

## Miniature Circuit Breakers FAZ, FAZ-PN, FAZ-HS

SG55812



### FAZ

- High-quality miniature circuit breakers for industrial applications and residential applications
- Contact position indicator red - green
- Guide for secure terminal connection
- 3-position DIN rail clip, permits removal from existing busbar system
- Comprehensive range of accessories suitable for subsequent installation
- Rated currents up to 63 A
- Tripping characteristics B, C, D, K, S, Z
- Rated breaking capacity up to 15 kA according to IEC/EN 60947-2

### FAZ-PN

- Tripping characteristic B
- Rated breaking capacity up to 6 kA according to IEC/EN 60898-1
- Module width 1MU (1+N-poles)

### FAZ-HS

- Tripping characteristic B
- Rated breaking capacity up to 10 kA according to IEC/EN 60898-1
- 1- and 2-poles available

## FAZ Miniature Circuit Breakers (MCBs)

### Characteristic B

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|---------------|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
| <b>1-pole</b> |                            |                      |   |                                |  |                     |             |                         |
| 1             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B1/1            | 182114      | 12                      |
| 1.5           | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B1,5/1          | 182115      | 12                      |
| 1.6           | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B1,6/1          | 182116      | 12                      |
| 2             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B2/1            | 182117      | 12                      |
| 3             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B3/1            | 182119      | 12                      |
| 3.5           | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B3,5/1          | 182120      | 12                      |
| 4             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B4/1            | 182121      | 12                      |
| 5             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B5/1            | 182122      | 12                      |
| 6             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B6/1            | 182123      | 12                      |
| 8             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B8/1            | 182124      | 12                      |
| 10            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B10/1           | 182125      | 12                      |
| 12            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B12/1           | 182126      | 12                      |
| 13            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B13/1           | 182127      | 12                      |
| 15            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B15/1           | 182128      | 12                      |
| 16            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B16/1           | 182129      | 12                      |
| 20            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B20/1           | 182130      | 12                      |
| 25            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B25/1           | 182131      | 12                      |
| 32            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B32/1           | 182132      | 12                      |
| 40            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-B40/1           | 182133      | 12                      |
| 50            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-B50/1           | 182134      | 12                      |
| 63            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-B63/1           | 182135      | 12                      |

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|                 |     |    |     |    |  |             |        |   |
|-----------------|-----|----|-----|----|--|-------------|--------|---|
| <b>1+N-pole</b> |     |    |     |    |  |             |        |   |
| 1               | 240 | 15 | 277 | 10 |  | FAZ-B1/1N   | 182136 | 6 |
| 1.5             | 240 | 15 | 277 | 10 |  | FAZ-B1,5/1N | 182137 | 6 |
| 1.6             | 240 | 15 | 277 | 10 |  | FAZ-B1,6/1N | 182138 | 6 |
| 2               | 240 | 15 | 277 | 10 |  | FAZ-B2/1N   | 182139 | 6 |
| 2.5             | 240 | 15 | 277 | 10 |  | FAZ-B2,5/1N | 182140 | 6 |
| 3               | 240 | 15 | 277 | 10 |  | FAZ-B3/1N   | 182141 | 6 |
| 3.5             | 240 | 15 | 277 | 10 |  | FAZ-B3,5/1N | 182142 | 6 |
| 4               | 240 | 15 | 277 | 10 |  | FAZ-B4/1N   | 182143 | 6 |
| 5               | 240 | 15 | 277 | 10 |  | FAZ-B5/1N   | 182144 | 6 |
| 6               | 240 | 15 | 277 | 10 |  | FAZ-B6/1N   | 182145 | 6 |
| 8               | 240 | 15 | 277 | 10 |  | FAZ-B8/1N   | 182146 | 6 |
| 10              | 240 | 15 | 277 | 10 |  | FAZ-B10/1N  | 182147 | 6 |
| 12              | 240 | 15 | 277 | 10 |  | FAZ-B12/1N  | 182148 | 6 |
| 13              | 240 | 15 | 277 | 10 |  | FAZ-B13/1N  | 182149 | 6 |
| 15              | 240 | 15 | 277 | 10 |  | FAZ-B15/1N  | 182150 | 6 |
| 16              | 240 | 15 | 277 | 10 |  | FAZ-B16/1N  | 182151 | 6 |
| 20              | 240 | 15 | 277 | 10 |  | FAZ-B20/1N  | 182152 | 6 |
| 25              | 240 | 15 | 277 | 10 |  | FAZ-B25/1N  | 182153 | 6 |
| 32              | 240 | 15 | 277 | 10 |  | FAZ-B32/1N  | 182154 | 6 |
| 40              | 240 | 15 | 277 | 5  |  | FAZ-B40/1N  | 182155 | 6 |
| 50              | 240 | 15 | 277 | 5  |  | FAZ-B50/1N  | 182156 | 6 |
| 63              | 240 | 15 | 277 | 5  |  | FAZ-B63/1N  | 182157 | 6 |

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| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|

### 2-pole

|     |     |    |          |    |            |        |   |
|-----|-----|----|----------|----|------------|--------|---|
| 1   | 415 | 15 | 480Y/277 | 10 | FAZ-B1/2   | 182158 | 6 |
| 1.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B1,5/2 | 182159 | 6 |
| 1.6 | 415 | 15 | 480Y/277 | 10 | FAZ-B1,6/2 | 182160 | 6 |
| 2   | 415 | 15 | 480Y/277 | 10 | FAZ-B2/2   | 182161 | 6 |
| 2.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B2,5/2 | 182162 | 6 |
| 3   | 415 | 15 | 480Y/277 | 10 | FAZ-B3/2   | 182112 | 6 |
| 3.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B3,5/2 | 182113 | 6 |
| 4   | 415 | 15 | 480Y/277 | 10 | FAZ-B4/2   | 182175 | 6 |
| 5   | 415 | 15 | 480Y/277 | 10 | FAZ-B5/2   | 182176 | 6 |
| 6   | 415 | 15 | 480Y/277 | 10 | FAZ-B6/2   | 182177 | 6 |
| 7   | 415 | 15 | 480Y/277 | 10 | FAZ-B7/2   | 182178 | 6 |
| 8   | 415 | 15 | 480Y/277 | 10 | FAZ-B8/2   | 182179 | 6 |
| 10  | 415 | 15 | 480Y/277 | 10 | FAZ-B10/2  | 182180 | 6 |
| 12  | 415 | 15 | 480Y/277 | 10 | FAZ-B12/2  | 182181 | 6 |
| 13  | 415 | 15 | 480Y/277 | 10 | FAZ-B13/2  | 182182 | 6 |
| 15  | 415 | 15 | 480Y/277 | 10 | FAZ-B15/2  | 182183 | 6 |
| 16  | 415 | 15 | 480Y/277 | 10 | FAZ-B16/2  | 182184 | 6 |
| 20  | 415 | 15 | 480Y/277 | 10 | FAZ-B20/2  | 182185 | 6 |
| 25  | 415 | 15 | 480Y/277 | 10 | FAZ-B25/2  | 182186 | 6 |
| 32  | 415 | 15 | 480Y/277 | 10 | FAZ-B32/2  | 182188 | 6 |
| 40  | 415 | 15 | 480Y/277 | 5  | FAZ-B40/2  | 182189 | 6 |
| 50  | 415 | 15 | 480Y/277 | 5  | FAZ-B50/2  | 182190 | 6 |
| 63  | 415 | 15 | 480Y/277 | 5  | FAZ-B63/2  | 182191 | 6 |

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### 3-pole

|     |     |    |          |    |            |        |   |
|-----|-----|----|----------|----|------------|--------|---|
| 1   | 415 | 15 | 480Y/277 | 10 | FAZ-B1/3   | 182192 | 4 |
| 1.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B1,5/3 | 182193 | 4 |
| 1.6 | 415 | 15 | 480Y/277 | 10 | FAZ-B1,6/3 | 182194 | 4 |
| 2   | 415 | 15 | 480Y/277 | 10 | FAZ-B2/3   | 182195 | 4 |
| 2.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B2,5/3 | 182196 | 4 |
| 3   | 415 | 15 | 480Y/277 | 10 | FAZ-B3/3   | 182197 | 4 |
| 3.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B3,5/3 | 182198 | 4 |
| 4   | 415 | 15 | 480Y/277 | 10 | FAZ-B4/3   | 182199 | 4 |
| 5   | 415 | 15 | 480Y/277 | 10 | FAZ-B5/3   | 182200 | 4 |
| 6   | 415 | 15 | 480Y/277 | 10 | FAZ-B6/3   | 182201 | 4 |
| 7   | 415 | 15 | 480Y/277 | 10 | FAZ-B7/3   | 182202 | 4 |
| 8   | 415 | 15 | 480Y/277 | 10 | FAZ-B8/3   | 182203 | 4 |
| 10  | 415 | 15 | 480Y/277 | 10 | FAZ-B10/3  | 182204 | 4 |
| 12  | 415 | 15 | 480Y/277 | 10 | FAZ-B12/3  | 182205 | 4 |
| 13  | 415 | 15 | 480Y/277 | 10 | FAZ-B13/3  | 182206 | 4 |
| 15  | 415 | 15 | 480Y/277 | 10 | FAZ-B15/3  | 182207 | 4 |
| 16  | 415 | 15 | 480Y/277 | 10 | FAZ-B16/3  | 182208 | 4 |
| 20  | 415 | 15 | 480Y/277 | 10 | FAZ-B20/3  | 182209 | 4 |
| 25  | 415 | 15 | 480Y/277 | 10 | FAZ-B25/3  | 182210 | 4 |
| 32  | 415 | 15 | 480Y/277 | 10 | FAZ-B32/3  | 182212 | 4 |
| 40  | 415 | 15 | 480Y/277 | 5  | FAZ-B40/3  | 182213 | 4 |
| 50  | 415 | 15 | 480Y/277 | 5  | FAZ-B50/3  | 182214 | 4 |
| 63  | 415 | 15 | 480Y/277 | 5  | FAZ-B63/3  | 182215 | 4 |

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| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|

### 3+N-pole

|     |     |    |          |    |             |        |   |
|-----|-----|----|----------|----|-------------|--------|---|
| 1   | 415 | 15 | 480Y/277 | 10 | FAZ-B1/3N   | 182216 | 3 |
| 1.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B1,5/3N | 182217 | 3 |
| 1.6 | 415 | 15 | 480Y/277 | 10 | FAZ-B1,6/3N | 182218 | 3 |
| 2   | 415 | 15 | 480Y/277 | 10 | FAZ-B2/3N   | 182219 | 3 |
| 2.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B2,5/3N | 182220 | 3 |
| 3   | 415 | 15 | 480Y/277 | 10 | FAZ-B3/3N   | 182221 | 3 |
| 3.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B3,5/3N | 182222 | 3 |
| 4   | 415 | 15 | 480Y/277 | 10 | FAZ-B4/3N   | 182223 | 3 |
| 5   | 415 | 15 | 480Y/277 | 10 | FAZ-B5/3N   | 182224 | 3 |
| 6   | 415 | 15 | 480Y/277 | 10 | FAZ-B6/3N   | 182225 | 3 |
| 8   | 415 | 15 | 480Y/277 | 10 | FAZ-B8/3N   | 182226 | 3 |
| 10  | 415 | 15 | 480Y/277 | 10 | FAZ-B10/3N  | 182227 | 3 |
| 12  | 415 | 15 | 480Y/277 | 10 | FAZ-B12/3N  | 182228 | 3 |
| 13  | 415 | 15 | 480Y/277 | 10 | FAZ-B13/3N  | 182229 | 3 |
| 15  | 415 | 15 | 480Y/277 | 10 | FAZ-B15/3N  | 182230 | 3 |
| 16  | 415 | 15 | 480Y/277 | 10 | FAZ-B16/3N  | 182231 | 3 |
| 20  | 415 | 15 | 480Y/277 | 10 | FAZ-B20/3N  | 182232 | 3 |
| 25  | 415 | 15 | 480Y/277 | 10 | FAZ-B25/3N  | 182233 | 3 |
| 32  | 415 | 15 | 480Y/277 | 10 | FAZ-B32/3N  | 182234 | 3 |
| 40  | 415 | 15 | 480Y/277 | 5  | FAZ-B40/3N  | 182235 | 3 |
| 50  | 415 | 15 | 480Y/277 | 5  | FAZ-B50/3N  | 182236 | 3 |
| 63  | 415 | 15 | 480Y/277 | 5  | FAZ-B63/3N  | 182237 | 3 |

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### 4-pole

|     |     |    |          |    |            |        |   |
|-----|-----|----|----------|----|------------|--------|---|
| 1   | 415 | 15 | 480Y/277 | 10 | FAZ-B1/4   | 182238 | 3 |
| 1.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B1,5/4 | 182239 | 3 |
| 1.6 | 415 | 15 | 480Y/277 | 10 | FAZ-B1,6/4 | 182240 | 3 |
| 2   | 415 | 15 | 480Y/277 | 10 | FAZ-B2/4   | 182241 | 3 |
| 2.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B2,5/4 | 182242 | 3 |
| 3   | 415 | 15 | 480Y/277 | 10 | FAZ-B3/4   | 182243 | 3 |
| 3.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B3,5/4 | 182244 | 3 |
| 4   | 415 | 15 | 480Y/277 | 10 | FAZ-B4/4   | 182245 | 3 |
| 5   | 415 | 15 | 480Y/277 | 10 | FAZ-B5/4   | 182246 | 3 |
| 6   | 415 | 15 | 480Y/277 | 10 | FAZ-B6/4   | 182247 | 3 |
| 7   | 415 | 15 | 480Y/277 | 10 | FAZ-B7/4   | 182248 | 3 |
| 8   | 415 | 15 | 480Y/277 | 10 | FAZ-B8/4   | 182249 | 3 |
| 10  | 415 | 15 | 480Y/277 | 10 | FAZ-B10/4  | 182250 | 3 |
| 12  | 415 | 15 | 480Y/277 | 10 | FAZ-B12/4  | 182251 | 3 |
| 13  | 415 | 15 | 480Y/277 | 10 | FAZ-B13/4  | 182252 | 3 |
| 15  | 415 | 15 | 480Y/277 | 10 | FAZ-B15/4  | 182253 | 3 |
| 16  | 415 | 15 | 480Y/277 | 10 | FAZ-B16/4  | 182254 | 3 |
| 20  | 415 | 15 | 480Y/277 | 10 | FAZ-B20/4  | 182255 | 3 |
| 25  | 415 | 15 | 480Y/277 | 10 | FAZ-B25/4  | 182256 | 3 |
| 32  | 415 | 15 | 480Y/277 | 10 | FAZ-B32/4  | 182257 | 3 |
| 40  | 415 | 15 | 480Y/277 | 5  | FAZ-B40/4  | 182258 | 3 |
| 50  | 415 | 15 | 480Y/277 | 5  | FAZ-B50/4  | 182259 | 3 |
| 63  | 415 | 15 | 480Y/277 | 5  | FAZ-B63/4  | 182260 | 3 |

## FAZ Miniature Circuit Breakers (MCBs)

### Characteristic C

| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
| <b>1-pole</b>              |                      |   |                                |  |                     |             |                         |
| 0.16                       | 240/415              | 15  | 277                            | 5  | FAZ-C0,16/1         | 182261      | 12                      |
| 0.25                       | 240/415              | 15  | 277                            | 5  | FAZ-C0,25/1         | 182262      | 12                      |
| 0.5                        | 240/415              | 15  | 277                            | 10   | FAZ-C0,5/1          | 182263      | 12                      |
| 0.75                       | 240/415              | 15  | 277                            | 10   | FAZ-C0,75/1         | 182264      | 12                      |
| 1                          | 240/415              | 15  | 277                            | 10   | FAZ-C1/1            | 182265      | 12                      |
| 1.5                        | 240/415              | 15  | 277                            | 10   | FAZ-C1,5/1          | 182266      | 12                      |
| 1.6                        | 240/415              | 15  | 277                            | 10   | FAZ-C1,6/1          | 182267      | 12                      |
| 2                          | 240/415              | 15  | 277                            | 10   | FAZ-C2/1            | 182268      | 12                      |
| 2.5                        | 240/415              | 15  | 277                            | 10   | FAZ-C2,5/1          | 182269      | 12                      |
| 3                          | 240/415              | 15  | 277                            | 10   | FAZ-C3/1            | 182270      | 12                      |
| 3.5                        | 240/415              | 15  | 277                            | 10   | FAZ-C3,5/1          | 182271      | 12                      |
| 4                          | 240/415              | 15  | 277                            | 10   | FAZ-C4/1            | 182272      | 12                      |
| 5                          | 240/415              | 15  | 277                            | 10   | FAZ-C5/1            | 182273      | 12                      |
| 6                          | 240/415              | 15  | 277                            | 10   | FAZ-C6/1            | 182274      | 12                      |
| 8                          | 240/415              | 15  | 277                            | 10   | FAZ-C8/1            | 182275      | 12                      |
| 10                         | 240/415              | 15  | 277                            | 10   | FAZ-C10/1           | 182276      | 12                      |
| 12                         | 240/415              | 15  | 277                            | 10   | FAZ-C12/1           | 182277      | 12                      |
| 13                         | 240/415              | 15  | 277                            | 10   | FAZ-C13/1           | 182278      | 12                      |
| 15                         | 240/415              | 15  | 277                            | 10   | FAZ-C15/1           | 182279      | 12                      |
| 16                         | 240/415              | 15  | 277                            | 10   | FAZ-C16/1           | 182280      | 12                      |
| 20                         | 240/415              | 15  | 277                            | 10   | FAZ-C20/1           | 182281      | 12                      |
| 25                         | 240/415              | 15  | 277                            | 10   | FAZ-C25/1           | 182282      | 12                      |
| 32                         | 240/415              | 15  | 277                            | 10   | FAZ-C32/1           | 182283      | 12                      |
| 40                         | 240/415              | 15  | 277                            | 5  | FAZ-C40/1           | 182284      | 12                      |
| 50                         | 240/415              | 15  | 277                            | 5  | FAZ-C50/1           | 182285      | 12                      |
| 63                         | 240/415              | 15  | 277                            | 5  | FAZ-C63/1           | 182286      | 12                      |

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### 1+N-pole

|      |     |    |     |    |              |        |   |
|------|-----|----|-----|----|--------------|--------|---|
| 0.16 | 240 | 15 | 277 | 5  | FAZ-C0,16/1N | 182287 | 6 |
| 0.25 | 240 | 15 | 277 | 5  | FAZ-C0,25/1N | 182288 | 6 |
| 0.5  | 240 | 15 | 277 | 10 | FAZ-C0,5/1N  | 182289 | 6 |
| 0.75 | 240 | 15 | 277 | 10 | FAZ-C0,75/1N | 182290 | 6 |
| 1    | 240 | 15 | 277 | 10 | FAZ-C1/1N    | 182291 | 6 |
| 1.5  | 240 | 15 | 277 | 10 | FAZ-C1,5/1N  | 182292 | 6 |
| 1.6  | 240 | 15 | 277 | 10 | FAZ-C1,6/1N  | 182293 | 6 |
| 2    | 240 | 15 | 277 | 10 | FAZ-C2/1N    | 182294 | 6 |
| 2.5  | 240 | 15 | 277 | 10 | FAZ-C2,5/1N  | 182295 | 6 |
| 3    | 240 | 15 | 277 | 10 | FAZ-C3/1N    | 182296 | 6 |
| 3.5  | 240 | 15 | 277 | 10 | FAZ-C3,5/1N  | 182297 | 6 |
| 4    | 240 | 15 | 277 | 10 | FAZ-C4/1N    | 182298 | 6 |
| 5    | 240 | 15 | 277 | 10 | FAZ-C5/1N    | 182299 | 6 |
| 6    | 240 | 15 | 277 | 10 | FAZ-C6/1N    | 182300 | 6 |
| 8    | 240 | 15 | 277 | 10 | FAZ-C8/1N    | 182301 | 6 |
| 10   | 240 | 15 | 277 | 10 | FAZ-C10/1N   | 182302 | 6 |
| 12   | 240 | 15 | 277 | 10 | FAZ-C12/1N   | 182303 | 6 |
| 13   | 240 | 15 | 277 | 10 | FAZ-C13/1N   | 182304 | 6 |
| 15   | 240 | 15 | 277 | 10 | FAZ-C15/1N   | 182305 | 6 |
| 16   | 240 | 15 | 277 | 10 | FAZ-C16/1N   | 182306 | 6 |
| 20   | 240 | 15 | 277 | 10 | FAZ-C20/1N   | 182307 | 6 |
| 25   | 240 | 15 | 277 | 10 | FAZ-C25/1N   | 182308 | 6 |
| 32   | 240 | 15 | 277 | 10 | FAZ-C32/1N   | 182309 | 6 |
| 40   | 240 | 15 | 277 | 5  | FAZ-C40/1N   | 182310 | 6 |
| 50   | 240 | 15 | 277 | 5  | FAZ-C50/1N   | 182311 | 6 |
| 63   | 240 | 15 | 277 | 5  | FAZ-C63/1N   | 182312 | 6 |

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| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|

### 2-pole

|      |     |    |          |    |             |        |   |
|------|-----|----|----------|----|-------------|--------|---|
| 0.16 | 415 | 15 | 480Y/277 | 5  | FAZ-C0,16/2 | 182313 | 6 |
| 0.25 | 415 | 15 | 480Y/277 | 5  | FAZ-C0,25/2 | 182314 | 6 |
| 0.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C0,5/2  | 182315 | 6 |
| 0.75 | 415 | 15 | 480Y/277 | 10 | FAZ-C0,75/2 | 182316 | 6 |
| 1    | 415 | 15 | 480Y/277 | 10 | FAZ-C1/2    | 182317 | 6 |
| 1.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C1,5/2  | 182318 | 6 |
| 1.6  | 415 | 15 | 480Y/277 | 10 | FAZ-C1,6/2  | 182319 | 6 |
| 2    | 415 | 15 | 480Y/277 | 10 | FAZ-C2/2    | 182320 | 6 |
| 2.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C2,5/2  | 182321 | 6 |
| 3    | 415 | 15 | 480Y/277 | 10 | FAZ-C3/2    | 182322 | 6 |
| 3.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C3,5/2  | 182323 | 6 |
| 4    | 415 | 15 | 480Y/277 | 10 | FAZ-C4/2    | 182324 | 6 |
| 5    | 415 | 15 | 480Y/277 | 10 | FAZ-C5/2    | 182325 | 6 |
| 6    | 415 | 15 | 480Y/277 | 10 | FAZ-C6/2    | 182326 | 6 |
| 7    | 415 | 15 | 480Y/277 | 10 | FAZ-C7/2    | 182327 | 6 |
| 8    | 415 | 15 | 480Y/277 | 10 | FAZ-C8/2    | 182328 | 6 |
| 10   | 415 | 15 | 480Y/277 | 10 | FAZ-C10/2   | 182329 | 6 |
| 12   | 415 | 15 | 480Y/277 | 10 | FAZ-C12/2   | 182330 | 6 |
| 13   | 415 | 15 | 480Y/277 | 10 | FAZ-C13/2   | 182331 | 6 |
| 15   | 415 | 15 | 480Y/277 | 10 | FAZ-C15/2   | 182332 | 6 |
| 16   | 415 | 15 | 480Y/277 | 10 | FAZ-C16/2   | 182333 | 6 |
| 20   | 415 | 15 | 480Y/277 | 10 | FAZ-C20/2   | 182334 | 6 |
| 25   | 415 | 15 | 480Y/277 | 10 | FAZ-C25/2   | 182335 | 6 |
| 30   | 415 | 15 | 480Y/277 | 10 | FAZ-C30/2   | 182336 | 6 |
| 32   | 415 | 15 | 480Y/277 | 10 | FAZ-C32/2   | 182337 | 6 |
| 40   | 415 | 15 | 480Y/277 | 5  | FAZ-C40/2   | 182338 | 6 |
| 50   | 415 | 15 | 480Y/277 | 5  | FAZ-C50/2   | 182339 | 6 |
| 63   | 415 | 15 | 480Y/277 | 5  | FAZ-C63/2   | 182340 | 6 |

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### 3-pole

|      |     |    |          |    |             |        |   |
|------|-----|----|----------|----|-------------|--------|---|
| 0.16 | 415 | 15 | 480Y/277 | 5  | FAZ-C0,16/3 | 182341 | 4 |
| 0.25 | 415 | 15 | 480Y/277 | 5  | FAZ-C0,25/3 | 182342 | 4 |
| 0.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C0,5/3  | 182163 | 4 |
| 0.75 | 415 | 15 | 480Y/277 | 10 | FAZ-C0,75/3 | 182164 | 4 |
| 1    | 415 | 15 | 480Y/277 | 10 | FAZ-C1/3    | 182165 | 4 |
| 1.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C1,5/3  | 182166 | 4 |
| 1.6  | 415 | 15 | 480Y/277 | 10 | FAZ-C1,6/3  | 182167 | 4 |
| 2    | 415 | 15 | 480Y/277 | 10 | FAZ-C2/3    | 182168 | 4 |
| 2.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C2,5/3  | 182169 | 4 |
| 3    | 415 | 15 | 480Y/277 | 10 | FAZ-C3/3    | 182170 | 4 |
| 3.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C3,5/3  | 182171 | 4 |
| 4    | 415 | 15 | 480Y/277 | 10 | FAZ-C4/3    | 182172 | 4 |
| 5    | 415 | 15 | 480Y/277 | 10 | FAZ-C5/3    | 182173 | 4 |
| 6    | 415 | 15 | 480Y/277 | 10 | FAZ-C6/3    | 182174 | 4 |
| 7    | 415 | 15 | 480Y/277 | 10 | FAZ-C7/3    | 181651 | 4 |
| 8    | 415 | 15 | 480Y/277 | 10 | FAZ-C8/3    | 181652 | 4 |
| 10   | 415 | 15 | 480Y/277 | 10 | FAZ-C10/3   | 181653 | 4 |
| 12   | 415 | 15 | 480Y/277 | 10 | FAZ-C12/3   | 181654 | 4 |
| 13   | 415 | 15 | 480Y/277 | 10 | FAZ-C13/3   | 181655 | 4 |
| 15   | 415 | 15 | 480Y/277 | 10 | FAZ-C15/3   | 181656 | 4 |
| 16   | 415 | 15 | 480Y/277 | 10 | FAZ-C16/3   | 181657 | 4 |
| 20   | 415 | 15 | 480Y/277 | 10 | FAZ-C20/3   | 181658 | 4 |
| 25   | 415 | 15 | 480Y/277 | 10 | FAZ-C25/3   | 181659 | 4 |
| 30   | 415 | 15 | 480Y/277 | 10 | FAZ-C30/3   | 181660 | 4 |
| 32   | 415 | 15 | 480Y/277 | 10 | FAZ-C32/3   | 181661 | 4 |
| 40   | 415 | 15 | 480Y/277 | 5  | FAZ-C40/3   | 181662 | 4 |
| 50   | 415 | 15 | 480Y/277 | 5  | FAZ-C50/3   | 181663 | 4 |
| 63   | 415 | 15 | 480Y/277 | 5  | FAZ-C63/3   | 181664 | 4 |

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| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|

### 3+N-pole

|      |     |    |          |    |              |        |   |
|------|-----|----|----------|----|--------------|--------|---|
| 0.16 | 415 | 15 | 480Y/277 | 5  | FAZ-C0,16/3N | 181665 | 3 |
| 0.25 | 415 | 15 | 480Y/277 | 5  | FAZ-C0,25/3N | 181666 | 3 |
| 0.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C0,5/3N  | 181667 | 3 |
| 0.75 | 415 | 15 | 480Y/277 | 10 | FAZ-C0,75/3N | 181668 | 3 |
| 1    | 415 | 15 | 480Y/277 | 10 | FAZ-C1/3N    | 181669 | 3 |
| 1.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C1,5/3N  | 181670 | 3 |
| 1.6  | 415 | 15 | 480Y/277 | 10 | FAZ-C1,6/3N  | 181671 | 3 |
| 2    | 415 | 15 | 480Y/277 | 10 | FAZ-C2/3N    | 181672 | 3 |
| 2.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C2,5/3N  | 181673 | 3 |
| 3    | 415 | 15 | 480Y/277 | 10 | FAZ-C3/3N    | 181674 | 3 |
| 3.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C3,5/3N  | 181675 | 3 |
| 4    | 415 | 15 | 480Y/277 | 10 | FAZ-C4/3N    | 181676 | 3 |
| 5    | 415 | 15 | 480Y/277 | 10 | FAZ-C5/3N    | 181677 | 3 |
| 6    | 415 | 15 | 480Y/277 | 10 | FAZ-C6/3N    | 181678 | 3 |
| 8    | 415 | 15 | 480Y/277 | 10 | FAZ-C8/3N    | 181679 | 3 |
| 10   | 415 | 15 | 480Y/277 | 10 | FAZ-C10/3N   | 181680 | 3 |
| 12   | 415 | 15 | 480Y/277 | 10 | FAZ-C12/3N   | 181681 | 3 |
| 13   | 415 | 15 | 480Y/277 | 10 | FAZ-C13/3N   | 181682 | 3 |
| 15   | 415 | 15 | 480Y/277 | 10 | FAZ-C15/3N   | 181683 | 3 |
| 16   | 415 | 15 | 480Y/277 | 10 | FAZ-C16/3N   | 181684 | 3 |
| 20   | 415 | 15 | 480Y/277 | 10 | FAZ-C20/3N   | 181685 | 3 |
| 25   | 415 | 15 | 480Y/277 | 10 | FAZ-C25/3N   | 181686 | 3 |
| 32   | 415 | 15 | 480Y/277 | 10 | FAZ-C32/3N   | 181687 | 3 |
| 40   | 415 | 15 | 480Y/277 | 5  | FAZ-C40/3N   | 181688 | 3 |
| 50   | 415 | 15 | 480Y/277 | 5  | FAZ-C50/3N   | 181689 | 3 |
| 63   | 415 | 15 | 480Y/277 | 5  | FAZ-C63/3N   | 181690 | 3 |

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### 4-pole

|      |     |    |          |    |             |        |   |
|------|-----|----|----------|----|-------------|--------|---|
| 0.16 | 415 | 15 | 480Y/277 | 5  | FAZ-C0,16/4 | 181691 | 3 |
| 0.25 | 415 | 15 | 480Y/277 | 5  | FAZ-C0,25/4 | 181692 | 3 |
| 0.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C0,5/4  | 181693 | 3 |
| 0.75 | 415 | 15 | 480Y/277 | 10 | FAZ-C0,75/4 | 181694 | 3 |
| 1    | 415 | 15 | 480Y/277 | 10 | FAZ-C1/4    | 181695 | 3 |
| 1.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C1,5/4  | 181696 | 3 |
| 1.6  | 415 | 15 | 480Y/277 | 10 | FAZ-C1,6/4  | 181697 | 3 |
| 2    | 415 | 15 | 480Y/277 | 10 | FAZ-C2/4    | 181698 | 3 |
| 2.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C2,5/4  | 181699 | 3 |
| 3    | 415 | 15 | 480Y/277 | 10 | FAZ-C3/4    | 181700 | 3 |
| 3.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C3,5/4  | 181701 | 3 |
| 4    | 415 | 15 | 480Y/277 | 10 | FAZ-C4/4    | 181702 | 3 |
| 5    | 415 | 15 | 480Y/277 | 10 | FAZ-C5/4    | 181703 | 3 |
| 6    | 415 | 15 | 480Y/277 | 10 | FAZ-C6/4    | 181704 | 3 |
| 7    | 415 | 15 | 480Y/277 | 10 | FAZ-C7/4    | 181705 | 3 |
| 8    | 415 | 15 | 480Y/277 | 10 | FAZ-C8/4    | 181706 | 3 |
| 10   | 415 | 15 | 480Y/277 | 10 | FAZ-C10/4   | 181707 | 3 |
| 12   | 415 | 15 | 480Y/277 | 10 | FAZ-C12/4   | 181708 | 3 |
| 13   | 415 | 15 | 480Y/277 | 10 | FAZ-C13/4   | 181709 | 3 |
| 15   | 415 | 15 | 480Y/277 | 10 | FAZ-C15/4   | 181710 | 3 |
| 16   | 415 | 15 | 480Y/277 | 10 | FAZ-C16/4   | 181711 | 3 |
| 20   | 415 | 15 | 480Y/277 | 10 | FAZ-C20/4   | 181712 | 3 |
| 25   | 415 | 15 | 480Y/277 | 10 | FAZ-C25/4   | 181713 | 3 |
| 32   | 415 | 15 | 480Y/277 | 10 | FAZ-C32/4   | 181714 | 3 |
| 40   | 415 | 15 | 480Y/277 | 5  | FAZ-C40/4   | 181715 | 3 |
| 50   | 415 | 15 | 480Y/277 | 5  | FAZ-C50/4   | 181716 | 3 |
| 63   | 415 | 15 | 480Y/277 | 5  | FAZ-C63/4   | 181717 | 3 |

## FAZ Miniature Circuit Breakers (MCBs)

### Characteristic D

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|---------------|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
| <b>1-pole</b> |                            |                      |   |                                |  |                     |             |                         |
| 0.5           | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D0,5/1          | 181718      | 12                      |
| 1             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D1/1            | 181719      | 12                      |
| 1.5           | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D1,5/1          | 181720      | 12                      |
| 1.6           | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D1,6/1          | 181721      | 12                      |
| 2             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D2/1            | 181722      | 12                      |
| 2.5           | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D2,5/1          | 181723      | 12                      |
| 3             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D3/1            | 181724      | 12                      |
| 3.5           | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D3,5/1          | 181725      | 12                      |
| 4             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D4/1            | 181726      | 12                      |
| 5             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D5/1            | 181727      | 12                      |
| 6             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D6/1            | 181728      | 12                      |
| 8             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D8/1            | 181729      | 12                      |
| 10            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D10/1           | 181730      | 12                      |
| 12            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D12/1           | 181731      | 12                      |
| 13            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D13/1           | 181732      | 12                      |
| 15            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D15/1           | 181733      | 12                      |
| 16            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D16/1           | 181734      | 12                      |
| 20            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D20/1           | 181735      | 12                      |
| 25            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D25/1           | 181736      | 12                      |
| 32            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D32/1           | 181737      | 12                      |
| 40            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D40/1           | 181738      | 12                      |
| 50            | 240/415                    | 10                   | -   | -                              |  | FAZ-D50/1           | 181739      | 12                      |
| 63            | 240/415                    | 10                   | -   | -                              |  | FAZ-D63/1           | 181740      | 12                      |

SG53112



SG55612



|                 |     |    |     |   |  |             |        |   |
|-----------------|-----|----|-----|---|--|-------------|--------|---|
| <b>1+N-pole</b> |     |    |     |   |  |             |        |   |
| 0.5             | 240 | 15 | 277 | 5 |  | FAZ-D0,5/1N | 181741 | 6 |
| 1               | 240 | 15 | 277 | 5 |  | FAZ-D1/1N   | 181742 | 6 |
| 1.5             | 240 | 15 | 277 | 5 |  | FAZ-D1,5/1N | 181743 | 6 |
| 1.6             | 240 | 15 | 277 | 5 |  | FAZ-D1,6/1N | 181744 | 6 |
| 2               | 240 | 15 | 277 | 5 |  | FAZ-D2/1N   | 181745 | 6 |
| 2.5             | 240 | 15 | 277 | 5 |  | FAZ-D2,5/1N | 181746 | 6 |
| 3               | 240 | 15 | 277 | 5 |  | FAZ-D3/1N   | 181747 | 6 |
| 3.5             | 240 | 15 | 277 | 5 |  | FAZ-D3,5/1N | 181748 | 6 |
| 4               | 240 | 15 | 277 | 5 |  | FAZ-D4/1N   | 181749 | 6 |
| 5               | 240 | 15 | 277 | 5 |  | FAZ-D5/1N   | 181750 | 6 |
| 6               | 240 | 15 | 277 | 5 |  | FAZ-D6/1N   | 181751 | 6 |
| 8               | 240 | 15 | 277 | 5 |  | FAZ-D8/1N   | 181752 | 6 |
| 10              | 240 | 15 | 277 | 5 |  | FAZ-D10/1N  | 181753 | 6 |
| 12              | 240 | 15 | 277 | 5 |  | FAZ-D12/1N  | 181754 | 6 |
| 13              | 240 | 15 | 277 | 5 |  | FAZ-D13/1N  | 181755 | 6 |
| 15              | 240 | 15 | 277 | 5 |  | FAZ-D15/1N  | 181756 | 6 |
| 16              | 240 | 15 | 277 | 5 |  | FAZ-D16/1N  | 181757 | 6 |
| 20              | 240 | 15 | 277 | 5 |  | FAZ-D20/1N  | 181758 | 6 |
| 25              | 240 | 15 | 277 | 5 |  | FAZ-D25/1N  | 181759 | 6 |
| 32              | 240 | 15 | 277 | 5 |  | FAZ-D32/1N  | 181760 | 6 |
| 40              | 240 | 15 | 277 | 5 |  | FAZ-D40/1N  | 181761 | 6 |
| 50              | 240 | 10 | -   | - |  | FAZ-D50/1N  | 181762 | 6 |
| 63              | 240 | 10 | -   | - |  | FAZ-D63/1N  | 181763 | 6 |



SG55112



| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|

### 2-pole

|     |     |    |          |   |            |        |   |
|-----|-----|----|----------|---|------------|--------|---|
| 0.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D0,5/2 | 181764 | 6 |
| 1   | 415 | 15 | 480Y/277 | 5 | FAZ-D1/2   | 181765 | 6 |
| 1.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D1,5/2 | 181766 | 6 |
| 1.6 | 415 | 15 | 480Y/277 | 5 | FAZ-D1,6/2 | 181767 | 6 |
| 2   | 415 | 15 | 480Y/277 | 5 | FAZ-D2/2   | 181768 | 6 |
| 2.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D2,5/2 | 181769 | 6 |
| 3   | 415 | 15 | 480Y/277 | 5 | FAZ-D3/2   | 181770 | 6 |
| 3.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D3,5/2 | 181771 | 6 |
| 4   | 415 | 15 | 480Y/277 | 5 | FAZ-D4/2   | 181772 | 6 |
| 5   | 415 | 15 | 480Y/277 | 5 | FAZ-D5/2   | 181773 | 6 |
| 6   | 415 | 15 | 480Y/277 | 5 | FAZ-D6/2   | 181774 | 6 |
| 7   | 415 | 15 | 480Y/277 | 5 | FAZ-D7/2   | 181775 | 6 |
| 8   | 415 | 15 | 480Y/277 | 5 | FAZ-D8/2   | 181776 | 6 |
| 10  | 415 | 15 | 480Y/277 | 5 | FAZ-D10/2  | 181777 | 6 |
| 12  | 415 | 15 | 480Y/277 | 5 | FAZ-D12/2  | 181778 | 6 |
| 13  | 415 | 15 | 480Y/277 | 5 | FAZ-D13/2  | 181779 | 6 |
| 15  | 415 | 15 | 480Y/277 | 5 | FAZ-D15/2  | 181780 | 6 |
| 16  | 415 | 15 | 480Y/277 | 5 | FAZ-D16/2  | 181781 | 6 |
| 20  | 415 | 15 | 480Y/277 | 5 | FAZ-D20/2  | 181782 | 6 |
| 25  | 415 | 15 | 480Y/277 | 5 | FAZ-D25/2  | 181783 | 6 |
| 32  | 415 | 15 | 480Y/277 | 5 | FAZ-D32/2  | 181785 | 6 |
| 40  | 415 | 15 | 480Y/277 | 5 | FAZ-D40/2  | 181786 | 6 |
| 50  | 415 | 10 | -        | - | FAZ-D50/2  | 181787 | 6 |
| 63  | 415 | 10 | -        | - | FAZ-D63/2  | 181788 | 6 |

SG53412



### 3-pole

|     |     |    |          |   |            |        |   |
|-----|-----|----|----------|---|------------|--------|---|
| 0.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D0,5/3 | 181789 | 4 |
| 1   | 415 | 15 | 480Y/277 | 5 | FAZ-D1/3   | 181790 | 4 |
| 1.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D1,5/3 | 181791 | 4 |
| 1.6 | 415 | 15 | 480Y/277 | 5 | FAZ-D1,6/3 | 181792 | 4 |
| 2   | 415 | 15 | 480Y/277 | 5 | FAZ-D2/3   | 181793 | 4 |
| 2.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D2,5/3 | 181794 | 4 |
| 3   | 415 | 15 | 480Y/277 | 5 | FAZ-D3/3   | 181795 | 4 |
| 3.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D3,5/3 | 181796 | 4 |
| 4   | 415 | 15 | 480Y/277 | 5 | FAZ-D4/3   | 181797 | 4 |
| 5   | 415 | 15 | 480Y/277 | 5 | FAZ-D5/3   | 181798 | 4 |
| 6   | 415 | 15 | 480Y/277 | 5 | FAZ-D6/3   | 181799 | 4 |
| 7   | 415 | 15 | 480Y/277 | 5 | FAZ-D7/3   | 181800 | 4 |
| 8   | 415 | 15 | 480Y/277 | 5 | FAZ-D8/3   | 181801 | 4 |
| 10  | 415 | 15 | 480Y/277 | 5 | FAZ-D10/3  | 181802 | 4 |
| 12  | 415 | 15 | 480Y/277 | 5 | FAZ-D12/3  | 181803 | 4 |
| 13  | 415 | 15 | 480Y/277 | 5 | FAZ-D13/3  | 181804 | 4 |
| 15  | 415 | 15 | 480Y/277 | 5 | FAZ-D15/3  | 181805 | 4 |
| 16  | 415 | 15 | 480Y/277 | 5 | FAZ-D16/3  | 181806 | 4 |
| 20  | 415 | 15 | 480Y/277 | 5 | FAZ-D20/3  | 181807 | 4 |
| 25  | 415 | 15 | 480Y/277 | 5 | FAZ-D25/3  | 181808 | 4 |
| 30  | 415 | 15 | 480Y/277 | 5 | FAZ-D30/3  | 181809 | 4 |
| 32  | 415 | 15 | 480Y/277 | 5 | FAZ-D32/3  | 181810 | 4 |
| 40  | 415 | 10 | 480Y/277 | 5 | FAZ-D40/3  | 181811 | 4 |
| 50  | 415 | 10 | -        | - | FAZ-D50/3  | 181812 | 4 |
| 63  | 415 | 10 | -        | - | FAZ-D63/3  | 181813 | 4 |

SG55712



| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|

### 3+N-pole

|     |     |    |          |   |             |        |   |
|-----|-----|----|----------|---|-------------|--------|---|
| 0.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D0,5/3N | 181814 | 3 |
| 1   | 415 | 15 | 480Y/277 | 5 | FAZ-D1/3N   | 181815 | 3 |
| 1.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D1,5/3N | 181816 | 3 |
| 1.6 | 415 | 15 | 480Y/277 | 5 | FAZ-D1,6/3N | 181817 | 3 |
| 2   | 415 | 15 | 480Y/277 | 5 | FAZ-D2/3N   | 181818 | 3 |
| 2.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D2,5/3N | 181819 | 3 |
| 3   | 415 | 15 | 480Y/277 | 5 | FAZ-D3/3N   | 181820 | 3 |
| 3.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D3,5/3N | 181821 | 3 |
| 4   | 415 | 15 | 480Y/277 | 5 | FAZ-D4/3N   | 181822 | 3 |
| 5   | 415 | 15 | 480Y/277 | 5 | FAZ-D5/3N   | 181823 | 3 |
| 6   | 415 | 15 | 480Y/277 | 5 | FAZ-D6/3N   | 181824 | 3 |
| 8   | 415 | 15 | 480Y/277 | 5 | FAZ-D8/3N   | 181825 | 3 |
| 10  | 415 | 15 | 480Y/277 | 5 | FAZ-D10/3N  | 181826 | 3 |
| 12  | 415 | 15 | 480Y/277 | 5 | FAZ-D12/3N  | 181827 | 3 |
| 13  | 415 | 15 | 480Y/277 | 5 | FAZ-D13/3N  | 181828 | 3 |
| 15  | 415 | 15 | 480Y/277 | 5 | FAZ-D15/3N  | 181829 | 3 |
| 16  | 415 | 15 | 480Y/277 | 5 | FAZ-D16/3N  | 181830 | 3 |
| 20  | 415 | 15 | 480Y/277 | 5 | FAZ-D20/3N  | 181639 | 3 |
| 25  | 415 | 15 | 480Y/277 | 5 | FAZ-D25/3N  | 181640 | 3 |
| 32  | 415 | 15 | 480Y/277 | 5 | FAZ-D32/3N  | 181641 | 3 |
| 40  | 415 | 15 | 480Y/277 | 5 | FAZ-D40/3N  | 181642 | 3 |
| 50  | 415 | 10 | -        | - | FAZ-D50/3N  | 181643 | 3 |
| 63  | 415 | 10 | -        | - | FAZ-D63/3N  | 181644 | 3 |

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### 4-pole

|     |     |    |          |   |            |        |   |
|-----|-----|----|----------|---|------------|--------|---|
| 0.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D0,5/4 | 181645 | 3 |
| 1   | 415 | 15 | 480Y/277 | 5 | FAZ-D1/4   | 181646 | 3 |
| 1.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D1,5/4 | 181647 | 3 |
| 1.6 | 415 | 15 | 480Y/277 | 5 | FAZ-D1,6/4 | 181648 | 3 |
| 2   | 415 | 15 | 480Y/277 | 5 | FAZ-D2/4   | 181649 | 3 |
| 2.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D2,5/4 | 181650 | 3 |
| 3   | 415 | 15 | 480Y/277 | 5 | FAZ-D3/4   | 181843 | 3 |
| 3.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D3,5/4 | 181844 | 3 |
| 4   | 415 | 15 | 480Y/277 | 5 | FAZ-D4/4   | 181845 | 3 |
| 5   | 415 | 15 | 480Y/277 | 5 | FAZ-D5/4   | 181846 | 3 |
| 6   | 415 | 15 | 480Y/277 | 5 | FAZ-D6/4   | 181847 | 3 |
| 7   | 415 | 15 | 480Y/277 | 5 | FAZ-D7/4   | 181848 | 3 |
| 8   | 415 | 15 | 480Y/277 | 5 | FAZ-D8/4   | 181849 | 3 |
| 10  | 415 | 15 | 480Y/277 | 5 | FAZ-D10/4  | 181850 | 3 |
| 12  | 415 | 15 | 480Y/277 | 5 | FAZ-D12/4  | 181851 | 3 |
| 13  | 415 | 15 | 480Y/277 | 5 | FAZ-D13/4  | 181852 | 3 |
| 15  | 415 | 15 | 480Y/277 | 5 | FAZ-D15/4  | 181853 | 3 |
| 16  | 415 | 15 | 480Y/277 | 5 | FAZ-D16/4  | 181854 | 3 |
| 20  | 415 | 15 | 480Y/277 | 5 | FAZ-D20/4  | 181855 | 3 |
| 25  | 415 | 15 | 480Y/277 | 5 | FAZ-D25/4  | 181856 | 3 |
| 32  | 415 | 15 | 480Y/277 | 5 | FAZ-D32/4  | 181857 | 3 |
| 40  | 415 | 10 | 480Y/277 | 5 | FAZ-D40/4  | 181858 | 3 |
| 50  | 415 | 10 | -        | - | FAZ-D50/4  | 181859 | 3 |
| 63  | 415 | 10 | -        | - | FAZ-D63/4  | 181860 | 3 |

## FAZ Miniature Circuit Breakers (MCBs)

### Characteristic K

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|---------------|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
| <b>1-pole</b> |                            |                      |   |                                |  |                     |             |                         |
|               | 0.5                        | 240/415              | 15  | 277                            | 5  | FAZ-K0,5/1          | 278589      | 12/120                  |
|               | 1                          | 240/415              | 15  | 277                            | 5  | FAZ-K1/1            | 278590      | 12/120                  |
|               | 1.6                        | 240/415              | 15  | 277                            | 5  | FAZ-K1,6/1          | 278591      | 12/120                  |
|               | 2                          | 240/415              | 15  | 277                            | 5  | FAZ-K2/1            | 278592      | 12/120                  |
|               | 3                          | 240/415              | 15  | 277                            | 5  | FAZ-K3/1            | 278593      | 12/120                  |
|               | 4                          | 240/415              | 15  | 277                            | 5  | FAZ-K4/1            | 278594      | 12/120                  |
|               | 6                          | 240/415              | 15  | 277                            | 5  | FAZ-K6/1            | 278595      | 12/120                  |
|               | 8                          | 240/415              | 15  | 277                            | 5  | FAZ-K8/1            | 278596      | 12/120                  |
|               | 10                         | 240/415              | 15  | 277                            | 5  | FAZ-K10/1           | 278597      | 12/120                  |
|               | 13                         | 240/415              | 15  | 277                            | 5  | FAZ-K13/1           | 278598      | 12/120                  |
|               | 16                         | 240/415              | 15  | 277                            | 5  | FAZ-K16/1           | 278599      | 12/120                  |
|               | 20                         | 240/415              | 15  | 277                            | 5  | FAZ-K20/1           | 278600      | 12/120                  |
|               | 25                         | 240/415              | 15  | 277                            | 5  | FAZ-K25/1           | 278601      | 12/120                  |
|               | 32                         | 240/415              | 15  | 277                            | 5  | FAZ-K32/1           | 278602      | 12/120                  |
|               | 40                         | 240/415              | 15  | 277                            | 5  | FAZ-K40/1           | 278603      | 12/120                  |
|               | 50                         | 240/415              | 15  | 277                            | 5  | FAZ-K50/1           | 278604      | 12/120                  |
|               | 63                         | 240/415              | 15  | 277                            | 5  | FAZ-K63/1           | 278605      | 12/120                  |

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|                 |     |     |    |     |   |             |        |      |
|-----------------|-----|-----|----|-----|---|-------------|--------|------|
| <b>1+N-pole</b> |     |     |    |     |   |             |        |      |
|                 | 0.5 | 240 | 15 | 277 | 5 | FAZ-K0,5/1N | 278702 | 1/60 |
|                 | 1   | 240 | 15 | 277 | 5 | FAZ-K1/1N   | 278703 | 1/60 |
|                 | 1.6 | 240 | 15 | 277 | 5 | FAZ-K1,6/1N | 278704 | 1/60 |
|                 | 2   | 240 | 15 | 277 | 5 | FAZ-K2/1N   | 278705 | 1/60 |
|                 | 3   | 240 | 15 | 277 | 5 | FAZ-K3/1N   | 278706 | 1/60 |
|                 | 4   | 240 | 15 | 277 | 5 | FAZ-K4/1N   | 278707 | 1/60 |
|                 | 6   | 240 | 15 | 277 | 5 | FAZ-K6/1N   | 278708 | 1/60 |
|                 | 8   | 240 | 15 | 277 | 5 | FAZ-K8/1N   | 278709 | 1/60 |
|                 | 10  | 240 | 15 | 277 | 5 | FAZ-K10/1N  | 278710 | 1/60 |
|                 | 13  | 240 | 15 | 277 | 5 | FAZ-K13/1N  | 278711 | 1/60 |
|                 | 16  | 240 | 15 | 277 | 5 | FAZ-K16/1N  | 278712 | 1/60 |
|                 | 20  | 240 | 15 | 277 | 5 | FAZ-K20/1N  | 278713 | 1/60 |
|                 | 25  | 240 | 15 | 277 | 5 | FAZ-K25/1N  | 278714 | 1/60 |
|                 | 32  | 240 | 15 | 277 | 5 | FAZ-K32/1N  | 278715 | 1/60 |
|                 | 40  | 240 | 15 | 277 | 5 | FAZ-K40/1N  | 278716 | 1/60 |
|                 | 50  | 240 | 15 | 277 | 5 | FAZ-K50/1N  | 278717 | 1/60 |
|                 | 63  | 240 | 15 | 277 | 5 | FAZ-K63/1N  | 278718 | 1/60 |

| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|

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### 2-pole

|     |     |    |          |   |            |        |      |
|-----|-----|----|----------|---|------------|--------|------|
| 0.5 | 415 | 15 | 480Y/277 | 5 | FAZ-K0,5/2 | 278788 | 1/60 |
| 1   | 415 | 15 | 480Y/277 | 5 | FAZ-K1/2   | 278789 | 1/60 |
| 1.6 | 415 | 15 | 480Y/277 | 5 | FAZ-K1,6/2 | 278790 | 1/60 |
| 2   | 415 | 15 | 480Y/277 | 5 | FAZ-K2/2   | 278791 | 1/60 |
| 3   | 415 | 15 | 480Y/277 | 5 | FAZ-K3/2   | 278792 | 1/60 |
| 4   | 415 | 15 | 480Y/277 | 5 | FAZ-K4/2   | 278793 | 1/60 |
| 6   | 415 | 15 | 480Y/277 | 5 | FAZ-K6/2   | 278794 | 1/60 |
| 8   | 415 | 15 | 480Y/277 | 5 | FAZ-K8/2   | 278795 | 1/60 |
| 10  | 415 | 15 | 480Y/277 | 5 | FAZ-K10/2  | 278796 | 1/60 |
| 13  | 415 | 15 | 480Y/277 | 5 | FAZ-K13/2  | 278797 | 1/60 |
| 16  | 415 | 15 | 480Y/277 | 5 | FAZ-K16/2  | 278798 | 1/60 |
| 20  | 415 | 15 | 480Y/277 | 5 | FAZ-K20/2  | 278799 | 1/60 |
| 25  | 415 | 15 | 480Y/277 | 5 | FAZ-K25/2  | 278800 | 1/60 |
| 32  | 415 | 15 | 480Y/277 | 5 | FAZ-K32/2  | 278801 | 1/60 |
| 40  | 415 | 15 | 480Y/277 | 5 | FAZ-K40/2  | 278802 | 1/60 |
| 50  | 415 | 15 | 480Y/277 | 5 | FAZ-K50/2  | 278803 | 1/60 |
| 63  | 415 | 15 | 480Y/277 | 5 | FAZ-K63/2  | 278804 | 1/60 |

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### 3-pole

|     |     |    |          |   |            |        |      |
|-----|-----|----|----------|---|------------|--------|------|
| 0.5 | 415 | 15 | 480Y/277 | 5 | FAZ-K0,5/3 | 278901 | 1/40 |
| 1   | 415 | 15 | 480Y/277 | 5 | FAZ-K1/3   | 278902 | 1/40 |
| 1.6 | 415 | 15 | 480Y/277 | 5 | FAZ-K1,6/3 | 278903 | 1/40 |
| 2   | 415 | 15 | 480Y/277 | 5 | FAZ-K2/3   | 278904 | 1/40 |
| 3   | 415 | 15 | 480Y/277 | 5 | FAZ-K3/3   | 278905 | 1/40 |
| 4   | 415 | 15 | 480Y/277 | 5 | FAZ-K4/3   | 278906 | 1/40 |
| 6   | 415 | 15 | 480Y/277 | 5 | FAZ-K6/3   | 278907 | 1/40 |
| 8   | 415 | 15 | 480Y/277 | 5 | FAZ-K8/3   | 278908 | 1/40 |
| 10  | 415 | 15 | 480Y/277 | 5 | FAZ-K10/3  | 278909 | 1/40 |
| 13  | 415 | 15 | 480Y/277 | 5 | FAZ-K13/3  | 278910 | 1/40 |
| 16  | 415 | 15 | 480Y/277 | 5 | FAZ-K16/3  | 278911 | 1/40 |
| 20  | 415 | 15 | 480Y/277 | 5 | FAZ-K20/3  | 278912 | 1/40 |
| 25  | 415 | 15 | 480Y/277 | 5 | FAZ-K25/3  | 278913 | 1/40 |
| 32  | 415 | 15 | 480Y/277 | 5 | FAZ-K32/3  | 278914 | 1/40 |
| 40  | 415 | 15 | 480Y/277 | 5 | FAZ-K40/3  | 278915 | 1/40 |
| 50  | 415 | 15 | 480Y/277 | 5 | FAZ-K50/3  | 278916 | 1/40 |
| 63  | 415 | 15 | 480Y/277 | 5 | FAZ-K63/3  | 278917 | 1/40 |

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| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|

### 3+N-pole

|     |     |    |          |   |             |        |      |
|-----|-----|----|----------|---|-------------|--------|------|
| 0.5 | 415 | 15 | 480Y/277 | 5 | FAZ-K0,5/3N | 279003 | 1/30 |
| 1   | 415 | 15 | 480Y/277 | 5 | FAZ-K1/3N   | 279004 | 1/30 |
| 1.6 | 415 | 15 | 480Y/277 | 5 | FAZ-K1,6/3N | 279005 | 1/30 |
| 2   | 415 | 15 | 480Y/277 | 5 | FAZ-K2/3N   | 279006 | 1/30 |
| 3   | 415 | 15 | 480Y/277 | 5 | FAZ-K3/3N   | 279007 | 1/30 |
| 4   | 415 | 15 | 480Y/277 | 5 | FAZ-K4/3N   | 279008 | 1/30 |
| 6   | 415 | 15 | 480Y/277 | 5 | FAZ-K6/3N   | 279009 | 1/30 |
| 8   | 415 | 15 | 480Y/277 | 5 | FAZ-K8/3N   | 279010 | 1/30 |
| 10  | 415 | 15 | 480Y/277 | 5 | FAZ-K10/3N  | 279011 | 1/30 |
| 13  | 415 | 15 | 480Y/277 | 5 | FAZ-K13/3N  | 279012 | 1/30 |
| 16  | 415 | 15 | 480Y/277 | 5 | FAZ-K16/3N  | 279013 | 1/30 |
| 20  | 415 | 15 | 480Y/277 | 5 | FAZ-K20/3N  | 279014 | 1/30 |
| 25  | 415 | 15 | 480Y/277 | 5 | FAZ-K25/3N  | 279015 | 1/30 |
| 32  | 415 | 15 | 480Y/277 | 5 | FAZ-K32/3N  | 279016 | 1/30 |
| 40  | 415 | 15 | 480Y/277 | 5 | FAZ-K40/3N  | 279017 | 1/30 |
| 50  | 415 | 15 | 480Y/277 | 5 | FAZ-K50/3N  | 279018 | 1/30 |
| 63  | 415 | 15 | 480Y/277 | 5 | FAZ-K63/3N  | 279019 | 1/30 |

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### 4-pole

|     |     |    |          |   |            |        |      |
|-----|-----|----|----------|---|------------|--------|------|
| 0.5 | 415 | 15 | 480Y/277 | 5 | FAZ-K0,5/4 | 279089 | 1/30 |
| 1   | 415 | 15 | 480Y/277 | 5 | FAZ-K1/4   | 279090 | 1/30 |
| 1.6 | 415 | 15 | 480Y/277 | 5 | FAZ-K1,6/4 | 279091 | 1/30 |
| 2   | 415 | 15 | 480Y/277 | 5 | FAZ-K2/4   | 279092 | 1/30 |
| 3   | 415 | 15 | 480Y/277 | 5 | FAZ-K3/4   | 279093 | 1/30 |
| 4   | 415 | 15 | 480Y/277 | 5 | FAZ-K4/4   | 279094 | 1/30 |
| 6   | 415 | 15 | 480Y/277 | 5 | FAZ-K6/4   | 279095 | 1/30 |
| 8   | 415 | 15 | 480Y/277 | 5 | FAZ-K8/4   | 279096 | 1/30 |
| 10  | 415 | 15 | 480Y/277 | 5 | FAZ-K10/4  | 279097 | 1/30 |
| 13  | 415 | 15 | 480Y/277 | 5 | FAZ-K13/4  | 279098 | 1/30 |
| 16  | 415 | 15 | 480Y/277 | 5 | FAZ-K16/4  | 279099 | 1/30 |
| 20  | 415 | 15 | 480Y/277 | 5 | FAZ-K20/4  | 279100 | 1/30 |
| 25  | 415 | 15 | 480Y/277 | 5 | FAZ-K25/4  | 279101 | 1/30 |
| 32  | 415 | 15 | 480Y/277 | 5 | FAZ-K32/4  | 279102 | 1/30 |
| 40  | 415 | 15 | 480Y/277 | 5 | FAZ-K40/4  | 279103 | 1/30 |
| 50  | 415 | 15 | 480Y/277 | 5 | FAZ-K50/4  | 279104 | 1/30 |
| 63  | 415 | 15 | 480Y/277 | 5 | FAZ-K63/4  | 279105 | 1/30 |

## FAZ Miniature Circuit Breakers (MCBs)

### Characteristic S

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|---------------|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
| <b>1-pole</b> |                            |                      |   |                                |  |                     |             |                         |
|               | 1                          | 240/415              | 10  | 277                            | 5  | FAZ-S1/1            | 181861      | 12                      |
|               | 2                          | 240/415              | 10  | 277                            | 5  | FAZ-S2/1            | 181862      | 12                      |
|               | 3                          | 240/415              | 10  | 277                            | 5  | FAZ-S3/1            | 181863      | 12                      |
|               | 4                          | 240/415              | 10  | 277                            | 5  | FAZ-S4/1            | 181864      | 12                      |
|               | 6                          | 240/415              | 10  | 277                            | 5  | FAZ-S6/1            | 181865      | 12                      |
|               | 10                         | 240/415              | 10  | 277                            | 5  | FAZ-S10/1           | 181866      | 12                      |
|               | 16                         | 240/415              | 10  | 277                            | 5  | FAZ-S16/1           | 181867      | 12                      |
|               | 20                         | 240/415              | 10  | 277                            | 5  | FAZ-S20/1           | 181868      | 12                      |
|               | 25                         | 240/415              | 10  | 277                            | 5  | FAZ-S25/1           | 181869      | 12                      |
|               | 32                         | 240/415              | 10  | 277                            | 5  | FAZ-S32/1           | 181870      | 12                      |
|               | 40                         | 240/415              | 10  | 277                            | 5  | FAZ-S40/1           | 181871      | 12                      |

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|               |    |     |    |          |   |           |        |   |
|---------------|----|-----|----|----------|---|-----------|--------|---|
| <b>2-pole</b> |    |     |    |          |   |           |        |   |
|               | 1  | 415 | 10 | 480Y/277 | 5 | FAZ-S1/2  | 181872 | 6 |
|               | 2  | 415 | 10 | 480Y/277 | 5 | FAZ-S2/2  | 181873 | 6 |
|               | 3  | 415 | 10 | 480Y/277 | 5 | FAZ-S3/2  | 181874 | 6 |
|               | 4  | 415 | 10 | 480Y/277 | 5 | FAZ-S4/2  | 181875 | 6 |
|               | 6  | 415 | 10 | 480Y/277 | 5 | FAZ-S6/2  | 181876 | 6 |
|               | 10 | 415 | 10 | 480Y/277 | 5 | FAZ-S10/2 | 181877 | 6 |
|               | 16 | 415 | 10 | 480Y/277 | 5 | FAZ-S16/2 | 181878 | 6 |
|               | 20 | 415 | 10 | 480Y/277 | 5 | FAZ-S20/2 | 181879 | 6 |
|               | 25 | 415 | 10 | 480Y/277 | 5 | FAZ-S25/2 | 181880 | 6 |
|               | 32 | 415 | 10 | 480Y/277 | 5 | FAZ-S32/2 | 181881 | 6 |
|               | 40 | 415 | 10 | 480Y/277 | 5 | FAZ-S40/2 | 181882 | 6 |

## FAZ Miniature Circuit Breakers (MCBs)

### Characteristic Z

| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
| <b>1-pole</b>              |                      |   |                                |  |                     |             |                         |
| 0,5                        | 240/415              | 15  | 277                            | 5  | FAZ-Z0,5/1          | 278617      | 12/120                  |
| 1                          | 240/415              | 15  | 277                            | 5  | FAZ-Z1/1            | 278618      | 12/120                  |
| 1.6                        | 240/415              | 15  | 277                            | 5  | FAZ-Z1,6/1          | 278619      | 12/120                  |
| 2                          | 240/415              | 15  | 277                            | 5  | FAZ-Z2/1            | 278620      | 12/120                  |
| 3                          | 240/415              | 15  | 277                            | 5  | FAZ-Z3/1            | 278621      | 12/120                  |
| 4                          | 240/415              | 15  | 277                            | 5  | FAZ-Z4/1            | 278622      | 12/120                  |
| 6                          | 240/415              | 15  | 277                            | 5  | FAZ-Z6/1            | 278623      | 12/120                  |
| 8                          | 240/415              | 15  | 277                            | 5  | FAZ-Z8/1            | 278624      | 12/120                  |
| 10                         | 240/415              | 15  | 277                            | 5  | FAZ-Z10/1           | 278625      | 12/120                  |
| 13                         | 240/415              | 15  | 277                            | 5  | FAZ-Z13/1           | 106020      | 12/120                  |
| 16                         | 240/415              | 15  | 277                            | 5  | FAZ-Z16/1           | 278626      | 12/120                  |
| 20                         | 240/415              | 15  | 277                            | 5  | FAZ-Z20/1           | 278627      | 12/120                  |
| 25                         | 240/415              | 15  | 277                            | 5  | FAZ-Z25/1           | 278628      | 12/120                  |
| 32                         | 240/415              | 15  | 277                            | 5  | FAZ-Z32/1           | 278629      | 12/120                  |
| 40                         | 240/415              | 15  | 277                            | 5  | FAZ-Z40/1           | 278630      | 12/120                  |
| 50                         | 240/415              | 15  | 277                            | 5  | FAZ-Z50/1           | 278631      | 12/120                  |
| 63                         | 240/415              | 15  | 277                            | 5  | FAZ-Z63/1           | 278632      | 12/120                  |

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|               |     |    |          |   |            |        |      |
|---------------|-----|----|----------|---|------------|--------|------|
| <b>2-pole</b> |     |    |          |   |            |        |      |
| 0,5           | 415 | 15 | 480Y/277 | 5 | FAZ-Z0,5/2 | 278816 | 1/60 |
| 1             | 415 | 15 | 480Y/277 | 5 | FAZ-Z1/2   | 278817 | 1/60 |
| 1.6           | 415 | 15 | 480Y/277 | 5 | FAZ-Z1,6/2 | 278818 | 1/60 |
| 2             | 415 | 15 | 480Y/277 | 5 | FAZ-Z2/2   | 278819 | 1/60 |
| 3             | 415 | 15 | 480Y/277 | 5 | FAZ-Z3/2   | 278820 | 1/60 |
| 4             | 415 | 15 | 480Y/277 | 5 | FAZ-Z4/2   | 278821 | 1/60 |
| 6             | 415 | 15 | 480Y/277 | 5 | FAZ-Z6/2   | 278822 | 1/60 |
| 8             | 415 | 15 | 480Y/277 | 5 | FAZ-Z8/2   | 278823 | 1/60 |
| 10            | 415 | 15 | 480Y/277 | 5 | FAZ-Z10/2  | 278824 | 1/60 |
| 13            | 415 | 15 | 480Y/277 | 5 | FAZ-Z13/2  | 106021 | 1/60 |
| 16            | 415 | 15 | 480Y/277 | 5 | FAZ-Z16/2  | 278825 | 1/60 |
| 20            | 415 | 15 | 480Y/277 | 5 | FAZ-Z20/2  | 278826 | 1/60 |
| 25            | 415 | 15 | 480Y/277 | 5 | FAZ-Z25/2  | 278827 | 1/60 |
| 32            | 415 | 15 | 480Y/277 | 5 | FAZ-Z32/2  | 278828 | 1/60 |
| 40            | 415 | 15 | 480Y/277 | 5 | FAZ-Z40/2  | 278829 | 1/60 |
| 50            | 415 | 15 | 480Y/277 | 5 | FAZ-Z50/2  | 278830 | 1/60 |
| 63            | 415 | 15 | 480Y/277 | 5 | FAZ-Z63/2  | 278831 | 1/60 |

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### 3-pole

| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
| 0.5                        | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z0,5/3          | 278918      | 1/40                    |
| 1                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z1/3            | 278919      | 1/40                    |
| 1.6                        | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z1,6/3          | 278920      | 1/40                    |
| 2                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z2/3            | 278921      | 1/40                    |
| 3                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z3/3            | 278922      | 1/40                    |
| 4                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z4/3            | 278923      | 1/40                    |
| 6                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z6/3            | 278924      | 1/40                    |
| 8                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z8/3            | 278925      | 1/40                    |
| 10                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z10/3           | 278926      | 1/40                    |
| 13                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z13/3           | 106022      | 1/40                    |
| 16                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z16/3           | 278927      | 1/40                    |
| 20                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z20/3           | 278928      | 1/40                    |
| 25                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z25/3           | 278929      | 1/40                    |
| 32                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z32/3           | 278930      | 1/40                    |
| 40                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z40/3           | 278931      | 1/40                    |
| 50                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z50/3           | 278932      | 1/40                    |
| 63                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z63/3           | 278933      | 1/40                    |

SG55812



### 4-pole

| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
| 0.5                        | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z0,5/4          | 279106      | 1/60                    |
| 1                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z1/4            | 279107      | 1/60                    |
| 1.6                        | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z1,6/4          | 279108      | 1/60                    |
| 2                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z2/4            | 279109      | 1/60                    |
| 3                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z3/4            | 279110      | 1/60                    |
| 4                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z4/4            | 279111      | 1/60                    |
| 6                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z6/4            | 279112      | 1/60                    |
| 8                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z8/4            | 279113      | 1/60                    |
| 10                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z10/4           | 279114      | 1/60                    |
| 13                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z13/4           | 106023      | 1/60                    |
| 16                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z16/4           | 279115      | 1/60                    |
| 20                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z20/4           | 279116      | 1/60                    |
| 25                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z25/4           | 279117      | 1/60                    |
| 32                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z32/4           | 279118      | 1/60                    |
| 40                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z40/4           | 279119      | 1/60                    |
| 50                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z50/4           | 279120      | 1/60                    |
| 63                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z63/4           | 279121      | 1/60                    |



## FAZ-PN Miniature Circuit Breakers (MCBs)

### Characteristic B

| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|---|---------------------|-------------|-------------------------|
| <b>1+N-pole (1MU)</b>      |                      |   |   |                     |             |                         |
| 6                          | 240                  | 6   | 10  | FAZ-PN-B6/1N        | 279146      | 12/120                  |
| 10                         | 240                  | 6   | 10  | FAZ-PN-B10/1N       | 279147      | 12/120                  |
| 13                         | 240                  | 6   | 10  | FAZ-PN-B13/1N       | 279148      | 12/120                  |
| 16                         | 240                  | 6   | 10  | FAZ-PN-B16/1N       | 279149      | 12/120                  |
| 20                         | 240                  | 6   | 10  | FAZ-PN-B20/1N       | 279150      | 12/120                  |
| 25                         | 240                  | 6   | 10  | FAZ-PN-B25/1N       | 279151      | 12/120                  |
| 32                         | 240                  | 6   | 10  | FAZ-PN-B32/1N       | 279152      | 12/120                  |
| 40                         | 240                  | 6   | 10  | FAZ-PN-B40/1N       | 279153      | 12/120                  |

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## FAZ-PN Miniature Circuit Breakers (MCBs)

### Characteristic C



| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|---|---------------------|-------------|-------------------------|
| <b>1+N-pole (1MU)</b>      |                      |   |   |                     |             |                         |
| 2                          | 240                  | 6   | 10  | FAZ-PN-C2/1N        | 279154      | 12/120                  |
| 4                          | 240                  | 6   | 10  | FAZ-PN-C4/1N        | 279155      | 12/120                  |
| 6                          | 240                  | 6   | 10  | FAZ-PN-C6/1N        | 279156      | 12/120                  |
| 10                         | 240                  | 6   | 10  | FAZ-PN-C10/1N       | 279157      | 12/120                  |
| 13                         | 240                  | 6   | 10  | FAZ-PN-C13/1N       | 279158      | 12/120                  |
| 16                         | 240                  | 6   | 10  | FAZ-PN-C16/1N       | 279159      | 12/120                  |
| 20                         | 240                  | 6   | 10  | FAZ-PN-C20/1N       | 279160      | 12/120                  |
| 25                         | 240                  | 6   | 10  | FAZ-PN-C25/1N       | 279161      | 12/120                  |
| 32                         | 240                  | 6   | 10  | FAZ-PN-C32/1N       | 279162      | 12/120                  |
| 40                         | 240                  | 6   | 10  | FAZ-PN-C40/1N       | 279163      | 12/120                  |

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## FAZ-...-HS Miniature Circuit Breakers (MCBs)

### Characteristic B

|  | Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|--|----------------------------|----------------------|---|---------------------|-------------|-------------------------|
| <b>1-pole</b>  |                            |                      |   |                     |             |                         |
|  wa_sg00114 | 4                          | 240                  | 10  | FAZ-B4/1-HS         | 279274      | 12/120                  |
| <b>2-pole</b>  |                            |                      |   |                     |             |                         |
|  SG55512    | 4                          | 240                  | 10  | FAZ-B4/2-HS         | 279275      | 1/60                    |

## FAZ Miniature Circuit Breakers

### Accessories:

|   |              |                        |
|---|--------------|------------------------|
| Auxiliary switch for subsequent installation        | ZP-IHK       | 286052                 |
| Auxiliary switch for subsequent installation        | ZP-WHK       | 286053                 |
| Tripping signal contact for subsequent installation | ZP-NHK       | 248437                 |
| Shunt trip release                                  | ZP-ASA       | 248438, 248439         |
| Undervoltage release                                | Z-USA        | 258288, 248289, 248290 |
|   | Z-USD        | 248292, 248291         |
| Switching interlock                                 | Z-IS/SPE-1TE | 274418                 |
| Terminal cover                                      |              |                        |
| 1-pole  | Z7-AK-1TE    | 750754200              |
| 2-pole  | Z-CV/SD-2P   | 221954800              |
| 3-pole  | Z-CV/SD-3P   | 221954900              |
| 4-pole  | Z-CV/SD-4P   | 221953900              |

## Specifications FAZ

### Technical data

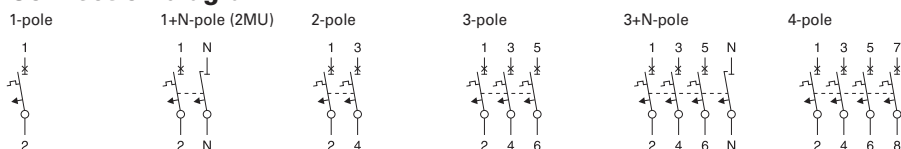
|  | B Curve  | C Curve   | D Curve   |
|--|--|---|---|
| <b>Electrical</b>                        |  |   |   |
| Approvals                                | UR (UL 1077), CSA (CSA 22.2 No. 235), CE, CB (Not for D50 and D63) |   |   |
| Standards                                | IEC/EN 60947-2   |   |   |
| Short-circuit trip response              | 3–5 $I_n$  | 5–10 $I_n$  | 10–20 $I_n$   |
| <b>Supplementary Protectors – UL/CSA</b> |  |   |   |
| Current range                            | 1–63A  | 0.5–63A   | 0.5–40A   |
| Maximum voltage ratings – UL/CSA         |  |   |   |
| Single-pole                              | 277 Vac<br>48 Vdc  | 277 Vac<br>48 Vdc   | 277 Vac<br>48 Vdc   |
| Two-, three-pole                         | 480Y/277 Vac   | 480Y/277 Vac  | 480Y/277 Vac  |
| Two poles in series                      | 96 Vdc   | 96 Vdc  | 96 Vdc  |
| Thermal tripping characteristics         |  |   |   |
| Single-pole                              | < 1 hour @ 1.35 x $I_n$ @ 40°C                                     | < 1 hour @ 1.35 x $I_n$ @ 40°C                                  | < 1 hour @ 1.35 x $I_n$ @ 40°C                                  |
| Multi-pole                               | < 1 hour @ 1.45 x $I_n$ @ 40°C                                     | < 1 hour @ 1.45 x $I_n$ @ 40°C                                  | < 1 hour @ 1.45 x $I_n$ @ 40°C                                  |
| Short-circuit ratings (at max. voltage)  |  |   |   |
| Single-pole                              | 10 kA (5 kA for 40–63A device)                                     | 10 kA (5 kA for 40–63A device)                                  | 5 kA  |
| Two-, three-pole                         | 10 kA (5 kA for 40–63A device)                                     | 10 kA (5 kA for 40–63A device)                                  | 5 kA  |
| Single-pole                              | 10 kA @ 48 Vdc   | 10 kA @ 48 Vdc  | 10 kA @ 48 Vdc  |
| Two poles in series                      | 10 kA @ 96 Vdc   | 10 kA @ 96 Vdc  | 10 kA @ 96 Vdc  |
| <b>Miniature Circuit Breaker – IEC</b>   |  |   |   |
| Current range                            | 1–63A  | 0.5–63A   | 0.5–63A   |
| Maximum voltage ratings – IEC 60947-2    |  |   |   |
| Single-pole                              | 230 Vac<br>60 Vdc  | 230 Vac<br>60 Vdc   | 230 Vac<br>60 Vdc   |
| Two-, three-pole                         | 230/400 Vac  | 230/400 Vac   | 230/400 Vac   |
| Maximum Voltage Ratings – IEC 60898      |  |   |   |
| Single-pole                              | 240 Vac  | 240 Vac   | 240 Vac   |
| Two-, three-pole                         | 240/415 Vac  | 240/415 Vac   | 240/415 Vac   |
| Thermal tripping characteristics         |  |   |   |
|  | > 1 hour @ 1.05 x $I_n$ @ 40°C<br>< 1 hour @ 1.3 x $I_n$ @ 40°C    | > 1 hour @ 1.05 x $I_n$ @ 40°C<br>< 1 hour @ 1.3 x $I_n$ @ 40°C | > 1 hour @ 1.05 x $I_n$ @ 40°C<br>< 1 hour @ 1.3 x $I_n$ @ 40°C |
| Interrupt ratings (at max. voltage)      |  |   |   |
| IEC 60947-2                              | 15 kA  | 15 kA   | 15 kA (type D50 and D63: 10kA)                                  |
| IEC 60898                                | 10 kA  | 10 kA   | 10 kA (type D50 and D63: 6kA)                                   |
| Operational switching capacity           | 7.5 kA   | 7.5 kA  | 7.5 kA (type D50 and D63: 6kA)                                  |
| Max. back-up fuse [gL/gG]                | 125A   | 125A  | 125A  |
| Rated impulse withstand – $U_{imp}$      | 4000 Vac   | 4000 Vac  | 4000 Vac  |
| Rated insulation voltage – $U_i$         | 440 Vac  | 440 Vac   | 440 Vac   |
| <b>Environmental/General</b>             |  |   |   |
| Selectivity class                        | 3  | 3   | 3   |
| Lifespan (operations)                    | > 10000 (1 operation = ON/OFF)                                     | > 10000 (1 operation = ON/OFF)                                  | > 10000 (1 operation = ON/OFF)                                  |
| Shock (IEC 68-2-22)                      | 10g–120 ms   | 10g–120 ms  | 10g–120 ms  |
| Operating temperature range              | -40 to +75°C   | -40 to +75°C  | -40 to +75°C  |
| <b>Mechanical</b>                        |  |   |   |
| Standard front dimension                 |  |   |   |
| Device height                            | 80 mm  | 80 mm   | 80 mm   |
| Terminal protection                      | Finger and back-of-hand proof                                      | Finger and back-of-hand proof                                   | Finger and back-of-hand proof                                   |
| Mounting width per pole                  | 17.5 mm  | 17.5 mm   | 17.5 mm   |
| Mounting                                 | IEC/EN 60715 top-hat rail  | IEC/EN 60715 top-hat rail                                       | IEC/EN 60715 top-hat rail                                       |
| Degree of protection                     | IP20   | IP20  | IP20  |
| Terminals top and bottom                 | Twin-purpose terminals   | Twin-purpose terminals  | Twin-purpose terminals  |
| Supply connection                        | Line or load side  | Line or load side   | Line or load side   |
| Terminal capacity [mm <sup>2</sup> ]     | 1 x 25 / 2 x 10  | 1 x 25 / 2 x 10   | 1 x 25 / 2 x 10   |
| Torque                                   | 2.4 Nm   | 2.4 Nm  | 2.4 Nm  |
| Thickness of busbar material             | 0.8–2 mm   | 0.8–2 mm  | 0.8–2 mm  |
| Mounting position                        | As required  | As required   | As required   |

## Specifications FAZ

### Technical Data (continued)

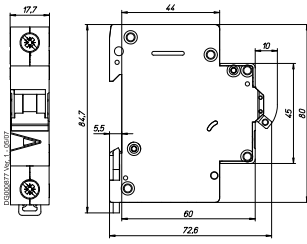
|  | K Curve   | S Curve   | Z Curve   |
|--|---|---|---|
| <b>Electrical</b>                                |   |   |   |
| Approvals  | UR (UL 1077), CE  | UR (UL 1077), CSA (CSA 22.2 No. 235) for 1-16 A, CE, CB         | UR (UL 1077), CE  |
| Standards  | IEC/EN 60947-2  |   |   |
| Short-circuit trip response                      | 8–12 $I_n$  | 13–17 $I_n$   | 2–3 $I_n$   |
| <b>Supplementary Protectors—UL/CSA</b>           |   |   |   |
| Current range                                    | 0.5–63A   | 0.5–40A   | 1–63A   |
| Maximum voltage ratings—UL/CSA                   |   |   |   |
| Single-pole, single-pole + neutral               | 277 Vac<br>48 Vdc   | 277 Vac<br>48 Vdc   | 277 Vac<br>48 Vdc   |
| Two-, three-, four-pole and three-pole + neutral | 480Y/277 Vac  | 480Y/277 Vac  | 480Y/277 Vac  |
| Two poles in series                              | 96 Vdc  | 96 Vdc  | 96 Vdc  |
| Thermal tripping characteristics                 |   |   |   |
| Single-pole                                      | < 1 hour @ 1.35 x $I_n$ @ 40°C                                  | < 1 hour @ 1.35 x $I_n$ @ 40°C                                  | < 1 hour @ 1.35 x $I_n$ @ 40°C                                  |
| Multi-pole                                       | < 1 hour @ 1.45 x $I_n$ @ 40°C                                  | < 1 hour @ 1.45 x $I_n$ @ 40°C                                  | < 1 hour @ 1.45 x $I_n$ @ 40°C                                  |
| Short-circuit ratings (at max. voltage)          |   |   |   |
| Single-pole                                      | 5 kA @ 277 Vac  | 5 kA @ 277 Vac  | 5 kA @ 277 Vac  |
| Single-pole + neutral                            | 5 kA @ 277 Vac  | 5 kA @ 277 Vac  | 5 kA @ 277 Vac  |
| Two-, three-, four-pole                          | 5 kA @ 480Y/277 Vac   | 5 kA @ 480Y/277 Vac   | 5 kA @ 480Y/277 Vac   |
| <b>Miniature Circuit Breaker—IEC</b>             |   |   |   |
| Current range                                    | 0.5–63A   | 0.5–40A   | 1–63A   |
| Maximum voltage ratings—IEC 60947-2              |   |   |   |
| Single-pole, single-pole + neutral               | 240 Vac   | 240 Vac   | 240 Vac   |
| Single-pole                                      | 60 Vdc  | 60 Vdc  | 60 Vdc  |
| Two-, three-, four-pole, three-pole + neutral    | 240/415 Vac   | 240/415 Vac   | 240/415 Vac   |
| Thermal tripping characteristics                 |   |   |   |
|  | > 1 hour @ 1.05 x $I_n$ @ 30°C<br>< 1 hour @ 1.3 x $I_n$ @ 30°C | > 1 hour @ 1.05 x $I_n$ @ 30°C<br>< 1 hour @ 1.3 x $I_n$ @ 30°C | > 1 hour @ 1.05 x $I_n$ @ 30°C<br>< 1 hour @ 1.3 x $I_n$ @ 30°C |
| Interrupt ratings (at max. voltage)              |   |   |   |
| IEC 60947-2                                      | 15 kA   | 10 kA   | 10 kA   |
| Operational switching capacity                   | 7.5 kA  | 7.5 kA  | 7.5 kA  |
| Max. back-up fuse [gL/gG]                        | 125A  | 125A  | 125A  |
| Rated impulse withstand— $U_{imp}$               | 4000 Vac  | 4000 Vac  | 4000 Vac  |
| Rated insulation voltage— $U_i$                  | 440 Vac   | 440 Vac   | 440 Vac   |
| <b>Environmental/General</b>                     |   |   |   |
| Selectivity class                                | 3   | 3   | 3   |
| Lifespan (operations)                            | > 10000 (1 operation = ON/OFF)                                  | > 10000 (1 operation = ON/OFF)                                  | > 10000 (1 operation = ON/OFF)                                  |
| Shock (IEC 68-2-22)                              | 10g–120 ms  | 10g–120 ms  | 10g–120 ms  |
| Operating temperature range                      | -40°C to +75°C  | -40°C to +75°C  | -40°C to +75°C  |
| <b>Mechanical</b>                                |   |   |   |
| Standard front dimension                         |   |   |   |
| Device height                                    | 80 mm   | 80 mm   | 80 mm   |
| Terminal protection                              | Finger and back-of-hand proof                                   | Finger and back-of-hand proof                                   | Finger and back-of-hand proof                                   |
| Mounting width per pole                          | 17.5 mm   | 17.5 mm   | 17.5 mm   |
| Mounting   |   |   |   |
| Degree of protection                             | IP20  | IP20  | IP20  |
| Terminals top and bottom                         | Twin-purpose terminals  | Twin-purpose terminals  | Twin-purpose terminals  |
| Supply connection                                | Line or load side   | Line or load side   | Line or load side   |
| Terminal capacity [mm <sup>2</sup> ]             | 1 x 25 / 2 x 10   | 1 x 25 / 2 x 10   | 1 x 25 / 2 x 10   |
| Torque   | 2.4 Nm  | 2.4 Nm  | 2.4 Nm  |
| Thickness of busbar material                     | 0.8–2 mm  | 0.8–2 mm  | 0.8–2 mm  |
| Mounting position                                | As required   | As required   | As required   |

### Connection diagram

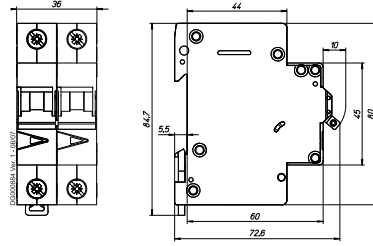


## Dimensions (mm) FAZ

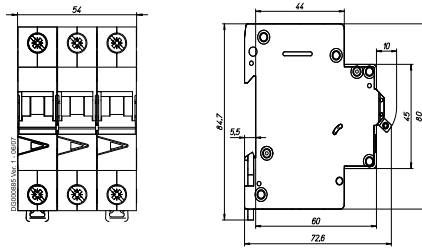
1-pole



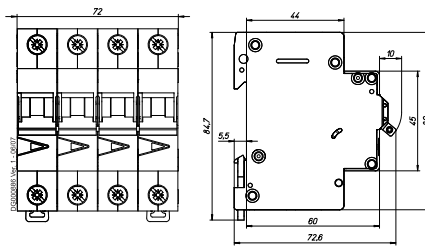
1+N-pole, 2-pole



3-pole

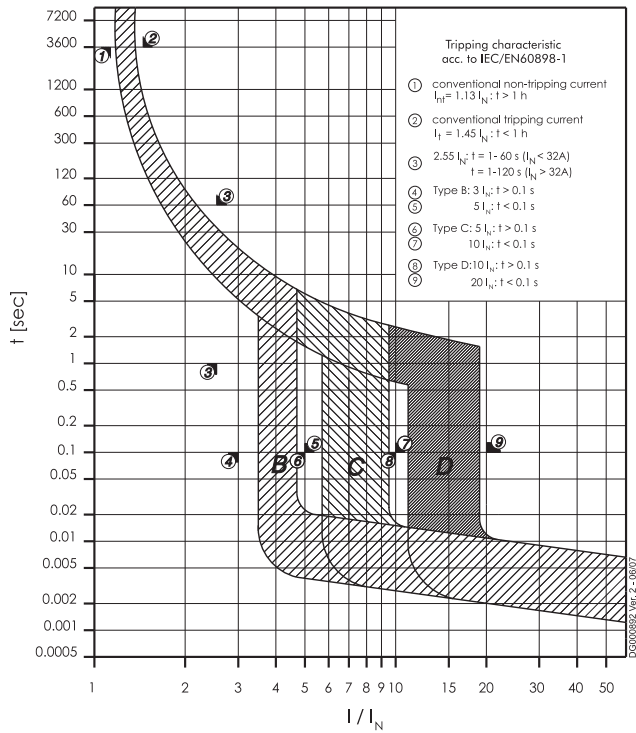


3+N-pole, 4-pole

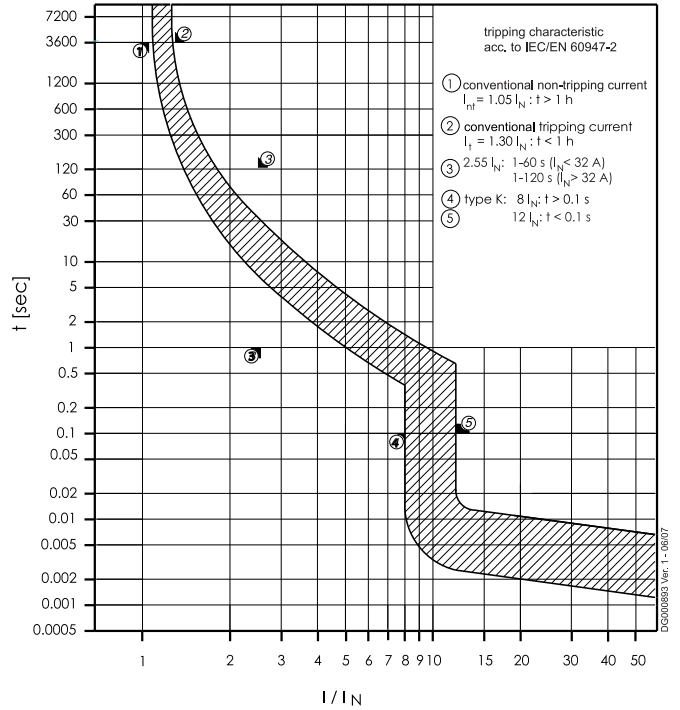


## Tripping Characteristic FAZ

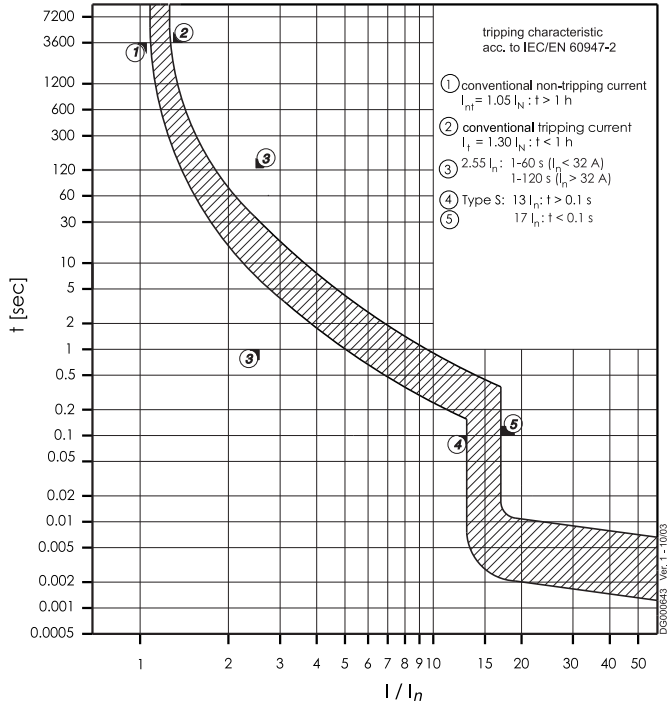
### Characteristics B, C and D - IEC/EN60898-1



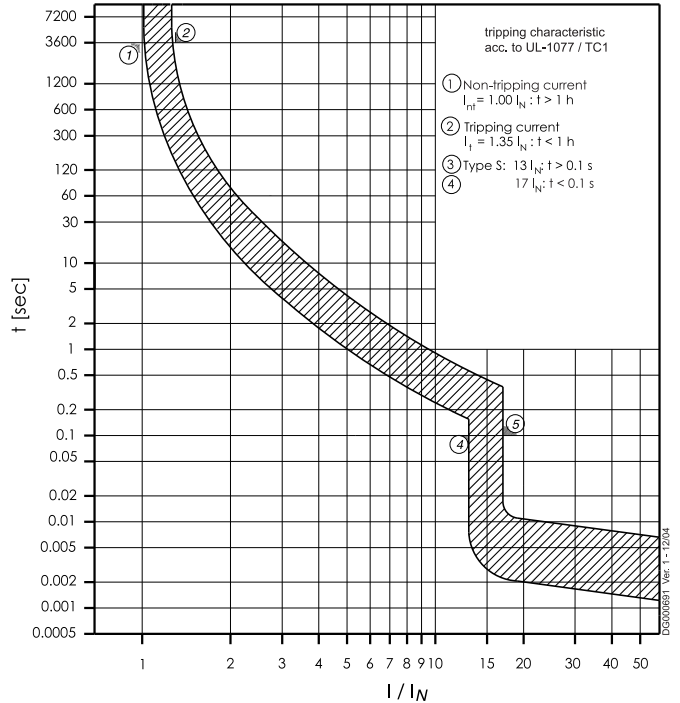
### Characteristic K - IEC/EN 60947-2



### Characteristic S - IEC/EN 60947-2

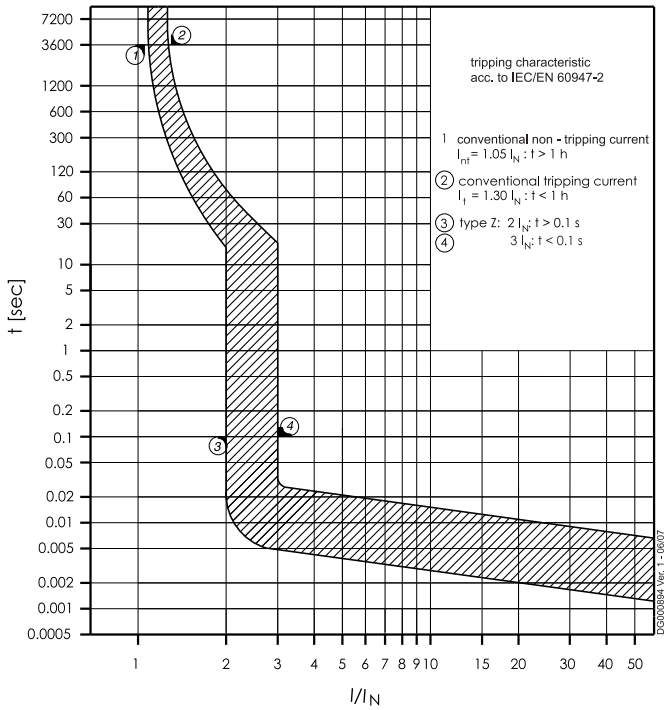


### Characteristic S - UL1077

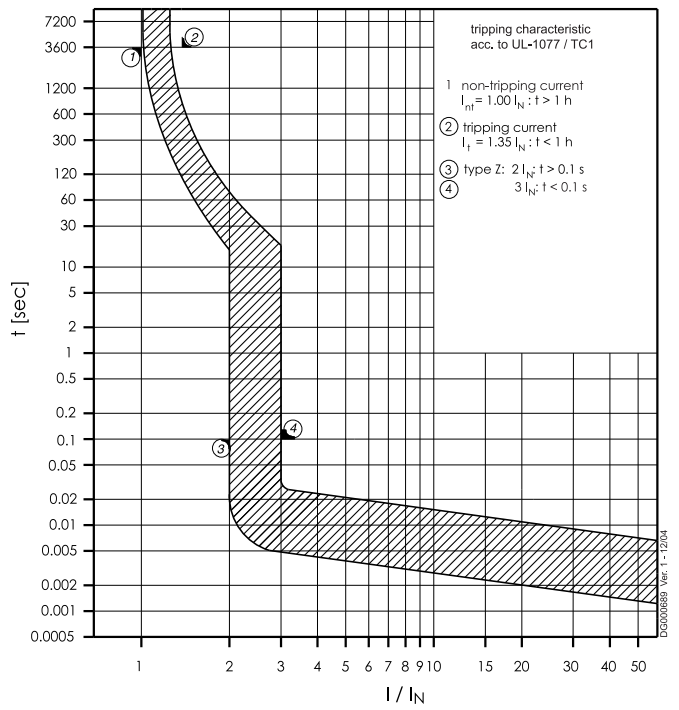


## Tripping Characteristic FAZ

Characteristic Z - IEC/EN 60947-2



Characteristic Z - UL1077



## Internal Resistance FAZ

### Type B

At room temperature (single pole)

| In [A] | Z* [mΩ] | R [mΩ] |
|--------|---------|--------|
| 1      | 1120    | 1102   |
| 1.5    | 922     | 912    |
| 1.6    | 922     | 912    |
| 2      | 335     | 333    |
| 2.5    | 234     | 230    |
| 3      | 211     | 208    |
| 3.5    | 184     | 180    |
| 4      | 87.7    | 87.2   |
| 5      | 73.5    | 72.8   |
| 6      | 46.8    | 46.3   |
| 8      | 30.5    | 30.4   |
| 10     | 17.5    | 17.4   |
| 12     | 16.9    | 16.8   |
| 13     | 13.4    | 13.3   |
| 15     | 8.0     | 7.9    |
| 16     | 8.0     | 7.9    |
| 20     | 7.2     | 7.1    |
| 25     | 5.0     | 4.9    |
| 32     | 3.7     | 3.7    |
| 40     | 2.6     | 2.5    |
| 50     | 2.1     | 2.1    |
| 63     | 2.0     | 2.0    |

\* 50Hz

### Type C

At room temperature (single pole)

| In [A] | Z* [mΩ] | R [mΩ] |
|--------|---------|--------|
| 0.16   | 68500   | 68300  |
| 0.25   | 27500   | 27400  |
| 0.5    | 4680    | 4670   |
| 0.75   | 2280    | 2250   |
| 1      | 1120    | 1100   |
| 1.5    | 589     | 587    |
| 1.6    | 589     | 587    |
| 2      | 335     | 333    |
| 2.5    | 234     | 230    |
| 3      | 131     | 130    |
| 3.5    | 143     | 141    |
| 4      | 87.7    | 87.2   |
| 5      | 73.5    | 72.8   |
| 6      | 39.3    | 39.1   |
| 8      | 30.5    | 30.4   |
| 10     | 14.1    | 14.0   |
| 12     | 13.5    | 13.4   |
| 13     | 13.4    | 13.3   |
| 15     | 8.0     | 7.9    |
| 16     | 8.0     | 7.9    |
| 20     | 7.2     | 7.1    |
| 25     | 5.0     | 4.9    |
| 32     | 3.7     | 3.7    |
| 40     | 2.6     | 2.5    |
| 50     | 2.1     | 2.1    |
| 63     | 2.0     | 2.0    |

\* 50Hz

### Type D

At room temperature (single pole)

| In [A] | Z* [mΩ] | R [mΩ] |
|--------|---------|--------|
| 0.5    | 4680    | 4670   |
| 1      | 772     | 770    |
| 1.5    | 512     | 508    |
| 1.6    | 512     | 508    |
| 2      | 250     | 249    |
| 2.5    | 153     | 153    |
| 3      | 131     | 130    |
| 3.5    | 143     | 141    |
| 4      | 87.7    | 87.2   |
| 5      | 65.4    | 65.1   |
| 6      | 39.3    | 39.1   |
| 8      | 19.5    | 19.5   |
| 10     | 14.1    | 14.0   |
| 12     | 11.3    | 11.2   |
| 13     | 10.1    | 10.1   |
| 15     | 8.0     | 7.9    |
| 16     | 8.0     | 7.9    |
| 20     | 4.9     | 4.9    |
| 25     | 3.9     | 3.8    |
| 32     | 3.5     | 3.4    |
| 40     | 2.7     | 2.6    |

\* 50Hz



## Fault Loop Impedance FAZ

Max. allowed value for the Fault Loop Impedance  $Z_s$   
(acc. to DIN VDE 0100, part 410)

$$U_0 = 230 \text{ V}$$

| Tripping time<br>$I_n/A$ | Type B                 |                      | Type C                 |                      | Type D                 |                      |
|--------------------------|------------------------|----------------------|------------------------|----------------------|------------------------|----------------------|
|                          | 0,4s<br>$Z_s (\Omega)$ | 5s<br>$Z_s (\Omega)$ | 0,4s<br>$Z_s (\Omega)$ | 5s<br>$Z_s (\Omega)$ | 0,4s<br>$Z_s (\Omega)$ | 5s<br>$Z_s (\Omega)$ |
| 1                        | 40,4                   | 40,4                 | 24,3                   | 40,4                 | 12,4                   | 40,4                 |
| 1.5                      | 26,9                   | 26,9                 | 16,2                   | 26,9                 | 8,3                    | 26,9                 |
| 2                        | 20,2                   | 20,2                 | 12,2                   | 20,2                 | 6,2                    | 20,2                 |
| 2.5                      | 16,1                   | 16,1                 | 9,7                    | 16,1                 | 5,0                    | 16,1                 |
| 3                        | 13,5                   | 13,5                 | 8,1                    | 13,5                 | 4,1                    | 13,5                 |
| 3.5                      | 11,5                   | 11,5                 | 7,0                    | 11,5                 | 3,6                    | 11,5                 |
| 4                        | 10,1                   | 10,1                 | 6,1                    | 10,1                 | 3,1                    | 10,1                 |
| 5                        | 8,1                    | 8,1                  | 4,9                    | 8,1                  | 2,5                    | 8,1                  |
| 6                        | 6,7                    | 6,7                  | 4,1                    | 6,7                  | 2,1                    | 6,7                  |
| 8                        | 5,0                    | 5,0                  | 3,0                    | 5,0                  | 1,6                    | 5,0                  |
| 10                       | 4,0                    | 4,0                  | 2,4                    | 4,0                  | 1,2                    | 4,0                  |
| 12                       | 3,4                    | 3,4                  | 2,0                    | 3,4                  | 1,0                    | 3,4                  |
| 13                       | 3,1                    | 3,1                  | 1,9                    | 3,1                  | 1,0                    | 3,1                  |
| 15                       | 2,7                    | 2,7                  | 1,6                    | 2,7                  | 0,8                    | 2,7                  |
| 16                       | 2,5                    | 2,5                  | 1,5                    | 2,5                  | 0,8                    | 2,5                  |
| 20                       | 2,0                    | 2,0                  | 1,2                    | 2,0                  | 0,6                    | 2,0                  |
| 25                       | 1,6                    | 1,6                  | 1,0                    | 1,6                  | 0,5                    | 1,6                  |
| 32                       | 1,3                    | 1,3                  | 0,8                    | 1,3                  | 0,4                    | 1,3                  |
| 40                       | 1,0                    | 1,0                  | 0,6                    | 1,0                  | 0,3                    | 1,0                  |
| 50                       | 0,8                    | 0,8                  | 0,5                    | 0,8                  | 0,2                    | 0,8                  |
| 63                       | 0,6                    | 0,6                  | 0,4                    | 0,6                  | 0,2                    | 0,6                  |

$$Z_s = R_{M.C.B.} + R_{Loop}$$

Data/factors taken from the time-current characteristic FAZ

For other rated voltages  $U_0$ :

$$U_0 = 240 \text{ V: } Z_s * 1,04 \text{ applies}$$

$$U_0 = 127 \text{ V: } Z_s * 0,55 \text{ applies}$$

## Power Loss at $I_n$ FAZ

### Type B

| $I_n$ [A] | 1p<br>P [W] | 1pN<br>P [W] | 2p<br>P [W] | 3p<br>P [W] | 3pN*<br>P [W] |
|-----------|-------------|--------------|-------------|-------------|---------------|
| 1         | 1.6         | 1.7          | 3.1         | 4.7         | 4.8           |
| 1.5       | 2.3         | 2.5          | 4.6         | 6.9         | 7.2           |
| 1.6       | 2.5         | 2.7          | 4.9         | 7.4         | 7.6           |
| 2         | 1.4         | 1.5          | 2.8         | 4.1         | 4.3           |
| 2.5       | 1.5         | 1.7          | 3.1         | 4.6         | 4.7           |
| 3         | 2.5         | 2.7          | 5.0         | 7.6         | 7.8           |
| 3.5       | 2.5         | 2.8          | 5.1         | 7.8         | 8.0           |
| 4         | 1.4         | 1.6          | 2.9         | 4.4         | 4.5           |
| 5         | 1.9         | 2.1          | 3.8         | 5.8         | 6.0           |
| 6         | 1.8         | 2.0          | 3.6         | 5.5         | 5.6           |
| 8         | 2.1         | 2.3          | 4.1         | 6.3         | 6.5           |
| 10        | 1.9         | 2.1          | 3.9         | 5.9         | 6.1           |
| 12        | 2.8         | 3.2          | 5.9         | 8.7         | 9.0           |
| 13        | 2.5         | 2.9          | 5.3         | 7.8         | 8.1           |
| 15        | 2.1         | 2.4          | 4.4         | 6.5         | 6.7           |
| 16        | 2.2         | 2.6          | 4.7         | 6.9         | 7.2           |
| 20        | 3.2         | 3.6          | 6.6         | 9.8         | 10.1          |
| 25        | 3.0         | 3.5          | 6.4         | 9.4         | 9.7           |
| 32        | 3.7         | 4.4          | 8.1         | 12.1        | 12.5          |
| 40        | 3.4         | 4.1          | 7.5         | 11.2        | 11.5          |
| 50        | 4.5         | 5.4          | 9.9         | 14.9        | 15.3          |
| 63        | 5.2         | 6.3          | 11.5        | 17.2        | 17.7          |

\*symmetrical load

### Type C

| $I_n$ [A] | 1p<br>P [W] | 1pN<br>P [W] | 2p<br>P [W] | 3p<br>P [W] | 3pN*<br>P [W] |
|-----------|-------------|--------------|-------------|-------------|---------------|
| 0.16      | 2.2         | 2.4          | 4.4         | 6.7         | 6.9           |
| 0.25      | 2.0         | 2.2          | 4.0         | 6.1         | 6.3           |
| 0.5       | 1.2         | 1.3          | 2.4         | 3.5         | 3.7           |
| 0.75      | 1.3         | 1.4          | 2.6         | 3.9         | 4.1           |
| 1         | 1.6         | 1.7          | 3.1         | 4.7         | 4.8           |
| 1.5       | 1.5         | 1.6          | 2.9         | 4.4         | 4.6           |
| 1.6       | 1.6         | 1.7          | 3.1         | 4.7         | 4.9           |
| 2         | 1.4         | 1.5          | 2.8         | 4.1         | 4.3           |
| 2.5       | 1.5         | 1.7          | 3.1         | 4.6         | 4.7           |
| 3         | 1.2         | 1.3          | 2.4         | 3.6         | 3.7           |
| 3.5       | 1.3         | 1.4          | 2.6         | 3.9         | 4.0           |
| 4         | 1.4         | 1.6          | 2.9         | 4.4         | 4.5           |
| 5         | 1.9         | 2.1          | 3.8         | 5.8         | 6.0           |
| 6         | 1.5         | 1.6          | 2.9         | 4.4         | 4.6           |
| 8         | 2.1         | 2.3          | 4.1         | 6.3         | 6.5           |
| 10        | 1.5         | 1.7          | 3.0         | 4.6         | 4.7           |
| 12        | 2.1         | 2.4          | 4.4         | 6.5         | 6.8           |
| 13        | 2.5         | 2.9          | 5.3         | 7.8         | 8.1           |
| 15        | 2.1         | 2.4          | 4.4         | 6.5         | 6.7           |
| 16        | 2.2         | 2.6          | 4.7         | 6.9         | 7.2           |
| 20        | 3.2         | 3.6          | 6.6         | 9.8         | 10.1          |
| 25        | 3.0         | 3.5          | 6.4         | 9.4         | 9.7           |
| 32        | 3.7         | 4.4          | 8.1         | 12.1        | 12.5          |
| 40        | 3.4         | 4.1          | 7.5         | 11.2        | 11.5          |
| 50        | 4.5         | 5.4          | 9.9         | 14.9        | 15.3          |
| 63        | 5.2         | 6.3          | 11.5        | 17.2        | 17.7          |

\*symmetrical load

### Type D

| $I_n$ [A] | 1p<br>P [W] | 1pN<br>P [W] | 2p<br>P [W] | 3p<br>P [W] | 3pN*<br>P [W] |
|-----------|-------------|--------------|-------------|-------------|---------------|
| 0.5       | 1.2         | 1.3          | 2.4         | 3.5         | 3.7           |
| 1         | 0.8         | 0.9          | 1.6         | 2.4         | 2.5           |
| 1.5       | 1.2         | 1.3          | 2.3         | 3.5         | 3.6           |
| 1.6       | 1.3         | 1.4          | 2.5         | 3.8         | 3.9           |
| 2         | 1.0         | 1.1          | 2.0         | 3.0         | 3.1           |
| 2.5       | 1.0         | 1.1          | 1.9         | 2.9         | 3.0           |
| 3         | 1.2         | 1.3          | 2.4         | 3.6         | 3.7           |
| 3.5       | 1.3         | 1.4          | 2.6         | 3.9         | 4.0           |
| 4         | 1.4         | 1.6          | 2.9         | 4.4         | 4.5           |
| 5         | 1.7         | 1.8          | 3.3         | 5.1         | 5.3           |
| 6         | 1.5         | 1.6          | 2.9         | 4.4         | 4.6           |
| 8         | 1.3         | 1.5          | 2.6         | 4.0         | 4.2           |
| 10        | 1.5         | 1.7          | 3.0         | 4.6         | 4.7           |
| 12        | 1.7         | 2.0          | 3.6         | 5.3         | 5.4           |
| 13        | 1.9         | 2.2          | 4.0         | 5.9         | 6.1           |
| 15        | 2.1         | 2.4          | 4.4         | 6.5         | 6.7           |
| 16        | 2.2         | 2.6          | 4.7         | 6.9         | 7.2           |
| 20        | 2.0         | 2.2          | 4.1         | 6.1         | 6.2           |
| 25        | 2.5         | 2.9          | 5.2         | 7.7         | 7.9           |
| 32        | 3.4         | 4.0          | 7.4         | 11.1        | 11.4          |
| 40        | 3.2         | 3.8          | 7.0         | 10.4        | 10.7          |

\*symmetrical load

## Influence of Ambient Temperature FAZ

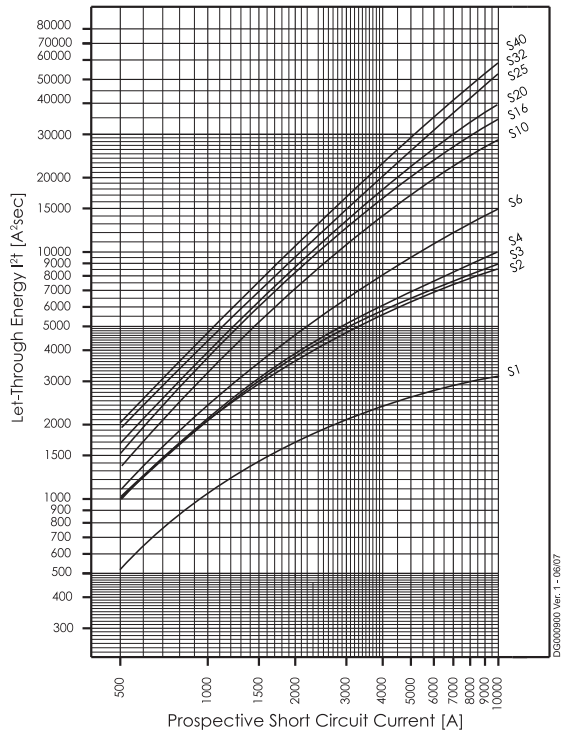
On Load Carrying Capacity (temperature derating)

| I <sub>N</sub> [A] | Ambient temperature T [°C] |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------|----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                    | -40                        | -30  | -20  | -10  | 0    | 10   | 20   | 30   | 35   | 40   | 45   | 50   | 55   | 60   | 65   | 70   | 75   |
| 0.16               | 0.2                        | 0.2  | 0.19 | 0.19 | 0.18 | 0.17 | 0.17 | 0.16 | 0.16 | 0.15 | 0.15 | 0.15 | 0.14 | 0.14 | 0.14 | 0.14 | 0.13 |
| 0.25               | 0.32                       | 0.31 | 0.3  | 0.29 | 0.28 | 0.27 | 0.26 | 0.25 | 0.25 | 0.24 | 0.24 | 0.23 | 0.23 | 0.22 | 0.22 | 0.21 | 0.21 |
| 0.5                | 0.64                       | 0.62 | 0.6  | 0.58 | 0.56 | 0.54 | 0.52 | 0.5  | 0.49 | 0.48 | 0.47 | 0.46 | 0.45 | 0.44 | 0.43 | 0.42 | 0.41 |
| 0.75               | 0.96                       | 0.93 | 0.9  | 0.87 | 0.84 | 0.81 | 0.78 | 0.75 | 0.74 | 0.73 | 0.71 | 0.69 | 0.68 | 0.66 | 0.65 | 0.64 | 0.62 |
| 1                  | 1.3                        | 1.2  | 1.2  | 1.2  | 1.1  | 1.1  | 1    | 1    | 0.99 | 0.97 | 0.95 | 0.93 | 0.9  | 0.89 | 0.87 | 0.85 | 0.83 |
| 1.5                | 1.9                        | 1.9  | 1.8  | 1.7  | 1.7  | 1.6  | 1.6  | 1.5  | 1.5  | 1.5  | 1.4  | 1.4  | 1.4  | 1.3  | 1.3  | 1.3  | 1.2  |
| 1.6                | 2                          | 2    | 1.9  | 1.9  | 1.8  | 1.7  | 1.7  | 1.6  | 1.6  | 1.5  | 1.5  | 1.5  | 1.4  | 1.4  | 1.4  | 1.4  | 1.3  |
| 2                  | 2.6                        | 2.5  | 2.4  | 2.3  | 2.2  | 2.2  | 2.1  | 2    | 2    | 1.9  | 1.9  | 1.9  | 1.8  | 1.8  | 1.7  | 1.7  | 1.7  |
| 2.5                | 3.2                        | 3.1  | 3    | 2.9  | 2.8  | 2.7  | 2.6  | 2.5  | 2.5  | 2.4  | 2.4  | 2.3  | 2.3  | 2.2  | 2.2  | 2.1  | 2.1  |
| 3                  | 3.8                        | 3.7  | 3.6  | 3.5  | 3.4  | 3.3  | 3.1  | 3    | 3    | 2.9  | 2.8  | 2.8  | 2.7  | 2.7  | 2.6  | 2.5  | 2.5  |
| 3.5                | 4.5                        | 4.4  | 4.2  | 4.1  | 3.9  | 3.8  | 3.7  | 3.5  | 3.4  | 3.4  | 3.3  | 3.2  | 3.2  | 3.1  | 3    | 3    | 2.9  |
| 4                  | 5.1                        | 5    | 4.8  | 4.7  | 4.5  | 4.3  | 4.2  | 4    | 3.9  | 3.9  | 3.8  | 3.7  | 3.6  | 3.5  | 3.5  | 3.4  | 3.3  |
| 5                  | 6.4                        | 6.2  | 6    | 5.8  | 5.6  | 5.4  | 5.2  | 5    | 4.9  | 4.8  | 4.7  | 4.6  | 4.5  | 4.4  | 4.3  | 4.2  | 4.1  |
| 6                  | 7.7                        | 7.5  | 7.2  | 7    | 6.7  | 6.5  | 6.3  | 6    | 5.9  | 5.8  | 5.7  | 5.6  | 5.4  | 5.3  | 5.2  | 5.1  | 5    |
| 8                  | 10.2                       | 9.9  | 9.6  | 9.3  | 9    | 8.7  | 8.4  | 8    | 7.9  | 7.7  | 7.6  | 7.4  | 7.2  | 7.1  | 6.9  | 6.8  | 6.6  |
| 10                 | 13                         | 12   | 12   | 12   | 11   | 11   | 10   | 10   | 9.9  | 9.7  | 9.5  | 9.3  | 9    | 8.9  | 8.7  | 8.5  | 8.3  |
| 12                 | 15                         | 15   | 14   | 14   | 13   | 13   | 13   | 12   | 12   | 12   | 11   | 11   | 11   | 11   | 10   | 10   | 10   |
| 13                 | 17                         | 16   | 16   | 15   | 15   | 14   | 14   | 13   | 13   | 13   | 12   | 12   | 12   | 12   | 11   | 11   | 11   |
| 15                 | 19                         | 19   | 18   | 17   | 17   | 16   | 16   | 15   | 15   | 15   | 14   | 14   | 14   | 13   | 13   | 13   | 12   |
| 16                 | 20                         | 20   | 19   | 19   | 18   | 17   | 17   | 16   | 16   | 15   | 15   | 15   | 14   | 14   | 14   | 14   | 13   |
| 20                 | 26                         | 25   | 24   | 23   | 22   | 22   | 21   | 20   | 20   | 19   | 19   | 19   | 18   | 18   | 17   | 17   | 17   |
| 25                 | 32                         | 31   | 30   | 29   | 28   | 27   | 26   | 25   | 25   | 24   | 24   | 23   | 23   | 22   | 22   | 21   | 21   |
| 32                 | 41                         | 40   | 38   | 37   | 36   | 35   | 33   | 32   | 32   | 31   | 30   | 30   | 29   | 28   | 28   | 27   | 26   |
| 40                 | 51                         | 50   | 48   | 47   | 45   | 43   | 42   | 40   | 39   | 39   | 38   | 37   | 36   | 35   | 35   | 34   | 33   |
| 50                 | 64                         | 62   | 60   | 58   | 56   | 54   | 52   | 50   | 49   | 48   | 47   | 46   | 45   | 44   | 43   | 42   | 41   |
| 63                 | 81                         | 78   | 76   | 73   | 71   | 68   | 66   | 63   | 62   | 61   | 60   | 58   | 57   | 56   | 55   | 53   | 52   |

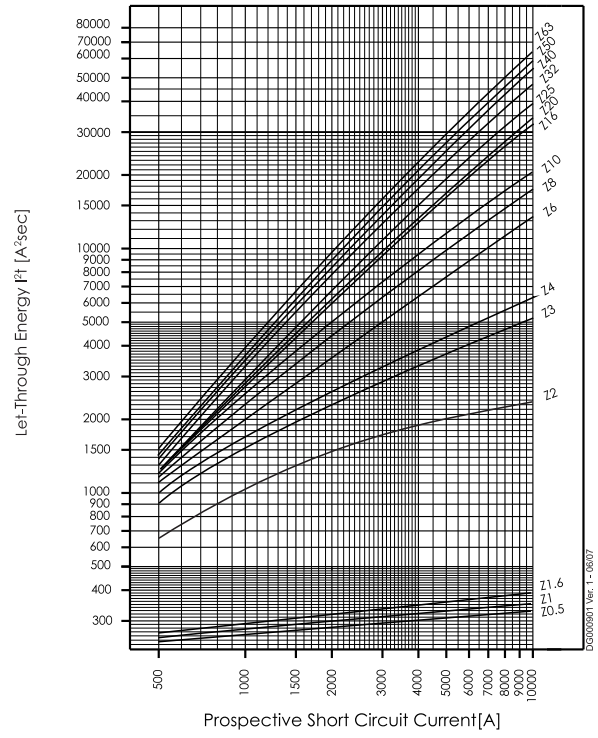


## Maximum Let-Through Energy FAZ

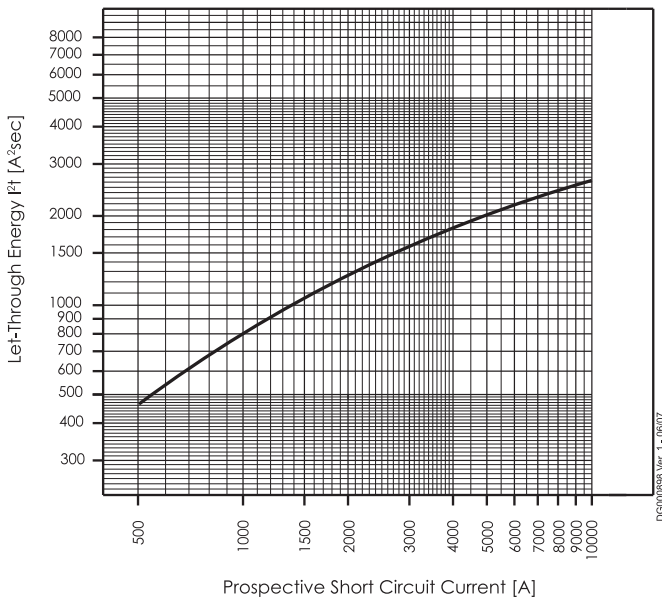
Type S



Type Z

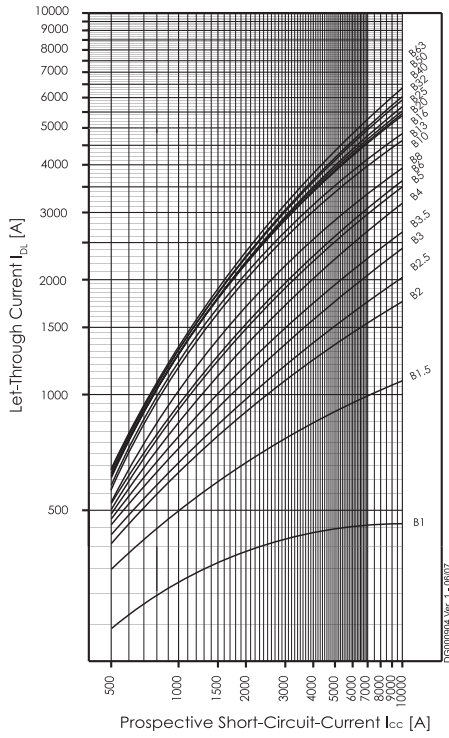


Type FAZ...-HS

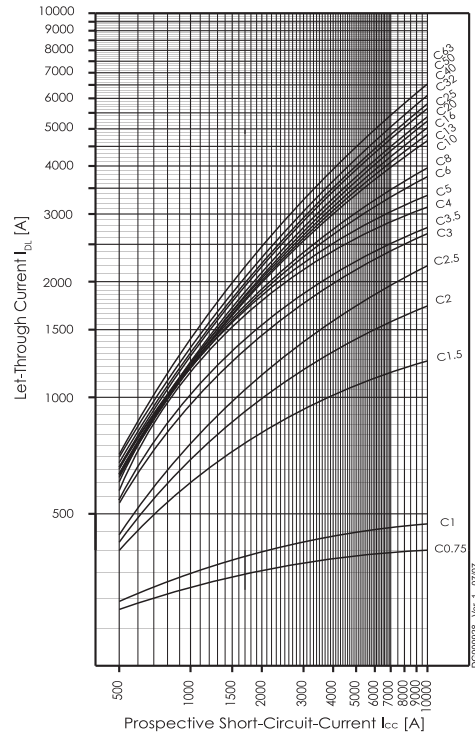


## Maximum Let-Through Current FAZ

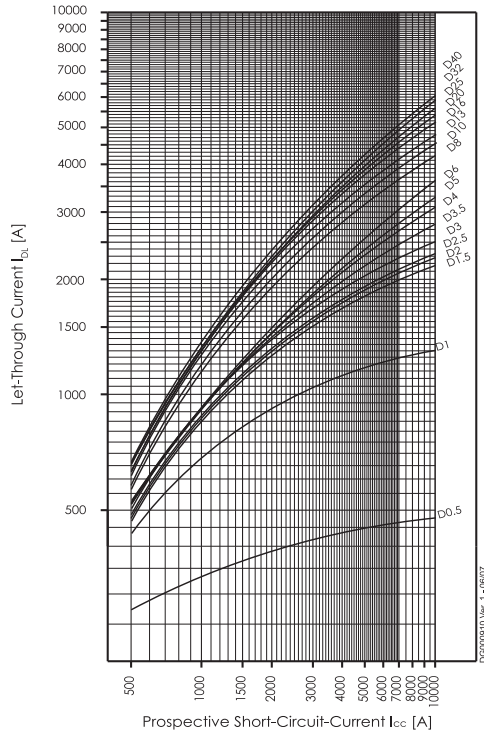
**Type B (IEC/EN60898)**



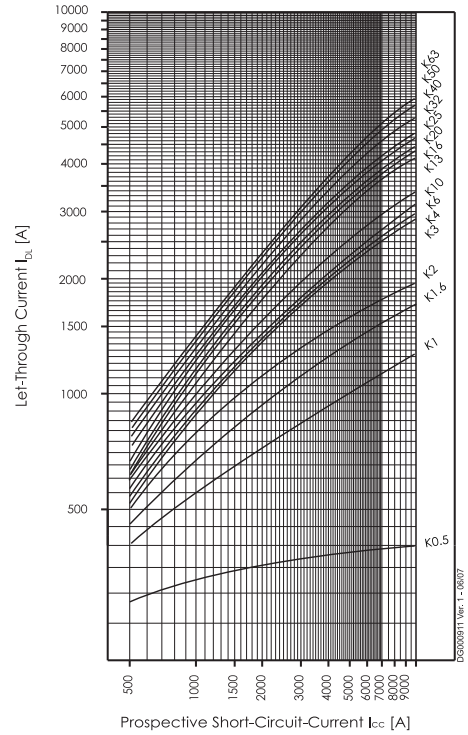
**Type C (IEC/EN60898)**



**Type D (IEC/EN60898)**



**Type K**





## Short Circuit Selectivity FAZ

In case of short circuit, there is selectivity between the miniature circuit breakers FAZ and the upstream protection devices up to the specified values of the selectivity limit current  $I_s$  [kA] (i. e. in case of short-circuit currents  $I_{ks}$  under  $I_s$ , only the MCB will trip, in case of short circuit currents above this value both protective devices will respond).

\*) basically in accordance with EN 60898-1 D.5.2.b

### FAZ towards NH-00 Fuses

Short circuit selectivity **characteristic B** towards fuse link **NH-00\***)

| FAZ       | NH-00 gL/gG        |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| $I_n$ [A] | 16                 | 20                 | 25                 | 32                 | 35                 | 40                 | 50                 | 63                 | 80                 | 100                | 125                | 160                |
| 1.0       | 0.9                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.5       | 0.8                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.0       | <0.5 <sup>1)</sup> | 0.5                | 1.0                | 2.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.5       | <0.5 <sup>1)</sup> | 0.5                | 1.0                | 2.3                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.0       | <0.5 <sup>1)</sup> | 0.5                | 0.9                | 2.1                | 8.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.5       | <0.5 <sup>1)</sup> | 0.5                | 0.9                | 1.8                | 5.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 4         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.8                | 1.3                | 2.3                | 4.3                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 5         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.1                | 1.6                | 2.2                | 3.6                | 4.8                | 8.9                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 6         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.1                | 1.5                | 2.0                | 3.3                | 4.3                | 7.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 8         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.0                | 1.3                | 1.7                | 2.6                | 3.3                | 5.2                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 10        |                    | <0.5 <sup>1)</sup> | 0.6                | 0.9                | 1.2                | 1.5                | 2.2                | 2.7                | 4.0                | 9.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 13        |                    | <0.5 <sup>1)</sup> | 0.6                | 0.8                | 1.1                | 1.4                | 2.1                | 2.6                | 3.8                | 7.9                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 16        |                    |                    | 0.5                | 0.7                | 1.0                | 1.3                | 1.9                | 2.4                | 3.4                | 6.4                | 9.3                | 10.0 <sup>2)</sup> |
| 20        |                    |                    |                    | 0.7                | 1.0                | 1.3                | 1.9                | 2.4                | 3.3                | 6.0                | 8.7                | 10.0 <sup>2)</sup> |
| 25        |                    |                    |                    | 0.7                | 1.0                | 1.3                | 1.8                | 2.3                | 3.2                | 5.7                | 8.0                | 10.0 <sup>2)</sup> |
| 32        |                    |                    |                    |                    | 0.9                | 1.2                | 1.7                | 2.2                | 3.1                | 5.4                | 7.6                | 10.0 <sup>2)</sup> |
| 40        |                    |                    |                    |                    |                    |                    |                    | 2.1                | 3.0                | 5.1                | 7.2                | 10.0 <sup>2)</sup> |
| 50        |                    |                    |                    |                    |                    |                    |                    | 1.9                | 2.8                | 4.7                | 6.6                | 9.5                |
| 63        |                    |                    |                    |                    |                    |                    |                    |                    |                    | 4.4                | 6.3                | 8.6                |

Short circuit selectivity **characteristic C** towards fuse link **NH-00\***)

| FAZ       | NH-00 gL/gG        |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| $I_n$ [A] | 16                 | 20                 | 25                 | 32                 | 35                 | 40                 | 50                 | 63                 | 80                 | 100                | 125                | 160                |
| 0.75      | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.0       | 0.9                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.5       | <0.5 <sup>1)</sup> | 0.6                | 1.3                | 4.2                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.0       | <0.5 <sup>1)</sup> | 0.6                | 1.0                | 2.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.5       | <0.5 <sup>1)</sup> | 0.5                | 1.0                | 2.1                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.0       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.2                | 1.8                | 2.6                | 4.7                | 6.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.5       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.1                | 1.7                | 2.4                | 4.2                | 6.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 4         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.0                | 1.5                | 2.1                | 3.6                | 5.0                | 10.0               | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 5         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 0.8                | 1.2                | 1.7                | 2.8                | 3.8                | 8.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 6         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 0.8                | 1.2                | 1.5                | 2.5                | 3.3                | 5.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 8         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 0.8                | 1.1                | 1.5                | 2.3                | 2.9                | 4.9                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 10        |                    |                    | 0.5                | 0.7                | 1.0                | 1.4                | 2.0                | 2.5                | 3.8                | 8.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 13        |                    |                    |                    |                    | 1.0                | 1.3                | 1.9                | 2.4                | 3.6                | 7.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 16        |                    |                    |                    |                    | 1.0                | 1.3                | 1.8                | 2.3                | 3.3                | 6.0                | 8.8                | 10.0 <sup>2)</sup> |
| 20        |                    |                    |                    |                    | 1.0                | 1.2                | 1.7                | 2.2                | 3.2                | 5.5                | 7.7                | 10.0 <sup>2)</sup> |
| 25        |                    |                    |                    |                    |                    | 1.6                | 2.1                | 3.0                | 5.2                | 7.3                | 10.0 <sup>2)</sup> |                    |
| 32        |                    |                    |                    |                    |                    |                    | 2.1                | 2.9                | 5.0                | 7.0                | 10.0 <sup>2)</sup> |                    |
| 40        |                    |                    |                    |                    |                    |                    |                    | 2.8                | 4.8                | 6.7                | 10.0               |                    |
| 50        |                    |                    |                    |                    |                    |                    |                    |                    | 4.5                | 6.3                | 9.5                |                    |
| 63        |                    |                    |                    |                    |                    |                    |                    |                    |                    | 5.9                | 8.4                |                    |

Short circuit selectivity **characteristic D** towards fuse link **NH-00\***)

| FAZ       | NH-00 gL/gG        |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| $I_n$ [A] | 16                 | 20                 | 25                 | 32                 | 35                 | 40                 | 50                 | 63                 | 80                 | 100                | 125                | 160                |
| 0.5       | 2.1                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.0       | <0.5 <sup>1)</sup> | 0.6                | 1.4                | 4.3                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.5       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.9                | 1.6                | 2.7                | 4.0                | 8.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.0       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.8                | 1.3                | 2.1                | 3.1                | 6.0                | 8.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.5       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.2                | 1.8                | 2.6                | 4.8                | 6.9                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.0       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.1                | 1.7                | 2.4                | 4.3                | 6.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.5       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.1                | 1.7                | 2.4                | 4.2                | 5.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 4         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.0                | 1.6                | 2.2                | 3.8                | 5.2                | 10.0               | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 5         |                    | <0.5 <sup>1)</sup> | 0.6                | 0.9                | 1.4                | 1.9                | 3.2                | 4.1                | 7.1                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 6         |                    | <0.5 <sup>1)</sup> | 0.5                | 0.8                | 1.2                | 1.6                | 2.6                | 3.3                | 5.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 8         |                    |                    | 0.5                | 0.8                | 1.1                | 1.5                | 2.2                | 2.7                | 4.1                | 8.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 10        |                    |                    | 0.5                | 0.7                | 1.0                | 1.3                | 1.9                | 2.5                | 3.6                | 7.2                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 13        |                    |                    |                    | 1.0                | 1.3                | 1.9                | 2.3                | 3.4                | 6.5                | 9.5                | 10.0 <sup>2)</sup> |                    |
| 16        |                    |                    |                    |                    | 1.1                | 1.6                | 2.0                | 3.0                | 5.5                | 8.0                | 10.0 <sup>2)</sup> |                    |
| 20        |                    |                    |                    |                    |                    | 1.4                | 1.8                | 2.8                | 5.0                | 7.5                | 10.0 <sup>2)</sup> |                    |
| 25        |                    |                    |                    |                    |                    |                    | 1.8                | 2.7                | 4.8                | 7.0                | 10.0 <sup>2)</sup> |                    |
| 32        |                    |                    |                    |                    |                    |                    |                    | 2.4                | 4.1                | 6.2                | 9.3                |                    |
| 40        |                    |                    |                    |                    |                    |                    |                    |                    | 4.0                | 6.0                | 9.0                |                    |

1) Selectivity limit current  $I_s$  under 0.5 kA

2) Selectivity limit current  $I_s$  = rated breaking capacity  $I_{cn}$  of the MCB

Shaded fields: no selectivity



## FAZ towards D01-D03 fuse link

Short circuit selectivity **characteristic B** towards fuse link **D01-D03\***)

| FAZ | D01-D03 gL/gG      |                    |                    |                    |                    |                    |                    |                    |                    |                    |
|-----|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|     | I <sub>n</sub> [A] | 10                 | 16                 | 20                 | 25                 | 35                 | 50                 | 63                 | 80                 | 100                |
| 1.0 | <0.5 <sup>1)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.5 | <0.5 <sup>1)</sup> | 4.1                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.0 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.5 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.0 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 1.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.5 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 0.9                | 7.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 4   | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 0.9                | 2.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 5   |                    | <0.5 <sup>1)</sup> | 0.5                | 0.8                | 1.7                | 4.0                | 7.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 6   |                    | <0.5 <sup>1)</sup> | 0.5                | 0.8                | 1.6                | 3.6                | 6.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 8   |                    |                    | 0.5                | 0.8                | 1.4                | 2.8                | 4.3                | 8.2                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 10  |                    |                    | 0.5                | 0.7                | 1.3                | 2.4                | 3.4                | 6.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 13  |                    |                    | <0.5 <sup>1)</sup> | 0.7                | 1.2                | 2.3                | 3.2                | 5.3                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 16  |                    |                    |                    | 0.6                | 1.1                | 2.2                | 2.9                | 4.6                | 10.0               | 10.0               |
| 20  |                    |                    |                    |                    | 1.1                | 2.1                | 2.8                | 4.4                | 9.3                | 9.3                |
| 25  |                    |                    |                    |                    | 1.1                | 2.0                | 2.7                | 4.2                | 8.7                | 8.7                |
| 32  |                    |                    |                    |                    |                    | 2.0                | 2.6                | 4.0                | 8.0                | 8.0                |
| 40  |                    |                    |                    |                    |                    |                    | 2.5                | 3.8                | 7.5                | 7.5                |
| 50  |                    |                    |                    |                    |                    |                    | 2.3                | 3.4                | 6.7                | 6.7                |
| 63  |                    |                    |                    |                    |                    |                    |                    |                    | 6.2                | 6.2                |

Short circuit selectivity **characteristic C** towards fuse link **D01-D03\***)

| FAZ  | D01-D03 gL/gG      |                    |                    |                    |                    |                    |                    |                    |                    |                    |
|------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|      | I <sub>n</sub> [A] | 10                 | 16                 | 20                 | 25                 | 35                 | 50                 | 63                 | 80                 | 100                |
| 0.75 | <0.5 <sup>1)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.0  | <0.5 <sup>1)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.5  | <0.5 <sup>1)</sup> | 0.5                | 0.6                | 0.9                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.0  | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 0.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.5  | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 0.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.0  | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.9                | 5.2                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.5  | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.8                | 4.7                | 9.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 4    | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.6                | 4.0                | 7.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 5    |                    | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 1.3                | 3.1                | 5.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 6    |                    | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 1.2                | 2.7                | 4.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 8    |                    | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 1.2                | 2.5                | 4.0                | 8.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 10   |                    |                    | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 1.2                | 2.3                | 3.1                | 5.4                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 13   |                    |                    |                    |                    | 1.1                | 2.2                | 3.0                | 4.9                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 16   |                    |                    |                    |                    | 1.1                | 2.1                | 2.8                | 4.4                | 9.5                | 9.5                |
| 20   |                    |                    |                    |                    | 1.0                | 2.0                | 2.6                | 4.0                | 8.3                | 8.3                |
| 25   |                    |                    |                    |                    |                    | 1.9                | 2.5                | 3.8                | 7.8                | 7.8                |
| 32   |                    |                    |                    |                    |                    |                    | 2.5                | 3.7                | 7.3                | 7.3                |
| 40   |                    |                    |                    |                    |                    |                    |                    | 3.5                | 7.0                | 7.0                |
| 50   |                    |                    |                    |                    |                    |                    |                    |                    | 6.5                | 6.5                |
| 63   |                    |                    |                    |                    |                    |                    |                    |                    |                    | 6.2                |

Short circuit selectivity **characteristic D** towards fuse link **D01-D03\***)

| FAZ | D01-D03 gL/gG      |                    |                    |                    |                    |                    |                    |                    |                    |                    |
|-----|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|     | I <sub>n</sub> [A] | 10                 | 16                 | 20                 | 25                 | 35                 | 50                 | 63                 | 80                 | 100                |
| 0.5 | <0.5 <sup>1)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.0 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.3                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.5 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 0.9                | 2.8                | 9.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.0 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 0.8                | 2.2                | 6.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.5 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 0.7                | 1.9                | 5.4                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.0 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 0.7                | 1.8                | 4.8                | 9.3                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.5 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 0.7                | 1.7                | 4.7                | 8.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 4   |                    | <0.5 <sup>1)</sup> | 0.5                | 0.7                | 1.7                | 4.6                | 7.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 5   |                    | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.5                | 3.5                | 5.8                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 6   |                    |                    | <0.5 <sup>1)</sup> | 0.5                | 1.3                | 2.9                | 4.5                | 9.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 8   |                    |                    | <0.5 <sup>1)</sup> | 0.5                | 1.2                | 2.4                | 3.5                | 6.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 10  |                    |                    |                    | 0.5                | 1.1                | 2.2                | 3.0                | 5.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 13  |                    |                    |                    |                    | 1.1                | 2.1                | 2.9                | 4.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 16  |                    |                    |                    |                    |                    | 1.9                | 2.6                | 3.9                | 9.0                | 9.0                |
| 20  |                    |                    |                    |                    |                    | 1.7                | 2.3                | 3.5                | 8.0                | 8.0                |
| 25  |                    |                    |                    |                    |                    |                    | 2.2                | 3.4                | 7.5                | 7.5                |
| 32  |                    |                    |                    |                    |                    |                    |                    | 2.9                | 6.0                | 6.0                |
| 40  |                    |                    |                    |                    |                    |                    |                    |                    | 5.7                | 5.7                |

<sup>1)</sup> Selectivity limit current I<sub>s</sub> under 0.5 kA

<sup>2)</sup> Selectivity limit current I<sub>s</sub> = rated breaking capacity I<sub>cn</sub> of the MCB

Shaded fields: no selectivity

## FAZ towards DII-DIV fuse link

Short circuit selectivity **characteristic B** towards fuse link **DII-DIV\***)

| FAZ                | DII-DIV gL/gG      |                    |                    |                    |                    |                    |                    |                    |                    |
|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| I <sub>n</sub> [A] | 10                 | 16                 | 20                 | 25                 | 35                 | 50                 | 63                 | 80                 | 100                |
| 1.0                | <0.5 <sup>1)</sup> | 1.2                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.5                | <0.5 <sup>1)</sup> | 1.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.0                | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.8                | 1.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.5                | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.8                | 1.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.0                | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.8                | 1.4                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.5                | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.3                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 4                  | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.0                | 3.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 5                  | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 0.9                | 2.0                | 3.5                | 8.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 6                  |                    | <0.5 <sup>1)</sup> | 0.6                | 0.9                | 1.8                | 3.2                | 7.4                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 8                  |                    | <0.5 <sup>1)</sup> | 0.5                | 0.8                | 1.6                | 2.6                | 5.2                | 8.3                | 10.0 <sup>2)</sup> |
| 10                 |                    |                    | 0.5                | 0.8                | 1.4                | 2.2                | 3.9                | 6.0                | 10.0 <sup>2)</sup> |
| 13                 |                    |                    | 0.5                | 0.7                | 1.3                | 2.0                | 3.6                | 5.4                | 10.0 <sup>2)</sup> |
| 16                 |                    |                    |                    | 0.6                | 1.2                | 1.9                | 3.2                | 4.6                | 8.4                |
| 20                 |                    |                    |                    |                    | 1.2                | 1.8                | 3.1                | 4.4                | 7.8                |
| 25                 |                    |                    |                    |                    | 1.2                | 1.8                | 3.0                | 4.2                | 7.3                |
| 32                 |                    |                    |                    |                    |                    | 1.7                | 2.8                | 3.9                | 6.8                |
| 40                 |                    |                    |                    |                    |                    |                    | 2.7                | 3.8                | 6.5                |
| 50                 |                    |                    |                    |                    |                    |                    | 2.5                | 3.5                | 5.7                |
| 63                 |                    |                    |                    |                    |                    |                    |                    |                    | 5.3                |

Short circuit selectivity **characteristic C** towards fuse link **DII-DIV\***)

| FAZ                | DII-DIV gL/gG      |                    |                    |                    |                    |                    |                    |                    |                    |
|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| I <sub>n</sub> [A] | 10                 | 16                 | 20                 | 25                 | 35                 | 50                 | 63                 | 80                 | 100                |
| 0.75               | 1.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.0                | <0.5 <sup>1)</sup> | 1.2                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.5                | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 1.0                | 2.2                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.0                | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.8                | 1.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.5                | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.8                | 1.4                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.0                | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.8                | 0.9                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.5                | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 0.9                | 2.2                | 4.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 4                  | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 0.8                | 1.8                | 3.6                | 9.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 5                  | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 0.7                | 1.5                | 2.7                | 7.3                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 6                  |                    | <0.5 <sup>1)</sup> | 0.5                | 0.6                | 1.4                | 2.4                | 5.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 8                  |                    | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.3                | 2.2                | 4.7                | 8.7                | 10.0 <sup>2)</sup> |
| 10                 |                    |                    | <0.5 <sup>1)</sup> | 0.6                | 1.3                | 2.0                | 3.6                | 5.4                | 10.0 <sup>2)</sup> |
| 13                 |                    |                    |                    |                    | 1.3                | 1.9                | 3.3                | 5.0                | 9.4                |
| 16                 |                    |                    |                    |                    | 1.2                | 1.8                | 3.2                | 4.4                | 8.0                |
| 20                 |                    |                    |                    |                    | 1.2                | 1.8                | 3.1                | 4.1                | 7.0                |
| 25                 |                    |                    |                    |                    |                    | 1.7                | 2.8                | 3.8                | 6.5                |
| 32                 |                    |                    |                    |                    |                    |                    | 2.7                | 3.7                | 6.2                |
| 40                 |                    |                    |                    |                    |                    |                    |                    | 3.5                | 5.9                |
| 50                 |                    |                    |                    |                    |                    |                    |                    |                    | 5.5                |
| 63                 |                    |                    |                    |                    |                    |                    |                    |                    |                    |

Short circuit selectivity **characteristic D** towards fuse link **DII-DIV\***)

| FAZ                | DII-DIV gL/gG      |                    |                    |                    |                    |                    |                    |                    |                    |
|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| I <sub>n</sub> [A] | 10                 | 16                 | 20                 | 25                 | 35                 | 50                 | 63                 | 80                 | 100                |
| 0.5                | 0.5                | 3.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.0                | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 1.0                | 2.4                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.5                | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.2                | 3.5                | 7.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.0                | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.0                | 2.8                | 5.8                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.5                | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.4                | 2.3                | 4.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.0                | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 0.9                | 2.3                | 4.3                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.5                | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 0.9                | 2.1                | 4.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 4                  |                    | <0.5 <sup>1)</sup> | 0.6                | 0.9                | 2.0                | 3.8                | 9.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 5                  |                    | <0.5 <sup>1)</sup> | 0.5                | 0.7                | 1.7                | 3.1                | 7.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 6                  |                    |                    | 0.5                | 0.7                | 1.5                | 2.6                | 5.3                | 9.1                | 10.0 <sup>2)</sup> |
| 8                  |                    |                    | <0.5 <sup>1)</sup> | 0.7                | 1.4                | 2.2                | 3.9                | 6.0                | 10.0 <sup>2)</sup> |
| 10                 |                    |                    |                    | 0.7                | 1.2                | 1.9                | 3.4                | 5.0                | 9.5                |
| 13                 |                    |                    |                    |                    | 1.2                | 1.8                | 3.2                | 4.6                | 8.6                |
| 16                 |                    |                    |                    |                    |                    | 1.6                | 2.7                | 4.0                | 7.4                |
| 20                 |                    |                    |                    |                    |                    | 1.5                | 2.5                | 3.5                | 6.7                |
| 25                 |                    |                    |                    |                    |                    |                    | 2.4                | 3.4                | 6.2                |
| 32                 |                    |                    |                    |                    |                    |                    |                    | 2.8                | 5.0                |
| 40                 |                    |                    |                    |                    |                    |                    |                    |                    | 4.8                |

<sup>1)</sup> Selectivity limit current I<sub>s</sub> under 0.5 kA

<sup>2)</sup> Selectivity limit current I<sub>s</sub> = rated breaking capacity I<sub>cn</sub> of the MCB

Shaded fields: no selectivity

## FAZ-B and NZM 1/2

Selectivity-limit current  $I_g$  [kA] for selectivity between FAZ-B and NZM (overload and short-circuit release unit NZM at max. value).

| $I_n$ [A]    | NZM...1-A...                  |           |           |           |            |            | NZM...2-A...                            |           |           |           |            |            |            |            |            |
|--------------|-------------------------------|-----------|-----------|-----------|------------|------------|---|-----------|-----------|-----------|------------|------------|------------|------------|------------|
|              | $I_{cu} = 25 (50) \text{ kA}$ |           |           |           |            |            | $I_{cu} = 25 (50)(100)(150) \text{ kA}$ |           |           |           |            |            |            |            |            |
| <b>FAZ-B</b> | <b>40</b>                     | <b>50</b> | <b>63</b> | <b>80</b> | <b>100</b> | <b>125</b> | <b>40</b>                               | <b>50</b> | <b>63</b> | <b>80</b> | <b>100</b> | <b>125</b> | <b>160</b> | <b>200</b> | <b>250</b> |
| 1            | 15                            | 15        | 15        | 15        | 15         | 15         | 15                                      | 15        | 15        | 15        | 15         | 15         | 15         | 15         | 15         |
| 2            | 2                             | 15        | 15        | 15        | 15         | 15         | 3                                       | 15        | 15        | 15        | 15         | 15         | 15         | 15         | 15         |
| 3            | 1.2                           | 2         | 3         | 3         | 10         | 15         | 1.5                                     | 1.5       | 3         | 5         | 15         | 15         | 15         | 15         | 15         |
| 4            | 1.2                           | 2         | 3         | 3         | 8          | 15         | 1.2                                     | 1.5       | 3         | 4         | 15         | 15         | 15         | 15         | 15         |
| 6            | 1.2                           | 2         | 2.5       | 3         | 5          | 10         | 1.2                                     | 1.5       | 2.5       | 3         | 15         | 15         | 15         | 15         | 15         |
| 10           | 1.2                           | 1.5       | 2         | 2         | 4          | 10         | 1                                       | 1.5       | 2.5       | 3         | 10         | 10         | 10         | 10         | 10         |
| 13           | 1                             | 1.5       | 2         | 2         | 4          | 10         | 1                                       | 1.2       | 2         | 3         | 10         | 10         | 10         | 10         | 10         |
| 16           | 1                             | 1.2       | 1.5       | 2         | 3          | 8          | 1                                       | 1.2       | 1.5       | 2.5       | 10         | 10         | 10         | 10         | 10         |
| 20           | 0.8                           | 1.2       | 1.5       | 1.5       | 3          | 8          | 1                                       | 1.2       | 1.5       | 1.5       | 10         | 10         | 10         | 10         | 10         |
| 25           | 0.7                           | 1.2       | 1.5       | 1.5       | 3          | 7          | 0.8                                     | 1         | 1.5       | 2         | 10         | 10         | 10         | 10         | 10         |
| 32           | -                             | 1.2       | 1         | 1.5       | 2          | 6          | -                                       | 1         | 1.5       | 2         | 8          | 8          | 8          | 8          | 10         |
| 40           | -                             | -         | 1         | 1.5       | 2          | 5          | -                                       | -         | 1.2       | 1.5       | 7          | 7          | 7          | 7          | 10         |
| 50           | -                             | -         | -         | 1.2       | 1.5        | 4          | -                                       | -         | -         | 1.5       | 6          | 6          | 6          | 6          | 10         |
| 63           | -                             | -         | -         | -         | 1.5        | 3          | -                                       | -         | -         | -         | 6          | 6          | 6          | 6          | 10         |

## FAZ-C and NZM 1/2

Selectivity-limit current  $I_g$  [kA] for selectivity between FAZ-C and NZM (overload and short-circuit release unit NZM at max. value).

| $I_n$ [A]    | NZM...1-A...                  |           |           |           |            |            | NZM...2-A...                            |           |           |           |            |            |            |            |            |
|--------------|-------------------------------|-----------|-----------|-----------|------------|------------|---|-----------|-----------|-----------|------------|------------|------------|------------|------------|
|              | $I_{cu} = 25 (50) \text{ kA}$ |           |           |           |            |            | $I_{cu} = 25 (50)(100)(150) \text{ kA}$ |           |           |           |            |            |            |            |            |
| <b>FAZ-C</b> | <b>40</b>                     | <b>50</b> | <b>63</b> | <b>80</b> | <b>100</b> | <b>125</b> | <b>40</b>                               | <b>50</b> | <b>63</b> | <b>80</b> | <b>100</b> | <b>125</b> | <b>160</b> | <b>200</b> | <b>250</b> |
| 0.5          | 15                            | 15        | 15        | 15        | 15         | 15         | 15                                      | 15        | 15        | 15        | 15         | 15         | 15         | 15         | 15         |
| 1            | 15                            | 15        | 15        | 15        | 15         | 15         | 15                                      | 15        | 15        | 15        | 15         | 15         | 15         | 15         | 15         |
| 2            | 2                             | 15        | 15        | 15        | 15         | 15         | 3                                       | 15        | 15        | 15        | 15         | 15         | 15         | 15         | 15         |
| 3            | 1.2                           | 2         | 3         | 3         | 10         | 15         | 1.5                                     | 1.5       | 3         | 5         | 15         | 15         | 15         | 15         | 15         |
| 4            | 1.2                           | 2         | 3         | 3         | 8          | 15         | 1.2                                     | 1.5       | 3         | 4         | 15         | 15         | 15         | 15         | 15         |
| 6            | 1.2                           | 2         | 2.5       | 3         | 5          | 10         | 1.2                                     | 1.5       | 2.5       | 3         | 15         | 15         | 15         | 15         | 15         |
| 10           | 1.2                           | 1.5       | 2         | 2         | 4          | 10         | 1                                       | 1.5       | 2.5       | 3         | 10         | 10         | 10         | 10         | 10         |
| 13           | 1                             | 1.5       | 2         | 2         | 4          | 10         | 1                                       | 1.2       | 2         | 3         | 10         | 10         | 10         | 10         | 10         |
| 16           | 1                             | 1.2       | 1.5       | 2         | 3          | 8          | 1                                       | 1.2       | 1.5       | 2.5       | 10         | 10         | 10         | 10         | 10         |
| 20           | 0.8                           | 1.2       | 1.5       | 1.5       | 3          | 8          | 1                                       | 1.2       | 1.5       | 1.5       | 10         | 10         | 10         | 10         | 10         |
| 25           | 0.7                           | 1.2       | 1.5       | 1.5       | 3          | 7          | 0.8                                     | 1         | 1.5       | 2         | 10         | 10         | 10         | 10         | 10         |
| 32           | -                             | 1.2       | 1         | 1.5       | 2          | 6          | -                                       | 1         | 1.5       | 2         | 8          | 8          | 8          | 8          | 10         |
| 40           | -                             | -         | 1         | 1.5       | 2          | 5          | -                                       | -         | 1.2       | 1.5       | 7          | 7          | 7          | 7          | 10         |
| 50           | -                             | -         | -         | 1.2       | 1.5        | 4          | -                                       | -         | -         | 1.5       | 6          | 6          | 6          | 6          | 10         |
| 63           | -                             | -         | -         | -         | 1.5        | 3          | -                                       | -         | -         | -         | 6          | 6          | 6          | 6          | 10         |

## FAZ-D and NZM 1/2

Selectivity-limit current  $I_s$  [kA] for selectivity between FAZ-D and NZM (overload and short-circuit release unit NZM at max. value).

| $I_n$ [A]    | NZM...1-A...                  |           |           |           |            |            | NZM...2-A...                            |           |           |           |            |            |            |            |            |
|--------------|-------------------------------|-----------|-----------|-----------|------------|------------|---|-----------|-----------|-----------|------------|------------|------------|------------|------------|
|              | $I_{cu} = 25 (50) \text{ kA}$ |           |           |           |            |            | $I_{cu} = 25 (50)(100)(150) \text{ kA}$ |           |           |           |            |            |            |            |            |
| <b>FAZ-D</b> | <b>40</b>                     | <b>50</b> | <b>63</b> | <b>80</b> | <b>100</b> | <b>125</b> | <b>40</b>                               | <b>50</b> | <b>63</b> | <b>80</b> | <b>100</b> | <b>125</b> | <b>160</b> | <b>200</b> | <b>250</b> |
| 0.5          | 9                             | 15        | 15        | 15        | 15         | 15         | 9                                       | 15        | 15        | 15        | 15         | 15         | 15         | 15         | 15         |
| 1            | 0.5                           | 0.7       | 1.1       | 1.9       | 4.2        | 15         | 0.5                                     | 0.7       | 1.1       | 1.9       | 4.2        | 15         | 15         | 15         | 15         |
| 1.5          | 0.3                           | 0.6       | 0.8       | 1.1       | 1.6        | 2.6        | 0.3                                     | 0.6       | 0.8       | 1.1       | 1.6        | 2.6        | 5          | 15         | 15         |
| 2            | 0.3                           | 0.5       | 0.75      | 0.95      | 1.4        | 2.4        | 0.3                                     | 0.5       | 0.75      | 0.95      | 1.4        | 2.4        | 4.5        | 10         | 15         |
| 2.5          | 0.3                           | 0.5       | 0.75      | 0.95      | 1.3        | 2.3        | 0.3                                     | 0.5       | 0.75      | 0.95      | 1.3        | 2.3        | 4.2        | 9          | 15         |
| 3            | 0.3                           | 0.5       | 0.7       | 0.9       | 1.3        | 2.1        | 0.3                                     | 0.5       | 0.7       | 0.9       | 1.3        | 2.1        | 3.6        | 7          | 15         |
| 3.5          | 0.3                           | 0.5       | 0.7       | 0.9       | 1.3        | 2          | 0.3                                     | 0.5       | 0.7       | 0.9       | 1.3        | 2          | 3.3        | 5.6        | 10         |
| 4            | 0.3                           | 0.5       | 0.7       | 0.9       | 1.3        | 1.9        | 0.3                                     | 0.5       | 0.7       | 0.9       | 1.3        | 1.9        | 3          | 4.7        | 8          |
| 5            | 0.3                           | 0.5       | 0.7       | 0.9       | 1.3        | 1.9        | 0.3                                     | 0.5       | 0.7       | 0.9       | 1.3        | 1.9        | 3          | 4.4        | 7          |
| 6            | 0.3                           | 0.5       | 0.6       | 0.9       | 1.3        | 1.8        | 0.3                                     | 0.5       | 0.6       | 0.9       | 1.3        | 1.8        | 2.8        | 4          | 6          |
| 8            | 0.3                           | 0.3       | 0.6       | 0.75      | 1          | 1.3        | 0.3                                     | 0.3       | 0.6       | 0.75      | 1          | 1.3        | 1.8        | 2.7        | 4          |
| 10           | 0.3                           | 0.3       | 0.6       | 0.75      | 0.95       | 1.2        | 0.3                                     | 0.3       | 0.6       | 0.75      | 0.95       | 1.2        | 1.7        | 2.4        | 3.6        |
| 13           | 0.3                           | 0.3       | 0.5       | 0.7       | 0.9        | 1.1        | 0.3                                     | 0.3       | 0.5       | 0.7       | 0.9        | 1.1        | 1.6        | 2.2        | 3.2        |
| 16           | -                             | 0.3       | 0.5       | 0.65      | 0.8        | 1.1        | -                                       | 0.3       | 0.5       | 0.65      | 0.8        | 1.1        | 1.5        | 2.1        | 3          |
| 20           | -                             | -         | 0.5       | 0.65      | 0.8        | 1.1        | -                                       | -         | 0.5       | 0.65      | 0.8        | 1.1        | 1.4        | 2.1        | 3          |
| 25           | -                             | -         | 0.5       | 0.65      | 0.8        | 1.1        | -                                       | -         | 0.5       | 0.65      | 0.8        | 1.1        | 1.4        | 1.9        | 2.7        |
| 32           | -                             | -         | -         | -         | 0.8        | 1.1        | -                                       | -         | -         | -         | 0.8        | 1.1        | 1.4        | 1.9        | 2.7        |
| 40           | -                             | -         | -         | -         | -          | 1          | -                                       | -         | -         | -         | -          | 1          | 1.4        | 1.8        | 2.6        |

## Back-up Protection FAZ

The up-stream protective devices will protect the down-stream FAZ up to the short-circuit current specified.

### FAZ/C and AZ/C

| $I_n$ [A] | AZ/C      |    |    |    |    |    |    |     |       |
|-----------|-----------|----|----|----|----|----|----|-----|-------|
|           | $I_n$ [A] |    |    |    |    |    |    |     |       |
| FAZ/C     | 20        | 25 | 32 | 40 | 50 | 63 | 80 | 100 | 125   |
| 1         | 25        | 25 | 25 | 25 | 25 | 25 | 20 | 20  | 15 kA |
| 2         | 25        | 25 | 25 | 25 | 25 | 25 | 20 | 20  | 15 kA |
| 4         | 25        | 25 | 25 | 25 | 25 | 25 | 20 | 20  | 15 kA |
| 6         | 25        | 25 | 25 | 25 | 25 | 25 | 20 | 20  | 15 kA |
| 10        | 25        | 25 | 25 | 25 | 25 | 25 | 20 | 20  | 15 kA |
| 13        | 25        | 25 | 25 | 25 | 25 | 25 | 20 | 20  | 15 kA |
| 16        | 25        | 25 | 25 | 25 | 25 | 25 | 20 | 20  | 15 kA |
| 20        | 1)        | 25 | 25 | 25 | 25 | 25 | 20 | 20  | 15 kA |
| 25        | 1)        | 1) | 25 | 25 | 25 | 25 | 20 | 20  | 15 kA |
| 32        | 1)        | 1) | 1) | 25 | 25 | 25 | 20 | 20  | -     |
| 40        | 1)        | 1) | 1) | 1) | 25 | 25 | 20 | 20  | -     |
| 50        | 1)        | 1) | 1) | 1) | 1) | 25 | 20 | 20  | -     |
| 63        | 1)        | 1) | 1) | 1) | 1) | 1) | -  | -   | -     |

1)  $I_n$  (AZ)  $\leq$   $I_n$  (FAZ)

### FAZ and CL-PKZ0

Back-up tests acc. to EN/IEC 60947-2, App. A:  $U = 1.05 U_e$ , (O - t - CO)

| $I_n$ [A] | FAZ- $I_n/1(2,3,4)/B(C) + CL-PKZ0$<br>$U_e = 230/400 V$ |
|-----------|---|
| 0.16      | 65 kA   |
| 0.25      | 65 kA   |
| 0.5       | 65 kA   |
| 0.75      | 65 kA   |
| 1         | 65 kA   |
| 1.5       | 65 kA   |
| 2         | 65 kA   |
| 2.5       | 65 kA   |
| 3         | 65 kA   |
| 3.5       | 65 kA   |
| 4         | 65 kA   |
| 5         | 45 kA   |
| 6         | 45 kA   |
| 8         | 45 kA   |
| 10        | 45 kA   |
| 12        | 45 kA   |
| 13        | 45 kA   |
| 15        | 45 kA   |
| 16        | 45 kA   |
| 20        | 45 kA   |
| 25        | 45 kA   |
| 32        | 45 kA   |
| 40        | 25 kA   |
| 50        | 25 kA   |
| 63        | 25 kA   |

### FAZ and NZM7

| $I_n$ [A] | FAZ- $I_n/1(2,3,4)/B(C) + NZM7-40(...100)$<br>$U_e = 230/400 V$ |
|-----------|---|
| 0.16      | 25 kA   |
| 0.25      | 25 kA   |
| 0.5       | 25 kA   |
| 0.75      | 25 kA   |
| 1         | 25 kA   |
| 1.5       | 25 kA   |
| 2         | 25 kA   |
| 2.5       | 25 kA   |
| 3         | 25 kA   |
| 3.5       | 25 kA   |
| 4         | 25 kA   |
| 5         | 20 kA   |
| 6         | 20 kA   |
| 8         | 20 kA   |
| 10        | 20 kA   |
| 12        | 20 kA   |
| 13        | 20 kA   |
| 15        | 20 kA   |
| 16        | 20 kA   |
| 20        | 18 kA   |
| 25        | 18 kA   |
| 32        | 18 kA   |
| 40        | 18 kA   |
| 50        | 15 kA   |
| 63        | 15 kA   |

## FAZ and NZMB1

$U_e = 230/400\text{ V}$ :  $I_{cu}$  (FAZ) = 15 kA

$U_e = 230/400\text{ V}$ :  $I_{cu}$  (NZMB1) = 25 kA

Back-up test acc. EN/IEC 60947-2, app. A:  $U = 1.05U_e$ , (O - t - CO)

(Settings NZMB1:  $I_r$ ,  $I_{rm}$  at max. volumes)

| $I_n$ [A] | <b>FAZ-<math>I_n/1(2,3,4)/B(C)</math> + NZMB1</b><br>$U_e = 230/400\text{ V}$ |
|-----------|---|
| 0.16      | 25 kA   |
| 0.25      | 25 kA   |
| 0.5       | 25 kA   |
| 0.75      | 25 kA   |
| 1         | 25 kA   |
| 1.5       | 25 kA   |
| 2         | 25 kA   |
| 2.5       | 25 kA   |
| 3         | 25 kA   |
| 3.5       | 25 kA   |
| 4         | 25 kA   |
| 5         | 25 kA   |
| 6         | 25 kA   |
| 8         | 25 kA   |
| 10        | 25 kA   |
| 12        | 25 kA   |
| 13        | 25 kA   |
| 15        | 25 kA   |
| 16        | 25 kA   |
| 20        | 20 kA   |
| 25        | 20 kA   |
| 32        | 20 kA   |
| 40        | 20 kA   |
| 50        | 15 kA   |
| 63        | 15 kA   |

## FAZ and NZMN1

$U_e = 230/400\text{ V}$ :  $I_{cu}$  (FAZ) = 15 kA

$U_e = 230/400\text{ V}$ :  $I_{cu}$  (NZMN1) = 25 kA

Back-up test acc. EN/IEC 60947-2, app. A:  $U = 1.05U_e$ , (O - t - CO)

(Settings NZM at max. values)

| $I_n$ [A] | <b>FAZ-<math>I_n/1(2,3,4)/B(C)</math> + NZMN1</b><br>$U_e = 230/400\text{ V}$ |
|-----------|---|
| 0.16      | 25 kA   |
| 0.25      | 25 kA   |
| 0.5       | 25 kA   |
| 0.75      | 25 kA   |
| 1         | 25 kA   |
| 1.5       | 25 kA   |
| 2         | 25 kA   |
| 2.5       | 25 kA   |
| 3         | 25 kA   |
| 3.5       | 25 kA   |
| 4         | 25 kA   |
| 5         | 25 kA   |
| 6         | 25 kA   |
| 8         | 25 kA   |
| 10        | 25 kA   |
| 12        | 25 kA   |
| 13        | 25 kA   |
| 15        | 25 kA   |
| 16        | 25 kA   |
| 20        | 20 kA   |
| 25        | 20 kA   |
| 32        | 20 kA   |
| 40        | 20 kA   |
| 50        | 15 kA   |
| 63        | 15 kA   |

## FAZ and NZMB2

$U_e = 230/400\text{ V}$ :  $I_{cu}$  (FAZ) = 15 kA  
 $U_e = 230/400\text{ V}$ :  $I_{cu}$  (NZMB2) = 25 kA  
 $U_e = 133/230\text{ V}$ :  $I_{cu}$  (FAZ) = 20 kA  
 $U_e = 133/230\text{ V}$ :  $I_{cu}$  (NZMB2) = 30 kA  
 Back-up test acc. EN/IEC 60947-2, app. A:  $U = 1.05U_e$ , (O - t - CO)  
 (Settings NZM at max. values)

| $I_n$ [A] | <b>FAZ-<math>I_n/1(2,3,4)/B(C)</math> + NZMB2</b> |                          |
|-----------|---|--------------------------|
|           | $U_e = 230/400\text{ V}$                          | $U_e = 133/230\text{ V}$ |
| 0.16      | 25 kA   | 30 kA                    |
| 0.25      | 25 kA   | 30 kA                    |
| 0.5       | 25 kA   | 30 kA                    |
| 0.75      | 25 kA   | 30 kA                    |
| 1         | 25 kA   | 30 kA                    |
| 1.5       | 25 kA   | 30 kA                    |
| 2         | 25 kA   | 30 kA                    |
| 2.5       | 25 kA   | 30 kA                    |
| 3         | 25 kA   | 30 kA                    |
| 3.5       | 25 kA   | 30 kA                    |
| 4         | 25 kA   | 30 kA                    |
| 5         | 25 kA   | 25 kA                    |
| 6         | 25 kA   | 25 kA                    |
| 8         | 25 kA   | 25 kA                    |
| 10        | 25 kA   | 25 kA                    |
| 12        | 20 kA   | 25 kA                    |
| 13        | 20 kA   | 25 kA                    |
| 15        | 20 kA   | 25 kA                    |
| 16        | 20 kA   | 25 kA                    |
| 20        | 20 kA   | 25 kA                    |
| 25        | 20 kA   | 25 kA                    |
| 32        | 20 kA   | 25 kA                    |
| 40        | 15 kA   | 20 kA                    |
| 50        | 15 kA   | 20 kA                    |
| 63        | 15 kA   | 20 kA                    |

## FAZ and NZMN2

$U_e = 230/400\text{ V}$ :  $I_{cu}$  (FAZ) = 15 kA  
 $U_e = 230/400\text{ V}$ :  $I_{cu}$  (NZMN2) = 50 kA  
 $U_e = 133/230\text{ V}$ :  $I_{cu}$  (FAZ) = 20 kA  
 $U_e = 133/230\text{ V}$ :  $I_{cu}$  (NZMN2) = 85 kA  
 Back-up test acc. EN/IEC 60947-2, app. A:  $U = 1.05U_e$ , (O - t - CO)  
 (Settings NZM at max. values)

| $I_n$ [A] | <b>FAZ-<math>I_n/1(2,3,4)/B(C)</math> + NZMN2</b> |                          |
|-----------|---|--------------------------|
|           | $U_e = 230/400\text{ V}$                          | $U_e = 133/230\text{ V}$ |
| 0.16      | 50 kA   | 85 kA                    |
| 0.25      | 50 kA   | 85 kA                    |
| 0.5       | 50 kA   | 85 kA                    |
| 0.75      | 50 kA   | 85 kA                    |
| 1         | 50 kA   | 85 kA                    |
| 1.5       | 50 kA   | 85 kA                    |
| 2         | 50 kA   | 85 kA                    |
| 2.5       | 50 kA   | 85 kA                    |
| 3         | 50 kA   | 85 kA                    |
| 3.5       | 50 kA   | 85 kA                    |
| 4         | 50 kA   | 85 kA                    |
| 5         | 50 kA   | 80 kA                    |
| 6         | 50 kA   | 80 kA                    |
| 8         | 50 kA   | 80 kA                    |
| 10        | 50 kA   | 80 kA                    |
| 12        | 30 kA   | 60 kA                    |
| 13        | 30 kA   | 60 kA                    |
| 15        | 30 kA   | 60 kA                    |
| 16        | 30 kA   | 60 kA                    |
| 20        | 30 kA   | 60 kA                    |
| 25        | 30 kA   | 60 kA                    |
| 32        | 30 kA   | 60 kA                    |
| 40        | 20 kA   | 40 kA                    |
| 50        | 20 kA   | 40 kA                    |
| 63        | 20 kA   | 40 kA                    |

## FAZ and NZMH2

$U_e = 230/400\text{ V}$ :  $I_{cu}$  (FAZ) = 15 kA  
 $U_e = 230/400\text{ V}$ :  $I_{cu}$  (NZMH2) = 150 kA  
 $U_e = 133/230\text{ V}$ :  $I_{cu}$  (FAZ) = 20 kA  
 $U_e = 133/230\text{ V}$ :  $I_{cu}$  (NZMH2) = 150 kA  
 Back-up test acc. EN/IEC 60947-2, app. A:  $U = 1.05U_e$ , (O - t - CO)  
 (Settings NZM at max. values)

| $I_n$ [A] | <b>FAZ-<math>I_n/1(2,3,4)/B(C)</math> + NZMH2</b> |                          |
|-----------|---|--------------------------|
|           | $U_e = 230/400\text{ V}$                          | $U_e = 133/230\text{ V}$ |
| 0.16      | 50 kA   | 85 kA                    |
| 0.25      | 50 kA   | 85 kA                    |
| 0.5       | 50 kA   | 85 kA                    |
| 0.75      | 50 kA   | 85 kA                    |
| 1         | 50 kA   | 85 kA                    |
| 1.5       | 50 kA   | 85 kA                    |
| 2         | 50 kA   | 85 kA                    |
| 2.5       | 50 kA   | 85 kA                    |
| 3         | 50 kA   | 85 kA                    |
| 3.5       | 50 kA   | 85 kA                    |
| 4         | 50 kA   | 85 kA                    |
| 5         | 50 kA   | 80 kA                    |
| 6         | 50 kA   | 80 kA                    |
| 8         | 50 kA   | 80 kA                    |
| 10        | 50 kA   | 80 kA                    |
| 12        | 30 kA   | 60 kA                    |
| 13        | 30 kA   | 60 kA                    |
| 15        | 30 kA   | 60 kA                    |
| 16        | 30 kA   | 60 kA                    |
| 20        | 30 kA   | 60 kA                    |
| 25        | 30 kA   | 60 kA                    |
| 32        | 30 kA   | 60 kA                    |
| 40        | 20 kA   | 40 kA                    |
| 50        | 20 kA   | 40 kA                    |
| 63        | 20 kA   | 40 kA                    |

## FAZ and NZML2

$U_e = 230/400\text{ V}$ :  $I_{cu}$  (FAZ) = 15 kA  
 $U_e = 230/400\text{ V}$ :  $I_{cu}$  (NZML2) = 150 kA  
 $U_e = 133/230\text{ V}$ :  $I_{cu}$  (FAZ) = 20 kA  
 $U_e = 133/230\text{ V}$ :  $I_{cu}$  (NZML2) = 150 kA  
 Back-up test acc. EN/IEC 60947-2, app. A:  $U = 1.05U_e$ , (O - t - CO)  
 (Settings NZM at max. values)

| $I_n$ [A] | <b>FAZ-<math>I_n/1(2,3,4)/B(C)</math> + NZML2</b> |                          |
|-----------|---|--------------------------|
|           | $U_e = 230/400\text{ V}$                          | $U_e = 133/230\text{ V}$ |
| 0.16      | 50 kA   | 85 kA                    |
| 0.25      | 50 kA   | 85 kA                    |
| 0.5       | 50 kA   | 85 kA                    |
| 0.75      | 50 kA   | 85 kA                    |
| 1         | 50 kA   | 85 kA                    |
| 1.5       | 50 kA   | 85 kA                    |
| 2         | 50 kA   | 85 kA                    |
| 2.5       | 50 kA   | 85 kA                    |
| 3         | 50 kA   | 85 kA                    |
| 3.5       | 50 kA   | 85 kA                    |
| 4         | 50 kA   | 85 kA                    |
| 5         | 50 kA   | 80 kA                    |
| 6         | 50 kA   | 80 kA                    |
| 8         | 50 kA   | 80 kA                    |
| 10        | 50 kA   | 80 kA                    |
| 12        | 30 kA   | 60 kA                    |
| 13        | 30 kA   | 60 kA                    |
| 15        | 30 kA   | 60 kA                    |
| 16        | 30 kA   | 60 kA                    |
| 20        | 30 kA   | 60 kA                    |
| 25        | 30 kA   | 60 kA                    |
| 32        | 30 kA   | 60 kA                    |
| 40        | 20 kA   | 40 kA                    |
| 50        | 20 kA   | 40 kA                    |
| 63        | 20 kA   | 40 kA                    |



## FAZ and NH

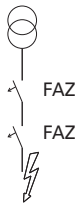
$U_e = 230\text{ V}$ :  $I_{cu}$  (FAZ) = 15 (10) kA (acc. to IEC/EN 60947)

$U_e = 500\text{ V}$ :  $I_{cu}$  (NH00 125 A gL / gG) = 120kA

| $I_n$ [A] | <b>FAZ-I<sub>n</sub>/B,(C),(D)... + NH00 125 A gL/gG</b><br>IT-system U = 230 V |
|-----------|---|
| 0.5       | 50 kA   |
| 1         | 50 kA   |
| 2         | 50 kA   |
| 3         | 50 kA   |
| 4         | 50 kA   |
| 6         | 50 kA   |
| 10        | 50 kA   |
| 13        | 50 kA   |
| 16        | 50 kA   |
| 20        | 50 kA   |
| 25        | 50 kA   |
| 32        | 50 kA   |
| 40        | 50 kA   |
| 50        | 50 kA   |
| 63        | 50 kA   |

## Overload Selectivity FAZ

### FAZ-B(C)(D) to FAZ-B



**Upstream side FAZ, Characteristic B**  
**Downstream side FAZ, Characteristic B, C, D**

x ... Selectivity range (i.e. only the downstream switch drops in case  $I < I_g$ )

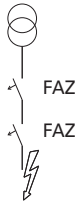
| Upstream side                           | FAZ Characteristic B |   |      |    |    |    |      |    |    |      |     |     |     |       |
|---|----------------------|---|------|----|----|----|------|----|----|------|-----|-----|-----|-------|
| Type B rated current $I_n$ [A]          |                      | 2 | 3    | 4  | 6  | 10 | 13   | 16 | 20 | 25   | 32  | 40  | 50  | 63    |
| Selectivity limiting current $I_g$ [A]  |                      | 7 | 10.5 | 14 | 21 | 35 | 45.5 | 56 | 70 | 87.5 | 112 | 140 | 175 | 220.5 |
| Downstream side<br>FAZ Characteristic B | 2                    |   | x    | x  | x  | x  | x    | x  | x  | x    | x   | x   | x   | x     |
|   | 3                    |   |      | x  | x  | x  | x    | x  | x  | x    | x   | x   | x   | x     |
|   | 4                    |   |      |    | x  | x  | x    | x  | x  | x    | x   | x   | x   | x     |
|   | 6                    |   |      |    |    | x  | x    | x  | x  | x    | x   | x   | x   | x     |
|   | 10                   |   |      |    |    |    | x    | x  | x  | x    | x   | x   | x   | x     |
|   | 13                   |   |      |    |    |    |      | x  | x  | x    | x   | x   | x   | x     |
|   | 16                   |   |      |    |    |    |      |    | x  | x    | x   | x   | x   | x     |
|   | 20                   |   |      |    |    |    |      |    |    | x    | x   | x   | x   | x     |
|   | 25                   |   |      |    |    |    |      |    |    |      | x   | x   | x   | x     |
|   | 32                   |   |      |    |    |    |      |    |    |      |     | x   | x   | x     |
|   | 40                   |   |      |    |    |    |      |    |    |      |     |     | x   | x     |
|   | 50                   |   |      |    |    |    |      |    |    |      |     |     |     | x     |
|   | 63                   |   |      |    |    |    |      |    |    |      |     |     |     |       |

| Upstream side                           | FAZ Characteristic B |   |      |    |    |    |      |    |    |      |     |     |     |       |   |   |
|---|----------------------|---|------|----|----|----|------|----|----|------|-----|-----|-----|-------|---|---|
| Type B rated current $I_n$ [A]          |                      | 2 | 3    | 4  | 6  | 10 | 13   | 16 | 20 | 25   | 32  | 40  | 50  | 63    |   |   |
| Selectivity limiting current $I_g$ [A]  |                      | 7 | 10.5 | 14 | 21 | 35 | 45.5 | 56 | 70 | 87.5 | 112 | 140 | 175 | 220.5 |   |   |
| Downstream side<br>FAZ Characteristic C | 0.5                  | x | x    | x  | x  | x  | x    | x  | x  | x    | x   | x   | x   | x     |   |   |
|   | 1                    | x | x    | x  | x  | x  | x    | x  | x  | x    | x   | x   | x   | x     |   |   |
|   | 2                    |   |      | x  | x  | x  | x    | x  | x  | x    | x   | x   | x   | x     |   |   |
|   | 3                    |   |      |    | x  | x  | x    | x  | x  | x    | x   | x   | x   | x     |   |   |
|   | 4                    |   |      |    |    | x  | x    | x  | x  | x    | x   | x   | x   | x     |   |   |
|   | 6                    |   |      |    |    |    | x    | x  | x  | x    | x   | x   | x   | x     |   |   |
|   | 8                    |   |      |    |    |    |      | x  | x  | x    | x   | x   | x   | x     |   |   |
|   | 10                   |   |      |    |    |    |      |    | x  | x    | x   | x   | x   | x     |   |   |
|   | 13                   |   |      |    |    |    |      |    |    | x    | x   | x   | x   | x     |   |   |
|   | 16                   |   |      |    |    |    |      |    |    |      | x   | x   | x   | x     |   |   |
|   | 20                   |   |      |    |    |    |      |    |    |      |     | x   | x   | x     |   |   |
|   | 25                   |   |      |    |    |    |      |    |    |      |     |     | x   | x     |   |   |
|   | 32                   |   |      |    |    |    |      |    |    |      |     |     |     | x     |   |   |
|   | 40                   |   |      |    |    |    |      |    |    |      |     |     |     |       | x |   |
|   | 50                   |   |      |    |    |    |      |    |    |      |     |     |     |       |   | x |
| 63                                      |                      |   |      |    |    |    |      |    |    |      |     |     |     |       |   | x |

| Upstream side                           | FAZ Characteristic B |   |      |    |    |    |      |    |    |      |     |     |     |       |   |   |
|---|----------------------|---|------|----|----|----|------|----|----|------|-----|-----|-----|-------|---|---|
| Type B rated current $I_n$ [A]          |                      | 2 | 3    | 4  | 6  | 10 | 13   | 16 | 20 | 25   | 32  | 40  | 50  | 63    |   |   |
| Selectivity limiting current $I_g$ [A]  |                      | 7 | 10.5 | 14 | 21 | 35 | 45.5 | 56 | 70 | 87.5 | 112 | 140 | 175 | 220.5 |   |   |
| Downstream side<br>FAZ Characteristic D | 2                    |   |      |    |    | x  | x    | x  | x  | x    | x   | x   | x   | x     |   |   |
|   | 4                    |   |      |    |    |    |      | x  | x  | x    | x   | x   | x   | x     |   |   |
|   | 6                    |   |      |    |    |    |      |    | x  | x    | x   | x   | x   | x     |   |   |
|   | 10                   |   |      |    |    |    |      |    |    |      | x   | x   | x   | x     |   |   |
|   | 13                   |   |      |    |    |    |      |    |    |      |     | x   | x   | x     |   |   |
|   | 16                   |   |      |    |    |    |      |    |    |      |     |     | x   | x     |   |   |
|   | 20                   |   |      |    |    |    |      |    |    |      |     |     |     | x     |   |   |
|   | 25                   |   |      |    |    |    |      |    |    |      |     |     |     |       | x |   |
|   | 32                   |   |      |    |    |    |      |    |    |      |     |     |     |       |   | x |
| 40                                      |                      |   |      |    |    |    |      |    |    |      |     |     |     |       |   | x |

## Overload Selectivity FAZ

### FAZ-B(C)(D) to FAZ-C



Upstream side FAZ, Characteristic C

Downstream side FAZ, Characteristic B, C, D

x ... Selectivity range (i.e. only the downstream switch drops in case  $I < I_g$ )

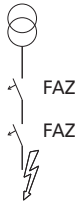
| Upstream side →                         |    | FAZ Characteristic C |     |      |      |      |      |      |    |      |      |     |       |       |     |     |       |   |
|---|----|----------------------|-----|------|------|------|------|------|----|------|------|-----|-------|-------|-----|-----|-------|---|
| Type B rated current $I_n$ [A]          |    | 0.5                  | 1   | 2    | 3    | 4    | 6    | 8    | 10 | 13   | 16   | 20  | 25    | 32    | 40  | 50  | 63    |   |
| Selectivity limiting current $I_g$ [A]  |    | 2.85                 | 5.7 | 11.4 | 17.1 | 22.8 | 34.2 | 45.6 | 57 | 74.1 | 91.2 | 114 | 142.5 | 182.4 | 228 | 285 | 359.1 |   |
| Downstream side<br>FAZ Characteristic B | 2  |                      |     |      | x    | x    | x    | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |   |
|   | 3  |                      |     |      |      | x    | x    | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |   |
|   | 4  |                      |     |      |      |      | x    | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |   |
|   | 6  |                      |     |      |      |      |      | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |   |
|   | 10 |                      |     |      |      |      |      |      |    | x    | x    | x   | x     | x     | x   | x   | x     |   |
|   | 13 |                      |     |      |      |      |      |      |    |      | x    | x   | x     | x     | x   | x   | x     |   |
|   | 16 |                      |     |      |      |      |      |      |    |      |      | x   | x     | x     | x   | x   | x     |   |
|   | 20 |                      |     |      |      |      |      |      |    |      |      |     | x     | x     | x   | x   | x     |   |
|   | 25 |                      |     |      |      |      |      |      |    |      |      |     |       | x     | x   | x   | x     |   |
|   | 32 |                      |     |      |      |      |      |      |    |      |      |     |       |       | x   | x   | x     |   |
|   | 40 |                      |     |      |      |      |      |      |    |      |      |     |       |       |     | x   | x     |   |
|   | 50 |                      |     |      |      |      |      |      |    |      |      |     |       |       |     |     | x     | x |
|   | 63 |                      |     |      |      |      |      |      |    |      |      |     |       |       |     |     |       | x |

| Upstream side →                         |     | FAZ Characteristic C |     |      |      |      |      |      |    |      |      |     |       |       |     |     |       |
|---|-----|----------------------|-----|------|------|------|------|------|----|------|------|-----|-------|-------|-----|-----|-------|
| Type B rated current $I_n$ [A]          |     | 0.5                  | 1   | 2    | 3    | 4    | 6    | 8    | 10 | 13   | 16   | 20  | 25    | 32    | 40  | 50  | 63    |
| Selectivity limiting current $I_g$ [A]  |     | 2.85                 | 5.7 | 11.4 | 17.1 | 22.8 | 34.2 | 45.6 | 57 | 74.1 | 91.2 | 114 | 142.5 | 182.4 | 228 | 285 | 359.1 |
| Downstream side<br>FAZ Characteristic C | 0.5 |                      | x   | x    | x    | x    | x    | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 1   |                      |     | x    | x    | x    | x    | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 2   |                      |     |      | x    | x    | x    | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 3   |                      |     |      |      | x    | x    | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 4   |                      |     |      |      |      | x    | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 6   |                      |     |      |      |      |      | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 8   |                      |     |      |      |      |      |      | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 10  |                      |     |      |      |      |      |      |    | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 13  |                      |     |      |      |      |      |      |    |      | x    | x   | x     | x     | x   | x   | x     |
|   | 16  |                      |     |      |      |      |      |      |    |      |      | x   | x     | x     | x   | x   | x     |
|   | 20  |                      |     |      |      |      |      |      |    |      |      |     | x     | x     | x   | x   | x     |
|   | 25  |                      |     |      |      |      |      |      |    |      |      |     |       | x     | x   | x   | x     |
|   | 32  |                      |     |      |      |      |      |      |    |      |      |     |       |       | x   | x   | x     |
|   | 40  |                      |     |      |      |      |      |      |    |      |      |     |       |       |     | x   | x     |
|   | 50  |                      |     |      |      |      |      |      |    |      |      |     |       |       |     |     | x     |
| 63                                      |     |                      |     |      |      |      |      |      |    |      |      |     |       |       |     |     | x     |

| Upstream side →                         |    | FAZ Characteristic C |     |      |      |      |      |      |    |      |      |     |       |       |     |     |       |
|---|----|----------------------|-----|------|------|------|------|------|----|------|------|-----|-------|-------|-----|-----|-------|
| Type B rated current $I_n$ [A]          |    | 0.5                  | 1   | 2    | 3    | 4    | 6    | 8    | 10 | 13   | 16   | 20  | 25    | 32    | 40  | 50  | 63    |
| Selectivity limiting current $I_g$ [A]  |    | 2.85                 | 5.7 | 11.4 | 17.1 | 22.8 | 34.2 | 45.6 | 57 | 74.1 | 91.2 | 114 | 142.5 | 182.4 | 228 | 285 | 359.1 |
| Downstream side<br>FAZ Characteristic D | 2  |                      |     |      |      |      | x    | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 4  |                      |     |      |      |      |      | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 6  |                      |     |      |      |      |      |      | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 10 |                      |     |      |      |      |      |      |    |      | x    | x   | x     | x     | x   | x   | x     |
|   | 13 |                      |     |      |      |      |      |      |    |      |      | x   | x     | x     | x   | x   | x     |
|   | 16 |                      |     |      |      |      |      |      |    |      |      |     | x     | x     | x   | x   | x     |
|   | 20 |                      |     |      |      |      |      |      |    |      |      |     |       | x     | x   | x   | x     |
|   | 25 |                      |     |      |      |      |      |      |    |      |      |     |       |       | x   | x   | x     |
|   | 32 |                      |     |      |      |      |      |      |    |      |      |     |       |       |     | x   | x     |
| 40                                      |    |                      |     |      |      |      |      |      |    |      |      |     |       |       |     | x   | x     |

## Overload Selectivity FAZ

### FAZ-B(C)(D) to FAZ-D



**Upstream side FAZ, Characteristic D**  
**Downstream side FAZ, Characteristic B, C, D**

x ... Selectivity range (i.e. only the downstream switch drops in case  $I < I_g$ )

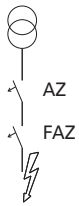
| Upstream side →                         |    | FAZ Characteristic D |    |    |     |       |     |     |       |     |     |
|---|----|----------------------|----|----|-----|-------|-----|-----|-------|-----|-----|
| Type B rated current $I_n$ [A]          |    | 2                    | 4  | 6  | 10  | 13    | 16  | 20  | 25    | 32  | 40  |
| Selectivity limiting current $I_g$ [A]  |    | 21                   | 42 | 63 | 105 | 136.5 | 168 | 210 | 262.5 | 336 | 420 |
| Downstream side<br>FAZ Characteristic B | 2  |                      | x  | x  | x   | x     | x   | x   | x     | x   | x   |
|   | 3  |                      | x  | x  | x   | x     | x   | x   | x     | x   | x   |
|   | 4  |                      |    | x  | x   | x     | x   | x   | x     | x   | x   |
|   | 6  |                      |    |    | x   | x     | x   | x   | x     | x   | x   |
|   | 10 |                      |    |    |     | x     | x   | x   | x     | x   | x   |
|   | 13 |                      |    |    |     |       | x   | x   | x     | x   | x   |
|   | 16 |                      |    |    |     |       |     | x   | x     | x   | x   |
|   | 20 |                      |    |    |     |       |     |     | x     | x   | x   |
|   | 25 |                      |    |    |     |       |     |     |       | x   | x   |
|   | 32 |                      |    |    |     |       |     |     |       |     | x   |
|   | 40 |                      |    |    |     |       |     |     |       |     |     |
|   | 50 |                      |    |    |     |       |     |     |       |     |     |
| 63                                      |    |                      |    |    |     |       |     |     |       |     |     |

| Upstream side →                         |     | FAZ Characteristic D |    |    |     |       |     |     |       |     |     |
|---|-----|----------------------|----|----|-----|-------|-----|-----|-------|-----|-----|
| Type B rated current $I_n$ [A]          |     | 2                    | 4  | 6  | 10  | 13    | 16  | 20  | 25    | 32  | 40  |
| Selectivity limiting current $I_g$ [A]  |     | 21                   | 42 | 63 | 105 | 136.5 | 168 | 210 | 262.5 | 336 | 420 |
| Downstream side<br>FAZ Characteristic C | 0.5 | x                    | x  | x  | x   | x     | x   | x   | x     | x   | x   |
|   | 1   | x                    | x  | x  | x   | x     | x   | x   | x     | x   | x   |
|   | 2   |                      | x  | x  | x   | x     | x   | x   | x     | x   | x   |
|   | 3   |                      | x  | x  | x   | x     | x   | x   | x     | x   | x   |
|   | 4   |                      |    | x  | x   | x     | x   | x   | x     | x   | x   |
|   | 6   |                      |    |    | x   | x     | x   | x   | x     | x   | x   |
|   | 8   |                      |    |    | x   | x     | x   | x   | x     | x   | x   |
|   | 10  |                      |    |    |     | x     | x   | x   | x     | x   | x   |
|   | 13  |                      |    |    |     |       | x   | x   | x     | x   | x   |
|   | 16  |                      |    |    |     |       |     | x   | x     | x   | x   |
|   | 20  |                      |    |    |     |       |     |     | x     | x   | x   |
|   | 25  |                      |    |    |     |       |     |     |       | x   | x   |
|   | 32  |                      |    |    |     |       |     |     |       |     | x   |
|   | 40  |                      |    |    |     |       |     |     |       |     |     |
|   | 50  |                      |    |    |     |       |     |     |       |     |     |
| 63                                      |     |                      |    |    |     |       |     |     |       |     |     |

| Upstream side →                         |    | FAZ Characteristic D |    |    |     |       |     |     |       |     |     |
|---|----|----------------------|----|----|-----|-------|-----|-----|-------|-----|-----|
| Type B rated current $I_n$ [A]          |    | 2                    | 4  | 6  | 10  | 13    | 16  | 20  | 25    | 32  | 40  |
| Selectivity limiting current $I_g$ [A]  |    | 21                   | 42 | 63 | 105 | 136.5 | 168 | 210 | 262.5 | 336 | 420 |
| Downstream side<br>FAZ Characteristic D | 2  |                      | x  | x  | x   | x     | x   | x   | x     | x   | x   |
|   | 4  |                      |    | x  | x   | x     | x   | x   | x     | x   | x   |
|   | 6  |                      |    |    | x   | x     | x   | x   | x     | x   | x   |
|   | 10 |                      |    |    |     | x     | x   | x   | x     | x   | x   |
|   | 13 |                      |    |    |     |       | x   | x   | x     | x   | x   |
|   | 16 |                      |    |    |     |       |     | x   | x     | x   | x   |
|   | 20 |                      |    |    |     |       |     |     | x     | x   | x   |
|   | 25 |                      |    |    |     |       |     |     |       | x   | x   |
|   | 32 |                      |    |    |     |       |     |     |       |     | x   |
| 40                                      |    |                      |    |    |     |       |     |     |       |     |     |

## Overload Selectivity FAZ

### FAZ-B(C)(D) to AZ-C



**Upstream side AZ, Characteristic C**  
**Downstream side FAZ, Characteristic B, C, D**

x ... Selectivity range (i.e. only the downstream switch drops in case  $I < I_g$ )

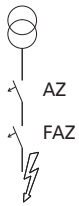
| Upstream side →                         |    | AZ Characteristic C |     |     |     |     |     |     |     |     |   |
|---|----|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|---|
| Type B rated current $I_n$ [A]          |    | 20                  | 25  | 32  | 40  | 50  | 63  | 80  | 100 | 125 |   |
| Selectivity limiting current $I_g$ [A]  |    | 130                 | 163 | 208 | 260 | 325 | 410 | 520 | 650 | 813 |   |
| Downstream side<br>FAZ Characteristic B | 2  | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 3  | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 4  | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 6  | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 10 | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 13 | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 16 | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 20 |                     | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 25 |                     |     | x   | x   | x   | x   | x   | x   | x   | x |
|   | 32 |                     |     |     | x   | x   | x   | x   | x   | x   | x |
|   | 40 |                     |     |     |     | x   | x   | x   | x   | x   | x |
|   | 50 |                     |     |     |     |     | x   | x   | x   | x   | x |
| 63                                      |    |                     |     |     |     |     | x   | x   | x   | x   |   |

| Upstream side →                         |     | AZ Characteristic C |     |     |     |     |     |     |     |     |   |
|---|-----|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|---|
| Type B rated current $I_n$ [A]          |     | 20                  | 25  | 32  | 40  | 50  | 63  | 80  | 100 | 125 |   |
| Selectivity limiting current $I_g$ [A]  |     | 130                 | 163 | 208 | 260 | 325 | 410 | 520 | 650 | 813 |   |
| Downstream side<br>FAZ Characteristic C | 0.5 | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 1   | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 2   | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 3   | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 4   | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 6   | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 8   | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 10  | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 13  | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 16  | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 20  |                     | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 25  |                     |     | x   | x   | x   | x   | x   | x   | x   | x |
|   | 32  |                     |     |     | x   | x   | x   | x   | x   | x   | x |
|   | 40  |                     |     |     |     | x   | x   | x   | x   | x   | x |
| 50                                      |     |                     |     |     |     | x   | x   | x   | x   | x   |   |
| 63                                      |     |                     |     |     |     |     | x   | x   | x   | x   |   |

| Upstream side →                         |    | AZ Characteristic C |     |     |     |     |     |     |     |     |   |
|---|----|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|---|
| Type B rated current $I_n$ [A]          |    | 20                  | 25  | 32  | 40  | 50  | 63  | 80  | 100 | 125 |   |
| Selectivity limiting current $I_g$ [A]  |    | 130                 | 163 | 208 | 260 | 325 | 410 | 520 | 650 | 813 |   |
| Downstream side<br>FAZ Characteristic D | 2  | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 4  | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 6  | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 10 | x                   | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 13 |                     | x   | x   | x   | x   | x   | x   | x   | x   | x |
|   | 16 |                     |     | x   | x   | x   | x   | x   | x   | x   | x |
|   | 20 |                     |     |     | x   | x   | x   | x   | x   | x   | x |
|   | 25 |                     |     |     |     | x   | x   | x   | x   | x   | x |
|   | 32 |                     |     |     |     |     | x   | x   | x   | x   | x |
| 40                                      |    |                     |     |     |     |     | x   | x   | x   | x   |   |

## Overload Selectivity FAZ

### FAZ-B(C)(D) to AZ-D



**Upstream side AZ, Characteristic D**  
**Downstream side FAZ, Characteristic B, C, D**

x ... Selectivity range (i.e. only the downstream switch drops in case  $I < I_g$ )

| Upstream side →                         |    | AZ Characteristic D |     |     |     |     |     |     |      |
|---|----|---------------------|-----|-----|-----|-----|-----|-----|------|
| Type B rated current $I_n$ [A]          |    | 20                  | 25  | 32  | 40  | 50  | 63  | 80  | 100  |
| Selectivity limiting current $I_g$ [A]  |    | 230                 | 285 | 365 | 450 | 550 | 680 | 850 | 1020 |
| Downstream side<br>FAZ Characteristic B | 2  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 3  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 4  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 6  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 10 | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 13 | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 16 | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 20 |                     | x   | x   | x   | x   | x   | x   | x    |
|   | 25 |                     |     | x   | x   | x   | x   | x   | x    |
|   | 32 |                     |     |     | x   | x   | x   | x   | x    |
|   | 40 |                     |     |     |     | x   | x   | x   | x    |
|   | 50 |                     |     |     |     |     | x   | x   | x    |
|   | 63 |                     |     |     |     |     |     | x   | x    |

| Upstream side →                         |     | AZ Characteristic D |     |     |     |     |     |     |      |
|---|-----|---------------------|-----|-----|-----|-----|-----|-----|------|
| Type B rated current $I_n$ [A]          |     | 20                  | 25  | 32  | 40  | 50  | 63  | 80  | 100  |
| Selectivity limiting current $I_g$ [A]  |     | 230                 | 285 | 365 | 450 | 550 | 680 | 850 | 1020 |
| Downstream side<br>FAZ Characteristic C | 0.5 | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 1   | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 2   | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 3   | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 4   | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 6   | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 8   | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 10  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 13  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 16  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 20  |                     | x   | x   | x   | x   | x   | x   | x    |
|   | 25  |                     |     | x   | x   | x   | x   | x   | x    |
|   | 32  |                     |     |     | x   | x   | x   | x   | x    |
|   | 40  |                     |     |     |     | x   | x   | x   | x    |
|   | 50  |                     |     |     |     |     | x   | x   | x    |
| 63                                      |     |                     |     |     |     |     | x   | x   |      |

| Upstream side →                         |    | AZ Characteristic D |     |     |     |     |     |     |      |
|---|----|---------------------|-----|-----|-----|-----|-----|-----|------|
| Type B rated current $I_n$ [A]          |    | 20                  | 25  | 32  | 40  | 50  | 63  | 80  | 100  |
| Selectivity limiting current $I_g$ [A]  |    | 230                 | 285 | 365 | 450 | 550 | 680 | 850 | 1020 |
| Downstream side<br>FAZ Characteristic D | 2  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 4  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 6  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 10 | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 13 | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 16 | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 20 |                     | x   | x   | x   | x   | x   | x   | x    |
|   | 25 |                     |     | x   | x   | x   | x   | x   | x    |
|   | 32 |                     |     |     | x   | x   | x   | x   | x    |
| 40                                      |    |                     |     |     | x   | x   | x   | x   |      |

## Influence of the Line Frequency FAZ

On the Instantaneous Tripping Current  $I_{MA}$

|                                     | Line Frequency f [Hz]          |     |     |     |     |     |     |
|-------------------------------------|--------------------------------|-----|-----|-----|-----|-----|-----|
|                                     | 16 <sup>2</sup> / <sub>3</sub> | 50  | 60  | 100 | 200 | 300 | 400 |
| $I_{MA}(f)/I_{MA}(50\text{Hz})$ [%] | 91                             | 100 | 101 | 106 | 115 | 134 | 141 |

## Miniature Circuit Breakers FAZ-T

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### FAZ-T

- High-quality miniature circuit breakers for industrial and commercial applications
- Contact position indicator red - green
- Accessories suitable for subsequent installation
- Rated currents up to 40 A
- Tripping characteristics B, C, D
- Rated breaking capacity up to 25 kA according to EN 60947-2



## FAZ-T Miniature Circuit Breakers (MCBs)

### Characteristic B

| Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60898-1<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|
|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|

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#### 1-pole

|    |         |    |     |    |            |        |        |
|----|---------|----|-----|----|------------|--------|--------|
| 1  | 240/415 | 15 | 240 | 25 | FAZT-B1/1  | 240770 | 12/120 |
| 2  | 240/415 | 15 | 240 | 25 | FAZT-B2/1  | 240771 | 12/120 |
| 3  | 240/415 | 15 | 240 | 25 | FAZT-B3/1  | 240772 | 12/120 |
| 4  | 240/415 | 15 | 240 | 25 | FAZT-B4/1  | 240777 | 12/120 |
| 6  | 240/415 | 15 | 240 | 25 | FAZT-B6/1  | 240782 | 12/120 |
| 10 | 240/415 | 15 | 240 | 25 | FAZT-B10/1 | 240787 | 12/120 |
| 12 | 240/415 | 15 | 240 | 25 | FAZT-B12/1 | 240792 | 12/120 |
| 13 | 240/415 | 15 | 240 | 25 | FAZT-B13/1 | 240793 | 12/120 |
| 15 | 240/415 | 15 | 240 | 25 | FAZT-B15/1 | 240794 | 12/120 |
| 16 | 240/415 | 15 | 240 | 25 | FAZT-B16/1 | 240795 | 12/120 |
| 20 | 240/415 | 15 | 240 | 25 | FAZT-B20/1 | 240796 | 12/120 |
| 25 | 240/415 | 15 | 240 | 25 | FAZT-B25/1 | 240797 | 12/120 |
| 32 | 240/415 | 10 | 240 | 20 | FAZT-B32/1 | 141907 | 12/120 |
| 40 | 240/415 | 10 | 240 | 20 | FAZT-B40/1 | 141908 | 12/120 |

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#### 1+N-pole

|    |     |    |     |    |             |        |      |
|----|-----|----|-----|----|-------------|--------|------|
| 1  | 240 | 15 | 240 | 25 | FAZT-B1/1N  | 240994 | 1/60 |
| 2  | 240 | 15 | 240 | 25 | FAZT-B2/1N  | 240995 | 1/60 |
| 3  | 240 | 15 | 240 | 25 | FAZT-B3/1N  | 240996 | 1/60 |
| 4  | 240 | 15 | 240 | 25 | FAZT-B4/1N  | 240997 | 1/60 |
| 6  | 240 | 15 | 240 | 25 | FAZT-B6/1N  | 240998 | 1/60 |
| 10 | 240 | 15 | 240 | 25 | FAZT-B10/1N | 240999 | 1/60 |
| 12 | 240 | 15 | 240 | 25 | FAZT-B12/1N | 241000 | 1/60 |
| 13 | 240 | 15 | 240 | 25 | FAZT-B13/1N | 241001 | 1/60 |
| 15 | 240 | 15 | 240 | 25 | FAZT-B15/1N | 241005 | 1/60 |
| 16 | 240 | 15 | 240 | 25 | FAZT-B16/1N | 241009 | 1/60 |
| 20 | 240 | 15 | 240 | 25 | FAZT-B20/1N | 241015 | 1/60 |
| 25 | 240 | 15 | 240 | 25 | FAZT-B25/1N | 241019 | 1/60 |
| 32 | 240 | 10 | 240 | 20 | FAZT-B32/1N | 142509 | 1/60 |
| 40 | 240 | 10 | 240 | 20 | FAZT-B40/1N | 142510 | 1/60 |

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#### 2-pole

|    |     |    |         |    |            |        |      |
|----|-----|----|---------|----|------------|--------|------|
| 1  | 415 | 15 | 240/415 | 25 | FAZT-B1/2  | 240820 | 1/60 |
| 2  | 415 | 15 | 240/415 | 25 | FAZT-B2/2  | 240821 | 1/60 |
| 3  | 415 | 15 | 240/415 | 25 | FAZT-B3/2  | 240822 | 1/60 |
| 4  | 415 | 15 | 240/415 | 25 | FAZT-B4/2  | 240823 | 1/60 |
| 6  | 415 | 15 | 240/415 | 25 | FAZT-B6/2  | 240824 | 1/60 |
| 10 | 415 | 15 | 240/415 | 25 | FAZT-B10/2 | 240825 | 1/60 |
| 12 | 415 | 15 | 240/415 | 25 | FAZT-B12/2 | 240826 | 1/60 |
| 13 | 415 | 15 | 240/415 | 25 | FAZT-B13/2 | 240827 | 1/60 |
| 15 | 415 | 15 | 240/415 | 25 | FAZT-B15/2 | 240828 | 1/60 |
| 16 | 415 | 15 | 240/415 | 25 | FAZT-B16/2 | 240829 | 1/60 |
| 20 | 415 | 15 | 240/415 | 25 | FAZT-B20/2 | 240830 | 1/60 |
| 25 | 415 | 15 | 240/415 | 25 | FAZT-B25/2 | 240831 | 1/60 |
| 32 | 415 | 10 | 240/415 | 20 | FAZT-B32/2 | 142485 | 1/60 |
| 40 | 415 | 10 | 240/415 | 20 | FAZT-B40/2 | 142486 | 1/60 |

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| Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60898-1<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|
|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|

### 3-pole

|    |     |    |         |    |            |        |      |
|----|-----|----|---------|----|------------|--------|------|
| 1  | 415 | 15 | 240/415 | 25 | FAZT-B1/3  | 240874 | 1/40 |
| 2  | 415 | 15 | 240/415 | 25 | FAZT-B2/3  | 240875 | 1/40 |
| 3  | 415 | 15 | 240/415 | 25 | FAZT-B3/3  | 240876 | 1/40 |
| 4  | 415 | 15 | 240/415 | 25 | FAZT-B4/3  | 240877 | 1/40 |
| 6  | 415 | 15 | 240/415 | 25 | FAZT-B6/3  | 240878 | 1/40 |
| 10 | 415 | 15 | 240/415 | 25 | FAZT-B10/3 | 240879 | 1/40 |
| 12 | 415 | 15 | 240/415 | 25 | FAZT-B12/3 | 240880 | 1/40 |
| 13 | 415 | 15 | 240/415 | 25 | FAZT-B13/3 | 240881 | 1/40 |
| 15 | 415 | 15 | 240/415 | 25 | FAZT-B15/3 | 240882 | 1/40 |
| 16 | 415 | 15 | 240/415 | 25 | FAZT-B16/3 | 240883 | 1/40 |
| 20 | 415 | 15 | 240/415 | 25 | FAZT-B20/3 | 240884 | 1/40 |
| 25 | 415 | 15 | 240/415 | 25 | FAZT-B25/3 | 240885 | 1/40 |
| 32 | 415 | 10 | 240/415 | 20 | FAZT-B32/3 | 142493 | 1/40 |
| 40 | 415 | 10 | 240/415 | 20 | FAZT-B40/3 | 142494 | 1/40 |

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### 3+N-pole

|    |     |    |         |    |             |        |      |
|----|-----|----|---------|----|-------------|--------|------|
| 1  | 415 | 15 | 240/415 | 25 | FAZT-B1/3N  | 241060 | 1/30 |
| 2  | 415 | 15 | 240/415 | 25 | FAZT-B2/3N  | 241065 | 1/30 |
| 3  | 415 | 15 | 240/415 | 25 | FAZT-B3/3N  | 241070 | 1/30 |
| 4  | 415 | 15 | 240/415 | 25 | FAZT-B4/3N  | 241075 | 1/30 |
| 6  | 415 | 15 | 240/415 | 25 | FAZT-B6/3N  | 241080 | 1/30 |
| 10 | 415 | 15 | 240/415 | 25 | FAZT-B10/3N | 241085 | 1/30 |
| 12 | 415 | 15 | 240/415 | 25 | FAZT-B12/3N | 241090 | 1/30 |
| 13 | 415 | 15 | 240/415 | 25 | FAZT-B13/3N | 241095 | 1/30 |
| 15 | 415 | 15 | 240/415 | 25 | FAZT-B15/3N | 241100 | 1/30 |
| 16 | 415 | 15 | 240/415 | 25 | FAZT-B16/3N | 241105 | 1/30 |
| 20 | 415 | 15 | 240/415 | 25 | FAZT-B20/3N | 241110 | 1/30 |
| 25 | 415 | 15 | 240/415 | 25 | FAZT-B25/3N | 241115 | 1/30 |
| 32 | 415 | 10 | 240/415 | 20 | FAZT-B32/3N | 142517 | 1/30 |
| 40 | 415 | 10 | 240/415 | 20 | FAZT-B40/3N | 142518 | 1/30 |

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### 4-pole

|    |     |    |         |    |            |        |      |
|----|-----|----|---------|----|------------|--------|------|
| 1  | 415 | 15 | 240/415 | 25 | FAZT-B1/4  | 240922 | 1/30 |
| 2  | 415 | 15 | 240/415 | 25 | FAZT-B2/4  | 240927 | 1/30 |
| 3  | 415 | 15 | 240/415 | 25 | FAZT-B3/4  | 240930 | 1/30 |
| 4  | 415 | 15 | 240/415 | 25 | FAZT-B4/4  | 240931 | 1/30 |
| 6  | 415 | 15 | 240/415 | 25 | FAZT-B6/4  | 240932 | 1/30 |
| 10 | 415 | 15 | 240/415 | 25 | FAZT-B10/4 | 240933 | 1/30 |
| 12 | 415 | 15 | 240/415 | 25 | FAZT-B12/4 | 240934 | 1/30 |
| 13 | 415 | 15 | 240/415 | 25 | FAZT-B13/4 | 240935 | 1/30 |
| 15 | 415 | 15 | 240/415 | 25 | FAZT-B15/4 | 240936 | 1/30 |
| 16 | 415 | 15 | 240/415 | 25 | FAZT-B16/4 | 240937 | 1/30 |
| 20 | 415 | 15 | 240/415 | 25 | FAZT-B20/4 | 240938 | 1/30 |
| 25 | 415 | 15 | 240/415 | 25 | FAZT-B25/4 | 240939 | 1/30 |
| 32 | 415 | 10 | 240/415 | 20 | FAZT-B32/4 | 142501 | 1/30 |
| 40 | 415 | 10 | 240/415 | 20 | FAZT-B40/4 | 142502 | 1/30 |

## FAZ-T Miniature Circuit Breakers (MCBs)

### Characteristic C

|                 | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60898-1<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|-----------------|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|
| <b>1-pole</b>   |                            |   |   |   |   |                     |             |                         |
| 1               | 240/415                    | 15  | 240   | 25  | FAZT-C1/1   | 240798              | 12/120      |                         |
| 2               | 240/415                    | 15  | 240   | 25  | FAZT-C2/1   | 240799              | 12/120      |                         |
| 3               | 240/415                    | 15  | 240   | 25  | FAZT-C3/1   | 240800              | 12/120      |                         |
| 4               | 240/415                    | 15  | 240   | 25  | FAZT-C4/1   | 240801              | 12/120      |                         |
| 6               | 240/415                    | 15  | 240   | 25  | FAZT-C6/1   | 240802              | 12/120      |                         |
| 10              | 240/415                    | 15  | 240   | 25  | FAZT-C10/1  | 240803              | 12/120      |                         |
| 12              | 240/415                    | 15  | 240   | 25  | FAZT-C12/1  | 240804              | 12/120      |                         |
| 13              | 240/415                    | 15  | 240   | 25  | FAZT-C13/1  | 240805              | 12/120      |                         |
| 15              | 240/415                    | 15  | 240   | 25  | FAZT-C15/1  | 240806              | 12/120      |                         |
| 16              | 240/415                    | 15  | 240   | 25  | FAZT-C16/1  | 240807              | 12/120      |                         |
| 20              | 240/415                    | 15  | 240   | 25  | FAZT-C20/1  | 240808              | 12/120      |                         |
| 25              | 240/415                    | 15  | 240   | 25  | FAZT-C25/1  | 240809              | 12/120      |                         |
| 32              | 240/415                    | 10  | 240   | 20  | FAZT-C32/1  | 141909              | 12/120      |                         |
| 40              | 240/415                    | 10  | 240   | 20  | FAZT-C40/1  | 142480              | 12/120      |                         |
| <b>1+N-pole</b> |                            |   |   |   |   |                     |             |                         |
| 1               | 240                        | 15  | 240   | 25  | FAZT-C1/1N  | 241022              | 1/60        |                         |
| 2               | 240                        | 15  | 240   | 25  | FAZT-C2/1N  | 241023              | 1/60        |                         |
| 3               | 240                        | 15  | 240   | 25  | FAZT-C3/1N  | 241024              | 1/60        |                         |
| 4               | 240                        | 15  | 240   | 25  | FAZT-C4/1N  | 241025              | 1/60        |                         |
| 6               | 240                        | 15  | 240   | 25  | FAZT-C6/1N  | 241026              | 1/60        |                         |
| 10              | 240                        | 15  | 240   | 25  | FAZT-C10/1N   | 241027              | 1/60        |                         |
| 12              | 240                        | 15  | 240   | 25  | FAZT-C12/1N   | 241028              | 1/60        |                         |
| 13              | 240                        | 15  | 240   | 25  | FAZT-C13/1N   | 241029              | 1/60        |                         |
| 15              | 240                        | 15  | 240   | 25  | FAZT-C15/1N   | 241030              | 1/60        |                         |
| 16              | 240                        | 15  | 240   | 25  | FAZT-C16/1N   | 241034              | 1/60        |                         |
| 20              | 240                        | 15  | 240   | 25  | FAZT-C20/1N   | 241038              | 1/60        |                         |
| 25              | 240                        | 15  | 240   | 25  | FAZT-C25/1N   | 241044              | 1/60        |                         |
| 32              | 240                        | 10  | 240   | 20  | FAZT-C32/1N   | 142511              | 1/60        |                         |
| 40              | 240                        | 10  | 240   | 20  | FAZT-C40/1N   | 142512              | 1/60        |                         |
| <b>2-pole</b>   |                            |   |   |   |   |                     |             |                         |
| 1               | 415                        | 15  | 240/415   | 25  | FAZT-C1/2   | 240832              | 1/60        |                         |
| 2               | 415                        | 15  | 240/415   | 25  | FAZT-C2/2   | 240833              | 1/60        |                         |
| 3               | 415                        | 15  | 240/415   | 25  | FAZT-C3/2   | 240838              | 1/60        |                         |
| 4               | 415                        | 15  | 240/415   | 25  | FAZT-C4/2   | 240843              | 1/60        |                         |
| 6               | 415                        | 15  | 240/415   | 25  | FAZT-C6/2   | 240850              | 1/60        |                         |
| 10              | 415                        | 15  | 240/415   | 25  | FAZT-C10/2  | 240855              | 1/60        |                         |
| 12              | 415                        | 15  | 240/415   | 25  | FAZT-C12/2  | 240858              | 1/60        |                         |
| 13              | 415                        | 15  | 240/415   | 25  | FAZT-C13/2  | 240859              | 1/60        |                         |
| 15              | 415                        | 15  | 240/415   | 25  | FAZT-C15/2  | 240860              | 1/60        |                         |
| 16              | 415                        | 15  | 240/415   | 25  | FAZT-C16/2  | 240861              | 1/60        |                         |
| 20              | 415                        | 15  | 240/415   | 25  | FAZT-C20/2  | 240862              | 1/60        |                         |
| 25              | 415                        | 15  | 240/415   | 25  | FAZT-C25/2  | 240863              | 1/60        |                         |
| 32              | 415                        | 10  | 240/415   | 20  | FAZT-C32/2  | 142487              | 1/60        |                         |
| 40              | 415                        | 10  | 240/415   | 20  | FAZT-C40/2  | 142488              | 1/60        |                         |

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SG55212



SG53512



### 3-pole

|    | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60898-1<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|
| 1  | 415                        | 15  | 240/415   | 25  |   | FAZT-C1/3           | 240886      | 1/40                    |
| 2  | 415                        | 15  | 240/415   | 25  |   | FAZT-C2/3           | 240887      | 1/40                    |
| 3  | 415                        | 15  | 240/415   | 25  |   | FAZT-C3/3           | 240888      | 1/40                    |
| 4  | 415                        | 15  | 240/415   | 25  |   | FAZT-C4/3           | 240889      | 1/40                    |
| 6  | 415                        | 15  | 240/415   | 25  |   | FAZT-C6/3           | 240890      | 1/40                    |
| 10 | 415                        | 15  | 240/415   | 25  |   | FAZT-C10/3          | 240891      | 1/40                    |
| 12 | 415                        | 15  | 240/415   | 25  |   | FAZT-C12/3          | 240892      | 1/40                    |
| 13 | 415                        | 15  | 240/415   | 25  |   | FAZT-C13/3          | 240893      | 1/40                    |
| 15 | 415                        | 15  | 240/415   | 25  |   | FAZT-C15/3          | 240894      | 1/40                    |
| 16 | 415                        | 15  | 240/415   | 25  |   | FAZT-C16/3          | 240895      | 1/40                    |
| 20 | 415                        | 15  | 240/415   | 25  |   | FAZT-C20/3          | 240896      | 1/40                    |
| 25 | 415                        | 15  | 240/415   | 25  |   | FAZT-C25/3          | 240897      | 1/40                    |
| 32 | 415                        | 10  | 240/415   | 20  |   | FAZT-C32/3          | 142495      | 1/40                    |
| 40 | 415                        | 10  | 240/415   | 20  |   | FAZT-C40/3          | 142496      | 1/40                    |

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### 3+N-pole

|    | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60898-1<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|
| 1  | 415                        | 15  | 240/415   | 25  |   | FAZT-C1/3N          | 241120      | 1/30                    |
| 2  | 415                        | 15  | 240/415   | 25  |   | FAZT-C2/3N          | 241125      | 1/30                    |
| 3  | 415                        | 15  | 240/415   | 25  |   | FAZT-C3/3N          | 241130      | 1/30                    |
| 4  | 415                        | 15  | 240/415   | 25  |   | FAZT-C4/3N          | 241135      | 1/30                    |
| 6  | 415                        | 15  | 240/415   | 25  |   | FAZT-C6/3N          | 241140      | 1/30                    |
| 10 | 415                        | 15  | 240/415   | 25  |   | FAZT-C10/3N         | 241145      | 1/30                    |
| 12 | 415                        | 15  | 240/415   | 25  |   | FAZT-C12/3N         | 241150      | 1/30                    |
| 13 | 415                        | 15  | 240/415   | 25  |   | FAZT-C13/3N         | 241155      | 1/30                    |
| 15 | 415                        | 15  | 240/415   | 25  |   | FAZT-C15/3N         | 241160      | 1/30                    |
| 16 | 415                        | 15  | 240/415   | 25  |   | FAZT-C16/3N         | 241165      | 1/30                    |
| 20 | 415                        | 15  | 240/415   | 25  |   | FAZT-C20/3N         | 241170      | 1/30                    |
| 25 | 415                        | 15  | 240/415   | 25  |   | FAZT-C25/3N         | 241175      | 1/30                    |
| 32 | 415                        | 10  | 240/415   | 20  |   | FAZT-C32/3N         | 142519      | 1/30                    |
| 40 | 415                        | 10  | 240/415   | 20  |   | FAZT-C40/3N         | 142520      | 1/30                    |

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### 4-pole

|    | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60898-1<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|
| 1  | 415                        | 15  | 240/415   | 25  |   | FAZT-C1/4           | 240940      | 1/30                    |
| 2  | 415                        | 15  | 240/415   | 25  |   | FAZT-C2/4           | 240941      | 1/30                    |
| 3  | 415                        | 15  | 240/415   | 25  |   | FAZT-C3/4           | 240945      | 1/30                    |
| 4  | 415                        | 15  | 240/415   | 25  |   | FAZT-C4/4           | 240949      | 1/30                    |
| 6  | 415                        | 15  | 240/415   | 25  |   | FAZT-C6/4           | 240955      | 1/30                    |
| 10 | 415                        | 15  | 240/415   | 25  |   | FAZT-C10/4          | 240959      | 1/30                    |
| 12 | 415                        | 15  | 240/415   | 25  |   | FAZT-C12/4          | 240962      | 1/30                    |
| 13 | 415                        | 15  | 240/415   | 25  |   | FAZT-C13/4          | 240963      | 1/30                    |
| 15 | 415                        | 15  | 240/415   | 25  |   | FAZT-C15/4          | 240964      | 1/30                    |
| 16 | 415                        | 15  | 240/415   | 25  |   | FAZT-C16/4          | 240965      | 1/30                    |
| 20 | 415                        | 15  | 240/415   | 25  |   | FAZT-C20/4          | 240966      | 1/30                    |
| 25 | 415                        | 15  | 240/415   | 25  |   | FAZT-C25/4          | 240967      | 1/30                    |
| 32 | 415                        | 10  | 240/415   | 20  |   | FAZT-C32/4          | 142503      | 1/30                    |
| 40 | 415                        | 10  | 240/415   | 20  |   | FAZT-C40/4          | 142504      | 1/30                    |

## FAZ-T Miniature Circuit Breakers (MCBs)

### Characteristic D

|                 | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60898-1<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|-----------------|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|
| <b>1-pole</b>   |                            |   |   |   |   |                     |             |                         |
| 1               | 240/415                    | 15  | 240   | 25  | FAZT-D1/1   | 240810              | 12/120      |                         |
| 2               | 240/415                    | 15  | 240   | 25  | FAZT-D2/1   | 240811              | 12/120      |                         |
| 3               | 240/415                    | 15  | 240   | 25  | FAZT-D3/1   | 240812              | 12/120      |                         |
| 4               | 240/415                    | 15  | 240   | 25  | FAZT-D4/1   | 240813              | 12/120      |                         |
| 6               | 240/415                    | 15  | 240   | 25  | FAZT-D6/1   | 240814              | 12/120      |                         |
| 10              | 240/415                    | 15  | 240   | 25  | FAZT-D10/1  | 240815              | 12/120      |                         |
| 12              | 240/415                    | 15  | 240   | 25  | FAZT-D12/1  | 240816              | 12/120      |                         |
| 13              | 240/415                    | 15  | 240   | 25  | FAZT-D13/1  | 240817              | 12/120      |                         |
| 15              | 240/415                    | 15  | 240   | 20  | FAZT-D15/1  | 240818              | 12/120      |                         |
| 16              | 240/415                    | 15  | 240   | 20  | FAZT-D16/1  | 240819              | 12/120      |                         |
| 20              | 240/415                    | 10  | 240   | 20  | FAZT-D20/1  | 142481              | 12/120      |                         |
| 25              | 240/415                    | 10  | 240   | 15  | FAZT-D25/1  | 142482              | 12/120      |                         |
| 32              | 240/415                    | 10  | 240   | 15  | FAZT-D32/1  | 142483              | 12/120      |                         |
| 40              | 240/415                    | 10  | 240   | 15  | FAZT-D40/1  | 142484              | 12/120      |                         |
| <b>1+N-pole</b> |                            |   |   |   |   |                     |             |                         |
| 1               | 240                        | 15  | 240   | 25  | FAZT-D1/1N  | 241048              | 1/60        |                         |
| 2               | 240                        | 15  | 240   | 25  | FAZT-D2/1N  | 241051              | 1/60        |                         |
| 3               | 240                        | 15  | 240   | 25  | FAZT-D3/1N  | 241052              | 1/60        |                         |
| 4               | 240                        | 15  | 240   | 25  | FAZT-D4/1N  | 241053              | 1/60        |                         |
| 6               | 240                        | 15  | 240   | 25  | FAZT-D6/1N  | 241054              | 1/60        |                         |
| 10              | 240                        | 15  | 240   | 25  | FAZT-D10/1N   | 241055              | 1/60        |                         |
| 12              | 240                        | 15  | 240   | 25  | FAZT-D12/1N   | 241056              | 1/60        |                         |
| 13              | 240                        | 15  | 240   | 25  | FAZT-D13/1N   | 241057              | 1/60        |                         |
| 15              | 240                        | 15  | 240   | 20  | FAZT-D15/1N   | 241058              | 1/60        |                         |
| 16              | 240                        | 15  | 240   | 20  | FAZT-D16/1N   | 241059              | 1/60        |                         |
| 20              | 240                        | 10  | 240   | 20  | FAZT-D20/1N   | 142513              | 1/60        |                         |
| 25              | 240                        | 10  | 240   | 15  | FAZT-D25/1N   | 142514              | 1/60        |                         |
| 32              | 240                        | 10  | 240   | 15  | FAZT-D32/1N   | 142515              | 1/60        |                         |
| 40              | 240                        | 10  | 240   | 15  | FAZT-D40/1N   | 142516              | 1/60        |                         |
| <b>2-pole</b>   |                            |   |   |   |   |                     |             |                         |
| 1               | 415                        | 15  | 240/415   | 25  | FAZT-D1/2   | 240864              | 1/60        |                         |
| 2               | 415                        | 15  | 240/415   | 25  | FAZT-D2/2   | 240865              | 1/60        |                         |
| 3               | 415                        | 15  | 240/415   | 25  | FAZT-D3/2   | 240866              | 1/60        |                         |
| 4               | 415                        | 15  | 240/415   | 25  | FAZT-D4/2   | 240867              | 1/60        |                         |
| 6               | 415                        | 15  | 240/415   | 25  | FAZT-D6/2   | 240868              | 1/60        |                         |
| 10              | 415                        | 15  | 240/415   | 25  | FAZT-D10/2  | 240869              | 1/60        |                         |
| 12              | 415                        | 15  | 240/415   | 25  | FAZT-D12/2  | 240870              | 1/60        |                         |
| 13              | 415                        | 15  | 240/415   | 25  | FAZT-D13/2  | 240871              | 1/60        |                         |
| 15              | 415                        | 15  | 240/415   | 20  | FAZT-D15/2  | 240872              | 1/60        |                         |
| 16              | 415                        | 15  | 240/415   | 20  | FAZT-D16/2  | 240873              | 1/60        |                         |
| 20              | 415                        | 10  | 240/415   | 20  | FAZT-D20/2  | 142489              | 1/60        |                         |
| 25              | 415                        | 10  | 240/415   | 15  | FAZT-D25/2  | 142490              | 1/60        |                         |
| 32              | 415                        | 10  | 240/415   | 15  | FAZT-D32/2  | 142491              | 1/60        |                         |
| 40              | 415                        | 10  | 240/415   | 15  | FAZT-D40/2  | 142492              | 1/60        |                         |

SG53212



SG55412



SG55212



| Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60898-1<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|
|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|

SG53512



### 3-pole

|    |     |    |         |    |            |        |      |
|----|-----|----|---------|----|------------|--------|------|
| 1  | 415 | 15 | 240/415 | 25 | FAZT-D1/3  | 240898 | 1/40 |
| 2  | 415 | 15 | 240/415 | 25 | FAZT-D2/3  | 240899 | 1/40 |
| 3  | 415 | 15 | 240/415 | 25 | FAZT-D3/3  | 240900 | 1/40 |
| 4  | 415 | 15 | 240/415 | 25 | FAZT-D4/3  | 240901 | 1/40 |
| 6  | 415 | 15 | 240/415 | 25 | FAZT-D6/3  | 240902 | 1/40 |
| 10 | 415 | 15 | 240/415 | 25 | FAZT-D10/3 | 240903 | 1/40 |
| 12 | 415 | 15 | 240/415 | 25 | FAZT-D12/3 | 240904 | 1/40 |
| 13 | 415 | 15 | 240/415 | 25 | FAZT-D13/3 | 240905 | 1/40 |
| 15 | 415 | 15 | 240/415 | 25 | FAZT-D15/3 | 240910 | 1/40 |
| 16 | 415 | 15 | 240/415 | 25 | FAZT-D16/3 | 240915 | 1/40 |
| 20 | 415 | 10 | 240/415 | 20 | FAZT-D20/3 | 142497 | 1/40 |
| 25 | 415 | 10 | 240/415 | 15 | FAZT-D25/3 | 142498 | 1/40 |
| 32 | 415 | 10 | 240/415 | 15 | FAZT-D32/3 | 142499 | 1/40 |
| 40 | 415 | 10 | 240/415 | 15 | FAZT-D40/3 | 142500 | 1/40 |

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### 3+N-pole

|    |     |    |         |    |             |        |      |
|----|-----|----|---------|----|-------------|--------|------|
| 1  | 415 | 15 | 240/415 | 25 | FAZT-D1/3N  | 241180 | 1/30 |
| 2  | 415 | 15 | 240/415 | 25 | FAZT-D2/3N  | 241181 | 1/30 |
| 3  | 415 | 15 | 240/415 | 25 | FAZT-D3/3N  | 241182 | 1/30 |
| 4  | 415 | 15 | 240/415 | 25 | FAZT-D4/3N  | 241183 | 1/30 |
| 6  | 415 | 15 | 240/415 | 25 | FAZT-D6/3N  | 241184 | 1/30 |
| 10 | 415 | 15 | 240/415 | 25 | FAZT-D10/3N | 241185 | 1/30 |
| 12 | 415 | 15 | 240/415 | 25 | FAZT-D12/3N | 241186 | 1/30 |
| 13 | 415 | 15 | 240/415 | 25 | FAZT-D13/3N | 241187 | 1/30 |
| 15 | 415 | 15 | 240/415 | 25 | FAZT-D15/3N | 241188 | 1/30 |
| 16 | 415 | 15 | 240/415 | 25 | FAZT-D16/3N | 241189 | 1/30 |
| 20 | 415 | 10 | 240/415 | 20 | FAZT-D20/3N | 142521 | 1/30 |
| 25 | 415 | 10 | 240/415 | 15 | FAZT-D25/3N | 142522 | 1/30 |
| 32 | 415 | 10 | 240/415 | 15 | FAZT-D32/3N | 142523 | 1/30 |
| 40 | 415 | 10 | 240/415 | 15 | FAZT-D40/3N | 142524 | 1/30 |

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### 4-pole

|    |     |    |         |    |            |        |      |
|----|-----|----|---------|----|------------|--------|------|
| 1  | 415 | 15 | 240/415 | 25 | FAZT-D1/4  | 240968 | 1/30 |
| 2  | 415 | 15 | 240/415 | 25 | FAZT-D2/4  | 240969 | 1/30 |
| 3  | 415 | 15 | 240/415 | 25 | FAZT-D3/4  | 240970 | 1/30 |
| 4  | 415 | 15 | 240/415 | 25 | FAZT-D4/4  | 240971 | 1/30 |
| 6  | 415 | 15 | 240/415 | 25 | FAZT-D6/4  | 240975 | 1/30 |
| 10 | 415 | 15 | 240/415 | 25 | FAZT-D10/4 | 240979 | 1/30 |
| 12 | 415 | 15 | 240/415 | 25 | FAZT-D12/4 | 240985 | 1/30 |
| 13 | 415 | 15 | 240/415 | 25 | FAZT-D13/4 | 240989 | 1/30 |
| 15 | 415 | 15 | 240/415 | 25 | FAZT-D15/4 | 240992 | 1/30 |
| 16 | 415 | 15 | 240/415 | 25 | FAZT-D16/4 | 240993 | 1/30 |
| 20 | 415 | 10 | 240/415 | 20 | FAZT-D20/4 | 142505 | 1/30 |
| 25 | 415 | 10 | 240/415 | 15 | FAZT-D25/4 | 142506 | 1/30 |
| 32 | 415 | 10 | 240/415 | 15 | FAZT-D32/4 | 142507 | 1/30 |
| 40 | 415 | 10 | 240/415 | 15 | FAZT-D40/4 | 142508 | 1/30 |

## Specifications FAZ-T

### Technical data

|                 | FAZ-T                            |
|-----------------|----------------------------------|
| Productstandard | IEC/EN 60947-2<br>IEC/EN 60898-1 |
| Number of poles | 1, 1p+N, 2, 3, 3p+N, 4           |

### Mechanical specifications

|   |  |
|---|--|
| Device width                                | 17.7 mm (1p), 27 mm (1p+N), 36 mm (2p), 54 mm (3p), 72mm (3p+N),<br>72 mm (4p) |
| Frame size                                  | 45 mm  |
| Socket size                                 | 80 mm  |
| Device depth                                | 60 mm  |
| Terminals                                   | lift terminal  |
| Terminal capacity rigid solid/stranded wire | 1-25 mm <sup>2</sup>   |
| Terminal screw                              | M5 (with slotted screw acc. to EN ISO 4757-Z2, PZ2)                            |
| Terminal torque                             | max. 2.4 Nm  |
| Snap on fixing                              | tristable (on DIN rail acc. to EN 50022)                                       |
| Finger proof                                | acc. to VBG4, ÖVE EN-6   |
| Degree of Protection (DIN VDE 0470)         |  |
| Surface mounted                             | IP 20  |
| Built-in behind panel                       | IP 40  |
| Contact position indicator                  | red / green  |

### Electrical specifications

|                                 |           |   |
|---------------------------------|-----------|---|
| Rated voltage                   | $U_n$     | 240/415Vac<br>60Vdc per pole                                      |
| Rated current                   | $I_n$     | Type B, C, D: 1, 2, 3, 4, 6, 10, 12, 13, 15, 16, 20, 25, 32, 40 A |
| Rated insulation voltage        | $U_i$     | 440 V   |
| Rated impulse withstand voltage | $U_{imp}$ | 4 kV (1.2/50) $\mu$ sec   |

### Tripping characteristic

|                                   |          |  |
|-----------------------------------|----------|--|
| Conventional non-tripping current | $I_{nt}$ | $1.13 I_n$   |
| Conventional tripping current     | $I_t$    | $1.45 I_n$   |
| Reference temperature             |          | 30 °C  |
| Temperature factor                |          | 0.4% /K  |
| Instantaneous tripping current    | $I_{mt}$ | type B: $3 I_n < I_{mt} = 5 I_n \cdot t (I_{mt}) < 0.1 \text{ sec}$<br>type C: $5 I_n < I_{mt} = 10 I_n \cdot t (I_{mt}) < 0.1 \text{ sec}$<br>type D: $10 I_n < I_{mt} = 20 I_n \cdot t (I_{mt}) < 0.1 \text{ sec}$ |

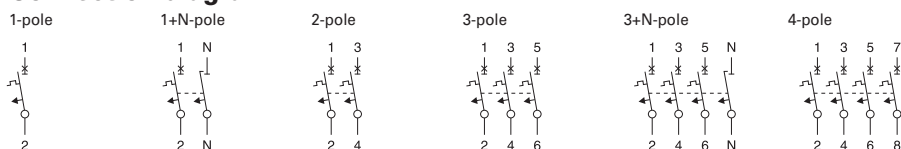
|   |  |  |
|---|--|--|
| Rated ultimate short-circuit braking capacity $I_{cu}$ (IEC/EN 60947-2) |  | type B 1-25 A: 25 kA, 32-40 A: 20 kA<br>type C 1-25 A: 25 kA, 32-40 A: 20 kA<br>type D 1p/1p+N/2p - 1-13 A: 25 kA, 15-20 A: 20 kA, 25-40 A: 15 kA<br>3p/3p+N/4p - 1-16 A: 25 kA, 20 A: 20 kA, 25-40 A: 15 kA |
|---|--|--|

|  |  |  |
|--|--|--|
| Rated service short-circuit braking capacity $I_{cs}$ (IEC/EN 60947-2) |  | for $I_{cu} = 25 \text{ kA} \rightarrow I_{cs} = 12.5 \text{ kA}$<br>for $I_{cu} = 20 \text{ kA} \rightarrow I_{cs} = 10 \text{ kA}$<br>for $I_{cu} = 15 \text{ kA} \rightarrow I_{cs} = 7.5 \text{ kA}$ |
|--|--|--|

|  |  |  |
|--|--|--|
| Rated short-circuit braking capacity $I_{cn}$ (IEC/EN 60898-1) |  | type B 1-25 A: 15 kA, 32-40 A: 10 kA<br>type C 1-25 A: 15 kA, 32-40 A: 10 kA<br>type D 1-16 A: 15 kA, 20-40 A: 10 kA |
|--|--|--|

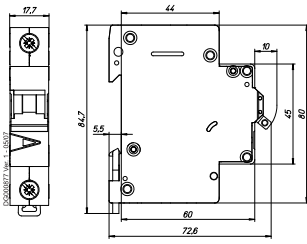
|                                 |  |  |
|---------------------------------|--|--|
| Selectivity class               |  | 3 (acc. to EN 60898)                     |
| Number of electrical operations |  | > 4000 (IEC/EN 60898)                    |
| Number of mechanical operations |  | > 10000 (IEC/EN 60947)                   |
| Climatic conditions             |  | acc. to IEC 68-2 (25..55°C / 90..95% RH) |
| Operating temperature range     |  | -40°C to +75°C                           |

### Connection diagram

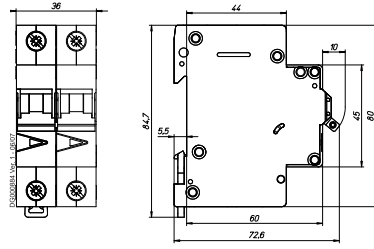


## Dimensions (mm) FAZ-T

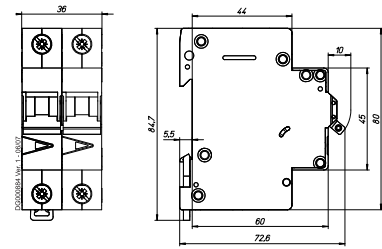
1-pole



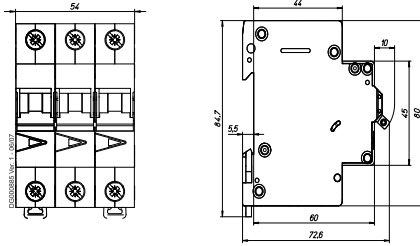
1+N-pole



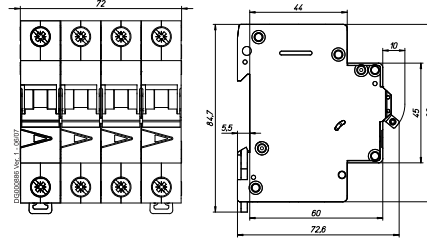
2-pole



3-pole



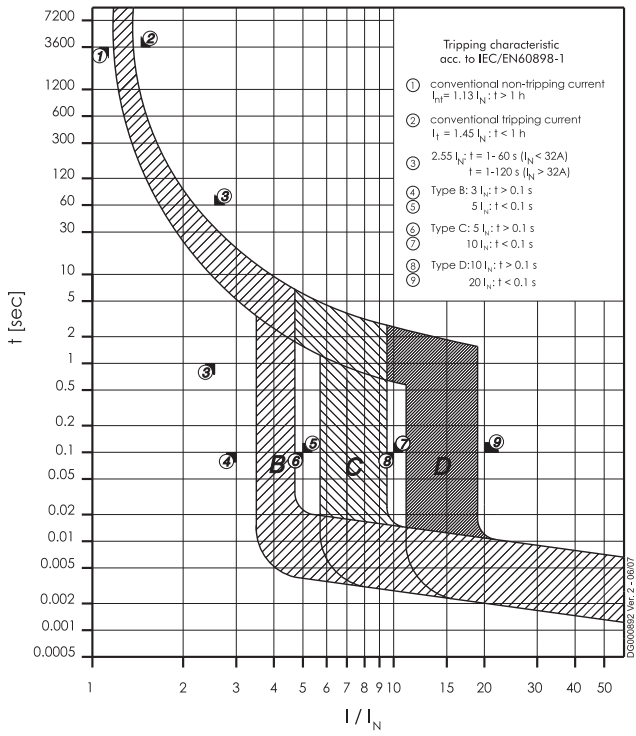
3+N-pole, 4-pole





## Tripping Characteristic FAZ-T

### Characteristics B, C and D - EN60898



## Power Loss at $I_n$ FAZ-T

### Type B

|           | 1p    | 1pN   | 2p    | 3p    | 3pN*  | 4p    |
|-----------|-------|-------|-------|-------|-------|-------|
| $I_n$ [A] | P [W] | P [W] | P [W] | P [W] | P [W] | P [W] |
| 1         | 1.6   | 1.7   | 3.1   | 4.7   | 4.8   | 6.3   |
| 2         | 1.4   | 1.5   | 2.8   | 4.1   | 4.3   | 5.5   |
| 3         | 2.5   | 2.7   | 5.0   | 7.6   | 7.8   | 10.1  |
| 4         | 1.4   | 1.6   | 2.9   | 4.4   | 4.5   | 5.8   |
| 6         | 1.8   | 2.0   | 3.6   | 5.5   | 5.6   | 7.3   |
| 10        | 1.9   | 2.1   | 3.9   | 5.9   | 6.1   | 7.8   |
| 12        | 2.8   | 3.2   | 5.9   | 8.7   | 9.0   | 11.5  |
| 13        | 2.5   | 2.9   | 5.3   | 7.8   | 8.1   | 10.3  |
| 15        | 2.1   | 2.4   | 4.4   | 6.5   | 6.7   | 8.6   |
| 16        | 2.2   | 2.6   | 4.7   | 6.9   | 7.2   | 9.1   |
| 20        | 3.2   | 3.6   | 6.6   | 9.8   | 10.1  | 13.0  |
| 25        | 3.0   | 3.5   | 6.4   | 9.4   | 9.7   | 12.4  |
| 32        | 3.7   | 4.4   | 8.1   | 12.1  | 12.5  | 15.8  |
| 40        | 3.4   | 4.1   | 7.5   | 11.2  | 11.5  | 14.6  |

\*symmetrical load

### Type C

|           | 1p    | 1pN   | 2p    | 3p    | 3pN*  | 4p    |
|-----------|-------|-------|-------|-------|-------|-------|
| $I_n$ [A] | P [W] | P [W] | P [W] | P [W] | P [W] | P [W] |
| 1         | 1.6   | 1.7   | 3.1   | 4.7   | 4.8   | 6.3   |
| 2         | 1.4   | 1.5   | 2.8   | 4.1   | 4.3   | 5.5   |
| 3         | 1.2   | 1.3   | 2.4   | 3.6   | 3.7   | 4.8   |
| 4         | 1.4   | 1.6   | 2.9   | 4.4   | 4.5   | 5.8   |
| 6         | 1.5   | 1.6   | 2.9   | 4.4   | 4.6   | 5.9   |
| 10        | 1.5   | 1.7   | 3.0   | 4.6   | 4.7   | 6.1   |
| 12        | 2.1   | 2.4   | 4.4   | 6.5   | 6.8   | 8.6   |
| 13        | 2.5   | 2.9   | 5.3   | 7.8   | 8.1   | 10.3  |
| 15        | 2.1   | 2.4   | 4.4   | 6.5   | 6.7   | 8.6   |
| 16        | 2.2   | 2.6   | 4.7   | 6.9   | 7.2   | 9.1   |
| 20        | 3.2   | 3.6   | 6.6   | 9.8   | 10.1  | 13.0  |
| 25        | 3.0   | 3.5   | 6.4   | 9.4   | 9.7   | 12.4  |
| 32        | 3.7   | 4.4   | 8.1   | 12.1  | 12.5  | 15.8  |
| 40        | 3.4   | 4.1   | 7.5   | 11.2  | 11.5  | 14.6  |

\*symmetrical load

### Type D

|           | 1p    | 1pN   | 2p    | 3p    | 3pN*  | 4p    |
|-----------|-------|-------|-------|-------|-------|-------|
| $I_n$ [A] | P [W] | P [W] | P [W] | P [W] | P [W] | P [W] |
| 1         | 0.8   | 0.9   | 1.6   | 2.4   | 2.5   | 3.2   |
| 2         | 1.0   | 1.1   | 2.0   | 3.0   | 3.1   | 4.0   |
| 3         | 1.2   | 1.3   | 2.4   | 3.6   | 3.7   | 4.8   |
| 4         | 1.4   | 1.6   | 2.9   | 4.4   | 4.5   | 5.8   |
| 6         | 1.5   | 1.6   | 2.9   | 4.4   | 4.6   | 5.9   |
| 10        | 1.5   | 1.7   | 3.0   | 4.6   | 4.7   | 6.1   |
| 12        | 1.7   | 2.0   | 3.6   | 5.3   | 5.4   | 7.0   |
| 13        | 1.9   | 2.2   | 4.0   | 5.9   | 6.1   | 7.8   |
| 15        | 2.1   | 2.4   | 4.4   | 6.5   | 6.7   | 8.6   |
| 16        | 2.2   | 2.6   | 4.7   | 6.9   | 7.2   | 9.1   |
| 20        | 2.0   | 2.2   | 4.1   | 6.1   | 6.2   | 8.1   |
| 25        | 2.5   | 2.9   | 5.2   | 7.7   | 7.9   | 10.2  |
| 32        | 3.4   | 4.0   | 7.4   | 11.1  | 11.4  | 14.5  |
| 40        | 3.2   | 3.8   | 7.0   | 10.4  | 10.7  | 13.6  |

\*symmetrical load

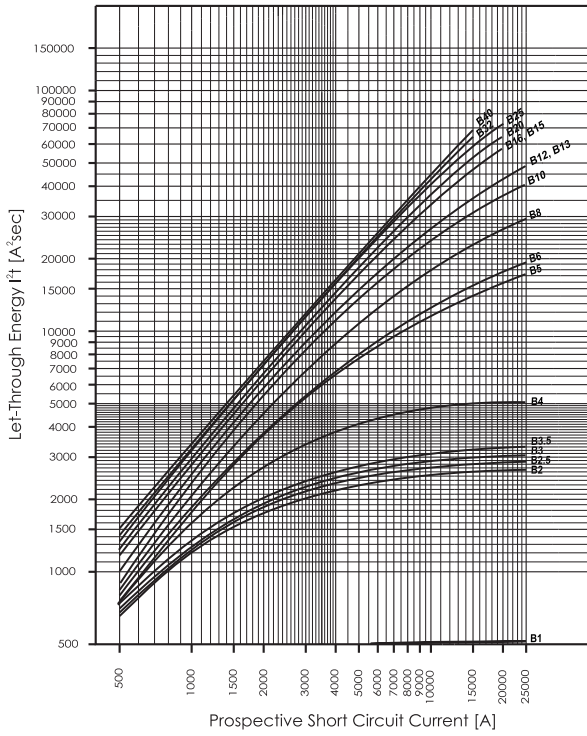
## Influence of Ambient Temperature FAZ-T

On Load Carrying Capacity (temperature derating)

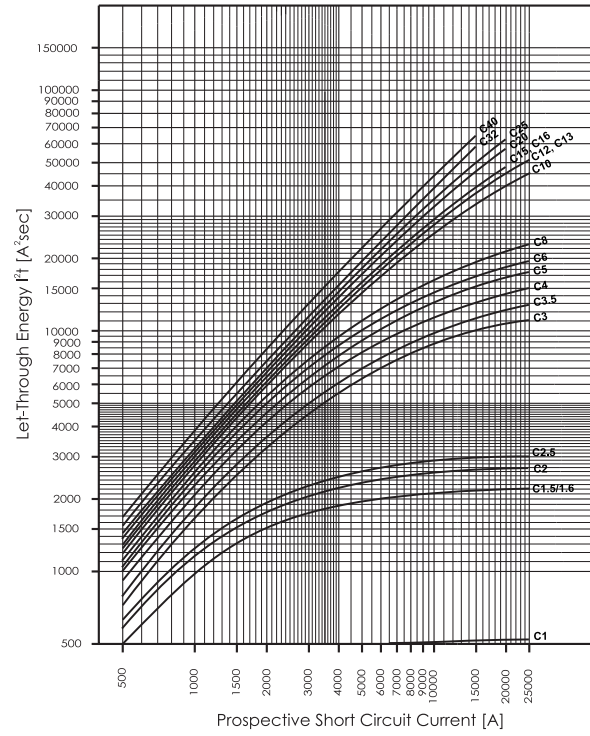
| $I_N$ [A] | Ambient temperature T [°C] |     |     |     |     |     |     |    |      |      |      |      |     |      |      |      |      |
|-----------|----------------------------|-----|-----|-----|-----|-----|-----|----|------|------|------|------|-----|------|------|------|------|
|           | -40                        | -30 | -20 | -10 | 0   | 10  | 20  | 30 | 35   | 40   | 45   | 50   | 55  | 60   | 65   | 70   | 75   |
| 1         | 1.3                        | 1.2 | 1.2 | 1.2 | 1.1 | 1.1 | 1   | 1  | 0.99 | 0.97 | 0.95 | 0.93 | 0.9 | 0.89 | 0.87 | 0.85 | 0.83 |
| 2         | 2.6                        | 2.5 | 2.4 | 2.3 | 2.2 | 2.2 | 2.1 | 2  | 2    | 1.9  | 1.9  | 1.9  | 1.8 | 1.8  | 1.7  | 1.7  | 1.7  |
| 3         | 3.8                        | 3.7 | 3.6 | 3.5 | 3.4 | 3.3 | 3.1 | 3  | 3    | 2.9  | 2.8  | 2.8  | 2.7 | 2.7  | 2.6  | 2.5  | 2.5  |
| 4         | 5.1                        | 5   | 4.8 | 4.7 | 4.5 | 4.3 | 4.2 | 4  | 3.9  | 3.9  | 3.8  | 3.7  | 3.6 | 3.5  | 3.5  | 3.4  | 3.3  |
| 6         | 7.7                        | 7.5 | 7.2 | 7   | 6.7 | 6.5 | 6.3 | 6  | 5.9  | 5.8  | 5.7  | 5.6  | 5.4 | 5.3  | 5.2  | 5.1  | 5    |
| 10        | 13                         | 12  | 12  | 12  | 11  | 11  | 10  | 10 | 9.9  | 9.7  | 9.5  | 9.3  | 9   | 8.9  | 8.7  | 8.5  | 8.3  |
| 12        | 15                         | 15  | 14  | 14  | 13  | 13  | 13  | 12 | 12   | 12   | 11   | 11   | 11  | 11   | 10   | 10   | 10   |
| 13        | 17                         | 16  | 16  | 15  | 15  | 14  | 14  | 13 | 13   | 13   | 12   | 12   | 12  | 12   | 11   | 11   | 11   |
| 15        | 19                         | 19  | 18  | 17  | 17  | 16  | 16  | 15 | 15   | 15   | 14   | 14   | 14  | 13   | 13   | 13   | 12   |
| 16        | 20                         | 20  | 19  | 19  | 18  | 17  | 17  | 16 | 16   | 15   | 15   | 15   | 14  | 14   | 14   | 14   | 13   |
| 20        | 26                         | 25  | 24  | 23  | 22  | 22  | 21  | 20 | 20   | 19   | 19   | 19   | 18  | 18   | 17   | 17   | 17   |
| 25        | 32                         | 31  | 30  | 29  | 28  | 27  | 26  | 25 | 25   | 24   | 24   | 23   | 23  | 22   | 22   | 21   | 21   |
| 32        | 41                         | 40  | 38  | 37  | 36  | 35  | 33  | 32 | 32   | 31   | 30   | 30   | 29  | 28   | 28   | 27   | 26   |
| 40        | 51                         | 50  | 48  | 47  | 45  | 43  | 42  | 40 | 39   | 39   | 38   | 37   | 36  | 35   | 35   | 34   | 33   |

## Maximum Let-Through Energy FAZ-T

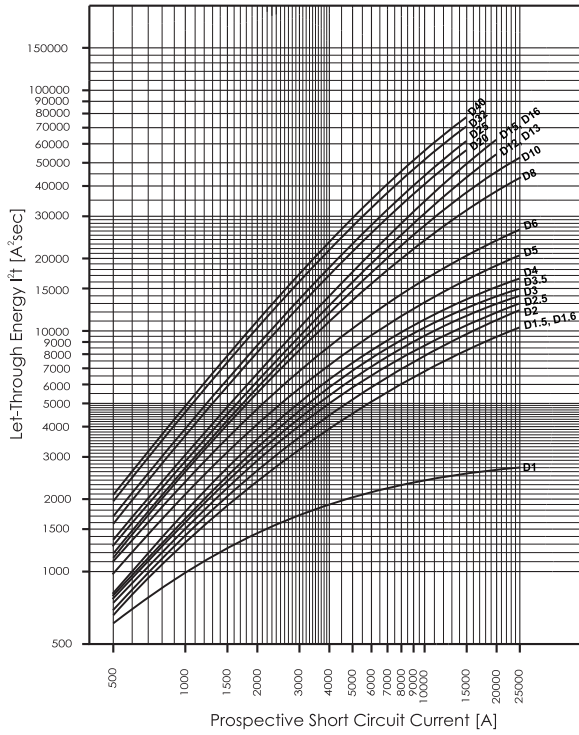
Type B



Type C

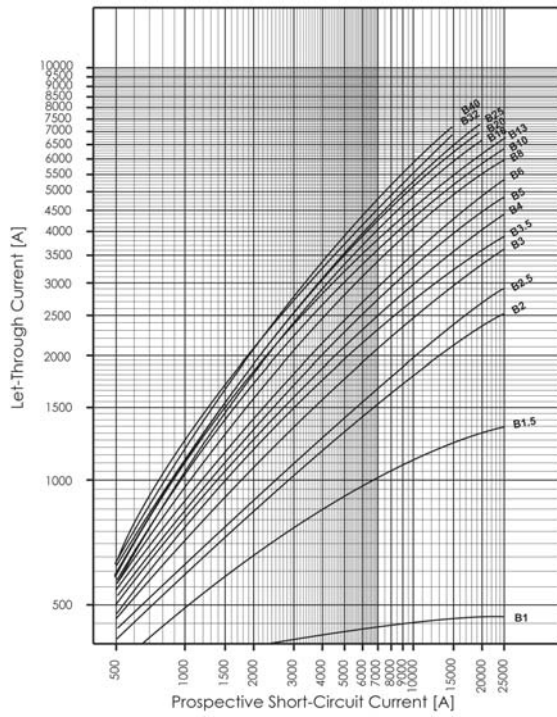


Type D

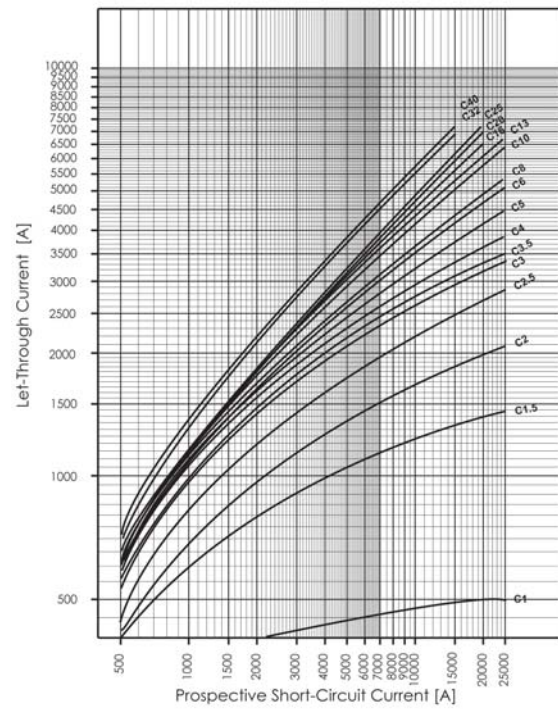


## Maximum Let-Through Current FAZ-T

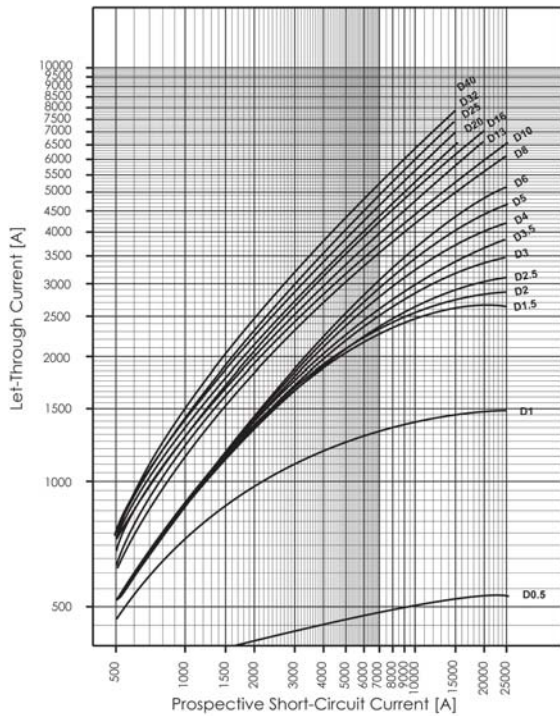
Type B



Type C



Type D

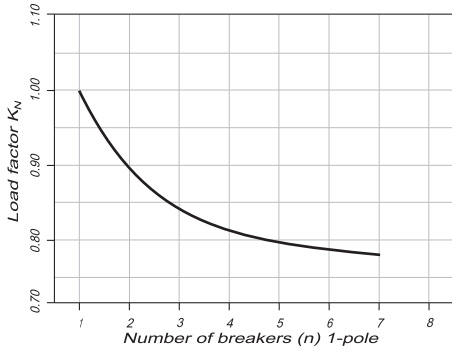


## Influence of the Line Frequency FAZ-T

On the Instantaneous Tripping Current  $I_{MA}$

|                                     | Line Frequency f [Hz] |     |     |     |     |     |     |
|-------------------------------------|-----------------------|-----|-----|-----|-----|-----|-----|
|                                     | $16\frac{2}{3}$       | 50  | 60  | 100 | 200 | 300 | 400 |
| $I_{MA}(f)/I_{MA}(50\text{Hz})$ [%] | 91                    | 100 | 101 | 106 | 115 | 134 | 141 |

## Load rating in case of circuit breakers arranged one next to the other FAZ-T



## Miniature Circuit Breakers FAZ-DC

SG53312





### FAZ-DC

- High-quality miniature circuit breakers for DC-applications
- Contact position indicator red - green
- Guide for secure terminal connection (not for FAZ-NA)
- 3-position DIN rail clip, permits removal from existing busbar system
- Comprehensive range of accessories suitable for subsequent installation
- Rated currents up to 50 A
- Tripping characteristic C
- Rated breaking capacity 10 kA according to IEC/EN 60947-2
- Up to 250 V DC pro pole

## FAZ-...-DC Miniature Circuit Breakers (MCBs)

### Characteristic C

|  | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60947-2<br>(V DC) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|--|----------------------------|--|---|---------------------|-------------|-------------------------|
| <b>1-pole</b>  |                            |  |   |                     |             |                         |
|   | 2                          | 220  | 10  | FAZ-C2/1-DC         | 279122      | 12/120                  |
|  | 3                          | 250  | 10  | FAZ-C3/1-DC         | 279123      | 12/120                  |
|  | 4                          | 250  | 10  | FAZ-C4/1-DC         | 279124      | 12/120                  |
|  | 6                          | 250  | 10  | FAZ-C6/1-DC         | 279125      | 12/120                  |
|  | 10                         | 250  | 10  | FAZ-C10/1-DC        | 279126      | 12/120                  |
|  | 13                         | 250  | 10  | FAZ-C13/1-DC        | 279127      | 12/120                  |
|  | 16                         | 250  | 10  | FAZ-C16/1-DC        | 279128      | 12/120                  |
|  | 20                         | 250  | 10  | FAZ-C20/1-DC        | 279129      | 12/120                  |
|  | 25                         | 250  | 10  | FAZ-C25/1-DC        | 279130      | 12/120                  |
|  | 32                         | 250  | 10  | FAZ-C32/1-DC        | 279131      | 12/120                  |
|  | 40                         | 250  | 10  | FAZ-C40/1-DC        | 279132      | 12/120                  |
|  | 50                         | 250  | 10  | FAZ-C50/1-DC        | 279133      | 12/120                  |
| <b>2-pole</b>  |                            |  |   |                     |             |                         |
|  | 2                          | 440  | 10  | FAZ-C2/2-DC         | 279134      | 1/60                    |
|  | 3                          | 500  | 10  | FAZ-C3/2-DC         | 279135      | 1/60                    |
|  | 4                          | 500  | 10  | FAZ-C4/2-DC         | 279136      | 1/60                    |
|  | 6                          | 500  | 10  | FAZ-C6/2-DC         | 279137      | 1/60                    |
|  | 10                         | 500  | 10  | FAZ-C10/2-DC        | 279138      | 1/60                    |
|  | 13                         | 500  | 10  | FAZ-C13/2-DC        | 279139      | 1/60                    |
|  | 16                         | 500  | 10  | FAZ-C16/2-DC        | 279140      | 1/60                    |
|  | 20                         | 500  | 10  | FAZ-C20/2-DC        | 279141      | 1/60                    |
|  | 25                         | 500  | 10  | FAZ-C25/2-DC        | 279142      | 1/60                    |
|  | 32                         | 500  | 10  | FAZ-C32/2-DC        | 279143      | 1/60                    |
|  | 40                         | 500  | 10  | FAZ-C40/2-DC        | 279144      | 1/60                    |
|  | 50                         | 500  | 10  | FAZ-C50/2-DC        | 279145      | 1/60                    |



## Specifications FAZ-DC

### Technical data

|                 | FAZ-DC *)      |
|-----------------|----------------|
| Productstandard | IEC/EN 60947-2 |
| Number of poles | 1, 2           |

### Mechanical specifications

|   |   |
|---|---|
| Device width                                | 17.7 mm (1p), 36 mm (2p)                            |
| Frame size                                  | 45 mm   |
| Socket size                                 | 80 mm   |
| Device depth                                | 60 mm   |
| Terminals                                   | lift terminal                                       |
| Terminal capacity rigid solid/stranded wire | 1-25 mm <sup>2</sup>                                |
| Terminal screw                              | M5 (with slotted screw acc. to EN ISO 4757-Z2, PZ2) |
| Terminal torque                             | max. 2.4 Nm   |
| Snap on fixing                              | tristable (on DIN rail acc. to EN 50022)            |
| Finger proof                                | acc. to VBG4, ÖVE EN-6                              |
| Degree of Protection (DIN VDE 0470)         |   |
| Surface mounted                             | IP 20   |
| Built-in behind panel                       | IP 40   |
| Contact position indicator                  | red / green   |

### Electrical specifications

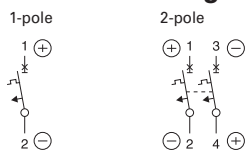
|                                 |           |  |
|---------------------------------|-----------|--|
| Rated voltage DC                | $U_n$     | 2 A type: 220V (per pole)<br>3-50 A types: 250V (per pole) |
| Rated current                   | $I_n$     | Type C: 2, 3, 4, 6, 10, 13, 16, 20, 25, 32, 40, 50 A       |
| Rated insulation voltage        | $U_i$     | 440 V  |
| Rated impulse withstand voltage | $U_{imp}$ | 4 kV (1.2/50)µsec  |

### Tripping characteristic

|                                      |          |   |
|--------------------------------------|----------|---|
| Conventional non-tripping current    |          | $I_{nt}=1.13 I_n$   |
| Conventional tripping current        |          | $I_t=1.45 I_n$  |
| Reference temperature                |          | 30 °C   |
| Temperature factor                   |          | 0.4% /K   |
| Instantaneous tripping current       | $I_{mt}$ | type C: $7 I_n < I_{mt} = 15 I_n$ ; $t(I_{mt}) < 0.1$ sec |
| Rated short-circuit braking capacity | $I_{cu}$ | 10 kA   |
| Selectivity class                    |          | 3   |
| Number of electrical operations      |          | > 4000  |
| Number of mechanical operations      |          | > 20000   |
| Climatic conditions                  |          | acc. to IEC 68-2 (25..55°C / 90..95% RH)                  |
| Operating temperature range          |          | -40°C to +75°C  |

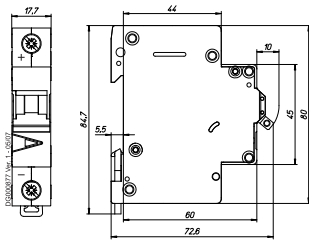
\*) not for PV string protection!

### Connection diagram

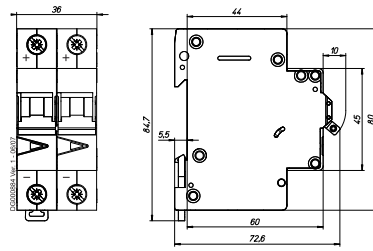


## Dimensions (mm) FAZ-...-DC

1-pole

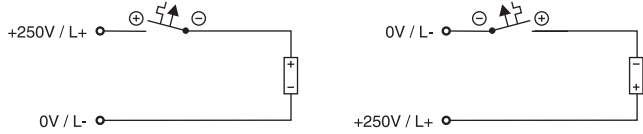


2-pole

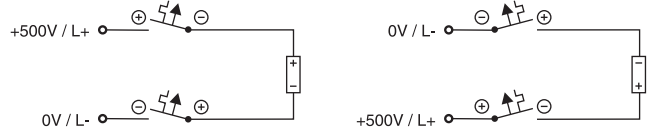


## Connection examples FAZ-...-DC

Connection example at 250V=, 1-pole

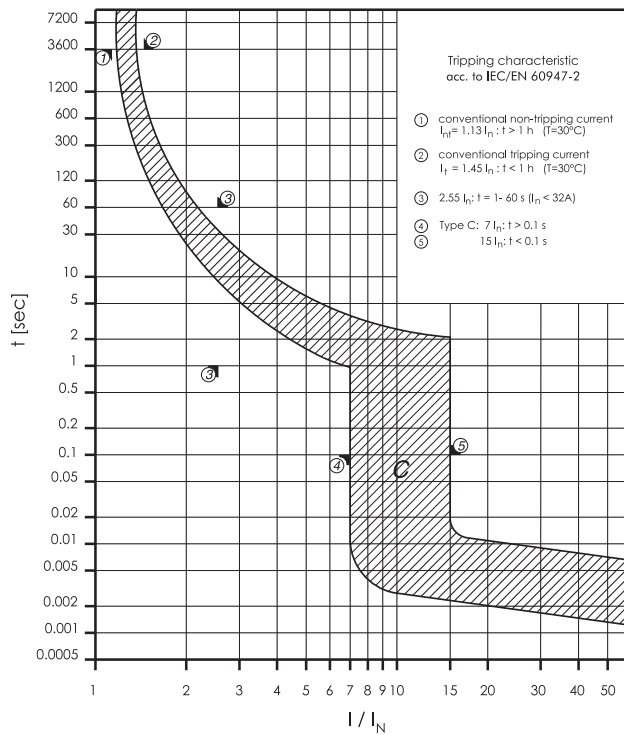


Connection example at 500V=, 2-pole



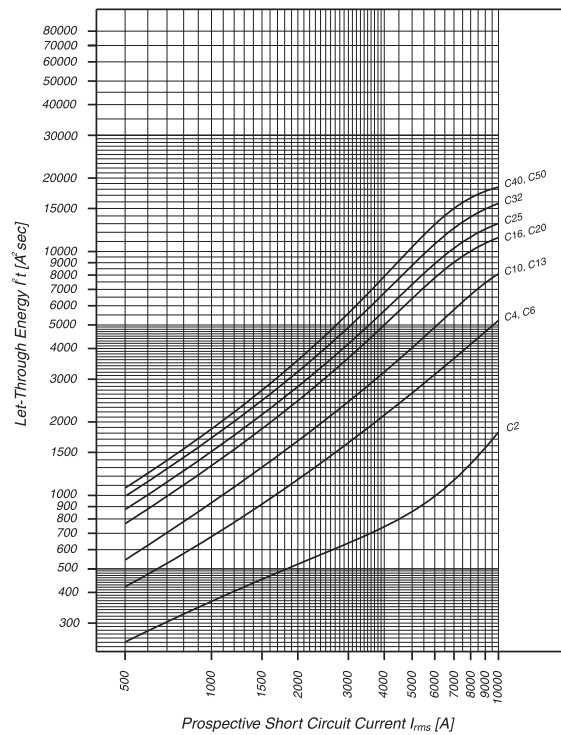
## Tripping Characteristic FAZ-...-DC

Characteristics C - IEC/EN 60947-2



## Maximum Let-Through Energy FAZ-...-DC

Type C



## Miniature Circuit Breakers FAZ-NA, FAZ-RT, FAZ-DU

SG56912



### FAZ-NA/-RT/-DU

- According to UL 489, CSA C22.2 No. 5 and also IEC 60947-2 standard
- For Applications, which are permitted for UL 1077 or CSA C22.2 No. 235
- Auxiliary switch and voltage trips suitable for subsequent installation
- Series with removable terminal screws (Type FAZ-...-RT/-DU), for use with ring cable lug
- Contact position indicator red - green
- Easy mounting at DIN-rail

## FAZ-...-NA Miniature Circuit Breakers (MCBs)

### Characteristic B

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL489<br>(V) | Breaking capacity<br>acc. to<br>UL489<br>(kA) | SWD    | NFPA 79       | Type<br>Designation | Article No. | Units<br>per<br>package |
|---------------|----------------------------|---|---|-------------------------------|---|--------|---------------|---------------------|-------------|-------------------------|
| <b>1-pole</b> |                            |   |   |                               |   |        |               |                     |             |                         |
| 1             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B1/1-NA   | 132414              | 12/120      |                         |
| 1.5           | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B1,5/1-NA | 132415              | 12/120      |                         |
| 2             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B2/1-NA   | 132416              | 12/120      |                         |
| 3             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B3/1-NA   | 132417              | 12/120      |                         |
| 4             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B4/1-NA   | 132418              | 12/120      |                         |
| 5             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B5/1-NA   | 132419              | 12/120      |                         |
| 6             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B6/1-NA   | 132680              | 12/120      |                         |
| 7             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B7/1-NA   | 132681              | 12/120      |                         |
| 8             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 16 | FAZ-B8/1-NA   | 132682              | 12/120      |                         |
| 10            | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 16 | FAZ-B10/1-NA  | 132683              | 12/120      |                         |
| 13            | 240/415                    | 15  | 277   | 10                            | SWD   |        | FAZ-B13/1-NA  | 132684              | 12/120      |                         |
| 15            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-B15/1-NA  | 132685              | 12/120      |                         |
| 16            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-B16/1-NA  | 132686              | 12/120      |                         |
| 20            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-B20/1-NA  | 132687              | 12/120      |                         |
| 25            | 240/415                    | 15  | 277   | 14                            |   |        | FAZ-B25/1-NA  | 132688              | 12/120      |                         |
| 30            | 240/415                    | 15  | 277   | 10                            |   |        | FAZ-B30/1-NA  | 132689              | 12/120      |                         |
| 32            | 240/415                    | 15  | 277   | 10                            |   |        | FAZ-B32/1-NA  | 132690              | 12/120      |                         |
| 35            | 240/415                    | 15  | 240   | 10                            |   |        | FAZ-B35/1-NA  | 132691              | 12/120      |                         |
| 40            | 240/415                    | 15  | 240   | 10                            |   |        | FAZ-B40/1-NA  | 132692              | 12/120      |                         |
| <b>2-pole</b> |                            |   |   |                               |   |        |               |                     |             |                         |
| 1             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B1/2-NA   | 132693              | 1/60        |                         |
| 1.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B1,5/2-NA | 132694              | 1/60        |                         |
| 2             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B2/2-NA   | 132695              | 1/60        |                         |
| 3             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B3/2-NA   | 132696              | 1/60        |                         |
| 4             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B4/2-NA   | 132697              | 1/60        |                         |
| 5             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B5/2-NA   | 132698              | 1/60        |                         |
| 6             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B6/2-NA   | 132699              | 1/60        |                         |
| 7             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B7/2-NA   | 132700              | 1/60        |                         |
| 8             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-B8/2-NA   | 132701              | 1/60        |                         |
| 10            | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-B10/2-NA  | 132702              | 1/60        |                         |
| 13            | 415                        | 15  | 480Y/277  | 10                            | SWD   |        | FAZ-B13/2-NA  | 132703              | 1/60        |                         |
| 15            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B15/2-NA  | 132704              | 1/60        |                         |
| 16            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B16/2-NA  | 132705              | 1/60        |                         |
| 20            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B20/2-NA  | 132706              | 1/60        |                         |
| 25            | 415                        | 15  | 480Y/277  | 14                            |   |        | FAZ-B25/2-NA  | 132707              | 1/60        |                         |
| 30            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-B30/2-NA  | 132708              | 1/60        |                         |
| 32            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-B32/2-NA  | 132709              | 1/60        |                         |
| 35            | 415                        | 15  | 240   | 10                            |   |        | FAZ-B35/2-NA  | 132710              | 1/60        |                         |
| 40            | 415                        | 15  | 240   | 10                            |   |        | FAZ-B40/2-NA  | 132711              | 1/60        |                         |
| <b>3-pole</b> |                            |   |   |                               |   |        |               |                     |             |                         |
| 1             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B1/3-NA   | 132712              | 1/40        |                         |
| 1.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B1,5/3-NA | 132713              | 1/40        |                         |
| 2             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B2/3-NA   | 132714              | 1/40        |                         |
| 3             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B3/3-NA   | 132715              | 1/40        |                         |
| 4             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B4/3-NA   | 132716              | 1/40        |                         |
| 5             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B5/3-NA   | 132717              | 1/40        |                         |
| 6             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B6/3-NA   | 132718              | 1/40        |                         |
| 7             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B7/3-NA   | 132719              | 1/40        |                         |
| 8             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-B8/3-NA   | 132720              | 1/40        |                         |
| 10            | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-B10/3-NA  | 132721              | 1/40        |                         |
| 13            | 415                        | 15  | 480Y/277  | 10                            | SWD   |        | FAZ-B13/3-NA  | 132722              | 1/40        |                         |
| 15            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B15/3-NA  | 132723              | 1/40        |                         |
| 16            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B16/3-NA  | 132724              | 1/40        |                         |
| 20            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B20/3-NA  | 132725              | 1/40        |                         |
| 25            | 415                        | 15  | 480Y/277  | 14                            |   |        | FAZ-B25/3-NA  | 132726              | 1/40        |                         |
| 30            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-B30/3-NA  | 132727              | 1/40        |                         |
| 32            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-B32/3-NA  | 132728              | 1/40        |                         |
| 35            | 415                        | 15  | 240   | 10                            |   |        | FAZ-B35/3-NA  | 132729              | 1/40        |                         |
| 40            | 415                        | 15  | 240   | 10                            |   |        | FAZ-B40/3-NA  | 132730              | 1/40        |                         |

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## FAZ...-NA Miniature Circuit Breakers (MCBs)

### Characteristic C

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL489<br>(V) | Breaking capacity<br>acc. to<br>UL489<br>(kA) | SWD | NFPA 79 | Type<br>Designation | Article No. | Units<br>per<br>package |
|---------------|----------------------------|---|---|-------------------------------|---|-----|---------|---------------------|-------------|-------------------------|
| <b>1-pole</b> |                            |   |   |                               |   |     |         |                     |             |                         |
|               | 0.5                        | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-C0,5/1-NA       | 181883      | 12/120                  |
|               | 1                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-C1/1-NA         | 181885      | 12/120                  |
|               | 1.5                        | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-C1,5/1-NA       | 181887      | 12/120                  |
|               | 2                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-C2/1-NA         | 181889      | 12/120                  |
|               | 3                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-C3/1-NA         | 181891      | 12/120                  |
|               | 4                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-C4/1-NA         | 181893      | 12/120                  |
|               | 5                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-C5/1-NA         | 181895      | 12/120                  |
|               | 6                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-C6/1-NA         | 181897      | 12/120                  |
|               | 7                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-C7/1-NA         | 181899      | 12/120                  |
|               | 8                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 16  | FAZ-C8/1-NA         | 181901      | 12/120                  |
|               | 10                         | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 16  | FAZ-C10/1-NA        | 181903      | 12/120                  |
|               | 13                         | 240/415                                   | 15  | 277                           | 10  | SWD |         | FAZ-C13/1-NA        | 181905      | 12/120                  |
|               | 15                         | 240/415                                   | 15  | 277                           | 14  | SWD |         | FAZ-C15/1-NA        | 181907      | 12/120                  |
|               | 16                         | 240/415                                   | 15  | 277                           | 14  | SWD |         | FAZ-C16/1-NA        | 181909      | 12/120                  |
|               | 20                         | 240/415                                   | 15  | 277                           | 14  | SWD |         | FAZ-C20/1-NA        | 181911      | 12/120                  |
|               | 25                         | 240/415                                   | 15  | 277                           | 14  |     |         | FAZ-C25/1-NA        | 181913      | 12/120                  |
|               | 30                         | 240/415                                   | 15  | 277                           | 10  |     |         | FAZ-C30/1-NA        | 181915      | 12/120                  |
|               | 32                         | 240/415                                   | 15  | 277                           | 10  |     |         | FAZ-C32/1-NA        | 181917      | 12/120                  |
|               | 35                         | 240/415                                   | 15  | 240                           | 10  |     |         | FAZ-C35/1-NA        | 181919      | 12/120                  |
|               | 40                         | 240/415                                   | 15  | 240                           | 10  |     |         | FAZ-C40/1-NA        | 181921      | 12/120                  |
| <b>2-pole</b> |                            |   |   |                               |   |     |         |                     |             |                         |
|               | 0.5                        | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C0,5/2-NA       | 181923      | 1/60                    |
|               | 1                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C1/2-NA         | 181925      | 1/60                    |
|               | 1.5                        | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C1,5/2-NA       | 181927      | 1/60                    |
|               | 2                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C2/2-NA         | 181929      | 1/60                    |
|               | 3                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C3/2-NA         | 181931      | 1/60                    |
|               | 4                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C4/2-NA         | 181933      | 1/60                    |
|               | 5                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C5/2-NA         | 181935      | 1/60                    |
|               | 6                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C6/2-NA         | 181937      | 1/60                    |
|               | 7                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C7/2-NA         | 181939      | 1/60                    |
|               | 8                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 16  | FAZ-C8/2-NA         | 181941      | 1/60                    |
|               | 10                         | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 16  | FAZ-C10/2-NA        | 181943      | 1/60                    |
|               | 13                         | 415                                       | 15  | 480Y/277                      | 10  | SWD |         | FAZ-C13/2-NA        | 181945      | 1/60                    |
|               | 15                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-C15/2-NA        | 181947      | 1/60                    |
|               | 16                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-C16/2-NA        | 181949      | 1/60                    |
|               | 20                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-C20/2-NA        | 181951      | 1/60                    |
|               | 25                         | 415                                       | 15  | 480Y/277                      | 14  |     |         | FAZ-C25/2-NA        | 181953      | 1/60                    |
|               | 30                         | 415                                       | 15  | 480Y/277                      | 10  |     |         | FAZ-C30/2-NA        | 181955      | 1/60                    |
|               | 32                         | 415                                       | 15  | 480Y/277                      | 10  |     |         | FAZ-C32/2-NA        | 181957      | 1/60                    |
|               | 35                         | 415                                       | 15  | 240                           | 10  |     |         | FAZ-C35/2-NA        | 181959      | 1/60                    |
|               | 40                         | 415                                       | 15  | 240                           | 10  |     |         | FAZ-C40/2-NA        | 181961      | 1/60                    |
| <b>3-pole</b> |                            |   |   |                               |   |     |         |                     |             |                         |
|               | 0.5                        | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C0,5/3-NA       | 181963      | 1/40                    |
|               | 1                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C1/3-NA         | 181965      | 1/40                    |
|               | 1.5                        | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C1,5/3-NA       | 181967      | 1/40                    |
|               | 2                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C2/3-NA         | 181969      | 1/40                    |
|               | 3                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C3/3-NA         | 181971      | 1/40                    |
|               | 4                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C4/3-NA         | 181973      | 1/40                    |
|               | 5                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C5/3-NA         | 181975      | 1/40                    |
|               | 6                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C6/3-NA         | 181977      | 1/40                    |
|               | 7                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C7/3-NA         | 181979      | 1/40                    |
|               | 8                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 16  | FAZ-C8/3-NA         | 181981      | 1/40                    |
|               | 10                         | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 16  | FAZ-C10/3-NA        | 181983      | 1/40                    |
|               | 13                         | 415                                       | 15  | 480Y/277                      | 10  | SWD |         | FAZ-C13/3-NA        | 181985      | 1/40                    |
|               | 15                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-C15/3-NA        | 181987      | 1/40                    |
|               | 16                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-C16/3-NA        | 181989      | 1/40                    |
|               | 20                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-C20/3-NA        | 181991      | 1/40                    |
|               | 25                         | 415                                       | 15  | 480Y/277                      | 14  |     |         | FAZ-C25/3-NA        | 181993      | 1/40                    |
|               | 30                         | 415                                       | 15  | 480Y/277                      | 10  |     |         | FAZ-C30/3-NA        | 181995      | 1/40                    |
|               | 32                         | 415                                       | 15  | 480Y/277                      | 10  |     |         | FAZ-C32/3-NA        | 181997      | 1/40                    |
|               | 35                         | 415                                       | 15  | 240                           | 10  |     |         | FAZ-C35/3-NA        | 181999      | 1/40                    |
|               | 40                         | 415                                       | 15  | 240                           | 10  |     |         | FAZ-C40/3-NA        | 182001      | 1/40                    |

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## FAZ...-NA Miniature Circuit Breakers (MCBs)

### Characteristic D

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL489<br>(V) | Breaking capacity<br>acc. to<br>UL489<br>(kA) | SWD    | NFPA 79       | Type<br>Designation | Article No. | Units<br>per<br>package |
|---------------|----------------------------|---|---|-------------------------------|---|--------|---------------|---------------------|-------------|-------------------------|
| <b>1-pole</b> |                            |   |   |                               |   |        |               |                     |             |                         |
| 0.5           | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D0,5/1-NA | 182003              | 12/120      |                         |
| 1             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D1/1-NA   | 182005              | 12/120      |                         |
| 1.5           | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D1,5/1-NA | 182007              | 12/120      |                         |
| 2             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D2/1-NA   | 182009              | 12/120      |                         |
| 3             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D3/1-NA   | 182011              | 12/120      |                         |
| 4             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D4/1-NA   | 182013              | 12/120      |                         |
| 5             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D5/1-NA   | 182015              | 12/120      |                         |
| 6             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D6/1-NA   | 182017              | 12/120      |                         |
| 7             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D7/1-NA   | 182019              | 12/120      |                         |
| 8             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 16 | FAZ-D8/1-NA   | 182021              | 12/120      |                         |
| 10            | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 16 | FAZ-D10/1-NA  | 181831              | 12/120      |                         |
| 13            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-D13/1-NA  | 181833              | 12/120      |                         |
| 15            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-D15/1-NA  | 181835              | 12/120      |                         |
| 16            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-D16/1-NA  | 181837              | 12/120      |                         |
| 20            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-D20/1-NA  | 181839              | 12/120      |                         |
| 25            | 240/415                    | 15  | 277   | 10                            |   |        | FAZ-D25/1-NA  | 181841              | 12/120      |                         |
| 30            | 240/415                    | 15  | 277   | 10                            |   |        | FAZ-D30/1-NA  | 182023              | 12/120      |                         |
| 32            | 240/415                    | 15  | 277   | 10                            |   |        | FAZ-D32/1-NA  | 182025              | 12/120      |                         |
| 35            | 240/415                    | 15  | 240   | 10                            |   |        | FAZ-D35/1-NA  | 182027              | 12/120      |                         |
| 40            | 240/415                    | 15  | 240   | 10                            |   |        | FAZ-D40/1-NA  | 182029              | 12/120      |                         |
| <b>2-pole</b> |                            |   |   |                               |   |        |               |                     |             |                         |
| 0.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D0,5/2-NA | 182031              | 1/60        |                         |
| 1             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D1/2-NA   | 182033              | 1/60        |                         |
| 1.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D1,5/2-NA | 182035              | 1/60        |                         |
| 2             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D2/2-NA   | 182037              | 1/60        |                         |
| 3             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D3/2-NA   | 182039              | 1/60        |                         |
| 4             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D4/2-NA   | 182041              | 1/60        |                         |
| 5             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D5/2-NA   | 182043              | 1/60        |                         |
| 6             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D6/2-NA   | 182045              | 1/60        |                         |
| 7             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D7/2-NA   | 182047              | 1/60        |                         |
| 8             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-D8/2-NA   | 182049              | 1/60        |                         |
| 10            | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-D10/2-NA  | 182051              | 1/60        |                         |
| 13            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D13/2-NA  | 182053              | 1/60        |                         |
| 15            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D15/2-NA  | 182055              | 1/60        |                         |
| 16            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D16/2-NA  | 182057              | 1/60        |                         |
| 20            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D20/2-NA  | 182059              | 1/60        |                         |
| 25            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-D25/2-NA  | 182061              | 1/60        |                         |
| 30            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-D30/2-NA  | 182063              | 1/60        |                         |
| 32            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-D32/2-NA  | 182065              | 1/60        |                         |
| 35            | 415                        | 15  | 240   | 10                            |   |        | FAZ-D35/2-NA  | 182067              | 1/60        |                         |
| 40            | 415                        | 15  | 240   | 10                            |   |        | FAZ-D40/2-NA  | 182069              | 1/60        |                         |
| <b>3-pole</b> |                            |   |   |                               |   |        |               |                     |             |                         |
| 0.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D0,5/3-NA | 182071              | 1/40        |                         |
| 1             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D1/3-NA   | 182073              | 1/40        |                         |
| 1.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D1,5/3-NA | 182075              | 1/40        |                         |
| 2             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D2/3-NA   | 182077              | 1/40        |                         |
| 3             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D3/3-NA   | 182079              | 1/40        |                         |
| 4             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D4/3-NA   | 182081              | 1/40        |                         |
| 5             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D5/3-NA   | 182083              | 1/40        |                         |
| 6             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D6/3-NA   | 182085              | 1/40        |                         |
| 7             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D7/3-NA   | 182087              | 1/40        |                         |
| 8             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-D8/3-NA   | 182089              | 1/40        |                         |
| 10            | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-D10/3-NA  | 182091              | 1/40        |                         |
| 13            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D13/3-NA  | 182093              | 1/40        |                         |
| 15            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D15/3-NA  | 182095              | 1/40        |                         |
| 16            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D16/3-NA  | 182097              | 1/40        |                         |
| 20            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D20/3-NA  | 182099              | 1/40        |                         |
| 25            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-D25/3-NA  | 182101              | 1/40        |                         |
| 30            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-D30/3-NA  | 182103              | 1/40        |                         |
| 32            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-D32/3-NA  | 182105              | 1/40        |                         |
| 35            | 415                        | 15  | 240   | 10                            |   |        | FAZ-D35/3-NA  | 182107              | 1/40        |                         |
| 40            | 415                        | 15  | 240   | 10                            |   |        | FAZ-D40/3-NA  | 182109              | 1/40        |                         |

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## FAZ...-RT/-DU Miniature Circuit Breakers (MCBs)

### Characteristic B

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL489<br>(V) | Breaking capacity<br>acc. to<br>UL489<br>(kA) | SWD    | NFPA 79       | Type<br>Designation | Article No. | Units<br>per<br>package |
|---------------|----------------------------|---|---|-------------------------------|---|--------|---------------|---------------------|-------------|-------------------------|
| <b>1-pole</b> |                            |   |   |                               |   |        |               |                     |             |                         |
| 1             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B1/1-RT   | 132731              | 12/120      |                         |
| 1.5           | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B1,5/1-RT | 132732              | 12/120      |                         |
| 2             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B2/1-RT   | 132733              | 12/120      |                         |
| 3             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B3/1-RT   | 132734              | 12/120      |                         |
| 4             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B4/1-RT   | 132735              | 12/120      |                         |
| 5             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B5/1-RT   | 132736              | 12/120      |                         |
| 6             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B6/1-RT   | 132737              | 12/120      |                         |
| 7             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B7/1-RT   | 132738              | 12/120      |                         |
| 8             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 16 | FAZ-B8/1-RT   | 132739              | 12/120      |                         |
| 10            | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 16 | FAZ-B10/1-RT  | 132740              | 12/120      |                         |
| 13            | 240/415                    | 15  | 277   | 10                            | SWD   |        | FAZ-B13/1-RT  | 132741              | 12/120      |                         |
| 15            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-B15/1-RT  | 132742              | 12/120      |                         |
| 16            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-B16/1-RT  | 132743              | 12/120      |                         |
| 20            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-B20/1-RT  | 132744              | 12/120      |                         |
| 25            | 240/415                    | 15  | 277   | 14                            |   |        | FAZ-B25/1-RT  | 132745              | 12/120      |                         |
| 30            | 240/415                    | 15  | 277   | 10                            |   |        | FAZ-B30/1-RT  | 132746              | 12/120      |                         |
| 32            | 240/415                    | 15  | 277   | 10                            |   |        | FAZ-B32/1-RT  | 132747              | 12/120      |                         |
| 35            | 240/415                    | 15  | 240   | 10                            |   |        | FAZ-B35/1-RT  | 132748              | 12/120      |                         |
| 40            | 240/415                    | 15  | 240   | 10                            |   |        | FAZ-B40/1-RT  | 132749              | 12/120      |                         |
| <b>2-pole</b> |                            |   |   |                               |   |        |               |                     |             |                         |
| 1             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B1/2-RT   | 132750              | 1/60        |                         |
| 1.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B1,5/2-RT | 132751              | 1/60        |                         |
| 2             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B2/2-RT   | 132752              | 1/60        |                         |
| 3             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B3/2-RT   | 132753              | 1/60        |                         |
| 4             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B4/2-RT   | 132754              | 1/60        |                         |
| 5             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B5/2-RT   | 132755              | 1/60        |                         |
| 6             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B6/2-RT   | 132756              | 1/60        |                         |
| 7             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B7/2-RT   | 132757              | 1/60        |                         |
| 8             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-B8/2-RT   | 132758              | 1/60        |                         |
| 10            | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-B10/2-RT  | 132759              | 1/60        |                         |
| 13            | 415                        | 15  | 480Y/277  | 10                            | SWD   |        | FAZ-B13/2-RT  | 132760              | 1/60        |                         |
| 15            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B15/2-RT  | 132761              | 1/60        |                         |
| 16            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B16/2-RT  | 132762              | 1/60        |                         |
| 20            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B20/2-RT  | 132763              | 1/60        |                         |
| 25            | 415                        | 15  | 480Y/277  | 14                            |   |        | FAZ-B25/2-RT  | 132764              | 1/60        |                         |
| 30            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-B30/2-RT  | 132765              | 1/60        |                         |
| 32            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-B32/2-RT  | 132766              | 1/60        |                         |
| 35            | 415                        | 15  | 240   | 10                            |   |        | FAZ-B35/2-RT  | 132767              | 1/60        |                         |
| 40            | 415                        | 15  | 240   | 10                            |   |        | FAZ-B40/2-RT  | 132768              | 1/60        |                         |
| <b>3-pole</b> |                            |   |   |                               |   |        |               |                     |             |                         |
| 1             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B1/3-RT   | 132769              | 1/40        |                         |
| 1.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B1,5/3-RT | 132770              | 1/40        |                         |
| 2             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B2/3-RT   | 132771              | 1/40        |                         |
| 3             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B3/3-RT   | 132772              | 1/40        |                         |
| 4             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B4/3-RT   | 132773              | 1/40        |                         |
| 5             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B5/3-RT   | 132774              | 1/40        |                         |
| 6             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B6/3-RT   | 132775              | 1/40        |                         |
| 7             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B7/3-RT   | 132776              | 1/40        |                         |
| 8             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-B8/3-RT   | 132777              | 1/40        |                         |
| 10            | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-B10/3-RT  | 132778              | 1/40        |                         |
| 13            | 415                        | 15  | 480Y/277  | 10                            | SWD   |        | FAZ-B13/3-RT  | 132779              | 1/40        |                         |
| 15            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B15/3-RT  | 132780              | 1/40        |                         |
| 16            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B16/3-RT  | 132781              | 1/40        |                         |
| 20            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B20/3-RT  | 132782              | 1/40        |                         |
| 25            | 415                        | 15  | 480Y/277  | 14                            |   |        | FAZ-B25/3-RT  | 132783              | 1/40        |                         |
| 30            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-B30/3-RT  | 132784              | 1/40        |                         |
| 32            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-B32/3-RT  | 132785              | 1/40        |                         |
| 35            | 415                        | 15  | 240   | 10                            |   |        | FAZ-B35/3-RT  | 132786              | 1/40        |                         |
| 40            | 415                        | 15  | 240   | 10                            |   |        | FAZ-B40/3-RT  | 132787              | 1/40        |                         |

SG56412



SG56712



SG57012



## FAZ...-RT/-DU Miniature Circuit Breakers (MCBs)

### Characteristic C



FAZ-RT has the plastic limiter at both terminals, as showed in red circle; While FAZ-DU doesn't have

SG56412



| Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL489<br>(V) | Breaking capacity<br>acc. to<br>UL489<br>(kA) | SWD | NFPA 79 | RT Type<br>Designation | RT Article<br>No. | DU Type<br>Designation | DU Article<br>No. | Units<br>per<br>package |
|----------------------------|---|---|-------------------------------|---|-----|---------|------------------------|-------------------|------------------------|-------------------|-------------------------|
|----------------------------|---|---|-------------------------------|---|-----|---------|------------------------|-------------------|------------------------|-------------------|-------------------------|

#### 1-pole

|     |         |    |     |    |     |        |               |        |               |        |        |
|-----|---------|----|-----|----|-----|--------|---------------|--------|---------------|--------|--------|
| 0.5 | 240/415 | 15 | 277 | 10 | SWD | AWG 18 | FAZ-C0,5/1-RT | 181884 | FAZ-C0,5/1-DU | 185095 | 12/120 |
| 1   | 240/415 | 15 | 277 | 10 | SWD | AWG 18 | FAZ-C1/1-RT   | 181886 | FAZ-C1/1-DU   | 185096 | 12/120 |
| 1.5 | 240/415 | 15 | 277 | 10 | SWD | AWG 18 | FAZ-C1,5/1-RT | 181888 | FAZ-C1,5/1-DU | 185097 | 12/120 |
| 2   | 240/415 | 15 | 277 | 10 | SWD | AWG 18 | FAZ-C2/1-RT   | 181890 | FAZ-C2/1-DU   | 185098 | 12/120 |
| 3   | 240/415 | 15 | 277 | 10 | SWD | AWG 18 | FAZ-C3/1-RT   | 181892 | FAZ-C3/1-DU   | 185099 | 12/120 |
| 4   | 240/415 | 15 | 277 | 10 | SWD | AWG 18 | FAZ-C4/1-RT   | 181894 | FAZ-C4/1-DU   | 185100 | 12/120 |
| 5   | 240/415 | 15 | 277 | 10 | SWD | AWG 18 | FAZ-C5/1-RT   | 181896 | FAZ-C5/1-DU   | 185101 | 12/120 |
| 6   | 240/415 | 15 | 277 | 10 | SWD | AWG 18 | FAZ-C6/1-RT   | 181898 | FAZ-C6/1-DU   | 185102 | 12/120 |
| 7   | 240/415 | 15 | 277 | 10 | SWD | AWG 18 | FAZ-C7/1-RT   | 181900 | FAZ-C7/1-DU   | 185103 | 12/120 |
| 8   | 240/415 | 15 | 277 | 10 | SWD | AWG 16 | FAZ-C8/1-RT   | 181902 | FAZ-C8/1-DU   | 184990 | 12/120 |
| 10  | 240/415 | 15 | 277 | 10 | SWD | AWG 16 | FAZ-C10/1-RT  | 181904 | FAZ-C10/1-DU  | 184991 | 12/120 |
| 13  | 240/415 | 15 | 277 | 10 | SWD |        | FAZ-C13/1-RT  | 181906 | FAZ-C13/1-DU  | 184992 | 12/120 |
| 15  | 240/415 | 15 | 277 | 14 | SWD |        | FAZ-C15/1-RT  | 181908 | FAZ-C15/1-DU  | 184993 | 12/120 |
| 16  | 240/415 | 15 | 277 | 14 | SWD |        | FAZ-C16/1-RT  | 181910 | FAZ-C16/1-DU  | 184994 | 12/120 |
| 20  | 240/415 | 15 | 277 | 14 | SWD |        | FAZ-C20/1-RT  | 181912 | FAZ-C20/1-DU  | 184995 | 12/120 |
| 25  | 240/415 | 15 | 277 | 14 |     |        | FAZ-C25/1-RT  | 181914 | FAZ-C25/1-DU  | 184996 | 12/120 |
| 30  | 240/415 | 15 | 277 | 10 |     |        | FAZ-C30/1-RT  | 181916 | FAZ-C30/1-DU  | 184997 | 12/120 |
| 32  | 240/415 | 15 | 277 | 10 |     |        | FAZ-C32/1-RT  | 181918 | FAZ-C32/1-DU  | 184998 | 12/120 |
| 35  | 240/415 | 15 | 240 | 10 |     |        | FAZ-C35/1-RT  | 181920 | FAZ-C35/1-DU  | 184999 | 12/120 |
| 40  | 240/415 | 15 | 240 | 10 |     |        | FAZ-C40/1-RT  | 181922 | FAZ-C40/1-DU  | 185000 | 12/120 |

SG56712



#### 2-pole

|     |     |    |          |    |     |        |               |        |               |        |      |
|-----|-----|----|----------|----|-----|--------|---------------|--------|---------------|--------|------|
| 0.5 | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C0,5/2-RT | 181924 | FAZ-C0,5/2-DU | 185021 | 1/60 |
| 1   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C1/2-RT   | 181926 | FAZ-C1/2-DU   | 185022 | 1/60 |
| 1.5 | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C1,5/2-RT | 181928 | FAZ-C1,5/2-DU | 185023 | 1/60 |
| 2   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C2/2-RT   | 181930 | FAZ-C2/2-DU   | 185024 | 1/60 |
| 3   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C3/2-RT   | 181932 | FAZ-C3/2-DU   | 185025 | 1/60 |
| 4   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C4/2-RT   | 181934 | FAZ-C4/2-DU   | 185026 | 1/60 |
| 5   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C5/2-RT   | 181936 | FAZ-C5/2-DU   | 185027 | 1/60 |
| 6   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C6/2-RT   | 181938 | FAZ-C6/2-DU   | 185028 | 1/60 |
| 7   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C7/2-RT   | 181940 | FAZ-C7/2-DU   | 185029 | 1/60 |
| 8   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 16 | FAZ-C8/2-RT   | 181942 | FAZ-C8/2-DU   | 185030 | 1/60 |
| 10  | 415 | 15 | 480Y/277 | 10 | SWD | AWG 16 | FAZ-C10/2-RT  | 181944 | FAZ-C10/2-DU  | 185031 | 1/60 |
| 13  | 415 | 15 | 480Y/277 | 10 | SWD |        | FAZ-C13/2-RT  | 181946 | FAZ-C13/2-DU  | 185032 | 1/60 |
| 15  | 415 | 15 | 480Y/277 | 14 | SWD |        | FAZ-C15/2-RT  | 181948 | FAZ-C15/2-DU  | 185033 | 1/60 |
| 16  | 415 | 15 | 480Y/277 | 14 | SWD |        | FAZ-C16/2-RT  | 181950 | FAZ-C16/2-DU  | 185034 | 1/60 |
| 20  | 415 | 15 | 480Y/277 | 14 | SWD |        | FAZ-C20/2-RT  | 181952 | FAZ-C20/2-DU  | 185035 | 1/60 |
| 25  | 415 | 15 | 480Y/277 | 14 |     |        | FAZ-C25/2-RT  | 181954 | FAZ-C25/2-DU  | 185036 | 1/60 |
| 30  | 415 | 15 | 480Y/277 | 10 |     |        | FAZ-C30/2-RT  | 181956 | FAZ-C30/2-DU  | 185037 | 1/60 |
| 32  | 415 | 15 | 480Y/277 | 10 |     |        | FAZ-C32/2-RT  | 181958 | FAZ-C32/2-DU  | 185038 | 1/60 |
| 35  | 415 | 15 | 240      | 10 |     |        | FAZ-C35/2-RT  | 181960 | FAZ-C35/2-DU  | 185039 | 1/60 |
| 40  | 415 | 15 | 240      | 10 |     |        | FAZ-C40/2-RT  | 181962 | FAZ-C40/2-DU  | 185040 | 1/60 |

SG57012



#### 3-pole

|     |     |    |          |    |     |        |               |        |               |        |      |
|-----|-----|----|----------|----|-----|--------|---------------|--------|---------------|--------|------|
| 0.5 | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C0,5/3-RT | 181964 | FAZ-C0,5/3-DU | 185061 | 1/40 |
| 1   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C1/3-RT   | 181966 | FAZ-C1/3-DU   | 185062 | 1/40 |
| 1.5 | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C1,5/3-RT | 181968 | FAZ-C1,5/3-DU | 185063 | 1/40 |
| 2   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C2/3-RT   | 181970 | FAZ-C2/3-DU   | 185064 | 1/40 |
| 3   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C3/3-RT   | 181972 | FAZ-C3/3-DU   | 185065 | 1/40 |
| 4   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C4/3-RT   | 181974 | FAZ-C4/3-DU   | 185066 | 1/40 |
| 5   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C5/3-RT   | 181976 | FAZ-C5/3-DU   | 185067 | 1/40 |
| 6   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C6/3-RT   | 181978 | FAZ-C6/3-DU   | 185068 | 1/40 |
| 7   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C7/3-RT   | 181980 | FAZ-C7/3-DU   | 185069 | 1/40 |
| 8   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 16 | FAZ-C8/3-RT   | 181982 | FAZ-C8/3-DU   | 185070 | 1/40 |
| 10  | 415 | 15 | 480Y/277 | 10 | SWD | AWG 16 | FAZ-C10/3-RT  | 181984 | FAZ-C10/3-DU  | 185071 | 1/40 |
| 13  | 415 | 15 | 480Y/277 | 10 | SWD |        | FAZ-C13/3-RT  | 181986 | FAZ-C13/3-DU  | 185072 | 1/40 |
| 15  | 415 | 15 | 480Y/277 | 14 | SWD |        | FAZ-C15/3-RT  | 181988 | FAZ-C15/3-DU  | 185073 | 1/40 |
| 16  | 415 | 15 | 480Y/277 | 14 | SWD |        | FAZ-C16/3-RT  | 181990 | FAZ-C16/3-DU  | 185074 | 1/40 |
| 20  | 415 | 15 | 480Y/277 | 14 | SWD |        | FAZ-C20/3-RT  | 181992 | FAZ-C20/3-DU  | 185075 | 1/40 |
| 25  | 415 | 15 | 480Y/277 | 14 |     |        | FAZ-C25/3-RT  | 181994 | FAZ-C25/3-DU  | 185076 | 1/40 |
| 30  | 415 | 15 | 480Y/277 | 10 |     |        | FAZ-C30/3-RT  | 181996 | FAZ-C30/3-DU  | 185077 | 1/40 |
| 32  | 415 | 15 | 480Y/277 | 10 |     |        | FAZ-C32/3-RT  | 181998 | FAZ-C32/3-DU  | 185078 | 1/40 |
| 35  | 415 | 15 | 240      | 10 |     |        | FAZ-C35/3-RT  | 182000 | FAZ-C35/3-DU  | 185079 | 1/40 |
| 40  | 415 | 15 | 240      | 10 |     |        | FAZ-C40/3-RT  | 182002 | FAZ-C40/3-DU  | 185080 | 1/40 |



## FAZ-...-RT/-DU Miniature Circuit Breakers (MCBs)

### Characteristic D

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL489<br>(V) | Breaking capacity<br>acc. to<br>UL489<br>(kA) | SWD    | NFPA 79<br>AWG | RT Type<br>Designation | RT Article<br>No. | DU Type<br>Designation | DU Article<br>No. | Units<br>per<br>package |
|---------------|----------------------------|---|---|-------------------------------|---|--------|----------------|------------------------|-------------------|------------------------|-------------------|-------------------------|
| <b>1-pole</b> |                            |   |   |                               |   |        |                |                        |                   |                        |                   |                         |
| 0.5           | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D0,5/1-RT  | 182004                 | FAZ-D0,5/1-DU     | 185001                 | 12/120            |                         |
| 1             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D1/1-RT    | 182006                 | FAZ-D1/1-DU       | 185002                 | 12/120            |                         |
| 1.5           | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D1,5/1-RT  | 182008                 | FAZ-D1,5/1-DU     | 185003                 | 12/120            |                         |
| 2             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D2/1-RT    | 182010                 | FAZ-D2/1-DU       | 185004                 | 12/120            |                         |
| 3             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D3/1-RT    | 182012                 | FAZ-D3/1-DU       | 185005                 | 12/120            |                         |
| 4             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D4/1-RT    | 182014                 | FAZ-D4/1-DU       | 185006                 | 12/120            |                         |
| 5             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D5/1-RT    | 182016                 | FAZ-D5/1-DU       | 185007                 | 12/120            |                         |
| 6             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D6/1-RT    | 182018                 | FAZ-D6/1-DU       | 185008                 | 12/120            |                         |
| 7             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D7/1-RT    | 182020                 | FAZ-D7/1-DU       | 185009                 | 12/120            |                         |
| 8             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 16 | FAZ-D8/1-RT    | 182022                 | FAZ-D8/1-DU       | 185010                 | 12/120            |                         |
| 10            | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 16 | FAZ-D10/1-RT   | 181832                 | FAZ-D10/1-DU      | 185011                 | 12/120            |                         |
| 13            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-D13/1-RT   | 181834                 | FAZ-D13/1-DU      | 185012                 | 12/120            |                         |
| 15            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-D15/1-RT   | 181836                 | FAZ-D15/1-DU      | 185013                 | 12/120            |                         |
| 16            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-D16/1-RT   | 181838                 | FAZ-D16/1-DU      | 185014                 | 12/120            |                         |
| 20            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-D20/1-RT   | 181840                 | FAZ-D20/1-DU      | 185015                 | 12/120            |                         |
| 25            | 240/415                    | 15  | 277   | 10                            |   |        | FAZ-D25/1-RT   | 181842                 | FAZ-D25/1-DU      | 185016                 | 12/120            |                         |
| 30            | 240/415                    | 15  | 277   | 10                            |   |        | FAZ-D30/1-RT   | 182024                 | FAZ-D30/1-DU      | 185017                 | 12/120            |                         |
| 32            | 240/415                    | 15  | 277   | 10                            |   |        | FAZ-D32/1-RT   | 182026                 | FAZ-D32/1-DU      | 185018                 | 12/120            |                         |
| 35            | 240/415                    | 15  | 240   | 10                            |   |        | FAZ-D35/1-RT   | 182028                 | FAZ-D35/1-DU      | 185019                 | 12/120            |                         |
| 40            | 240/415                    | 15  | 240   | 10                            |   |        | FAZ-D40/1-RT   | 182030                 | FAZ-D40/1-DU      | 185020                 | 12/120            |                         |
| <b>2-pole</b> |                            |   |   |                               |   |        |                |                        |                   |                        |                   |                         |
| 0.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D0,5/2-RT  | 182032                 | FAZ-D0,5/2-DU     | 185041                 | 1/60              |                         |
| 1             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D1/2-RT    | 182034                 | FAZ-D1/2-DU       | 185042                 | 1/60              |                         |
| 1.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D1,5/2-RT  | 182036                 | FAZ-D1,5/2-DU     | 185043                 | 1/60              |                         |
| 2             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D2/2-RT    | 182038                 | FAZ-D2/2-DU       | 185044                 | 1/60              |                         |
| 3             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D3/2-RT    | 182040                 | FAZ-D3/2-DU       | 185045                 | 1/60              |                         |
| 4             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D4/2-RT    | 182042                 | FAZ-D4/2-DU       | 185046                 | 1/60              |                         |
| 5             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D5/2-RT    | 182044                 | FAZ-D5/2-DU       | 185047                 | 1/60              |                         |
| 6             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D6/2-RT    | 182046                 | FAZ-D6/2-DU       | 185048                 | 1/60              |                         |
| 7             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D7/2-RT    | 182048                 | FAZ-D7/2-DU       | 185049                 | 1/60              |                         |
| 8             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-D8/2-RT    | 182050                 | FAZ-D8/2-DU       | 185050                 | 1/60              |                         |
| 10            | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-D10/2-RT   | 182052                 | FAZ-D10/2-DU      | 185051                 | 1/60              |                         |
| 13            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D13/2-RT   | 182054                 | FAZ-D13/2-DU      | 185052                 | 1/60              |                         |
| 15            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D15/2-RT   | 182056                 | FAZ-D15/2-DU      | 185053                 | 1/60              |                         |
| 16            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D16/2-RT   | 182058                 | FAZ-D16/2-DU      | 185054                 | 1/60              |                         |
| 20            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D20/2-RT   | 182060                 | FAZ-D20/2-DU      | 185055                 | 1/60              |                         |
| 25            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-D25/2-RT   | 182062                 | FAZ-D25/2-DU      | 185056                 | 1/60              |                         |
| 30            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-D30/2-RT   | 182064                 | FAZ-D30/2-DU      | 185057                 | 1/60              |                         |
| 32            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-D32/2-RT   | 182066                 | FAZ-D32/2-DU      | 185058                 | 1/60              |                         |
| 35            | 415                        | 15  | 240   | 10                            |   |        | FAZ-D35/2-RT   | 182068                 | FAZ-D35/2-DU      | 185059                 | 1/60              |                         |
| 40            | 415                        | 15  | 240   | 10                            |   |        | FAZ-D40/2-RT   | 182070                 | FAZ-D40/2-DU      | 185060                 | 1/60              |                         |
| <b>3-pole</b> |                            |   |   |                               |   |        |                |                        |                   |                        |                   |                         |
| 0.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D0,5/3-RT  | 182072                 | FAZ-D0,5/3-DU     | 185081                 | 1/40              |                         |
| 1             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D1/3-RT    | 182074                 | FAZ-D1/3-DU       | 185082                 | 1/40              |                         |
| 1.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D1,5/3-RT  | 182076                 | FAZ-D1,5/3-DU     | 185083                 | 1/40              |                         |
| 2             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D2/3-RT    | 182078                 | FAZ-D2/3-DU       | 185084                 | 1/40              |                         |
| 3             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D3/3-RT    | 182080                 | FAZ-D3/3-DU       | 185085                 | 1/40              |                         |
| 4             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D4/3-RT    | 182082                 | FAZ-D4/3-DU       | 185086                 | 1/40              |                         |
| 5             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D5/3-RT    | 182084                 | FAZ-D5/3-DU       | 185087                 | 1/40              |                         |
| 6             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D6/3-RT    | 182086                 | FAZ-D6/3-DU       | 185088                 | 1/40              |                         |
| 7             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D7/3-RT    | 182088                 | FAZ-D7/3-DU       | 185089                 | 1/40              |                         |
| 8             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-D8/3-RT    | 182090                 | FAZ-D8/3-DU       | 185090                 | 1/40              |                         |
| 10            | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-D10/3-RT   | 182092                 | FAZ-D10/3-DU      | 185091                 | 1/40              |                         |
| 13            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D13/3-RT   | 182094                 | FAZ-D13/3-DU      | 185092                 | 1/40              |                         |
| 15            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D15/3-RT   | 182096                 | FAZ-D15/3-DU      | 185093                 | 1/40              |                         |
| 16            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D16/3-RT   | 182098                 | FAZ-D16/3-DU      | 185094                 | 1/40              |                         |
| 20            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D20/3-RT   | 182100                 | FAZ-D20/3-DU      | 184984                 | 1/40              |                         |
| 25            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-D25/3-RT   | 182102                 | FAZ-D25/3-DU      | 184985                 | 1/40              |                         |
| 30            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-D30/3-RT   | 182104                 | FAZ-D30/3-DU      | 184986                 | 1/40              |                         |
| 32            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-D32/3-RT   | 182106                 | FAZ-D32/3-DU      | 184987                 | 1/40              |                         |
| 35            | 415                        | 15  | 240   | 10                            |   |        | FAZ-D35/3-RT   | 182108                 | FAZ-D35/3-DU      | 184988                 | 1/40              |                         |
| 40            | 415                        | 15  | 240   | 10                            |   |        | FAZ-D40/3-RT   | 182110                 | FAZ-D40/3-DU      | 184989                 | 1/40              |                         |

## FAZ-NA, -RT, -DU Miniature Circuit Breakers

### Accessories:

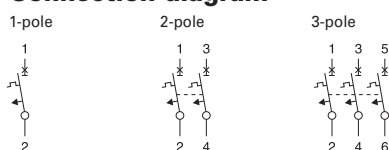
|   |                      |        |
|---|----------------------|--------|
| Auxiliary switch for subsequent installation        | Z-IHK-NA             | 113895 |
| Tripping signal contact for subsequent installation | Z-NHK                | 248434 |
| Shunt trip release                                  | FAZ-XAA-NA12-110VAC  | 102037 |
|   | FAZ-XAA-NA110-415VAC | 102036 |
| Switching interlock                                 | IS/SPE-1TE           | 101911 |
|   | Z-IS/SPE-1TE         | 274418 |

## Specifications FAZ-NA, -RT, -DU

### Technical data IEC/EN

|   | FAZ-...-NA, -RT, -DU                                  |  |
|---|---|--|
| Productstandard                             | IEC/EN 60947-2  |  |
| Number of poles                             | 1, 2, 3   |  |
| <b>Mechanical specifications</b>            |   |  |
| Device width                                | 17.7mm (1-pole), 35.4 mm (2-poles), 53.1 mm (3-poles) |  |
| Frame size                                  | 45 mm   |  |
| Socket size                                 | 105 mm  |  |
| Device depth                                | 60 mm   |  |
| Terminals                                   | lift terminal / ring-tongue                           |  |
| Terminal capacity rigid solid/stranded wire | 1-25 mm <sup>2</sup>                                  |  |
| Terminal screw                              | M5 (with slotted screw Pozidriv PZ2)                  |  |
| Terminal torque                             | max. 2.4 Nm   |  |
| Snap on fixing                              | tristable (on DIN Rail acc. to IEC/EN 60715)          |  |
| Degree of Protection (DIN VDE 0470)         |   |  |
| Surface mounted                             | IP 20   |  |
| Built-in behind panel                       | IP 40   |  |
| Contact position indicator                  | red / green   |  |
| <b>Electrical specifications</b>            |   |  |
| Rated voltage                               | $U_n$   | 240/415 V AC   |
| Rated current                               | $I_n$   | 0.5, 1, 1.5, 2, 3, 4, 5, 6, 7, 8, 10, 13, 15, 16, 20, 25, 30, 32, 35, 40 A   |
| Rated insulation voltage                    | $U_i$   | 440 V AC   |
| Rated impulse withstand voltage             | $U_{imp}$   | 4 kV (1.2/50)µsec  |
| <b>Tripping characteristic</b>              |   |  |
| Conventional non-tripping current           | $I_{nt}$  | $I_{nt}=1.05 I_n$  |
| Conventional tripping current               | $I_t$   | $I_t=1.30 I_n$   |
| Reference temperature                       | 30 °C   |  |
| Temperature factor                          | 0.5% /K   |  |
| Instantaneous tripping current              | $I_{mt}$  | type B: $3 I_n < I_{mt} = 5 I_n$ ; $t(I_{mt}) < 0.1$ sec (IEC/EN 60898-1)<br>type C: $5 I_n < I_{mt} = 10 I_n$ ; $t(I_{mt}) < 0.1$ sec (IEC/EN 60898-1)<br>type D: $10 I_n < I_{mt} = 20 I_n$ ; $t(I_{mt}) < 0.1$ sec (IEC/EN 60898-1) |
| Rated short-circuit braking capacity        | $I_{cu}$  | 15 kA  |
| Service short circuit capacity              | $I_{cs}$  | 7.5 kA   |
| Selectivity class                           | 3 (acc. to EN 60898)                                  |  |
| Number of electrical operations             | > 1500  |  |
| Number of mechanical operations             | > 10000   |  |
| Climatic conditions                         | acc. to IEC 68-2 (25..55°C / 90..95% RH)              |  |
| Operating temperature range                 | -40°C to +75°C  |  |

### Connection diagram

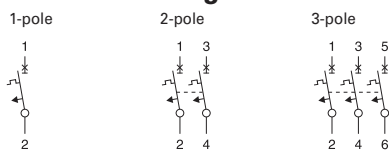


## Specifications FAZ-NA, -RT, -DU

### Technical data UL

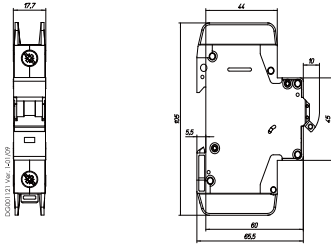
|  |          | FAZ-...-NA, -RT, -DU  |
|--|----------|---|
| Productstandard                        |          | UL 489 CSA C22.2 No. 5-02   |
| Number of poles                        |          | 1, 2, 3   |
| <b>Mechanical specifications</b>       |          |   |
| Device width                           |          | 0.697 in. (1-pole), 1.394 in. (2-poles), 2.090 in. (3-poles)  |
| Frame size                             |          | 1.772 in.   |
| Socket size                            |          | 4.134 in.   |
| Device depth                           |          | 2.362 in.   |
| Terminals                              |          | lift terminal / ring-tongue   |
| Terminal capacity                      |          | 1 Wire: #18-6 AWG (Cu only)<br>2 Wires: #18-10 AWG (Cu only)  |
| Terminal screw                         |          | M5 (with slotted screw Pozidriv PZ2)  |
| Terminal torque                        |          | #18-12 AWG: 21 lb-in<br>#10-8 AWG: 25 lb-in<br>#6 AWG: 36 lb-in   |
| Snap on fixing                         |          | tristable (on DIN Rail acc. to IEC/EN 60715)  |
| Contact position indicator             |          | red / green   |
| <b>Electrical specifications</b>       |          |   |
| Rated voltage                          | $U_n$    | 0.5-32 A: 480Y/277 V AC, 35-40 A: 240 V AC  |
| Rated current                          | $I_n$    | 0.5, 1, 1.5, 2, 3, 4, 5, 6, 7, 8, 10, 13, 15, 16, 20, 25, 30, 32, 35, 40 A  |
| <b>Tripping characteristic</b>         |          |   |
| Conventional non-tripping current      |          | $I_{nt}=1.00 I_n$   |
| Conventional tripping current          |          | $I_t=1.35 I_n$  |
| Reference temperature                  |          | 40 °C   |
| Temperature factor                     |          | 0.5% /K   |
| Instantaneous tripping current         | $I_{mt}$ | type C: $5 I_n < I_{mt} = 10 I_n$ ; $t(I_{mt}) < 0.1$ sec<br>type D: $10 I_n < I_{mt} = 20 I_n$ ; $t(I_{mt}) < 0.1$ sec |
| Current interrupting rating            |          | 10 kA, 14 kA (types D13, B/C/D15, 16, 20, B/C25 A)  |
| Current-Limiting at 240 V / 10 kA      |          | 1p, 2p, 3p to $I^2t = 43 \text{ kA}^2\text{s}$ and $I_{peak} = 6.2 \text{ kA}$  |
| Current-Limiting at 480Y/277 V / 10 kA |          | 1p, 2p, 3p to $I^2t = 60 \text{ kA}^2\text{s}$ and $I_{peak} = 6.2 \text{ kA}$  |
| Current-Limiting at 480Y/277 V / 14 kA |          | 1p, 2p, 3p to $I^2t = 65 \text{ kA}^2\text{s}$ and $I_{peak} = 7.5 \text{ kA}$  |
| Selectivity class                      |          | 3 (acc. to EN 60898)  |
| Number of electrical operations        |          | 6000  |
| Number of mechanical operations        |          | 10000   |
| Climatic conditions                    |          | acc. to IEC 68-2 (25..55°C / 90..95% RH)  |
| Operating temperature range            |          | -5°C to +40°C   |

### Connection diagram

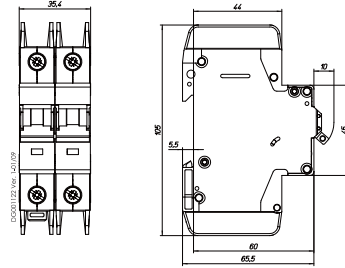


## Dimensions (mm) FAZ-...-NA, -RT, -DU

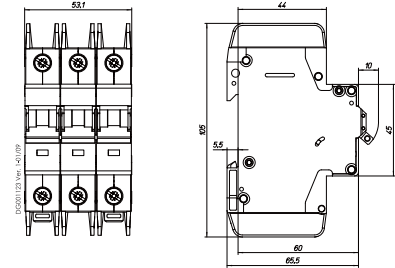
1-pole



2-pole

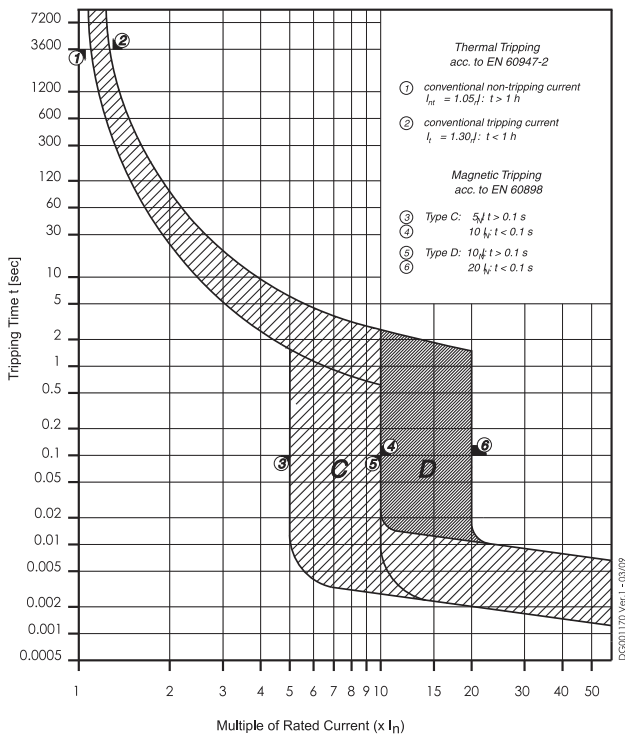


3-pole

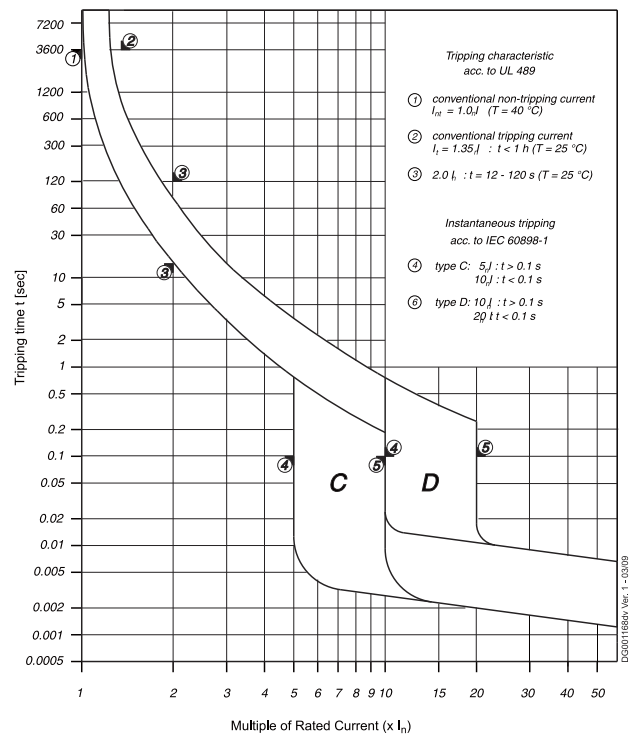


## Tripping Characteristic FAZ-...-NA, -RT, -DU

### Characteristics C and D - EN/IEC 60947-2



### Characteristics C and D - UL 489



## Internal Resistance FAZ-...-NA, -RT, -DU

### Type C

At room temperature (single pole)

| In [A] | Z* [mΩ] | R [mΩ] |
|--------|---------|--------|
| 0.5    | 6400    | 6300   |
| 1      | 1100    | 1080   |
| 1.5    | 560     | 550    |
| 2      | 340     | 330    |
| 3      | 132     | 130    |
| 4      | 86      | 85     |
| 5      | 70      | 69     |
| 6      | 31      | 30     |
| 7      | 28      | 27     |
| 8      | 20      | 19.6   |
| 10     | 15.8    | 15.5   |
| 13     | 12.3    | 12.1   |
| 15     | 7.1     | 7.0    |
| 16     | 7.1     | 7.0    |
| 20     | 6.0     | 5.9    |
| 25     | 4.1     | 4.0    |
| 30     | 2.8     | 2.7    |
| 32     | 2.8     | 2.7    |
| 35     | 2.5     | 2.5    |
| 40     | 2.1     | 2.1    |

\* 50Hz

### Type D

At room temperature (single pole)

| In [A] | Z* [mΩ] | R [mΩ] |
|--------|---------|--------|
| 0.5    | 6400    | 6300   |
| 1      | 770     | 755    |
| 1.5    | 460     | 450    |
| 2      | 250     | 245    |
| 3      | 132     | 130    |
| 4      | 86      | 85     |
| 5      | 57      | 56     |
| 6      | 31      | 30     |
| 7      | 28      | 27     |
| 8      | 18      | 17.6   |
| 10     | 13.5    | 13.2   |
| 13     | 10.5    | 10.3   |
| 15     | 5.9     | 5.8    |
| 16     | 5.9     | 5.8    |
| 20     | 4.0     | 3.9    |
| 25     | 3.4     | 3.3    |
| 30     | 2.5     | 2.5    |
| 32     | 2.5     | 2.5    |
| 35     | 2.5     | 2.5    |
| 40     | 2.0     | 2.0    |

\* 50Hz

## Power Loss at I<sub>n</sub> FAZ-...-NA, -RT, -DU

### Type C

| In [A] | 1p     | 2p     | 3p     |
|--------|--------|--------|--------|
|        | P* [W] | P* [W] | P* [W] |
| 0.5    | 1.6    | 3.2    | 4.7    |
| 1      | 1.1    | 2.2    | 3.4    |
| 1.5    | 1.3    | 2.6    | 3.9    |
| 2      | 1.4    | 2.8    | 4.3    |
| 3      | 1.2    | 2.4    | 3.6    |
| 4      | 1.4    | 2.9    | 4.3    |
| 5      | 1.9    | 3.7    | 5.6    |
| 6      | 1.2    | 2.3    | 3.5    |
| 7      | 1.4    | 2.8    | 4.3    |
| 8      | 1.4    | 2.8    | 4.2    |
| 10     | 1.8    | 3.6    | 5.3    |
| 13     | 2.4    | 4.7    | 7.1    |
| 15     | 1.9    | 3.8    | 5.6    |
| 16     | 2.1    | 4.3    | 6.4    |
| 20     | 2.9    | 5.8    | 8.7    |
| 25     | 3.1    | 6.2    | 9.3    |
| 30     | 3.0    | 6.0    | 9.0    |
| 32     | 3.4    | 6.8    | 10.2   |
| 35     | 3.7    | 7.4    | 11.0   |
| 40     | 4.0    | 8.1    | 12.1   |

\*50Hz

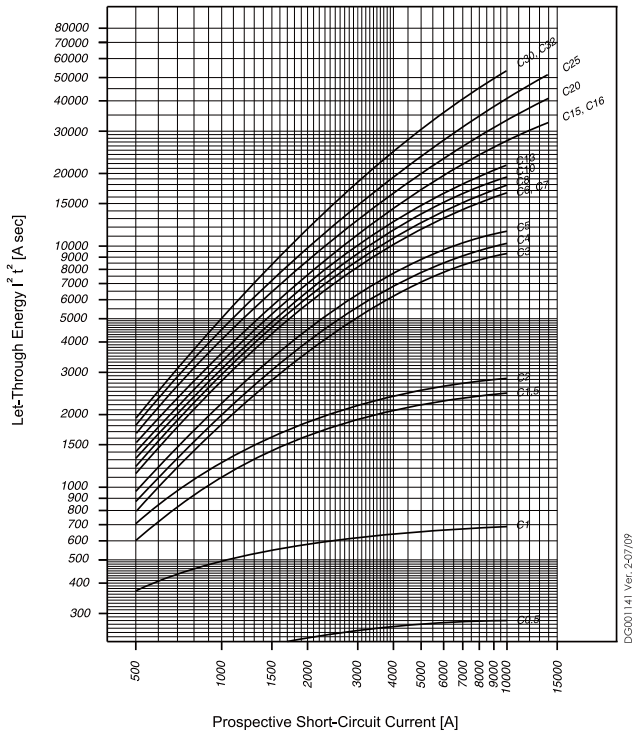
### Type D

| In [A] | 1p     | 2p     | 3p     |
|--------|--------|--------|--------|
|        | P* [W] | P* [W] | P* [W] |
| 0.5    | 1.6    | 3.2    | 4.8    |
| 1      | 0.8    | 1.5    | 2.3    |
| 1.5    | 1.0    | 2.1    | 3.1    |
| 2      | 1.0    | 2.1    | 3.1    |
| 3      | 1.2    | 2.4    | 3.6    |
| 4      | 1.4    | 2.9    | 4.3    |
| 5      | 1.5    | 2.9    | 4.4    |
| 6      | 1.2    | 2.3    | 3.5    |
| 7      | 1.4    | 2.8    | 4.3    |
| 8      | 1.2    | 2.4    | 3.7    |
| 10     | 1.5    | 3.0    | 4.5    |
| 13     | 2.0    | 4.1    | 6.1    |
| 15     | 1.5    | 3.1    | 4.6    |
| 16     | 1.7    | 3.5    | 5.2    |
| 20     | 1.8    | 3.7    | 5.5    |
| 25     | 2.6    | 5.1    | 7.7    |
| 30     | 2.7    | 5.4    | 8.1    |
| 32     | 3.1    | 6.2    | 9.3    |
| 35     | 3.8    | 7.6    | 11.3   |
| 40     | 3.9    | 7.8    | 11.6   |

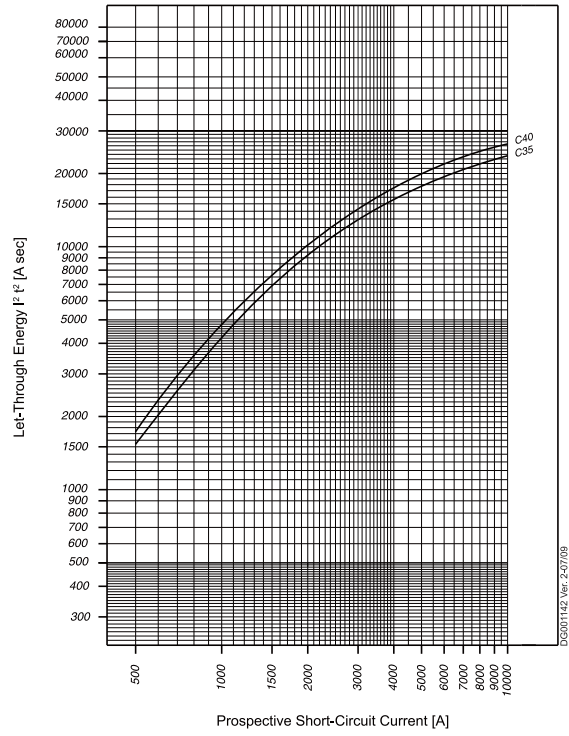
\*50Hz

## Maximum Let-Through Energy FAZ-...-NA, -RT, -DU

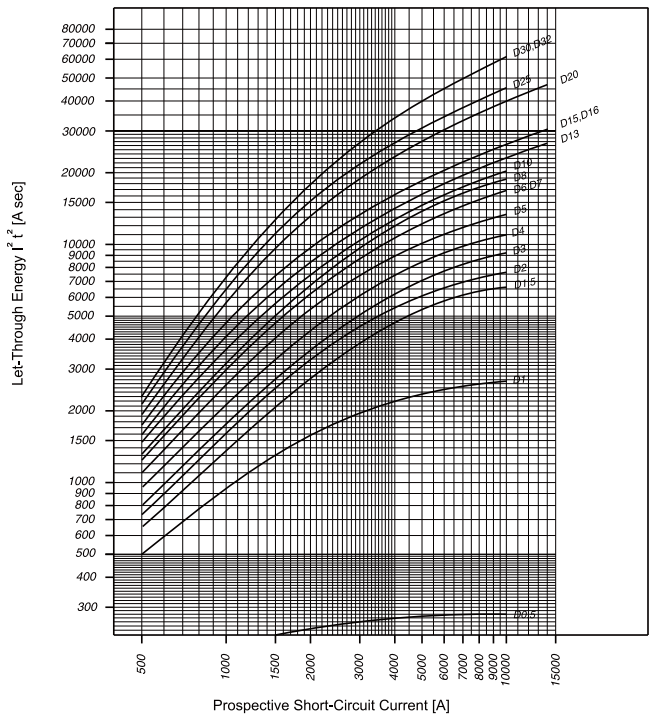
**Type C (0.5 - 32 A), 277 V**



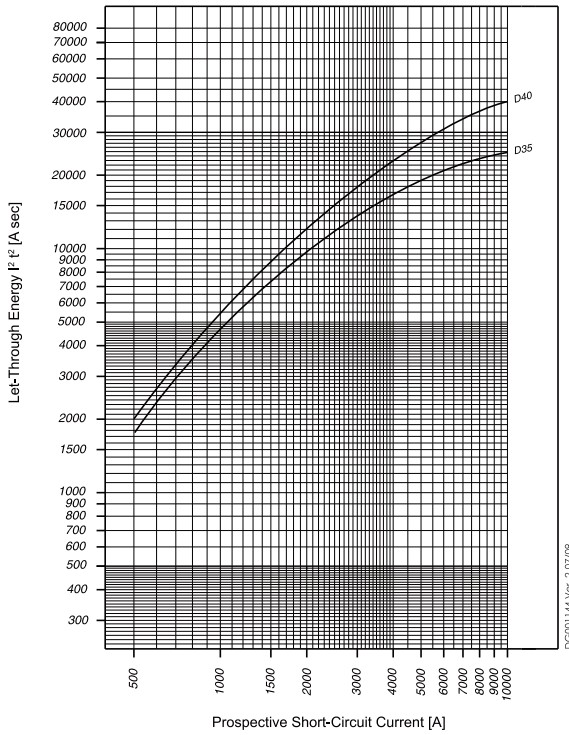
**Type C (35 - 40 A), 240 V**



**Type D (0.5 - 32 A), 277 V**

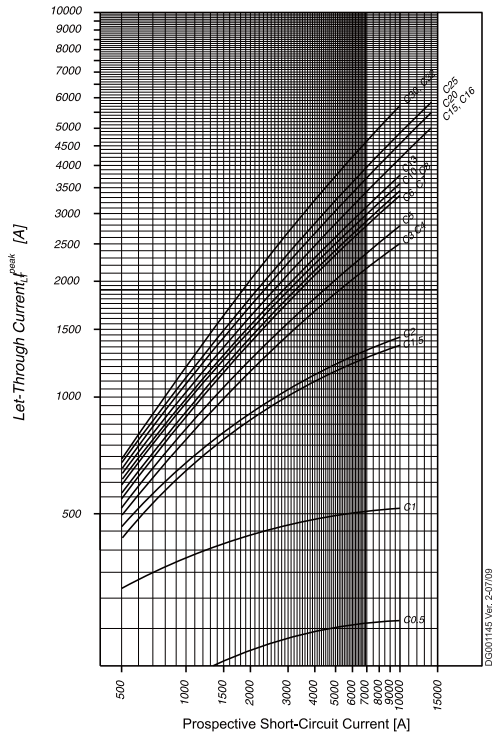


**Type D (35 - 40 A), 240 V**

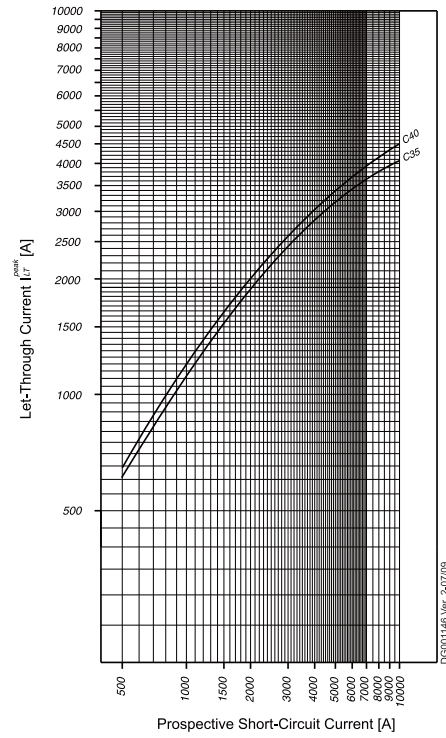


## Maximum Let-Through Current FAZ-...-NA, -RT, -DU

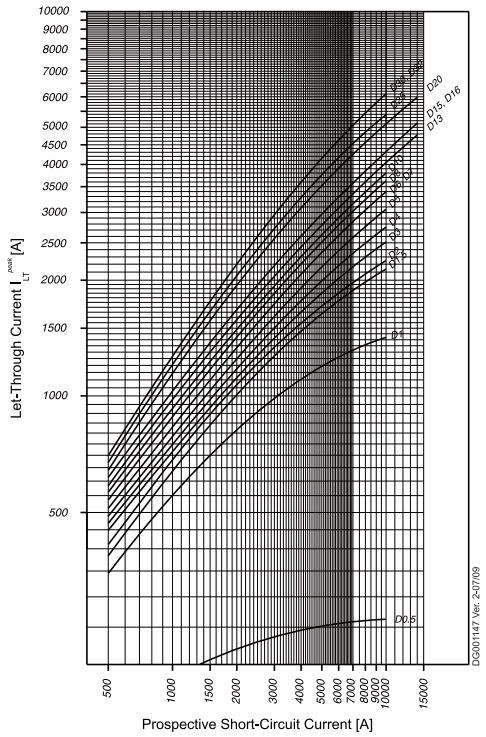
Type C (0.5 - 32 A), 277 V



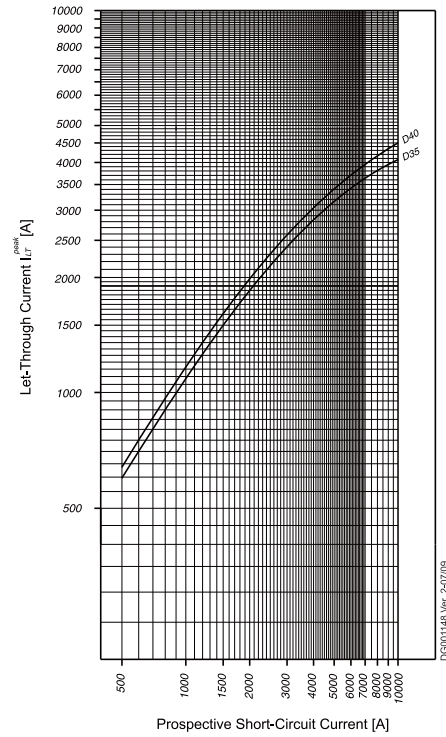
Type C (35 - 40 A), 240 V



Type D (0.5 - 32 A), 277 V



Type D (35 - 40 A), 240 V



## Miniature Circuit Breakers FAZ-NA-DC

SG56612



### FAZ-NA-DC

- High-quality miniature circuit breakers for DC-applications
- Contact position indicator red - green
- Guide for secure terminal connection (not for FAZ-NA)
- 3-position DIN rail clip, permits removal from existing busbar system
- Comprehensive range of accessories suitable for subsequent installation
- Rated currents up to 40 A
- Tripping characteristic C
- Rated breaking capacity 10 kA according to IEC/EN 60947-2
- Up to 125 V DC per pole



## FAZ-...-NA-DC Miniature Circuit Breakers (MCBs)

### Characteristic C

| Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60947-2<br>(V DC) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL489<br>(V) | Breaking capacity<br>acc. to<br>UL489<br>(kA) | SWD | NFPA 79 | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|--|---|-------------------------------|---|-----|---------|---------------------|-------------|-------------------------|
| <b>1-pole</b>              |  |   |                               |   |     |         |                     |             |                         |
| 2                          | 220  | 10  | 125                           | 10  |     |         | FAZ-C2/1-NA-DC      | 113752      | 12/120                  |
| 3                          | 250  | 10  | 125                           | 10  |     |         | FAZ-C3/1-NA-DC      | 113753      | 12/120                  |
| 4                          | 250  | 10  | 125                           | 10  |     |         | FAZ-C4/1-NA-DC      | 113754      | 12/120                  |
| 5                          | 250  | 10  | 125                           | 10  |     |         | FAZ-C5/1-NA-DC      | 113755      | 12/120                  |
| 6                          | 250  | 10  | 125                           | 10  |     |         | FAZ-C6/1-NA-DC      | 113756      | 12/120                  |
| 7                          | 250  | 10  | 125                           | 10  |     |         | FAZ-C7/1-NA-DC      | 113757      | 12/120                  |
| 8                          | 250  | 10  | 125                           | 10  |     |         | FAZ-C8/1-NA-DC      | 113758      | 12/120                  |
| 10                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C10/1-NA-DC     | 113759      | 12/120                  |
| 13                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C13/1-NA-DC     | 113760      | 12/120                  |
| 15                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C15/1-NA-DC     | 113761      | 12/120                  |
| 16                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C16/1-NA-DC     | 113762      | 12/120                  |
| 20                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C20/1-NA-DC     | 113763      | 12/120                  |
| 25                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C25/1-NA-DC     | 113764      | 12/120                  |
| 30                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C30/1-NA-DC     | 113765      | 12/120                  |
| 32                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C32/1-NA-DC     | 113766      | 12/120                  |
| 35                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C35/1-NA-DC     | 113767      | 12/120                  |
| 40                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C40/1-NA-DC     | 113768      | 12/120                  |

SG56512



SG56612



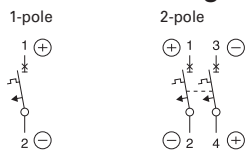
|               |     |    |     |    |  |  |                 |        |      |
|---------------|-----|----|-----|----|--|--|-----------------|--------|------|
| <b>2-pole</b> |     |    |     |    |  |  |                 |        |      |
| 2             | 440 | 10 | 250 | 10 |  |  | FAZ-C2/2-NA-DC  | 137239 | 1/60 |
| 3             | 500 | 10 | 250 | 10 |  |  | FAZ-C3/2-NA-DC  | 137250 | 1/60 |
| 4             | 500 | 10 | 250 | 10 |  |  | FAZ-C4/2-NA-DC  | 137251 | 1/60 |
| 5             | 500 | 10 | 250 | 10 |  |  | FAZ-C5/2-NA-DC  | 137252 | 1/60 |
| 6             | 500 | 10 | 250 | 10 |  |  | FAZ-C6/2-NA-DC  | 120638 | 1/60 |
| 7             | 500 | 10 | 250 | 10 |  |  | FAZ-C7/2-NA-DC  | 120639 | 1/60 |
| 8             | 500 | 10 | 250 | 10 |  |  | FAZ-C8/2-NA-DC  | 120640 | 1/60 |
| 10            | 500 | 10 | 250 | 10 |  |  | FAZ-C10/2-NA-DC | 120641 | 1/60 |
| 13            | 500 | 10 | 250 | 10 |  |  | FAZ-C13/2-NA-DC | 120642 | 1/60 |
| 15            | 500 | 10 | 250 | 10 |  |  | FAZ-C15/2-NA-DC | 120643 | 1/60 |
| 16            | 500 | 10 | 250 | 10 |  |  | FAZ-C16/2-NA-DC | 120644 | 1/60 |
| 20            | 500 | 10 | 250 | 10 |  |  | FAZ-C20/2-NA-DC | 120645 | 1/60 |
| 25            | 500 | 10 | 250 | 10 |  |  | FAZ-C25/2-NA-DC | 120646 | 1/60 |
| 30            | 500 | 10 | 250 | 10 |  |  | FAZ-C30/2-NA-DC | 120647 | 1/60 |
| 32            | 500 | 10 | 250 | 10 |  |  | FAZ-C32/2-NA-DC | 120648 | 1/60 |
| 35            | 500 | 10 | 250 | 10 |  |  | FAZ-C35/2-NA-DC | 120649 | 1/60 |
| 40            | 500 | 10 | 250 | 10 |  |  | FAZ-C40/2-NA-DC | 120650 | 1/60 |

## Specifications FAZ-NA-DC

### Technical data

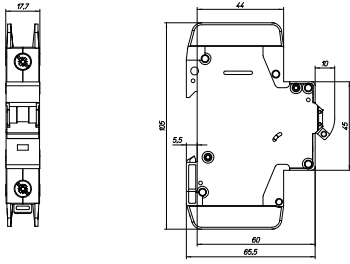
|   |           | <b>FAZ-NA-DC</b>  |
|---|-----------|---|
| Productstandard                             |           | UL 489, CSA C22.2 No 5-02                                       |
| Number of poles                             |           | 1, 2  |
| <b>Mechanical specifications</b>            |           |   |
| Device width                                |           | 1 pole = 0.697 inch, 2 poles = 1.394 inch                       |
| Frame size                                  |           | 1.772 inch  |
| Socket size                                 |           | 4.134 inch  |
| Device depth                                |           | 2.362 inch  |
| Terminals                                   |           | lift terminal / ring-tongue                                     |
| Terminal capacity rigid solid/stranded wire |           | 1 Wire: AWG 18-6 (Cu only)<br>2 Wires: AWG 18-10 (Cu only)      |
| Terminal screw                              |           | M5 (with slotted screw Pozidriv PZ2)                            |
| Terminal torque                             |           | #18-12 AWG: 21 lb-in<br>#10-8 AWG: 25 lb-in<br>#6 AWG: 36 lb-in |
| Snap on fixing                              |           | tristable (on DIN Rail acc. to IEC/EN 60715)                    |
| Finger proof                                |           | acc.to VBG4, ÖVE EN-6   |
| Contact position indicator                  |           | red / green   |
| <b>Electrical specifications</b>            |           |   |
| Rated voltage DC                            | $U_n$     | 125 V d.c. (1p)<br>250 V d.c. (2p)                              |
| Rated current                               | $I_n$     | 2, 3, 4, 5, 6, 7, 8, 10, 13, 15, 16, 20, 25, 30, 32, 35, 40 A   |
| Rated impulse withstand voltage             | $U_{imp}$ | 4 kV (1.2/50) $\mu$ sec   |
| <b>Tripping characteristic</b>              |           |   |
| Conventional non-tripping current           | $I_{nt}$  | $I_{nt}=1.0 I_n$  |
| Conventional tripping current               | $I_t$     | $I_t=1.35 I_n$  |
| Reference temperature                       |           | 40 °C   |
| Temperature factor                          |           | 0.5% /K   |
| Instantaneous tripping current              | $I_{mt}$  | $7 I_n < I_{mt} = 15 I_n \cdot t (I_{mt}) < 0.1 \text{ sec}$    |
| Current interrupting rating                 |           | 10 kA   |
| Number of electrical operating cycles       |           | 6000  |
| Number of mechanical operating cycles       |           | 10000   |
| Climatic conditions                         |           | acc. to IEC 68-2 (25..55°C / 90..95% RH)                        |
| Operating temperature range                 |           | -25°C to +55°C  |

### Connection diagram

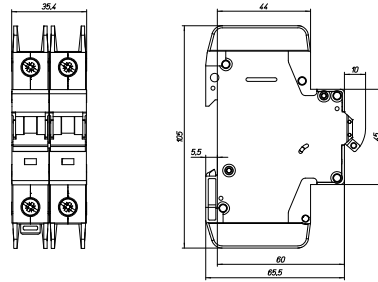


## Dimensions (mm) FAZ-NA-DC

1-pole

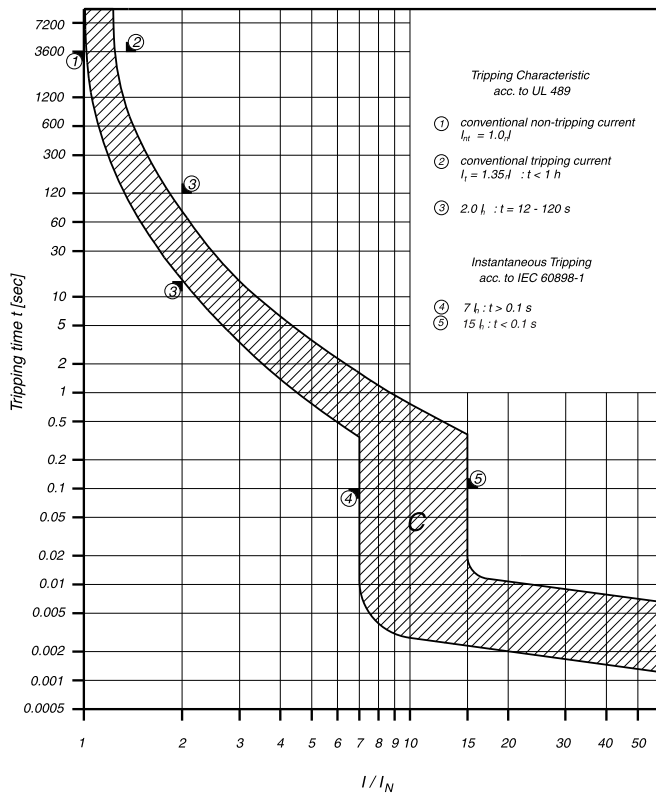


2-pole



## Tripping Characteristic FAZ-NA-DC

### Characteristics C - UL 489








## Miniature Circuit Breakers AZ

SG51412







- High-quality miniature circuit breakers for commercial and industrial applications
- Contact position indicator red - green
- Accessories suitable for subsequent installation
- Rated currents up to 125 A
- Tripping characteristics C, D
- Rated breaking capacity up to 25 kA according to EN 60947-2

## AZ Miniature Circuit Breakers (MCBs) Characteristic C

|   | Rated current<br>$I_n$ (A) | Type Designation | Article No. | Units per package |
|---|----------------------------|------------------|-------------|-------------------|
| SG51212<br>      | <b>1-pole</b>              |                  |             |                   |
|   | 20                         | AZ-C20           | 211769      | 12                |
|   | 25                         | AZ-C25           | 211774      | 12                |
|   | 32                         | AZ-C32           | 211779      | 12                |
|   | 40                         | AZ-C40           | 211784      | 12                |
|   | 50                         | AZ-C50           | 211789      | 12                |
|   | 63                         | AZ-C63           | 211794      | 12                |
|   | 80                         | AZ-C80           | 211799      | 12                |
|   | 100                        | AZ-C100          | 211804      | 12                |
| 125   | AZ-C125                    | 211809           | 12          |                   |
| SG51312<br>      | <b>2-pole</b>              |                  |             |                   |
|   | 20                         | AZ-2-C20         | 211770      | 2                 |
|   | 25                         | AZ-2-C25         | 211775      | 2                 |
|   | 32                         | AZ-2-C32         | 211780      | 2                 |
|   | 40                         | AZ-2-C40         | 211785      | 2                 |
|   | 50                         | AZ-2-C50         | 211790      | 2                 |
|   | 63                         | AZ-2-C63         | 211795      | 2                 |
|   | 80                         | AZ-2-C80         | 211800      | 2                 |
|   | 100                        | AZ-2-C100        | 211805      | 2                 |
| 125   | AZ-2-C125                  | 211810           | 2           |                   |
| wa_sg00314<br> | <b>3-pole</b>              |                  |             |                   |
|   | 20                         | AZ-3-C20         | 211771      | 1                 |
|   | 25                         | AZ-3-C25         | 211776      | 1                 |
|   | 32                         | AZ-3-C32         | 211781      | 1                 |
|   | 40                         | AZ-3-C40         | 211786      | 1                 |
|   | 50                         | AZ-3-C50         | 211791      | 1                 |
|   | 63                         | AZ-3-C63         | 211796      | 1                 |
|   | 80                         | AZ-3-C80         | 211801      | 1                 |
|   | 100                        | AZ-3-C100        | 211806      | 1                 |
| 125   | AZ-3-C125                  | 211811           | 1           |                   |
| wa_sg00214<br> | <b>3+N-pole</b>            |                  |             |                   |
|   | 20                         | AZ-3N-C20        | 211773      | 1                 |
|   | 25                         | AZ-3N-C25        | 211778      | 1                 |
|   | 32                         | AZ-3N-C32        | 211783      | 1                 |
|   | 40                         | AZ-3N-C40        | 211788      | 1                 |
|   | 50                         | AZ-3N-C50        | 211793      | 1                 |
|   | 63                         | AZ-3N-C63        | 211798      | 1                 |
|   | 80                         | AZ-3N-C80        | 211803      | 1                 |
|   | 100                        | AZ-3N-C100       | 211808      | 1                 |
| 125   | AZ-3N-C125                 | 211813           | 1           |                   |
| SG51412<br>    | <b>4-pole</b>              |                  |             |                   |
|   | 20                         | AZ-4-C20         | 211772      | 1                 |
|   | 25                         | AZ-4-C25         | 211777      | 1                 |
|   | 32                         | AZ-4-C32         | 211782      | 1                 |
|   | 40                         | AZ-4-C40         | 211787      | 1                 |
|   | 50                         | AZ-4-C50         | 211792      | 1                 |
|   | 63                         | AZ-4-C63         | 211797      | 1                 |
|   | 80                         | AZ-4-C80         | 211802      | 1                 |
|   | 100                        | AZ-4-C100        | 211807      | 1                 |
| 125   | AZ-4-C125                  | 211812           | 1           |                   |

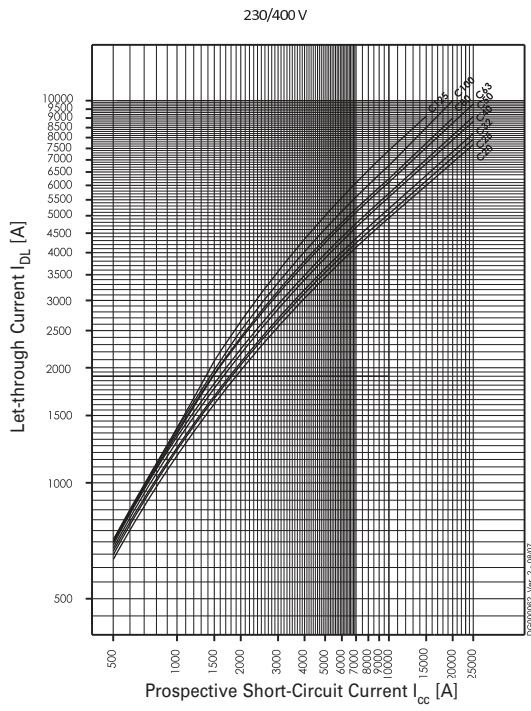
## AZ Miniature Circuit Breakers (MCBs)

### Characteristic D

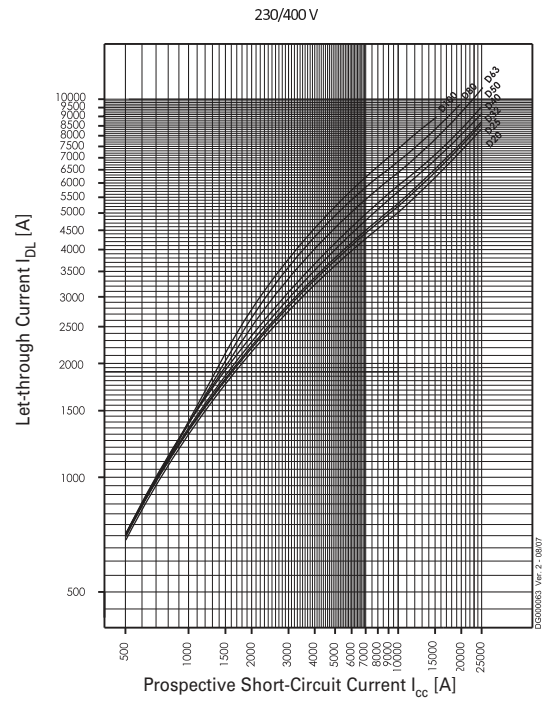
|   | Rated current<br>$I_n$ (A) | Type Designation | Article No. | Units per package |
|---|----------------------------|------------------|-------------|-------------------|
| SG51212<br>      | <b>1-pole</b>              |                  |             |                   |
|   | 50                         | AZ-D50           | 211814      | 12                |
|   | 63                         | AZ-D63           | 211818      | 12                |
|   | 80                         | AZ-D80           | 211822      | 12                |
|   | 100                        | AZ-D100          | 211826      | 12                |
| SG51312<br>      | <b>2-pole</b>              |                  |             |                   |
|   | 50                         | AZ-2-D50         | 211815      | 2                 |
|   | 63                         | AZ-2-D63         | 211819      | 2                 |
|   | 80                         | AZ-2-D80         | 211823      | 2                 |
|   | 100                        | AZ-2-D100        | 211827      | 2                 |
| wa_sg00314<br>  | <b>3-pole</b>              |                  |             |                   |
|   | 50                         | AZ-3-D50         | 211816      | 1                 |
|   | 63                         | AZ-3-D63         | 211820      | 1                 |
|   | 80                         | AZ-3-D80         | 211824      | 1                 |
|   | 100                        | AZ-3-D100        | 211828      | 1                 |
| wa_sg00214<br> | <b>3+N-pole</b>            |                  |             |                   |
|   | 50                         | AZ-3N-D50        | 211817      | 1                 |
|   | 63                         | AZ-3N-D63        | 211821      | 1                 |
|   | 80                         | AZ-3N-D80        | 211825      | 1                 |
|   | 100                        | AZ-3N-D100       | 211829      | 1                 |

## Maximum Let-Through Current AZ

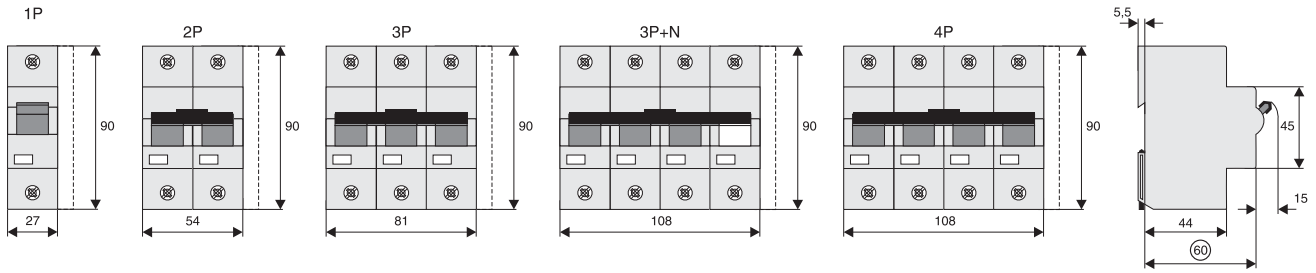
Type C



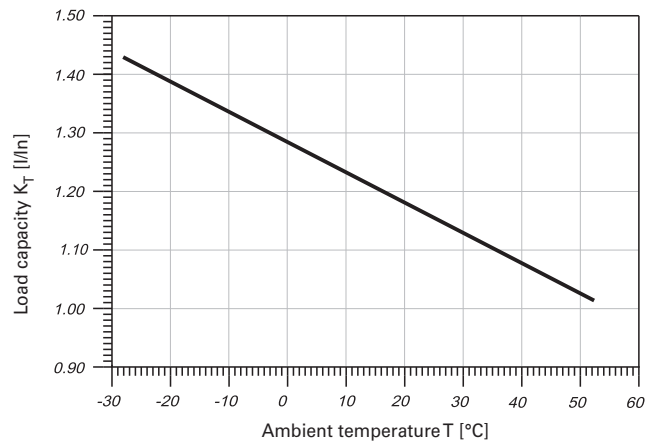
Type D



## Dimensions (mm)



## Effect of ambient temperature AZ

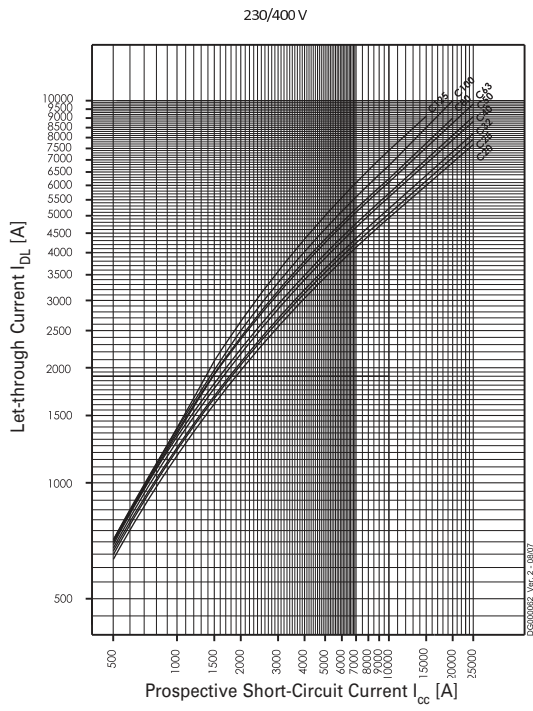


Permitted permanent load at ambient temperature  $T$  [°C] with  $n$  devices:  $I_{DL} = I_n K_T(T) K_N(N)$ .

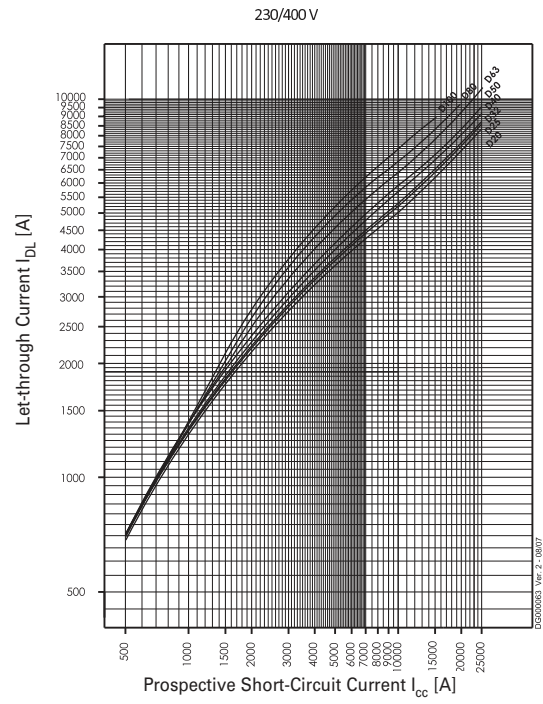


## Maximum Let-Through Current AZ

Type C



Type D



## Short Circuit Selectivity AZ

In case of short circuit, there is selectivity between the miniature circuit breakers AZ and the upstream protection devices up to the specified values of the selectivity limit current  $I_s$  [kA] (i. e. in case of short-circuit currents  $I_{ks}$  under  $I_s$ , only the MCB will trip, in case of short circuit currents above this value both protective devices will respond).

### AZ towards back-up fuses D01, D02, D03

| Rated current $I_n$<br>AZ in A | Rated current of the back-up fuse in A |     |     |     |     |     |     |
|--------------------------------|--|-----|-----|-----|-----|-----|-----|
|                                | 25                                     | 35  | 50  | 63  | 80  | 100 |     |
| <b>C</b> -<br>Characteristic   | 20                                     | 0,5 | 1,0 | 2,0 | 2,9 | 3,9 | 7,6 |
|                                | 25                                     |     | 1,0 | 1,9 | 2,8 | 3,8 | 7,3 |
|                                | 32                                     |     | 1,0 | 1,8 | 2,7 | 3,6 | 7,0 |
|                                | 40                                     |     |     | 1,6 | 2,2 | 3,0 | 5,6 |
|                                | 50                                     |     |     |     | 2,1 | 2,8 | 5,2 |
|                                | 63                                     |     |     |     |     | 2,7 | 4,8 |
|                                | 80                                     |     |     |     |     |     | 4,3 |
|                                | 100                                    |     |     |     |     |     |     |
|                                | 125                                    |     |     |     |     |     |     |
| <b>D</b> -Characteristic       | 20                                     | 0,5 | 0,9 | 1,7 | 2,5 | 3,4 | 6,7 |
|                                | 25                                     |     | 0,9 | 1,6 | 2,3 | 3,2 | 6,2 |
|                                | 32                                     |     | 0,9 | 1,5 | 2,3 | 3,0 | 6,0 |
|                                | 40                                     |     |     | 1,4 | 2,0 | 2,6 | 4,7 |
|                                | 50                                     |     |     |     | 1,8 | 2,3 | 4,3 |
|                                | 63                                     |     |     |     |     | 2,1 | 3,7 |
|                                | 80                                     |     |     |     |     |     | 3,1 |
|                                | 100                                    |     |     |     |     |     |     |
|                                | 125                                    |     |     |     |     |     |     |

### AZ towards back-up fuses NH Gr. 00

| Rated current $I_n$<br>AZ in A | Rated current of the back-up fuse in A |      |     |     |     |     |     |     |      |      |      |
|--------------------------------|--|------|-----|-----|-----|-----|-----|-----|------|------|------|
|                                | 25                                     | 35   | 40  | 50  | 63  | 80  | 100 | 125 | 160  | 200  |      |
| <b>C</b> -<br>Characteristic   | 20                                     | 0,5  | 1,0 | 1,3 | 1,9 | 2,7 | 3,7 | 6,7 | 17,0 | 25,0 | 25,0 |
|                                | 25                                     |      | 0,9 | 1,3 | 1,8 | 2,6 | 3,5 | 6,5 | 17,0 | 25,0 | 25,0 |
|                                | 32                                     |      | 0,9 | 1,2 | 1,7 | 2,4 | 3,3 | 6,0 | 15,0 | 23,0 | 25,0 |
|                                | 40                                     |      |     |     | 1,4 | 2,1 | 2,9 | 4,8 | 12,0 | 18,0 | 25,0 |
|                                | 50                                     |      |     |     |     | 1,9 | 2,7 | 4,5 | 11,0 | 17,0 | 25,0 |
|                                | 63                                     |      |     |     |     |     |     | 4,2 | 10,0 | 15,0 | 25,0 |
|                                | 80                                     |      |     |     |     |     |     | 3,8 | 8,5  | 12,0 | 25,0 |
|                                | 100                                    |      |     |     |     |     |     |     | 7,0  | 10,0 | 25,0 |
|                                | 125                                    |      |     |     |     |     |     |     |      | 7,5  | 25,0 |
| <b>D</b> -<br>Characteristic   | 20                                     | <0,5 | 0,8 | 1,1 | 1,5 | 2,3 | 3,1 | 5,6 | 16,0 | 25,0 | 25,0 |
|                                | 25                                     |      | 0,7 | 1,0 | 1,4 | 2,1 | 3,0 | 5,3 | 14,0 | 23,0 | 25,0 |
|                                | 32                                     |      | 0,7 | 1,0 | 1,3 | 2,1 | 2,9 | 5,0 | 13,0 | 22,0 | 25,0 |
|                                | 40                                     |      |     |     | 1,1 | 1,8 | 2,5 | 4,2 | 10,0 | 15,0 | 25,0 |
|                                | 50                                     |      |     |     |     | 1,6 | 2,3 | 3,8 | 8,5  | 13,0 | 22,0 |
|                                | 63                                     |      |     |     |     |     | 2,1 | 3,2 | 7,0  | 10,5 | 18,0 |
|                                | 80                                     |      |     |     |     |     |     | 2,8 | 5,5  | 8,4  | 15,0 |
|                                | 100                                    |      |     |     |     |     |     |     | 4,8  | 7,5  | 12,5 |
|                                | 125                                    |      |     |     |     |     |     |     |      |      |      |


## AZ towards NZM 1

Short circuit selectivity **characteristic C** towards **NZM\***)

| AZ                 | NZM...1-A gL/gG |     |     |      |      |      |
|--------------------|-----------------|-----|-----|------|------|------|
| I <sub>n</sub> [A] | 40              | 50  | 63  | 80   | 100  | 125  |
| 20                 | 0.3             | 0.4 | 0.5 | 0.75 | 0.9  | 1.25 |
| 25                 | 0.3             | 0.4 | 0.5 | 0.7  | 0.9  | 1.2  |
| 32                 |                 | 0.4 | 0.5 | 0.7  | 0.85 | 1.2  |
| 40                 |                 |     | 0.5 | 0.6  | 0.85 | 1.1  |
| 50                 |                 |     |     | 0.6  | 0.85 | 1.1  |
| 63                 |                 |     |     |      | 0.8  | 1    |
| 80                 |                 |     |     |      |      | 1    |
| 100                |                 |     |     |      |      |      |
| 125                |                 |     |     |      |      |      |

Short circuit selectivity **characteristic D** towards **NZM\***)

| AZ                 | NZM...1-A gL/gG |    |    |    |     |     |
|--------------------|-----------------|----|----|----|-----|-----|
| I <sub>n</sub> [A] | 40              | 50 | 63 | 80 | 100 | 125 |
| 50                 |                 |    |    |    |     |     |
| 63                 |                 |    |    |    |     |     |
| 80                 |                 |    |    |    |     |     |
| 100                |                 |    |    |    |     |     |

 no selectivity


## AZ towards NZM 2

Short circuit selectivity **characteristic C** towards **NZM\***)

| AZ                 | NZM...2-A gL/gG |     |     |      |      |      |      |     |     |
|--------------------|-----------------|-----|-----|------|------|------|------|-----|-----|
| I <sub>n</sub> [A] | 40              | 50  | 63  | 80   | 100  | 125  | 160  | 200 | 250 |
| 20                 | 0.3             | 0.4 | 0.5 | 0.75 | 0.9  | 1.25 | 1.8  | 2.5 | 3.5 |
| 25                 | 0.3             | 0.4 | 0.5 | 0.7  | 0.9  | 1.2  | 1.7  | 2.4 | 3.3 |
| 32                 |                 | 0.4 | 0.5 | 0.7  | 0.85 | 1.2  | 1.65 | 2.3 | 3.2 |
| 40                 |                 |     | 0.5 | 0.6  | 0.85 | 1.1  | 1.5  | 2.1 | 2.9 |
| 50                 |                 |     |     | 0.6  | 0.85 | 1.1  | 1.5  | 2   | 2.8 |
| 63                 |                 |     |     |      | 0.8  | 1    | 1.4  | 1.8 | 2.5 |
| 80                 |                 |     |     |      |      | 1    | 1.4  | 1.8 | 2.4 |
| 100                |                 |     |     |      |      |      | 1.3  | 1.7 | 2.3 |
| 125                |                 |     |     |      |      |      |      | 1.6 | 2.1 |

Short circuit selectivity **characteristic D** towards **NZM\***)

| AZ                 | NZM...2-A gL/gG |    |    |    |     |     |     |     |     |
|--------------------|-----------------|----|----|----|-----|-----|-----|-----|-----|
| I <sub>n</sub> [A] | 40              | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 |
| 50                 |                 |    |    |    |     |     | 1   | 1.4 | 2.6 |
| 63                 |                 |    |    |    |     |     | 1   | 1.3 | 2.3 |
| 80                 |                 |    |    |    |     |     |     |     | 2.1 |
| 100                |                 |    |    |    |     |     |     |     |     |

 no selectivity

## Back-up Protection AZ

The up-stream protective devices will protect the down-stream AZ up to the short-circuit current specified.

### AZ and NZM(B)(C)(N)(H)1

| $I_n$ [A] | <b>AZ-<math>I_n/1(2,3,4)</math> / C(D) + NZMB1</b><br>$U_e = 230/400$ V |
|-----------|---|
| 20        | 25 kA   |
| 25        | 25 kA   |
| 32        | 25 kA   |
| 40        | 25 kA   |
| 50        | 25 kA   |
| 63        | 25 kA   |
| 80        | 25 kA   |
| 100       | 25 kA   |
| 125       | 25 kA   |

| $I_n$ [A] | <b>AZ-<math>I_n/1(2,3,4)</math> / C(D) + NZMC1</b><br>$U_e = 230/400$ V |
|-----------|---|
| 20        | 36 kA   |
| 25        | 36 kA   |
| 32        | 36 kA   |
| 40        | 36 kA   |
| 50        | 36 kA   |
| 63        | 36 kA   |
| 80        | 36 kA   |
| 100       | 36 kA   |
| 125       | 36 kA   |

| $I_n$ [A] | <b>AZ-<math>I_n/1(2,3,4)</math> / C(D) + NZMN1</b><br>$U_e = 230/400$ V |
|-----------|---|
| 20        | 50 kA   |
| 25        | 50 kA   |
| 32        | 50 kA   |
| 40        | 50 kA   |
| 50        | 50 kA   |
| 63        | 50 kA   |
| 80        | 50 kA   |
| 100       | 50 kA   |
| 125       | 50 kA   |

| $I_n$ [A] | <b>AZ-<math>I_n/1(2,3,4)</math> / C(D) + NZMH1</b><br>$U_e = 230/400$ V |
|-----------|---|
| 20        | 80 kA   |
| 25        | 80 kA   |
| 32        | 80 kA   |
| 40        | 80 kA   |
| 50        | 80 kA   |
| 63        | 80 kA   |
| 80        | 80 kA   |
| 100       | 80 kA   |
| 125       | 80 kA   |

### AZ and NZM(B)(C)(N)(H)2

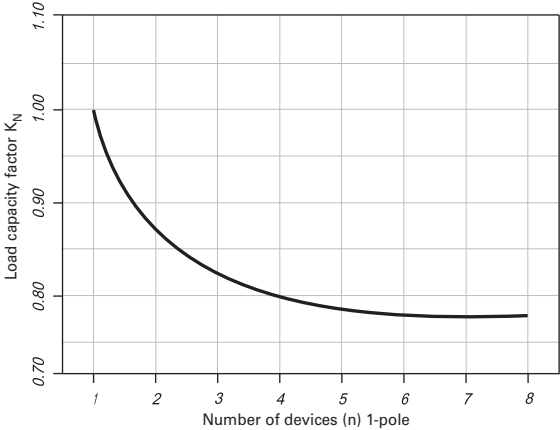
| $I_n$ [A] | <b>AZ-<math>I_n/1(2,3,4)</math> / C(D) + NZMB2</b><br>$U_e = 230/400$ V |
|-----------|---|
| 20        | 25 kA   |
| 25        | 25 kA   |
| 32        | 25 kA   |
| 40        | 25 kA   |
| 50        | 25 kA   |
| 63        | 25 kA   |
| 80        | 25 kA   |
| 100       | 25 kA   |
| 125       | 25 kA   |

| $I_n$ [A] | <b>AZ-<math>I_n/1(2,3,4)</math> / C(D) + NZMC2</b><br>$U_e = 230/400$ V |
|-----------|---|
| 20        | 36 kA   |
| 25        | 36 kA   |
| 32        | 36 kA   |
| 40        | 36 kA   |
| 50        | 36 kA   |
| 63        | 36 kA   |
| 80        | 36 kA   |
| 100       | 36 kA   |
| 125       | 36 kA   |

| $I_n$ [A] | <b>AZ-<math>I_n/1(2,3,4)</math> / C(D) + NZMN2</b><br>$U_e = 230/400$ V |
|-----------|---|
| 20        | 50 kA   |
| 25        | 50 kA   |
| 32        | 50 kA   |
| 40        | 50 kA   |
| 50        | 50 kA   |
| 63        | 50 kA   |
| 80        | 50 kA   |
| 100       | 50 kA   |
| 125       | 50 kA   |

| $I_n$ [A] | <b>AZ-<math>I_n/1(2,3,4)</math> / C(D) + NZMH2</b><br>$U_e = 230/400$ V |
|-----------|---|
| 20        | 65 kA   |
| 25        | 65 kA   |
| 32        | 65 kA   |
| 40        | 65 kA   |
| 50        | 65 kA   |
| 63        | 65 kA   |
| 80        | 65 kA   |
| 100       | 65 kA   |
| 125       | 65 kA   |

## Load capacity in case of block installation AZ







## Main Load Disconnecter Switch (Isolator) IS

SG10911




- Load circuit breaker with isolating function
- Highly wear resistant contacts
- Quick make
- Terminal capacity 50 mm<sup>2</sup>
- Compatible busbars
- 1-, 2-, 3-, 4-pole

## Main Load Disconnecter Switch (Isolator) IS

|   | Rated Current (A)  | Poles | Type Designation | Article No. | Units per package |        |
|---|--|-------|------------------|-------------|-------------------|--------|
| <br>SG10611  | 16   | 1     | IS-16/1          | 276254      | 12/120            |        |
|   | 16   | 2     | IS-16/2          | 276255      | 1/60              |        |
|   | 16   | 3     | IS-16/3          | 276256      | 1/40              |        |
|   | 16   | 4     | IS-16/4          | 276257      | 1/30              |        |
|   | 20   | 1     | IS-20/1          | 276258      | 12/120            |        |
|   | 20   | 2     | IS-20/2          | 276259      | 1/60              |        |
|   | 20   | 3     | IS-20/3          | 276260      | 1/40              |        |
|   | 20   | 4     | IS-20/4          | 276261      | 1/30              |        |
|   | <br>SG10711   | 25    | 1                | IS-25/1     | 276262            | 12/120 |
|   |  | 25    | 2                | IS-25/2     | 276263            | 1/60   |
| 25  |  | 3     | IS-25/3          | 276264      | 1/40              |        |
| 25  |  | 4     | IS-25/4          | 276265      | 1/30              |        |
| 32  |  | 1     | IS-32/1          | 276266      | 12/120            |        |
| 32  |  | 2     | IS-32/2          | 276267      | 1/60              |        |
| 32  |  | 3     | IS-32/3          | 276268      | 1/40              |        |
| 32  |  | 4     | IS-32/4          | 276269      | 1/30              |        |
| <br>SG10811 |  | 40    | 1                | IS-40/1     | 276270            | 12/120 |
|   |  | 40    | 2                | IS-40/2     | 276271            | 1/60   |
|   | 40   | 3     | IS-40/3          | 276272      | 1/40              |        |
|   | 40   | 4     | IS-40/4          | 276273      | 1/30              |        |
|   | 63   | 1     | IS-63/1          | 276274      | 12/120            |        |
|   | 63   | 2     | IS-63/2          | 276275      | 1/60              |        |
|   | 63   | 3     | IS-63/3          | 276276      | 1/40              |        |
|   | 63   | 4     | IS-63/4          | 276277      | 1/30              |        |
|   | <br>SG10911 | 80    | 1                | IS-80/1     | 276278            | 12/120 |
|   |  | 80    | 2                | IS-80/2     | 276279            | 1/60   |
| 80  |  | 3     | IS-80/3          | 276280      | 1/40              |        |
| 80  |  | 4     | IS-80/4          | 276281      | 1/30              |        |
| 100   |  | 1     | IS-100/1         | 276282      | 12/120            |        |
| 100   |  | 2     | IS-100/2         | 276283      | 1/60              |        |
| 100   |  | 3     | IS-100/3         | 276284      | 1/40              |        |
| 100   |  | 4     | IS-100/4         | 276285      | 1/30              |        |
|   |  | 125   | 1                | IS-125/1    | 276286            | 12/120 |
|   |  | 125   | 2                | IS-125/2    | 276287            | 1/60   |
|   | 125  | 3     | IS-125/3         | 276288      | 1/40              |        |
|   | 125  | 4     | IS-125/4         | 276289      | 1/30              |        |

## Accessories

|  | Description  | Type Designation | Article No. | Units per package |
|--|--|------------------|-------------|-------------------|
| <br>SG47812 | Switching interlock without lock for Isolators, RCDs, combined RCD/MCBs, ... | IS/SPE-1TE       | 101911      | 5/30              |
|  | Terminal cover   | Z-IS/AK-1TE      | 276290      | 10/600            |

### Switching interlock IS/SPE-1TE

- Without lock
- Also suitable for PFIM, CF16, PKNM, CKN6

### Terminal Cover Caps Z-IS/AK-1TE

- Can be sealed with leads
- Modular design, width 1 MU

## Specifications | Main Load Disconnect Switch (Isolator) IS

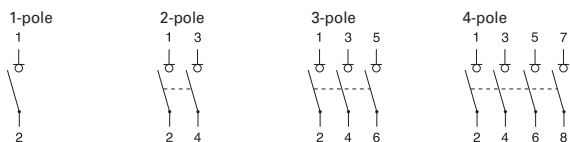
### Description

- Load circuit breaker with isolating function
- Design according to IEC/EN 60947-3
- Highly wear resistant contacts
- Quick make, black toggle
- Terminal capacity 50 mm<sup>2</sup>
- Compatible busbars with switchgear series Xpole by use of the mouth terminal in combination with standard fork busbar

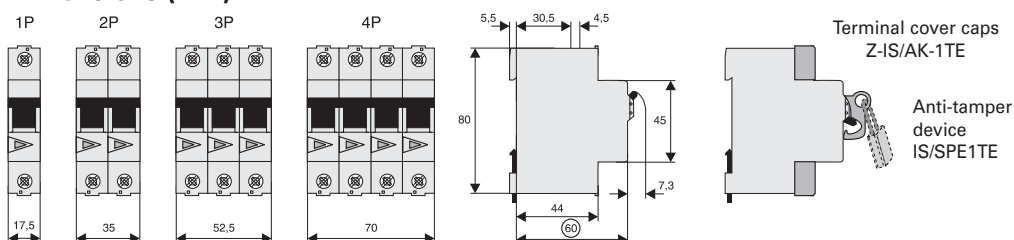
### Technical Data

|   | IS-16   | IS-20   | IS-25   | IS-32   | IS-40   | IS-63   | IS-80   | IS-100  | IS-125  |
|---|---|---------|---------|---------|---------|---------|---------|---------|---------|
| <b>Electrical</b>   |   |         |         |         |         |         |         |         |         |
| Design  | according to IEC/EN 60947-3                                       |         |         |         |         |         |         |         |         |
| Rated voltage   | 240/415 V   |         |         |         |         |         |         |         |         |
| Frequency   | 50/60 Hz  |         |         |         |         |         |         |         |         |
| Rated insulation voltage  | $U_i$   | 690 V~  |         |         |         |         |         |         |         |
| Rated peak withstand voltage  | $U_{imp}$   | 6 kV    |         |         |         |         |         |         |         |
| Pollution degree  | 3   |         |         |         |         |         |         |         |         |
| Rated short-time withstand current                                      | $I_{cw}$  | 2 kA    |         |         |         |         |         |         |         |
| Rated short-circuit making capacity                                     | $I_{cm}$  | 2.8 kA  |         |         |         |         |         |         |         |
| Rated current   |   |         |         |         |         |         |         |         |         |
| 240/415V, AC23A   | 16 A  | 20 A    | 25 A    | 32 A    | 40 A    | 63 A    | 80 A    | 100 A   | 125 A   |
| Number of poles   | 1-, 2-, 3-, 4-pole  |         |         |         |         |         |         |         |         |
| Maximum back-up fuse  | 125 A gG  |         |         |         |         |         |         |         |         |
| Short circuit strength - with back-up fuse acc. to the applicable rules |   |         |         |         |         |         |         |         |         |
| IEC/EN 60947-3  | 12.5 kA   | 12.5 kA | 12.5 kA | 12.5 kA | 12.5 kA | 12.5 kA | 12.5 kA | 10 kA   | 10 kA   |
| <b>Endurance</b>  |   |         |         |         |         |         |         |         |         |
| electrical components operation cycles                                  | ≥3.000  | ≥3.000  | ≥3.000  | ≥3.000  | ≥3.000  | ≥3.000  | ≥3.000  | ≥3.000  | ≥2.000  |
| mechanical components operation cycles                                  | ≥16.000   | ≥16.000 | ≥16.000 | ≥16.000 | ≥16.000 | ≥16.000 | ≥16.000 | ≥16.000 | ≥14.000 |
| <b>Mechanical</b>   |   |         |         |         |         |         |         |         |         |
| Frame size  | 45 mm   |         |         |         |         |         |         |         |         |
| Device height   | 80 mm   |         |         |         |         |         |         |         |         |
| Device width  | 17.5mm/pole   |         |         |         |         |         |         |         |         |
| Mounting  | quick fastening with 2 lock-in positions on DIN rail IEC/EN 60715 |         |         |         |         |         |         |         |         |
| Degree of protection, built-in  | IP40  |         |         |         |         |         |         |         |         |
| Terminal protection   | finger and hand touch safe according to BGV A3                    |         |         |         |         |         |         |         |         |
| Terminals   | open mouthed/lift terminals                                       |         |         |         |         |         |         |         |         |
| Terminal capacity   | 2.5 - 50 mm <sup>2</sup>  |         |         |         |         |         |         |         |         |
| Busbar thickness  | 0.8 - 2 mm  |         |         |         |         |         |         |         |         |
| Fastening torque of terminal screws                                     | 2.5 - 5 Nm  |         |         |         |         |         |         |         |         |
| Function  | irrespective of the position of installation                      |         |         |         |         |         |         |         |         |

### Connection diagram



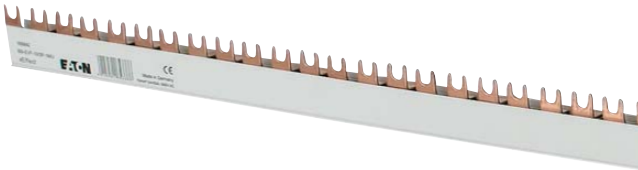
### Dimensions (mm)





## Busbar System xEffect BB-EV

SG13113



Busbar System xEffect is the modular design system for busbars. xEffect busbars are available as yard goods with 1, 2 or 3 poles. Now, there is a special feature: each bar can easily be extended by one-pole bar as you like. The additional pole can be added completely without tools by easy clamping technique. The lugs or forks in the xEffect bars - available in 10 and 16 mm<sup>2</sup> and all common distances - can be broken out at a predetermined breaking point. There is actually no more flexibility available.

### Busbar System xEffect saves time and material

The yard good can be cut with a saw of course. However, there is no need neither for deburring nor for cutting the conductor. Just cut to the required dimension and close with the fitting end cap -ready! The end caps have also breakable edges, which enable further connecting of the Busbar System xEffect. By overlapping assembly, doubling the cross section can be achieved.

### Busbar System xEffect in use

Busbar System xEffect is especially well suited for solving flexible busbar applications rack-mounted models in series. Fork-pin combinations for 1+N applications can be realized by individual combinations - for this also the one-pole version with blue isolation is available besides the one with grey isolation. Even different cross sections can be combined in this case.

Accessories, such as feeder terminals and self adhesive phase marking labels will complete the comfortable total package. Existing contact prevention caps can be used.

### Busbar System xEffect at a glance:

- Yard goods can be cut
- No cutting back of copper required
- No deburring required
- Almost no waste during cutting
- End caps available with 1- to 4-poles, end caps can be broken out for further extensions
- 4-pole end cap molded in pairs (left and right)
- Overlapping rail extension possible
- Rails can be extended on demand by 1-pole rails (plug-in technology)
- All step distances
- 10 and 16 mm<sup>2</sup>
- Fork and stud
- Lugs can be broken out at any predetermined breaking point
- Self adhesive phase indication labels available
- Contact preventing caps (ZV-BS-G) can be used
- Simple, flexible handling
- All assembly requirements can be covered by the Busbar System xEffect
- Low storage space requirements due to modular system
- Less time consuming (no deburring, no cutting back)
- Individual and self configurable
- Fork-pin combination for 1+N application possible, feeding through rail (terminal clamp) not possible.
- Protected technology

| Description | Step Distance (mm) | Cu-factor | Type Designation | Article No. | Units per package |
|-------------|--------------------|-----------|------------------|-------------|-------------------|
|-------------|--------------------|-----------|------------------|-------------|-------------------|

## xEffect busbar 1m 10mm<sup>2</sup>, 16mm<sup>2</sup> (Fork) BB-EVF

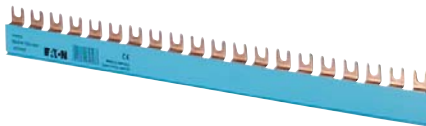
for MCBs, RCCBs, RCBOs, SPDs

- Delivered without end caps

SG13113



SG13413



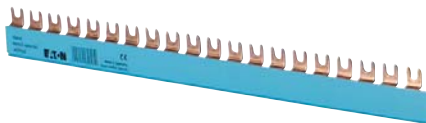
### 10 mm<sup>2</sup>, Rated Current 63 A

|               |            |      |                      |        |    |
|---------------|------------|------|----------------------|--------|----|
| 1-phase       | 17.8       | 0.22 | BB-EVF-10/1P-1MU     | 168826 | 10 |
|               | 27         | 0.24 | BB-EVF-10/1P-2MU     | 168830 | 10 |
|               | 36         | 0.24 | BB-EVF-10/1P-3MU     | 168834 | 10 |
| 2-phase       | 17.8       | 0.31 | BB-EVF-10/2P-1MU     | 168838 | 10 |
|               | 27         | 0.36 | BB-EVF-10/2P-2MU     | 168840 | 10 |
| 3-phase       | 17.8       | 0.46 | BB-EVF-10/3P-1MU     | 168842 | 10 |
|               | 27         | 0.58 | BB-EVF-10/3P-2MU     | 168844 | 10 |
|               | 36         | 0.56 | BB-EVF-10/3P-3MU     | 168850 | 10 |
| 3-phase + AUX | 3x17.5+1x9 | 0.58 | BB-EVF-10/3P-1MU/AUX | 168846 | 10 |
|               | 3x17.5+2x9 | 0.57 | BB-EVF-10/3P-1MU2AUX | 168848 | 10 |
| Neutral       | 17.8       | 0.22 | BB-EVF-10/N-1MU      | 168828 | 10 |
|               | 27         | 0.24 | BB-EVF-10/N-2MU      | 168832 | 10 |
|               | 36         | 0.24 | BB-EVF-10/N-3MU      | 168836 | 10 |

SG13213



SG13613



### 16 mm<sup>2</sup>, Rated Current 80 A

|               |            |      |                      |        |    |
|---------------|------------|------|----------------------|--------|----|
| 1-phase       | 17.8       | 0.33 | BB-EVF-16/1P-1MU     | 168827 | 10 |
|               | 27         | 0.36 | BB-EVF-16/1P-2MU     | 168831 | 10 |
|               | 36         | 0.32 | BB-EVF-16/1P-3MU     | 168835 | 10 |
| 2-phase       | 17.8       | 0.46 | BB-EVF-16/2P-1MU     | 168839 | 10 |
|               | 27         | 0.54 | BB-EVF-16/2P-2MU     | 168841 | 10 |
| 3-phase       | 17.8       | 0.69 | BB-EVF-16/3P-1MU     | 168843 | 10 |
|               | 27         | 0.87 | BB-EVF-16/3P-2MU     | 168845 | 10 |
|               | 36         | 0.84 | BB-EVF-16/3P-3MU     | 168851 | 10 |
| 3-phase + AUX | 3x17.5+1x9 | 0.87 | BB-EVF-16/3P-1MU/AUX | 168847 | 10 |
|               | 3x17.5+2x9 | 0.86 | BB-EVF-16/3P-1MU2AUX | 168849 | 10 |
| Neutral       | 17.8       | 0.33 | BB-EVF-16/N-1MU      | 168829 | 10 |
|               | 27         | 0.36 | BB-EVF-16/N-2MU      | 168833 | 10 |
|               | 36         | 0.32 | BB-EVF-16/N-3MU      | 168837 | 10 |

| Description | Step Distance (mm) | Cu-factor | Type Designation | Article No. | Units per package |
|-------------|--------------------|-----------|------------------|-------------|-------------------|
|-------------|--------------------|-----------|------------------|-------------|-------------------|

## xEffect busbar 1m 10mm<sup>2</sup>, 16mm<sup>2</sup> (Pin) BB-EVP

for MCBs, RCCBs, RCBOs, SPDs

- Delivered without end caps

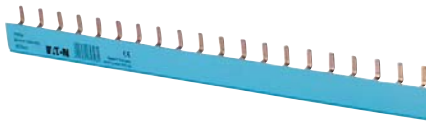
SG13013



### 10 mm<sup>2</sup>, Rated Current 63 A

|               |            |      |                      |        |    |
|---------------|------------|------|----------------------|--------|----|
| 1-phase       | 17.8       | 0.22 | BB-EVP-10/1P-1MU     | 168852 | 10 |
|               | 27         | 0.24 | BB-EVP-10/1P-2MU     | 168856 | 10 |
|               | 36         | 0.24 | BB-EVP-10/1P-3MU     | 168860 | 10 |
| 2-phase       | 17.8       | 0.31 | BB-EVP-10/2P-1MU     | 168864 | 10 |
|               | 27         | 0.36 | BB-EVP-10/2P-2MU     | 168866 | 10 |
| 3-phase       | 17.8       | 0.46 | BB-EVP-10/3P-1MU     | 168868 | 10 |
|               | 27         | 0.58 | BB-EVP-10/3P-2MU     | 168870 | 10 |
| 3-phase + AUX | 3x17.5+1x9 | 0.58 | BB-EVP-10/3P-1MU/AUX | 168872 | 10 |
|               | 3x17.5+2x9 | 0.57 | BB-EVP-10/3P-1MU2AUX | 168874 | 10 |
| Neutral       | 17.8       | 0.22 | BB-EVP-10/N-1MU      | 168854 | 10 |
|               | 27         | 0.24 | BB-EVP-10/N-2MU      | 168858 | 10 |
|               | 36         | 0.24 | BB-EVP-10/N-3MU      | 168862 | 10 |

SG13513



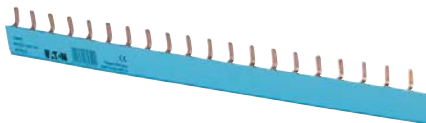
SG12913



### 16 mm<sup>2</sup>, Rated Current 80 A

|               |            |      |                      |        |    |
|---------------|------------|------|----------------------|--------|----|
| 1-phase       | 17.8       | 0.33 | BB-EVP-16/1P-1MU     | 168853 | 10 |
|               | 27         | 0.36 | BB-EVP-16/1P-2MU     | 168857 | 10 |
|               | 36         | 0.32 | BB-EVP-16/1P-3MU     | 168861 | 10 |
| 2-phase       | 17.8       | 0.46 | BB-EVP-16/2P-1MU     | 168865 | 10 |
|               | 27         | 0.54 | BB-EVP-16/2P-2MU     | 168867 | 10 |
| 3-phase       | 17.8       | 0.69 | BB-EVP-16/3P-1MU     | 168869 | 10 |
|               | 27         | 0.87 | BB-EVP-16/3P-2MU     | 168871 | 10 |
|               | 36         | 0.84 | BB-EVP-16/3P-3MU     | 168877 | 10 |
| 3-phase + AUX | 3x17.5+1x9 | 0.87 | BB-EVP-16/3P-1MU/AUX | 168873 | 10 |
|               | 3x17.5+2x9 | 0.86 | BB-EVP-16/3P-1MU2AUX | 168875 | 10 |
| Neutral       | 17.8       | 0.33 | BB-EVP-16/N-1MU      | 168855 | 10 |
|               | 27         | 0.36 | BB-EVP-16/N-2MU      | 168859 | 10 |
|               | 36         | 0.32 | BB-EVP-16/N-3MU      | 168863 | 10 |

SG13313



| Description | Cu-factor | Type Designation | Article No. | Units per package |
|-------------|-----------|------------------|-------------|-------------------|
|-------------|-----------|------------------|-------------|-------------------|

## Accessories

### End caps BB-EV-EC

wa\_sg05612



|           |   |               |        |    |
|-----------|---|---------------|--------|----|
| 1-phase   | - | BB-EV-EC/1P   | 168878 | 40 |
| 2+3-phase | - | BB-EV-EC/2-3P | 168823 | 40 |
| 4-phase   | - | BB-EV-EC/4P   | 168824 | 20 |
| Neutral   | - | BB-EV-EC/N    | 168879 | 20 |

### Terminal BB-EV-TE/35

wa\_sg05312



|  |      |             |        |   |
|--|------|-------------|--------|---|
|  | 0.04 | BB-EV-TE/35 | 168825 | 3 |
|--|------|-------------|--------|---|

### Sticker phase sequence

SG08713



|  |   |         |        |   |
|--|---|---------|--------|---|
|  | - | BB-S-PS | 169831 | 5 |
|--|---|---------|--------|---|

### Busbar Tag Shrouds ZV-BS-G

SG05705



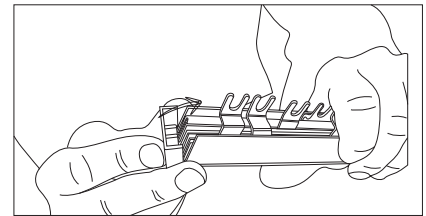
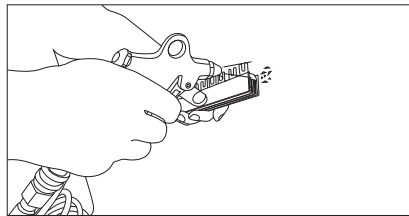
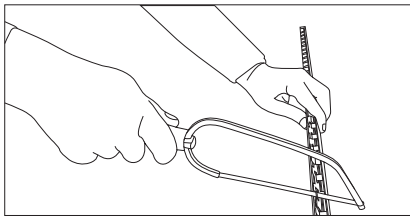
|  |   |         |        |        |
|--|---|---------|--------|--------|
|  | - | ZV-BS-G | 104903 | 10/600 |
|--|---|---------|--------|--------|

## Technical Data

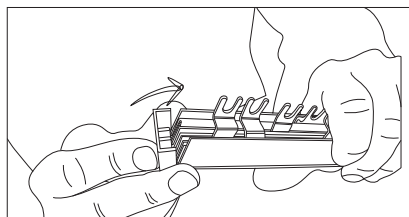
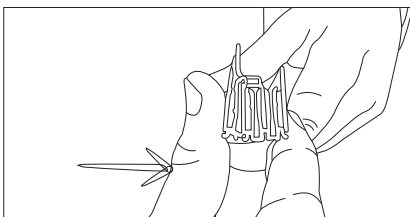
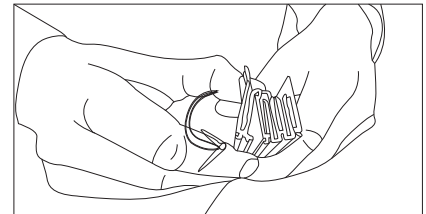
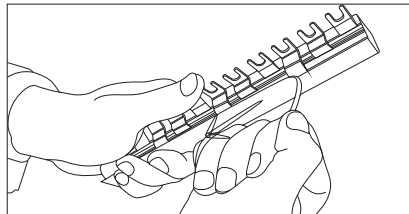
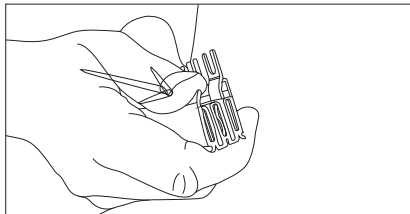
| <b>BB-EV.</b>                        |   |
|--------------------------------------|---|
| <b>General</b>                       |   |
| Heat deflection temperature          | ≥80°C UL94 V0                                       |
| Standards                            | EN 60947-1:2007 / IEC 60947-1:2007 / IEC 60999:2000 |
| Climate stability                    | according to DIN EN 60068                           |
| Insulation coordination              | Overvoltage category III / Degree of pollution 2    |
| <b>Electrical</b>                    |   |
| Impulse voltage strenght             | ≥4.5 kV   |
| Min. air distance                    | >5.5 mm   |
| Min. creeping distance               | >5 mm   |
| Max. operating voltage               | 690 V AC/DC<br>1,000 V DC 1-pole only               |
| Max. current I <sub>g</sub> /Phase   |   |
| 10 mm <sup>2</sup>                   | 63 A  |
| 16 mm <sup>2</sup>                   | 80 A  |
| Protection class                     | IP20  |
| Short circuit rating I <sub>CC</sub> | 25kA - NH3 355A<br>gC500V JM                        |
| Dielectric strenght                  | PC - ABS >32 kV / mm                                |

## Assembly instruction:

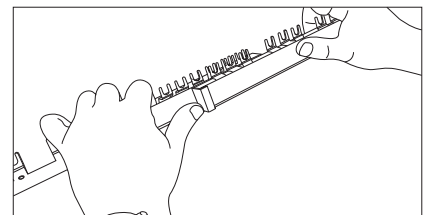
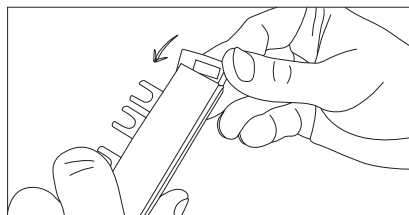
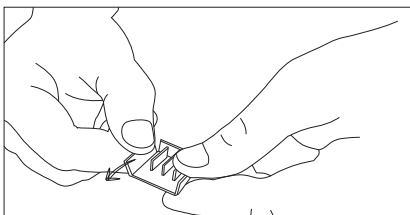
### Cutting



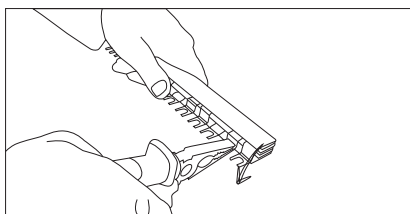
### Mounting of an extension busbar



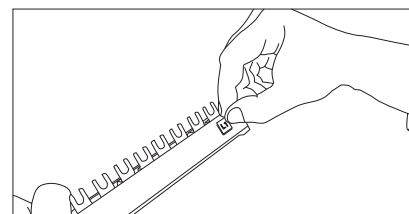
### Overlapping mounting or further connection, resp.



### Bracking out of connection lugs



### Sticking on phase marking



## Busbar UL489 Z-BB/UL

SG13713



- For MCB FAZ-NA/RT/DU
- Sliceable
- 18 and 25 mm<sup>2</sup>
- Pin busbar
- Accessories available:
  - End cap
  - Terminal
  - Busbar tag shrouds
- Length 1 m

| Description | Step Distance (mm) | Cu-factor | Type Designation | Article No. | Units per package |
|-------------|--------------------|-----------|------------------|-------------|-------------------|
|-------------|--------------------|-----------|------------------|-------------|-------------------|

## Busbar UL489 sliceable 1m 18mm<sup>2</sup>, 25mm<sup>2</sup> (Pin), Z-BB/UL

for FAZ-NA/RT/DU

- Delivered without end caps

SG13713



### 18 mm<sup>2</sup>, Rated Current 80 A

|                  |                |       |                          |        |    |
|------------------|----------------|-------|--------------------------|--------|----|
| 1-phase          | 17.6           | 0.39  | Z-BB/UL18/1P1MU/57       | 171128 | 10 |
| 1-phase + AUX    | 26.4           | 0.378 | Z-BB/UL18/1P1MU+AUX/37   | 171134 | 10 |
| 2x 1-phase + AUX | 26.4           | 0.56  | Z-BB/UL18/2X1P1MU+AUX/38 | 171142 | 10 |
| 3x 1-phase + AUX | 26.4           | 0.945 | Z-BB/UL18/3X1P1MU+AUX/39 | 171140 | 10 |
| 2-phase          | 17.6           | 0.625 | Z-BB/UL18/2P1MU/56       | 171129 | 10 |
| 2-phase + AUX    | 17.6 + 26.4    | 0.625 | Z-BB/UL18/2P1MU+AUX/46   | 171135 | 10 |
| 3-phase          | 17.6           | 0.95  | Z-BB/UL18/3P1MU/57       | 171130 | 10 |
| 3-phase + AUX    | 2x 17.6 + 26.4 | 0.93  | Z-BB/UL18/3P1MU+AUX/48   | 171136 | 10 |

SG14213



### 25 mm<sup>2</sup>, Rated Current 100 A

|                  |                |       |                          |        |    |
|------------------|----------------|-------|--------------------------|--------|----|
| 1-phase          | 17.6           | 0.535 | Z-BB/UL25/1P1MU/57       | 171131 | 10 |
| 1-phase + AUX    | 26.4           | 0.745 | Z-BB/UL25/1P1MU+AUX/37   | 171137 | 10 |
| 2x 1-phase + AUX | 26.4           | 0.78  | Z-BB/UL25/2X1P1MU+AUX/38 | 171143 | 10 |
| 3x 1-phase + AUX | 26.4           | 1.315 | Z-BB/UL25/3X1P1MU+AUX/39 | 171141 | 10 |
| 2-phase          | 17.6           | 0.888 | Z-BB/UL25/2P1MU/56       | 171132 | 10 |
| 2-phase + AUX    | 17.6 + 26.4    | 0.87  | Z-BB/UL25/2P1MU+AUX/46   | 171138 | 10 |
| 3-phase          | 17.6           | 1.31  | Z-BB/UL25/3P1MU/57       | 171133 | 10 |
| 3-phase + AUX    | 2x 17.6 + 26.4 | 1.28  | Z-BB/UL25/3P1MU+AUX/48   | 171139 | 10 |

| Description | Cu-factor | Type Designation | Article No. | Units per package |
|-------------|-----------|------------------|-------------|-------------------|
|-------------|-----------|------------------|-------------|-------------------|

## Accessories

### End cap Z-ECUL

|   |        |        |    |
|---|--------|--------|----|
| - | Z-ECUL | 171145 | 10 |
|---|--------|--------|----|

### Terminal Z-TEUL35

|       |          |        |    |
|-------|----------|--------|----|
| 0,038 | Z-TEUL35 | 171144 | 10 |
|-------|----------|--------|----|










### Busbar Tag Shrouds Z-FPUL

SG08613



|   |        |        |    |
|---|--------|--------|----|
| - | Z-FPUL | 171146 | 10 |
|---|--------|--------|----|

## Description of the Busbar UL489, Z-BB/UL for FAZ-NA, -RT, -DU

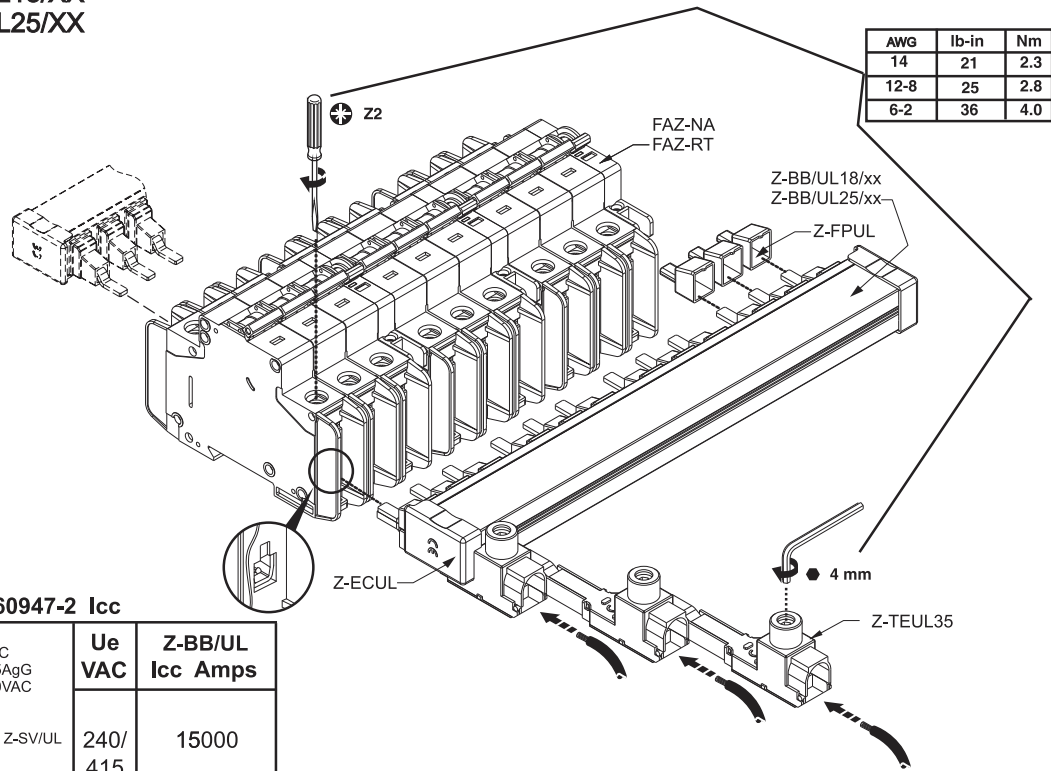
|                        |        |  |  |  |  |  |  |  |  |  |
|------------------------|--------|---|---|---|---|---|--|---|---|---|
| Z-BB/UL18/1P1MU/57     | 171128 | 57  | -   | -   | -   | -   | -  | -   | -   | -   |
| Z-BB/UL18/2P1MU/56     | 171129 | -   | 56  | -   | -   | -   | -  | -   | -   | -   |
| Z-BB/UL18/3P1MU/57     | 171130 | -   | -   | 57  | -   | -   | -  | -   | -   | -   |
| Z-BB/UL25/1P1MU/57     | 171131 | 57  | -   | -   | -   | -   | -  | -   | -   | -   |
| Z-BB/UL25/2P1MU/56     | 171132 | -   | 56  | -   | -   | -   | -  | -   | -   | -   |
| Z-BB/UL25/3P1MU/57     | 171133 | -   | -   | 57  | -   | -   | -  | -   | -   | -   |
| Z-BB/UL18/1P1MU+AUX/37 | 171134 | -   | -   | -   | 37  | -   | -  | -   | -   | -   |
| Z-BB/UL18/2P1MU+AUX/46 | 171135 | -   | -   | -   | -   | -   | -  | 46  | -   | -   |
| Z-BB/UL18/3P1MU+AUX/48 | 171136 | -   | -   | -   | -   | -   | -  | -   | 48  | -   |
| Z-BB/UL25/1P1MU+AUX/37 | 171137 | -   | -   | -   | 37  | -   | -  | -   | -   | -   |
| Z-BB/UL25/2P1MU+AUX/46 | 171138 | -   | -   | -   | -   | -   | -  | 46  | -   | -   |
| Z-BB/UL25/3P1MU+AUX/48 | 171139 | -   | -   | -   | -   | -   | -  | -   | 48  | -   |
| Z-BB/UL18/3X1MU+AUX/39 | 171140 | -   | -   | -   | -   | -   | 39   | -   | -   | -   |
| Z-BB/UL25/3X1MU+AUX/39 | 171141 | -   | -   | -   | -   | -   | 39   | -   | -   | -   |
| Z-BB/UL18/2X1MU+AUX/38 | 171142 | -   | -   | -   | -   | 38  | -  | -   | -   | -   |
| Z-BB/UL25/2X1MU+AUX/38 | 171143 | -   | -   | -   | -   | 38  | -  | -   | -   | -   |
| Z-TEUL35               | 171144 | -   | -   | -   | -   | -   | -  | -   | -   | -   |
| Z-ECUL                 | 171145 | -   | -   | -   | -   | -   | -  | -   | -   | -   |
| Z-FPUL                 | 171146 | -   | -   | -   | -   | -   | -  | -   | -   | -   |

## Technical Data

|                                      |  | Z-BB/UL  |
|--------------------------------------|--|--|
| <b>General</b>                       |  |  |
| Heat deflection temperature          |  | >100°C - UL94 V0                                 |
| Standards                            |  | UL489, EN 60947-1, IEC 60947-1:2004              |
| Climate stability                    |  | according to DIN EN 60068                        |
| Insulation coordination              |  | Overvoltage category III / Degree of pollution 2 |
| <b>Electrical</b>                    |  |  |
| Impulse voltage strenght             |  | ≥10 kV   |
| Min. air distance                    |  | ≥1" ext.   |
| Min. creeping distance               |  | ≥2" ext.   |
| Max. operating voltage               |  |  |
| 1-pole                               |  | 1,000 V AC/DC                                    |
| 2-, 3-pole                           |  | 600 V AC/DC                                      |
| Max. current I <sub>s</sub> /Phase   |  |  |
| 18 mm <sup>2</sup>                   |  | 80 A   |
| 25 mm <sup>2</sup>                   |  | 100 A  |
| Protection class                     |  | IP20   |
| Short circuit rating I <sub>CC</sub> |  | 10 kA  |
| Dielectric strenght                  |  | PA66-V0, >35 kV                                  |

## Mounting example of busbar UL489, Z-BB/UL for FAZ-NA, -RT, -DU

Z-BB/UL18/XX  
Z-BB/UL25/XX



| AWG  | lb-in | Nm  |
|------|-------|-----|
| 14   | 21    | 2.3 |
| 12-8 | 25    | 2.8 |
| 6-2  | 36    | 4.0 |

### IEC/EN 60947-2 Icc

| Ue<br>HRC<br>315AgG<br>500VAC | Ue<br>VAC   | Z-BB/UL<br>Icc Amps |
|-------------------------------|-------------|---------------------|
| Z-SV/UL                       | 240/<br>415 | 15000               |

### UL SCCR

| Ue<br>Z-SV/UL    | FAZ-NA<br>FAZ-RT<br>In<br>Amps | Ue<br>VAC    | Z-BB/UL<br>SCCR RMS<br>Sym Amps |
|------------------|--------------------------------|--------------|---------------------------------|
| FAZ-NA<br>FAZ-RT | 0.5-32                         | 480Y/<br>277 | 10000                           |
|                  | 35-40                          | 240          | 10000                           |



## Busbar UL508 BB/UL

- For MCB FAZ
- Sliceable
- 18 and 25 mm<sup>2</sup>
- Pin busbar
- Accessories available:
  - End caps
  - Terminals
  - Busbar tag shrouds
- Length 1 m

| Description | Step Distance (mm) | Cu-factor | Type Designation | Article No. | Units per package |
|-------------|--------------------|-----------|------------------|-------------|-------------------|
|-------------|--------------------|-----------|------------------|-------------|-------------------|

## Busbar UL508 sliceable 1m 18mm<sup>2</sup>, 25mm<sup>2</sup> (Pin), BB/UL

for FAZ

- Delivered without end caps

### 18 mm<sup>2</sup>, Rated Current 80 A

|               |                |       |                        |        |    |
|---------------|----------------|-------|------------------------|--------|----|
| 1-phase       | 17.8           | 0.33  | BB-UL-18/1P-1M/57      | 121981 | 10 |
| 2-phase       | 17.8           | 0.508 | BB-UL-18/2P-2M/56      | 121982 | 10 |
| 3-phase       | 17.8           | 0.8   | BB-UL-18/3P-3M/57      | 121983 | 10 |
| 1-phase + AUX | 27             | 0.33  | BB-UL-18/1P-1,5M/37    | 121984 | 10 |
| 2-phase + AUX | 17.8 + 26.7    | 0.52  | BB-UL-18/2P+AS-2,5M/46 | 121987 | 10 |
| 3-phase + AUX | 2x 17.8 + 26.7 | 0.8   | BB-UL-18/3P+AS-3,5M/48 | 121988 | 10 |

### 25 mm<sup>2</sup>, Rated Current 100 A

|               |                |      |                        |        |    |
|---------------|----------------|------|------------------------|--------|----|
| 1-phase       | 17.8           | 0.45 | BB-UL-25/1P-1M/57      | 121989 | 10 |
| 2-phase       | 17.8           | 0.68 | BB-UL-25/2P-2M/56      | 121990 | 10 |
| 3-phase       | 17.8           | 1.07 | BB-UL-25/3P-3M/57      | 121991 | 10 |
| 1-phase + AUX | 27             | 0.45 | BB-UL-25/1P-1,5M/37    | 121992 | 10 |
| 2-phase + AUX | 17.8 + 26.7    | 0.69 | BB-UL-25/2P+AS-2,5M/46 | 121995 | 10 |
| 3-phase + AUX | 2x 17.8 + 26.7 | 1.03 | BB-UL-25/3P+AS-3,5M/48 | 121996 | 10 |

| Description | Cu-factor | Type Designation | Article No. | Units per package |
|-------------|-----------|------------------|-------------|-------------------|
|-------------|-----------|------------------|-------------|-------------------|

## Accessories

### End caps BB-UL-EC

|          |   |            |        |    |
|----------|---|------------|--------|----|
| 1-phasig | - | BB-UL-EC/1 | 122000 | 10 |
| 3-phasig | - | BB-UL-EC/3 | 122001 | 10 |

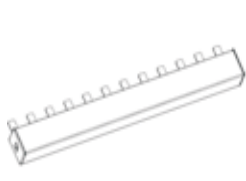




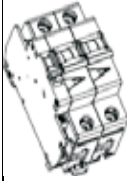

### Terminals BB-UL-TE

|   |       |               |        |    |
|---|-------|---------------|--------|----|
| 6 - 35mm <sup>2</sup> (single and multi wire) | 0,035 | BB-UL-TEP/35  | 121997 | 10 |
| 6 - 50mm <sup>2</sup>                         | 0,038 | BB-UL-TEPA/35 | 169823 | 10 |
| 6 - 50mm <sup>2</sup> (single and multi wire) | 0,038 | BB-UL-TE/50   | 121998 | 10 |

### Busbar Tag Shrouds BB-IP/5

|            |   |         |        |    |
|------------|---|---------|--------|----|
| for 5 pins | - | BB-IP/5 | 121999 | 10 |
|------------|---|---------|--------|----|

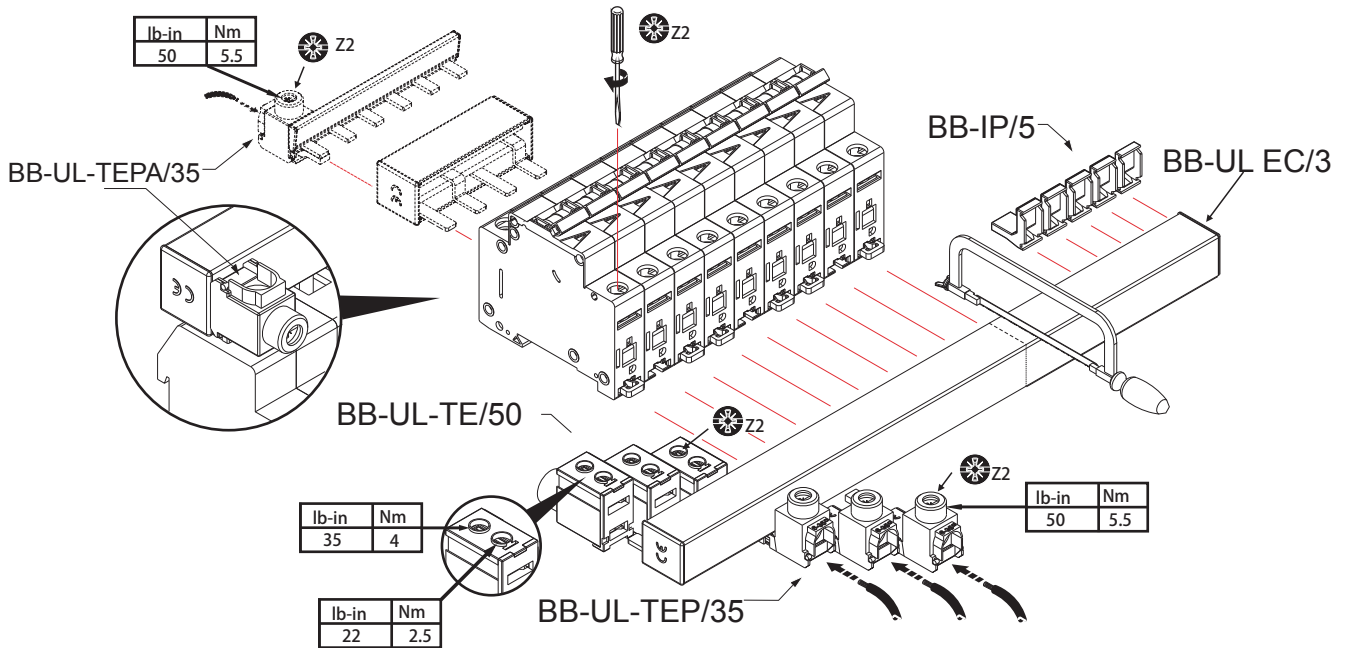
## Description of the Busbar UL508, BB/UL for FAZ




| Article No. |  |  |  |  |  |  |  |
|-------------|---|---|---|---|---|---|---|
| 121981      | BB-UL-18/1P-1M/57   | 57  | -   | -   | -   | -   | -   |
| 121982      | BB-UL-18/2P-2M/56   | -   | 28  | -   | -   | -   | -   |
| 121983      | BB-UL-18/3P-3M/57   | -   | -   | 19  | -   | -   | -   |
| 121984      | BB-UL-18/1P-1,5M/37   | -   | -   | -   | 37  | -   | -   |
| 121987      | BB-UL-18/2P+AS-2,5M/46  | -   | -   | -   | -   | 23  | -   |
| 121988      | BB-UL-18/3P+AS-3,5M/48  | -   | -   | -   | -   | -   | 16  |
| 121989      | BB-UL-25/1P-1M/57   | 57  | -   | -   | -   | -   | -   |
| 121990      | BB-UL-25/2P-2M/56   | -   | 28  | -   | -   | -   | -   |
| 121991      | BB-UL-25/3P-3M/57   | -   | -   | 19  | -   | -   | -   |
| 121992      | BB-UL-25/1P-1,5M/37   | -   | -   | -   | 37  | -   | -   |
| 121995      | BB-UL-25/2P+AS-2,5M/46  | -   | -   | -   | -   | 23  | -   |
| 121996      | BB-UL-25/3P+AS-3,5M/48  | -   | -   | -   | -   | -   | 16  |
| 121997      | BB-UL-TEP/35  | -   | -   | -   | -   | -   | -   |
| 169823      | BB-UL-TEPA/35   | -   | -   | -   | -   | -   | -   |
| 121998      | BB-UL-TE/50   | -   | -   | -   | -   | -   | -   |
| 121999      | BB-IP/5   | -   | -   | -   | -   | -   | -   |
| 122000      | BB-UL-EC/1  | -   | -   | -   | -   | -   | -   |
| 122001      | BB-UL-EC/3  | -   | -   | -   | -   | -   | -   |

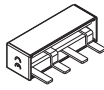
## Technical Data

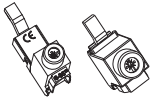


| Z-BB/UL                            |   |
|------------------------------------|---|
| <b>General</b>                     |   |
| Heat deflection temperature        | 125°C - UL94 V0   |
| Standards                          | DIN EN 60947-2, VDE 0660 - 101 = IEC 60947-2, IEC 60999:2000, UL508, UL486A, CSA C22.2      |
| Climate stability                  | according to DIN EN 60068   |
| Insulation coordination            | Overvoltage category III / Degree of pollution 2  |
| <b>Electrical</b>                  |   |
| Impulse voltage strenght           | ≥9.5 kV   |
| Min. air distance                  | >9.5 mm   |
| Min. creeping distance             | >12.7 mm  |
| Max. operating voltage             |   |
| 1-pole                             | 1,000 V AC/DC   |
| 2-, 3-pole                         | IEC/EN 690 V AC/DC<br>600 V AC/DC UL Fuse<br>480 V AC/DC UL-SP                              |
| Terminals                          | 1, 000 V AC/DC  |
| Max. current I <sub>g</sub> /Phase |   |
| 18 mm <sup>2</sup>                 | 80 A (feed in the center: 160 A)  |
| 25 mm <sup>2</sup>                 | 100 A (feed in the center: 200 A)   |
| Protection class                   | IP20  |
| Short circuit rating               | 10kA 3 cycles@480V / 100 kA Fuse Class J<br>175A@18mm <sup>2</sup> - 200A@25mm <sup>2</sup> |
| Dielectric strenght                | >32 kV/mm   |

## Mounting example of busbar UL508, BB/UL for FAZ



|   |                          |                                |
|---|--------------------------|--------------------------------|
| BB-UL-TE/50   |                          |                                |
|  | UL508                    | EN/IEC 60947-2                 |
| $U_e$   | 480 V AC                 | 240/690V AC                    |
| $f$   | 50/60 Hz                 | 50/60 Hz                       |
| $I_e$   | 115 A @ 40° C            | 160 A @ 30° C                  |
|  | #1-14 AWG<br>60/75° C Cu | 1.5 – 50 mm <sup>2</sup><br>Cu |
|  | 0.56 in                  | 14 mm                          |

|   |                  |                  |
|---|------------------|------------------|
| BB-UL   |                  |                  |
|  | UL508            | EN/IEC 60947-2   |
| $U_e$   | 480 V AC         | 690V AC          |
| $f$   | 50/60 Hz         |                  |
| $I_{pk}$  | 10kA             | 15kA             |
| $I_e$   | 18mm $\boxtimes$ | 25mm $\boxtimes$ |
| Infeed at the start of the busbar   | 80A@40° C        | 100A@30° C       |
| Infeed at the center of the busbar  | 160A@40° C       | 200A@30° C       |

|   |                          |                                |
|---|--------------------------|--------------------------------|
| BB-UL-TEP/35 /<br>BB-UL-TEPA/35   |                          |                                |
|  | UL508                    | EN/IEC 60947-2                 |
| $U_e$   | 480 V AC                 | 240/690V AC                    |
| $f$   | 50/60 Hz                 | 50/60 Hz                       |
| $I_e$   | 115 A@40° C              | 80 A@30° C                     |
|  | #2-14 AWG<br>60/75° C Cu | 2.5 – 35 mm <sup>2</sup><br>Cu |
|  | 0.56 in                  | 14 mm                          |

### \*-UL508 SHORT CIRCUIT RATINGS

-SUITABLE FOR USE ON A CIRCUIT CAPABLE OF DELIVERING NOT MORE THAN 10,000 RMS SYMMETRICAL AMPERES, 600 VOLTS MAXIMUM.

-SUITABLE FOR USE ON A CIRCUIT CAPABLE OF DELIVERING NOT MORE THAN 100,000 RMS SYMMETRICAL AMPERES, 600 VOLTS MAXIMUM WHEN PROTECTED BY A CLASS J FUSE RATED 175A.

## Busbar UL489 Z-SV/UL16

wa\_sg03511



- For MCB FAZ-NA/RT/DU
- 16 mm<sup>2</sup>
- Pin busbar
- Accessories available:
  - Terminals
  - Busbar tag shrouds
- Several length

| Description | Step Distance (mm) | Cu-factor | Type Designation | Article No. | Units per package |
|-------------|--------------------|-----------|------------------|-------------|-------------------|
|-------------|--------------------|-----------|------------------|-------------|-------------------|

## Busbar UL489 16mm<sup>2</sup> (Pin), Z-SV/UL16

for FAZ-NA/RT/DU, not sliceable!!

- Delivered with end caps

wa\_sg03511



### 16 mm<sup>2</sup>, Rated Current 80 A

|               |      |       |                      |        |    |
|---------------|------|-------|----------------------|--------|----|
| 1-phase, 6MU  | 17.6 | 0.035 | Z-SV/UL-16/1P-1MU/6  | 104892 | 10 |
| 1-phase, 12MU | 17.6 | 0.07  | Z-SV/UL-16/1P-1MU/12 | 104893 | 10 |
| 1-phase, 18MU | 17.6 | 0.105 | Z-SV/UL-16/1P-1MU/18 | 104894 | 10 |
| 2-phase, 6MU  | 17.6 | 0.07  | Z-SV/UL-16/2P-2MU/6  | 104895 | 10 |
| 2-phase, 12MU | 17.6 | 0.14  | Z-SV/UL-16/2P-2MU/12 | 104896 | 10 |
| 2-phase, 18MU | 17.6 | 0.21  | Z-SV/UL-16/2P-2MU/18 | 104897 | 10 |
| 3-phase, 6MU  | 17.6 | 0.14  | Z-SV/UL-16/3P-3MU/6  | 104898 | 10 |
| 3-phase, 12MU | 17.6 | 0.221 | Z-SV/UL-16/3P-3MU/12 | 104899 | 10 |
| 3-phase, 18MU | 17.6 | 0.332 | Z-SV/UL-16/3P-3MU/18 | 104900 | 10 |

| Description | Cu-factor | Type Designation | Article No. | Units per package |
|-------------|-----------|------------------|-------------|-------------------|
|-------------|-----------|------------------|-------------|-------------------|

## Accessories

### Terminals Z-TEUL35

SG07506



|                         |       |            |        |   |
|-------------------------|-------|------------|--------|---|
| 2.5 - 35mm <sup>2</sup> | 0.035 | Z-EK/35/UL | 104901 | 3 |
| 1.5 - 50mm <sup>2</sup> | 0.038 | Z-EB/50/UL | 104902 | 3 |

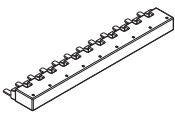
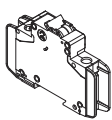
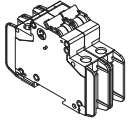
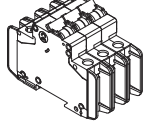
### Busbar Tag Shrouds Z-FPUL

SG07706



|            |   |          |        |    |
|------------|---|----------|--------|----|
| for 3 pins | - | ZV-BS-UL | 104904 | 10 |
|------------|---|----------|--------|----|

## Description of the Busbar UL489, Z-SV/UL-16 for FAZ-NA/RT/DU

| Article No. |  |  |  |  |
|-------------|---|---|---|--|
| 104892      | Z-SV/UL-16/1P-1TE/6   | 6   | -   | -  |
| 104893      | Z-SV/UL-16/1P-1TE/12  | 12  | -   | -  |
| 104894      | Z-SV/UL-16/1P-1TE/18  | 18  | -   | -  |
| 104895      | Z-SV/UL-16/2P-2TE/6   | -   | 3   | -  |
| 104896      | Z-SV/UL-16/2P-2TE/12  | -   | 6   | -  |
| 104897      | Z-SV/UL-16/2P-2TE/18  | -   | 9   | -  |
| 104898      | Z-SV/UL-16/3P-3TE/6   | -   | -   | 2  |
| 104899      | Z-SV/UL-16/3P-3TE/12  | -   | -   | 4  |
| 104900      | Z-SV/UL-16/3P-3TE/18  | -   | -   | 6  |
| 104901      | Z-EK/35/UL  | -   | -   | -  |
| 104902      | Z-EB/50/UL  | -   | -   | -  |
| 104904      | ZV-BS-UL  | -   | -   | -  |

## Technical Data

| <b>Z-SV/UL16</b>                   |   |
|------------------------------------|---|
| <b>General</b>                     |   |
| Heat deflection temperature        | 125°C - UL94 V0   |
| Standards                          |   |
| Busbar                             | UL489, DIN EN 60947-1, VDE 0660 part 100 = IEC 60947-1:2004, IEC 60947-2:2003 |
| Terminal                           | IEC 60999:2000, UL489, UL486A, CSA C22.2                                      |
| Climate stability                  | according to DIN EN 60068   |
| Insulation coordination            | Overvoltage category III / Degree of pollution 2                              |
| <b>Electrical</b>                  |   |
| Impulse voltage strenght           | ≥9.5 kV (1kV / mmLS)  |
| Min. air distance                  | >9.5mm/25.4mm (intern/external)   |
| Min. creeping distance             | >12.7mm/50.8mm (intern/external)  |
| Max. operating voltage             |   |
| 1-, 3-phase                        | 690 V IEC<br>480Y/277V & 240V AC  |
| Terminals                          | 1,000 V AC/DC   |
| Max. current I <sub>g</sub> /Phase | 80 A  |
| Protection class                   | IP20  |
| Short circuit rating               | 15kA with NH3 355 A gL 500V JM / 7.5kA 3 cycles @ 600V                        |
| Dielectric strenght                | >30 kV/mm   |

## Mounting example of busbar UL489, Z-SV/UL-16 for FAZ-NA, -RT, -DU



**ATTENTION:** Maximum of 3 commoning links allowed. Any combination of same pole configuration.

**ATTENTION:** 3 liaisons communes autorisées au maximum. Toute combinaison de configurations de polarité identiques.

**ACHTUNG:** Maximal 3 Schienenblöcke. Beliebige Kombination gleichpoliger Konfigurationen.

**ATTENZIONE:** Sono consentiti al massimo 3 pettini di collegamento in qualsiasi combinazione della stessa configurazione di poli.

**ATENCIÓN:** Se permite un máximo de 3 enlaces comunes.

Cualquier combinación del mismo tipo de configuración de polo



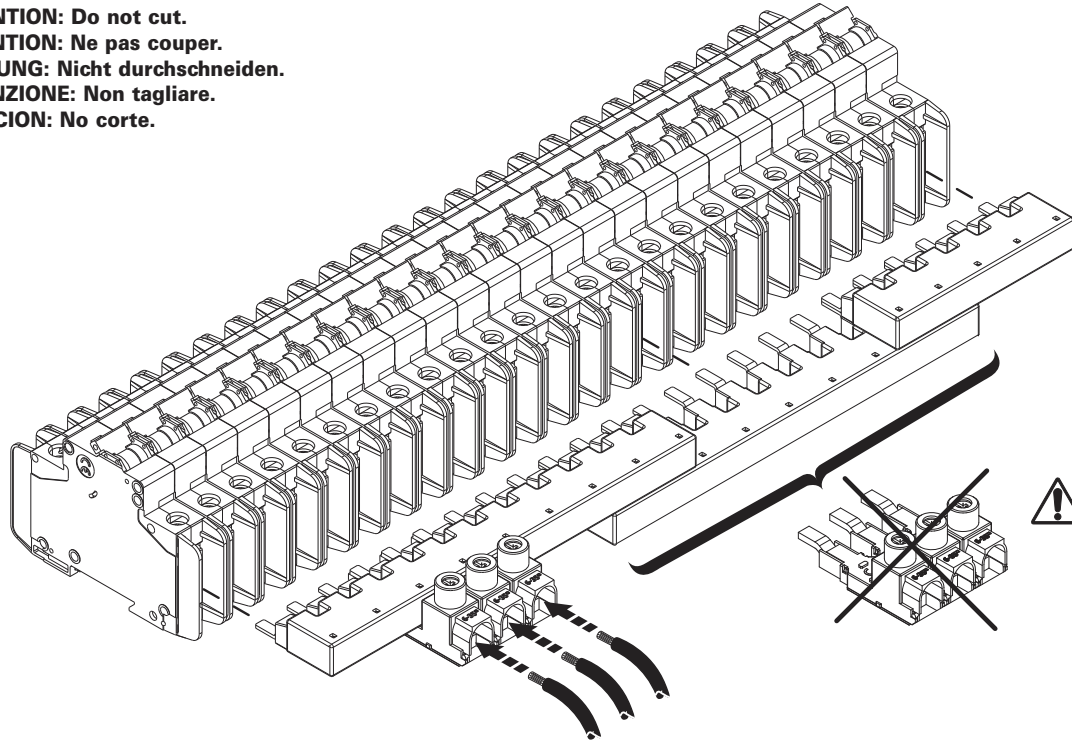
**ATTENTION:** Do not cut.

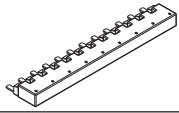
**ATTENTION:** Ne pas couper.

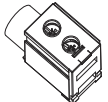


**ACHTUNG:** Nicht durchschneiden.

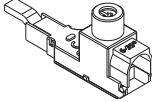


**ATTENZIONE:** Non tagliare.

**ATENCIÓN:** No corte.



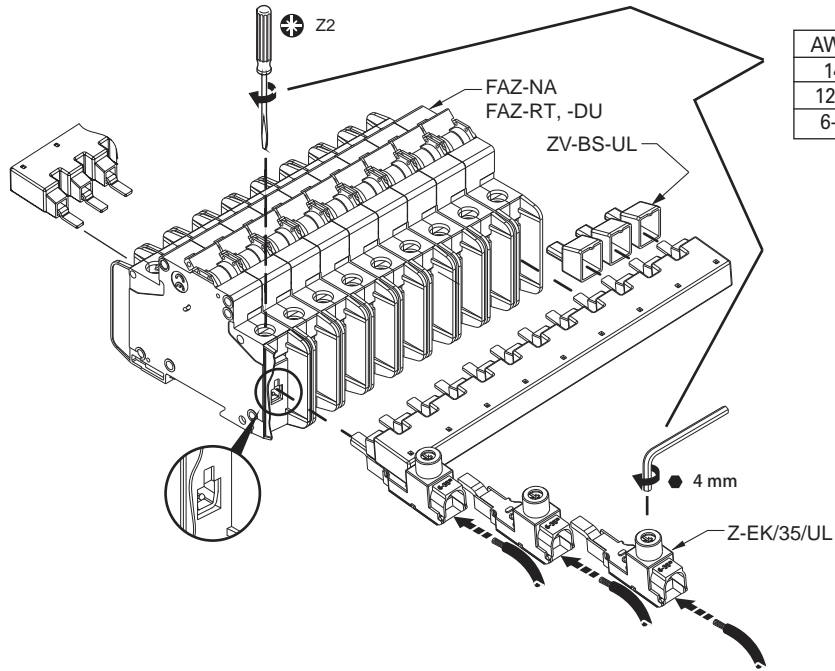
|   |             |         |                    |
|---|-------------|---------|--------------------|
|  | UL489       |         | EN/IEC<br>00947-2  |
| $U_e$   | 480 V AC    | 96 V DC | 240/415 V AC       |
| $f$   | 50/60 Hz    | -----   | 50/60 Hz           |
| $U_{imp}$   | -----       |         | 9.5 kV             |
| $I_e$   | 80 A @ 40°C |         | 80 A @ 30°C        |
| Cross section   | -----       |         | 16 mm <sup>2</sup> |

|   |                         |                              |                   |
|---|-------------------------|------------------------------|-------------------|
|  | UL489                   |                              | EN/IEC<br>00947-2 |
| $U_e$   | 480 V AC                | 96 V DC                      | 240/415 V AC      |
| $f$   | 50/60 Hz                | -----                        | 50/60 Hz          |
| $U_{imp}$   | -----                   |                              | 9.5 kV            |
|  | #1-14 AWG<br>60/75°C Cu | 1.5-50 mm <sup>2</sup><br>Cu |                   |
|  | 0.56 in                 |                              | 14 mm             |

|  |                         |                              |                   |
|--|-------------------------|------------------------------|-------------------|
|  | UL489                   |                              | EN/IEC<br>00947-2 |
| $U_e$  | 480 V AC                | 96 V DC                      | 240/415 V AC      |
| $f$  | 50/60 Hz                | -----                        | 50/60 Hz          |
| $U_{imp}$  | -----                   |                              | 9.5 kV            |
| $I_e$  | 80 A @ 40°C             |                              | 80 A @ 30°C       |
|  | #2-14 AWG<br>60/75°C Cu | 2.5-35 mm <sup>2</sup><br>Cu |                   |
|  | 0.56 in                 |                              | 14 mm             |

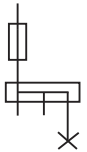


## Mounting example of busbar UL489, Z-SV/UL-16 for FAZ-NA, -RT, -DU

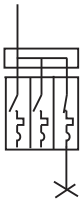


| AWG  | lb-in | Nm  |
|------|-------|-----|
| 14   | 21    | 2.3 |
| 12-8 | 25    | 2.8 |
| 6-2  | 36    | 4.0 |

### IEC/EN 60947-2 Icc

|  | Ue<br>VAC | Z-SV/UL<br>Icc Amps |
|--|-----------|---------------------|
|  |           | 240/<br>415         |

### UL SCCR

|  | FAZ-NA<br>FAZ-RT/-DU<br>In<br>Amps | Ue<br>VAC | Z-SV/UL<br>SCCR RMS<br>Sym Amps |
|---|------------------------------------|-----------|---------------------------------|
|   |                                    | 0.5-32    | 480Y/<br>277                    |
|   | 35-40                              | 240       | 10000                           |

## Accessories for RCDs, MCBs, Combined RCD/MCB Devices

SG60811







- Auxiliary Switch
- RCD-Tripping Module
- Shunt Trip Release
- Undervoltage Release
- Remote Control and Automatic Switching Device
- Switching Interlocks
- Terminal Covers

SG60811



## Auxiliary Switch Z-HK, Z-AHK, Z-HD; Tripping Signal Switch Z-NHK

### Design: for screwing

|   | For Protective Device / Function | Type Designation | Article No. | Units per package |
|---|----------------------------------|------------------|-------------|-------------------|
|    | RCCB / 1NO+1NC                   | Z-HK             | 248432      | 4/120             |
|    | MCB, RCBO, RCCB / 1NO+1NC        | Z-AHK            | 248433      | 4/120             |
|   | MCB, RCBO, RCCB / 2CO            | Z-NHK            | 248434      | 4/120             |
|  | RCCB / 1CO+1NC                   | Z-HD             | 265620      | 1                 |

## Specifications | Auxiliary Switch Z-HK, Z-AHK; Tripping Signal Switch Z-NHK

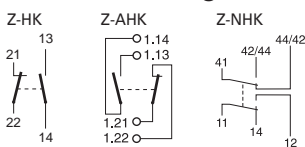
### Description

- Design according to IEC/EN 60947-5-1, IEC/EN 62019
- Can be mounted subsequently (screws) onto FRCmM, FRCdM
- The specified minimum voltages are per contact.  
Take into account particularly in case of series connection!
- **Z-AHK, Z-NHK:** Contact function with relative movement (self-cleaning contacts)
- Contact material and design particularly suitable for extra low voltage
- **Z-NHK:** The function of one of the two change-over contacts can be switched from “auxiliary switch” to “tripping signal switch”
- Tripping signal contact transmits message of electric tripping, not mechanical switch-off
- Test key for contact function “electrical tripping”

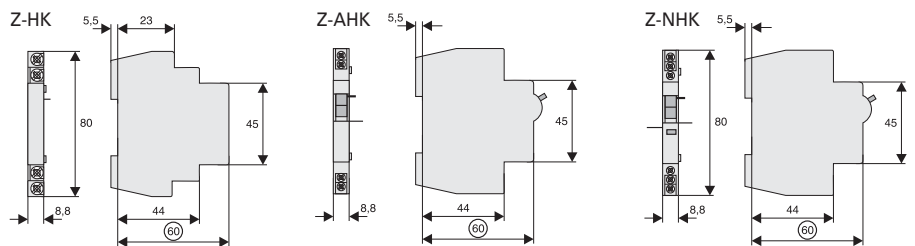
## Technical Data

|   | Z-HK   | Z-AHK                   | Z-NHK                   |
|---|--|-------------------------|-------------------------|
| <b>Electrical</b>                             |  |                         |                         |
| Contact function                              | 1NO + 1NC  | 1NO + 1NC               | 2CO                     |
| Rated voltage                                 | 250 V  | 250 V                   | 250 V                   |
| Frequency                                     | 50/60 Hz   | 50/60 Hz                | 50/60 Hz                |
| Rated current                                 | 8 A  | 4 A                     | 4 A                     |
| Rated thermal current                         | $I_{th}$ 8 A   | 4 A                     | 4 A                     |
| Utilisation category AC13                     |  |                         |                         |
| Rated operational current                     | $I_e$ 6A/250V AC<br>2A/440V AC                           | 3A/250V AC<br>-         | 3A/250V AC<br>-         |
| Utilisation category AC15                     |  |                         |                         |
| Rated operational current                     | $I_e$ -  | 2A/250V AC              | 2A/250V AC              |
| Utilisation category DC12                     |  |                         |                         |
| Rated operational current                     | $I_e$ -  | 0.5A/110V DC            | 0.5A/110V DC            |
| Utilisation category DC13                     |  |                         |                         |
| Rated operational current                     | $I_e$ 0.5A/230V DC<br>2A/110V DC<br>4A/60V DC            | -<br>-<br>-             | -<br>-<br>-             |
| Rated insulation voltage                      | $U_i$ 250 V AC   | 250 V AC                | 250 V AC                |
| Minimum operational voltage per contact       | $U_{min}$ 24 V AC/DC                                     | 5 V DC                  | 5 V DC                  |
| Minimum operational current                   | $I_{min}$ 50 mA AC/DC                                    | 10 mA DC                | 10 mA DC                |
| Rated peak withstand voltage                  | $U_{imp} (1.2/50\mu)$ 2.5 kV                             | 2.5 kV                  | 2.5 kV                  |
| Conditional short circuit current             | $I_k$  |                         |                         |
| with back-up fuse 6A or FAZ-B4-HS             | 1 kA   | 1 kA                    | 1 kA                    |
| Max. back-up fuse, overload and short circuit | 6 A gL / FAZ-4/..B-HS                                    | 4 A gL / FAZ-4/..B-HS   | 4 A gL / FAZ-4/..B-HS   |
| <b>Mechanical</b>                             |  |                         |                         |
| Can be mounted from the left onto             | RCCB   | MCB, RCBO               | MCB, RCBO               |
| Can be mounted from the right onto            | -  | -                       | RCCB                    |
| Tripping indicator "electrical tripping"      | -  | -                       | blue/white              |
| Frame size                                    | 45 mm  | 45 mm                   | 45 mm                   |
| Device height                                 | 80 mm  | 80 mm                   | 80 mm                   |
| Device width                                  | 8.8 mm (0.5MU)   | 8.8 mm (0.5MU)          | 8.8 mm (0.5MU)          |
| Mounting                                      | onto switching device                                    | onto switching device   | onto switching device   |
| Degree of protection, built-in                | IP40   | IP40                    | IP40                    |
| Terminal protection                           | finger and hand touch safe according to BGV A3, ÖVE-EN 6 |                         |                         |
| Terminals                                     | lift terminals   | lift terminals          | lift terminals          |
| Terminal capacity                             | 0.5-2.5 mm <sup>2</sup>                                  | 0.5-2.5 mm <sup>2</sup> | 0.5-2.5 mm <sup>2</sup> |
| Terminal screws                               | M3 (Pozidrive Z0)  | M3 (Pozidrive Z0)       | M3 (Pozidrive Z0)       |
| Fastening torque of terminal screws           | max. 0.8-1.0 Nm  | max.0.8-1.0 Nm          | max. 0.8-1.0 Nm         |

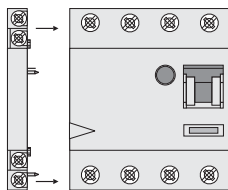
## Connection diagram



## Dimensions (mm)

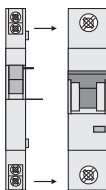


**Example: Z-HK+RCCB**



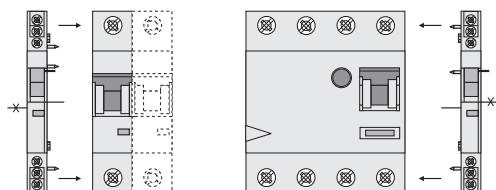
1NO+1NC 24V 50mA min.

**Example: Z-AHK+MCB**



1NO+1NC 5V 10mA min.

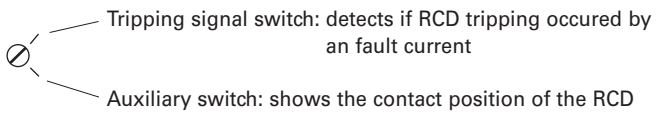
**Example: Z-NHK+MCB RCCB+Z-NHK**



2CO 5V 10mA min.

## Specifications | Auxiliary Switch Z-HD

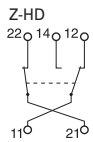
### Function Auxiliary Switch Z-HD



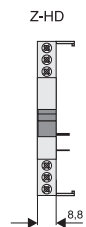
### Technical Data

| <b>Z-HD</b>                              |                           |
|--|---------------------------|
| <b>Electrical</b>                        |                           |
| Subsequent installation to the left onto | FRCmM-125A                |
| Contacts                                 | 1CO + 1NC                 |
| Load rating                              |                           |
| AC11                                     | 6 A / 230 V AC            |
| DC11                                     | 1 A / 230 V DC            |
| <b>Mechanical</b>                        |                           |
| Terminal capacity                        | up to 2.5 mm <sup>2</sup> |

### Connection diagram






### Dimensions (mm)



## Auxiliary Switch ZP-AHK, ZP-IHK, ZP-WHK; Tripping Signal Switch ZP-NHK

### Design: for snapping

|   | For Protective Device / Function | Type Designation | Article No. | Units per package |
|---|----------------------------------|------------------|-------------|-------------------|
|  <p>SG60811</p>  | MCB, RCBO / 1NO+1NC              | ZP-IHK           | 286052      | 4/120             |
|  <p>SG34612</p>  | MCB, RCBO / 1CO                  | ZP-WHK           | 286053      | 4/120             |
|  <p>SG34512</p> | MCB, RCBO / 2CO                  | ZP-NHK           | 248437      | 4/120             |

## Specifications | Auxiliary Switch ZP-IHK, ZP-WHK; Tripping Signal Switch ZP-NHK

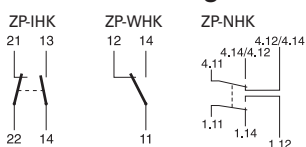
### Description

- Design according to IEC/EN 62019
- No screws required. Can be snapped onto FAZ and FRBmM-1N subsequently
- **ZP-IHK, ZP-WHK:** Can be snapped on additionally 1 time onto itself
- The specified minimum voltages are per contact. Take into account particularly in case of series connection!
- Contact material and design particularly suitable for extra low voltage.
- Contact function with relative movement (self-cleaning contacts)e)
- **ZP-NHK:** The function of one of the two change-over contacts can be switched from "auxiliary switch" to "tripping signal switch"
- Tripping signal contact transmits message of electric tripping, not mechanical switch-off
- **ZP-NHK:** The "Service button" is used to check whether or not the auxiliary switch is correctly wired in the tripping-signal-switch position. Activating the "service button" will mechanically simulate an electrical switch-off, so the mechanism for the electrical switchoff will disengage and can be checked. The main switchgear (MCB or combined MCB/RCD) connected to the ZP-NHK auxiliary switch does not need to trip as well during an inspection through the service button.

## Technical Data

|   | ZP-IHK   | ZP-WHK                  | ZP-NHK                  |
|---|--|-------------------------|-------------------------|
| <b>Electrical</b>                             |  |                         |                         |
| Contact function                              | 1NO + 1NC  | 1CO                     | 2CO                     |
| Rated voltage                                 | 250 V  | 250 V                   | 250 V                   |
| Frequency                                     | 50/60 Hz   | 50/60 Hz                | 50/60 Hz                |
| Rated current                                 | 6 A  | 6 A                     | 4 A                     |
| Rated thermal current                         | $I_{th}$ 6 A   | 6 A                     | 4 A                     |
| Utilisation category AC13                     |  |                         |                         |
| Rated operational current                     | $I_e$ 3A/250V AC   | 3A/250V AC              | 3A/250V AC              |
| Utilisation category AC15                     |  |                         |                         |
| Rated operational current                     | $I_e$ 2A/250V AC   | 2A/250V AC              | 2A/250V AC              |
| Utilisation category DC12                     |  |                         |                         |
| Rated operational current                     | $I_e$ 0.5A/110V DC                                       | 0.5A/110V DC            | 0.5A/110V DC            |
| Rated insulation voltage                      | $U_I$ 250 V AC   | 250 V AC                | 250 V AC                |
| Minimum operational voltage per contact       | $U_{min}$ 5 V DC   | 5 V DC                  | 5 V DC                  |
| Minimum operational current                   | $I_{min}$ 10 mA DC                                       | 10 mA DC                | 10 mA DC                |
| Rated peak withstand voltage                  | $U_{imp}$ (1.2/50 $\mu$ ) 2.5 kV                         | 2.5 kV                  | 2.5 kV                  |
| Conditional short circuit current             |  |                         |                         |
| with back-up fuse 6A or PLSM-B4-HS            | $I_k$ 1 kA   | 1 kA                    | 1 kA                    |
| Max. back-up fuse, overload and short circuit | 6 A gL / FAZ-B4-HS                                       | 6 A gL / FAZ-B4-HS      | 6 A gL / FAZ-B4-HS      |
| <b>Mechanical</b>                             |  |                         |                         |
| Can be mounted from the left onto             | MCB, RCBO  | MCB, RCBO               | MCB, RCBO               |
| Accessories:                                  | ZP-ASA   | ZP-ASA                  | ZP-ASA                  |
| Tripping indicator "electrical tripping"      | –  | –                       | blue/white              |
| Frame size                                    | 45 mm  | 45 mm                   | 45 mm                   |
| Device height                                 | 80 mm  | 80 mm                   | 80 mm                   |
| Device width                                  | 8.8 mm (0.5MU)   | 8.8 mm (0.5MU)          | 8.8 mm (0.5MU)          |
| Degree of protection, built-in                | IP40   | IP40                    | IP40                    |
| Terminal protection                           | finger and hand touch safe according to BGV A3, ÖVE-EN 6 |                         |                         |
| Terminals                                     | lift terminals   | lift terminals          | lift terminals          |
| Terminal capacity                             | 0.5-2.5 mm <sup>2</sup>                                  | 0.5-2.5 mm <sup>2</sup> | 0.5-2.5 mm <sup>2</sup> |
| Terminal screws                               | M4 (Pozidrive Z2)  | M4 (Pozidrive Z2)       | M3 (Pozidrive Z0)       |
| Fastening torque of terminal screws           | max. 1.2 Nm  | max. 1.2 Nm             | max. 0.8-1.0 Nm         |

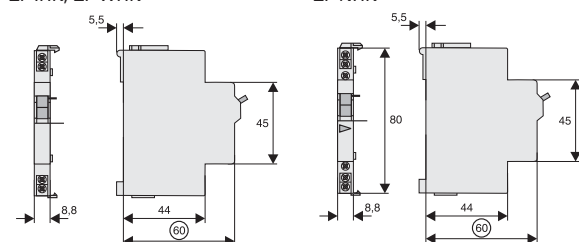
## Connection diagram



## Dimensions (mm)

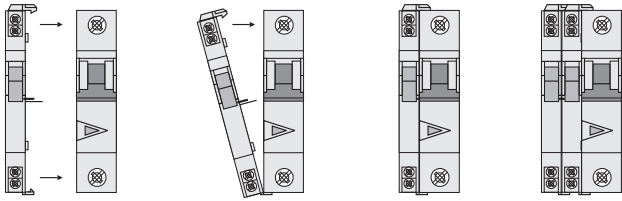
ZP-IHK, ZP-WHK

ZP-NHK

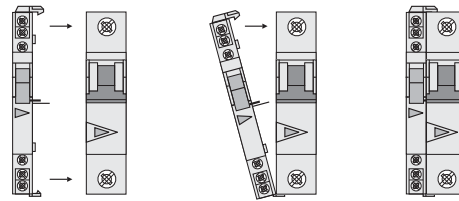






## Example: ZP-IHK/(ZP-WHK)+MCB



## Example: ZP-NHK+MCB



## RCCB-Tripping Module Z-.AM

|  | For Protective Device | Type Designation | Article No. | Units per package |
|--|-----------------------|------------------|-------------|-------------------|
|  <p>SG16011</p> | RCCB                  | Z-FAM            | 248293      | 1/60              |
|  <p>SG16211</p> | RCBO                  | Z-KAM            | 248294      | 1/60              |

## Specifications | RCCB Tripping Module Z-FAM, Z-KAM

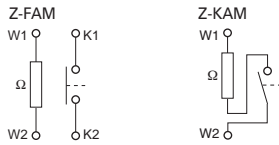
### Description

- For remote switch-off of RCCBs, standard and electronic combined RCD/MCB devices
- Remote switch-off by one or several parallel potential-free contacts, e.g. pushbutton max. rated current 3 A at 250 V, take into account maximum pushbutton voltage
- Remote tripping test by means of remote testing module Z-FW
- Can be mounted subsequently, to be wired according to connection diagram with the respective terminals of the RCCB
- No undesired voltage rise in the consumer system during remote switch-off thanks to integrated breaker contact K1-K2

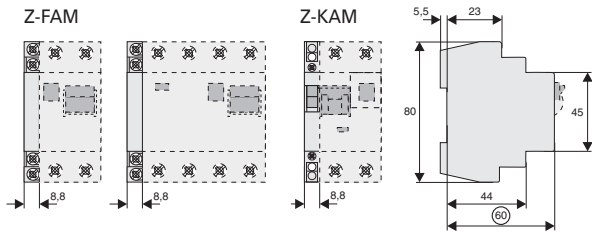
### Technical Data

|                                | Z-FAM   | Z-KAM                     |
|--------------------------------|---|---------------------------|
| <b>Electrical</b>              |   |                           |
| Rated voltage                  | 230(400) V AC   | 230(400) V AC             |
| Frequency                      | 50-60 Hz  | 50-60 Hz                  |
| Rated tripping current         | $I_{\Delta n}$ 0.01 - 0.3 A                               | 0.01 - 0.3 A              |
| Function                       | 1NO   | 1NO                       |
| <b>Mechanical</b>              |   |                           |
| Tripping module for            | RCCB  | RCBO                      |
| Frame size                     | 45 mm   | 45 mm                     |
| Device height                  | 80 mm   | 80 mm                     |
| Device width                   | 8.8 mm (0.5MU)  | 8.8 mm (0.5MU)            |
| Degree of protection, built-in | IP40  | IP40                      |
| Terminal capacity              | 1 - 2x2.5 mm <sup>2</sup>                                 | 1 - 2x2.5 mm <sup>2</sup> |
| Terminal protection            | finger and hand touch safe, according to BGV A3, ÖVE-EN 6 |                           |

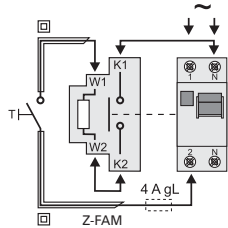
## Connection diagram



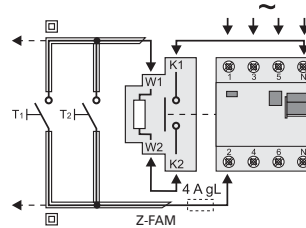
## Dimensions (mm)



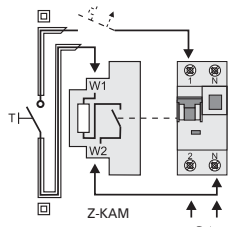
## Connection examples Lay lines to the switching devices with double insulation **and** overload protection, e.g. 4A gL or CLS6-4..-HS



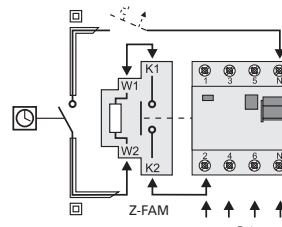
Connection diagram:  
RCCB-2p, RCCB feed above



Connection diagram:  
RCCB-4p, RCCB feed above



Connection diagram:  
RCBO-2p, RCBO feed below



Connection diagram:  
RCCB-4p, RCCB feed below

## Shunt Trip Release Z-ASA, ZP-ASA

| Operational voltage range (V-) | Type Designation | Article No. | Units per package |
|--------------------------------|------------------|-------------|-------------------|
|--------------------------------|------------------|-------------|-------------------|

SG00712



### To be glued on

|         |           |        |      |
|---------|-----------|--------|------|
| 12-110  | Z-ASA/24  | 248286 | 1/60 |
| 110-415 | Z-ASA/230 | 248287 | 1/60 |

SG00212



### To be snapped on

|         |            |        |      |
|---------|------------|--------|------|
| 12-110  | ZP-ASA/24  | 248438 | 1/60 |
| 110-415 | ZP-ASA/230 | 248439 | 1/60 |

## Specifications | Shunt Trip Release Z-ASA, ZP-ASA

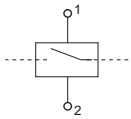
### Description

- Remote release for subsequent mounting onto FAZ, FRBmM-1N, Z-MS
- Module width 1MU
- Additional installation of standard auxiliary switch is possible
- Position indicator red - green
- Type ZP-ASA for snap-on mounting

### Technical Data

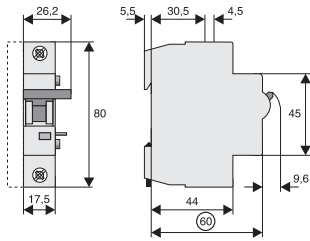
|   | Z-ASA24   | Z-ASA230             | ZP-ASA24                     | ZP-ASA230                    |
|---|---|----------------------|------------------------------|------------------------------|
| <b>Electrical</b>                             |   |                      |                              |                              |
| Minimum pulse duration                        | 15 ms   | 10 ms                | 15 ms                        | 10 ms                        |
| Internal resistance                           | 2.2 Ω   | 215 Ω                | 2.2 Ω                        | 215 Ω                        |
| Duty cycle                                    | 100%  | 100%                 | 100%                         | 100%                         |
| Tripping time                                 | < 20 ms   | < 20 ms              | < 20 ms                      | < 20 ms                      |
| Rated peak withstand voltage (1.2/50μs)       | 2.5 kV  | 2.5 kV               | 2.5 kV                       | 2.5 kV                       |
| Endurance                                     | > 4000 operating cycles > 4000 operating cycles > 4000 operating cycles > 4000 operating cycles |                      |                              |                              |
| <b>AC voltage range</b>                       |   |                      |                              |                              |
| Operating limit                               | 10 V  | 60 V                 | 10 V                         | 60 V                         |
| Operational voltage range                     | 12-110 V  | 110-415 V            | 12-110 V                     | 110-415 V                    |
| Maximum current consumption during switch-on  | 15 A  |                      | 2.1 A                        | 15 A                         |
| Current flow time at max. current consumption | 10 ms   |                      | 10 ms                        | 10 ms                        |
| <b>DC voltage range</b>                       |   |                      |                              |                              |
| Operating limit                               | 9 V   | 72 V                 | 9 V                          | 72 V                         |
| Operational voltage range                     | 10-60 V   | 110-220 V            | 10-60 V                      | 110-220 V                    |
| Maximum current consumption during switch-on  | 21 A  |                      | 1 A                          | 21 A                         |
| Current flow time at max. current consumption | 2 ms  |                      | 2 ms                         | 2 ms                         |
| <b>Mechanical</b>                             |   |                      |                              |                              |
| Frame size                                    | 45 mm   | 45 mm                | 45 mm                        | 45 mm                        |
| Device height                                 | 80 mm   | 80 mm                | 80 mm                        | 80 mm                        |
| Device width                                  | 17.5 mm (1MU)   | 17.5 mm (1MU)        | 17.5 mm (1MU)                | 17.5 mm (1MU)                |
| Mounting                                      | bonding   | bonding              | to snap on                   | to snap on                   |
| Degree of protection, built-in                | IP40  | IP40                 | IP40                         | IP40                         |
| Terminals above/below                         | open mouthed/lift   | open mouthed/lift    | open mouthed/lift with guide | open mouthed/lift with guide |
| Klemmquerschnitt                              | 1-25 mm <sup>2</sup>  | 1-25 mm <sup>2</sup> | 1-25 mm <sup>2</sup>         | 1-25 mm <sup>2</sup>         |
| Fastening torque of terminal screws           | max. 2.4 Nm   | max. 2.4 Nm          | max. 2.4 Nm                  | max. 2.4 Nm                  |

## Connection diagram

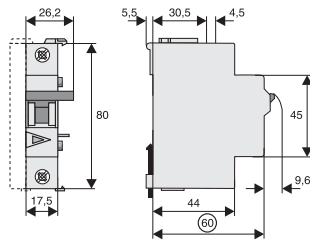


## Dimensions (mm)

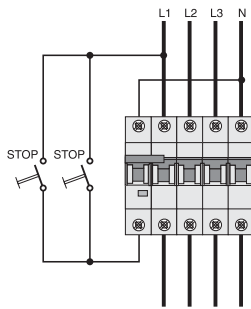
Z-ASA



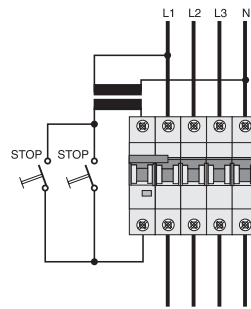
ZP-ASA



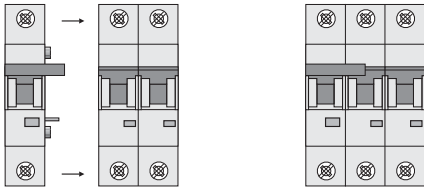
## Connection Example 230 V



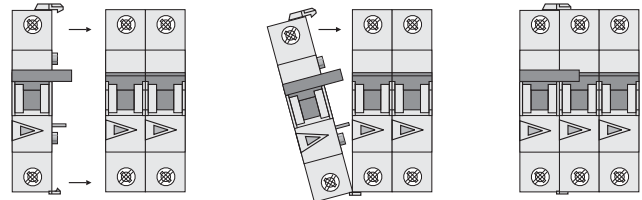
## Connection Example 24 V



## Example: Z-ASA + MCB



## Example: ZP-ASA + MCB



## Undervoltage Release Z-USA, Z-USD

SG78811



| Operational voltage range (V-) / Function | Type Designation | Article No. | Units per package |
|---|------------------|-------------|-------------------|
| <b>To be screwed on</b>                   |                  |             |                   |
| 115 / undelayed                           | Z-USA/115        | 248288      | 1/60              |
| 230 / undelayed                           | Z-USA/230        | 248289      | 1/60              |
| 400 / undelayed                           | Z-USA/400        | 248290      | 1/60              |
| 115 / delayed 0.4s                        | Z-USD/115        | 248292      | 1/60              |
| 230 / delayed 0.4s                        | Z-USD/230        | 248291      | 1/60              |

## Specifications | Undervoltage Release Z-USA, Z-USD

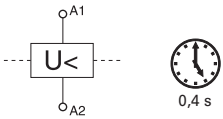
### Description

- Tripping:  
Instantaneous Z-USA  
Delayed Z-USD, typ. 0,4 s
- Voltage control indicator blue/white
- Service key for zero voltage switch-on for testing purposes
- Can be used with FAZ

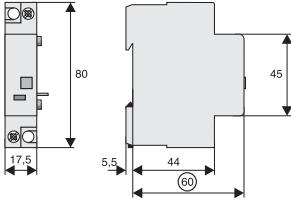
### Technical Data

|                                | Z-US./115   | Z-US./230                 | Z-US./400                 |
|--------------------------------|---|---------------------------|---------------------------|
| <b>Electrical</b>              |   |                           |                           |
| Rated voltage                  | $U_n$ 115 V AC  | 230 V AC                  | 400 V AC                  |
| Frequency                      | 50-60 Hz  | 50-60 Hz                  | 50-60 Hz                  |
| Making threshold               | 80% of $U_n$  | 80% of $U_n$              | 80% of $U_n$              |
| Tripping threshold             | 50% of $U_n$  | 50% of $U_n$              | 50% of $U_n$              |
| <b>Mechanical</b>              |   |                           |                           |
| Frame size                     | 45 mm   | 45 mm                     | 45 mm                     |
| Device height                  | 80 mm   | 80 mm                     | 80 mm                     |
| Device width                   | 17.5 mm (1MU)   | 17.5 mm (1MU)             | 17.5 mm (1MU)             |
| Mounting                       | quick fastening on DIN rail IEC/EN 60715                  |                           |                           |
| Degree of protection, built-in | IP40  | IP40                      | IP40                      |
| Terminals                      | open mouthed/lift   | open mouthed/lift         | open mouthed/lift         |
| Terminal capacity              | 1 - 2x2.5 mm <sup>2</sup>                                 | 1 - 2x2.5 mm <sup>2</sup> | 1 - 2x2.5 mm <sup>2</sup> |
| Terminal protection            | finger and hand touch safe, according to BGV A3, ÖVE-EN 6 |                           |                           |

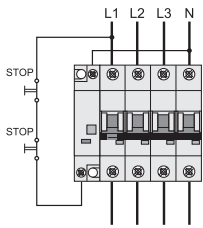
## Connection diagram



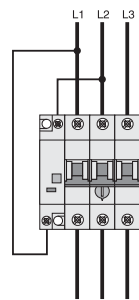
## Dimensions (mm)



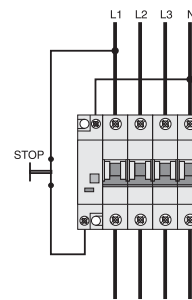
## Connection Example Release



## Connection Examples 400V and 230V




Connection example  
Z-USA/400 + Z-MS



Connection example  
Z-USA/230 + MCB

## Switching interlocks IS/SPE-1TE, Z-IS/SPE-1TE

|   | Description  | Type Designation | Article No. | Units per package |
|---|--|------------------|-------------|-------------------|
|  | Switching interlock without lock for Isolators, RCDs, combined RCD/MCBs, ... | IS/SPE-1TE       | 101911      | 5/30              |
|   | Switching interlock without lock for MCBs and Circuit Breaker ZP-A           | Z-IS/SPE-1TE     | 274418      | 5/30              |

## Specifications | Switching interlocks IS/SPE-1TE, Z-IS/SPE-1TE

### Description

- Without lock

**Type IS/SPE-1TE:**

- for Isolators, RCDs, combined RCD/MCBs, ...

**Type Z-IS/SPE-1TE:**

- for MCB





## Accessories for Add-on Residual Current Protection Unit FBHmV

### Shunt Trip Release Kit Z-BHASA

| Operational voltage range V~ | Type Designation | Article No. | Units per package |
|------------------------------|------------------|-------------|-------------------|
| 110-415                      | Z-BHASA/230      | 248445      | 8                 |
| 12-60                        | Z-BHASA/24       | 248444      | 8                 |

SG09411



## Specifications | Shunt Trip Release Kit Z-BHASA

### Description

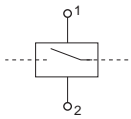
- Can be mounted subsequently
- Contact position indicator red - green
- Wide operational voltage range
- Sufficient power of extra low voltage source must be ensured  
FBHmV-ASA/24: min. 90 VA
- Screws for mounting included FBHmV => BHASA => AZ

## Accessories for Add-on Residual Current Protection Unit FBHmV

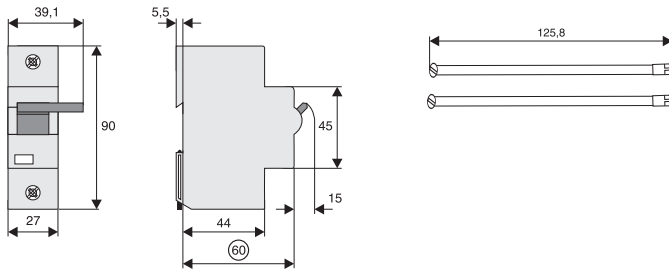
### Technical Data

|   | Z-BHASA/24                               | Z-BHASA/230             |
|---|--|-------------------------|
| <b>Electrical</b>                             |  |                         |
| Minimum pulse duration                        | 15 ms                                    | 10 ms                   |
| Internal resistance                           | 2 W                                      | 130 W                   |
| Duty  | 100%                                     | 100%                    |
| Tripping time                                 | < 20 ms                                  | < 20 ms                 |
| Peak withstand voltage (1.2/50µs)             | 2 kV                                     | 2 kV                    |
| Endurance                                     | >4,000 operating cycles                  | >4,000 operating cycles |
| <b>AC voltage range:</b>                      |  |                         |
| Responding limit                              | 8 V                                      | 70 V                    |
| Operational voltage range                     | 12-60 V                                  | 110-415 V               |
| Maximum current consumption during switch-on  | 14 A                                     | 3.4 A                   |
| Current flow time at max. current consumption | 4.0 ms                                   | 4.5 ms                  |
| <b>DC voltage range:</b>                      |  |                         |
| Responding limit                              | 11 V                                     | 90 V                    |
| Operational voltage range                     | 12-60 V                                  | 110-230 V               |
| Maximum current consumption during switch-on  | 23.5 A typ.                              | 1.7 A typ.              |
| Current flow time at max. current consumption | 2 ms                                     | 4 ms                    |
| <b>Mechanical</b>                             |  |                         |
| Frame size                                    | 45 mm                                    | 45 mm                   |
| Device height                                 | 90 mm                                    | 90 mm                   |
| Device width                                  | 27 mm                                    | 27 mm                   |
| Mounting                                      | quick fastening on DIN rail IEC/EN 60715 |                         |
| Degree of protection, built-in                | IP40                                     | IP40                    |
| Upper and lower terminal screws               | lift terminals                           | lift terminals          |
| Terminal capacity                             | 2.5-30 mm <sup>2</sup>                   | 2.5-30 mm <sup>2</sup>  |
| Fastening torque of terminal screws           | 4 Nm                                     | 4 Nm                    |

## Connection diagram




## Dimensions (mm)



## Accessories for Miniature Circuit Breakers AZ

### Shunt Trip Release Z-LHASA

|   | Operational voltage range V~ | Type Designation | Article No. | Units per package |
|---|------------------------------|------------------|-------------|-------------------|
|  | 110-415                      | Z-LHASA/230      | 248442      | 8                 |
|   | 12-60                        | Z-LHASA/24       | 248441      | 8                 |

## Specifications | Shunt Trip Release Z-LHASA

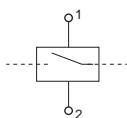
### Description

- Can be mounted subsequently
- Contact position indicator red - green
- Wide operational voltage range
- Sufficient power of extra low voltage source must be ensured  
Z-LHASA/24: min. 90 VA

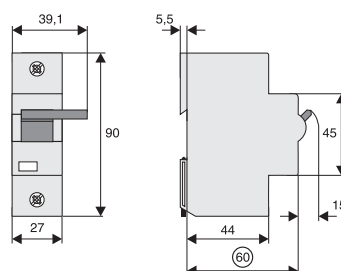
### Technical Data

|   | Z-LHASA/24                               | Z-LHASA/230             |
|---|--|-------------------------|
| <b>Electrical</b>                             |  |                         |
| Minimum pulse duration                        | 15 ms                                    | 10 ms                   |
| Internal resistance                           | 2 W                                      | 130 W                   |
| Duty  | 100%                                     | 100%                    |
| Tripping time                                 | < 20 ms                                  | < 20 ms                 |
| Peak withstand voltage (1.2/50µs)             | 2 kV                                     | 2 kV                    |
| Endurance                                     | >4,000 operating cycles                  | >4,000 operating cycles |
| <b>AC voltage range:</b>                      |  |                         |
| Responding limit                              | 8 V                                      | 70 V                    |
| Operational voltage range                     | 12-60 V                                  | 110-415 V               |
| Maximum current consumption during switch-on  | 14 A                                     | 3.4 A                   |
| Current flow time at max. current consumption | 4.0 ms                                   | 4.5 ms                  |
| <b>DC voltage range:</b>                      |  |                         |
| Responding limit                              | 11 V                                     | 90 V                    |
| Operational voltage range                     | 12-60 V                                  | 110-230 V               |
| Maximum current consumption during switch-on  | 23.5 A typ.                              | 1.7 A typ.              |
| Current flow time at max. current consumption | 2 ms                                     | 4 ms                    |
| <b>Mechanical</b>                             |  |                         |
| Frame size                                    | 45 mm                                    | 45 mm                   |
| Device height                                 | 90 mm                                    | 90 mm                   |
| Device width                                  | 27 mm                                    | 27 mm                   |
| Mounting                                      | quick fastening on DIN rail IEC/EN 60715 |                         |
| Degree of protection, built-in                | IP40                                     | IP40                    |
| Upper and lower terminal screws               | lift terminals                           | lift terminals          |
| Terminal capacity                             | 2.5-30 mm <sup>2</sup>                   | 2.5-30 mm <sup>2</sup>  |
| Fastening torque of terminal screws           | 4 Nm                                     | 4 Nm                    |

### Connection diagram



### Dimensions (mm)



## Accessories for Miniature Circuit Breakers AZ

### Auxiliary Switch Z-LHK

| Function | Type Designation | Article No. | Units per package |
|----------|------------------|-------------|-------------------|
| 1NO+1NC  | Z-LHK            | 248440      | 10/100            |

SG16111



## Specifications | Auxiliary Switch Z-LHK

### Description

- Auxiliary switch according to IEC 947-5-1
- Can be mounted subsequently

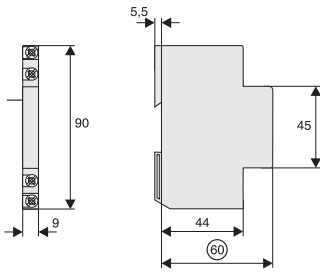
### Technical Data

|   |                       | Z-LHK  |
|---|-----------------------|--|
| <b>Electrical</b>                             |                       |  |
| Contact function                              |                       | 1NO + 1NC  |
| Rated voltage                                 |                       | 250 V  |
| Frequency                                     |                       | 50/60 Hz   |
| Rated current                                 |                       | 8 A  |
| Rated thermal current                         | $I_{th}$              | 8 A  |
| Utilisation category AC13                     |                       |  |
| Rated operational current                     | $I_e$                 | 6A/250V AC<br>2A/440V AC                                 |
| Utilisation category AC15                     |                       |  |
| Rated operational current                     | $I_e$                 | –  |
| Utilisation category DC12                     |                       |  |
| Rated operational current                     | $I_e$                 | –  |
| Utilisation category DC13                     |                       |  |
| Rated operational current                     | $I_e$                 | 0.5A/230V DC<br>2A/110V DC<br>4A/60V DC                  |
| Rated insulation voltage                      | $U_I$                 | 250 V AC   |
| Minimum operational voltage per contact       | $U_{min}$             | 24 V AC/DC   |
| Minimum operational current                   | $I_{min}$             | 50 mA AC/DC  |
| Rated peak withstand voltage                  | $U_{imp} (1.2/50\mu)$ | 2.5 kV   |
| Conditional short circuit current             | $I_k$                 | 1 kA   |
| with back-up fuse 6A or FAZ-B4-HS             |                       |  |
| Max. back-up fuse, overload and short circuit |                       | 6 A gL / FAZ-4/..B-HS                                    |
| <b>Mechanical</b>                             |                       |  |
| Can be mounted from the left onto             |                       | AZ   |
| Can be mounted from the right onto            |                       | –  |
| Tripping indicator "electrical tripping"      |                       | –  |
| Frame size                                    |                       | 45 mm  |
| Device height                                 |                       | 80 mm  |
| Device width                                  |                       | 8.8 mm (0.5MU)   |
| Mounting                                      |                       | onto switching device                                    |
| Degree of protection, built-in                |                       | IP40   |
| Terminal protection                           |                       | finger and hand touch safe according to BGV A3, ÖVE-EN 6 |
| Terminals                                     |                       | lift terminals   |
| Terminal capacity                             |                       | 0.5-2.5 mm <sup>2</sup>                                  |
| Terminal screws                               |                       | M3 (PoziDrive Z0)  |
| Fastening torque of terminal screws           |                       | max. 0.8-1.0 Nm  |

## Connection diagram



## Dimensions (mm)



## Accessories for Miniature Circuit Breakers AZ

### Interlocks LH-SP

| Function            | Type Designation | Article No. | Units per package |
|---------------------|------------------|-------------|-------------------|
| Tripping interlock  | LH-SPL           | 285752      | 1                 |
| Tripping interlock  | LH-SPE           | 215999      | 1                 |
| Switchoff interlock | LH-SPA           | 216000      | 1                 |

### Specifications | Anti-Tamper Device LH-SPE, LH-SPL

#### Description

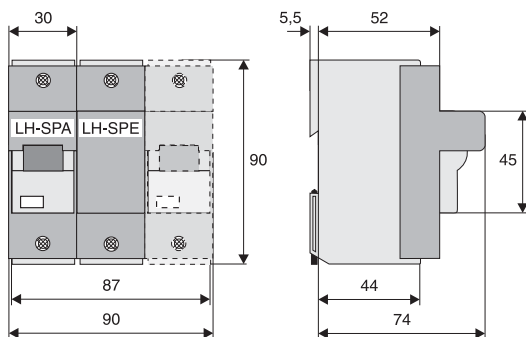
- Prevents undesired switching ON or OFF

### Specifications | Switchoff Interlock LH-SPA

#### Description

- Prevents undesired switch-OFF

### Dimensions (mm)



## Accessories for Miniature Circuit Breaker FAZ-...-NA, -RT, -DU

### Auxiliary Contact Z-IHK-NA

|   | Operational Voltage Range | Type Designation | Article No. | Units per package |
|---|---------------------------|------------------|-------------|-------------------|
|  | 250 VAC                   | Z-IHK-NA         | 113895      | 1                 |

## Specifications | Auxiliary Contact Z-IHK-NA

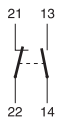
### Description

- Design according to IEC/EN 60947-5-1, IEC/EN 62019
- Field installable
- The specified minimum voltages are per contact—take into account particularly in case of series connection
- Self-cleaning contacts
- Contact material and design particularly suitable for extra low voltage
- Tripping signal contact transmits message of electric tripping, not mechanical switch-off
- Test key for contact function “electrical tripping”
- Will allow for > 480Y/277 VAC rating

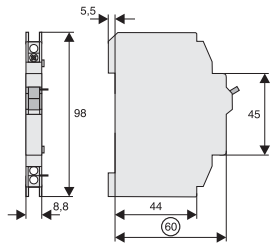
### Technical Data

|   |                       | Z-IHK-NA   |
|---|-----------------------|--|
| <b>Electrical</b>                             |                       |  |
| Contact function                              |                       | 1NO + 1NC  |
| Rated voltage                                 |                       | 250V   |
| Rated current                                 |                       | 6A   |
| Rated thermal current                         | $I_{th}$              | 6A   |
| Utilization category AC13                     |                       |  |
| Rated operational current                     | $I_e$                 | 3A/250 Vac   |
| Utilization category AC15                     |                       |  |
| Rated operational current                     | $I_e$                 | 2A/250 Vac   |
| Utilization category DC12                     |                       |  |
| Rated operational current                     | $I_e$                 | 0.5A/110 Vdc   |
| Rated insulation voltage                      | $U_i$                 | 250 Vac  |
| Minimum operational voltage per contact       | $U_{min}$             | 5 Vdc  |
| Minimum operational current                   | $I_{min}$             | 10 mA AC/DC  |
| Rated peak withstand voltage                  | $U_{imp} (1.2/50\mu)$ | 4 kV   |
| Conditional short circuit current             | $I_k$                 |  |
| with Back-Up Fuse 6A                          |                       | 1 kA   |
| Max. back-up fuse, overload and short circuit |                       | 6 A gL / FAZ-4/..B-HS                                    |
| <b>Mechanical</b>                             |                       |  |
| Tripping indicator “electrical tripping”      |                       | —  |
| Frame size                                    |                       | 45 mm  |
| Device height                                 |                       | 80 mm  |
| Device width                                  |                       | 8.8 mm (0.5MU)   |
| Mounting                                      |                       | —  |
| Degree of protection, built-in                |                       | IP40   |
| Terminal protection                           |                       | Finger and hand touch safe according to BGV A3, ÖVE-EN 6 |
| Terminals                                     |                       | Lift terminals   |
| Terminal capacity                             |                       | 0.5–2.5 mm <sup>2</sup>                                  |
| Terminal screws                               |                       | M3 (Pozidrive Z2)  |
| Tightening torque of terminal screws          |                       | max. 1.2 Nm  |

## Connection diagram



## Dimensions (mm)





## Accessories for Miniature Circuit Breaker FAZ-..-NA, -RT, -DU

### Shunt Trip FAZ-XAA-NA

SG13511



| Operational Voltage Range  | Type Designation     | Article No. | Units per package |
|----------------------------|----------------------|-------------|-------------------|
| 12–110 VAC<br>12–60 VDC    | FAZ-XAA-NA12-110VAC  | 102037      | 1                 |
| 110–415 VAC<br>110–230 VDC | FAZ-XAA-NA110-415VAC | 102036      | 1                 |

## Specifications | Shunt Trip FAZ-XAA-NA

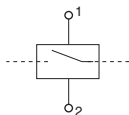
### Description

- Remote release for subsequent mounting onto FAZ-NA
- Additional installation of standard auxiliary switch is possible
- Position indicator red–green

### Technical Data

|                                      | FAZ-XAA-NA12-110VAC                                      | FAZ-XAA-NA110-415VAC                                     |
|--------------------------------------|--|--|
| <b>Electrical</b>                    |  |  |
| Can be mounted onto                  | FAZ-NA / FAZ-NA-DC / FAZ-RT/-DU                          | FAZ-NA / FAZ-NA-DC / FAZ-RT/-DU                          |
| Operational voltage range            | 12–110 Vac<br>12–60 Vdc                                  | 110–415 Vac<br>110–230 Vdc                               |
| Frequency                            | 50/60 Hz   | 50/60 Hz   |
| <b>Mechanical</b>                    |  |  |
| Frame size                           | 45 mm  | 45 mm  |
| Device height                        | 105 mm   | 105 mm   |
| Device width                         | 17.5 mm  | 17.5 mm  |
| Mounting                             | Quick fastening with two lock-in positions on EN 50022   |  |
| Degree of protection, built-in       | IP40   | IP40   |
| Terminal protection                  | Finger and hand touch safe according to BGV A3, ÖVE-EN 6 | Finger and hand touch safe according to BGV A3, ÖVE-EN 6 |
| Terminals                            | Open mouthed/lift  | Open mouthed/lift  |
| Terminal capacity, one and two wires | 18–10 AWG  | 18–10 AWG  |

### Connection diagram



## Terminal Covers

| Description | Type Designation | Article No. | Units per package |
|-------------|------------------|-------------|-------------------|
|-------------|------------------|-------------|-------------------|

### Terminal Covers for RCDs

|        |             |        |    |
|--------|-------------|--------|----|
| 2-pole | Z-RC/AK-2TE | 285385 | 10 |
| 4-pole | Z-RC/AK-4TE | 101062 | 10 |

### Terminal Covers for Add-on Device

|          |              |           |    |
|----------|--------------|-----------|----|
| 2-pole   | Z-CV/AO-2P   | 221957600 | 10 |
| 3+4-pole | Z-CV/AO-3-4P | 221957500 | 10 |



### Terminal Covers for MCB, RCBO

|        |            |           |    |
|--------|------------|-----------|----|
| 2-pole | Z-CV/SD-2P | 221954800 | 10 |
| 3-pole | Z-CV/SD-3P | 221954900 | 10 |
| 4-pole | Z-CV/SD-4P | 221953900 | 10 |


### Terminal Cover for MCB

|        |           |           |    |
|--------|-----------|-----------|----|
| 1-pole | Z7-AK-1TE | 750754200 | 10 |
|--------|-----------|-----------|----|


## Remote Control and Automatic Switching Device Z-ZW

| Function   | Type Designation   | Article No. | Units per package |
|--|--|-------------|-------------------|
| <br>SG30811 | Automatic restarting 230VAC  | Z-FW-LP     | 248296 1/20       |
|  | Automatic restarting 24-48VDC  | Z-FW-LPD    | 265244 1/20       |
| <br>SG30711 | + Remote control ON/OFF/TEST<br>(only in connection with Z-FW-LP, -LPD from delivery date 2006!) | Z-FW-MO     | 284730 1          |

## Pre-mounted sets Z-FW

| Operational voltage range   | Type Designation | Article No. | Units per package |
|---|------------------|-------------|-------------------|
| <br>SG31311 | 230 VAC          | Z-FW-LP/MO  | 290171 1/12       |
|   | 24-48 VDC        | Z-FW-LPD/MO | 290172 1/12       |

## Remote Testing Module Z-FW (for Z-FW-LP/MO set use only)

| Operational voltage range  | Type Designation | Article No. | Units per package |
|--|------------------|-------------|-------------------|
| <br>SG12111 | 0.01 A           | Z-FW/001    | 248297 4/120      |
|  | 0.03 A           | Z-FW/003    | 248298 4/120      |
|  | 0.1 A            | Z-FW/010    | 248299 4/120      |
|  | 0.3 A            | Z-FW/030    | 248300 4/120      |
|  | 0.5 A            | Z-FW/050    | 248301 4/120      |

## Specifications | Remote Control and Automatic Switching Z-FW

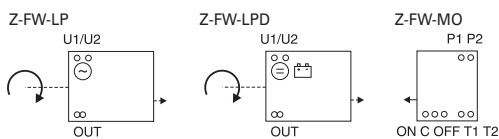
### Description

- Shape compatible switching device suitable for subsequent installation for automatic re-setting and remote control of CLS6, PFIM, PFHM-4p, dRCM, Z-A40, PFR, Z-MS
- Mechanical interlock, can be sealed with leads
- Mechanical switching capability up to max. PFIM-100/4p, CLS6-100/4p
- Operating and alarm display by green and red LED
- Function extension with Switching Modul Z-FW-MO  
Operating and trouble display by LED pre-assembled only with Z-FW...

## Technical Data

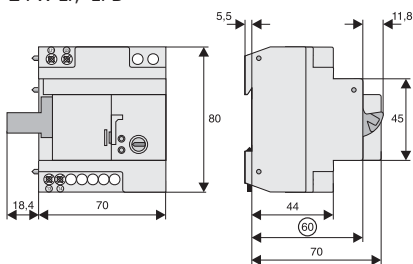
|  | Z-FW-LP   | Z-FW-LPD   | Z-FW-MO  |
|--|---|--|--|
| <b>Electrical</b>  |   |  |  |
| Possible operating voltages                              | 220-240 V AC  | 24-48 V DC   | -  |
| Frequency  | 50/60 Hz  | -  | -  |
| Testing module (0.5MU) for remote testing of RCDs        | Z-FW...   | Z-FW...  | -  |
| Control voltage for remote control                       | -   | -  | 24-230 V AC/DC                                     |
| Relay output for tripping test with Z-FW                 | -   | -  | 400 V AC max.                                      |
| Relay output for alarm, potential-free                   | 5A/250V AC  | 5A/250V AC   | -  |
| Functions  | automatic restarting  | automatic restarting                               | +ON/OFF/TEST                                       |
| Function selector  | Automatic 5x, OFF/RESET   | Automatic 5x, OFF/RESET                            | ON, OFF/RESET                                      |
| Remote control function via telephone with Telecommander | -   | -  | -  |
| <b>Mechanical</b>  |   |  |  |
| Frame size   | 45 mm   | 45 mm  | 45 mm  |
| Device height  | 80 mm   | 80 mm  | 80 mm  |
| Device width   | 70 mm   | 70 mm  | 35 mm  |
| Mounting   | quick fastening with 2 lock-in positions on DIN rail IEC/EN 60715 |  | -  |
| Degree of protection, built-in                           | IP40  | IP40   | IP40   |
| Terminal protection                                      | finger and hand touch safe according to BGV A3, ÖVE-EN 6          |  |  |
| Terminals  | lift terminals  | lift terminals                                     | lift terminals                                     |
| Terminal capacity  | 2 x 1.5 mm <sup>2</sup> or 1 x 2.5 mm <sup>2</sup>                | 2 x 1.5 mm <sup>2</sup> or 1 x 2.5 mm <sup>2</sup> | 4 x 1.5 mm <sup>2</sup> or 2 x 2.5 mm <sup>2</sup> |
| Scope of delivery  | -   | -  | Coupling plug                                      |

## Connection diagram

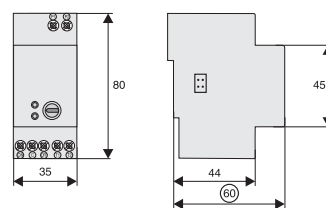


## Dimensions (mm)

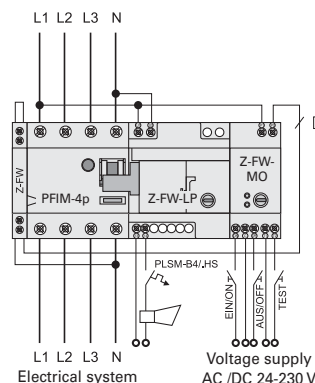
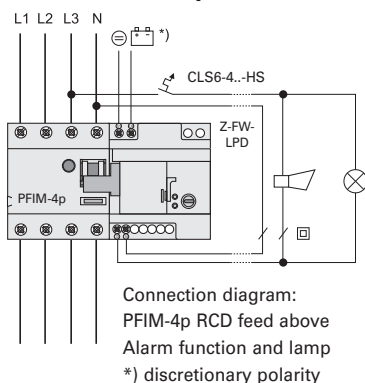
Z-FW-LP, -LPD



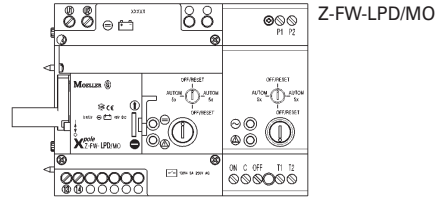
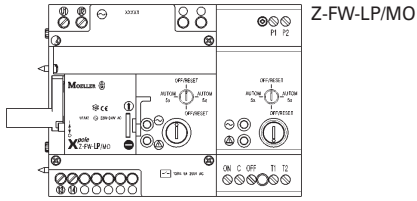
Z-FW-MO



## Connection example



## Pre-mounted Sets

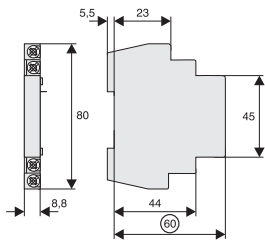


## Specifications | Remote Testing Module Z-FW (for Z-FW-LP)

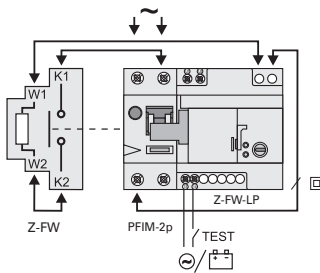
### Description

- External testing module with testing resistor for RCDs
- Proper "external" test key function according to the applicable rules thanks to design adapted to the rated tripping current
- For remote testing with remote control and automatic switching device Z-FW-LP
- No undesired voltage rise in the consumer system during remote switch-off thanks to integrated breaker contact K1-K2
- Can also be used as a remote tripping module for PFIM, PFHM

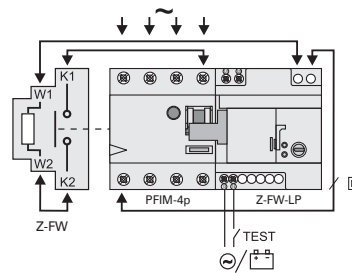
### Dimensions (mm)



### Connection examples



Connection diagram:  
PFIM-2p, RCD feed above



Connection diagram:  
PFIM-4p, RCD feed above

## Miniature Circuit Breakers FAZ, FAZ-PN, FAZ-HS

SG55812



### FAZ

- High-quality miniature circuit breakers for industrial applications and residential applications
- Contact position indicator red - green
- Guide for secure terminal connection
- 3-position DIN rail clip, permits removal from existing busbar system
- Comprehensive range of accessories suitable for subsequent installation
- Rated currents up to 63 A
- Tripping characteristics B, C, D, K, S, Z
- Rated breaking capacity up to 15 kA according to IEC/EN 60947-2

### FAZ-PN

- Tripping characteristic B
- Rated breaking capacity up to 6 kA according to IEC/EN 60898-1
- Module width 1MU (1+N-poles)

### FAZ-HS

- Tripping characteristic B
- Rated breaking capacity up to 10 kA according to IEC/EN 60898-1
- 1- and 2-poles available

## FAZ Miniature Circuit Breakers (MCBs)

### Characteristic B

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|---------------|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
| <b>1-pole</b> |                            |                      |   |                                |  |                     |             |                         |
| 1             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B1/1            | 182114      | 12                      |
| 1.5           | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B1,5/1          | 182115      | 12                      |
| 1.6           | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B1,6/1          | 182116      | 12                      |
| 2             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B2/1            | 182117      | 12                      |
| 3             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B3/1            | 182119      | 12                      |
| 3.5           | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B3,5/1          | 182120      | 12                      |
| 4             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B4/1            | 182121      | 12                      |
| 5             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B5/1            | 182122      | 12                      |
| 6             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B6/1            | 182123      | 12                      |
| 8             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B8/1            | 182124      | 12                      |
| 10            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B10/1           | 182125      | 12                      |
| 12            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B12/1           | 182126      | 12                      |
| 13            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B13/1           | 182127      | 12                      |
| 15            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B15/1           | 182128      | 12                      |
| 16            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B16/1           | 182129      | 12                      |
| 20            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B20/1           | 182130      | 12                      |
| 25            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B25/1           | 182131      | 12                      |
| 32            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-B32/1           | 182132      | 12                      |
| 40            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-B40/1           | 182133      | 12                      |
| 50            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-B50/1           | 182134      | 12                      |
| 63            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-B63/1           | 182135      | 12                      |

SG53112



SG56612



|                 |     |    |     |    |  |             |        |   |
|-----------------|-----|----|-----|----|--|-------------|--------|---|
| <b>1+N-pole</b> |     |    |     |    |  |             |        |   |
| 1               | 240 | 15 | 277 | 10 |  | FAZ-B1/1N   | 182136 | 6 |
| 1.5             | 240 | 15 | 277 | 10 |  | FAZ-B1,5/1N | 182137 | 6 |
| 1.6             | 240 | 15 | 277 | 10 |  | FAZ-B1,6/1N | 182138 | 6 |
| 2               | 240 | 15 | 277 | 10 |  | FAZ-B2/1N   | 182139 | 6 |
| 2.5             | 240 | 15 | 277 | 10 |  | FAZ-B2,5/1N | 182140 | 6 |
| 3               | 240 | 15 | 277 | 10 |  | FAZ-B3/1N   | 182141 | 6 |
| 3.5             | 240 | 15 | 277 | 10 |  | FAZ-B3,5/1N | 182142 | 6 |
| 4               | 240 | 15 | 277 | 10 |  | FAZ-B4/1N   | 182143 | 6 |
| 5               | 240 | 15 | 277 | 10 |  | FAZ-B5/1N   | 182144 | 6 |
| 6               | 240 | 15 | 277 | 10 |  | FAZ-B6/1N   | 182145 | 6 |
| 8               | 240 | 15 | 277 | 10 |  | FAZ-B8/1N   | 182146 | 6 |
| 10              | 240 | 15 | 277 | 10 |  | FAZ-B10/1N  | 182147 | 6 |
| 12              | 240 | 15 | 277 | 10 |  | FAZ-B12/1N  | 182148 | 6 |
| 13              | 240 | 15 | 277 | 10 |  | FAZ-B13/1N  | 182149 | 6 |
| 15              | 240 | 15 | 277 | 10 |  | FAZ-B15/1N  | 182150 | 6 |
| 16              | 240 | 15 | 277 | 10 |  | FAZ-B16/1N  | 182151 | 6 |
| 20              | 240 | 15 | 277 | 10 |  | FAZ-B20/1N  | 182152 | 6 |
| 25              | 240 | 15 | 277 | 10 |  | FAZ-B25/1N  | 182153 | 6 |
| 32              | 240 | 15 | 277 | 10 |  | FAZ-B32/1N  | 182154 | 6 |
| 40              | 240 | 15 | 277 | 5  |  | FAZ-B40/1N  | 182155 | 6 |
| 50              | 240 | 15 | 277 | 5  |  | FAZ-B50/1N  | 182156 | 6 |
| 63              | 240 | 15 | 277 | 5  |  | FAZ-B63/1N  | 182157 | 6 |

SG55112



| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|

### 2-pole

|     |     |    |          |    |            |        |   |
|-----|-----|----|----------|----|------------|--------|---|
| 1   | 415 | 15 | 480Y/277 | 10 | FAZ-B1/2   | 182158 | 6 |
| 1.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B1,5/2 | 182159 | 6 |
| 1.6 | 415 | 15 | 480Y/277 | 10 | FAZ-B1,6/2 | 182160 | 6 |
| 2   | 415 | 15 | 480Y/277 | 10 | FAZ-B2/2   | 182161 | 6 |
| 2.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B2,5/2 | 182162 | 6 |
| 3   | 415 | 15 | 480Y/277 | 10 | FAZ-B3/2   | 182112 | 6 |
| 3.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B3,5/2 | 182113 | 6 |
| 4   | 415 | 15 | 480Y/277 | 10 | FAZ-B4/2   | 182175 | 6 |
| 5   | 415 | 15 | 480Y/277 | 10 | FAZ-B5/2   | 182176 | 6 |
| 6   | 415 | 15 | 480Y/277 | 10 | FAZ-B6/2   | 182177 | 6 |
| 7   | 415 | 15 | 480Y/277 | 10 | FAZ-B7/2   | 182178 | 6 |
| 8   | 415 | 15 | 480Y/277 | 10 | FAZ-B8/2   | 182179 | 6 |
| 10  | 415 | 15 | 480Y/277 | 10 | FAZ-B10/2  | 182180 | 6 |
| 12  | 415 | 15 | 480Y/277 | 10 | FAZ-B12/2  | 182181 | 6 |
| 13  | 415 | 15 | 480Y/277 | 10 | FAZ-B13/2  | 182182 | 6 |
| 15  | 415 | 15 | 480Y/277 | 10 | FAZ-B15/2  | 182183 | 6 |
| 16  | 415 | 15 | 480Y/277 | 10 | FAZ-B16/2  | 182184 | 6 |
| 20  | 415 | 15 | 480Y/277 | 10 | FAZ-B20/2  | 182185 | 6 |
| 25  | 415 | 15 | 480Y/277 | 10 | FAZ-B25/2  | 182186 | 6 |
| 32  | 415 | 15 | 480Y/277 | 10 | FAZ-B32/2  | 182188 | 6 |
| 40  | 415 | 15 | 480Y/277 | 5  | FAZ-B40/2  | 182189 | 6 |
| 50  | 415 | 15 | 480Y/277 | 5  | FAZ-B50/2  | 182190 | 6 |
| 63  | 415 | 15 | 480Y/277 | 5  | FAZ-B63/2  | 182191 | 6 |

SG53412



### 3-pole

|     |     |    |          |    |            |        |   |
|-----|-----|----|----------|----|------------|--------|---|
| 1   | 415 | 15 | 480Y/277 | 10 | FAZ-B1/3   | 182192 | 4 |
| 1.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B1,5/3 | 182193 | 4 |
| 1.6 | 415 | 15 | 480Y/277 | 10 | FAZ-B1,6/3 | 182194 | 4 |
| 2   | 415 | 15 | 480Y/277 | 10 | FAZ-B2/3   | 182195 | 4 |
| 2.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B2,5/3 | 182196 | 4 |
| 3   | 415 | 15 | 480Y/277 | 10 | FAZ-B3/3   | 182197 | 4 |
| 3.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B3,5/3 | 182198 | 4 |
| 4   | 415 | 15 | 480Y/277 | 10 | FAZ-B4/3   | 182199 | 4 |
| 5   | 415 | 15 | 480Y/277 | 10 | FAZ-B5/3   | 182200 | 4 |
| 6   | 415 | 15 | 480Y/277 | 10 | FAZ-B6/3   | 182201 | 4 |
| 7   | 415 | 15 | 480Y/277 | 10 | FAZ-B7/3   | 182202 | 4 |
| 8   | 415 | 15 | 480Y/277 | 10 | FAZ-B8/3   | 182203 | 4 |
| 10  | 415 | 15 | 480Y/277 | 10 | FAZ-B10/3  | 182204 | 4 |
| 12  | 415 | 15 | 480Y/277 | 10 | FAZ-B12/3  | 182205 | 4 |
| 13  | 415 | 15 | 480Y/277 | 10 | FAZ-B13/3  | 182206 | 4 |
| 15  | 415 | 15 | 480Y/277 | 10 | FAZ-B15/3  | 182207 | 4 |
| 16  | 415 | 15 | 480Y/277 | 10 | FAZ-B16/3  | 182208 | 4 |
| 20  | 415 | 15 | 480Y/277 | 10 | FAZ-B20/3  | 182209 | 4 |
| 25  | 415 | 15 | 480Y/277 | 10 | FAZ-B25/3  | 182210 | 4 |
| 32  | 415 | 15 | 480Y/277 | 10 | FAZ-B32/3  | 182212 | 4 |
| 40  | 415 | 15 | 480Y/277 | 5  | FAZ-B40/3  | 182213 | 4 |
| 50  | 415 | 15 | 480Y/277 | 5  | FAZ-B50/3  | 182214 | 4 |
| 63  | 415 | 15 | 480Y/277 | 5  | FAZ-B63/3  | 182215 | 4 |



SG55712



| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|

### 3+N-pole

|     |     |    |          |    |             |        |   |
|-----|-----|----|----------|----|-------------|--------|---|
| 1   | 415 | 15 | 480Y/277 | 10 | FAZ-B1/3N   | 182216 | 3 |
| 1.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B1,5/3N | 182217 | 3 |
| 1.6 | 415 | 15 | 480Y/277 | 10 | FAZ-B1,6/3N | 182218 | 3 |
| 2   | 415 | 15 | 480Y/277 | 10 | FAZ-B2/3N   | 182219 | 3 |
| 2.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B2,5/3N | 182220 | 3 |
| 3   | 415 | 15 | 480Y/277 | 10 | FAZ-B3/3N   | 182221 | 3 |
| 3.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B3,5/3N | 182222 | 3 |
| 4   | 415 | 15 | 480Y/277 | 10 | FAZ-B4/3N   | 182223 | 3 |
| 5   | 415 | 15 | 480Y/277 | 10 | FAZ-B5/3N   | 182224 | 3 |
| 6   | 415 | 15 | 480Y/277 | 10 | FAZ-B6/3N   | 182225 | 3 |
| 8   | 415 | 15 | 480Y/277 | 10 | FAZ-B8/3N   | 182226 | 3 |
| 10  | 415 | 15 | 480Y/277 | 10 | FAZ-B10/3N  | 182227 | 3 |
| 12  | 415 | 15 | 480Y/277 | 10 | FAZ-B12/3N  | 182228 | 3 |
| 13  | 415 | 15 | 480Y/277 | 10 | FAZ-B13/3N  | 182229 | 3 |
| 15  | 415 | 15 | 480Y/277 | 10 | FAZ-B15/3N  | 182230 | 3 |
| 16  | 415 | 15 | 480Y/277 | 10 | FAZ-B16/3N  | 182231 | 3 |
| 20  | 415 | 15 | 480Y/277 | 10 | FAZ-B20/3N  | 182232 | 3 |
| 25  | 415 | 15 | 480Y/277 | 10 | FAZ-B25/3N  | 182233 | 3 |
| 32  | 415 | 15 | 480Y/277 | 10 | FAZ-B32/3N  | 182234 | 3 |
| 40  | 415 | 15 | 480Y/277 | 5  | FAZ-B40/3N  | 182235 | 3 |
| 50  | 415 | 15 | 480Y/277 | 5  | FAZ-B50/3N  | 182236 | 3 |
| 63  | 415 | 15 | 480Y/277 | 5  | FAZ-B63/3N  | 182237 | 3 |

SG55812



### 4-pole

|     |     |    |          |    |            |        |   |
|-----|-----|----|----------|----|------------|--------|---|
| 1   | 415 | 15 | 480Y/277 | 10 | FAZ-B1/4   | 182238 | 3 |
| 1.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B1,5/4 | 182239 | 3 |
| 1.6 | 415 | 15 | 480Y/277 | 10 | FAZ-B1,6/4 | 182240 | 3 |
| 2   | 415 | 15 | 480Y/277 | 10 | FAZ-B2/4   | 182241 | 3 |
| 2.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B2,5/4 | 182242 | 3 |
| 3   | 415 | 15 | 480Y/277 | 10 | FAZ-B3/4   | 182243 | 3 |
| 3.5 | 415 | 15 | 480Y/277 | 10 | FAZ-B3,5/4 | 182244 | 3 |
| 4   | 415 | 15 | 480Y/277 | 10 | FAZ-B4/4   | 182245 | 3 |
| 5   | 415 | 15 | 480Y/277 | 10 | FAZ-B5/4   | 182246 | 3 |
| 6   | 415 | 15 | 480Y/277 | 10 | FAZ-B6/4   | 182247 | 3 |
| 7   | 415 | 15 | 480Y/277 | 10 | FAZ-B7/4   | 182248 | 3 |
| 8   | 415 | 15 | 480Y/277 | 10 | FAZ-B8/4   | 182249 | 3 |
| 10  | 415 | 15 | 480Y/277 | 10 | FAZ-B10/4  | 182250 | 3 |
| 12  | 415 | 15 | 480Y/277 | 10 | FAZ-B12/4  | 182251 | 3 |
| 13  | 415 | 15 | 480Y/277 | 10 | FAZ-B13/4  | 182252 | 3 |
| 15  | 415 | 15 | 480Y/277 | 10 | FAZ-B15/4  | 182253 | 3 |
| 16  | 415 | 15 | 480Y/277 | 10 | FAZ-B16/4  | 182254 | 3 |
| 20  | 415 | 15 | 480Y/277 | 10 | FAZ-B20/4  | 182255 | 3 |
| 25  | 415 | 15 | 480Y/277 | 10 | FAZ-B25/4  | 182256 | 3 |
| 32  | 415 | 15 | 480Y/277 | 10 | FAZ-B32/4  | 182257 | 3 |
| 40  | 415 | 15 | 480Y/277 | 5  | FAZ-B40/4  | 182258 | 3 |
| 50  | 415 | 15 | 480Y/277 | 5  | FAZ-B50/4  | 182259 | 3 |
| 63  | 415 | 15 | 480Y/277 | 5  | FAZ-B63/4  | 182260 | 3 |

## FAZ Miniature Circuit Breakers (MCBs)

### Characteristic C

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|---------------|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
| <b>1-pole</b> |                            |                      |   |                                |  |                     |             |                         |
| 0.16          | 240/415                    | 15                   | 277   | 5                              |  | FAZ-C0,16/1         | 182261      | 12                      |
| 0.25          | 240/415                    | 15                   | 277   | 5                              |  | FAZ-C0,25/1         | 182262      | 12                      |
| 0.5           | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C0,5/1          | 182263      | 12                      |
| 0.75          | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C0,75/1         | 182264      | 12                      |
| 1             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C1/1            | 182265      | 12                      |
| 1.5           | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C1,5/1          | 182266      | 12                      |
| 1.6           | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C1,6/1          | 182267      | 12                      |
| 2             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C2/1            | 182268      | 12                      |
| 2.5           | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C2,5/1          | 182269      | 12                      |
| 3             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C3/1            | 182270      | 12                      |
| 3.5           | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C3,5/1          | 182271      | 12                      |
| 4             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C4/1            | 182272      | 12                      |
| 5             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C5/1            | 182273      | 12                      |
| 6             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C6/1            | 182274      | 12                      |
| 8             | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C8/1            | 182275      | 12                      |
| 10            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C10/1           | 182276      | 12                      |
| 12            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C12/1           | 182277      | 12                      |
| 13            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C13/1           | 182278      | 12                      |
| 15            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C15/1           | 182279      | 12                      |
| 16            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C16/1           | 182280      | 12                      |
| 20            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C20/1           | 182281      | 12                      |
| 25            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C25/1           | 182282      | 12                      |
| 32            | 240/415                    | 15                   | 277   | 10                             |  | FAZ-C32/1           | 182283      | 12                      |
| 40            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-C40/1           | 182284      | 12                      |
| 50            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-C50/1           | 182285      | 12                      |
| 63            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-C63/1           | 182286      | 12                      |

SG53112



SG55612



### 1+N-pole

|      |     |    |     |    |  |              |        |   |
|------|-----|----|-----|----|--|--------------|--------|---|
| 0.16 | 240 | 15 | 277 | 5  |  | FAZ-C0,16/1N | 182287 | 6 |
| 0.25 | 240 | 15 | 277 | 5  |  | FAZ-C0,25/1N | 182288 | 6 |
| 0.5  | 240 | 15 | 277 | 10 |  | FAZ-C0,5/1N  | 182289 | 6 |
| 0.75 | 240 | 15 | 277 | 10 |  | FAZ-C0,75/1N | 182290 | 6 |
| 1    | 240 | 15 | 277 | 10 |  | FAZ-C1/1N    | 182291 | 6 |
| 1.5  | 240 | 15 | 277 | 10 |  | FAZ-C1,5/1N  | 182292 | 6 |
| 1.6  | 240 | 15 | 277 | 10 |  | FAZ-C1,6/1N  | 182293 | 6 |
| 2    | 240 | 15 | 277 | 10 |  | FAZ-C2/1N    | 182294 | 6 |
| 2.5  | 240 | 15 | 277 | 10 |  | FAZ-C2,5/1N  | 182295 | 6 |
| 3    | 240 | 15 | 277 | 10 |  | FAZ-C3/1N    | 182296 | 6 |
| 3.5  | 240 | 15 | 277 | 10 |  | FAZ-C3,5/1N  | 182297 | 6 |
| 4    | 240 | 15 | 277 | 10 |  | FAZ-C4/1N    | 182298 | 6 |
| 5    | 240 | 15 | 277 | 10 |  | FAZ-C5/1N    | 182299 | 6 |
| 6    | 240 | 15 | 277 | 10 |  | FAZ-C6/1N    | 182300 | 6 |
| 8    | 240 | 15 | 277 | 10 |  | FAZ-C8/1N    | 182301 | 6 |
| 10   | 240 | 15 | 277 | 10 |  | FAZ-C10/1N   | 182302 | 6 |
| 12   | 240 | 15 | 277 | 10 |  | FAZ-C12/1N   | 182303 | 6 |
| 13   | 240 | 15 | 277 | 10 |  | FAZ-C13/1N   | 182304 | 6 |
| 15   | 240 | 15 | 277 | 10 |  | FAZ-C15/1N   | 182305 | 6 |
| 16   | 240 | 15 | 277 | 10 |  | FAZ-C16/1N   | 182306 | 6 |
| 20   | 240 | 15 | 277 | 10 |  | FAZ-C20/1N   | 182307 | 6 |
| 25   | 240 | 15 | 277 | 10 |  | FAZ-C25/1N   | 182308 | 6 |
| 32   | 240 | 15 | 277 | 10 |  | FAZ-C32/1N   | 182309 | 6 |
| 40   | 240 | 15 | 277 | 5  |  | FAZ-C40/1N   | 182310 | 6 |
| 50   | 240 | 15 | 277 | 5  |  | FAZ-C50/1N   | 182311 | 6 |
| 63   | 240 | 15 | 277 | 5  |  | FAZ-C63/1N   | 182312 | 6 |

SG55112



| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|

### 2-pole

|      |     |    |          |    |             |        |   |
|------|-----|----|----------|----|-------------|--------|---|
| 0.16 | 415 | 15 | 480Y/277 | 5  | FAZ-C0,16/2 | 182313 | 6 |
| 0.25 | 415 | 15 | 480Y/277 | 5  | FAZ-C0,25/2 | 182314 | 6 |
| 0.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C0,5/2  | 182315 | 6 |
| 0.75 | 415 | 15 | 480Y/277 | 10 | FAZ-C0,75/2 | 182316 | 6 |
| 1    | 415 | 15 | 480Y/277 | 10 | FAZ-C1/2    | 182317 | 6 |
| 1.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C1,5/2  | 182318 | 6 |
| 1.6  | 415 | 15 | 480Y/277 | 10 | FAZ-C1,6/2  | 182319 | 6 |
| 2    | 415 | 15 | 480Y/277 | 10 | FAZ-C2/2    | 182320 | 6 |
| 2.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C2,5/2  | 182321 | 6 |
| 3    | 415 | 15 | 480Y/277 | 10 | FAZ-C3/2    | 182322 | 6 |
| 3.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C3,5/2  | 182323 | 6 |
| 4    | 415 | 15 | 480Y/277 | 10 | FAZ-C4/2    | 182324 | 6 |
| 5    | 415 | 15 | 480Y/277 | 10 | FAZ-C5/2    | 182325 | 6 |
| 6    | 415 | 15 | 480Y/277 | 10 | FAZ-C6/2    | 182326 | 6 |
| 7    | 415 | 15 | 480Y/277 | 10 | FAZ-C7/2    | 182327 | 6 |
| 8    | 415 | 15 | 480Y/277 | 10 | FAZ-C8/2    | 182328 | 6 |
| 10   | 415 | 15 | 480Y/277 | 10 | FAZ-C10/2   | 182329 | 6 |
| 12   | 415 | 15 | 480Y/277 | 10 | FAZ-C12/2   | 182330 | 6 |
| 13   | 415 | 15 | 480Y/277 | 10 | FAZ-C13/2   | 182331 | 6 |
| 15   | 415 | 15 | 480Y/277 | 10 | FAZ-C15/2   | 182332 | 6 |
| 16   | 415 | 15 | 480Y/277 | 10 | FAZ-C16/2   | 182333 | 6 |
| 20   | 415 | 15 | 480Y/277 | 10 | FAZ-C20/2   | 182334 | 6 |
| 25   | 415 | 15 | 480Y/277 | 10 | FAZ-C25/2   | 182335 | 6 |
| 30   | 415 | 15 | 480Y/277 | 10 | FAZ-C30/2   | 182336 | 6 |
| 32   | 415 | 15 | 480Y/277 | 10 | FAZ-C32/2   | 182337 | 6 |
| 40   | 415 | 15 | 480Y/277 | 5  | FAZ-C40/2   | 182338 | 6 |
| 50   | 415 | 15 | 480Y/277 | 5  | FAZ-C50/2   | 182339 | 6 |
| 63   | 415 | 15 | 480Y/277 | 5  | FAZ-C63/2   | 182340 | 6 |

SG53412



### 3-pole

|      |     |    |          |    |             |        |   |
|------|-----|----|----------|----|-------------|--------|---|
| 0.16 | 415 | 15 | 480Y/277 | 5  | FAZ-C0,16/3 | 182341 | 4 |
| 0.25 | 415 | 15 | 480Y/277 | 5  | FAZ-C0,25/3 | 182342 | 4 |
| 0.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C0,5/3  | 182163 | 4 |
| 0.75 | 415 | 15 | 480Y/277 | 10 | FAZ-C0,75/3 | 182164 | 4 |
| 1    | 415 | 15 | 480Y/277 | 10 | FAZ-C1/3    | 182165 | 4 |
| 1.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C1,5/3  | 182166 | 4 |
| 1.6  | 415 | 15 | 480Y/277 | 10 | FAZ-C1,6/3  | 182167 | 4 |
| 2    | 415 | 15 | 480Y/277 | 10 | FAZ-C2/3    | 182168 | 4 |
| 2.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C2,5/3  | 182169 | 4 |
| 3    | 415 | 15 | 480Y/277 | 10 | FAZ-C3/3    | 182170 | 4 |
| 3.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C3,5/3  | 182171 | 4 |
| 4    | 415 | 15 | 480Y/277 | 10 | FAZ-C4/3    | 182172 | 4 |
| 5    | 415 | 15 | 480Y/277 | 10 | FAZ-C5/3    | 182173 | 4 |
| 6    | 415 | 15 | 480Y/277 | 10 | FAZ-C6/3    | 182174 | 4 |
| 7    | 415 | 15 | 480Y/277 | 10 | FAZ-C7/3    | 181651 | 4 |
| 8    | 415 | 15 | 480Y/277 | 10 | FAZ-C8/3    | 181652 | 4 |
| 10   | 415 | 15 | 480Y/277 | 10 | FAZ-C10/3   | 181653 | 4 |
| 12   | 415 | 15 | 480Y/277 | 10 | FAZ-C12/3   | 181654 | 4 |
| 13   | 415 | 15 | 480Y/277 | 10 | FAZ-C13/3   | 181655 | 4 |
| 15   | 415 | 15 | 480Y/277 | 10 | FAZ-C15/3   | 181656 | 4 |
| 16   | 415 | 15 | 480Y/277 | 10 | FAZ-C16/3   | 181657 | 4 |
| 20   | 415 | 15 | 480Y/277 | 10 | FAZ-C20/3   | 181658 | 4 |
| 25   | 415 | 15 | 480Y/277 | 10 | FAZ-C25/3   | 181659 | 4 |
| 30   | 415 | 15 | 480Y/277 | 10 | FAZ-C30/3   | 181660 | 4 |
| 32   | 415 | 15 | 480Y/277 | 10 | FAZ-C32/3   | 181661 | 4 |
| 40   | 415 | 15 | 480Y/277 | 5  | FAZ-C40/3   | 181662 | 4 |
| 50   | 415 | 15 | 480Y/277 | 5  | FAZ-C50/3   | 181663 | 4 |
| 63   | 415 | 15 | 480Y/277 | 5  | FAZ-C63/3   | 181664 | 4 |

SG55712



| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|

### 3+N-pole

|      |     |    |          |    |              |        |   |
|------|-----|----|----------|----|--------------|--------|---|
| 0.16 | 415 | 15 | 480Y/277 | 5  | FAZ-C0,16/3N | 181665 | 3 |
| 0.25 | 415 | 15 | 480Y/277 | 5  | FAZ-C0,25/3N | 181666 | 3 |
| 0.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C0,5/3N  | 181667 | 3 |
| 0.75 | 415 | 15 | 480Y/277 | 10 | FAZ-C0,75/3N | 181668 | 3 |
| 1    | 415 | 15 | 480Y/277 | 10 | FAZ-C1/3N    | 181669 | 3 |
| 1.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C1,5/3N  | 181670 | 3 |
| 1.6  | 415 | 15 | 480Y/277 | 10 | FAZ-C1,6/3N  | 181671 | 3 |
| 2    | 415 | 15 | 480Y/277 | 10 | FAZ-C2/3N    | 181672 | 3 |
| 2.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C2,5/3N  | 181673 | 3 |
| 3    | 415 | 15 | 480Y/277 | 10 | FAZ-C3/3N    | 181674 | 3 |
| 3.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C3,5/3N  | 181675 | 3 |
| 4    | 415 | 15 | 480Y/277 | 10 | FAZ-C4/3N    | 181676 | 3 |
| 5    | 415 | 15 | 480Y/277 | 10 | FAZ-C5/3N    | 181677 | 3 |
| 6    | 415 | 15 | 480Y/277 | 10 | FAZ-C6/3N    | 181678 | 3 |
| 8    | 415 | 15 | 480Y/277 | 10 | FAZ-C8/3N    | 181679 | 3 |
| 10   | 415 | 15 | 480Y/277 | 10 | FAZ-C10/3N   | 181680 | 3 |
| 12   | 415 | 15 | 480Y/277 | 10 | FAZ-C12/3N   | 181681 | 3 |
| 13   | 415 | 15 | 480Y/277 | 10 | FAZ-C13/3N   | 181682 | 3 |
| 15   | 415 | 15 | 480Y/277 | 10 | FAZ-C15/3N   | 181683 | 3 |
| 16   | 415 | 15 | 480Y/277 | 10 | FAZ-C16/3N   | 181684 | 3 |
| 20   | 415 | 15 | 480Y/277 | 10 | FAZ-C20/3N   | 181685 | 3 |
| 25   | 415 | 15 | 480Y/277 | 10 | FAZ-C25/3N   | 181686 | 3 |
| 32   | 415 | 15 | 480Y/277 | 10 | FAZ-C32/3N   | 181687 | 3 |
| 40   | 415 | 15 | 480Y/277 | 5  | FAZ-C40/3N   | 181688 | 3 |
| 50   | 415 | 15 | 480Y/277 | 5  | FAZ-C50/3N   | 181689 | 3 |
| 63   | 415 | 15 | 480Y/277 | 5  | FAZ-C63/3N   | 181690 | 3 |

SG55812



### 4-pole

|      |     |    |          |    |             |        |   |
|------|-----|----|----------|----|-------------|--------|---|
| 0.16 | 415 | 15 | 480Y/277 | 5  | FAZ-C0,16/4 | 181691 | 3 |
| 0.25 | 415 | 15 | 480Y/277 | 5  | FAZ-C0,25/4 | 181692 | 3 |
| 0.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C0,5/4  | 181693 | 3 |
| 0.75 | 415 | 15 | 480Y/277 | 10 | FAZ-C0,75/4 | 181694 | 3 |
| 1    | 415 | 15 | 480Y/277 | 10 | FAZ-C1/4    | 181695 | 3 |
| 1.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C1,5/4  | 181696 | 3 |
| 1.6  | 415 | 15 | 480Y/277 | 10 | FAZ-C1,6/4  | 181697 | 3 |
| 2    | 415 | 15 | 480Y/277 | 10 | FAZ-C2/4    | 181698 | 3 |
| 2.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C2,5/4  | 181699 | 3 |
| 3    | 415 | 15 | 480Y/277 | 10 | FAZ-C3/4    | 181700 | 3 |
| 3.5  | 415 | 15 | 480Y/277 | 10 | FAZ-C3,5/4  | 181701 | 3 |
| 4    | 415 | 15 | 480Y/277 | 10 | FAZ-C4/4    | 181702 | 3 |
| 5    | 415 | 15 | 480Y/277 | 10 | FAZ-C5/4    | 181703 | 3 |
| 6    | 415 | 15 | 480Y/277 | 10 | FAZ-C6/4    | 181704 | 3 |
| 7    | 415 | 15 | 480Y/277 | 10 | FAZ-C7/4    | 181705 | 3 |
| 8    | 415 | 15 | 480Y/277 | 10 | FAZ-C8/4    | 181706 | 3 |
| 10   | 415 | 15 | 480Y/277 | 10 | FAZ-C10/4   | 181707 | 3 |
| 12   | 415 | 15 | 480Y/277 | 10 | FAZ-C12/4   | 181708 | 3 |
| 13   | 415 | 15 | 480Y/277 | 10 | FAZ-C13/4   | 181709 | 3 |
| 15   | 415 | 15 | 480Y/277 | 10 | FAZ-C15/4   | 181710 | 3 |
| 16   | 415 | 15 | 480Y/277 | 10 | FAZ-C16/4   | 181711 | 3 |
| 20   | 415 | 15 | 480Y/277 | 10 | FAZ-C20/4   | 181712 | 3 |
| 25   | 415 | 15 | 480Y/277 | 10 | FAZ-C25/4   | 181713 | 3 |
| 32   | 415 | 15 | 480Y/277 | 10 | FAZ-C32/4   | 181714 | 3 |
| 40   | 415 | 15 | 480Y/277 | 5  | FAZ-C40/4   | 181715 | 3 |
| 50   | 415 | 15 | 480Y/277 | 5  | FAZ-C50/4   | 181716 | 3 |
| 63   | 415 | 15 | 480Y/277 | 5  | FAZ-C63/4   | 181717 | 3 |

## FAZ Miniature Circuit Breakers (MCBs)

### Characteristic D

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|---------------|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
| <b>1-pole</b> |                            |                      |   |                                |  |                     |             |                         |
| 0.5           | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D0,5/1          | 181718      | 12                      |
| 1             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D1/1            | 181719      | 12                      |
| 1.5           | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D1,5/1          | 181720      | 12                      |
| 1.6           | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D1,6/1          | 181721      | 12                      |
| 2             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D2/1            | 181722      | 12                      |
| 2.5           | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D2,5/1          | 181723      | 12                      |
| 3             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D3/1            | 181724      | 12                      |
| 3.5           | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D3,5/1          | 181725      | 12                      |
| 4             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D4/1            | 181726      | 12                      |
| 5             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D5/1            | 181727      | 12                      |
| 6             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D6/1            | 181728      | 12                      |
| 8             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D8/1            | 181729      | 12                      |
| 10            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D10/1           | 181730      | 12                      |
| 12            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D12/1           | 181731      | 12                      |
| 13            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D13/1           | 181732      | 12                      |
| 15            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D15/1           | 181733      | 12                      |
| 16            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D16/1           | 181734      | 12                      |
| 20            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D20/1           | 181735      | 12                      |
| 25            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D25/1           | 181736      | 12                      |
| 32            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D32/1           | 181737      | 12                      |
| 40            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-D40/1           | 181738      | 12                      |
| 50            | 240/415                    | 10                   | -   | -                              |  | FAZ-D50/1           | 181739      | 12                      |
| 63            | 240/415                    | 10                   | -   | -                              |  | FAZ-D63/1           | 181740      | 12                      |

SG53112



SG55612



### 1+N-pole

|     |     |    |     |   |  |             |        |   |
|-----|-----|----|-----|---|--|-------------|--------|---|
| 0.5 | 240 | 15 | 277 | 5 |  | FAZ-D0,5/1N | 181741 | 6 |
| 1   | 240 | 15 | 277 | 5 |  | FAZ-D1/1N   | 181742 | 6 |
| 1.5 | 240 | 15 | 277 | 5 |  | FAZ-D1,5/1N | 181743 | 6 |
| 1.6 | 240 | 15 | 277 | 5 |  | FAZ-D1,6/1N | 181744 | 6 |
| 2   | 240 | 15 | 277 | 5 |  | FAZ-D2/1N   | 181745 | 6 |
| 2.5 | 240 | 15 | 277 | 5 |  | FAZ-D2,5/1N | 181746 | 6 |
| 3   | 240 | 15 | 277 | 5 |  | FAZ-D3/1N   | 181747 | 6 |
| 3.5 | 240 | 15 | 277 | 5 |  | FAZ-D3,5/1N | 181748 | 6 |
| 4   | 240 | 15 | 277 | 5 |  | FAZ-D4/1N   | 181749 | 6 |
| 5   | 240 | 15 | 277 | 5 |  | FAZ-D5/1N   | 181750 | 6 |
| 6   | 240 | 15 | 277 | 5 |  | FAZ-D6/1N   | 181751 | 6 |
| 8   | 240 | 15 | 277 | 5 |  | FAZ-D8/1N   | 181752 | 6 |
| 10  | 240 | 15 | 277 | 5 |  | FAZ-D10/1N  | 181753 | 6 |
| 12  | 240 | 15 | 277 | 5 |  | FAZ-D12/1N  | 181754 | 6 |
| 13  | 240 | 15 | 277 | 5 |  | FAZ-D13/1N  | 181755 | 6 |
| 15  | 240 | 15 | 277 | 5 |  | FAZ-D15/1N  | 181756 | 6 |
| 16  | 240 | 15 | 277 | 5 |  | FAZ-D16/1N  | 181757 | 6 |
| 20  | 240 | 15 | 277 | 5 |  | FAZ-D20/1N  | 181758 | 6 |
| 25  | 240 | 15 | 277 | 5 |  | FAZ-D25/1N  | 181759 | 6 |
| 32  | 240 | 15 | 277 | 5 |  | FAZ-D32/1N  | 181760 | 6 |
| 40  | 240 | 15 | 277 | 5 |  | FAZ-D40/1N  | 181761 | 6 |
| 50  | 240 | 10 | -   | - |  | FAZ-D50/1N  | 181762 | 6 |
| 63  | 240 | 10 | -   | - |  | FAZ-D63/1N  | 181763 | 6 |

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| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|

### 2-pole

|     |     |    |          |   |            |        |   |
|-----|-----|----|----------|---|------------|--------|---|
| 0.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D0,5/2 | 181764 | 6 |
| 1   | 415 | 15 | 480Y/277 | 5 | FAZ-D1/2   | 181765 | 6 |
| 1.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D1,5/2 | 181766 | 6 |
| 1.6 | 415 | 15 | 480Y/277 | 5 | FAZ-D1,6/2 | 181767 | 6 |
| 2   | 415 | 15 | 480Y/277 | 5 | FAZ-D2/2   | 181768 | 6 |
| 2.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D2,5/2 | 181769 | 6 |
| 3   | 415 | 15 | 480Y/277 | 5 | FAZ-D3/2   | 181770 | 6 |
| 3.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D3,5/2 | 181771 | 6 |
| 4   | 415 | 15 | 480Y/277 | 5 | FAZ-D4/2   | 181772 | 6 |
| 5   | 415 | 15 | 480Y/277 | 5 | FAZ-D5/2   | 181773 | 6 |
| 6   | 415 | 15 | 480Y/277 | 5 | FAZ-D6/2   | 181774 | 6 |
| 7   | 415 | 15 | 480Y/277 | 5 | FAZ-D7/2   | 181775 | 6 |
| 8   | 415 | 15 | 480Y/277 | 5 | FAZ-D8/2   | 181776 | 6 |
| 10  | 415 | 15 | 480Y/277 | 5 | FAZ-D10/2  | 181777 | 6 |
| 12  | 415 | 15 | 480Y/277 | 5 | FAZ-D12/2  | 181778 | 6 |
| 13  | 415 | 15 | 480Y/277 | 5 | FAZ-D13/2  | 181779 | 6 |
| 15  | 415 | 15 | 480Y/277 | 5 | FAZ-D15/2  | 181780 | 6 |
| 16  | 415 | 15 | 480Y/277 | 5 | FAZ-D16/2  | 181781 | 6 |
| 20  | 415 | 15 | 480Y/277 | 5 | FAZ-D20/2  | 181782 | 6 |
| 25  | 415 | 15 | 480Y/277 | 5 | FAZ-D25/2  | 181783 | 6 |
| 32  | 415 | 15 | 480Y/277 | 5 | FAZ-D32/2  | 181785 | 6 |
| 40  | 415 | 15 | 480Y/277 | 5 | FAZ-D40/2  | 181786 | 6 |
| 50  | 415 | 10 | -        | - | FAZ-D50/2  | 181787 | 6 |
| 63  | 415 | 10 | -        | - | FAZ-D63/2  | 181788 | 6 |

SG53412



### 3-pole

|     |     |    |          |   |            |        |   |
|-----|-----|----|----------|---|------------|--------|---|
| 0.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D0,5/3 | 181789 | 4 |
| 1   | 415 | 15 | 480Y/277 | 5 | FAZ-D1/3   | 181790 | 4 |
| 1.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D1,5/3 | 181791 | 4 |
| 1.6 | 415 | 15 | 480Y/277 | 5 | FAZ-D1,6/3 | 181792 | 4 |
| 2   | 415 | 15 | 480Y/277 | 5 | FAZ-D2/3   | 181793 | 4 |
| 2.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D2,5/3 | 181794 | 4 |
| 3   | 415 | 15 | 480Y/277 | 5 | FAZ-D3/3   | 181795 | 4 |
| 3.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D3,5/3 | 181796 | 4 |
| 4   | 415 | 15 | 480Y/277 | 5 | FAZ-D4/3   | 181797 | 4 |
| 5   | 415 | 15 | 480Y/277 | 5 | FAZ-D5/3   | 181798 | 4 |
| 6   | 415 | 15 | 480Y/277 | 5 | FAZ-D6/3   | 181799 | 4 |
| 7   | 415 | 15 | 480Y/277 | 5 | FAZ-D7/3   | 181800 | 4 |
| 8   | 415 | 15 | 480Y/277 | 5 | FAZ-D8/3   | 181801 | 4 |
| 10  | 415 | 15 | 480Y/277 | 5 | FAZ-D10/3  | 181802 | 4 |
| 12  | 415 | 15 | 480Y/277 | 5 | FAZ-D12/3  | 181803 | 4 |
| 13  | 415 | 15 | 480Y/277 | 5 | FAZ-D13/3  | 181804 | 4 |
| 15  | 415 | 15 | 480Y/277 | 5 | FAZ-D15/3  | 181805 | 4 |
| 16  | 415 | 15 | 480Y/277 | 5 | FAZ-D16/3  | 181806 | 4 |
| 20  | 415 | 15 | 480Y/277 | 5 | FAZ-D20/3  | 181807 | 4 |
| 25  | 415 | 15 | 480Y/277 | 5 | FAZ-D25/3  | 181808 | 4 |
| 30  | 415 | 15 | 480Y/277 | 5 | FAZ-D30/3  | 181809 | 4 |
| 32  | 415 | 15 | 480Y/277 | 5 | FAZ-D32/3  | 181810 | 4 |
| 40  | 415 | 10 | 480Y/277 | 5 | FAZ-D40/3  | 181811 | 4 |
| 50  | 415 | 10 | -        | - | FAZ-D50/3  | 181812 | 4 |
| 63  | 415 | 10 | -        | - | FAZ-D63/3  | 181813 | 4 |

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| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|

### 3+N-pole

|     |     |    |          |   |             |        |   |
|-----|-----|----|----------|---|-------------|--------|---|
| 0.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D0,5/3N | 181814 | 3 |
| 1   | 415 | 15 | 480Y/277 | 5 | FAZ-D1/3N   | 181815 | 3 |
| 1.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D1,5/3N | 181816 | 3 |
| 1.6 | 415 | 15 | 480Y/277 | 5 | FAZ-D1,6/3N | 181817 | 3 |
| 2   | 415 | 15 | 480Y/277 | 5 | FAZ-D2/3N   | 181818 | 3 |
| 2.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D2,5/3N | 181819 | 3 |
| 3   | 415 | 15 | 480Y/277 | 5 | FAZ-D3/3N   | 181820 | 3 |
| 3.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D3,5/3N | 181821 | 3 |
| 4   | 415 | 15 | 480Y/277 | 5 | FAZ-D4/3N   | 181822 | 3 |
| 5   | 415 | 15 | 480Y/277 | 5 | FAZ-D5/3N   | 181823 | 3 |
| 6   | 415 | 15 | 480Y/277 | 5 | FAZ-D6/3N   | 181824 | 3 |
| 8   | 415 | 15 | 480Y/277 | 5 | FAZ-D8/3N   | 181825 | 3 |
| 10  | 415 | 15 | 480Y/277 | 5 | FAZ-D10/3N  | 181826 | 3 |
| 12  | 415 | 15 | 480Y/277 | 5 | FAZ-D12/3N  | 181827 | 3 |
| 13  | 415 | 15 | 480Y/277 | 5 | FAZ-D13/3N  | 181828 | 3 |
| 15  | 415 | 15 | 480Y/277 | 5 | FAZ-D15/3N  | 181829 | 3 |
| 16  | 415 | 15 | 480Y/277 | 5 | FAZ-D16/3N  | 181830 | 3 |
| 20  | 415 | 15 | 480Y/277 | 5 | FAZ-D20/3N  | 181639 | 3 |
| 25  | 415 | 15 | 480Y/277 | 5 | FAZ-D25/3N  | 181640 | 3 |
| 32  | 415 | 15 | 480Y/277 | 5 | FAZ-D32/3N  | 181641 | 3 |
| 40  | 415 | 15 | 480Y/277 | 5 | FAZ-D40/3N  | 181642 | 3 |
| 50  | 415 | 10 | -        | - | FAZ-D50/3N  | 181643 | 3 |
| 63  | 415 | 10 | -        | - | FAZ-D63/3N  | 181644 | 3 |

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### 4-pole

|     |     |    |          |   |            |        |   |
|-----|-----|----|----------|---|------------|--------|---|
| 0.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D0,5/4 | 181645 | 3 |
| 1   | 415 | 15 | 480Y/277 | 5 | FAZ-D1/4   | 181646 | 3 |
| 1.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D1,5/4 | 181647 | 3 |
| 1.6 | 415 | 15 | 480Y/277 | 5 | FAZ-D1,6/4 | 181648 | 3 |
| 2   | 415 | 15 | 480Y/277 | 5 | FAZ-D2/4   | 181649 | 3 |
| 2.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D2,5/4 | 181650 | 3 |
| 3   | 415 | 15 | 480Y/277 | 5 | FAZ-D3/4   | 181843 | 3 |
| 3.5 | 415 | 15 | 480Y/277 | 5 | FAZ-D3,5/4 | 181844 | 3 |
| 4   | 415 | 15 | 480Y/277 | 5 | FAZ-D4/4   | 181845 | 3 |
| 5   | 415 | 15 | 480Y/277 | 5 | FAZ-D5/4   | 181846 | 3 |
| 6   | 415 | 15 | 480Y/277 | 5 | FAZ-D6/4   | 181847 | 3 |
| 7   | 415 | 15 | 480Y/277 | 5 | FAZ-D7/4   | 181848 | 3 |
| 8   | 415 | 15 | 480Y/277 | 5 | FAZ-D8/4   | 181849 | 3 |
| 10  | 415 | 15 | 480Y/277 | 5 | FAZ-D10/4  | 181850 | 3 |
| 12  | 415 | 15 | 480Y/277 | 5 | FAZ-D12/4  | 181851 | 3 |
| 13  | 415 | 15 | 480Y/277 | 5 | FAZ-D13/4  | 181852 | 3 |
| 15  | 415 | 15 | 480Y/277 | 5 | FAZ-D15/4  | 181853 | 3 |
| 16  | 415 | 15 | 480Y/277 | 5 | FAZ-D16/4  | 181854 | 3 |
| 20  | 415 | 15 | 480Y/277 | 5 | FAZ-D20/4  | 181855 | 3 |
| 25  | 415 | 15 | 480Y/277 | 5 | FAZ-D25/4  | 181856 | 3 |
| 32  | 415 | 15 | 480Y/277 | 5 | FAZ-D32/4  | 181857 | 3 |
| 40  | 415 | 10 | 480Y/277 | 5 | FAZ-D40/4  | 181858 | 3 |
| 50  | 415 | 10 | -        | - | FAZ-D50/4  | 181859 | 3 |
| 63  | 415 | 10 | -        | - | FAZ-D63/4  | 181860 | 3 |

## FAZ Miniature Circuit Breakers (MCBs)

### Characteristic K

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|---------------|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
| <b>1-pole</b> |                            |                      |   |                                |  |                     |             |                         |
| 0.5           | 240/415                    | 15                   | 277   | 5                              |  | FAZ-K0,5/1          | 278589      | 12/120                  |
| 1             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-K1/1            | 278590      | 12/120                  |
| 1.6           | 240/415                    | 15                   | 277   | 5                              |  | FAZ-K1,6/1          | 278591      | 12/120                  |
| 2             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-K2/1            | 278592      | 12/120                  |
| 3             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-K3/1            | 278593      | 12/120                  |
| 4             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-K4/1            | 278594      | 12/120                  |
| 6             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-K6/1            | 278595      | 12/120                  |
| 8             | 240/415                    | 15                   | 277   | 5                              |  | FAZ-K8/1            | 278596      | 12/120                  |
| 10            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-K10/1           | 278597      | 12/120                  |
| 13            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-K13/1           | 278598      | 12/120                  |
| 16            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-K16/1           | 278599      | 12/120                  |
| 20            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-K20/1           | 278600      | 12/120                  |
| 25            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-K25/1           | 278601      | 12/120                  |
| 32            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-K32/1           | 278602      | 12/120                  |
| 40            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-K40/1           | 278603      | 12/120                  |
| 50            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-K50/1           | 278604      | 12/120                  |
| 63            | 240/415                    | 15                   | 277   | 5                              |  | FAZ-K63/1           | 278605      | 12/120                  |

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SG55612



|                 |     |    |     |   |  |             |        |      |
|-----------------|-----|----|-----|---|--|-------------|--------|------|
| <b>1+N-pole</b> |     |    |     |   |  |             |        |      |
| 0.5             | 240 | 15 | 277 | 5 |  | FAZ-K0,5/1N | 278702 | 1/60 |
| 1               | 240 | 15 | 277 | 5 |  | FAZ-K1/1N   | 278703 | 1/60 |
| 1.6             | 240 | 15 | 277 | 5 |  | FAZ-K1,6/1N | 278704 | 1/60 |
| 2               | 240 | 15 | 277 | 5 |  | FAZ-K2/1N   | 278705 | 1/60 |
| 3               | 240 | 15 | 277 | 5 |  | FAZ-K3/1N   | 278706 | 1/60 |
| 4               | 240 | 15 | 277 | 5 |  | FAZ-K4/1N   | 278707 | 1/60 |
| 6               | 240 | 15 | 277 | 5 |  | FAZ-K6/1N   | 278708 | 1/60 |
| 8               | 240 | 15 | 277 | 5 |  | FAZ-K8/1N   | 278709 | 1/60 |
| 10              | 240 | 15 | 277 | 5 |  | FAZ-K10/1N  | 278710 | 1/60 |
| 13              | 240 | 15 | 277 | 5 |  | FAZ-K13/1N  | 278711 | 1/60 |
| 16              | 240 | 15 | 277 | 5 |  | FAZ-K16/1N  | 278712 | 1/60 |
| 20              | 240 | 15 | 277 | 5 |  | FAZ-K20/1N  | 278713 | 1/60 |
| 25              | 240 | 15 | 277 | 5 |  | FAZ-K25/1N  | 278714 | 1/60 |
| 32              | 240 | 15 | 277 | 5 |  | FAZ-K32/1N  | 278715 | 1/60 |
| 40              | 240 | 15 | 277 | 5 |  | FAZ-K40/1N  | 278716 | 1/60 |
| 50              | 240 | 15 | 277 | 5 |  | FAZ-K50/1N  | 278717 | 1/60 |
| 63              | 240 | 15 | 277 | 5 |  | FAZ-K63/1N  | 278718 | 1/60 |



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| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|

### 2-pole

|     |     |    |          |   |            |        |      |
|-----|-----|----|----------|---|------------|--------|------|
| 0.5 | 415 | 15 | 480Y/277 | 5 | FAZ-K0,5/2 | 278788 | 1/60 |
| 1   | 415 | 15 | 480Y/277 | 5 | FAZ-K1/2   | 278789 | 1/60 |
| 1.6 | 415 | 15 | 480Y/277 | 5 | FAZ-K1,6/2 | 278790 | 1/60 |
| 2   | 415 | 15 | 480Y/277 | 5 | FAZ-K2/2   | 278791 | 1/60 |
| 3   | 415 | 15 | 480Y/277 | 5 | FAZ-K3/2   | 278792 | 1/60 |
| 4   | 415 | 15 | 480Y/277 | 5 | FAZ-K4/2   | 278793 | 1/60 |
| 6   | 415 | 15 | 480Y/277 | 5 | FAZ-K6/2   | 278794 | 1/60 |
| 8   | 415 | 15 | 480Y/277 | 5 | FAZ-K8/2   | 278795 | 1/60 |
| 10  | 415 | 15 | 480Y/277 | 5 | FAZ-K10/2  | 278796 | 1/60 |
| 13  | 415 | 15 | 480Y/277 | 5 | FAZ-K13/2  | 278797 | 1/60 |
| 16  | 415 | 15 | 480Y/277 | 5 | FAZ-K16/2  | 278798 | 1/60 |
| 20  | 415 | 15 | 480Y/277 | 5 | FAZ-K20/2  | 278799 | 1/60 |
| 25  | 415 | 15 | 480Y/277 | 5 | FAZ-K25/2  | 278800 | 1/60 |
| 32  | 415 | 15 | 480Y/277 | 5 | FAZ-K32/2  | 278801 | 1/60 |
| 40  | 415 | 15 | 480Y/277 | 5 | FAZ-K40/2  | 278802 | 1/60 |
| 50  | 415 | 15 | 480Y/277 | 5 | FAZ-K50/2  | 278803 | 1/60 |
| 63  | 415 | 15 | 480Y/277 | 5 | FAZ-K63/2  | 278804 | 1/60 |

SG53412



### 3-pole

|     |     |    |          |   |            |        |      |
|-----|-----|----|----------|---|------------|--------|------|
| 0.5 | 415 | 15 | 480Y/277 | 5 | FAZ-K0,5/3 | 278901 | 1/40 |
| 1   | 415 | 15 | 480Y/277 | 5 | FAZ-K1/3   | 278902 | 1/40 |
| 1.6 | 415 | 15 | 480Y/277 | 5 | FAZ-K1,6/3 | 278903 | 1/40 |
| 2   | 415 | 15 | 480Y/277 | 5 | FAZ-K2/3   | 278904 | 1/40 |
| 3   | 415 | 15 | 480Y/277 | 5 | FAZ-K3/3   | 278905 | 1/40 |
| 4   | 415 | 15 | 480Y/277 | 5 | FAZ-K4/3   | 278906 | 1/40 |
| 6   | 415 | 15 | 480Y/277 | 5 | FAZ-K6/3   | 278907 | 1/40 |
| 8   | 415 | 15 | 480Y/277 | 5 | FAZ-K8/3   | 278908 | 1/40 |
| 10  | 415 | 15 | 480Y/277 | 5 | FAZ-K10/3  | 278909 | 1/40 |
| 13  | 415 | 15 | 480Y/277 | 5 | FAZ-K13/3  | 278910 | 1/40 |
| 16  | 415 | 15 | 480Y/277 | 5 | FAZ-K16/3  | 278911 | 1/40 |
| 20  | 415 | 15 | 480Y/277 | 5 | FAZ-K20/3  | 278912 | 1/40 |
| 25  | 415 | 15 | 480Y/277 | 5 | FAZ-K25/3  | 278913 | 1/40 |
| 32  | 415 | 15 | 480Y/277 | 5 | FAZ-K32/3  | 278914 | 1/40 |
| 40  | 415 | 15 | 480Y/277 | 5 | FAZ-K40/3  | 278915 | 1/40 |
| 50  | 415 | 15 | 480Y/277 | 5 | FAZ-K50/3  | 278916 | 1/40 |
| 63  | 415 | 15 | 480Y/277 | 5 | FAZ-K63/3  | 278917 | 1/40 |

| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|

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### 3+N-pole

|     |     |    |          |   |             |        |      |
|-----|-----|----|----------|---|-------------|--------|------|
| 0.5 | 415 | 15 | 480Y/277 | 5 | FAZ-K0,5/3N | 279003 | 1/30 |
| 1   | 415 | 15 | 480Y/277 | 5 | FAZ-K1/3N   | 279004 | 1/30 |
| 1.6 | 415 | 15 | 480Y/277 | 5 | FAZ-K1,6/3N | 279005 | 1/30 |
| 2   | 415 | 15 | 480Y/277 | 5 | FAZ-K2/3N   | 279006 | 1/30 |
| 3   | 415 | 15 | 480Y/277 | 5 | FAZ-K3/3N   | 279007 | 1/30 |
| 4   | 415 | 15 | 480Y/277 | 5 | FAZ-K4/3N   | 279008 | 1/30 |
| 6   | 415 | 15 | 480Y/277 | 5 | FAZ-K6/3N   | 279009 | 1/30 |
| 8   | 415 | 15 | 480Y/277 | 5 | FAZ-K8/3N   | 279010 | 1/30 |
| 10  | 415 | 15 | 480Y/277 | 5 | FAZ-K10/3N  | 279011 | 1/30 |
| 13  | 415 | 15 | 480Y/277 | 5 | FAZ-K13/3N  | 279012 | 1/30 |
| 16  | 415 | 15 | 480Y/277 | 5 | FAZ-K16/3N  | 279013 | 1/30 |
| 20  | 415 | 15 | 480Y/277 | 5 | FAZ-K20/3N  | 279014 | 1/30 |
| 25  | 415 | 15 | 480Y/277 | 5 | FAZ-K25/3N  | 279015 | 1/30 |
| 32  | 415 | 15 | 480Y/277 | 5 | FAZ-K32/3N  | 279016 | 1/30 |
| 40  | 415 | 15 | 480Y/277 | 5 | FAZ-K40/3N  | 279017 | 1/30 |
| 50  | 415 | 15 | 480Y/277 | 5 | FAZ-K50/3N  | 279018 | 1/30 |
| 63  | 415 | 15 | 480Y/277 | 5 | FAZ-K63/3N  | 279019 | 1/30 |

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### 4-pole

|     |     |    |          |   |            |        |      |
|-----|-----|----|----------|---|------------|--------|------|
| 0.5 | 415 | 15 | 480Y/277 | 5 | FAZ-K0,5/4 | 279089 | 1/30 |
| 1   | 415 | 15 | 480Y/277 | 5 | FAZ-K1/4   | 279090 | 1/30 |
| 1.6 | 415 | 15 | 480Y/277 | 5 | FAZ-K1,6/4 | 279091 | 1/30 |
| 2   | 415 | 15 | 480Y/277 | 5 | FAZ-K2/4   | 279092 | 1/30 |
| 3   | 415 | 15 | 480Y/277 | 5 | FAZ-K3/4   | 279093 | 1/30 |
| 4   | 415 | 15 | 480Y/277 | 5 | FAZ-K4/4   | 279094 | 1/30 |
| 6   | 415 | 15 | 480Y/277 | 5 | FAZ-K6/4   | 279095 | 1/30 |
| 8   | 415 | 15 | 480Y/277 | 5 | FAZ-K8/4   | 279096 | 1/30 |
| 10  | 415 | 15 | 480Y/277 | 5 | FAZ-K10/4  | 279097 | 1/30 |
| 13  | 415 | 15 | 480Y/277 | 5 | FAZ-K13/4  | 279098 | 1/30 |
| 16  | 415 | 15 | 480Y/277 | 5 | FAZ-K16/4  | 279099 | 1/30 |
| 20  | 415 | 15 | 480Y/277 | 5 | FAZ-K20/4  | 279100 | 1/30 |
| 25  | 415 | 15 | 480Y/277 | 5 | FAZ-K25/4  | 279101 | 1/30 |
| 32  | 415 | 15 | 480Y/277 | 5 | FAZ-K32/4  | 279102 | 1/30 |
| 40  | 415 | 15 | 480Y/277 | 5 | FAZ-K40/4  | 279103 | 1/30 |
| 50  | 415 | 15 | 480Y/277 | 5 | FAZ-K50/4  | 279104 | 1/30 |
| 63  | 415 | 15 | 480Y/277 | 5 | FAZ-K63/4  | 279105 | 1/30 |

## FAZ Miniature Circuit Breakers (MCBs)

### Characteristic S

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|---------------|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
| <b>1-pole</b> |                            |                      |   |                                |  |                     |             |                         |
|               | 1                          | 240/415              | 10  | 277                            | 5  | FAZ-S1/1            | 181861      | 12                      |
|               | 2                          | 240/415              | 10  | 277                            | 5  | FAZ-S2/1            | 181862      | 12                      |
|               | 3                          | 240/415              | 10  | 277                            | 5  | FAZ-S3/1            | 181863      | 12                      |
|               | 4                          | 240/415              | 10  | 277                            | 5  | FAZ-S4/1            | 181864      | 12                      |
|               | 6                          | 240/415              | 10  | 277                            | 5  | FAZ-S6/1            | 181865      | 12                      |
|               | 10                         | 240/415              | 10  | 277                            | 5  | FAZ-S10/1           | 181866      | 12                      |
|               | 16                         | 240/415              | 10  | 277                            | 5  | FAZ-S16/1           | 181867      | 12                      |
|               | 20                         | 240/415              | 10  | 277                            | 5  | FAZ-S20/1           | 181868      | 12                      |
|               | 25                         | 240/415              | 10  | 277                            | 5  | FAZ-S25/1           | 181869      | 12                      |
|               | 32                         | 240/415              | 10  | 277                            | 5  | FAZ-S32/1           | 181870      | 12                      |
|               | 40                         | 240/415              | 10  | 277                            | 5  | FAZ-S40/1           | 181871      | 12                      |

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SG55112



|               |    |     |    |          |   |           |        |   |
|---------------|----|-----|----|----------|---|-----------|--------|---|
| <b>2-pole</b> |    |     |    |          |   |           |        |   |
|               | 1  | 415 | 10 | 480Y/277 | 5 | FAZ-S1/2  | 181872 | 6 |
|               | 2  | 415 | 10 | 480Y/277 | 5 | FAZ-S2/2  | 181873 | 6 |
|               | 3  | 415 | 10 | 480Y/277 | 5 | FAZ-S3/2  | 181874 | 6 |
|               | 4  | 415 | 10 | 480Y/277 | 5 | FAZ-S4/2  | 181875 | 6 |
|               | 6  | 415 | 10 | 480Y/277 | 5 | FAZ-S6/2  | 181876 | 6 |
|               | 10 | 415 | 10 | 480Y/277 | 5 | FAZ-S10/2 | 181877 | 6 |
|               | 16 | 415 | 10 | 480Y/277 | 5 | FAZ-S16/2 | 181878 | 6 |
|               | 20 | 415 | 10 | 480Y/277 | 5 | FAZ-S20/2 | 181879 | 6 |
|               | 25 | 415 | 10 | 480Y/277 | 5 | FAZ-S25/2 | 181880 | 6 |
|               | 32 | 415 | 10 | 480Y/277 | 5 | FAZ-S32/2 | 181881 | 6 |
|               | 40 | 415 | 10 | 480Y/277 | 5 | FAZ-S40/2 | 181882 | 6 |

## FAZ Miniature Circuit Breakers (MCBs)

### Characteristic Z

| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
| <b>1-pole</b>              |                      |   |                                |  |                     |             |                         |
| 0,5                        | 240/415              | 15  | 277                            | 5  | FAZ-Z0,5/1          | 278617      | 12/120                  |
| 1                          | 240/415              | 15  | 277                            | 5  | FAZ-Z1/1            | 278618      | 12/120                  |
| 1.6                        | 240/415              | 15  | 277                            | 5  | FAZ-Z1,6/1          | 278619      | 12/120                  |
| 2                          | 240/415              | 15  | 277                            | 5  | FAZ-Z2/1            | 278620      | 12/120                  |
| 3                          | 240/415              | 15  | 277                            | 5  | FAZ-Z3/1            | 278621      | 12/120                  |
| 4                          | 240/415              | 15  | 277                            | 5  | FAZ-Z4/1            | 278622      | 12/120                  |
| 6                          | 240/415              | 15  | 277                            | 5  | FAZ-Z6/1            | 278623      | 12/120                  |
| 8                          | 240/415              | 15  | 277                            | 5  | FAZ-Z8/1            | 278624      | 12/120                  |
| 10                         | 240/415              | 15  | 277                            | 5  | FAZ-Z10/1           | 278625      | 12/120                  |
| 13                         | 240/415              | 15  | 277                            | 5  | FAZ-Z13/1           | 106020      | 12/120                  |
| 16                         | 240/415              | 15  | 277                            | 5  | FAZ-Z16/1           | 278626      | 12/120                  |
| 20                         | 240/415              | 15  | 277                            | 5  | FAZ-Z20/1           | 278627      | 12/120                  |
| 25                         | 240/415              | 15  | 277                            | 5  | FAZ-Z25/1           | 278628      | 12/120                  |
| 32                         | 240/415              | 15  | 277                            | 5  | FAZ-Z32/1           | 278629      | 12/120                  |
| 40                         | 240/415              | 15  | 277                            | 5  | FAZ-Z40/1           | 278630      | 12/120                  |
| 50                         | 240/415              | 15  | 277                            | 5  | FAZ-Z50/1           | 278631      | 12/120                  |
| 63                         | 240/415              | 15  | 277                            | 5  | FAZ-Z63/1           | 278632      | 12/120                  |

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SG55112



|               |     |    |          |   |            |        |      |
|---------------|-----|----|----------|---|------------|--------|------|
| <b>2-pole</b> |     |    |          |   |            |        |      |
| 0,5           | 415 | 15 | 480Y/277 | 5 | FAZ-Z0,5/2 | 278816 | 1/60 |
| 1             | 415 | 15 | 480Y/277 | 5 | FAZ-Z1/2   | 278817 | 1/60 |
| 1.6           | 415 | 15 | 480Y/277 | 5 | FAZ-Z1,6/2 | 278818 | 1/60 |
| 2             | 415 | 15 | 480Y/277 | 5 | FAZ-Z2/2   | 278819 | 1/60 |
| 3             | 415 | 15 | 480Y/277 | 5 | FAZ-Z3/2   | 278820 | 1/60 |
| 4             | 415 | 15 | 480Y/277 | 5 | FAZ-Z4/2   | 278821 | 1/60 |
| 6             | 415 | 15 | 480Y/277 | 5 | FAZ-Z6/2   | 278822 | 1/60 |
| 8             | 415 | 15 | 480Y/277 | 5 | FAZ-Z8/2   | 278823 | 1/60 |
| 10            | 415 | 15 | 480Y/277 | 5 | FAZ-Z10/2  | 278824 | 1/60 |
| 13            | 415 | 15 | 480Y/277 | 5 | FAZ-Z13/2  | 106021 | 1/60 |
| 16            | 415 | 15 | 480Y/277 | 5 | FAZ-Z16/2  | 278825 | 1/60 |
| 20            | 415 | 15 | 480Y/277 | 5 | FAZ-Z20/2  | 278826 | 1/60 |
| 25            | 415 | 15 | 480Y/277 | 5 | FAZ-Z25/2  | 278827 | 1/60 |
| 32            | 415 | 15 | 480Y/277 | 5 | FAZ-Z32/2  | 278828 | 1/60 |
| 40            | 415 | 15 | 480Y/277 | 5 | FAZ-Z40/2  | 278829 | 1/60 |
| 50            | 415 | 15 | 480Y/277 | 5 | FAZ-Z50/2  | 278830 | 1/60 |
| 63            | 415 | 15 | 480Y/277 | 5 | FAZ-Z63/2  | 278831 | 1/60 |

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### 3-pole

| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
| 0.5                        | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z0,5/3          | 278918      | 1/40                    |
| 1                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z1/3            | 278919      | 1/40                    |
| 1.6                        | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z1,6/3          | 278920      | 1/40                    |
| 2                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z2/3            | 278921      | 1/40                    |
| 3                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z3/3            | 278922      | 1/40                    |
| 4                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z4/3            | 278923      | 1/40                    |
| 6                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z6/3            | 278924      | 1/40                    |
| 8                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z8/3            | 278925      | 1/40                    |
| 10                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z10/3           | 278926      | 1/40                    |
| 13                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z13/3           | 106022      | 1/40                    |
| 16                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z16/3           | 278927      | 1/40                    |
| 20                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z20/3           | 278928      | 1/40                    |
| 25                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z25/3           | 278929      | 1/40                    |
| 32                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z32/3           | 278930      | 1/40                    |
| 40                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z40/3           | 278931      | 1/40                    |
| 50                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z50/3           | 278932      | 1/40                    |
| 63                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z63/3           | 278933      | 1/40                    |

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### 4-pole

| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL1077<br>(V) | Breaking capacity<br>acc. to<br>UL1077<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|--------------------------------|--|---------------------|-------------|-------------------------|
| 0.5                        | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z0,5/4          | 279106      | 1/60                    |
| 1                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z1/4            | 279107      | 1/60                    |
| 1.6                        | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z1,6/4          | 279108      | 1/60                    |
| 2                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z2/4            | 279109      | 1/60                    |
| 3                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z3/4            | 279110      | 1/60                    |
| 4                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z4/4            | 279111      | 1/60                    |
| 6                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z6/4            | 279112      | 1/60                    |
| 8                          | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z8/4            | 279113      | 1/60                    |
| 10                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z10/4           | 279114      | 1/60                    |
| 13                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z13/4           | 106023      | 1/60                    |
| 16                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z16/4           | 279115      | 1/60                    |
| 20                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z20/4           | 279116      | 1/60                    |
| 25                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z25/4           | 279117      | 1/60                    |
| 32                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z32/4           | 279118      | 1/60                    |
| 40                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z40/4           | 279119      | 1/60                    |
| 50                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z50/4           | 279120      | 1/60                    |
| 63                         | 415                  | 15  | 480Y/277                       | 5  | FAZ-Z63/4           | 279121      | 1/60                    |

## FAZ-PN Miniature Circuit Breakers (MCBs)

### Characteristic B

| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|---|---------------------|-------------|-------------------------|
| <b>1+N-pole (1MU)</b>      |                      |   |   |                     |             |                         |
| 6                          | 240                  | 6   | 10  | FAZ-PN-B6/1N        | 279146      | 12/120                  |
| 10                         | 240                  | 6   | 10  | FAZ-PN-B10/1N       | 279147      | 12/120                  |
| 13                         | 240                  | 6   | 10  | FAZ-PN-B13/1N       | 279148      | 12/120                  |
| 16                         | 240                  | 6   | 10  | FAZ-PN-B16/1N       | 279149      | 12/120                  |
| 20                         | 240                  | 6   | 10  | FAZ-PN-B20/1N       | 279150      | 12/120                  |
| 25                         | 240                  | 6   | 10  | FAZ-PN-B25/1N       | 279151      | 12/120                  |
| 32                         | 240                  | 6   | 10  | FAZ-PN-B32/1N       | 279152      | 12/120                  |
| 40                         | 240                  | 6   | 10  | FAZ-PN-B40/1N       | 279153      | 12/120                  |

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## FAZ-PN Miniature Circuit Breakers (MCBs)

### Characteristic C



| Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|----------------------|---|---|---------------------|-------------|-------------------------|
| <b>1+N-pole (1MU)</b>      |                      |   |   |                     |             |                         |
| 2                          | 240                  | 6   | 10  | FAZ-PN-C2/1N        | 279154      | 12/120                  |
| 4                          | 240                  | 6   | 10  | FAZ-PN-C4/1N        | 279155      | 12/120                  |
| 6                          | 240                  | 6   | 10  | FAZ-PN-C6/1N        | 279156      | 12/120                  |
| 10                         | 240                  | 6   | 10  | FAZ-PN-C10/1N       | 279157      | 12/120                  |
| 13                         | 240                  | 6   | 10  | FAZ-PN-C13/1N       | 279158      | 12/120                  |
| 16                         | 240                  | 6   | 10  | FAZ-PN-C16/1N       | 279159      | 12/120                  |
| 20                         | 240                  | 6   | 10  | FAZ-PN-C20/1N       | 279160      | 12/120                  |
| 25                         | 240                  | 6   | 10  | FAZ-PN-C25/1N       | 279161      | 12/120                  |
| 32                         | 240                  | 6   | 10  | FAZ-PN-C32/1N       | 279162      | 12/120                  |
| 40                         | 240                  | 6   | 10  | FAZ-PN-C40/1N       | 279163      | 12/120                  |

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## FAZ-...-HS Miniature Circuit Breakers (MCBs)

### Characteristic B

|  | Rated current<br>$I_n$ (A) | Rated voltage<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|--|----------------------------|----------------------|---|---------------------|-------------|-------------------------|
| <b>1-pole</b>  |                            |                      |   |                     |             |                         |
|  wa_sg00114 | 4                          | 240                  | 10  | FAZ-B4/1-HS         | 279274      | 12/120                  |
| <b>2-pole</b>  |                            |                      |   |                     |             |                         |
|  SG55512    | 4                          | 240                  | 10  | FAZ-B4/2-HS         | 279275      | 1/60                    |

## FAZ Miniature Circuit Breakers

### Accessories:

|   |              |                        |
|---|--------------|------------------------|
| Auxiliary switch for subsequent installation        | ZP-IHK       | 286052                 |
| Auxiliary switch for subsequent installation        | ZP-WHK       | 286053                 |
| Tripping signal contact for subsequent installation | ZP-NHK       | 248437                 |
| Shunt trip release                                  | ZP-ASA       | 248438, 248439         |
| Undervoltage release                                | Z-USA        | 258288, 248289, 248290 |
|   | Z-USD        | 248292, 248291         |
| Switching interlock                                 | Z-IS/SPE-1TE | 274418                 |
| Terminal cover                                      |              |                        |
| 1-pole  | Z7-AK-1TE    | 750754200              |
| 2-pole  | Z-CV/SD-2P   | 221954800              |
| 3-pole  | Z-CV/SD-3P   | 221954900              |
| 4-pole  | Z-CV/SD-4P   | 221953900              |

## Specifications FAZ

### Technical data

|  | B Curve  | C Curve   | D Curve   |
|--|--|---|---|
| <b>Electrical</b>                        |  |   |   |
| Approvals                                | UR (UL 1077), CSA (CSA 22.2 No. 235), CE, CB (Not for D50 and D63) |   |   |
| Standards                                | IEC/EN 60947-2   |   |   |
| Short-circuit trip response              | 3–5 $I_n$  | 5–10 $I_n$  | 10–20 $I_n$   |
| <b>Supplementary Protectors – UL/CSA</b> |  |   |   |
| Current range                            | 1–63A  | 0.5–63A   | 0.5–40A   |
| Maximum voltage ratings – UL/CSA         |  |   |   |
| Single-pole                              | 277 Vac<br>48 Vdc  | 277 Vac<br>48 Vdc   | 277 Vac<br>48 Vdc   |
| Two-, three-pole                         | 480Y/277 Vac   | 480Y/277 Vac  | 480Y/277 Vac  |
| Two poles in series                      | 96 Vdc   | 96 Vdc  | 96 Vdc  |
| Thermal tripping characteristics         |  |   |   |
| Single-pole                              | < 1 hour @ 1.35 x $I_n$ @ 40°C                                     | < 1 hour @ 1.35 x $I_n$ @ 40°C                                  | < 1 hour @ 1.35 x $I_n$ @ 40°C                                  |
| Multi-pole                               | < 1 hour @ 1.45 x $I_n$ @ 40°C                                     | < 1 hour @ 1.45 x $I_n$ @ 40°C                                  | < 1 hour @ 1.45 x $I_n$ @ 40°C                                  |
| Short-circuit ratings (at max. voltage)  |  |   |   |
| Single-pole                              | 10 kA (5 kA for 40–63A device)                                     | 10 kA (5 kA for 40–63A device)                                  | 5 kA  |
| Two-, three-pole                         | 10 kA (5 kA for 40–63A device)                                     | 10 kA (5 kA for 40–63A device)                                  | 5 kA  |
| Single-pole                              | 10 kA @ 48 Vdc   | 10 kA @ 48 Vdc  | 10 kA @ 48 Vdc  |
| Two poles in series                      | 10 kA @ 96 Vdc   | 10 kA @ 96 Vdc  | 10 kA @ 96 Vdc  |
| <b>Miniature Circuit Breaker – IEC</b>   |  |   |   |
| Current range                            | 1–63A  | 0.5–63A   | 0.5–63A   |
| Maximum voltage ratings – IEC 60947-2    |  |   |   |
| Single-pole                              | 230 Vac<br>60 Vdc  | 230 Vac<br>60 Vdc   | 230 Vac<br>60 Vdc   |
| Two-, three-pole                         | 230/400 Vac  | 230/400 Vac   | 230/400 Vac   |
| Maximum Voltage Ratings – IEC 60898      |  |   |   |
| Single-pole                              | 240 Vac  | 240 Vac   | 240 Vac   |
| Two-, three-pole                         | 240/415 Vac  | 240/415 Vac   | 240/415 Vac   |
| Thermal tripping characteristics         |  |   |   |
|  | > 1 hour @ 1.05 x $I_n$ @ 40°C<br>< 1 hour @ 1.3 x $I_n$ @ 40°C    | > 1 hour @ 1.05 x $I_n$ @ 40°C<br>< 1 hour @ 1.3 x $I_n$ @ 40°C | > 1 hour @ 1.05 x $I_n$ @ 40°C<br>< 1 hour @ 1.3 x $I_n$ @ 40°C |
| Interrupt ratings (at max. voltage)      |  |   |   |
| IEC 60947-2                              | 15 kA  | 15 kA   | 15 kA (type D50 and D63: 10kA)                                  |
| IEC 60898                                | 10 kA  | 10 kA   | 10 kA (type D50 and D63: 6kA)                                   |
| Operational switching capacity           | 7.5 kA   | 7.5 kA  | 7.5 kA (type D50 and D63: 6kA)                                  |
| Max. back-up fuse [gL/gG]                | 125A   | 125A  | 125A  |
| Rated impulse withstand – $U_{imp}$      | 4000 Vac   | 4000 Vac  | 4000 Vac  |
| Rated insulation voltage – $U_i$         | 440 Vac  | 440 Vac   | 440 Vac   |
| <b>Environmental/General</b>             |  |   |   |
| Selectivity class                        | 3  | 3   | 3   |
| Lifespan (operations)                    | > 10000 (1 operation = ON/OFF)                                     | > 10000 (1 operation = ON/OFF)                                  | > 10000 (1 operation = ON/OFF)                                  |
| Shock (IEC 68-2-22)                      | 10g–120 ms   | 10g–120 ms  | 10g–120 ms  |
| Operating temperature range              | -40 to +75°C   | -40 to +75°C  | -40 to +75°C  |
| <b>Mechanical</b>                        |  |   |   |
| Standard front dimension                 |  |   |   |
| Device height                            | 80 mm  | 80 mm   | 80 mm   |
| Terminal protection                      | Finger and back-of-hand proof                                      | Finger and back-of-hand proof                                   | Finger and back-of-hand proof                                   |
| Mounting width per pole                  | 17.5 mm  | 17.5 mm   | 17.5 mm   |
| Mounting                                 | IEC/EN 60715 top-hat rail  | IEC/EN 60715 top-hat rail                                       | IEC/EN 60715 top-hat rail                                       |
| Degree of protection                     | IP20   | IP20  | IP20  |
| Terminals top and bottom                 | Twin-purpose terminals   | Twin-purpose terminals  | Twin-purpose terminals  |
| Supply connection                        | Line or load side  | Line or load side   | Line or load side   |
| Terminal capacity [mm <sup>2</sup> ]     | 1 x 25 / 2 x 10  | 1 x 25 / 2 x 10   | 1 x 25 / 2 x 10   |
| Torque                                   | 2.4 Nm   | 2.4 Nm  | 2.4 Nm  |
| Thickness of busbar material             | 0.8–2 mm   | 0.8–2 mm  | 0.8–2 mm  |
| Mounting position                        | As required  | As required   | As required   |

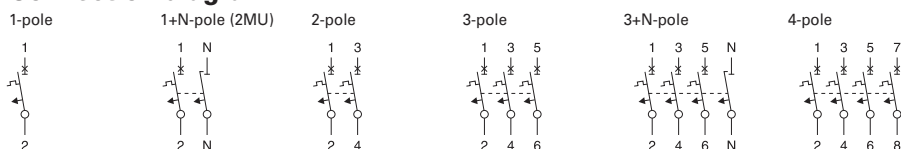


## Specifications FAZ

### Technical Data (continued)

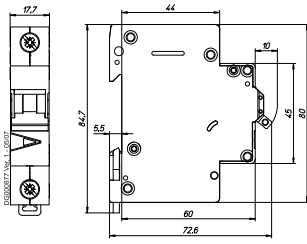
|  | K Curve   | S Curve   | Z Curve   |
|--|---|---|---|
| <b>Electrical</b>                                |   |   |   |
| Approvals  | UR (UL 1077), CE  | UR (UL 1077), CSA (CSA 22.2 No. 235) for 1-16 A, CE, CB         | UR (UL 1077), CE  |
| Standards  | IEC/EN 60947-2  |   |   |
| Short-circuit trip response                      | 8–12 $I_n$  | 13–17 $I_n$   | 2–3 $I_n$   |
| <b>Supplementary Protectors—UL/CSA</b>           |   |   |   |
| Current range                                    | 0.5–63A   | 0.5–40A   | 1–63A   |
| Maximum voltage ratings—UL/CSA                   |   |   |   |
| Single-pole, single-pole + neutral               | 277 Vac<br>48 Vdc   | 277 Vac<br>48 Vdc   | 277 Vac<br>48 Vdc   |
| Two-, three-, four-pole and three-pole + neutral | 480Y/277 Vac  | 480Y/277 Vac  | 480Y/277 Vac  |
| Two poles in series                              | 96 Vdc  | 96 Vdc  | 96 Vdc  |
| Thermal tripping characteristics                 |   |   |   |
| Single-pole                                      | < 1 hour @ 1.35 x $I_n$ @ 40°C                                  | < 1 hour @ 1.35 x $I_n$ @ 40°C                                  | < 1 hour @ 1.35 x $I_n$ @ 40°C                                  |
| Multi-pole                                       | < 1 hour @ 1.45 x $I_n$ @ 40°C                                  | < 1 hour @ 1.45 x $I_n$ @ 40°C                                  | < 1 hour @ 1.45 x $I_n$ @ 40°C                                  |
| Short-circuit ratings (at max. voltage)          |   |   |   |
| Single-pole                                      | 5 kA @ 277 Vac  | 5 kA @ 277 Vac  | 5 kA @ 277 Vac  |
| Single-pole + neutral                            | 5 kA @ 277 Vac  | 5 kA @ 277 Vac  | 5 kA @ 277 Vac  |
| Two-, three-, four-pole                          | 5 kA @ 480Y/277 Vac   | 5 kA @ 480Y/277 Vac   | 5 kA @ 480Y/277 Vac   |
| <b>Miniature Circuit Breaker—IEC</b>             |   |   |   |
| Current range                                    | 0.5–63A   | 0.5–40A   | 1–63A   |
| Maximum voltage ratings—IEC 60947-2              |   |   |   |
| Single-pole, single-pole + neutral               | 240 Vac   | 240 Vac   | 240 Vac   |
| Single-pole                                      | 60 Vdc  | 60 Vdc  | 60 Vdc  |
| Two-, three-, four-pole, three-pole + neutral    | 240/415 Vac   | 240/415 Vac   | 240/415 Vac   |
| Thermal tripping characteristics                 |   |   |   |
|  | > 1 hour @ 1.05 x $I_n$ @ 30°C<br>< 1 hour @ 1.3 x $I_n$ @ 30°C | > 1 hour @ 1.05 x $I_n$ @ 30°C<br>< 1 hour @ 1.3 x $I_n$ @ 30°C | > 1 hour @ 1.05 x $I_n$ @ 30°C<br>< 1 hour @ 1.3 x $I_n$ @ 30°C |
| Interrupt ratings (at max. voltage)              |   |   |   |
| IEC 60947-2                                      | 15 kA   | 10 kA   | 10 kA   |
| Operational switching capacity                   | 7.5 kA  | 7.5 kA  | 7.5 kA  |
| Max. back-up fuse [gL/gG]                        | 125A  | 125A  | 125A  |
| Rated impulse withstand— $U_{imp}$               | 4000 Vac  | 4000 Vac  | 4000 Vac  |
| Rated insulation voltage— $U_i$                  | 440 Vac   | 440 Vac   | 440 Vac   |
| <b>Environmental/General</b>                     |   |   |   |
| Selectivity class                                | 3   | 3   | 3   |
| Lifespan (operations)                            | > 10000 (1 operation = ON/OFF)                                  | > 10000 (1 operation = ON/OFF)                                  | > 10000 (1 operation = ON/OFF)                                  |
| Shock (IEC 68-2-22)                              | 10g–120 ms  | 10g–120 ms  | 10g–120 ms  |
| Operating temperature range                      | -40°C to +75°C  | -40°C to +75°C  | -40°C to +75°C  |
| <b>Mechanical</b>                                |   |   |   |
| Standard front dimension                         |   |   |   |
| Device height                                    | 80 mm   | 80 mm   | 80 mm   |
| Terminal protection                              | Finger and back-of-hand proof                                   | Finger and back-of-hand proof                                   | Finger and back-of-hand proof                                   |
| Mounting width per pole                          | 17.5 mm   | 17.5 mm   | 17.5 mm   |
| Mounting   |   |   |   |
| Degree of protection                             | IP20  | IP20  | IP20  |
| Terminals top and bottom                         | Twin-purpose terminals  | Twin-purpose terminals  | Twin-purpose terminals  |
| Supply connection                                | Line or load side   | Line or load side   | Line or load side   |
| Terminal capacity [mm <sup>2</sup> ]             | 1 x 25 / 2 x 10   | 1 x 25 / 2 x 10   | 1 x 25 / 2 x 10   |
| Torque   | 2.4 Nm  | 2.4 Nm  | 2.4 Nm  |
| Thickness of busbar material                     | 0.8–2 mm  | 0.8–2 mm  | 0.8–2 mm  |
| Mounting position                                | As required   | As required   | As required   |

### Connection diagram

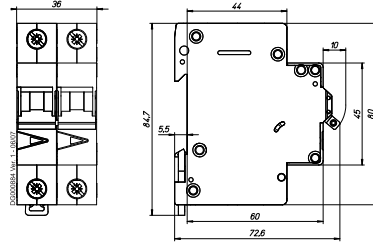


## Dimensions (mm) FAZ

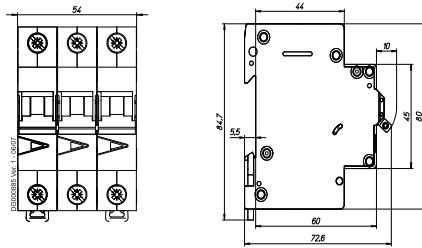
1-pole



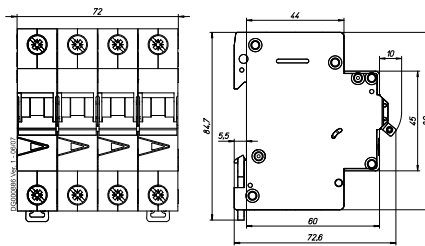
1+N-pole, 2-pole



3-pole

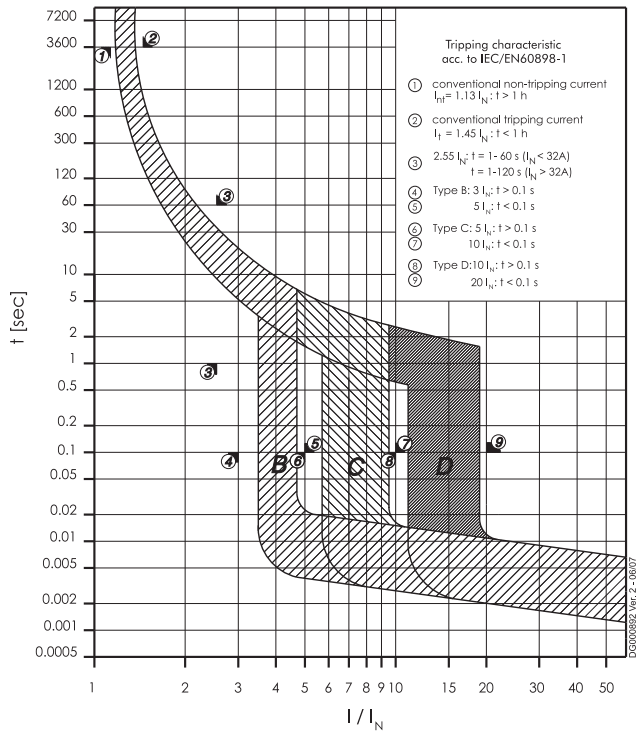


3+N-pole, 4-pole

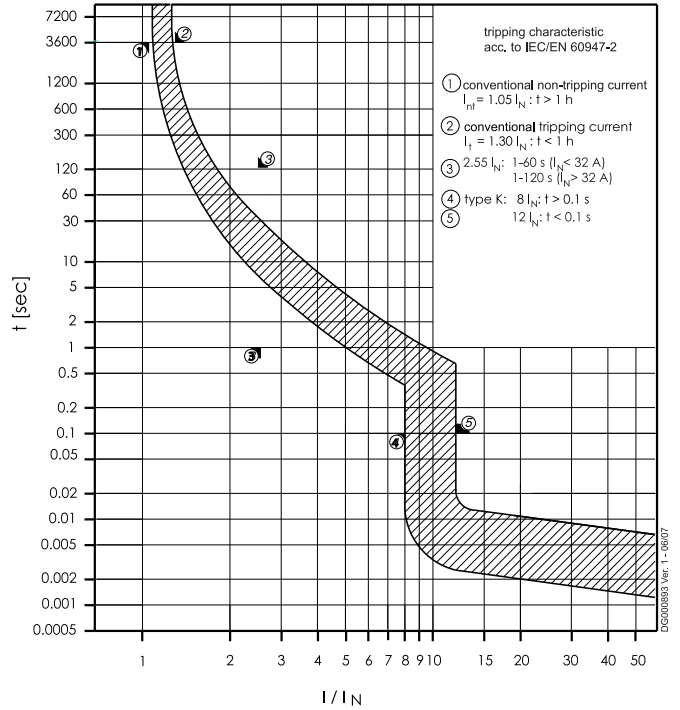


## Tripping Characteristic FAZ

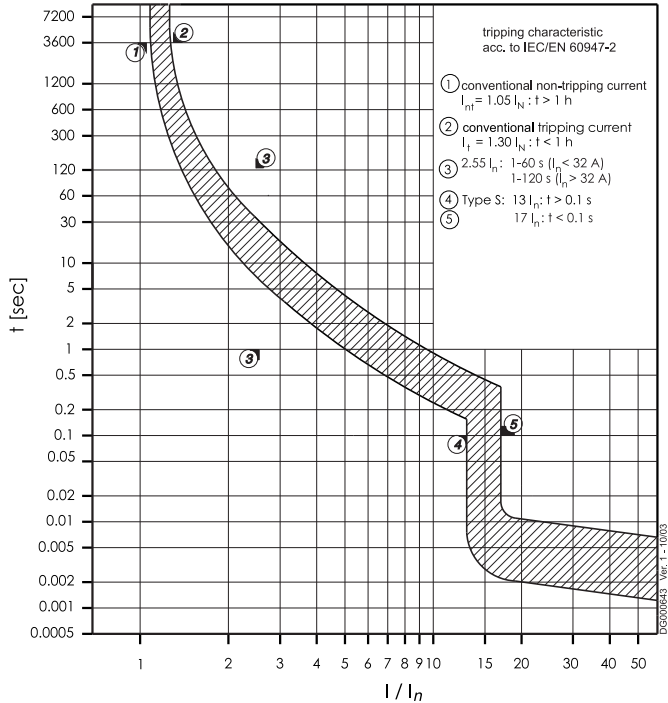
Characteristics B, C and D - IEC/EN60898-1



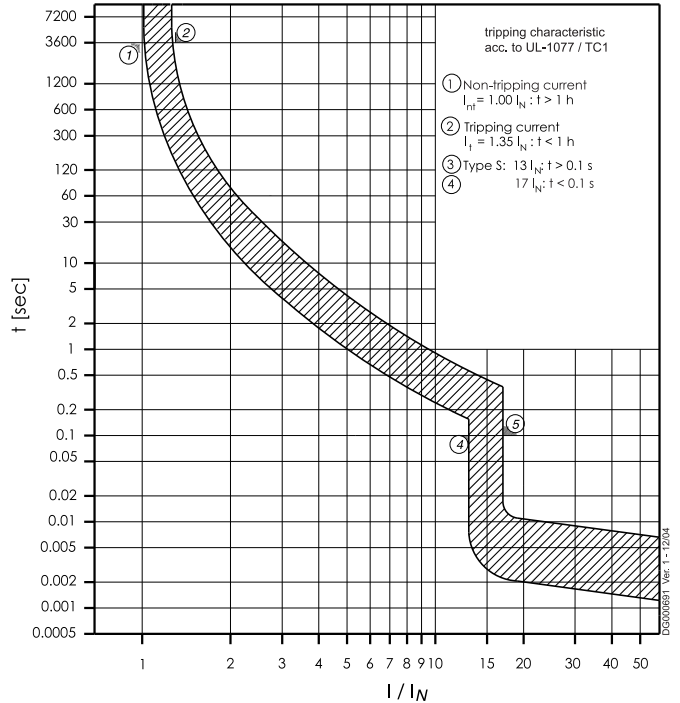
Characteristic K - IEC/EN 60947-2



Characteristic S - IEC/EN 60947-2

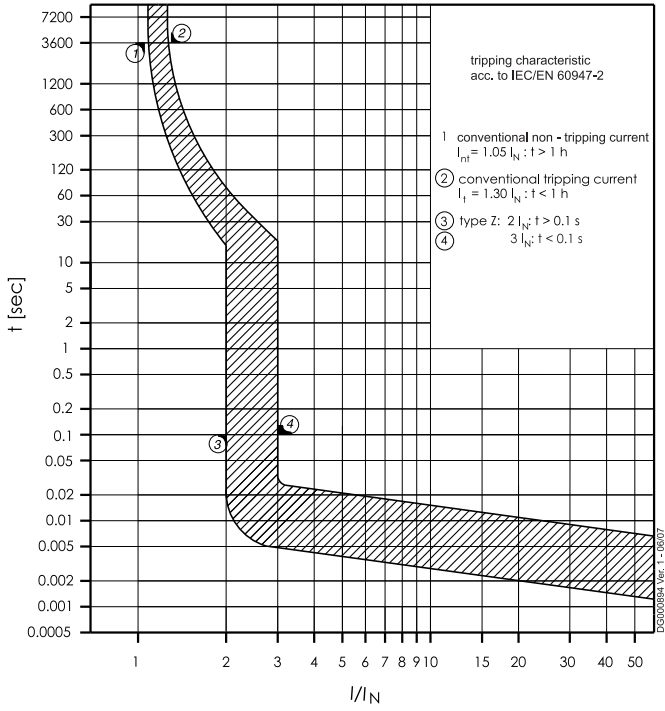


Characteristic S - UL1077

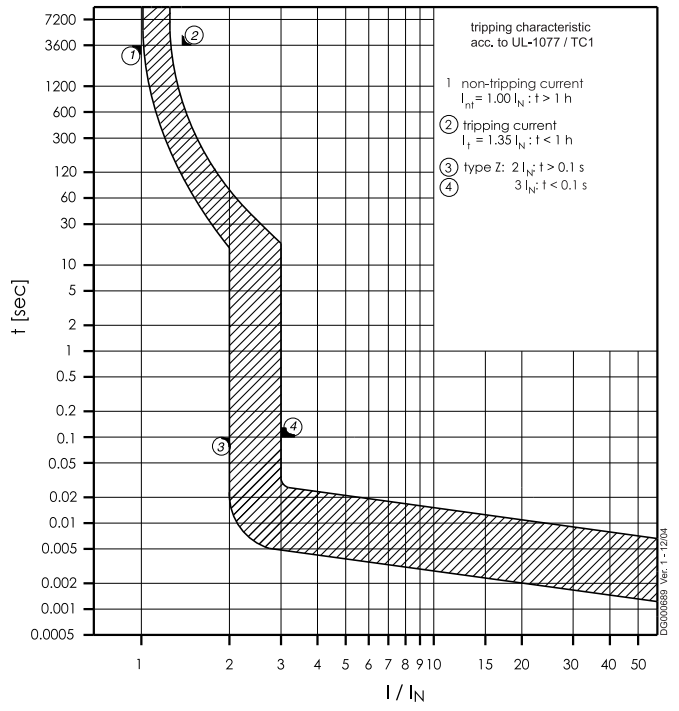


## Tripping Characteristic FAZ

Characteristic Z - IEC/EN 60947-2



Characteristic Z - UL1077



## Internal Resistance FAZ

### Type B

At room temperature (single pole)

| In [A] | Z* [mΩ] | R [mΩ] |
|--------|---------|--------|
| 1      | 1120    | 1102   |
| 1.5    | 922     | 912    |
| 1.6    | 922     | 912    |
| 2      | 335     | 333    |
| 2.5    | 234     | 230    |
| 3      | 211     | 208    |
| 3.5    | 184     | 180    |
| 4      | 87.7    | 87.2   |
| 5      | 73.5    | 72.8   |
| 6      | 46.8    | 46.3   |
| 8      | 30.5    | 30.4   |
| 10     | 17.5    | 17.4   |
| 12     | 16.9    | 16.8   |
| 13     | 13.4    | 13.3   |
| 15     | 8.0     | 7.9    |
| 16     | 8.0     | 7.9    |
| 20     | 7.2     | 7.1    |
| 25     | 5.0     | 4.9    |
| 32     | 3.7     | 3.7    |
| 40     | 2.6     | 2.5    |
| 50     | 2.1     | 2.1    |
| 63     | 2.0     | 2.0    |

\* 50Hz

### Type C

At room temperature (single pole)

| In [A] | Z* [mΩ] | R [mΩ] |
|--------|---------|--------|
| 0.16   | 68500   | 68300  |
| 0.25   | 27500   | 27400  |
| 0.5    | 4680    | 4670   |
| 0.75   | 2280    | 2250   |
| 1      | 1120    | 1100   |
| 1.5    | 589     | 587    |
| 1.6    | 589     | 587    |
| 2      | 335     | 333    |
| 2.5    | 234     | 230    |
| 3      | 131     | 130    |
| 3.5    | 143     | 141    |
| 4      | 87.7    | 87.2   |
| 5      | 73.5    | 72.8   |
| 6      | 39.3    | 39.1   |
| 8      | 30.5    | 30.4   |
| 10     | 14.1    | 14.0   |
| 12     | 13.5    | 13.4   |
| 13     | 13.4    | 13.3   |
| 15     | 8.0     | 7.9    |
| 16     | 8.0     | 7.9    |
| 20     | 7.2     | 7.1    |
| 25     | 5.0     | 4.9    |
| 32     | 3.7     | 3.7    |
| 40     | 2.6     | 2.5    |
| 50     | 2.1     | 2.1    |
| 63     | 2.0     | 2.0    |

\* 50Hz

### Type D

At room temperature (single pole)

| In [A] | Z* [mΩ] | R [mΩ] |
|--------|---------|--------|
| 0.5    | 4680    | 4670   |
| 1      | 772     | 770    |
| 1.5    | 512     | 508    |
| 1.6    | 512     | 508    |
| 2      | 250     | 249    |
| 2.5    | 153     | 153    |
| 3      | 131     | 130    |
| 3.5    | 143     | 141    |
| 4      | 87.7    | 87.2   |
| 5      | 65.4    | 65.1   |
| 6      | 39.3    | 39.1   |
| 8      | 19.5    | 19.5   |
| 10     | 14.1    | 14.0   |
| 12     | 11.3    | 11.2   |
| 13     | 10.1    | 10.1   |
| 15     | 8.0     | 7.9    |
| 16     | 8.0     | 7.9    |
| 20     | 4.9     | 4.9    |
| 25     | 3.9     | 3.8    |
| 32     | 3.5     | 3.4    |
| 40     | 2.7     | 2.6    |

\* 50Hz

## Fault Loop Impedance FAZ

Max. allowed value for the Fault Loop Impedance  $Z_s$   
(acc. to DIN VDE 0100, part 410)

$$U_0 = 230 \text{ V}$$

| Tripping time<br>$I_n/A$ | Type B                 |                      | Type C                 |                      | Type D                 |                      |
|--------------------------|------------------------|----------------------|------------------------|----------------------|------------------------|----------------------|
|                          | 0,4s<br>$Z_s (\Omega)$ | 5s<br>$Z_s (\Omega)$ | 0,4s<br>$Z_s (\Omega)$ | 5s<br>$Z_s (\Omega)$ | 0,4s<br>$Z_s (\Omega)$ | 5s<br>$Z_s (\Omega)$ |
| 1                        | 40,4                   | 40,4                 | 24,3                   | 40,4                 | 12,4                   | 40,4                 |
| 1.5                      | 26,9                   | 26,9                 | 16,2                   | 26,9                 | 8,3                    | 26,9                 |
| 2                        | 20,2                   | 20,2                 | 12,2                   | 20,2                 | 6,2                    | 20,2                 |
| 2.5                      | 16,1                   | 16,1                 | 9,7                    | 16,1                 | 5,0                    | 16,1                 |
| 3                        | 13,5                   | 13,5                 | 8,1                    | 13,5                 | 4,1                    | 13,5                 |
| 3.5                      | 11,5                   | 11,5                 | 7,0                    | 11,5                 | 3,6                    | 11,5                 |
| 4                        | 10,1                   | 10,1                 | 6,1                    | 10,1                 | 3,1                    | 10,1                 |
| 5                        | 8,1                    | 8,1                  | 4,9                    | 8,1                  | 2,5                    | 8,1                  |
| 6                        | 6,7                    | 6,7                  | 4,1                    | 6,7                  | 2,1                    | 6,7                  |
| 8                        | 5,0                    | 5,0                  | 3,0                    | 5,0                  | 1,6                    | 5,0                  |
| 10                       | 4,0                    | 4,0                  | 2,4                    | 4,0                  | 1,2                    | 4,0                  |
| 12                       | 3,4                    | 3,4                  | 2,0                    | 3,4                  | 1,0                    | 3,4                  |
| 13                       | 3,1                    | 3,1                  | 1,9                    | 3,1                  | 1,0                    | 3,1                  |
| 15                       | 2,7                    | 2,7                  | 1,6                    | 2,7                  | 0,8                    | 2,7                  |
| 16                       | 2,5                    | 2,5                  | 1,5                    | 2,5                  | 0,8                    | 2,5                  |
| 20                       | 2,0                    | 2,0                  | 1,2                    | 2,0                  | 0,6                    | 2,0                  |
| 25                       | 1,6                    | 1,6                  | 1,0                    | 1,6                  | 0,5                    | 1,6                  |
| 32                       | 1,3                    | 1,3                  | 0,8                    | 1,3                  | 0,4                    | 1,3                  |
| 40                       | 1,0                    | 1,0                  | 0,6                    | 1,0                  | 0,3                    | 1,0                  |
| 50                       | 0,8                    | 0,8                  | 0,5                    | 0,8                  | 0,2                    | 0,8                  |
| 63                       | 0,6                    | 0,6                  | 0,4                    | 0,6                  | 0,2                    | 0,6                  |

$$Z_s = R_{M.C.B.} + R_{Loop}$$

Data/factors taken from the time-current characteristic FAZ

For other rated voltages  $U_0$ :

$$U_0 = 240 \text{ V: } Z_s * 1,04 \text{ applies}$$

$$U_0 = 127 \text{ V: } Z_s * 0,55 \text{ applies}$$

## Power Loss at $I_n$ FAZ

### Type B

| $I_n$ [A] | 1p<br>P [W] | 1pN<br>P [W] | 2p<br>P [W] | 3p<br>P [W] | 3pN*<br>P [W] |
|-----------|-------------|--------------|-------------|-------------|---------------|
| 1         | 1.6         | 1.7          | 3.1         | 4.7         | 4.8           |
| 1.5       | 2.3         | 2.5          | 4.6         | 6.9         | 7.2           |
| 1.6       | 2.5         | 2.7          | 4.9         | 7.4         | 7.6           |
| 2         | 1.4         | 1.5          | 2.8         | 4.1         | 4.3           |
| 2.5       | 1.5         | 1.7          | 3.1         | 4.6         | 4.7           |
| 3         | 2.5         | 2.7          | 5.0         | 7.6         | 7.8           |
| 3.5       | 2.5         | 2.8          | 5.1         | 7.8         | 8.0           |
| 4         | 1.4         | 1.6          | 2.9         | 4.4         | 4.5           |
| 5         | 1.9         | 2.1          | 3.8         | 5.8         | 6.0           |
| 6         | 1.8         | 2.0          | 3.6         | 5.5         | 5.6           |
| 8         | 2.1         | 2.3          | 4.1         | 6.3         | 6.5           |
| 10        | 1.9         | 2.1          | 3.9         | 5.9         | 6.1           |
| 12        | 2.8         | 3.2          | 5.9         | 8.7         | 9.0           |
| 13        | 2.5         | 2.9          | 5.3         | 7.8         | 8.1           |
| 15        | 2.1         | 2.4          | 4.4         | 6.5         | 6.7           |
| 16        | 2.2         | 2.6          | 4.7         | 6.9         | 7.2           |
| 20        | 3.2         | 3.6          | 6.6         | 9.8         | 10.1          |
| 25        | 3.0         | 3.5          | 6.4         | 9.4         | 9.7           |
| 32        | 3.7         | 4.4          | 8.1         | 12.1        | 12.5          |
| 40        | 3.4         | 4.1          | 7.5         | 11.2        | 11.5          |
| 50        | 4.5         | 5.4          | 9.9         | 14.9        | 15.3          |
| 63        | 5.2         | 6.3          | 11.5        | 17.2        | 17.7          |

\*symmetrical load

### Type C

| $I_n$ [A] | 1p<br>P [W] | 1pN<br>P [W] | 2p<br>P [W] | 3p<br>P [W] | 3pN*<br>P [W] |
|-----------|-------------|--------------|-------------|-------------|---------------|
| 0.16      | 2.2         | 2.4          | 4.4         | 6.7         | 6.9           |
| 0.25      | 2.0         | 2.2          | 4.0         | 6.1         | 6.3           |
| 0.5       | 1.2         | 1.3          | 2.4         | 3.5         | 3.7           |
| 0.75      | 1.3         | 1.4          | 2.6         | 3.9         | 4.1           |
| 1         | 1.6         | 1.7          | 3.1         | 4.7         | 4.8           |
| 1.5       | 1.5         | 1.6          | 2.9         | 4.4         | 4.6           |
| 1.6       | 1.6         | 1.7          | 3.1         | 4.7         | 4.9           |
| 2         | 1.4         | 1.5          | 2.8         | 4.1         | 4.3           |
| 2.5       | 1.5         | 1.7          | 3.1         | 4.6         | 4.7           |
| 3         | 1.2         | 1.3          | 2.4         | 3.6         | 3.7           |
| 3.5       | 1.3         | 1.4          | 2.6         | 3.9         | 4.0           |
| 4         | 1.4         | 1.6          | 2.9         | 4.4         | 4.5           |
| 5         | 1.9         | 2.1          | 3.8         | 5.8         | 6.0           |
| 6         | 1.5         | 1.6          | 2.9         | 4.4         | 4.6           |
| 8         | 2.1         | 2.3          | 4.1         | 6.3         | 6.5           |
| 10        | 1.5         | 1.7          | 3.0         | 4.6         | 4.7           |
| 12        | 2.1         | 2.4          | 4.4         | 6.5         | 6.8           |
| 13        | 2.5         | 2.9          | 5.3         | 7.8         | 8.1           |
| 15        | 2.1         | 2.4          | 4.4         | 6.5         | 6.7           |
| 16        | 2.2         | 2.6          | 4.7         | 6.9         | 7.2           |
| 20        | 3.2         | 3.6          | 6.6         | 9.8         | 10.1          |
| 25        | 3.0         | 3.5          | 6.4         | 9.4         | 9.7           |
| 32        | 3.7         | 4.4          | 8.1         | 12.1        | 12.5          |
| 40        | 3.4         | 4.1          | 7.5         | 11.2        | 11.5          |
| 50        | 4.5         | 5.4          | 9.9         | 14.9        | 15.3          |
| 63        | 5.2         | 6.3          | 11.5        | 17.2        | 17.7          |

\*symmetrical load

### Type D

| $I_n$ [A] | 1p<br>P [W] | 1pN<br>P [W] | 2p<br>P [W] | 3p<br>P [W] | 3pN*<br>P [W] |
|-----------|-------------|--------------|-------------|-------------|---------------|
| 0.5       | 1.2         | 1.3          | 2.4         | 3.5         | 3.7           |
| 1         | 0.8         | 0.9          | 1.6         | 2.4         | 2.5           |
| 1.5       | 1.2         | 1.3          | 2.3         | 3.5         | 3.6           |
| 1.6       | 1.3         | 1.4          | 2.5         | 3.8         | 3.9           |
| 2         | 1.0         | 1.1          | 2.0         | 3.0         | 3.1           |
| 2.5       | 1.0         | 1.1          | 1.9         | 2.9         | 3.0           |
| 3         | 1.2         | 1.3          | 2.4         | 3.6         | 3.7           |
| 3.5       | 1.3         | 1.4          | 2.6         | 3.9         | 4.0           |
| 4         | 1.4         | 1.6          | 2.9         | 4.4         | 4.5           |
| 5         | 1.7         | 1.8          | 3.3         | 5.1         | 5.3           |
| 6         | 1.5         | 1.6          | 2.9         | 4.4         | 4.6           |
| 8         | 1.3         | 1.5          | 2.6         | 4.0         | 4.2           |
| 10        | 1.5         | 1.7          | 3.0         | 4.6         | 4.7           |
| 12        | 1.7         | 2.0          | 3.6         | 5.3         | 5.4           |
| 13        | 1.9         | 2.2          | 4.0         | 5.9         | 6.1           |
| 15        | 2.1         | 2.4          | 4.4         | 6.5         | 6.7           |
| 16        | 2.2         | 2.6          | 4.7         | 6.9         | 7.2           |
| 20        | 2.0         | 2.2          | 4.1         | 6.1         | 6.2           |
| 25        | 2.5         | 2.9          | 5.2         | 7.7         | 7.9           |
| 32        | 3.4         | 4.0          | 7.4         | 11.1        | 11.4          |
| 40        | 3.2         | 3.8          | 7.0         | 10.4        | 10.7          |

\*symmetrical load

## Influence of Ambient Temperature FAZ

On Load Carrying Capacity (temperature derating)

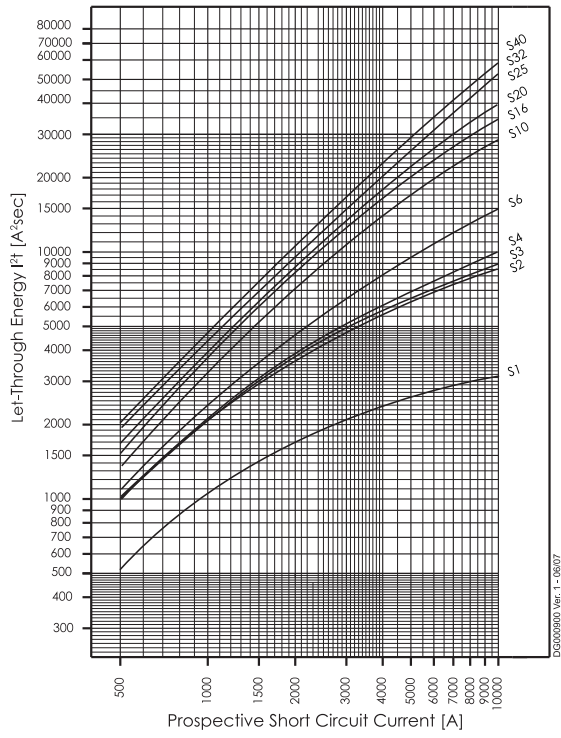
| $I_N$ [A] | Ambient temperature T [°C] |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-----------|----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|           | -40                        | -30  | -20  | -10  | 0    | 10   | 20   | 30   | 35   | 40   | 45   | 50   | 55   | 60   | 65   | 70   | 75   |
| 0.16      | 0.2                        | 0.2  | 0.19 | 0.19 | 0.18 | 0.17 | 0.17 | 0.16 | 0.16 | 0.15 | 0.15 | 0.15 | 0.14 | 0.14 | 0.14 | 0.14 | 0.13 |
| 0.25      | 0.32                       | 0.31 | 0.3  | 0.29 | 0.28 | 0.27 | 0.26 | 0.25 | 0.25 | 0.24 | 0.24 | 0.23 | 0.23 | 0.22 | 0.22 | 0.21 | 0.21 |
| 0.5       | 0.64                       | 0.62 | 0.6  | 0.58 | 0.56 | 0.54 | 0.52 | 0.5  | 0.49 | 0.48 | 0.47 | 0.46 | 0.45 | 0.44 | 0.43 | 0.42 | 0.41 |
| 0.75      | 0.96                       | 0.93 | 0.9  | 0.87 | 0.84 | 0.81 | 0.78 | 0.75 | 0.74 | 0.73 | 0.71 | 0.69 | 0.68 | 0.66 | 0.65 | 0.64 | 0.62 |
| 1         | 1.3                        | 1.2  | 1.2  | 1.2  | 1.1  | 1.1  | 1    | 1    | 0.99 | 0.97 | 0.95 | 0.93 | 0.9  | 0.89 | 0.87 | 0.85 | 0.83 |
| 1.5       | 1.9                        | 1.9  | 1.8  | 1.7  | 1.7  | 1.6  | 1.6  | 1.5  | 1.5  | 1.5  | 1.4  | 1.4  | 1.4  | 1.3  | 1.3  | 1.3  | 1.2  |
| 1.6       | 2                          | 2    | 1.9  | 1.9  | 1.8  | 1.7  | 1.7  | 1.6  | 1.6  | 1.5  | 1.5  | 1.5  | 1.4  | 1.4  | 1.4  | 1.4  | 1.3  |
| 2         | 2.6                        | 2.5  | 2.4  | 2.3  | 2.2  | 2.2  | 2.1  | 2    | 2    | 1.9  | 1.9  | 1.9  | 1.8  | 1.8  | 1.7  | 1.7  | 1.7  |
| 2.5       | 3.2                        | 3.1  | 3    | 2.9  | 2.8  | 2.7  | 2.6  | 2.5  | 2.5  | 2.4  | 2.4  | 2.3  | 2.3  | 2.2  | 2.2  | 2.1  | 2.1  |
| 3         | 3.8                        | 3.7  | 3.6  | 3.5  | 3.4  | 3.3  | 3.1  | 3    | 3    | 2.9  | 2.8  | 2.8  | 2.7  | 2.7  | 2.6  | 2.5  | 2.5  |
| 3.5       | 4.5                        | 4.4  | 4.2  | 4.1  | 3.9  | 3.8  | 3.7  | 3.5  | 3.4  | 3.4  | 3.3  | 3.2  | 3.2  | 3.1  | 3    | 3    | 2.9  |
| 4         | 5.1                        | 5    | 4.8  | 4.7  | 4.5  | 4.3  | 4.2  | 4    | 3.9  | 3.9  | 3.8  | 3.7  | 3.6  | 3.5  | 3.5  | 3.4  | 3.3  |
| 5         | 6.4                        | 6.2  | 6    | 5.8  | 5.6  | 5.4  | 5.2  | 5    | 4.9  | 4.8  | 4.7  | 4.6  | 4.5  | 4.4  | 4.3  | 4.2  | 4.1  |
| 6         | 7.7                        | 7.5  | 7.2  | 7    | 6.7  | 6.5  | 6.3  | 6    | 5.9  | 5.8  | 5.7  | 5.6  | 5.4  | 5.3  | 5.2  | 5.1  | 5    |
| 8         | 10.2                       | 9.9  | 9.6  | 9.3  | 9    | 8.7  | 8.4  | 8    | 7.9  | 7.7  | 7.6  | 7.4  | 7.2  | 7.1  | 6.9  | 6.8  | 6.6  |
| 10        | 13                         | 12   | 12   | 12   | 11   | 11   | 10   | 10   | 9.9  | 9.7  | 9.5  | 9.3  | 9    | 8.9  | 8.7  | 8.5  | 8.3  |
| 12        | 15                         | 15   | 14   | 14   | 13   | 13   | 13   | 12   | 12   | 12   | 11   | 11   | 11   | 11   | 10   | 10   | 10   |
| 13        | 17                         | 16   | 16   | 15   | 15   | 14   | 14   | 13   | 13   | 13   | 12   | 12   | 12   | 12   | 11   | 11   | 11   |
| 15        | 19                         | 19   | 18   | 17   | 17   | 16   | 16   | 15   | 15   | 15   | 14   | 14   | 14   | 13   | 13   | 13   | 12   |
| 16        | 20                         | 20   | 19   | 19   | 18   | 17   | 17   | 16   | 16   | 15   | 15   | 15   | 14   | 14   | 14   | 14   | 13   |
| 20        | 26                         | 25   | 24   | 23   | 22   | 22   | 21   | 20   | 20   | 19   | 19   | 19   | 18   | 18   | 17   | 17   | 17   |
| 25        | 32                         | 31   | 30   | 29   | 28   | 27   | 26   | 25   | 25   | 24   | 24   | 23   | 23   | 22   | 22   | 21   | 21   |
| 32        | 41                         | 40   | 38   | 37   | 36   | 35   | 33   | 32   | 32   | 31   | 30   | 30   | 29   | 28   | 28   | 27   | 26   |
| 40        | 51                         | 50   | 48   | 47   | 45   | 43   | 42   | 40   | 39   | 39   | 38   | 37   | 36   | 35   | 35   | 34   | 33   |
| 50        | 64                         | 62   | 60   | 58   | 56   | 54   | 52   | 50   | 49   | 48   | 47   | 46   | 45   | 44   | 43   | 42   | 41   |
| 63        | 81                         | 78   | 76   | 73   | 71   | 68   | 66   | 63   | 62   | 61   | 60   | 58   | 57   | 56   | 55   | 53   | 52   |



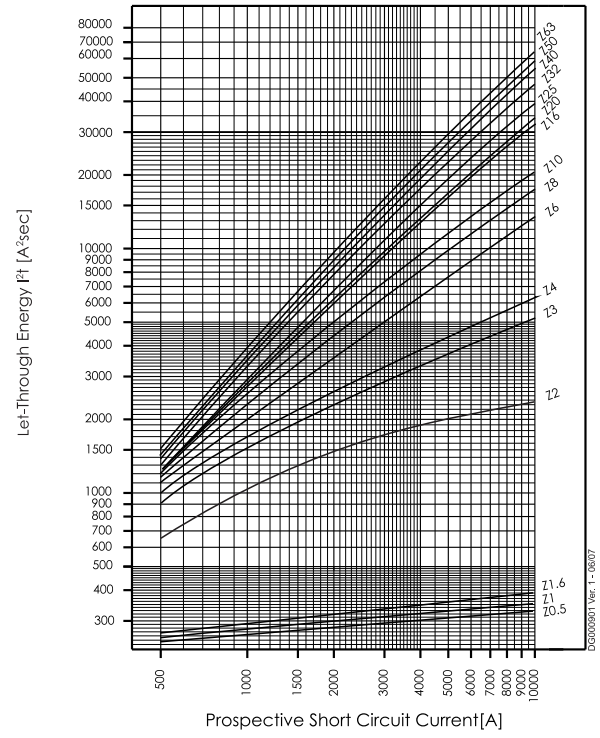


## Maximum Let-Through Energy FAZ

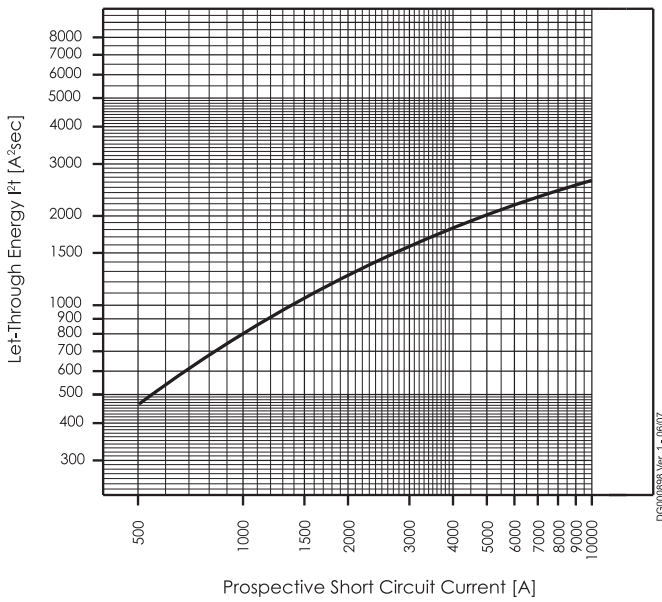
Type S



Type Z

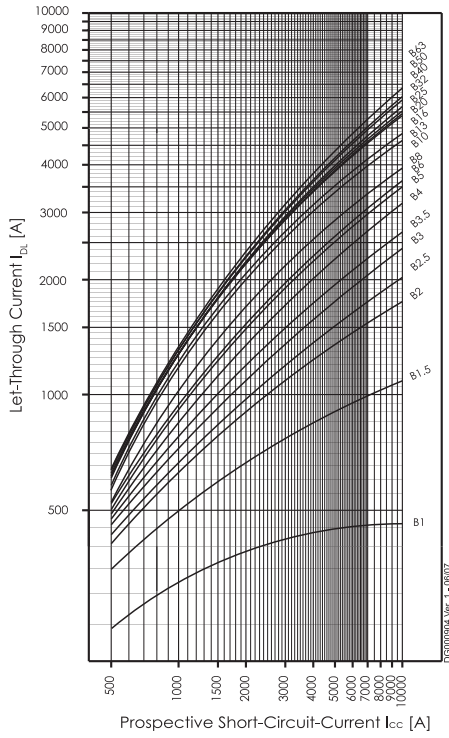


Type FAZ...-HS

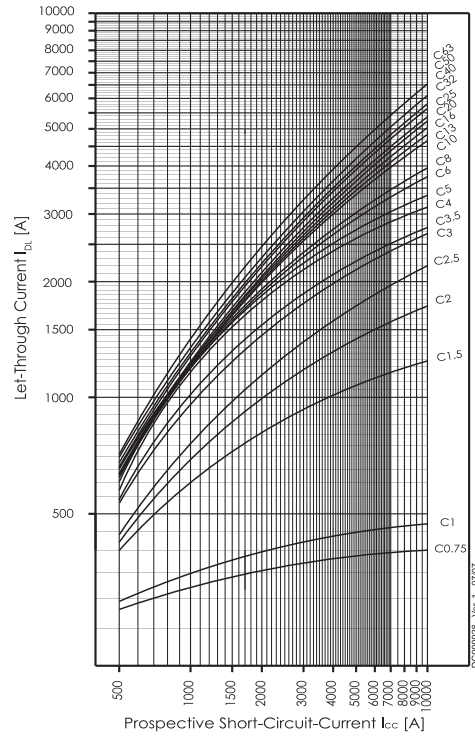


## Maximum Let-Through Current FAZ

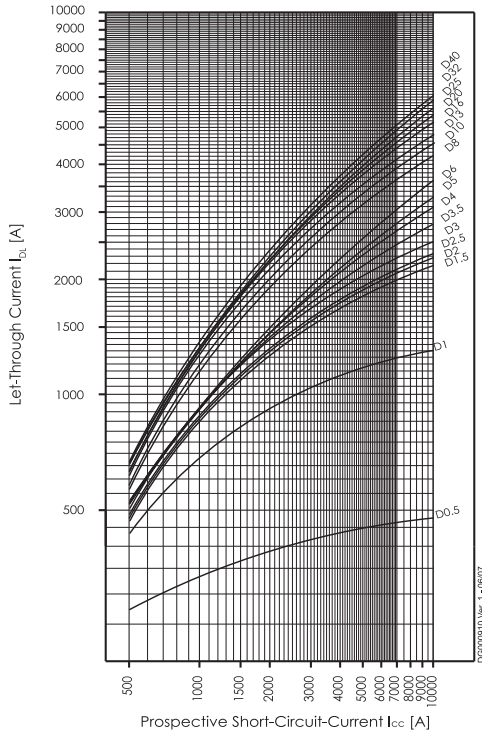
**Type B (IEC/EN60898)**



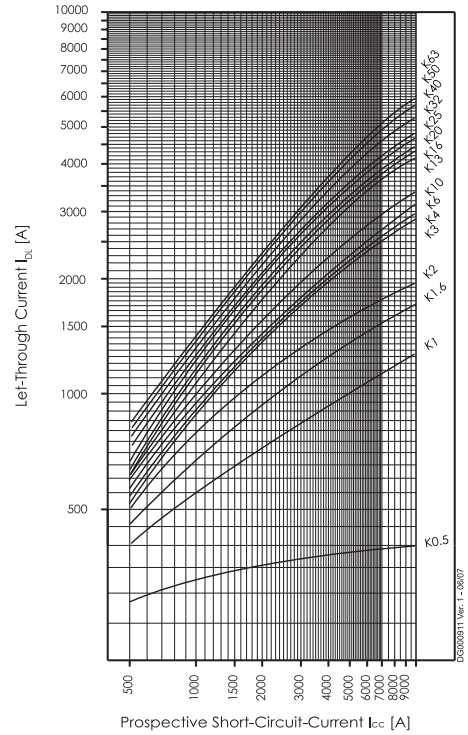
**Type C (IEC/EN60898)**



**Type D (IEC/EN60898)**



**Type K**





## Short Circuit Selectivity FAZ

In case of short circuit, there is selectivity between the miniature circuit breakers FAZ and the upstream protection devices up to the specified values of the selectivity limit current  $I_s$  [kA] (i. e. in case of short-circuit currents  $I_{ks}$  under  $I_s$ , only the MCB will trip, in case of short circuit currents above this value both protective devices will respond).

\*) basically in accordance with EN 60898-1 D.5.2.b

### FAZ towards NH-00 Fuses

Short circuit selectivity **characteristic B** towards fuse link **NH-00\***)

| FAZ       | NH-00 gL/gG        |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| $I_n$ [A] | 16                 | 20                 | 25                 | 32                 | 35                 | 40                 | 50                 | 63                 | 80                 | 100                | 125                | 160                |
| 1.0       | 0.9                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.5       | 0.8                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.0       | <0.5 <sup>1)</sup> | 0.5                | 1.0                | 2.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.5       | <0.5 <sup>1)</sup> | 0.5                | 1.0                | 2.3                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.0       | <0.5 <sup>1)</sup> | 0.5                | 0.9                | 2.1                | 8.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.5       | <0.5 <sup>1)</sup> | 0.5                | 0.9                | 1.8                | 5.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 4         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.8                | 1.3                | 2.3                | 4.3                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 5         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.1                | 1.6                | 2.2                | 3.6                | 4.8                | 8.9                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 6         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.1                | 1.5                | 2.0                | 3.3                | 4.3                | 7.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 8         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.0                | 1.3                | 1.7                | 2.6                | 3.3                | 5.2                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 10        |                    | <0.5 <sup>1)</sup> | 0.6                | 0.9                | 1.2                | 1.5                | 2.2                | 2.7                | 4.0                | 9.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 13        |                    | <0.5 <sup>1)</sup> | 0.6                | 0.8                | 1.1                | 1.4                | 2.1                | 2.6                | 3.8                | 7.9                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 16        |                    |                    | 0.5                | 0.7                | 1.0                | 1.3                | 1.9                | 2.4                | 3.4                | 6.4                | 9.3                | 10.0 <sup>2)</sup> |
| 20        |                    |                    |                    | 0.7                | 1.0                | 1.3                | 1.9                | 2.4                | 3.3                | 6.0                | 8.7                | 10.0 <sup>2)</sup> |
| 25        |                    |                    |                    | 0.7                | 1.0                | 1.3                | 1.8                | 2.3                | 3.2                | 5.7                | 8.0                | 10.0 <sup>2)</sup> |
| 32        |                    |                    |                    |                    | 0.9                | 1.2                | 1.7                | 2.2                | 3.1                | 5.4                | 7.6                | 10.0 <sup>2)</sup> |
| 40        |                    |                    |                    |                    |                    |                    |                    | 2.1                | 3.0                | 5.1                | 7.2                | 10.0 <sup>2)</sup> |
| 50        |                    |                    |                    |                    |                    |                    |                    | 1.9                | 2.8                | 4.7                | 6.6                | 9.5                |
| 63        |                    |                    |                    |                    |                    |                    |                    |                    |                    | 4.4                | 6.3                | 8.6                |

Short circuit selectivity **characteristic C** towards fuse link **NH-00\***)

| FAZ       | NH-00 gL/gG        |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| $I_n$ [A] | 16                 | 20                 | 25                 | 32                 | 35                 | 40                 | 50                 | 63                 | 80                 | 100                | 125                | 160                |
| 0.75      | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.0       | 0.9                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.5       | <0.5 <sup>1)</sup> | 0.6                | 1.3                | 4.2                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.0       | <0.5 <sup>1)</sup> | 0.6                | 1.0                | 2.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.5       | <0.5 <sup>1)</sup> | 0.5                | 1.0                | 2.1                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.0       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.2                | 1.8                | 2.6                | 4.7                | 6.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.5       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.1                | 1.7                | 2.4                | 4.2                | 6.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 4         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.0                | 1.5                | 2.1                | 3.6                | 5.0                | 10.0               | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 5         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 0.8                | 1.2                | 1.7                | 2.8                | 3.8                | 8.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 6         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 0.8                | 1.2                | 1.5                | 2.5                | 3.3                | 5.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 8         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 0.8                | 1.1                | 1.5                | 2.3                | 2.9                | 4.9                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 10        |                    |                    | 0.5                | 0.7                | 1.0                | 1.4                | 2.0                | 2.5                | 3.8                | 8.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 13        |                    |                    |                    |                    | 1.0                | 1.3                | 1.9                | 2.4                | 3.6                | 7.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 16        |                    |                    |                    |                    | 1.0                | 1.3                | 1.8                | 2.3                | 3.3                | 6.0                | 8.8                | 10.0 <sup>2)</sup> |
| 20        |                    |                    |                    |                    | 1.0                | 1.2                | 1.7                | 2.2                | 3.2                | 5.5                | 7.7                | 10.0 <sup>2)</sup> |
| 25        |                    |                    |                    |                    |                    | 1.6                | 2.1                | 3.0                | 5.2                | 7.3                | 10.0 <sup>2)</sup> |                    |
| 32        |                    |                    |                    |                    |                    |                    | 2.1                | 2.9                | 5.0                | 7.0                | 10.0 <sup>2)</sup> |                    |
| 40        |                    |                    |                    |                    |                    |                    |                    | 2.8                | 4.8                | 6.7                | 10.0               |                    |
| 50        |                    |                    |                    |                    |                    |                    |                    |                    | 4.5                | 6.3                | 9.5                |                    |
| 63        |                    |                    |                    |                    |                    |                    |                    |                    |                    | 5.9                | 8.4                |                    |

Short circuit selectivity **characteristic D** towards fuse link **NH-00\***)

| FAZ       | NH-00 gL/gG        |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| $I_n$ [A] | 16                 | 20                 | 25                 | 32                 | 35                 | 40                 | 50                 | 63                 | 80                 | 100                | 125                | 160                |
| 0.5       | 2.1                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.0       | <0.5 <sup>1)</sup> | 0.6                | 1.4                | 4.3                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.5       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.9                | 1.6                | 2.7                | 4.0                | 8.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.0       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.8                | 1.3                | 2.1                | 3.1                | 6.0                | 8.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.5       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.2                | 1.8                | 2.6                | 4.8                | 6.9                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.0       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.1                | 1.7                | 2.4                | 4.3                | 6.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.5       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.1                | 1.7                | 2.4                | 4.2                | 5.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 4         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.0                | 1.6                | 2.2                | 3.8                | 5.2                | 10.0               | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 5         |                    | <0.5 <sup>1)</sup> | 0.6                | 0.9                | 1.4                | 1.9                | 3.2                | 4.1                | 7.1                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 6         |                    | <0.5 <sup>1)</sup> | 0.5                | 0.8                | 1.2                | 1.6                | 2.6                | 3.3                | 5.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 8         |                    |                    | 0.5                | 0.8                | 1.1                | 1.5                | 2.2                | 2.7                | 4.1                | 8.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 10        |                    |                    | 0.5                | 0.7                | 1.0                | 1.3                | 1.9                | 2.5                | 3.6                | 7.2                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 13        |                    |                    |                    | 1.0                | 1.3                | 1.9                | 2.3                | 3.4                | 6.5                | 9.5                | 10.0 <sup>2)</sup> |                    |
| 16        |                    |                    |                    |                    | 1.1                | 1.6                | 2.0                | 3.0                | 5.5                | 8.0                | 10.0 <sup>2)</sup> |                    |
| 20        |                    |                    |                    |                    |                    | 1.4                | 1.8                | 2.8                | 5.0                | 7.5                | 10.0 <sup>2)</sup> |                    |
| 25        |                    |                    |                    |                    |                    |                    | 1.8                | 2.7                | 4.8                | 7.0                | 10.0 <sup>2)</sup> |                    |
| 32        |                    |                    |                    |                    |                    |                    |                    | 2.4                | 4.1                | 6.2                | 9.3                |                    |
| 40        |                    |                    |                    |                    |                    |                    |                    |                    | 4.0                | 6.0                | 9.0                |                    |

<sup>1)</sup> Selectivity limit current  $I_s$  under 0.5 kA

<sup>2)</sup> Selectivity limit current  $I_s$  = rated breaking capacity  $I_{cn}$  of the MCB

Shaded fields: no selectivity

## FAZ towards D01-D03 fuse link

Short circuit selectivity **characteristic B** towards fuse link **D01-D03\***)

| FAZ | D01-D03 gL/gG      |                    |                    |                    |                    |                    |                    |                    |                    |                    |
|-----|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|     | I <sub>n</sub> [A] | 10                 | 16                 | 20                 | 25                 | 35                 | 50                 | 63                 | 80                 | 100                |
| 1.0 | <0.5 <sup>1)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.5 | <0.5 <sup>1)</sup> | 4.1                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.0 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.5 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.0 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 1.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.5 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 0.9                | 7.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 4   | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 0.9                | 2.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 5   |                    | <0.5 <sup>1)</sup> | 0.5                | 0.8                | 1.7                | 4.0                | 7.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 6   |                    | <0.5 <sup>1)</sup> | 0.5                | 0.8                | 1.6                | 3.6                | 6.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 8   |                    |                    | 0.5                | 0.8                | 1.4                | 2.8                | 4.3                | 8.2                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 10  |                    |                    | 0.5                | 0.7                | 1.3                | 2.4                | 3.4                | 6.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 13  |                    |                    | <0.5 <sup>1)</sup> | 0.7                | 1.2                | 2.3                | 3.2                | 5.3                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 16  |                    |                    |                    | 0.6                | 1.1                | 2.2                | 2.9                | 4.6                | 10.0               | 10.0               |
| 20  |                    |                    |                    |                    | 1.1                | 2.1                | 2.8                | 4.4                | 9.3                | 9.3                |
| 25  |                    |                    |                    |                    | 1.1                | 2.0                | 2.7                | 4.2                | 8.7                | 8.7                |
| 32  |                    |                    |                    |                    |                    | 2.0                | 2.6                | 4.0                | 8.0                | 8.0                |
| 40  |                    |                    |                    |                    |                    |                    | 2.5                | 3.8                | 7.5                | 7.5                |
| 50  |                    |                    |                    |                    |                    |                    | 2.3                | 3.4                | 6.7                | 6.7                |
| 63  |                    |                    |                    |                    |                    |                    |                    |                    | 6.2                | 6.2                |

Short circuit selectivity **characteristic C** towards fuse link **D01-D03\***)

| FAZ  | D01-D03 gL/gG      |                    |                    |                    |                    |                    |                    |                    |                    |                    |
|------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|      | I <sub>n</sub> [A] | 10                 | 16                 | 20                 | 25                 | 35                 | 50                 | 63                 | 80                 | 100                |
| 0.75 | <0.5 <sup>1)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.0  | <0.5 <sup>1)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.5  | <0.5 <sup>1)</sup> | 0.5                | 0.6                | 0.9                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.0  | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 0.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.5  | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 0.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.0  | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.9                | 5.2                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.5  | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.8                | 4.7                | 9.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 4    | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.6                | 4.0                | 7.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 5    |                    | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 1.3                | 3.1                | 5.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 6    |                    | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 1.2                | 2.7                | 4.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 8    |                    | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 1.2                | 2.5                | 4.0                | 8.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 10   |                    |                    | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 1.2                | 2.3                | 3.1                | 5.4                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 13   |                    |                    |                    |                    | 1.1                | 2.2                | 3.0                | 4.9                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 16   |                    |                    |                    |                    | 1.1                | 2.1                | 2.8                | 4.4                | 9.5                | 9.5                |
| 20   |                    |                    |                    |                    | 1.0                | 2.0                | 2.6                | 4.0                | 8.3                | 8.3                |
| 25   |                    |                    |                    |                    |                    | 1.9                | 2.5                | 3.8                | 7.8                | 7.8                |
| 32   |                    |                    |                    |                    |                    |                    | 2.5                | 3.7                | 7.3                | 7.3                |
| 40   |                    |                    |                    |                    |                    |                    |                    | 3.5                | 7.0                | 7.0                |
| 50   |                    |                    |                    |                    |                    |                    |                    |                    | 6.5                | 6.5                |
| 63   |                    |                    |                    |                    |                    |                    |                    |                    |                    | 6.2                |

Short circuit selectivity **characteristic D** towards fuse link **D01-D03\***)

| FAZ | D01-D03 gL/gG      |                    |                    |                    |                    |                    |                    |                    |                    |                    |
|-----|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|     | I <sub>n</sub> [A] | 10                 | 16                 | 20                 | 25                 | 35                 | 50                 | 63                 | 80                 | 100                |
| 0.5 | <0.5 <sup>1)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.0 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.3                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.5 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 0.9                | 2.8                | 9.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.0 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 0.8                | 2.2                | 6.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.5 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 0.7                | 1.9                | 5.4                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.0 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 0.7                | 1.8                | 4.8                | 9.3                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.5 | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.5                | 0.7                | 1.7                | 4.7                | 8.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 4   |                    | <0.5 <sup>1)</sup> | 0.5                | 0.7                | 1.7                | 4.6                | 7.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 5   |                    | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.5                | 3.5                | 5.8                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 6   |                    |                    | <0.5 <sup>1)</sup> | 0.5                | 1.3                | 2.9                | 4.5                | 9.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 8   |                    |                    | <0.5 <sup>1)</sup> | 0.5                | 1.2                | 2.4                | 3.5                | 6.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 10  |                    |                    |                    | 0.5                | 1.1                | 2.2                | 3.0                | 5.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 13  |                    |                    |                    |                    | 1.1                | 2.1                | 2.9                | 4.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 16  |                    |                    |                    |                    |                    | 1.9                | 2.6                | 3.9                | 9.0                | 9.0                |
| 20  |                    |                    |                    |                    |                    | 1.7                | 2.3                | 3.5                | 8.0                | 8.0                |
| 25  |                    |                    |                    |                    |                    |                    | 2.2                | 3.4                | 7.5                | 7.5                |
| 32  |                    |                    |                    |                    |                    |                    |                    | 2.9                | 6.0                | 6.0                |
| 40  |                    |                    |                    |                    |                    |                    |                    |                    | 5.7                | 5.7                |

<sup>1)</sup> Selectivity limit current I<sub>s</sub> under 0.5 kA

<sup>2)</sup> Selectivity limit current I<sub>s</sub> = rated breaking capacity I<sub>cn</sub> of the MCB

Shaded fields: no selectivity

## FAZ towards DII-DIV fuse link

Short circuit selectivity **characteristic B** towards fuse link **DII-DIV\***)

| FAZ       | DII-DIV gL/gG      |                    |                    |                    |                    |                    |                    |                    |                    |
|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| $I_n$ [A] | 10                 | 16                 | 20                 | 25                 | 35                 | 50                 | 63                 | 80                 | 100                |
| 1.0       | <0.5 <sup>1)</sup> | 1.2                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.5       | <0.5 <sup>1)</sup> | 1.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.0       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.8                | 1.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.5       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.8                | 1.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.0       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.8                | 1.4                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.5       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.3                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 4         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.0                | 3.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 5         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 0.9                | 2.0                | 3.5                | 8.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 6         |                    | <0.5 <sup>1)</sup> | 0.6                | 0.9                | 1.8                | 3.2                | 7.4                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 8         |                    | <0.5 <sup>1)</sup> | 0.5                | 0.8                | 1.6                | 2.6                | 5.2                | 8.3                | 10.0 <sup>2)</sup> |
| 10        |                    |                    | 0.5                | 0.8                | 1.4                | 2.2                | 3.9                | 6.0                | 10.0 <sup>2)</sup> |
| 13        |                    |                    | 0.5                | 0.7                | 1.3                | 2.0                | 3.6                | 5.4                | 10.0 <sup>2)</sup> |
| 16        |                    |                    |                    | 0.6                | 1.2                | 1.9                | 3.2                | 4.6                | 8.4                |
| 20        |                    |                    |                    |                    | 1.2                | 1.8                | 3.1                | 4.4                | 7.8                |
| 25        |                    |                    |                    |                    | 1.2                | 1.8                | 3.0                | 4.2                | 7.3                |
| 32        |                    |                    |                    |                    |                    | 1.7                | 2.8                | 3.9                | 6.8                |
| 40        |                    |                    |                    |                    |                    |                    | 2.7                | 3.8                | 6.5                |
| 50        |                    |                    |                    |                    |                    |                    | 2.5                | 3.5                | 5.7                |
| 63        |                    |                    |                    |                    |                    |                    |                    |                    | 5.3                |

Short circuit selectivity **characteristic C** towards fuse link **DII-DIV\***)

| FAZ       | DII-DIV gL/gG      |                    |                    |                    |                    |                    |                    |                    |                    |
|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| $I_n$ [A] | 10                 | 16                 | 20                 | 25                 | 35                 | 50                 | 63                 | 80                 | 100                |
| 0.75      | 1.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.0       | <0.5 <sup>1)</sup> | 1.2                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.5       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 1.0                | 2.2                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.0       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.8                | 1.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.5       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.8                | 1.4                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.0       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.8                | 0.9                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.5       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 0.9                | 2.2                | 4.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 4         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 0.8                | 1.8                | 3.6                | 9.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 5         | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 0.7                | 1.5                | 2.7                | 7.3                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 6         |                    | <0.5 <sup>1)</sup> | 0.5                | 0.6                | 1.4                | 2.4                | 5.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 8         |                    | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.3                | 2.2                | 4.7                | 8.7                | 10.0 <sup>2)</sup> |
| 10        |                    |                    | <0.5 <sup>1)</sup> | 0.6                | 1.3                | 2.0                | 3.6                | 5.4                | 10.0 <sup>2)</sup> |
| 13        |                    |                    |                    |                    | 1.3                | 1.9                | 3.3                | 5.0                | 9.4                |
| 16        |                    |                    |                    |                    | 1.2                | 1.8                | 3.2                | 4.4                | 8.0                |
| 20        |                    |                    |                    |                    | 1.2                | 1.8                | 3.1                | 4.1                | 7.0                |
| 25        |                    |                    |                    |                    |                    | 1.7                | 2.8                | 3.8                | 6.5                |
| 32        |                    |                    |                    |                    |                    |                    | 2.7                | 3.7                | 6.2                |
| 40        |                    |                    |                    |                    |                    |                    |                    | 3.5                | 5.9                |
| 50        |                    |                    |                    |                    |                    |                    |                    |                    | 5.5                |
| 63        |                    |                    |                    |                    |                    |                    |                    |                    |                    |

Short circuit selectivity **characteristic D** towards fuse link **DII-DIV\***)

| FAZ       | DII-DIV gL/gG      |                    |                    |                    |                    |                    |                    |                    |                    |
|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| $I_n$ [A] | 10                 | 16                 | 20                 | 25                 | 35                 | 50                 | 63                 | 80                 | 100                |
| 0.5       | 0.5                | 3.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.0       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 1.0                | 2.4                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 1.5       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.7                | 1.2                | 3.5                | 7.7                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.0       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.0                | 2.8                | 5.8                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 2.5       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 1.4                | 2.3                | 4.6                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.0       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 0.9                | 2.3                | 4.3                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 3.5       | <0.5 <sup>1)</sup> | <0.5 <sup>1)</sup> | 0.6                | 0.9                | 2.1                | 4.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 4         |                    | <0.5 <sup>1)</sup> | 0.6                | 0.9                | 2.0                | 3.8                | 9.5                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 5         |                    | <0.5 <sup>1)</sup> | 0.5                | 0.7                | 1.7                | 3.1                | 7.0                | 10.0 <sup>2)</sup> | 10.0 <sup>2)</sup> |
| 6         |                    |                    | 0.5                | 0.7                | 1.5                | 2.6                | 5.3                | 9.1                | 10.0 <sup>2)</sup> |
| 8         |                    |                    | <0.5 <sup>1)</sup> | 0.7                | 1.4                | 2.2                | 3.9                | 6.0                | 10.0 <sup>2)</sup> |
| 10        |                    |                    |                    | 0.7                | 1.2                | 1.9                | 3.4                | 5.0                | 9.5                |
| 13        |                    |                    |                    |                    | 1.2                | 1.8                | 3.2                | 4.6                | 8.6                |
| 16        |                    |                    |                    |                    |                    | 1.6                | 2.7                | 4.0                | 7.4                |
| 20        |                    |                    |                    |                    |                    | 1.5                | 2.5                | 3.5                | 6.7                |
| 25        |                    |                    |                    |                    |                    |                    | 2.4                | 3.4                | 6.2                |
| 32        |                    |                    |                    |                    |                    |                    |                    | 2.8                | 5.0                |
| 40        |                    |                    |                    |                    |                    |                    |                    |                    | 4.8                |

<sup>1)</sup> Selectivity limit current  $I_s$  under 0.5 kA

<sup>2)</sup> Selectivity limit current  $I_s$  = rated breaking capacity  $I_{cn}$  of the MCB

Shaded fields: no selectivity

## FAZ-B and NZM 1/2

Selectivity-limit current  $I_g$  [kA] for selectivity between FAZ-B and NZM (overload and short-circuit release unit NZM at max. value).

| $I_n$ [A]    | NZM...1-A...                  |           |           |           |            |            | NZM...2-A...                            |           |           |           |            |            |            |            |            |
|--------------|-------------------------------|-----------|-----------|-----------|------------|------------|---|-----------|-----------|-----------|------------|------------|------------|------------|------------|
|              | $I_{cu} = 25 (50) \text{ kA}$ |           |           |           |            |            | $I_{cu} = 25 (50)(100)(150) \text{ kA}$ |           |           |           |            |            |            |            |            |
| <b>FAZ-B</b> | <b>40</b>                     | <b>50</b> | <b>63</b> | <b>80</b> | <b>100</b> | <b>125</b> | <b>40</b>                               | <b>50</b> | <b>63</b> | <b>80</b> | <b>100</b> | <b>125</b> | <b>160</b> | <b>200</b> | <b>250</b> |
| 1            | 15                            | 15        | 15        | 15        | 15         | 15         | 15                                      | 15        | 15        | 15        | 15         | 15         | 15         | 15         | 15         |
| 2            | 2                             | 15        | 15        | 15        | 15         | 15         | 3                                       | 15        | 15        | 15        | 15         | 15         | 15         | 15         | 15         |
| 3            | 1.2                           | 2         | 3         | 3         | 10         | 15         | 1.5                                     | 1.5       | 3         | 5         | 15         | 15         | 15         | 15         | 15         |
| 4            | 1.2                           | 2         | 3         | 3         | 8          | 15         | 1.2                                     | 1.5       | 3         | 4         | 15         | 15         | 15         | 15         | 15         |
| 6            | 1.2                           | 2         | 2.5       | 3         | 5          | 10         | 1.2                                     | 1.5       | 2.5       | 3         | 15         | 15         | 15         | 15         | 15         |
| 10           | 1.2                           | 1.5       | 2         | 2         | 4          | 10         | 1                                       | 1.5       | 2.5       | 3         | 10         | 10         | 10         | 10         | 10         |
| 13           | 1                             | 1.5       | 2         | 2         | 4          | 10         | 1                                       | 1.2       | 2         | 3         | 10         | 10         | 10         | 10         | 10         |
| 16           | 1                             | 1.2       | 1.5       | 2         | 3          | 8          | 1                                       | 1.2       | 1.5       | 2.5       | 10         | 10         | 10         | 10         | 10         |
| 20           | 0.8                           | 1.2       | 1.5       | 1.5       | 3          | 8          | 1                                       | 1.2       | 1.5       | 1.5       | 10         | 10         | 10         | 10         | 10         |
| 25           | 0.7                           | 1.2       | 1.5       | 1.5       | 3          | 7          | 0.8                                     | 1         | 1.5       | 2         | 10         | 10         | 10         | 10         | 10         |
| 32           | -                             | 1.2       | 1         | 1.5       | 2          | 6          | -                                       | 1         | 1.5       | 2         | 8          | 8          | 8          | 8          | 10         |
| 40           | -                             | -         | 1         | 1.5       | 2          | 5          | -                                       | -         | 1.2       | 1.5       | 7          | 7          | 7          | 7          | 10         |
| 50           | -                             | -         | -         | 1.2       | 1.5        | 4          | -                                       | -         | -         | 1.5       | 6          | 6          | 6          | 6          | 10         |
| 63           | -                             | -         | -         | -         | 1.5        | 3          | -                                       | -         | -         | -         | 6          | 6          | 6          | 6          | 10         |

## FAZ-C and NZM 1/2

Selectivity-limit current  $I_g$  [kA] for selectivity between FAZ-C and NZM (overload and short-circuit release unit NZM at max. value).

| $I_n$ [A]    | NZM...1-A...                  |           |           |           |            |            | NZM...2-A...                            |           |           |           |            |            |            |            |            |
|--------------|-------------------------------|-----------|-----------|-----------|------------|------------|---|-----------|-----------|-----------|------------|------------|------------|------------|------------|
|              | $I_{cu} = 25 (50) \text{ kA}$ |           |           |           |            |            | $I_{cu} = 25 (50)(100)(150) \text{ kA}$ |           |           |           |            |            |            |            |            |
| <b>FAZ-C</b> | <b>40</b>                     | <b>50</b> | <b>63</b> | <b>80</b> | <b>100</b> | <b>125</b> | <b>40</b>                               | <b>50</b> | <b>63</b> | <b>80</b> | <b>100</b> | <b>125</b> | <b>160</b> | <b>200</b> | <b>250</b> |
| 0.5          | 15                            | 15        | 15        | 15        | 15         | 15         | 15                                      | 15        | 15        | 15        | 15         | 15         | 15         | 15         | 15         |
| 1            | 15                            | 15        | 15        | 15        | 15         | 15         | 15                                      | 15        | 15        | 15        | 15         | 15         | 15         | 15         | 15         |
| 2            | 2                             | 15        | 15        | 15        | 15         | 15         | 3                                       | 15        | 15        | 15        | 15         | 15         | 15         | 15         | 15         |
| 3            | 1.2                           | 2         | 3         | 3         | 10         | 15         | 1.5                                     | 1.5       | 3         | 5         | 15         | 15         | 15         | 15         | 15         |
| 4            | 1.2                           | 2         | 3         | 3         | 8          | 15         | 1.2                                     | 1.5       | 3         | 4         | 15         | 15         | 15         | 15         | 15         |
| 6            | 1.2                           | 2         | 2.5       | 3         | 5          | 10         | 1.2                                     | 1.5       | 2.5       | 3         | 15         | 15         | 15         | 15         | 15         |
| 10           | 1.2                           | 1.5       | 2         | 2         | 4          | 10         | 1                                       | 1.5       | 2.5       | 3         | 10         | 10         | 10         | 10         | 10         |
| 13           | 1                             | 1.5       | 2         | 2         | 4          | 10         | 1                                       | 1.2       | 2         | 3         | 10         | 10         | 10         | 10         | 10         |
| 16           | 1                             | 1.2       | 1.5       | 2         | 3          | 8          | 1                                       | 1.2       | 1.5       | 2.5       | 10         | 10         | 10         | 10         | 10         |
| 20           | 0.8                           | 1.2       | 1.5       | 1.5       | 3          | 8          | 1                                       | 1.2       | 1.5       | 1.5       | 10         | 10         | 10         | 10         | 10         |
| 25           | 0.7                           | 1.2       | 1.5       | 1.5       | 3          | 7          | 0.8                                     | 1         | 1.5       | 2         | 10         | 10         | 10         | 10         | 10         |
| 32           | -                             | 1.2       | 1         | 1.5       | 2          | 6          | -                                       | 1         | 1.5       | 2         | 8          | 8          | 8          | 8          | 10         |
| 40           | -                             | -         | 1         | 1.5       | 2          | 5          | -                                       | -         | 1.2       | 1.5       | 7          | 7          | 7          | 7          | 10         |
| 50           | -                             | -         | -         | 1.2       | 1.5        | 4          | -                                       | -         | -         | 1.5       | 6          | 6          | 6          | 6          | 10         |
| 63           | -                             | -         | -         | -         | 1.5        | 3          | -                                       | -         | -         | -         | 6          | 6          | 6          | 6          | 10         |



## FAZ-D and NZM 1/2

Selectivity-limit current  $I_s$  [kA] for selectivity between FAZ-D and NZM (overload and short-circuit release unit NZM at max. value).

| $I_n$ [A]    | NZM...1-A...                  |           |           |           |            |            | NZM...2-A...                            |           |           |           |            |            |            |            |            |
|--------------|-------------------------------|-----------|-----------|-----------|------------|------------|---|-----------|-----------|-----------|------------|------------|------------|------------|------------|
|              | $I_{cu} = 25 (50) \text{ kA}$ |           |           |           |            |            | $I_{cu} = 25 (50)(100)(150) \text{ kA}$ |           |           |           |            |            |            |            |            |
| <b>FAZ-D</b> | <b>40</b>                     | <b>50</b> | <b>63</b> | <b>80</b> | <b>100</b> | <b>125</b> | <b>40</b>                               | <b>50</b> | <b>63</b> | <b>80</b> | <b>100</b> | <b>125</b> | <b>160</b> | <b>200</b> | <b>250</b> |
| 0.5          | 9                             | 15        | 15        | 15        | 15         | 15         | 9                                       | 15        | 15        | 15        | 15         | 15         | 15         | 15         | 15         |
| 1            | 0.5                           | 0.7       | 1.1       | 1.9       | 4.2        | 15         | 0.5                                     | 0.7       | 1.1       | 1.9       | 4.2        | 15         | 15         | 15         | 15         |
| 1.5          | 0.3                           | 0.6       | 0.8       | 1.1       | 1.6        | 2.6        | 0.3                                     | 0.6       | 0.8       | 1.1       | 1.6        | 2.6        | 5          | 15         | 15         |
| 2            | 0.3                           | 0.5       | 0.75      | 0.95      | 1.4        | 2.4        | 0.3                                     | 0.5       | 0.75      | 0.95      | 1.4        | 2.4        | 4.5        | 10         | 15         |
| 2.5          | 0.3                           | 0.5       | 0.75      | 0.95      | 1.3        | 2.3        | 0.3                                     | 0.5       | 0.75      | 0.95      | 1.3        | 2.3        | 4.2        | 9          | 15         |
| 3            | 0.3                           | 0.5       | 0.7       | 0.9       | 1.3        | 2.1        | 0.3                                     | 0.5       | 0.7       | 0.9       | 1.3        | 2.1        | 3.6        | 7          | 15         |
| 3.5          | 0.3                           | 0.5       | 0.7       | 0.9       | 1.3        | 2          | 0.3                                     | 0.5       | 0.7       | 0.9       | 1.3        | 2          | 3.3        | 5.6        | 10         |
| 4            | 0.3                           | 0.5       | 0.7       | 0.9       | 1.3        | 1.9        | 0.3                                     | 0.5       | 0.7       | 0.9       | 1.3        | 1.9        | 3          | 4.7        | 8          |
| 5            | 0.3                           | 0.5       | 0.7       | 0.9       | 1.3        | 1.9        | 0.3                                     | 0.5       | 0.7       | 0.9       | 1.3        | 1.9        | 3          | 4.4        | 7          |
| 6            | 0.3                           | 0.5       | 0.6       | 0.9       | 1.3        | 1.8        | 0.3                                     | 0.5       | 0.6       | 0.9       | 1.3        | 1.8        | 2.8        | 4          | 6          |
| 8            | 0.3                           | 0.3       | 0.6       | 0.75      | 1          | 1.3        | 0.3                                     | 0.3       | 0.6       | 0.75      | 1          | 1.3        | 1.8        | 2.7        | 4          |
| 10           | 0.3                           | 0.3       | 0.6       | 0.75      | 0.95       | 1.2        | 0.3                                     | 0.3       | 0.6       | 0.75      | 0.95       | 1.2        | 1.7        | 2.4        | 3.6        |
| 13           | 0.3                           | 0.3       | 0.5       | 0.7       | 0.9        | 1.1        | 0.3                                     | 0.3       | 0.5       | 0.7       | 0.9        | 1.1        | 1.6        | 2.2        | 3.2        |
| 16           | -                             | 0.3       | 0.5       | 0.65      | 0.8        | 1.1        | -                                       | 0.3       | 0.5       | 0.65      | 0.8        | 1.1        | 1.5        | 2.1        | 3          |
| 20           | -                             | -         | 0.5       | 0.65      | 0.8        | 1.1        | -                                       | -         | 0.5       | 0.65      | 0.8        | 1.1        | 1.4        | 2.1        | 3          |
| 25           | -                             | -         | 0.5       | 0.65      | 0.8        | 1.1        | -                                       | -         | 0.5       | 0.65      | 0.8        | 1.1        | 1.4        | 1.9        | 2.7        |
| 32           | -                             | -         | -         | -         | 0.8        | 1.1        | -                                       | -         | -         | -         | 0.8        | 1.1        | 1.4        | 1.9        | 2.7        |
| 40           | -                             | -         | -         | -         | -          | 1          | -                                       | -         | -         | -         | -          | 1          | 1.4        | 1.8        | 2.6        |

## Back-up Protection FAZ

The up-stream protective devices will protect the down-stream FAZ up to the short-circuit current specified.

### FAZ/C and AZ/C

| $I_n$ [A] | AZ/C      |    |    |    |    |    |    |     |       |
|-----------|-----------|----|----|----|----|----|----|-----|-------|
|           | $I_n$ [A] |    |    |    |    |    |    |     |       |
| FAZ/C     | 20        | 25 | 32 | 40 | 50 | 63 | 80 | 100 | 125   |
| 1         | 25        | 25 | 25 | 25 | 25 | 25 | 20 | 20  | 15 kA |
| 2         | 25        | 25 | 25 | 25 | 25 | 25 | 20 | 20  | 15 kA |
| 4         | 25        | 25 | 25 | 25 | 25 | 25 | 20 | 20  | 15 kA |
| 6         | 25        | 25 | 25 | 25 | 25 | 25 | 20 | 20  | 15 kA |
| 10        | 25        | 25 | 25 | 25 | 25 | 25 | 20 | 20  | 15 kA |
| 13        | 25        | 25 | 25 | 25 | 25 | 25 | 20 | 20  | 15 kA |
| 16        | 25        | 25 | 25 | 25 | 25 | 25 | 20 | 20  | 15 kA |
| 20        | 1)        | 25 | 25 | 25 | 25 | 25 | 20 | 20  | 15 kA |
| 25        | 1)        | 1) | 25 | 25 | 25 | 25 | 20 | 20  | 15 kA |
| 32        | 1)        | 1) | 1) | 25 | 25 | 25 | 20 | 20  | -     |
| 40        | 1)        | 1) | 1) | 1) | 25 | 25 | 20 | 20  | -     |
| 50        | 1)        | 1) | 1) | 1) | 1) | 25 | 20 | 20  | -     |
| 63        | 1)        | 1) | 1) | 1) | 1) | 1) | -  | -   | -     |

1)  $I_n$  (AZ)  $\leq$   $I_n$  (FAZ)

### FAZ and CL-PKZ0

Back-up tests acc. to EN/IEC 60947-2, App. A:  $U = 1.05 U_e$ , (O - t - CO)

| $I_n$ [A] | FAZ- $I_n$ /1(2,3,4)/B(C) + CL-PKZ0<br>$U_e = 230/400$ V |
|-----------|--|
| 0.16      | 65 kA  |
| 0.25      | 65 kA  |
| 0.5       | 65 kA  |
| 0.75      | 65 kA  |
| 1         | 65 kA  |
| 1.5       | 65 kA  |
| 2         | 65 kA  |
| 2.5       | 65 kA  |
| 3         | 65 kA  |
| 3.5       | 65 kA  |
| 4         | 65 kA  |
| 5         | 45 kA  |
| 6         | 45 kA  |
| 8         | 45 kA  |
| 10        | 45 kA  |
| 12        | 45 kA  |
| 13        | 45 kA  |
| 15        | 45 kA  |
| 16        | 45 kA  |
| 20        | 45 kA  |
| 25        | 45 kA  |
| 32        | 45 kA  |
| 40        | 25 kA  |
| 50        | 25 kA  |
| 63        | 25 kA  |

### FAZ and NZM7

| $I_n$ [A] | FAZ- $I_n$ /1(2,3,4)/B(C) + NZM7-40(...100)<br>$U_e = 230/400$ V |
|-----------|--|
| 0.16      | 25 kA  |
| 0.25      | 25 kA  |
| 0.5       | 25 kA  |
| 0.75      | 25 kA  |
| 1         | 25 kA  |
| 1.5       | 25 kA  |
| 2         | 25 kA  |
| 2.5       | 25 kA  |
| 3         | 25 kA  |
| 3.5       | 25 kA  |
| 4         | 25 kA  |
| 5         | 20 kA  |
| 6         | 20 kA  |
| 8         | 20 kA  |
| 10        | 20 kA  |
| 12        | 20 kA  |
| 13        | 20 kA  |
| 15        | 20 kA  |
| 16        | 20 kA  |
| 20        | 18 kA  |
| 25        | 18 kA  |
| 32        | 18 kA  |
| 40        | 18 kA  |
| 50        | 15 kA  |
| 63        | 15 kA  |

## FAZ and NZMB1

$U_e = 230/400\text{ V}$ :  $I_{cu}$  (FAZ) = 15 kA

$U_e = 230/400\text{ V}$ :  $I_{cu}$  (NZMB1) = 25 kA

Back-up test acc. EN/IEC 60947-2, app. A:  $U = 1.05U_e$ , (O - t - CO)

(Settings NZMB1:  $I_r$ ,  $I_{rm}$  at max. volumes)

| $I_n$ [A] | <b>FAZ-<math>I_n/1(2,3,4)/B(C)</math> + NZMB1</b><br>$U_e = 230/400\text{ V}$ |
|-----------|---|
| 0.16      | 25 kA   |
| 0.25      | 25 kA   |
| 0.5       | 25 kA   |
| 0.75      | 25 kA   |
| 1         | 25 kA   |
| 1.5       | 25 kA   |
| 2         | 25 kA   |
| 2.5       | 25 kA   |
| 3         | 25 kA   |
| 3.5       | 25 kA   |
| 4         | 25 kA   |
| 5         | 25 kA   |
| 6         | 25 kA   |
| 8         | 25 kA   |
| 10        | 25 kA   |
| 12        | 25 kA   |
| 13        | 25 kA   |
| 15        | 25 kA   |
| 16        | 25 kA   |
| 20        | 20 kA   |
| 25        | 20 kA   |
| 32        | 20 kA   |
| 40        | 20 kA   |
| 50        | 15 kA   |
| 63        | 15 kA   |

## FAZ and NZMN1

$U_e = 230/400\text{ V}$ :  $I_{cu}$  (FAZ) = 15 kA

$U_e = 230/400\text{ V}$ :  $I_{cu}$  (NZMN1) = 25 kA

Back-up test acc. EN/IEC 60947-2, app. A:  $U = 1.05U_e$ , (O - t - CO)

(Settings NZM at max. values)

| $I_n$ [A] | <b>FAZ-<math>I_n/1(2,3,4)/B(C)</math> + NZMN1</b><br>$U_e = 230/400\text{ V}$ |
|-----------|---|
| 0.16      | 25 kA   |
| 0.25      | 25 kA   |
| 0.5       | 25 kA   |
| 0.75      | 25 kA   |
| 1         | 25 kA   |
| 1.5       | 25 kA   |
| 2         | 25 kA   |
| 2.5       | 25 kA   |
| 3         | 25 kA   |
| 3.5       | 25 kA   |
| 4         | 25 kA   |
| 5         | 25 kA   |
| 6         | 25 kA   |
| 8         | 25 kA   |
| 10        | 25 kA   |
| 12        | 25 kA   |
| 13        | 25 kA   |
| 15        | 25 kA   |
| 16        | 25 kA   |
| 20        | 20 kA   |
| 25        | 20 kA   |
| 32        | 20 kA   |
| 40        | 20 kA   |
| 50        | 15 kA   |
| 63        | 15 kA   |

## FAZ and NZMB2

$U_e = 230/400\text{ V}$ :  $I_{cu}$  (FAZ) = 15 kA  
 $U_e = 230/400\text{ V}$ :  $I_{cu}$  (NZMB2) = 25 kA  
 $U_e = 133/230\text{ V}$ :  $I_{cu}$  (FAZ) = 20 kA  
 $U_e = 133/230\text{ V}$ :  $I_{cu}$  (NZMB2) = 30 kA  
 Back-up test acc. EN/IEC 60947-2, app. A:  $U = 1.05U_e$ , (O - t - CO)  
 (Settings NZM at max. values)

| $I_n$ [A] | <b>FAZ-<math>I_n/1(2,3,4)/B(C)</math> + NZMB2</b> |                          |
|-----------|---|--------------------------|
|           | $U_e = 230/400\text{ V}$                          | $U_e = 133/230\text{ V}$ |
| 0.16      | 25 kA   | 30 kA                    |
| 0.25      | 25 kA   | 30 kA                    |
| 0.5       | 25 kA   | 30 kA                    |
| 0.75      | 25 kA   | 30 kA                    |
| 1         | 25 kA   | 30 kA                    |
| 1.5       | 25 kA   | 30 kA                    |
| 2         | 25 kA   | 30 kA                    |
| 2.5       | 25 kA   | 30 kA                    |
| 3         | 25 kA   | 30 kA                    |
| 3.5       | 25 kA   | 30 kA                    |
| 4         | 25 kA   | 30 kA                    |
| 5         | 25 kA   | 25 kA                    |
| 6         | 25 kA   | 25 kA                    |
| 8         | 25 kA   | 25 kA                    |
| 10        | 25 kA   | 25 kA                    |
| 12        | 20 kA   | 25 kA                    |
| 13        | 20 kA   | 25 kA                    |
| 15        | 20 kA   | 25 kA                    |
| 16        | 20 kA   | 25 kA                    |
| 20        | 20 kA   | 25 kA                    |
| 25        | 20 kA   | 25 kA                    |
| 32        | 20 kA   | 25 kA                    |
| 40        | 15 kA   | 20 kA                    |
| 50        | 15 kA   | 20 kA                    |
| 63        | 15 kA   | 20 kA                    |

## FAZ and NZMN2

$U_e = 230/400\text{ V}$ :  $I_{cu}$  (FAZ) = 15 kA  
 $U_e = 230/400\text{ V}$ :  $I_{cu}$  (NZMN2) = 50 kA  
 $U_e = 133/230\text{ V}$ :  $I_{cu}$  (FAZ) = 20 kA  
 $U_e = 133/230\text{ V}$ :  $I_{cu}$  (NZMN2) = 85 kA  
 Back-up test acc. EN/IEC 60947-2, app. A:  $U = 1.05U_e$ , (O - t - CO)  
 (Settings NZM at max. values)

| $I_n$ [A] | <b>FAZ-<math>I_n/1(2,3,4)/B(C)</math> + NZMN2</b> |                          |
|-----------|---|--------------------------|
|           | $U_e = 230/400\text{ V}$                          | $U_e = 133/230\text{ V}$ |
| 0.16      | 50 kA   | 85 kA                    |
| 0.25      | 50 kA   | 85 kA                    |
| 0.5       | 50 kA   | 85 kA                    |
| 0.75      | 50 kA   | 85 kA                    |
| 1         | 50 kA   | 85 kA                    |
| 1.5       | 50 kA   | 85 kA                    |
| 2         | 50 kA   | 85 kA                    |
| 2.5       | 50 kA   | 85 kA                    |
| 3         | 50 kA   | 85 kA                    |
| 3.5       | 50 kA   | 85 kA                    |
| 4         | 50 kA   | 85 kA                    |
| 5         | 50 kA   | 80 kA                    |
| 6         | 50 kA   | 80 kA                    |
| 8         | 50 kA   | 80 kA                    |
| 10        | 50 kA   | 80 kA                    |
| 12        | 30 kA   | 60 kA                    |
| 13        | 30 kA   | 60 kA                    |
| 15        | 30 kA   | 60 kA                    |
| 16        | 30 kA   | 60 kA                    |
| 20        | 30 kA   | 60 kA                    |
| 25        | 30 kA   | 60 kA                    |
| 32        | 30 kA   | 60 kA                    |
| 40        | 20 kA   | 40 kA                    |
| 50        | 20 kA   | 40 kA                    |
| 63        | 20 kA   | 40 kA                    |

## FAZ and NZMH2

$U_e = 230/400\text{ V}$ :  $I_{cu}$  (FAZ) = 15 kA  
 $U_e = 230/400\text{ V}$ :  $I_{cu}$  (NZMH2) = 150 kA  
 $U_e = 133/230\text{ V}$ :  $I_{cu}$  (FAZ) = 20 kA  
 $U_e = 133/230\text{ V}$ :  $I_{cu}$  (NZMH2) = 150 kA  
 Back-up test acc. EN/IEC 60947-2, app. A:  $U = 1.05U_e$ , (O - t - CO)  
 (Settings NZM at max. values)

| $I_n$ [A] | <b>FAZ-<math>I_n/1(2,3,4)/B(C)</math> + NZMH2</b> |                          |
|-----------|---|--------------------------|
|           | $U_e = 230/400\text{ V}$                          | $U_e = 133/230\text{ V}$ |
| 0.16      | 50 kA   | 85 kA                    |
| 0.25      | 50 kA   | 85 kA                    |
| 0.5       | 50 kA   | 85 kA                    |
| 0.75      | 50 kA   | 85 kA                    |
| 1         | 50 kA   | 85 kA                    |
| 1.5       | 50 kA   | 85 kA                    |
| 2         | 50 kA   | 85 kA                    |
| 2.5       | 50 kA   | 85 kA                    |
| 3         | 50 kA   | 85 kA                    |
| 3.5       | 50 kA   | 85 kA                    |
| 4         | 50 kA   | 85 kA                    |
| 5         | 50 kA   | 80 kA                    |
| 6         | 50 kA   | 80 kA                    |
| 8         | 50 kA   | 80 kA                    |
| 10        | 50 kA   | 80 kA                    |
| 12        | 30 kA   | 60 kA                    |
| 13        | 30 kA   | 60 kA                    |
| 15        | 30 kA   | 60 kA                    |
| 16        | 30 kA   | 60 kA                    |
| 20        | 30 kA   | 60 kA                    |
| 25        | 30 kA   | 60 kA                    |
| 32        | 30 kA   | 60 kA                    |
| 40        | 20 kA   | 40 kA                    |
| 50        | 20 kA   | 40 kA                    |
| 63        | 20 kA   | 40 kA                    |

## FAZ and NZML2

$U_e = 230/400\text{ V}$ :  $I_{cu}$  (FAZ) = 15 kA  
 $U_e = 230/400\text{ V}$ :  $I_{cu}$  (NZML2) = 150 kA  
 $U_e = 133/230\text{ V}$ :  $I_{cu}$  (FAZ) = 20 kA  
 $U_e = 133/230\text{ V}$ :  $I_{cu}$  (NZML2) = 150 kA  
 Back-up test acc. EN/IEC 60947-2, app. A:  $U = 1.05U_e$ , (O - t - CO)  
 (Settings NZM at max. values)

| $I_n$ [A] | <b>FAZ-<math>I_n/1(2,3,4)/B(C)</math> + NZML2</b> |                          |
|-----------|---|--------------------------|
|           | $U_e = 230/400\text{ V}$                          | $U_e = 133/230\text{ V}$ |
| 0.16      | 50 kA   | 85 kA                    |
| 0.25      | 50 kA   | 85 kA                    |
| 0.5       | 50 kA   | 85 kA                    |
| 0.75      | 50 kA   | 85 kA                    |
| 1         | 50 kA   | 85 kA                    |
| 1.5       | 50 kA   | 85 kA                    |
| 2         | 50 kA   | 85 kA                    |
| 2.5       | 50 kA   | 85 kA                    |
| 3         | 50 kA   | 85 kA                    |
| 3.5       | 50 kA   | 85 kA                    |
| 4         | 50 kA   | 85 kA                    |
| 5         | 50 kA   | 80 kA                    |
| 6         | 50 kA   | 80 kA                    |
| 8         | 50 kA   | 80 kA                    |
| 10        | 50 kA   | 80 kA                    |
| 12        | 30 kA   | 60 kA                    |
| 13        | 30 kA   | 60 kA                    |
| 15        | 30 kA   | 60 kA                    |
| 16        | 30 kA   | 60 kA                    |
| 20        | 30 kA   | 60 kA                    |
| 25        | 30 kA   | 60 kA                    |
| 32        | 30 kA   | 60 kA                    |
| 40        | 20 kA   | 40 kA                    |
| 50        | 20 kA   | 40 kA                    |
| 63        | 20 kA   | 40 kA                    |

## FAZ and NH

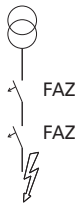
$U_e = 230\text{ V}$ :  $I_{cu}$  (FAZ) = 15 (10) kA (acc. to IEC/EN 60947)

$U_e = 500\text{ V}$ :  $I_{cu}$  (NH00 125 A gL / gG) = 120kA

| $I_n$ [A] | <b>FAZ-I<sub>n</sub>/B,(C),(D)... + NH00 125 A gL/gG</b><br>IT-system U = 230 V |
|-----------|---|
| 0.5       | 50 kA   |
| 1         | 50 kA   |
| 2         | 50 kA   |
| 3         | 50 kA   |
| 4         | 50 kA   |
| 6         | 50 kA   |
| 10        | 50 kA   |
| 13        | 50 kA   |
| 16        | 50 kA   |
| 20        | 50 kA   |
| 25        | 50 kA   |
| 32        | 50 kA   |
| 40        | 50 kA   |
| 50        | 50 kA   |
| 63        | 50 kA   |

## Overload Selectivity FAZ

### FAZ-B(C)(D) to FAZ-B



**Upstream side FAZ, Characteristic B**  
**Downstream side FAZ, Characteristic B, C, D**

x ... Selectivity range (i.e. only the downstream switch drops in case  $I < I_g$ )

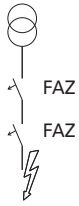
| Upstream side                           | FAZ Characteristic B |   |      |    |    |    |      |    |    |      |     |     |     |       |
|---|----------------------|---|------|----|----|----|------|----|----|------|-----|-----|-----|-------|
| Type B rated current $I_n$ [A]          |                      | 2 | 3    | 4  | 6  | 10 | 13   | 16 | 20 | 25   | 32  | 40  | 50  | 63    |
| Selectivity limiting current $I_g$ [A]  |                      | 7 | 10.5 | 14 | 21 | 35 | 45.5 | 56 | 70 | 87.5 | 112 | 140 | 175 | 220.5 |
| Downstream side<br>FAZ Characteristic B | 2                    |   | x    | x  | x  | x  | x    | x  | x  | x    | x   | x   | x   | x     |
|   | 3                    |   |      | x  | x  | x  | x    | x  | x  | x    | x   | x   | x   | x     |
|   | 4                    |   |      |    | x  | x  | x    | x  | x  | x    | x   | x   | x   | x     |
|   | 6                    |   |      |    |    | x  | x    | x  | x  | x    | x   | x   | x   | x     |
|   | 10                   |   |      |    |    |    | x    | x  | x  | x    | x   | x   | x   | x     |
|   | 13                   |   |      |    |    |    |      | x  | x  | x    | x   | x   | x   | x     |
|   | 16                   |   |      |    |    |    |      |    | x  | x    | x   | x   | x   | x     |
|   | 20                   |   |      |    |    |    |      |    |    | x    | x   | x   | x   | x     |
|   | 25                   |   |      |    |    |    |      |    |    |      | x   | x   | x   | x     |
|   | 32                   |   |      |    |    |    |      |    |    |      |     | x   | x   | x     |
|   | 40                   |   |      |    |    |    |      |    |    |      |     |     | x   | x     |
|   | 50                   |   |      |    |    |    |      |    |    |      |     |     |     | x     |
|   | 63                   |   |      |    |    |    |      |    |    |      |     |     |     |       |

| Upstream side                           | FAZ Characteristic B |   |      |    |    |    |      |    |    |      |     |     |     |       |   |   |
|---|----------------------|---|------|----|----|----|------|----|----|------|-----|-----|-----|-------|---|---|
| Type B rated current $I_n$ [A]          |                      | 2 | 3    | 4  | 6  | 10 | 13   | 16 | 20 | 25   | 32  | 40  | 50  | 63    |   |   |
| Selectivity limiting current $I_g$ [A]  |                      | 7 | 10.5 | 14 | 21 | 35 | 45.5 | 56 | 70 | 87.5 | 112 | 140 | 175 | 220.5 |   |   |
| Downstream side<br>FAZ Characteristic C | 0.5                  | x | x    | x  | x  | x  | x    | x  | x  | x    | x   | x   | x   | x     |   |   |
|   | 1                    | x | x    | x  | x  | x  | x    | x  | x  | x    | x   | x   | x   | x     |   |   |
|   | 2                    |   |      | x  | x  | x  | x    | x  | x  | x    | x   | x   | x   | x     |   |   |
|   | 3                    |   |      |    | x  | x  | x    | x  | x  | x    | x   | x   | x   | x     |   |   |
|   | 4                    |   |      |    |    | x  | x    | x  | x  | x    | x   | x   | x   | x     |   |   |
|   | 6                    |   |      |    |    |    | x    | x  | x  | x    | x   | x   | x   | x     |   |   |
|   | 8                    |   |      |    |    |    |      | x  | x  | x    | x   | x   | x   | x     |   |   |
|   | 10                   |   |      |    |    |    |      |    | x  | x    | x   | x   | x   | x     |   |   |
|   | 13                   |   |      |    |    |    |      |    |    | x    | x   | x   | x   | x     |   |   |
|   | 16                   |   |      |    |    |    |      |    |    |      | x   | x   | x   | x     |   |   |
|   | 20                   |   |      |    |    |    |      |    |    |      |     | x   | x   | x     |   |   |
|   | 25                   |   |      |    |    |    |      |    |    |      |     |     | x   | x     |   |   |
|   | 32                   |   |      |    |    |    |      |    |    |      |     |     |     | x     |   |   |
|   | 40                   |   |      |    |    |    |      |    |    |      |     |     |     |       | x |   |
|   | 50                   |   |      |    |    |    |      |    |    |      |     |     |     |       |   | x |
| 63                                      |                      |   |      |    |    |    |      |    |    |      |     |     |     |       |   | x |

| Upstream side                           | FAZ Characteristic B |   |      |    |    |    |      |    |    |      |     |     |     |       |   |   |
|---|----------------------|---|------|----|----|----|------|----|----|------|-----|-----|-----|-------|---|---|
| Type B rated current $I_n$ [A]          |                      | 2 | 3    | 4  | 6  | 10 | 13   | 16 | 20 | 25   | 32  | 40  | 50  | 63    |   |   |
| Selectivity limiting current $I_g$ [A]  |                      | 7 | 10.5 | 14 | 21 | 35 | 45.5 | 56 | 70 | 87.5 | 112 | 140 | 175 | 220.5 |   |   |
| Downstream side<br>FAZ Characteristic D | 2                    |   |      |    |    | x  | x    | x  | x  | x    | x   | x   | x   | x     |   |   |
|   | 4                    |   |      |    |    |    |      | x  | x  | x    | x   | x   | x   | x     |   |   |
|   | 6                    |   |      |    |    |    |      |    | x  | x    | x   | x   | x   | x     |   |   |
|   | 10                   |   |      |    |    |    |      |    |    |      | x   | x   | x   | x     |   |   |
|   | 13                   |   |      |    |    |    |      |    |    |      |     | x   | x   | x     |   |   |
|   | 16                   |   |      |    |    |    |      |    |    |      |     |     | x   | x     |   |   |
|   | 20                   |   |      |    |    |    |      |    |    |      |     |     |     | x     |   |   |
|   | 25                   |   |      |    |    |    |      |    |    |      |     |     |     |       | x |   |
|   | 32                   |   |      |    |    |    |      |    |    |      |     |     |     |       |   | x |
| 40                                      |                      |   |      |    |    |    |      |    |    |      |     |     |     |       |   | x |

## Overload Selectivity FAZ

### FAZ-B(C)(D) to FAZ-C



**Upstream side FAZ, Characteristic C**  
**Downstream side FAZ, Characteristic B, C, D**

x ... Selectivity range (i.e. only the downstream switch drops in case  $I < I_g$ )

| Upstream side →                         |    | FAZ Characteristic C |     |      |      |      |      |      |    |      |      |     |       |       |     |     |       |   |
|---|----|----------------------|-----|------|------|------|------|------|----|------|------|-----|-------|-------|-----|-----|-------|---|
| Type B rated current $I_n$ [A]          |    | 0.5                  | 1   | 2    | 3    | 4    | 6    | 8    | 10 | 13   | 16   | 20  | 25    | 32    | 40  | 50  | 63    |   |
| Selectivity limiting current $I_g$ [A]  |    | 2.85                 | 5.7 | 11.4 | 17.1 | 22.8 | 34.2 | 45.6 | 57 | 74.1 | 91.2 | 114 | 142.5 | 182.4 | 228 | 285 | 359.1 |   |
| Downstream side<br>FAZ Characteristic B | 2  |                      |     |      | x    | x    | x    | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |   |
|   | 3  |                      |     |      |      | x    | x    | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |   |
|   | 4  |                      |     |      |      |      | x    | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |   |
|   | 6  |                      |     |      |      |      |      | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |   |
|   | 10 |                      |     |      |      |      |      |      |    | x    | x    | x   | x     | x     | x   | x   | x     |   |
|   | 13 |                      |     |      |      |      |      |      |    |      | x    | x   | x     | x     | x   | x   | x     |   |
|   | 16 |                      |     |      |      |      |      |      |    |      |      | x   | x     | x     | x   | x   | x     |   |
|   | 20 |                      |     |      |      |      |      |      |    |      |      |     | x     | x     | x   | x   | x     |   |
|   | 25 |                      |     |      |      |      |      |      |    |      |      |     |       | x     | x   | x   | x     |   |
|   | 32 |                      |     |      |      |      |      |      |    |      |      |     |       |       | x   | x   | x     |   |
|   | 40 |                      |     |      |      |      |      |      |    |      |      |     |       |       |     | x   | x     |   |
|   | 50 |                      |     |      |      |      |      |      |    |      |      |     |       |       |     |     | x     | x |
|   | 63 |                      |     |      |      |      |      |      |    |      |      |     |       |       |     |     |       | x |

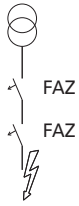
| Upstream side →                         |     | FAZ Characteristic C |     |      |      |      |      |      |    |      |      |     |       |       |     |     |       |
|---|-----|----------------------|-----|------|------|------|------|------|----|------|------|-----|-------|-------|-----|-----|-------|
| Type B rated current $I_n$ [A]          |     | 0.5                  | 1   | 2    | 3    | 4    | 6    | 8    | 10 | 13   | 16   | 20  | 25    | 32    | 40  | 50  | 63    |
| Selectivity limiting current $I_g$ [A]  |     | 2.85                 | 5.7 | 11.4 | 17.1 | 22.8 | 34.2 | 45.6 | 57 | 74.1 | 91.2 | 114 | 142.5 | 182.4 | 228 | 285 | 359.1 |
| Downstream side<br>FAZ Characteristic C | 0.5 |                      | x   | x    | x    | x    | x    | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 1   |                      |     | x    | x    | x    | x    | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 2   |                      |     |      | x    | x    | x    | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 3   |                      |     |      |      | x    | x    | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 4   |                      |     |      |      |      | x    | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 6   |                      |     |      |      |      |      | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 8   |                      |     |      |      |      |      |      | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 10  |                      |     |      |      |      |      |      |    | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 13  |                      |     |      |      |      |      |      |    |      | x    | x   | x     | x     | x   | x   | x     |
|   | 16  |                      |     |      |      |      |      |      |    |      |      | x   | x     | x     | x   | x   | x     |
|   | 20  |                      |     |      |      |      |      |      |    |      |      |     | x     | x     | x   | x   | x     |
|   | 25  |                      |     |      |      |      |      |      |    |      |      |     |       | x     | x   | x   | x     |
|   | 32  |                      |     |      |      |      |      |      |    |      |      |     |       |       | x   | x   | x     |
|   | 40  |                      |     |      |      |      |      |      |    |      |      |     |       |       |     | x   | x     |
|   | 50  |                      |     |      |      |      |      |      |    |      |      |     |       |       |     |     | x     |
| 63                                      |     |                      |     |      |      |      |      |      |    |      |      |     |       |       |     |     | x     |

| Upstream side →                         |    | FAZ Characteristic C |     |      |      |      |      |      |    |      |      |     |       |       |     |     |       |
|---|----|----------------------|-----|------|------|------|------|------|----|------|------|-----|-------|-------|-----|-----|-------|
| Type B rated current $I_n$ [A]          |    | 0.5                  | 1   | 2    | 3    | 4    | 6    | 8    | 10 | 13   | 16   | 20  | 25    | 32    | 40  | 50  | 63    |
| Selectivity limiting current $I_g$ [A]  |    | 2.85                 | 5.7 | 11.4 | 17.1 | 22.8 | 34.2 | 45.6 | 57 | 74.1 | 91.2 | 114 | 142.5 | 182.4 | 228 | 285 | 359.1 |
| Downstream side<br>FAZ Characteristic D | 2  |                      |     |      |      |      | x    | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 4  |                      |     |      |      |      |      | x    | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 6  |                      |     |      |      |      |      |      | x  | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 10 |                      |     |      |      |      |      |      |    | x    | x    | x   | x     | x     | x   | x   | x     |
|   | 13 |                      |     |      |      |      |      |      |    |      | x    | x   | x     | x     | x   | x   | x     |
|   | 16 |                      |     |      |      |      |      |      |    |      |      | x   | x     | x     | x   | x   | x     |
|   | 20 |                      |     |      |      |      |      |      |    |      |      |     | x     | x     | x   | x   | x     |
|   | 25 |                      |     |      |      |      |      |      |    |      |      |     |       | x     | x   | x   | x     |
|   | 32 |                      |     |      |      |      |      |      |    |      |      |     |       |       | x   | x   | x     |
| 40                                      |    |                      |     |      |      |      |      |      |    |      |      |     |       |       | x   | x   |       |



## Overload Selectivity FAZ

### FAZ-B(C)(D) to FAZ-D



**Upstream side FAZ, Characteristic D**  
**Downstream side FAZ, Characteristic B, C, D**

x ... Selectivity range (i.e. only the downstream switch drops in case  $I < I_g$ )

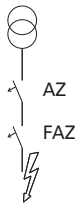
| Upstream side →                         |    | FAZ Characteristic D |    |    |     |       |     |     |       |     |     |
|---|----|----------------------|----|----|-----|-------|-----|-----|-------|-----|-----|
| Type B rated current $I_n$ [A]          |    | 2                    | 4  | 6  | 10  | 13    | 16  | 20  | 25    | 32  | 40  |
| Selectivity limiting current $I_g$ [A]  |    | 21                   | 42 | 63 | 105 | 136.5 | 168 | 210 | 262.5 | 336 | 420 |
| Downstream side<br>FAZ Characteristic B | 2  | x                    | x  | x  | x   | x     | x   | x   | x     | x   | x   |
|   | 3  |                      | x  | x  | x   | x     | x   | x   | x     | x   | x   |
|   | 4  |                      |    | x  | x   | x     | x   | x   | x     | x   | x   |
|   | 6  |                      |    |    | x   | x     | x   | x   | x     | x   | x   |
|   | 10 |                      |    |    |     | x     | x   | x   | x     | x   | x   |
|   | 13 |                      |    |    |     |       | x   | x   | x     | x   | x   |
|   | 16 |                      |    |    |     |       |     | x   | x     | x   | x   |
|   | 20 |                      |    |    |     |       |     |     | x     | x   | x   |
|   | 25 |                      |    |    |     |       |     |     |       | x   | x   |
|   | 32 |                      |    |    |     |       |     |     |       |     | x   |
|   | 40 |                      |    |    |     |       |     |     |       |     |     |
|   | 50 |                      |    |    |     |       |     |     |       |     |     |
| 63                                      |    |                      |    |    |     |       |     |     |       |     |     |

| Upstream side →                         |     | FAZ Characteristic D |    |    |     |       |     |     |       |     |     |
|---|-----|----------------------|----|----|-----|-------|-----|-----|-------|-----|-----|
| Type B rated current $I_n$ [A]          |     | 2                    | 4  | 6  | 10  | 13    | 16  | 20  | 25    | 32  | 40  |
| Selectivity limiting current $I_g$ [A]  |     | 21                   | 42 | 63 | 105 | 136.5 | 168 | 210 | 262.5 | 336 | 420 |
| Downstream side<br>FAZ Characteristic C | 0.5 | x                    | x  | x  | x   | x     | x   | x   | x     | x   | x   |
|   | 1   | x                    | x  | x  | x   | x     | x   | x   | x     | x   | x   |
|   | 2   |                      | x  | x  | x   | x     | x   | x   | x     | x   | x   |
|   | 3   |                      |    | x  | x   | x     | x   | x   | x     | x   | x   |
|   | 4   |                      |    |    | x   | x     | x   | x   | x     | x   | x   |
|   | 6   |                      |    |    |     | x     | x   | x   | x     | x   | x   |
|   | 8   |                      |    |    |     |       | x   | x   | x     | x   | x   |
|   | 10  |                      |    |    |     |       |     | x   | x     | x   | x   |
|   | 13  |                      |    |    |     |       |     |     | x     | x   | x   |
|   | 16  |                      |    |    |     |       |     |     |       | x   | x   |
|   | 20  |                      |    |    |     |       |     |     |       |     | x   |
|   | 25  |                      |    |    |     |       |     |     |       |     |     |
|   | 32  |                      |    |    |     |       |     |     |       |     |     |
|   | 40  |                      |    |    |     |       |     |     |       |     |     |
|   | 50  |                      |    |    |     |       |     |     |       |     |     |
| 63                                      |     |                      |    |    |     |       |     |     |       |     |     |

| Upstream side →                         |    | FAZ Characteristic D |    |    |     |       |     |     |       |     |     |
|---|----|----------------------|----|----|-----|-------|-----|-----|-------|-----|-----|
| Type B rated current $I_n$ [A]          |    | 2                    | 4  | 6  | 10  | 13    | 16  | 20  | 25    | 32  | 40  |
| Selectivity limiting current $I_g$ [A]  |    | 21                   | 42 | 63 | 105 | 136.5 | 168 | 210 | 262.5 | 336 | 420 |
| Downstream side<br>FAZ Characteristic D | 2  | x                    | x  | x  | x   | x     | x   | x   | x     | x   | x   |
|   | 4  |                      |    | x  | x   | x     | x   | x   | x     | x   | x   |
|   | 6  |                      |    |    | x   | x     | x   | x   | x     | x   | x   |
|   | 10 |                      |    |    |     | x     | x   | x   | x     | x   | x   |
|   | 13 |                      |    |    |     |       | x   | x   | x     | x   | x   |
|   | 16 |                      |    |    |     |       |     | x   | x     | x   | x   |
|   | 20 |                      |    |    |     |       |     |     | x     | x   | x   |
|   | 25 |                      |    |    |     |       |     |     |       | x   | x   |
|   | 32 |                      |    |    |     |       |     |     |       |     | x   |
| 40                                      |    |                      |    |    |     |       |     |     |       |     |     |

## Overload Selectivity FAZ

### FAZ-B(C)(D) to AZ-C



**Upstream side AZ, Characteristic C**  
**Downstream side FAZ, Characteristic B, C, D**

x ... Selectivity range (i.e. only the downstream switch drops in case  $I < I_g$ )

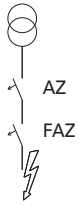
| Upstream side →                         |    | AZ Characteristic C |     |     |     |     |     |     |     |     |  |  |
|---|----|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| Type B rated current $I_n$ [A]          |    | 20                  | 25  | 32  | 40  | 50  | 63  | 80  | 100 | 125 |  |  |
| Selectivity limiting current $I_g$ [A]  |    | 130                 | 163 | 208 | 260 | 325 | 410 | 520 | 650 | 813 |  |  |
| Downstream side<br>FAZ Characteristic B | 2  | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 3  | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 4  | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 6  | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 10 | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 13 | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 16 | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 20 |                     | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 25 |                     |     | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 32 |                     |     |     | x   | x   | x   | x   | x   | x   |  |  |
|   | 40 |                     |     |     |     | x   | x   | x   | x   | x   |  |  |
|   | 50 |                     |     |     |     |     | x   | x   | x   | x   |  |  |
| 63                                      |    |                     |     |     |     |     | x   | x   | x   |     |  |  |

| Upstream side →                         |     | AZ Characteristic C |     |     |     |     |     |     |     |     |  |  |
|---|-----|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| Type B rated current $I_n$ [A]          |     | 20                  | 25  | 32  | 40  | 50  | 63  | 80  | 100 | 125 |  |  |
| Selectivity limiting current $I_g$ [A]  |     | 130                 | 163 | 208 | 260 | 325 | 410 | 520 | 650 | 813 |  |  |
| Downstream side<br>FAZ Characteristic C | 0.5 | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 1   | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 2   | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 3   | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 4   | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 6   | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 8   | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 10  | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 13  | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 16  | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 20  |                     | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 25  |                     |     | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 32  |                     |     |     | x   | x   | x   | x   | x   | x   |  |  |
|   | 40  |                     |     |     |     | x   | x   | x   | x   | x   |  |  |
|   | 50  |                     |     |     |     |     | x   | x   | x   | x   |  |  |
| 63                                      |     |                     |     |     |     |     | x   | x   | x   |     |  |  |

| Upstream side →                         |    | AZ Characteristic C |     |     |     |     |     |     |     |     |  |  |
|---|----|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| Type B rated current $I_n$ [A]          |    | 20                  | 25  | 32  | 40  | 50  | 63  | 80  | 100 | 125 |  |  |
| Selectivity limiting current $I_g$ [A]  |    | 130                 | 163 | 208 | 260 | 325 | 410 | 520 | 650 | 813 |  |  |
| Downstream side<br>FAZ Characteristic D | 2  | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 4  | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 6  | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 10 | x                   | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 13 |                     | x   | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 16 |                     |     | x   | x   | x   | x   | x   | x   | x   |  |  |
|   | 20 |                     |     |     | x   | x   | x   | x   | x   | x   |  |  |
|   | 25 |                     |     |     |     | x   | x   | x   | x   | x   |  |  |
|   | 32 |                     |     |     |     |     | x   | x   | x   | x   |  |  |
|   | 40 |                     |     |     |     |     |     | x   | x   | x   |  |  |

## Overload Selectivity FAZ

### FAZ-B(C)(D) to AZ-D



**Upstream side AZ, Characteristic D**  
**Downstream side FAZ, Characteristic B, C, D**

x ... Selectivity range (i.e. only the downstream switch drops in case  $I < I_g$ )

| Upstream side →                         |    | AZ Characteristic D |     |     |     |     |     |     |      |
|---|----|---------------------|-----|-----|-----|-----|-----|-----|------|
| Type B rated current $I_n$ [A]          |    | 20                  | 25  | 32  | 40  | 50  | 63  | 80  | 100  |
| Selectivity limiting current $I_g$ [A]  |    | 230                 | 285 | 365 | 450 | 550 | 680 | 850 | 1020 |
| Downstream side<br>FAZ Characteristic B | 2  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 3  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 4  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 6  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 10 | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 13 | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 16 | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 20 |                     | x   | x   | x   | x   | x   | x   | x    |
|   | 25 |                     |     | x   | x   | x   | x   | x   | x    |
|   | 32 |                     |     |     | x   | x   | x   | x   | x    |
|   | 40 |                     |     |     |     | x   | x   | x   | x    |
|   | 50 |                     |     |     |     |     | x   | x   | x    |
|   | 63 |                     |     |     |     |     |     | x   | x    |

| Upstream side →                         |     | AZ Characteristic D |     |     |     |     |     |     |      |
|---|-----|---------------------|-----|-----|-----|-----|-----|-----|------|
| Type B rated current $I_n$ [A]          |     | 20                  | 25  | 32  | 40  | 50  | 63  | 80  | 100  |
| Selectivity limiting current $I_g$ [A]  |     | 230                 | 285 | 365 | 450 | 550 | 680 | 850 | 1020 |
| Downstream side<br>FAZ Characteristic C | 0.5 | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 1   | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 2   | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 3   | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 4   | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 6   | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 8   | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 10  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 13  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 16  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 20  |                     | x   | x   | x   | x   | x   | x   | x    |
|   | 25  |                     |     | x   | x   | x   | x   | x   | x    |
|   | 32  |                     |     |     | x   | x   | x   | x   | x    |
|   | 40  |                     |     |     |     | x   | x   | x   | x    |
|   | 50  |                     |     |     |     |     | x   | x   | x    |
| 63                                      |     |                     |     |     |     |     | x   | x   |      |

| Upstream side →                         |    | AZ Characteristic D |     |     |     |     |     |     |      |
|---|----|---------------------|-----|-----|-----|-----|-----|-----|------|
| Type B rated current $I_n$ [A]          |    | 20                  | 25  | 32  | 40  | 50  | 63  | 80  | 100  |
| Selectivity limiting current $I_g$ [A]  |    | 230                 | 285 | 365 | 450 | 550 | 680 | 850 | 1020 |
| Downstream side<br>FAZ Characteristic D | 2  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 4  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 6  | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 10 | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 13 | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 16 | x                   | x   | x   | x   | x   | x   | x   | x    |
|   | 20 |                     | x   | x   | x   | x   | x   | x   | x    |
|   | 25 |                     |     | x   | x   | x   | x   | x   | x    |
|   | 32 |                     |     |     | x   | x   | x   | x   | x    |
| 40                                      |    |                     |     |     | x   | x   | x   | x   |      |

## Influence of the Line Frequency FAZ

On the Instantaneous Tripping Current  $I_{MA}$

|                                     | Line Frequency f [Hz]          |     |     |     |     |     |     |
|-------------------------------------|--------------------------------|-----|-----|-----|-----|-----|-----|
|                                     | 16 <sup>2</sup> / <sub>3</sub> | 50  | 60  | 100 | 200 | 300 | 400 |
| $I_{MA}(f)/I_{MA}(50\text{Hz})$ [%] | 91                             | 100 | 101 | 106 | 115 | 134 | 141 |

## Miniature Circuit Breakers FAZ-T

SG56012



### FAZ-T

- High-quality miniature circuit breakers for industrial and commercial applications
- Contact position indicator red - green
- Accessories suitable for subsequent installation
- Rated currents up to 40 A
- Tripping characteristics B, C, D
- Rated breaking capacity up to 25 kA according to EN 60947-2

## FAZ-T Miniature Circuit Breakers (MCBs)

### Characteristic B

| Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60898-1<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|
|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|

SG53212



#### 1-pole

|    |         |    |     |    |            |        |        |
|----|---------|----|-----|----|------------|--------|--------|
| 1  | 240/415 | 15 | 240 | 25 | FAZT-B1/1  | 240770 | 12/120 |
| 2  | 240/415 | 15 | 240 | 25 | FAZT-B2/1  | 240771 | 12/120 |
| 3  | 240/415 | 15 | 240 | 25 | FAZT-B3/1  | 240772 | 12/120 |
| 4  | 240/415 | 15 | 240 | 25 | FAZT-B4/1  | 240777 | 12/120 |
| 6  | 240/415 | 15 | 240 | 25 | FAZT-B6/1  | 240782 | 12/120 |
| 10 | 240/415 | 15 | 240 | 25 | FAZT-B10/1 | 240787 | 12/120 |
| 12 | 240/415 | 15 | 240 | 25 | FAZT-B12/1 | 240792 | 12/120 |
| 13 | 240/415 | 15 | 240 | 25 | FAZT-B13/1 | 240793 | 12/120 |
| 15 | 240/415 | 15 | 240 | 25 | FAZT-B15/1 | 240794 | 12/120 |
| 16 | 240/415 | 15 | 240 | 25 | FAZT-B16/1 | 240795 | 12/120 |
| 20 | 240/415 | 15 | 240 | 25 | FAZT-B20/1 | 240796 | 12/120 |
| 25 | 240/415 | 15 | 240 | 25 | FAZT-B25/1 | 240797 | 12/120 |
| 32 | 240/415 | 10 | 240 | 20 | FAZT-B32/1 | 141907 | 12/120 |
| 40 | 240/415 | 10 | 240 | 20 | FAZT-B40/1 | 141908 | 12/120 |

SG55412



#### 1+N-pole

|    |     |    |     |    |             |        |      |
|----|-----|----|-----|----|-------------|--------|------|
| 1  | 240 | 15 | 240 | 25 | FAZT-B1/1N  | 240994 | 1/60 |
| 2  | 240 | 15 | 240 | 25 | FAZT-B2/1N  | 240995 | 1/60 |
| 3  | 240 | 15 | 240 | 25 | FAZT-B3/1N  | 240996 | 1/60 |
| 4  | 240 | 15 | 240 | 25 | FAZT-B4/1N  | 240997 | 1/60 |
| 6  | 240 | 15 | 240 | 25 | FAZT-B6/1N  | 240998 | 1/60 |
| 10 | 240 | 15 | 240 | 25 | FAZT-B10/1N | 240999 | 1/60 |
| 12 | 240 | 15 | 240 | 25 | FAZT-B12/1N | 241000 | 1/60 |
| 13 | 240 | 15 | 240 | 25 | FAZT-B13/1N | 241001 | 1/60 |
| 15 | 240 | 15 | 240 | 25 | FAZT-B15/1N | 241005 | 1/60 |
| 16 | 240 | 15 | 240 | 25 | FAZT-B16/1N | 241009 | 1/60 |
| 20 | 240 | 15 | 240 | 25 | FAZT-B20/1N | 241015 | 1/60 |
| 25 | 240 | 15 | 240 | 25 | FAZT-B25/1N | 241019 | 1/60 |
| 32 | 240 | 10 | 240 | 20 | FAZT-B32/1N | 142509 | 1/60 |
| 40 | 240 | 10 | 240 | 20 | FAZT-B40/1N | 142510 | 1/60 |

SG55212



#### 2-pole

|    |     |    |         |    |            |        |      |
|----|-----|----|---------|----|------------|--------|------|
| 1  | 415 | 15 | 240/415 | 25 | FAZT-B1/2  | 240820 | 1/60 |
| 2  | 415 | 15 | 240/415 | 25 | FAZT-B2/2  | 240821 | 1/60 |
| 3  | 415 | 15 | 240/415 | 25 | FAZT-B3/2  | 240822 | 1/60 |
| 4  | 415 | 15 | 240/415 | 25 | FAZT-B4/2  | 240823 | 1/60 |
| 6  | 415 | 15 | 240/415 | 25 | FAZT-B6/2  | 240824 | 1/60 |
| 10 | 415 | 15 | 240/415 | 25 | FAZT-B10/2 | 240825 | 1/60 |
| 12 | 415 | 15 | 240/415 | 25 | FAZT-B12/2 | 240826 | 1/60 |
| 13 | 415 | 15 | 240/415 | 25 | FAZT-B13/2 | 240827 | 1/60 |
| 15 | 415 | 15 | 240/415 | 25 | FAZT-B15/2 | 240828 | 1/60 |
| 16 | 415 | 15 | 240/415 | 25 | FAZT-B16/2 | 240829 | 1/60 |
| 20 | 415 | 15 | 240/415 | 25 | FAZT-B20/2 | 240830 | 1/60 |
| 25 | 415 | 15 | 240/415 | 25 | FAZT-B25/2 | 240831 | 1/60 |
| 32 | 415 | 10 | 240/415 | 20 | FAZT-B32/2 | 142485 | 1/60 |
| 40 | 415 | 10 | 240/415 | 20 | FAZT-B40/2 | 142486 | 1/60 |

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| Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60898-1<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|
|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|

### 3-pole

|    |     |    |         |    |            |        |      |
|----|-----|----|---------|----|------------|--------|------|
| 1  | 415 | 15 | 240/415 | 25 | FAZT-B1/3  | 240874 | 1/40 |
| 2  | 415 | 15 | 240/415 | 25 | FAZT-B2/3  | 240875 | 1/40 |
| 3  | 415 | 15 | 240/415 | 25 | FAZT-B3/3  | 240876 | 1/40 |
| 4  | 415 | 15 | 240/415 | 25 | FAZT-B4/3  | 240877 | 1/40 |
| 6  | 415 | 15 | 240/415 | 25 | FAZT-B6/3  | 240878 | 1/40 |
| 10 | 415 | 15 | 240/415 | 25 | FAZT-B10/3 | 240879 | 1/40 |
| 12 | 415 | 15 | 240/415 | 25 | FAZT-B12/3 | 240880 | 1/40 |
| 13 | 415 | 15 | 240/415 | 25 | FAZT-B13/3 | 240881 | 1/40 |
| 15 | 415 | 15 | 240/415 | 25 | FAZT-B15/3 | 240882 | 1/40 |
| 16 | 415 | 15 | 240/415 | 25 | FAZT-B16/3 | 240883 | 1/40 |
| 20 | 415 | 15 | 240/415 | 25 | FAZT-B20/3 | 240884 | 1/40 |
| 25 | 415 | 15 | 240/415 | 25 | FAZT-B25/3 | 240885 | 1/40 |
| 32 | 415 | 10 | 240/415 | 20 | FAZT-B32/3 | 142493 | 1/40 |
| 40 | 415 | 10 | 240/415 | 20 | FAZT-B40/3 | 142494 | 1/40 |

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### 3+N-pole

|    |     |    |         |    |             |        |      |
|----|-----|----|---------|----|-------------|--------|------|
| 1  | 415 | 15 | 240/415 | 25 | FAZT-B1/3N  | 241060 | 1/30 |
| 2  | 415 | 15 | 240/415 | 25 | FAZT-B2/3N  | 241065 | 1/30 |
| 3  | 415 | 15 | 240/415 | 25 | FAZT-B3/3N  | 241070 | 1/30 |
| 4  | 415 | 15 | 240/415 | 25 | FAZT-B4/3N  | 241075 | 1/30 |
| 6  | 415 | 15 | 240/415 | 25 | FAZT-B6/3N  | 241080 | 1/30 |
| 10 | 415 | 15 | 240/415 | 25 | FAZT-B10/3N | 241085 | 1/30 |
| 12 | 415 | 15 | 240/415 | 25 | FAZT-B12/3N | 241090 | 1/30 |
| 13 | 415 | 15 | 240/415 | 25 | FAZT-B13/3N | 241095 | 1/30 |
| 15 | 415 | 15 | 240/415 | 25 | FAZT-B15/3N | 241100 | 1/30 |
| 16 | 415 | 15 | 240/415 | 25 | FAZT-B16/3N | 241105 | 1/30 |
| 20 | 415 | 15 | 240/415 | 25 | FAZT-B20/3N | 241110 | 1/30 |
| 25 | 415 | 15 | 240/415 | 25 | FAZT-B25/3N | 241115 | 1/30 |
| 32 | 415 | 10 | 240/415 | 20 | FAZT-B32/3N | 142517 | 1/30 |
| 40 | 415 | 10 | 240/415 | 20 | FAZT-B40/3N | 142518 | 1/30 |

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### 4-pole

|    |     |    |         |    |            |        |      |
|----|-----|----|---------|----|------------|--------|------|
| 1  | 415 | 15 | 240/415 | 25 | FAZT-B1/4  | 240922 | 1/30 |
| 2  | 415 | 15 | 240/415 | 25 | FAZT-B2/4  | 240927 | 1/30 |
| 3  | 415 | 15 | 240/415 | 25 | FAZT-B3/4  | 240930 | 1/30 |
| 4  | 415 | 15 | 240/415 | 25 | FAZT-B4/4  | 240931 | 1/30 |
| 6  | 415 | 15 | 240/415 | 25 | FAZT-B6/4  | 240932 | 1/30 |
| 10 | 415 | 15 | 240/415 | 25 | FAZT-B10/4 | 240933 | 1/30 |
| 12 | 415 | 15 | 240/415 | 25 | FAZT-B12/4 | 240934 | 1/30 |
| 13 | 415 | 15 | 240/415 | 25 | FAZT-B13/4 | 240935 | 1/30 |
| 15 | 415 | 15 | 240/415 | 25 | FAZT-B15/4 | 240936 | 1/30 |
| 16 | 415 | 15 | 240/415 | 25 | FAZT-B16/4 | 240937 | 1/30 |
| 20 | 415 | 15 | 240/415 | 25 | FAZT-B20/4 | 240938 | 1/30 |
| 25 | 415 | 15 | 240/415 | 25 | FAZT-B25/4 | 240939 | 1/30 |
| 32 | 415 | 10 | 240/415 | 20 | FAZT-B32/4 | 142501 | 1/30 |
| 40 | 415 | 10 | 240/415 | 20 | FAZT-B40/4 | 142502 | 1/30 |

## FAZ-T Miniature Circuit Breakers (MCBs)

### Characteristic C

| Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60898-1<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|
|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|

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#### 1-pole

|    |         |    |     |    |            |        |        |
|----|---------|----|-----|----|------------|--------|--------|
| 1  | 240/415 | 15 | 240 | 25 | FAZT-C1/1  | 240798 | 12/120 |
| 2  | 240/415 | 15 | 240 | 25 | FAZT-C2/1  | 240799 | 12/120 |
| 3  | 240/415 | 15 | 240 | 25 | FAZT-C3/1  | 240800 | 12/120 |
| 4  | 240/415 | 15 | 240 | 25 | FAZT-C4/1  | 240801 | 12/120 |
| 6  | 240/415 | 15 | 240 | 25 | FAZT-C6/1  | 240802 | 12/120 |
| 10 | 240/415 | 15 | 240 | 25 | FAZT-C10/1 | 240803 | 12/120 |
| 12 | 240/415 | 15 | 240 | 25 | FAZT-C12/1 | 240804 | 12/120 |
| 13 | 240/415 | 15 | 240 | 25 | FAZT-C13/1 | 240805 | 12/120 |
| 15 | 240/415 | 15 | 240 | 25 | FAZT-C15/1 | 240806 | 12/120 |
| 16 | 240/415 | 15 | 240 | 25 | FAZT-C16/1 | 240807 | 12/120 |
| 20 | 240/415 | 15 | 240 | 25 | FAZT-C20/1 | 240808 | 12/120 |
| 25 | 240/415 | 15 | 240 | 25 | FAZT-C25/1 | 240809 | 12/120 |
| 32 | 240/415 | 10 | 240 | 20 | FAZT-C32/1 | 141909 | 12/120 |
| 40 | 240/415 | 10 | 240 | 20 | FAZT-C40/1 | 142480 | 12/120 |

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#### 1+N-pole

|    |     |    |     |    |             |        |      |
|----|-----|----|-----|----|-------------|--------|------|
| 1  | 240 | 15 | 240 | 25 | FAZT-C1/1N  | 241022 | 1/60 |
| 2  | 240 | 15 | 240 | 25 | FAZT-C2/1N  | 241023 | 1/60 |
| 3  | 240 | 15 | 240 | 25 | FAZT-C3/1N  | 241024 | 1/60 |
| 4  | 240 | 15 | 240 | 25 | FAZT-C4/1N  | 241025 | 1/60 |
| 6  | 240 | 15 | 240 | 25 | FAZT-C6/1N  | 241026 | 1/60 |
| 10 | 240 | 15 | 240 | 25 | FAZT-C10/1N | 241027 | 1/60 |
| 12 | 240 | 15 | 240 | 25 | FAZT-C12/1N | 241028 | 1/60 |
| 13 | 240 | 15 | 240 | 25 | FAZT-C13/1N | 241029 | 1/60 |
| 15 | 240 | 15 | 240 | 25 | FAZT-C15/1N | 241030 | 1/60 |
| 16 | 240 | 15 | 240 | 25 | FAZT-C16/1N | 241034 | 1/60 |
| 20 | 240 | 15 | 240 | 25 | FAZT-C20/1N | 241038 | 1/60 |
| 25 | 240 | 15 | 240 | 25 | FAZT-C25/1N | 241044 | 1/60 |
| 32 | 240 | 10 | 240 | 20 | FAZT-C32/1N | 142511 | 1/60 |
| 40 | 240 | 10 | 240 | 20 | FAZT-C40/1N | 142512 | 1/60 |

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#### 2-pole

|    |     |    |         |    |            |        |      |
|----|-----|----|---------|----|------------|--------|------|
| 1  | 415 | 15 | 240/415 | 25 | FAZT-C1/2  | 240832 | 1/60 |
| 2  | 415 | 15 | 240/415 | 25 | FAZT-C2/2  | 240833 | 1/60 |
| 3  | 415 | 15 | 240/415 | 25 | FAZT-C3/2  | 240838 | 1/60 |
| 4  | 415 | 15 | 240/415 | 25 | FAZT-C4/2  | 240843 | 1/60 |
| 6  | 415 | 15 | 240/415 | 25 | FAZT-C6/2  | 240850 | 1/60 |
| 10 | 415 | 15 | 240/415 | 25 | FAZT-C10/2 | 240855 | 1/60 |
| 12 | 415 | 15 | 240/415 | 25 | FAZT-C12/2 | 240858 | 1/60 |
| 13 | 415 | 15 | 240/415 | 25 | FAZT-C13/2 | 240859 | 1/60 |
| 15 | 415 | 15 | 240/415 | 25 | FAZT-C15/2 | 240860 | 1/60 |
| 16 | 415 | 15 | 240/415 | 25 | FAZT-C16/2 | 240861 | 1/60 |
| 20 | 415 | 15 | 240/415 | 25 | FAZT-C20/2 | 240862 | 1/60 |
| 25 | 415 | 15 | 240/415 | 25 | FAZT-C25/2 | 240863 | 1/60 |
| 32 | 415 | 10 | 240/415 | 20 | FAZT-C32/2 | 142487 | 1/60 |
| 40 | 415 | 10 | 240/415 | 20 | FAZT-C40/2 | 142488 | 1/60 |



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### 3-pole

|    | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60898-1<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|
| 1  | 415                        | 15  | 240/415   | 25  |   | FAZT-C1/3           | 240886      | 1/40                    |
| 2  | 415                        | 15  | 240/415   | 25  |   | FAZT-C2/3           | 240887      | 1/40                    |
| 3  | 415                        | 15  | 240/415   | 25  |   | FAZT-C3/3           | 240888      | 1/40                    |
| 4  | 415                        | 15  | 240/415   | 25  |   | FAZT-C4/3           | 240889      | 1/40                    |
| 6  | 415                        | 15  | 240/415   | 25  |   | FAZT-C6/3           | 240890      | 1/40                    |
| 10 | 415                        | 15  | 240/415   | 25  |   | FAZT-C10/3          | 240891      | 1/40                    |
| 12 | 415                        | 15  | 240/415   | 25  |   | FAZT-C12/3          | 240892      | 1/40                    |
| 13 | 415                        | 15  | 240/415   | 25  |   | FAZT-C13/3          | 240893      | 1/40                    |
| 15 | 415                        | 15  | 240/415   | 25  |   | FAZT-C15/3          | 240894      | 1/40                    |
| 16 | 415                        | 15  | 240/415   | 25  |   | FAZT-C16/3          | 240895      | 1/40                    |
| 20 | 415                        | 15  | 240/415   | 25  |   | FAZT-C20/3          | 240896      | 1/40                    |
| 25 | 415                        | 15  | 240/415   | 25  |   | FAZT-C25/3          | 240897      | 1/40                    |
| 32 | 415                        | 10  | 240/415   | 20  |   | FAZT-C32/3          | 142495      | 1/40                    |
| 40 | 415                        | 10  | 240/415   | 20  |   | FAZT-C40/3          | 142496      | 1/40                    |

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### 3+N-pole

|    |     |    |         |    |  |             |        |      |
|----|-----|----|---------|----|--|-------------|--------|------|
| 1  | 415 | 15 | 240/415 | 25 |  | FAZT-C1/3N  | 241120 | 1/30 |
| 2  | 415 | 15 | 240/415 | 25 |  | FAZT-C2/3N  | 241125 | 1/30 |
| 3  | 415 | 15 | 240/415 | 25 |  | FAZT-C3/3N  | 241130 | 1/30 |
| 4  | 415 | 15 | 240/415 | 25 |  | FAZT-C4/3N  | 241135 | 1/30 |
| 6  | 415 | 15 | 240/415 | 25 |  | FAZT-C6/3N  | 241140 | 1/30 |
| 10 | 415 | 15 | 240/415 | 25 |  | FAZT-C10/3N | 241145 | 1/30 |
| 12 | 415 | 15 | 240/415 | 25 |  | FAZT-C12/3N | 241150 | 1/30 |
| 13 | 415 | 15 | 240/415 | 25 |  | FAZT-C13/3N | 241155 | 1/30 |
| 15 | 415 | 15 | 240/415 | 25 |  | FAZT-C15/3N | 241160 | 1/30 |
| 16 | 415 | 15 | 240/415 | 25 |  | FAZT-C16/3N | 241165 | 1/30 |
| 20 | 415 | 15 | 240/415 | 25 |  | FAZT-C20/3N | 241170 | 1/30 |
| 25 | 415 | 15 | 240/415 | 25 |  | FAZT-C25/3N | 241175 | 1/30 |
| 32 | 415 | 10 | 240/415 | 20 |  | FAZT-C32/3N | 142519 | 1/30 |
| 40 | 415 | 10 | 240/415 | 20 |  | FAZT-C40/3N | 142520 | 1/30 |

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### 4-pole

|    |     |    |         |    |  |            |        |      |
|----|-----|----|---------|----|--|------------|--------|------|
| 1  | 415 | 15 | 240/415 | 25 |  | FAZT-C1/4  | 240940 | 1/30 |
| 2  | 415 | 15 | 240/415 | 25 |  | FAZT-C2/4  | 240941 | 1/30 |
| 3  | 415 | 15 | 240/415 | 25 |  | FAZT-C3/4  | 240945 | 1/30 |
| 4  | 415 | 15 | 240/415 | 25 |  | FAZT-C4/4  | 240949 | 1/30 |
| 6  | 415 | 15 | 240/415 | 25 |  | FAZT-C6/4  | 240955 | 1/30 |
| 10 | 415 | 15 | 240/415 | 25 |  | FAZT-C10/4 | 240959 | 1/30 |
| 12 | 415 | 15 | 240/415 | 25 |  | FAZT-C12/4 | 240962 | 1/30 |
| 13 | 415 | 15 | 240/415 | 25 |  | FAZT-C13/4 | 240963 | 1/30 |
| 15 | 415 | 15 | 240/415 | 25 |  | FAZT-C15/4 | 240964 | 1/30 |
| 16 | 415 | 15 | 240/415 | 25 |  | FAZT-C16/4 | 240965 | 1/30 |
| 20 | 415 | 15 | 240/415 | 25 |  | FAZT-C20/4 | 240966 | 1/30 |
| 25 | 415 | 15 | 240/415 | 25 |  | FAZT-C25/4 | 240967 | 1/30 |
| 32 | 415 | 10 | 240/415 | 20 |  | FAZT-C32/4 | 142503 | 1/30 |
| 40 | 415 | 10 | 240/415 | 20 |  | FAZT-C40/4 | 142504 | 1/30 |

## FAZ-T Miniature Circuit Breakers (MCBs)

### Characteristic D

|                 | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60898-1<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|-----------------|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|
| <b>1-pole</b>   |                            |   |   |   |   |                     |             |                         |
| 1               | 240/415                    | 15  | 240   | 25  | FAZT-D1/1   | 240810              | 12/120      |                         |
| 2               | 240/415                    | 15  | 240   | 25  | FAZT-D2/1   | 240811              | 12/120      |                         |
| 3               | 240/415                    | 15  | 240   | 25  | FAZT-D3/1   | 240812              | 12/120      |                         |
| 4               | 240/415                    | 15  | 240   | 25  | FAZT-D4/1   | 240813              | 12/120      |                         |
| 6               | 240/415                    | 15  | 240   | 25  | FAZT-D6/1   | 240814              | 12/120      |                         |
| 10              | 240/415                    | 15  | 240   | 25  | FAZT-D10/1  | 240815              | 12/120      |                         |
| 12              | 240/415                    | 15  | 240   | 25  | FAZT-D12/1  | 240816              | 12/120      |                         |
| 13              | 240/415                    | 15  | 240   | 25  | FAZT-D13/1  | 240817              | 12/120      |                         |
| 15              | 240/415                    | 15  | 240   | 20  | FAZT-D15/1  | 240818              | 12/120      |                         |
| 16              | 240/415                    | 15  | 240   | 20  | FAZT-D16/1  | 240819              | 12/120      |                         |
| 20              | 240/415                    | 10  | 240   | 20  | FAZT-D20/1  | 142481              | 12/120      |                         |
| 25              | 240/415                    | 10  | 240   | 15  | FAZT-D25/1  | 142482              | 12/120      |                         |
| 32              | 240/415                    | 10  | 240   | 15  | FAZT-D32/1  | 142483              | 12/120      |                         |
| 40              | 240/415                    | 10  | 240   | 15  | FAZT-D40/1  | 142484              | 12/120      |                         |
| <b>1+N-pole</b> |                            |   |   |   |   |                     |             |                         |
| 1               | 240                        | 15  | 240   | 25  | FAZT-D1/1N  | 241048              | 1/60        |                         |
| 2               | 240                        | 15  | 240   | 25  | FAZT-D2/1N  | 241051              | 1/60        |                         |
| 3               | 240                        | 15  | 240   | 25  | FAZT-D3/1N  | 241052              | 1/60        |                         |
| 4               | 240                        | 15  | 240   | 25  | FAZT-D4/1N  | 241053              | 1/60        |                         |
| 6               | 240                        | 15  | 240   | 25  | FAZT-D6/1N  | 241054              | 1/60        |                         |
| 10              | 240                        | 15  | 240   | 25  | FAZT-D10/1N   | 241055              | 1/60        |                         |
| 12              | 240                        | 15  | 240   | 25  | FAZT-D12/1N   | 241056              | 1/60        |                         |
| 13              | 240                        | 15  | 240   | 25  | FAZT-D13/1N   | 241057              | 1/60        |                         |
| 15              | 240                        | 15  | 240   | 20  | FAZT-D15/1N   | 241058              | 1/60        |                         |
| 16              | 240                        | 15  | 240   | 20  | FAZT-D16/1N   | 241059              | 1/60        |                         |
| 20              | 240                        | 10  | 240   | 20  | FAZT-D20/1N   | 142513              | 1/60        |                         |
| 25              | 240                        | 10  | 240   | 15  | FAZT-D25/1N   | 142514              | 1/60        |                         |
| 32              | 240                        | 10  | 240   | 15  | FAZT-D32/1N   | 142515              | 1/60        |                         |
| 40              | 240                        | 10  | 240   | 15  | FAZT-D40/1N   | 142516              | 1/60        |                         |
| <b>2-pole</b>   |                            |   |   |   |   |                     |             |                         |
| 1               | 415                        | 15  | 240/415   | 25  | FAZT-D1/2   | 240864              | 1/60        |                         |
| 2               | 415                        | 15  | 240/415   | 25  | FAZT-D2/2   | 240865              | 1/60        |                         |
| 3               | 415                        | 15  | 240/415   | 25  | FAZT-D3/2   | 240866              | 1/60        |                         |
| 4               | 415                        | 15  | 240/415   | 25  | FAZT-D4/2   | 240867              | 1/60        |                         |
| 6               | 415                        | 15  | 240/415   | 25  | FAZT-D6/2   | 240868              | 1/60        |                         |
| 10              | 415                        | 15  | 240/415   | 25  | FAZT-D10/2  | 240869              | 1/60        |                         |
| 12              | 415                        | 15  | 240/415   | 25  | FAZT-D12/2  | 240870              | 1/60        |                         |
| 13              | 415                        | 15  | 240/415   | 25  | FAZT-D13/2  | 240871              | 1/60        |                         |
| 15              | 415                        | 15  | 240/415   | 20  | FAZT-D15/2  | 240872              | 1/60        |                         |
| 16              | 415                        | 15  | 240/415   | 20  | FAZT-D16/2  | 240873              | 1/60        |                         |
| 20              | 415                        | 10  | 240/415   | 20  | FAZT-D20/2  | 142489              | 1/60        |                         |
| 25              | 415                        | 10  | 240/415   | 15  | FAZT-D25/2  | 142490              | 1/60        |                         |
| 32              | 415                        | 10  | 240/415   | 15  | FAZT-D32/2  | 142491              | 1/60        |                         |
| 40              | 415                        | 10  | 240/415   | 15  | FAZT-D40/2  | 142492              | 1/60        |                         |

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| Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60898-1<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60898-1<br>(kA) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|
|----------------------------|---|---|---|---|---------------------|-------------|-------------------------|

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### 3-pole

|    |     |    |         |    |            |        |      |
|----|-----|----|---------|----|------------|--------|------|
| 1  | 415 | 15 | 240/415 | 25 | FAZT-D1/3  | 240898 | 1/40 |
| 2  | 415 | 15 | 240/415 | 25 | FAZT-D2/3  | 240899 | 1/40 |
| 3  | 415 | 15 | 240/415 | 25 | FAZT-D3/3  | 240900 | 1/40 |
| 4  | 415 | 15 | 240/415 | 25 | FAZT-D4/3  | 240901 | 1/40 |
| 6  | 415 | 15 | 240/415 | 25 | FAZT-D6/3  | 240902 | 1/40 |
| 10 | 415 | 15 | 240/415 | 25 | FAZT-D10/3 | 240903 | 1/40 |
| 12 | 415 | 15 | 240/415 | 25 | FAZT-D12/3 | 240904 | 1/40 |
| 13 | 415 | 15 | 240/415 | 25 | FAZT-D13/3 | 240905 | 1/40 |
| 15 | 415 | 15 | 240/415 | 25 | FAZT-D15/3 | 240910 | 1/40 |
| 16 | 415 | 15 | 240/415 | 25 | FAZT-D16/3 | 240915 | 1/40 |
| 20 | 415 | 10 | 240/415 | 20 | FAZT-D20/3 | 142497 | 1/40 |
| 25 | 415 | 10 | 240/415 | 15 | FAZT-D25/3 | 142498 | 1/40 |
| 32 | 415 | 10 | 240/415 | 15 | FAZT-D32/3 | 142499 | 1/40 |
| 40 | 415 | 10 | 240/415 | 15 | FAZT-D40/3 | 142500 | 1/40 |

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### 3+N-pole

|    |     |    |         |    |             |        |      |
|----|-----|----|---------|----|-------------|--------|------|
| 1  | 415 | 15 | 240/415 | 25 | FAZT-D1/3N  | 241180 | 1/30 |
| 2  | 415 | 15 | 240/415 | 25 | FAZT-D2/3N  | 241181 | 1/30 |
| 3  | 415 | 15 | 240/415 | 25 | FAZT-D3/3N  | 241182 | 1/30 |
| 4  | 415 | 15 | 240/415 | 25 | FAZT-D4/3N  | 241183 | 1/30 |
| 6  | 415 | 15 | 240/415 | 25 | FAZT-D6/3N  | 241184 | 1/30 |
| 10 | 415 | 15 | 240/415 | 25 | FAZT-D10/3N | 241185 | 1/30 |
| 12 | 415 | 15 | 240/415 | 25 | FAZT-D12/3N | 241186 | 1/30 |
| 13 | 415 | 15 | 240/415 | 25 | FAZT-D13/3N | 241187 | 1/30 |
| 15 | 415 | 15 | 240/415 | 25 | FAZT-D15/3N | 241188 | 1/30 |
| 16 | 415 | 15 | 240/415 | 25 | FAZT-D16/3N | 241189 | 1/30 |
| 20 | 415 | 10 | 240/415 | 20 | FAZT-D20/3N | 142521 | 1/30 |
| 25 | 415 | 10 | 240/415 | 15 | FAZT-D25/3N | 142522 | 1/30 |
| 32 | 415 | 10 | 240/415 | 15 | FAZT-D32/3N | 142523 | 1/30 |
| 40 | 415 | 10 | 240/415 | 15 | FAZT-D40/3N | 142524 | 1/30 |

SG56012



### 4-pole

|    |     |    |         |    |            |        |      |
|----|-----|----|---------|----|------------|--------|------|
| 1  | 415 | 15 | 240/415 | 25 | FAZT-D1/4  | 240968 | 1/30 |
| 2  | 415 | 15 | 240/415 | 25 | FAZT-D2/4  | 240969 | 1/30 |
| 3  | 415 | 15 | 240/415 | 25 | FAZT-D3/4  | 240970 | 1/30 |
| 4  | 415 | 15 | 240/415 | 25 | FAZT-D4/4  | 240971 | 1/30 |
| 6  | 415 | 15 | 240/415 | 25 | FAZT-D6/4  | 240975 | 1/30 |
| 10 | 415 | 15 | 240/415 | 25 | FAZT-D10/4 | 240979 | 1/30 |
| 12 | 415 | 15 | 240/415 | 25 | FAZT-D12/4 | 240985 | 1/30 |
| 13 | 415 | 15 | 240/415 | 25 | FAZT-D13/4 | 240989 | 1/30 |
| 15 | 415 | 15 | 240/415 | 25 | FAZT-D15/4 | 240992 | 1/30 |
| 16 | 415 | 15 | 240/415 | 25 | FAZT-D16/4 | 240993 | 1/30 |
| 20 | 415 | 10 | 240/415 | 20 | FAZT-D20/4 | 142505 | 1/30 |
| 25 | 415 | 10 | 240/415 | 15 | FAZT-D25/4 | 142506 | 1/30 |
| 32 | 415 | 10 | 240/415 | 15 | FAZT-D32/4 | 142507 | 1/30 |
| 40 | 415 | 10 | 240/415 | 15 | FAZT-D40/4 | 142508 | 1/30 |

## Specifications FAZ-T

### Technical data

|                 | FAZ-T                            |
|-----------------|----------------------------------|
| Productstandard | IEC/EN 60947-2<br>IEC/EN 60898-1 |
| Number of poles | 1, 1p+N, 2, 3, 3p+N, 4           |

### Mechanical specifications

|   |   |
|---|---|
| Device width                                | 17.7 mm (1p), 27 mm (1p+N), 36 mm (2p), 54 mm (3p), 72mm (3p+N), 72 mm (4p) |
| Frame size                                  | 45 mm   |
| Socket size                                 | 80 mm   |
| Device depth                                | 60 mm   |
| Terminals                                   | lift terminal   |
| Terminal capacity rigid solid/stranded wire | 1-25 mm <sup>2</sup>  |
| Terminal screw                              | M5 (with slotted screw acc. to EN ISO 4757-Z2, PZ2)                         |
| Terminal torque                             | max. 2.4 Nm   |
| Snap on fixing                              | tristable (on DIN rail acc. to EN 50022)                                    |
| Finger proof                                | acc. to VBG4, ÖVE EN-6  |
| Degree of Protection (DIN VDE 0470)         |   |
| Surface mounted                             | IP 20   |
| Built-in behind panel                       | IP 40   |
| Contact position indicator                  | red / green   |

### Electrical specifications

|                                 |           |   |
|---------------------------------|-----------|---|
| Rated voltage                   | $U_n$     | 240/415Vac<br>60Vdc per pole                                      |
| Rated current                   | $I_n$     | Type B, C, D: 1, 2, 3, 4, 6, 10, 12, 13, 15, 16, 20, 25, 32, 40 A |
| Rated insulation voltage        | $U_i$     | 440 V   |
| Rated impulse withstand voltage | $U_{imp}$ | 4 kV (1.2/50) $\mu$ sec   |

### Tripping characteristic

|                                   |          |  |
|-----------------------------------|----------|--|
| Conventional non-tripping current | $I_{nt}$ | $1.13 I_n$   |
| Conventional tripping current     | $I_t$    | $1.45 I_n$   |
| Reference temperature             |          | 30 °C  |
| Temperature factor                |          | 0.4% /K  |
| Instantaneous tripping current    | $I_{mt}$ | type B: $3 I_n < I_{mt} = 5 I_n \cdot t (I_{mt}) < 0.1 \text{ sec}$<br>type C: $5 I_n < I_{mt} = 10 I_n \cdot t (I_{mt}) < 0.1 \text{ sec}$<br>type D: $10 I_n < I_{mt} = 20 I_n \cdot t (I_{mt}) < 0.1 \text{ sec}$ |

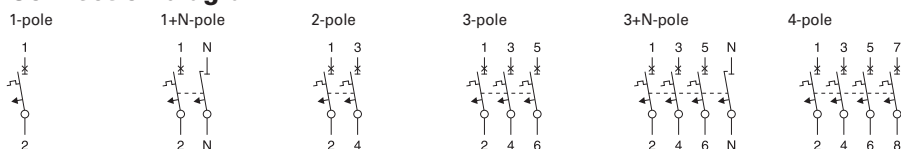
|   |  |  |
|---|--|--|
| Rated ultimate short-circuit braking capacity $I_{cu}$ (IEC/EN 60947-2) |  | type B 1-25 A: 25 kA, 32-40 A: 20 kA<br>type C 1-25 A: 25 kA, 32-40 A: 20 kA<br>type D 1p/1p+N/2p - 1-13 A: 25 kA, 15-20 A: 20 kA, 25-40 A: 15 kA<br>3p/3p+N/4p - 1-16 A: 25 kA, 20 A: 20 kA, 25-40 A: 15 kA |
|---|--|--|

|  |  |  |
|--|--|--|
| Rated service short-circuit braking capacity $I_{cs}$ (IEC/EN 60947-2) |  | for $I_{cu} = 25 \text{ kA} \rightarrow I_{cs} = 12.5 \text{ kA}$<br>for $I_{cu} = 20 \text{ kA} \rightarrow I_{cs} = 10 \text{ kA}$<br>for $I_{cu} = 15 \text{ kA} \rightarrow I_{cs} = 7.5 \text{ kA}$ |
|--|--|--|

|  |  |  |
|--|--|--|
| Rated short-circuit braking capacity $I_{cn}$ (IEC/EN 60898-1) |  | type B 1-25 A: 15 kA, 32-40 A: 10 kA<br>type C 1-25 A: 15 kA, 32-40 A: 10 kA<br>type D 1-16 A: 15 kA, 20-40 A: 10 kA |
|--|--|--|

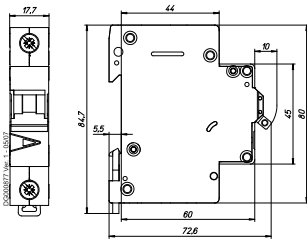
|                                 |  |  |
|---------------------------------|--|--|
| Selectivity class               |  | 3 (acc. to EN 60898)                     |
| Number of electrical operations |  | > 4000 (IEC/EN 60898)                    |
| Number of mechanical operations |  | > 10000 (IEC/EN 60947)                   |
| Climatic conditions             |  | acc. to IEC 68-2 (25..55°C / 90..95% RH) |
| Operating temperature range     |  | -40°C to +75°C                           |

### Connection diagram

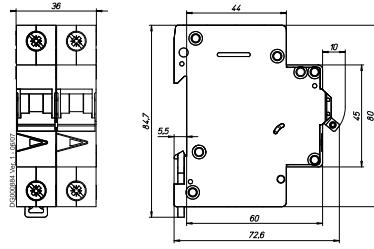


## Dimensions (mm) FAZ-T

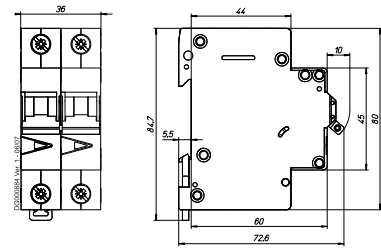
1-pole



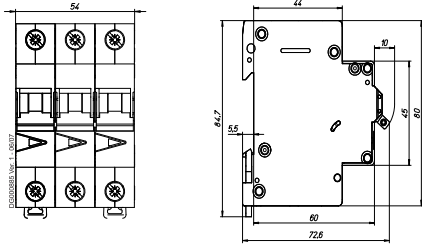
1+N-pole



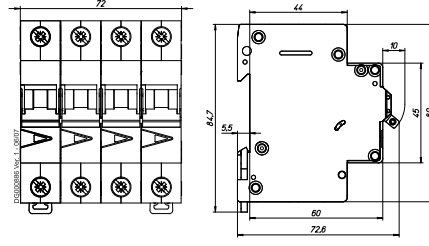
2-pole



3-pole

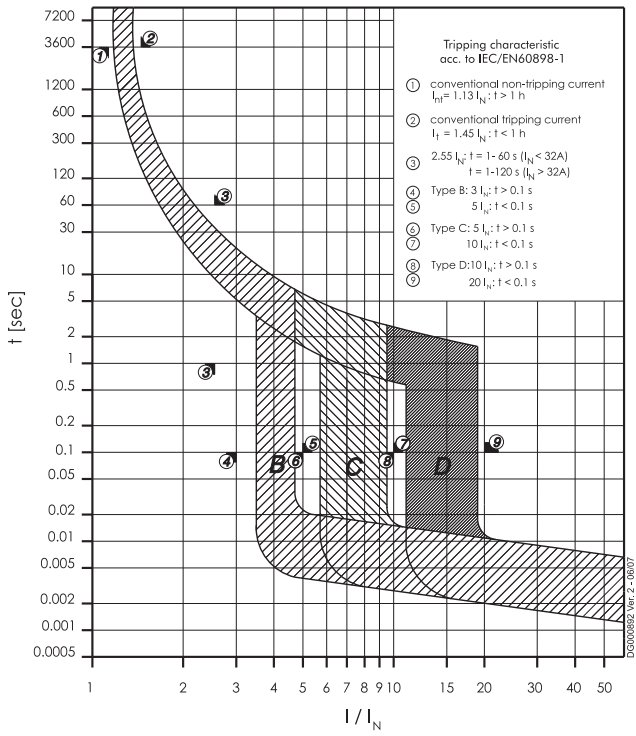


3+N-pole, 4-pole



## Tripping Characteristic FAZ-T

### Characteristics B, C and D - EN60898



## Power Loss at $I_n$ FAZ-T

### Type B

|           | 1p    | 1pN   | 2p    | 3p    | 3pN*  | 4p    |
|-----------|-------|-------|-------|-------|-------|-------|
| $I_n$ [A] | P [W] | P [W] | P [W] | P [W] | P [W] | P [W] |
| 1         | 1.6   | 1.7   | 3.1   | 4.7   | 4.8   | 6.3   |
| 2         | 1.4   | 1.5   | 2.8   | 4.1   | 4.3   | 5.5   |
| 3         | 2.5   | 2.7   | 5.0   | 7.6   | 7.8   | 10.1  |
| 4         | 1.4   | 1.6   | 2.9   | 4.4   | 4.5   | 5.8   |
| 6         | 1.8   | 2.0   | 3.6   | 5.5   | 5.6   | 7.3   |
| 10        | 1.9   | 2.1   | 3.9   | 5.9   | 6.1   | 7.8   |
| 12        | 2.8   | 3.2   | 5.9   | 8.7   | 9.0   | 11.5  |
| 13        | 2.5   | 2.9   | 5.3   | 7.8   | 8.1   | 10.3  |
| 15        | 2.1   | 2.4   | 4.4   | 6.5   | 6.7   | 8.6   |
| 16        | 2.2   | 2.6   | 4.7   | 6.9   | 7.2   | 9.1   |
| 20        | 3.2   | 3.6   | 6.6   | 9.8   | 10.1  | 13.0  |
| 25        | 3.0   | 3.5   | 6.4   | 9.4   | 9.7   | 12.4  |
| 32        | 3.7   | 4.4   | 8.1   | 12.1  | 12.5  | 15.8  |
| 40        | 3.4   | 4.1   | 7.5   | 11.2  | 11.5  | 14.6  |

\*symmetrical load

### Type C

|           | 1p    | 1pN   | 2p    | 3p    | 3pN*  | 4p    |
|-----------|-------|-------|-------|-------|-------|-------|
| $I_n$ [A] | P [W] | P [W] | P [W] | P [W] | P [W] | P [W] |
| 1         | 1.6   | 1.7   | 3.1   | 4.7   | 4.8   | 6.3   |
| 2         | 1.4   | 1.5   | 2.8   | 4.1   | 4.3   | 5.5   |
| 3         | 1.2   | 1.3   | 2.4   | 3.6   | 3.7   | 4.8   |
| 4         | 1.4   | 1.6   | 2.9   | 4.4   | 4.5   | 5.8   |
| 6         | 1.5   | 1.6   | 2.9   | 4.4   | 4.6   | 5.9   |
| 10        | 1.5   | 1.7   | 3.0   | 4.6   | 4.7   | 6.1   |
| 12        | 2.1   | 2.4   | 4.4   | 6.5   | 6.8   | 8.6   |
| 13        | 2.5   | 2.9   | 5.3   | 7.8   | 8.1   | 10.3  |
| 15        | 2.1   | 2.4   | 4.4   | 6.5   | 6.7   | 8.6   |
| 16        | 2.2   | 2.6   | 4.7   | 6.9   | 7.2   | 9.1   |
| 20        | 3.2   | 3.6   | 6.6   | 9.8   | 10.1  | 13.0  |
| 25        | 3.0   | 3.5   | 6.4   | 9.4   | 9.7   | 12.4  |
| 32        | 3.7   | 4.4   | 8.1   | 12.1  | 12.5  | 15.8  |
| 40        | 3.4   | 4.1   | 7.5   | 11.2  | 11.5  | 14.6  |

\*symmetrical load

### Type D

|           | 1p    | 1pN   | 2p    | 3p    | 3pN*  | 4p    |
|-----------|-------|-------|-------|-------|-------|-------|
| $I_n$ [A] | P [W] | P [W] | P [W] | P [W] | P [W] | P [W] |
| 1         | 0.8   | 0.9   | 1.6   | 2.4   | 2.5   | 3.2   |
| 2         | 1.0   | 1.1   | 2.0   | 3.0   | 3.1   | 4.0   |
| 3         | 1.2   | 1.3   | 2.4   | 3.6   | 3.7   | 4.8   |
| 4         | 1.4   | 1.6   | 2.9   | 4.4   | 4.5   | 5.8   |
| 6         | 1.5   | 1.6   | 2.9   | 4.4   | 4.6   | 5.9   |
| 10        | 1.5   | 1.7   | 3.0   | 4.6   | 4.7   | 6.1   |
| 12        | 1.7   | 2.0   | 3.6   | 5.3   | 5.4   | 7.0   |
| 13        | 1.9   | 2.2   | 4.0   | 5.9   | 6.1   | 7.8   |
| 15        | 2.1   | 2.4   | 4.4   | 6.5   | 6.7   | 8.6   |
| 16        | 2.2   | 2.6   | 4.7   | 6.9   | 7.2   | 9.1   |
| 20        | 2.0   | 2.2   | 4.1   | 6.1   | 6.2   | 8.1   |
| 25        | 2.5   | 2.9   | 5.2   | 7.7   | 7.9   | 10.2  |
| 32        | 3.4   | 4.0   | 7.4   | 11.1  | 11.4  | 14.5  |
| 40        | 3.2   | 3.8   | 7.0   | 10.4  | 10.7  | 13.6  |

\*symmetrical load

## Influence of Ambient Temperature FAZ-T

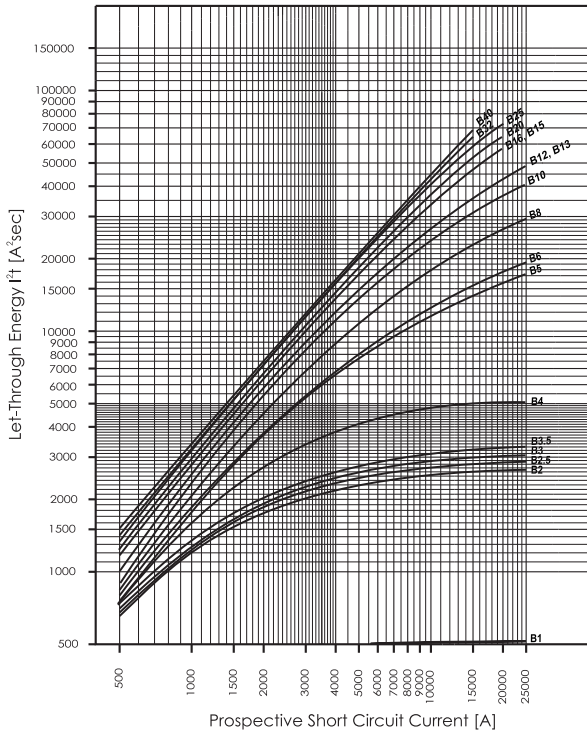
On Load Carrying Capacity (temperature derating)

| $I_N$ [A] | Ambient temperature T [°C] |     |     |     |     |     |     |    |      |      |      |      |     |      |      |      |      |
|-----------|----------------------------|-----|-----|-----|-----|-----|-----|----|------|------|------|------|-----|------|------|------|------|
|           | -40                        | -30 | -20 | -10 | 0   | 10  | 20  | 30 | 35   | 40   | 45   | 50   | 55  | 60   | 65   | 70   | 75   |
| 1         | 1.3                        | 1.2 | 1.2 | 1.2 | 1.1 | 1.1 | 1   | 1  | 0.99 | 0.97 | 0.95 | 0.93 | 0.9 | 0.89 | 0.87 | 0.85 | 0.83 |
| 2         | 2.6                        | 2.5 | 2.4 | 2.3 | 2.2 | 2.2 | 2.1 | 2  | 2    | 1.9  | 1.9  | 1.9  | 1.8 | 1.8  | 1.7  | 1.7  | 1.7  |
| 3         | 3.8                        | 3.7 | 3.6 | 3.5 | 3.4 | 3.3 | 3.1 | 3  | 3    | 2.9  | 2.8  | 2.8  | 2.7 | 2.7  | 2.6  | 2.5  | 2.5  |
| 4         | 5.1                        | 5   | 4.8 | 4.7 | 4.5 | 4.3 | 4.2 | 4  | 3.9  | 3.9  | 3.8  | 3.7  | 3.6 | 3.5  | 3.5  | 3.4  | 3.3  |
| 6         | 7.7                        | 7.5 | 7.2 | 7   | 6.7 | 6.5 | 6.3 | 6  | 5.9  | 5.8  | 5.7  | 5.6  | 5.4 | 5.3  | 5.2  | 5.1  | 5    |
| 10        | 13                         | 12  | 12  | 12  | 11  | 11  | 10  | 10 | 9.9  | 9.7  | 9.5  | 9.3  | 9   | 8.9  | 8.7  | 8.5  | 8.3  |
| 12        | 15                         | 15  | 14  | 14  | 13  | 13  | 13  | 12 | 12   | 12   | 11   | 11   | 11  | 11   | 10   | 10   | 10   |
| 13        | 17                         | 16  | 16  | 15  | 15  | 14  | 14  | 13 | 13   | 13   | 12   | 12   | 12  | 12   | 11   | 11   | 11   |
| 15        | 19                         | 19  | 18  | 17  | 17  | 16  | 16  | 15 | 15   | 15   | 14   | 14   | 14  | 13   | 13   | 13   | 12   |
| 16        | 20                         | 20  | 19  | 19  | 18  | 17  | 17  | 16 | 16   | 15   | 15   | 15   | 14  | 14   | 14   | 14   | 13   |
| 20        | 26                         | 25  | 24  | 23  | 22  | 22  | 21  | 20 | 20   | 19   | 19   | 19   | 18  | 18   | 17   | 17   | 17   |
| 25        | 32                         | 31  | 30  | 29  | 28  | 27  | 26  | 25 | 25   | 24   | 24   | 23   | 23  | 22   | 22   | 21   | 21   |
| 32        | 41                         | 40  | 38  | 37  | 36  | 35  | 33  | 32 | 32   | 31   | 30   | 30   | 29  | 28   | 28   | 27   | 26   |
| 40        | 51                         | 50  | 48  | 47  | 45  | 43  | 42  | 40 | 39   | 39   | 38   | 37   | 36  | 35   | 35   | 34   | 33   |

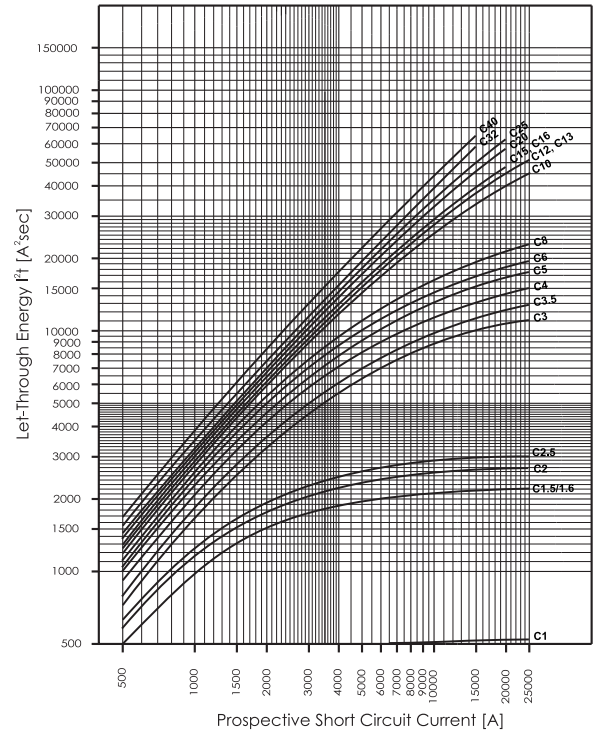


## Maximum Let-Through Energy FAZ-T

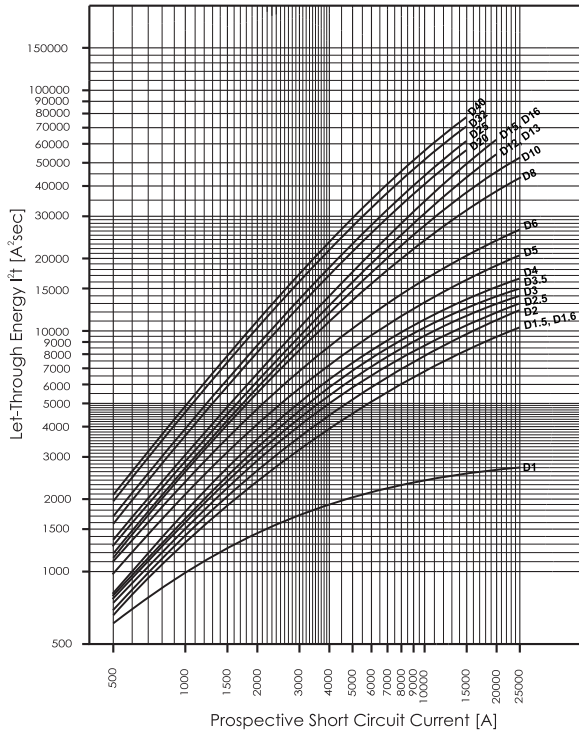
**Type B**



**Type C**

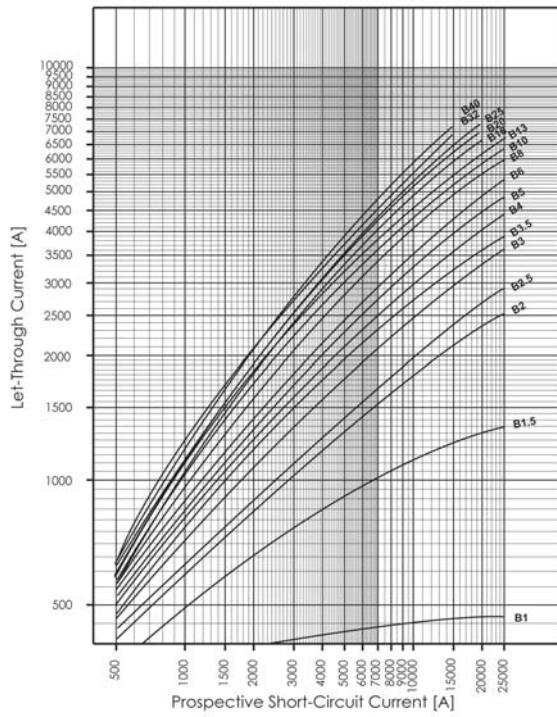


**Type D**

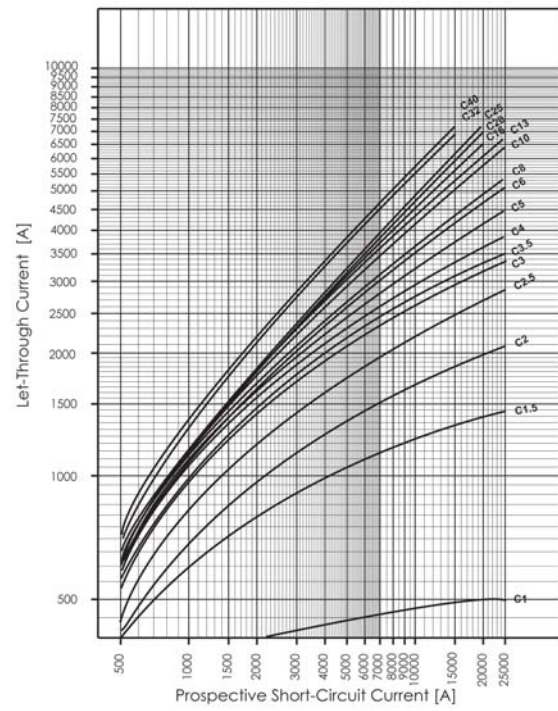


## Maximum Let-Through Current FAZ-T

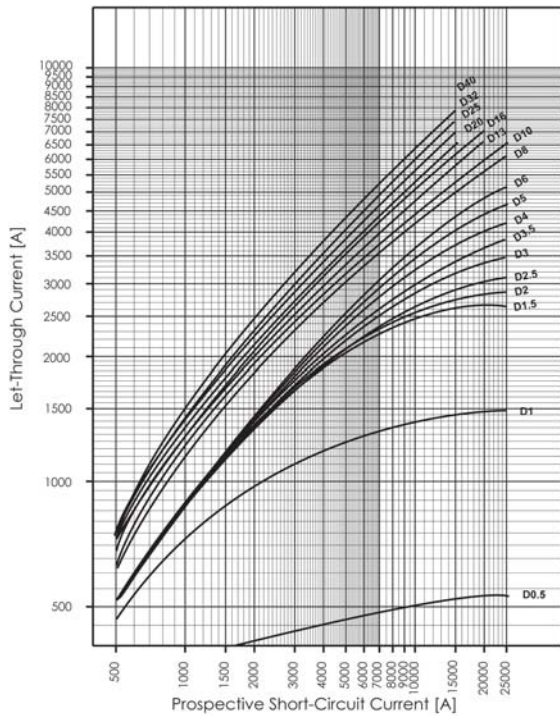
Type B



Type C



Type D

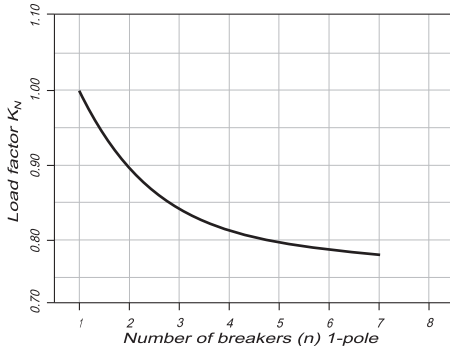


## Influence of the Line Frequency FAZ-T

On the Instantaneous Tripping Current  $I_{MA}$

|                                     | Line Frequency f [Hz] |     |     |     |     |     |     |
|-------------------------------------|-----------------------|-----|-----|-----|-----|-----|-----|
|                                     | $16\frac{2}{3}$       | 50  | 60  | 100 | 200 | 300 | 400 |
| $I_{MA}(f)/I_{MA}(50\text{Hz})$ [%] | 91                    | 100 | 101 | 106 | 115 | 134 | 141 |

## Load rating in case of circuit breakers arranged one next to the other FAZ-T



## Miniature Circuit Breakers FAZ-DC

SG53312





### FAZ-DC

- High-quality miniature circuit breakers for DC-applications
- Contact position indicator red - green
- Guide for secure terminal connection (not for FAZ-NA)
- 3-position DIN rail clip, permits removal from existing busbar system
- Comprehensive range of accessories suitable for subsequent installation
- Rated currents up to 50 A
- Tripping characteristic C
- Rated breaking capacity 10 kA according to IEC/EN 60947-2
- Up to 250 V DC pro pole

## FAZ-...-DC Miniature Circuit Breakers (MCBs)

### Characteristic C

|  | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60947-2<br>(V DC) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Type<br>Designation | Article No. | Units<br>per<br>package |
|--|----------------------------|--|---|---------------------|-------------|-------------------------|
| <b>1-pole</b>  |                            |  |   |                     |             |                         |
|   | 2                          | 220  | 10  | FAZ-C2/1-DC         | 279122      | 12/120                  |
|  | 3                          | 250  | 10  | FAZ-C3/1-DC         | 279123      | 12/120                  |
|  | 4                          | 250  | 10  | FAZ-C4/1-DC         | 279124      | 12/120                  |
|  | 6                          | 250  | 10  | FAZ-C6/1-DC         | 279125      | 12/120                  |
|  | 10                         | 250  | 10  | FAZ-C10/1-DC        | 279126      | 12/120                  |
|  | 13                         | 250  | 10  | FAZ-C13/1-DC        | 279127      | 12/120                  |
|  | 16                         | 250  | 10  | FAZ-C16/1-DC        | 279128      | 12/120                  |
|  | 20                         | 250  | 10  | FAZ-C20/1-DC        | 279129      | 12/120                  |
|  | 25                         | 250  | 10  | FAZ-C25/1-DC        | 279130      | 12/120                  |
|  | 32                         | 250  | 10  | FAZ-C32/1-DC        | 279131      | 12/120                  |
|  | 40                         | 250  | 10  | FAZ-C40/1-DC        | 279132      | 12/120                  |
|  | 50                         | 250  | 10  | FAZ-C50/1-DC        | 279133      | 12/120                  |
| <b>2-pole</b>  |                            |  |   |                     |             |                         |
|  | 2                          | 440  | 10  | FAZ-C2/2-DC         | 279134      | 1/60                    |
|  | 3                          | 500  | 10  | FAZ-C3/2-DC         | 279135      | 1/60                    |
|  | 4                          | 500  | 10  | FAZ-C4/2-DC         | 279136      | 1/60                    |
|  | 6                          | 500  | 10  | FAZ-C6/2-DC         | 279137      | 1/60                    |
|  | 10                         | 500  | 10  | FAZ-C10/2-DC        | 279138      | 1/60                    |
|  | 13                         | 500  | 10  | FAZ-C13/2-DC        | 279139      | 1/60                    |
|  | 16                         | 500  | 10  | FAZ-C16/2-DC        | 279140      | 1/60                    |
|  | 20                         | 500  | 10  | FAZ-C20/2-DC        | 279141      | 1/60                    |
|  | 25                         | 500  | 10  | FAZ-C25/2-DC        | 279142      | 1/60                    |
|  | 32                         | 500  | 10  | FAZ-C32/2-DC        | 279143      | 1/60                    |
|  | 40                         | 500  | 10  | FAZ-C40/2-DC        | 279144      | 1/60                    |
|  | 50                         | 500  | 10  | FAZ-C50/2-DC        | 279145      | 1/60                    |

## Specifications FAZ-DC

### Technical data

|                 | FAZ-DC *)      |
|-----------------|----------------|
| Productstandard | IEC/EN 60947-2 |
| Number of poles | 1, 2           |

### Mechanical specifications

|   |   |
|---|---|
| Device width                                | 17.7 mm (1p), 36 mm (2p)                            |
| Frame size                                  | 45 mm   |
| Socket size                                 | 80 mm   |
| Device depth                                | 60 mm   |
| Terminals                                   | lift terminal                                       |
| Terminal capacity rigid solid/stranded wire | 1-25 mm <sup>2</sup>                                |
| Terminal screw                              | M5 (with slotted screw acc. to EN ISO 4757-Z2, PZ2) |
| Terminal torque                             | max. 2.4 Nm   |
| Snap on fixing                              | tristable (on DIN rail acc. to EN 50022)            |
| Finger proof                                | acc. to VBG4, ÖVE EN-6                              |
| Degree of Protection (DIN VDE 0470)         |   |
| Surface mounted                             | IP 20   |
| Built-in behind panel                       | IP 40   |
| Contact position indicator                  | red / green   |

### Electrical specifications

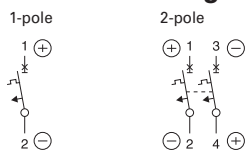
|                                 |           |  |
|---------------------------------|-----------|--|
| Rated voltage DC                | $U_n$     | 2 A type: 220V (per pole)<br>3-50 A types: 250V (per pole) |
| Rated current                   | $I_n$     | Type C: 2, 3, 4, 6, 10, 13, 16, 20, 25, 32, 40, 50 A       |
| Rated insulation voltage        | $U_i$     | 440 V  |
| Rated impulse withstand voltage | $U_{imp}$ | 4 kV (1.2/50)µsec  |

### Tripping characteristic

|                                      |          |   |
|--------------------------------------|----------|---|
| Conventional non-tripping current    |          | $I_{nt}=1.13 I_n$   |
| Conventional tripping current        |          | $I_t=1.45 I_n$  |
| Reference temperature                |          | 30 °C   |
| Temperature factor                   |          | 0.4% /K   |
| Instantaneous tripping current       | $I_{mt}$ | type C: $7 I_n < I_{mt} = 15 I_n$ ; $t(I_{mt}) < 0.1$ sec |
| Rated short-circuit braking capacity | $I_{cu}$ | 10 kA   |
| Selectivity class                    |          | 3   |
| Number of electrical operations      |          | > 4000  |
| Number of mechanical operations      |          | > 20000   |
| Climatic conditions                  |          | acc. to IEC 68-2 (25..55°C / 90..95% RH)                  |
| Operating temperature range          |          | -40°C to +75°C  |

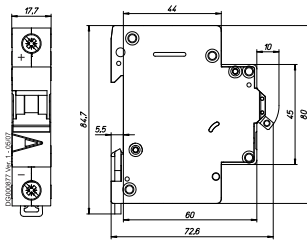
\*) not for PV string protection!

### Connection diagram

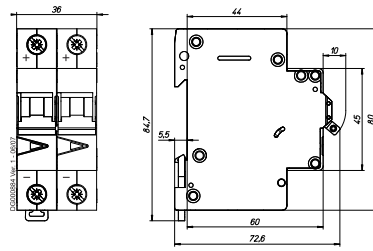


## Dimensions (mm) FAZ-...-DC

1-pole

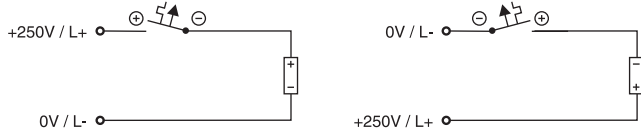


2-pole

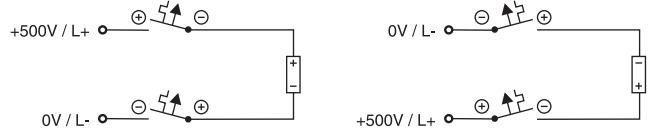


## Connection examples FAZ-...-DC

Connection example at 250V=, 1-pole

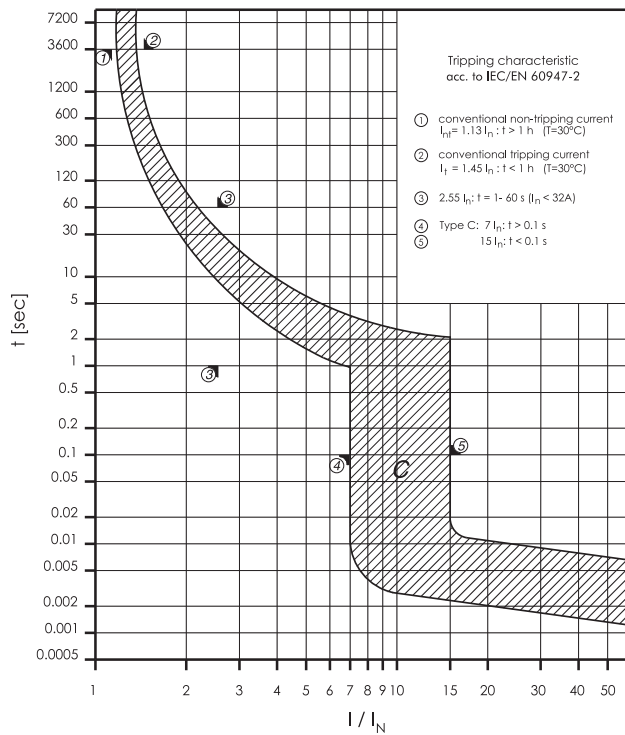


Connection example at 500V=, 2-pole



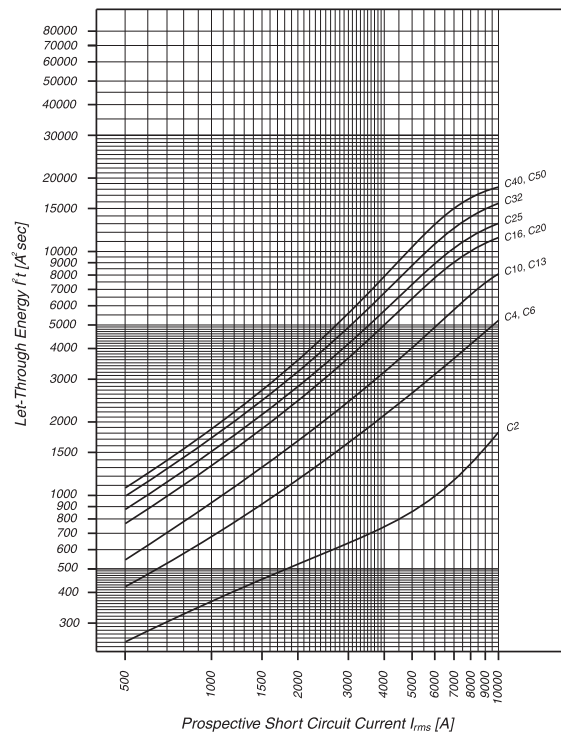
## Tripping Characteristic FAZ-...-DC

Characteristics C - IEC/EN 60947-2



## Maximum Let-Through Energy FAZ-...-DC

Type C



## Miniature Circuit Breakers FAZ-NA, FAZ-RT, FAZ-DU

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### FAZ-NA/-RT/-DU

- According to UL 489, CSA C22.2 No. 5 and also IEC 60947-2 standard
- For Applications, which are permitted for UL 1077 or CSA C22.2 No. 235
- Auxiliary switch and voltage trips suitable for subsequent installation
- Series with removable terminal screws (Type FAZ-...-RT/-DU), for use with ring cable lug
- Contact position indicator red - green
- Easy mounting at DIN-rail



## FAZ-...-NA Miniature Circuit Breakers (MCBs)

### Characteristic B

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL489<br>(V) | Breaking capacity<br>acc. to<br>UL489<br>(kA) | SWD    | NFPA 79       | Type<br>Designation | Article No. | Units<br>per<br>package |
|---------------|----------------------------|---|---|-------------------------------|---|--------|---------------|---------------------|-------------|-------------------------|
| <b>1-pole</b> |                            |   |   |                               |   |        |               |                     |             |                         |
| 1             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B1/1-NA   | 132414              | 12/120      |                         |
| 1.5           | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B1,5/1-NA | 132415              | 12/120      |                         |
| 2             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B2/1-NA   | 132416              | 12/120      |                         |
| 3             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B3/1-NA   | 132417              | 12/120      |                         |
| 4             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B4/1-NA   | 132418              | 12/120      |                         |
| 5             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B5/1-NA   | 132419              | 12/120      |                         |
| 6             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B6/1-NA   | 132680              | 12/120      |                         |
| 7             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B7/1-NA   | 132681              | 12/120      |                         |
| 8             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 16 | FAZ-B8/1-NA   | 132682              | 12/120      |                         |
| 10            | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 16 | FAZ-B10/1-NA  | 132683              | 12/120      |                         |
| 13            | 240/415                    | 15  | 277   | 10                            | SWD   |        | FAZ-B13/1-NA  | 132684              | 12/120      |                         |
| 15            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-B15/1-NA  | 132685              | 12/120      |                         |
| 16            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-B16/1-NA  | 132686              | 12/120      |                         |
| 20            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-B20/1-NA  | 132687              | 12/120      |                         |
| 25            | 240/415                    | 15  | 277   | 14                            |   |        | FAZ-B25/1-NA  | 132688              | 12/120      |                         |
| 30            | 240/415                    | 15  | 277   | 10                            |   |        | FAZ-B30/1-NA  | 132689              | 12/120      |                         |
| 32            | 240/415                    | 15  | 277   | 10                            |   |        | FAZ-B32/1-NA  | 132690              | 12/120      |                         |
| 35            | 240/415                    | 15  | 240   | 10                            |   |        | FAZ-B35/1-NA  | 132691              | 12/120      |                         |
| 40            | 240/415                    | 15  | 240   | 10                            |   |        | FAZ-B40/1-NA  | 132692              | 12/120      |                         |
| <b>2-pole</b> |                            |   |   |                               |   |        |               |                     |             |                         |
| 1             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B1/2-NA   | 132693              | 1/60        |                         |
| 1.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B1,5/2-NA | 132694              | 1/60        |                         |
| 2             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B2/2-NA   | 132695              | 1/60        |                         |
| 3             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B3/2-NA   | 132696              | 1/60        |                         |
| 4             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B4/2-NA   | 132697              | 1/60        |                         |
| 5             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B5/2-NA   | 132698              | 1/60        |                         |
| 6             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B6/2-NA   | 132699              | 1/60        |                         |
| 7             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B7/2-NA   | 132700              | 1/60        |                         |
| 8             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-B8/2-NA   | 132701              | 1/60        |                         |
| 10            | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-B10/2-NA  | 132702              | 1/60        |                         |
| 13            | 415                        | 15  | 480Y/277  | 10                            | SWD   |        | FAZ-B13/2-NA  | 132703              | 1/60        |                         |
| 15            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B15/2-NA  | 132704              | 1/60        |                         |
| 16            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B16/2-NA  | 132705              | 1/60        |                         |
| 20            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B20/2-NA  | 132706              | 1/60        |                         |
| 25            | 415                        | 15  | 480Y/277  | 14                            |   |        | FAZ-B25/2-NA  | 132707              | 1/60        |                         |
| 30            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-B30/2-NA  | 132708              | 1/60        |                         |
| 32            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-B32/2-NA  | 132709              | 1/60        |                         |
| 35            | 415                        | 15  | 240   | 10                            |   |        | FAZ-B35/2-NA  | 132710              | 1/60        |                         |
| 40            | 415                        | 15  | 240   | 10                            |   |        | FAZ-B40/2-NA  | 132711              | 1/60        |                         |
| <b>3-pole</b> |                            |   |   |                               |   |        |               |                     |             |                         |
| 1             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B1/3-NA   | 132712              | 1/40        |                         |
| 1.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B1,5/3-NA | 132713              | 1/40        |                         |
| 2             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B2/3-NA   | 132714              | 1/40        |                         |
| 3             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B3/3-NA   | 132715              | 1/40        |                         |
| 4             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B4/3-NA   | 132716              | 1/40        |                         |
| 5             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B5/3-NA   | 132717              | 1/40        |                         |
| 6             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B6/3-NA   | 132718              | 1/40        |                         |
| 7             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B7/3-NA   | 132719              | 1/40        |                         |
| 8             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-B8/3-NA   | 132720              | 1/40        |                         |
| 10            | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-B10/3-NA  | 132721              | 1/40        |                         |
| 13            | 415                        | 15  | 480Y/277  | 10                            | SWD   |        | FAZ-B13/3-NA  | 132722              | 1/40        |                         |
| 15            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B15/3-NA  | 132723              | 1/40        |                         |
| 16            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B16/3-NA  | 132724              | 1/40        |                         |
| 20            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B20/3-NA  | 132725              | 1/40        |                         |
| 25            | 415                        | 15  | 480Y/277  | 14                            |   |        | FAZ-B25/3-NA  | 132726              | 1/40        |                         |
| 30            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-B30/3-NA  | 132727              | 1/40        |                         |
| 32            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-B32/3-NA  | 132728              | 1/40        |                         |
| 35            | 415                        | 15  | 240   | 10                            |   |        | FAZ-B35/3-NA  | 132729              | 1/40        |                         |
| 40            | 415                        | 15  | 240   | 10                            |   |        | FAZ-B40/3-NA  | 132730              | 1/40        |                         |

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## FAZ...-NA Miniature Circuit Breakers (MCBs)

### Characteristic C

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL489<br>(V) | Breaking capacity<br>acc. to<br>UL489<br>(kA) | SWD | NFPA 79 | Type<br>Designation | Article No. | Units<br>per<br>package |
|---------------|----------------------------|---|---|-------------------------------|---|-----|---------|---------------------|-------------|-------------------------|
| <b>1-pole</b> |                            |   |   |                               |   |     |         |                     |             |                         |
|               | 0.5                        | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-C0,5/1-NA       | 181883      | 12/120                  |
|               | 1                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-C1/1-NA         | 181885      | 12/120                  |
|               | 1.5                        | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-C1,5/1-NA       | 181887      | 12/120                  |
|               | 2                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-C2/1-NA         | 181889      | 12/120                  |
|               | 3                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-C3/1-NA         | 181891      | 12/120                  |
|               | 4                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-C4/1-NA         | 181893      | 12/120                  |
|               | 5                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-C5/1-NA         | 181895      | 12/120                  |
|               | 6                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-C6/1-NA         | 181897      | 12/120                  |
|               | 7                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-C7/1-NA         | 181899      | 12/120                  |
|               | 8                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 16  | FAZ-C8/1-NA         | 181901      | 12/120                  |
|               | 10                         | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 16  | FAZ-C10/1-NA        | 181903      | 12/120                  |
|               | 13                         | 240/415                                   | 15  | 277                           | 10  | SWD |         | FAZ-C13/1-NA        | 181905      | 12/120                  |
|               | 15                         | 240/415                                   | 15  | 277                           | 14  | SWD |         | FAZ-C15/1-NA        | 181907      | 12/120                  |
|               | 16                         | 240/415                                   | 15  | 277                           | 14  | SWD |         | FAZ-C16/1-NA        | 181909      | 12/120                  |
|               | 20                         | 240/415                                   | 15  | 277                           | 14  | SWD |         | FAZ-C20/1-NA        | 181911      | 12/120                  |
|               | 25                         | 240/415                                   | 15  | 277                           | 14  |     |         | FAZ-C25/1-NA        | 181913      | 12/120                  |
|               | 30                         | 240/415                                   | 15  | 277                           | 10  |     |         | FAZ-C30/1-NA        | 181915      | 12/120                  |
|               | 32                         | 240/415                                   | 15  | 277                           | 10  |     |         | FAZ-C32/1-NA        | 181917      | 12/120                  |
|               | 35                         | 240/415                                   | 15  | 240                           | 10  |     |         | FAZ-C35/1-NA        | 181919      | 12/120                  |
|               | 40                         | 240/415                                   | 15  | 240                           | 10  |     |         | FAZ-C40/1-NA        | 181921      | 12/120                  |
| <b>2-pole</b> |                            |   |   |                               |   |     |         |                     |             |                         |
|               | 0.5                        | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C0,5/2-NA       | 181923      | 1/60                    |
|               | 1                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C1/2-NA         | 181925      | 1/60                    |
|               | 1.5                        | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C1,5/2-NA       | 181927      | 1/60                    |
|               | 2                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C2/2-NA         | 181929      | 1/60                    |
|               | 3                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C3/2-NA         | 181931      | 1/60                    |
|               | 4                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C4/2-NA         | 181933      | 1/60                    |
|               | 5                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C5/2-NA         | 181935      | 1/60                    |
|               | 6                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C6/2-NA         | 181937      | 1/60                    |
|               | 7                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C7/2-NA         | 181939      | 1/60                    |
|               | 8                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 16  | FAZ-C8/2-NA         | 181941      | 1/60                    |
|               | 10                         | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 16  | FAZ-C10/2-NA        | 181943      | 1/60                    |
|               | 13                         | 415                                       | 15  | 480Y/277                      | 10  | SWD |         | FAZ-C13/2-NA        | 181945      | 1/60                    |
|               | 15                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-C15/2-NA        | 181947      | 1/60                    |
|               | 16                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-C16/2-NA        | 181949      | 1/60                    |
|               | 20                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-C20/2-NA        | 181951      | 1/60                    |
|               | 25                         | 415                                       | 15  | 480Y/277                      | 14  |     |         | FAZ-C25/2-NA        | 181953      | 1/60                    |
|               | 30                         | 415                                       | 15  | 480Y/277                      | 10  |     |         | FAZ-C30/2-NA        | 181955      | 1/60                    |
|               | 32                         | 415                                       | 15  | 480Y/277                      | 10  |     |         | FAZ-C32/2-NA        | 181957      | 1/60                    |
|               | 35                         | 415                                       | 15  | 240                           | 10  |     |         | FAZ-C35/2-NA        | 181959      | 1/60                    |
|               | 40                         | 415                                       | 15  | 240                           | 10  |     |         | FAZ-C40/2-NA        | 181961      | 1/60                    |
| <b>3-pole</b> |                            |   |   |                               |   |     |         |                     |             |                         |
|               | 0.5                        | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C0,5/3-NA       | 181963      | 1/40                    |
|               | 1                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C1/3-NA         | 181965      | 1/40                    |
|               | 1.5                        | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C1,5/3-NA       | 181967      | 1/40                    |
|               | 2                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C2/3-NA         | 181969      | 1/40                    |
|               | 3                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C3/3-NA         | 181971      | 1/40                    |
|               | 4                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C4/3-NA         | 181973      | 1/40                    |
|               | 5                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C5/3-NA         | 181975      | 1/40                    |
|               | 6                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C6/3-NA         | 181977      | 1/40                    |
|               | 7                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-C7/3-NA         | 181979      | 1/40                    |
|               | 8                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 16  | FAZ-C8/3-NA         | 181981      | 1/40                    |
|               | 10                         | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 16  | FAZ-C10/3-NA        | 181983      | 1/40                    |
|               | 13                         | 415                                       | 15  | 480Y/277                      | 10  | SWD |         | FAZ-C13/3-NA        | 181985      | 1/40                    |
|               | 15                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-C15/3-NA        | 181987      | 1/40                    |
|               | 16                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-C16/3-NA        | 181989      | 1/40                    |
|               | 20                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-C20/3-NA        | 181991      | 1/40                    |
|               | 25                         | 415                                       | 15  | 480Y/277                      | 14  |     |         | FAZ-C25/3-NA        | 181993      | 1/40                    |
|               | 30                         | 415                                       | 15  | 480Y/277                      | 10  |     |         | FAZ-C30/3-NA        | 181995      | 1/40                    |
|               | 32                         | 415                                       | 15  | 480Y/277                      | 10  |     |         | FAZ-C32/3-NA        | 181997      | 1/40                    |
|               | 35                         | 415                                       | 15  | 240                           | 10  |     |         | FAZ-C35/3-NA        | 181999      | 1/40                    |
|               | 40                         | 415                                       | 15  | 240                           | 10  |     |         | FAZ-C40/3-NA        | 182001      | 1/40                    |

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## FAZ...-NA Miniature Circuit Breakers (MCBs)

### Characteristic D

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL489<br>(V) | Breaking capacity<br>acc. to<br>UL489<br>(kA) | SWD | NFPA 79 | Type<br>Designation | Article No. | Units<br>per<br>package |
|---------------|----------------------------|---|---|-------------------------------|---|-----|---------|---------------------|-------------|-------------------------|
| <b>1-pole</b> |                            |   |   |                               |   |     |         |                     |             |                         |
|               | 0.5                        | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-D0,5/1-NA       | 182003      | 12/120                  |
|               | 1                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-D1/1-NA         | 182005      | 12/120                  |
|               | 1.5                        | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-D1,5/1-NA       | 182007      | 12/120                  |
|               | 2                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-D2/1-NA         | 182009      | 12/120                  |
|               | 3                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-D3/1-NA         | 182011      | 12/120                  |
|               | 4                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-D4/1-NA         | 182013      | 12/120                  |
|               | 5                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-D5/1-NA         | 182015      | 12/120                  |
|               | 6                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-D6/1-NA         | 182017      | 12/120                  |
|               | 7                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 18  | FAZ-D7/1-NA         | 182019      | 12/120                  |
|               | 8                          | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 16  | FAZ-D8/1-NA         | 182021      | 12/120                  |
|               | 10                         | 240/415                                   | 15  | 277                           | 10  | SWD | AWG 16  | FAZ-D10/1-NA        | 181831      | 12/120                  |
|               | 13                         | 240/415                                   | 15  | 277                           | 14  | SWD |         | FAZ-D13/1-NA        | 181833      | 12/120                  |
|               | 15                         | 240/415                                   | 15  | 277                           | 14  | SWD |         | FAZ-D15/1-NA        | 181835      | 12/120                  |
|               | 16                         | 240/415                                   | 15  | 277                           | 14  | SWD |         | FAZ-D16/1-NA        | 181837      | 12/120                  |
|               | 20                         | 240/415                                   | 15  | 277                           | 14  | SWD |         | FAZ-D20/1-NA        | 181839      | 12/120                  |
|               | 25                         | 240/415                                   | 15  | 277                           | 10  |     |         | FAZ-D25/1-NA        | 181841      | 12/120                  |
|               | 30                         | 240/415                                   | 15  | 277                           | 10  |     |         | FAZ-D30/1-NA        | 182023      | 12/120                  |
|               | 32                         | 240/415                                   | 15  | 277                           | 10  |     |         | FAZ-D32/1-NA        | 182025      | 12/120                  |
|               | 35                         | 240/415                                   | 15  | 240                           | 10  |     |         | FAZ-D35/1-NA        | 182027      | 12/120                  |
|               | 40                         | 240/415                                   | 15  | 240                           | 10  |     |         | FAZ-D40/1-NA        | 182029      | 12/120                  |
| <b>2-pole</b> |                            |   |   |                               |   |     |         |                     |             |                         |
|               | 0.5                        | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-D0,5/2-NA       | 182031      | 1/60                    |
|               | 1                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-D1/2-NA         | 182033      | 1/60                    |
|               | 1.5                        | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-D1,5/2-NA       | 182035      | 1/60                    |
|               | 2                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-D2/2-NA         | 182037      | 1/60                    |
|               | 3                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-D3/2-NA         | 182039      | 1/60                    |
|               | 4                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-D4/2-NA         | 182041      | 1/60                    |
|               | 5                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-D5/2-NA         | 182043      | 1/60                    |
|               | 6                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-D6/2-NA         | 182045      | 1/60                    |
|               | 7                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-D7/2-NA         | 182047      | 1/60                    |
|               | 8                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 16  | FAZ-D8/2-NA         | 182049      | 1/60                    |
|               | 10                         | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 16  | FAZ-D10/2-NA        | 182051      | 1/60                    |
|               | 13                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-D13/2-NA        | 182053      | 1/60                    |
|               | 15                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-D15/2-NA        | 182055      | 1/60                    |
|               | 16                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-D16/2-NA        | 182057      | 1/60                    |
|               | 20                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-D20/2-NA        | 182059      | 1/60                    |
|               | 25                         | 415                                       | 15  | 480Y/277                      | 10  |     |         | FAZ-D25/2-NA        | 182061      | 1/60                    |
|               | 30                         | 415                                       | 15  | 480Y/277                      | 10  |     |         | FAZ-D30/2-NA        | 182063      | 1/60                    |
|               | 32                         | 415                                       | 15  | 480Y/277                      | 10  |     |         | FAZ-D32/2-NA        | 182065      | 1/60                    |
|               | 35                         | 415                                       | 15  | 240                           | 10  |     |         | FAZ-D35/2-NA        | 182067      | 1/60                    |
|               | 40                         | 415                                       | 15  | 240                           | 10  |     |         | FAZ-D40/2-NA        | 182069      | 1/60                    |
| <b>3-pole</b> |                            |   |   |                               |   |     |         |                     |             |                         |
|               | 0.5                        | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-D0,5/3-NA       | 182071      | 1/40                    |
|               | 1                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-D1/3-NA         | 182073      | 1/40                    |
|               | 1.5                        | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-D1,5/3-NA       | 182075      | 1/40                    |
|               | 2                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-D2/3-NA         | 182077      | 1/40                    |
|               | 3                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-D3/3-NA         | 182079      | 1/40                    |
|               | 4                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-D4/3-NA         | 182081      | 1/40                    |
|               | 5                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-D5/3-NA         | 182083      | 1/40                    |
|               | 6                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-D6/3-NA         | 182085      | 1/40                    |
|               | 7                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 18  | FAZ-D7/3-NA         | 182087      | 1/40                    |
|               | 8                          | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 16  | FAZ-D8/3-NA         | 182089      | 1/40                    |
|               | 10                         | 415                                       | 15  | 480Y/277                      | 10  | SWD | AWG 16  | FAZ-D10/3-NA        | 182091      | 1/40                    |
|               | 13                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-D13/3-NA        | 182093      | 1/40                    |
|               | 15                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-D15/3-NA        | 182095      | 1/40                    |
|               | 16                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-D16/3-NA        | 182097      | 1/40                    |
|               | 20                         | 415                                       | 15  | 480Y/277                      | 14  | SWD |         | FAZ-D20/3-NA        | 182099      | 1/40                    |
|               | 25                         | 415                                       | 15  | 480Y/277                      | 10  |     |         | FAZ-D25/3-NA        | 182101      | 1/40                    |
|               | 30                         | 415                                       | 15  | 480Y/277                      | 10  |     |         | FAZ-D30/3-NA        | 182103      | 1/40                    |
|               | 32                         | 415                                       | 15  | 480Y/277                      | 10  |     |         | FAZ-D32/3-NA        | 182105      | 1/40                    |
|               | 35                         | 415                                       | 15  | 240                           | 10  |     |         | FAZ-D35/3-NA        | 182107      | 1/40                    |
|               | 40                         | 415                                       | 15  | 240                           | 10  |     |         | FAZ-D40/3-NA        | 182109      | 1/40                    |

SG53012



SG56812



SG56912



## FAZ...-RT/-DU Miniature Circuit Breakers (MCBs)

### Characteristic B

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL489<br>(V) | Breaking capacity<br>acc. to<br>UL489<br>(kA) | SWD    | NFPA 79       | Type<br>Designation | Article No. | Units<br>per<br>package |
|---------------|----------------------------|---|---|-------------------------------|---|--------|---------------|---------------------|-------------|-------------------------|
| <b>1-pole</b> |                            |   |   |                               |   |        |               |                     |             |                         |
| 1             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B1/1-RT   | 132731              | 12/120      |                         |
| 1.5           | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B1,5/1-RT | 132732              | 12/120      |                         |
| 2             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B2/1-RT   | 132733              | 12/120      |                         |
| 3             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B3/1-RT   | 132734              | 12/120      |                         |
| 4             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B4/1-RT   | 132735              | 12/120      |                         |
| 5             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B5/1-RT   | 132736              | 12/120      |                         |
| 6             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B6/1-RT   | 132737              | 12/120      |                         |
| 7             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-B7/1-RT   | 132738              | 12/120      |                         |
| 8             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 16 | FAZ-B8/1-RT   | 132739              | 12/120      |                         |
| 10            | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 16 | FAZ-B10/1-RT  | 132740              | 12/120      |                         |
| 13            | 240/415                    | 15  | 277   | 10                            | SWD   |        | FAZ-B13/1-RT  | 132741              | 12/120      |                         |
| 15            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-B15/1-RT  | 132742              | 12/120      |                         |
| 16            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-B16/1-RT  | 132743              | 12/120      |                         |
| 20            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-B20/1-RT  | 132744              | 12/120      |                         |
| 25            | 240/415                    | 15  | 277   | 14                            |   |        | FAZ-B25/1-RT  | 132745              | 12/120      |                         |
| 30            | 240/415                    | 15  | 277   | 10                            |   |        | FAZ-B30/1-RT  | 132746              | 12/120      |                         |
| 32            | 240/415                    | 15  | 277   | 10                            |   |        | FAZ-B32/1-RT  | 132747              | 12/120      |                         |
| 35            | 240/415                    | 15  | 240   | 10                            |   |        | FAZ-B35/1-RT  | 132748              | 12/120      |                         |
| 40            | 240/415                    | 15  | 240   | 10                            |   |        | FAZ-B40/1-RT  | 132749              | 12/120      |                         |
| <b>2-pole</b> |                            |   |   |                               |   |        |               |                     |             |                         |
| 1             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B1/2-RT   | 132750              | 1/60        |                         |
| 1.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B1,5/2-RT | 132751              | 1/60        |                         |
| 2             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B2/2-RT   | 132752              | 1/60        |                         |
| 3             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B3/2-RT   | 132753              | 1/60        |                         |
| 4             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B4/2-RT   | 132754              | 1/60        |                         |
| 5             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B5/2-RT   | 132755              | 1/60        |                         |
| 6             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B6/2-RT   | 132756              | 1/60        |                         |
| 7             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B7/2-RT   | 132757              | 1/60        |                         |
| 8             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-B8/2-RT   | 132758              | 1/60        |                         |
| 10            | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-B10/2-RT  | 132759              | 1/60        |                         |
| 13            | 415                        | 15  | 480Y/277  | 10                            | SWD   |        | FAZ-B13/2-RT  | 132760              | 1/60        |                         |
| 15            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B15/2-RT  | 132761              | 1/60        |                         |
| 16            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B16/2-RT  | 132762              | 1/60        |                         |
| 20            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B20/2-RT  | 132763              | 1/60        |                         |
| 25            | 415                        | 15  | 480Y/277  | 14                            |   |        | FAZ-B25/2-RT  | 132764              | 1/60        |                         |
| 30            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-B30/2-RT  | 132765              | 1/60        |                         |
| 32            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-B32/2-RT  | 132766              | 1/60        |                         |
| 35            | 415                        | 15  | 240   | 10                            |   |        | FAZ-B35/2-RT  | 132767              | 1/60        |                         |
| 40            | 415                        | 15  | 240   | 10                            |   |        | FAZ-B40/2-RT  | 132768              | 1/60        |                         |
| <b>3-pole</b> |                            |   |   |                               |   |        |               |                     |             |                         |
| 1             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B1/3-RT   | 132769              | 1/40        |                         |
| 1.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B1,5/3-RT | 132770              | 1/40        |                         |
| 2             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B2/3-RT   | 132771              | 1/40        |                         |
| 3             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B3/3-RT   | 132772              | 1/40        |                         |
| 4             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B4/3-RT   | 132773              | 1/40        |                         |
| 5             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B5/3-RT   | 132774              | 1/40        |                         |
| 6             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B6/3-RT   | 132775              | 1/40        |                         |
| 7             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-B7/3-RT   | 132776              | 1/40        |                         |
| 8             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-B8/3-RT   | 132777              | 1/40        |                         |
| 10            | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-B10/3-RT  | 132778              | 1/40        |                         |
| 13            | 415                        | 15  | 480Y/277  | 10                            | SWD   |        | FAZ-B13/3-RT  | 132779              | 1/40        |                         |
| 15            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B15/3-RT  | 132780              | 1/40        |                         |
| 16            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B16/3-RT  | 132781              | 1/40        |                         |
| 20            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-B20/3-RT  | 132782              | 1/40        |                         |
| 25            | 415                        | 15  | 480Y/277  | 14                            |   |        | FAZ-B25/3-RT  | 132783              | 1/40        |                         |
| 30            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-B30/3-RT  | 132784              | 1/40        |                         |
| 32            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-B32/3-RT  | 132785              | 1/40        |                         |
| 35            | 415                        | 15  | 240   | 10                            |   |        | FAZ-B35/3-RT  | 132786              | 1/40        |                         |
| 40            | 415                        | 15  | 240   | 10                            |   |        | FAZ-B40/3-RT  | 132787              | 1/40        |                         |

SG56412



SG56712



SG57012



## FAZ...-RT/-DU Miniature Circuit Breakers (MCBs)

### Characteristic C



FAZ-RT has the plastic limiter at both terminals, as showed in red circle; While FAZ-DU doesn't have

SG56412



| Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL489<br>(V) | Breaking capacity<br>acc. to<br>UL489<br>(kA) | SWD | NFPA 79 | RT Type<br>Designation | RT Article<br>No. | DU Type<br>Designation | DU Article<br>No. | Units<br>per<br>package |
|----------------------------|---|---|-------------------------------|---|-----|---------|------------------------|-------------------|------------------------|-------------------|-------------------------|
|----------------------------|---|---|-------------------------------|---|-----|---------|------------------------|-------------------|------------------------|-------------------|-------------------------|

#### 1-pole

|     |         |    |     |    |     |        |               |        |               |        |        |
|-----|---------|----|-----|----|-----|--------|---------------|--------|---------------|--------|--------|
| 0.5 | 240/415 | 15 | 277 | 10 | SWD | AWG 18 | FAZ-C0,5/1-RT | 181884 | FAZ-C0,5/1-DU | 185095 | 12/120 |
| 1   | 240/415 | 15 | 277 | 10 | SWD | AWG 18 | FAZ-C1/1-RT   | 181886 | FAZ-C1/1-DU   | 185096 | 12/120 |
| 1.5 | 240/415 | 15 | 277 | 10 | SWD | AWG 18 | FAZ-C1,5/1-RT | 181888 | FAZ-C1,5/1-DU | 185097 | 12/120 |
| 2   | 240/415 | 15 | 277 | 10 | SWD | AWG 18 | FAZ-C2/1-RT   | 181890 | FAZ-C2/1-DU   | 185098 | 12/120 |
| 3   | 240/415 | 15 | 277 | 10 | SWD | AWG 18 | FAZ-C3/1-RT   | 181892 | FAZ-C3/1-DU   | 185099 | 12/120 |
| 4   | 240/415 | 15 | 277 | 10 | SWD | AWG 18 | FAZ-C4/1-RT   | 181894 | FAZ-C4/1-DU   | 185100 | 12/120 |
| 5   | 240/415 | 15 | 277 | 10 | SWD | AWG 18 | FAZ-C5/1-RT   | 181896 | FAZ-C5/1-DU   | 185101 | 12/120 |
| 6   | 240/415 | 15 | 277 | 10 | SWD | AWG 18 | FAZ-C6/1-RT   | 181898 | FAZ-C6/1-DU   | 185102 | 12/120 |
| 7   | 240/415 | 15 | 277 | 10 | SWD | AWG 18 | FAZ-C7/1-RT   | 181900 | FAZ-C7/1-DU   | 185103 | 12/120 |
| 8   | 240/415 | 15 | 277 | 10 | SWD | AWG 16 | FAZ-C8/1-RT   | 181902 | FAZ-C8/1-DU   | 184990 | 12/120 |
| 10  | 240/415 | 15 | 277 | 10 | SWD | AWG 16 | FAZ-C10/1-RT  | 181904 | FAZ-C10/1-DU  | 184991 | 12/120 |
| 13  | 240/415 | 15 | 277 | 10 | SWD |        | FAZ-C13/1-RT  | 181906 | FAZ-C13/1-DU  | 184992 | 12/120 |
| 15  | 240/415 | 15 | 277 | 14 | SWD |        | FAZ-C15/1-RT  | 181908 | FAZ-C15/1-DU  | 184993 | 12/120 |
| 16  | 240/415 | 15 | 277 | 14 | SWD |        | FAZ-C16/1-RT  | 181910 | FAZ-C16/1-DU  | 184994 | 12/120 |
| 20  | 240/415 | 15 | 277 | 14 | SWD |        | FAZ-C20/1-RT  | 181912 | FAZ-C20/1-DU  | 184995 | 12/120 |
| 25  | 240/415 | 15 | 277 | 14 |     |        | FAZ-C25/1-RT  | 181914 | FAZ-C25/1-DU  | 184996 | 12/120 |
| 30  | 240/415 | 15 | 277 | 10 |     |        | FAZ-C30/1-RT  | 181916 | FAZ-C30/1-DU  | 184997 | 12/120 |
| 32  | 240/415 | 15 | 277 | 10 |     |        | FAZ-C32/1-RT  | 181918 | FAZ-C32/1-DU  | 184998 | 12/120 |
| 35  | 240/415 | 15 | 240 | 10 |     |        | FAZ-C35/1-RT  | 181920 | FAZ-C35/1-DU  | 184999 | 12/120 |
| 40  | 240/415 | 15 | 240 | 10 |     |        | FAZ-C40/1-RT  | 181922 | FAZ-C40/1-DU  | 185000 | 12/120 |

SG56712



#### 2-pole

|     |     |    |          |    |     |        |               |        |               |        |      |
|-----|-----|----|----------|----|-----|--------|---------------|--------|---------------|--------|------|
| 0.5 | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C0,5/2-RT | 181924 | FAZ-C0,5/2-DU | 185021 | 1/60 |
| 1   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C1/2-RT   | 181926 | FAZ-C1/2-DU   | 185022 | 1/60 |
| 1.5 | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C1,5/2-RT | 181928 | FAZ-C1,5/2-DU | 185023 | 1/60 |
| 2   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C2/2-RT   | 181930 | FAZ-C2/2-DU   | 185024 | 1/60 |
| 3   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C3/2-RT   | 181932 | FAZ-C3/2-DU   | 185025 | 1/60 |
| 4   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C4/2-RT   | 181934 | FAZ-C4/2-DU   | 185026 | 1/60 |
| 5   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C5/2-RT   | 181936 | FAZ-C5/2-DU   | 185027 | 1/60 |
| 6   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C6/2-RT   | 181938 | FAZ-C6/2-DU   | 185028 | 1/60 |
| 7   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C7/2-RT   | 181940 | FAZ-C7/2-DU   | 185029 | 1/60 |
| 8   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 16 | FAZ-C8/2-RT   | 181942 | FAZ-C8/2-DU   | 185030 | 1/60 |
| 10  | 415 | 15 | 480Y/277 | 10 | SWD | AWG 16 | FAZ-C10/2-RT  | 181944 | FAZ-C10/2-DU  | 185031 | 1/60 |
| 13  | 415 | 15 | 480Y/277 | 10 | SWD |        | FAZ-C13/2-RT  | 181946 | FAZ-C13/2-DU  | 185032 | 1/60 |
| 15  | 415 | 15 | 480Y/277 | 14 | SWD |        | FAZ-C15/2-RT  | 181948 | FAZ-C15/2-DU  | 185033 | 1/60 |
| 16  | 415 | 15 | 480Y/277 | 14 | SWD |        | FAZ-C16/2-RT  | 181950 | FAZ-C16/2-DU  | 185034 | 1/60 |
| 20  | 415 | 15 | 480Y/277 | 14 | SWD |        | FAZ-C20/2-RT  | 181952 | FAZ-C20/2-DU  | 185035 | 1/60 |
| 25  | 415 | 15 | 480Y/277 | 14 |     |        | FAZ-C25/2-RT  | 181954 | FAZ-C25/2-DU  | 185036 | 1/60 |
| 30  | 415 | 15 | 480Y/277 | 10 |     |        | FAZ-C30/2-RT  | 181956 | FAZ-C30/2-DU  | 185037 | 1/60 |
| 32  | 415 | 15 | 480Y/277 | 10 |     |        | FAZ-C32/2-RT  | 181958 | FAZ-C32/2-DU  | 185038 | 1/60 |
| 35  | 415 | 15 | 240      | 10 |     |        | FAZ-C35/2-RT  | 181960 | FAZ-C35/2-DU  | 185039 | 1/60 |
| 40  | 415 | 15 | 240      | 10 |     |        | FAZ-C40/2-RT  | 181962 | FAZ-C40/2-DU  | 185040 | 1/60 |

SG57012



#### 3-pole

|     |     |    |          |    |     |        |               |        |               |        |      |
|-----|-----|----|----------|----|-----|--------|---------------|--------|---------------|--------|------|
| 0.5 | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C0,5/3-RT | 181964 | FAZ-C0,5/3-DU | 185061 | 1/40 |
| 1   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C1/3-RT   | 181966 | FAZ-C1/3-DU   | 185062 | 1/40 |
| 1.5 | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C1,5/3-RT | 181968 | FAZ-C1,5/3-DU | 185063 | 1/40 |
| 2   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C2/3-RT   | 181970 | FAZ-C2/3-DU   | 185064 | 1/40 |
| 3   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C3/3-RT   | 181972 | FAZ-C3/3-DU   | 185065 | 1/40 |
| 4   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C4/3-RT   | 181974 | FAZ-C4/3-DU   | 185066 | 1/40 |
| 5   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C5/3-RT   | 181976 | FAZ-C5/3-DU   | 185067 | 1/40 |
| 6   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C6/3-RT   | 181978 | FAZ-C6/3-DU   | 185068 | 1/40 |
| 7   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 18 | FAZ-C7/3-RT   | 181980 | FAZ-C7/3-DU   | 185069 | 1/40 |
| 8   | 415 | 15 | 480Y/277 | 10 | SWD | AWG 16 | FAZ-C8/3-RT   | 181982 | FAZ-C8/3-DU   | 185070 | 1/40 |
| 10  | 415 | 15 | 480Y/277 | 10 | SWD | AWG 16 | FAZ-C10/3-RT  | 181984 | FAZ-C10/3-DU  | 185071 | 1/40 |
| 13  | 415 | 15 | 480Y/277 | 10 | SWD |        | FAZ-C13/3-RT  | 181986 | FAZ-C13/3-DU  | 185072 | 1/40 |
| 15  | 415 | 15 | 480Y/277 | 14 | SWD |        | FAZ-C15/3-RT  | 181988 | FAZ-C15/3-DU  | 185073 | 1/40 |
| 16  | 415 | 15 | 480Y/277 | 14 | SWD |        | FAZ-C16/3-RT  | 181990 | FAZ-C16/3-DU  | 185074 | 1/40 |
| 20  | 415 | 15 | 480Y/277 | 14 | SWD |        | FAZ-C20/3-RT  | 181992 | FAZ-C20/3-DU  | 185075 | 1/40 |
| 25  | 415 | 15 | 480Y/277 | 14 |     |        | FAZ-C25/3-RT  | 181994 | FAZ-C25/3-DU  | 185076 | 1/40 |
| 30  | 415 | 15 | 480Y/277 | 10 |     |        | FAZ-C30/3-RT  | 181996 | FAZ-C30/3-DU  | 185077 | 1/40 |
| 32  | 415 | 15 | 480Y/277 | 10 |     |        | FAZ-C32/3-RT  | 181998 | FAZ-C32/3-DU  | 185078 | 1/40 |
| 35  | 415 | 15 | 240      | 10 |     |        | FAZ-C35/3-RT  | 182000 | FAZ-C35/3-DU  | 185079 | 1/40 |
| 40  | 415 | 15 | 240      | 10 |     |        | FAZ-C40/3-RT  | 182002 | FAZ-C40/3-DU  | 185080 | 1/40 |

## FAZ-...-RT/-DU Miniature Circuit Breakers (MCBs)

### Characteristic D

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60947-2<br>(V) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL489<br>(V) | Breaking capacity<br>acc. to<br>UL489<br>(kA) | SWD    | NFPA 79<br>AWG | RT Type<br>Designation | RT Article<br>No. | DU Type<br>Designation | DU Article<br>No. | Units<br>per<br>package |
|---------------|----------------------------|---|---|-------------------------------|---|--------|----------------|------------------------|-------------------|------------------------|-------------------|-------------------------|
| <b>1-pole</b> |                            |   |   |                               |   |        |                |                        |                   |                        |                   |                         |
| 0.5           | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D0,5/1-RT  | 182004                 | FAZ-D0,5/1-DU     | 185001                 | 12/120            |                         |
| 1             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D1/1-RT    | 182006                 | FAZ-D1/1-DU       | 185002                 | 12/120            |                         |
| 1.5           | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D1,5/1-RT  | 182008                 | FAZ-D1,5/1-DU     | 185003                 | 12/120            |                         |
| 2             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D2/1-RT    | 182010                 | FAZ-D2/1-DU       | 185004                 | 12/120            |                         |
| 3             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D3/1-RT    | 182012                 | FAZ-D3/1-DU       | 185005                 | 12/120            |                         |
| 4             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D4/1-RT    | 182014                 | FAZ-D4/1-DU       | 185006                 | 12/120            |                         |
| 5             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D5/1-RT    | 182016                 | FAZ-D5/1-DU       | 185007                 | 12/120            |                         |
| 6             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D6/1-RT    | 182018                 | FAZ-D6/1-DU       | 185008                 | 12/120            |                         |
| 7             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 18 | FAZ-D7/1-RT    | 182020                 | FAZ-D7/1-DU       | 185009                 | 12/120            |                         |
| 8             | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 16 | FAZ-D8/1-RT    | 182022                 | FAZ-D8/1-DU       | 185010                 | 12/120            |                         |
| 10            | 240/415                    | 15  | 277   | 10                            | SWD   | AWG 16 | FAZ-D10/1-RT   | 181832                 | FAZ-D10/1-DU      | 185011                 | 12/120            |                         |
| 13            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-D13/1-RT   | 181834                 | FAZ-D13/1-DU      | 185012                 | 12/120            |                         |
| 15            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-D15/1-RT   | 181836                 | FAZ-D15/1-DU      | 185013                 | 12/120            |                         |
| 16            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-D16/1-RT   | 181838                 | FAZ-D16/1-DU      | 185014                 | 12/120            |                         |
| 20            | 240/415                    | 15  | 277   | 14                            | SWD   |        | FAZ-D20/1-RT   | 181840                 | FAZ-D20/1-DU      | 185015                 | 12/120            |                         |
| 25            | 240/415                    | 15  | 277   | 10                            |   |        | FAZ-D25/1-RT   | 181842                 | FAZ-D25/1-DU      | 185016                 | 12/120            |                         |
| 30            | 240/415                    | 15  | 277   | 10                            |   |        | FAZ-D30/1-RT   | 182024                 | FAZ-D30/1-DU      | 185017                 | 12/120            |                         |
| 32            | 240/415                    | 15  | 277   | 10                            |   |        | FAZ-D32/1-RT   | 182026                 | FAZ-D32/1-DU      | 185018                 | 12/120            |                         |
| 35            | 240/415                    | 15  | 240   | 10                            |   |        | FAZ-D35/1-RT   | 182028                 | FAZ-D35/1-DU      | 185019                 | 12/120            |                         |
| 40            | 240/415                    | 15  | 240   | 10                            |   |        | FAZ-D40/1-RT   | 182030                 | FAZ-D40/1-DU      | 185020                 | 12/120            |                         |
| <b>2-pole</b> |                            |   |   |                               |   |        |                |                        |                   |                        |                   |                         |
| 0.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D0,5/2-RT  | 182032                 | FAZ-D0,5/2-DU     | 185041                 | 1/60              |                         |
| 1             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D1/2-RT    | 182034                 | FAZ-D1/2-DU       | 185042                 | 1/60              |                         |
| 1.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D1,5/2-RT  | 182036                 | FAZ-D1,5/2-DU     | 185043                 | 1/60              |                         |
| 2             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D2/2-RT    | 182038                 | FAZ-D2/2-DU       | 185044                 | 1/60              |                         |
| 3             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D3/2-RT    | 182040                 | FAZ-D3/2-DU       | 185045                 | 1/60              |                         |
| 4             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D4/2-RT    | 182042                 | FAZ-D4/2-DU       | 185046                 | 1/60              |                         |
| 5             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D5/2-RT    | 182044                 | FAZ-D5/2-DU       | 185047                 | 1/60              |                         |
| 6             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D6/2-RT    | 182046                 | FAZ-D6/2-DU       | 185048                 | 1/60              |                         |
| 7             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D7/2-RT    | 182048                 | FAZ-D7/2-DU       | 185049                 | 1/60              |                         |
| 8             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-D8/2-RT    | 182050                 | FAZ-D8/2-DU       | 185050                 | 1/60              |                         |
| 10            | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-D10/2-RT   | 182052                 | FAZ-D10/2-DU      | 185051                 | 1/60              |                         |
| 13            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D13/2-RT   | 182054                 | FAZ-D13/2-DU      | 185052                 | 1/60              |                         |
| 15            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D15/2-RT   | 182056                 | FAZ-D15/2-DU      | 185053                 | 1/60              |                         |
| 16            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D16/2-RT   | 182058                 | FAZ-D16/2-DU      | 185054                 | 1/60              |                         |
| 20            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D20/2-RT   | 182060                 | FAZ-D20/2-DU      | 185055                 | 1/60              |                         |
| 25            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-D25/2-RT   | 182062                 | FAZ-D25/2-DU      | 185056                 | 1/60              |                         |
| 30            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-D30/2-RT   | 182064                 | FAZ-D30/2-DU      | 185057                 | 1/60              |                         |
| 32            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-D32/2-RT   | 182066                 | FAZ-D32/2-DU      | 185058                 | 1/60              |                         |
| 35            | 415                        | 15  | 240   | 10                            |   |        | FAZ-D35/2-RT   | 182068                 | FAZ-D35/2-DU      | 185059                 | 1/60              |                         |
| 40            | 415                        | 15  | 240   | 10                            |   |        | FAZ-D40/2-RT   | 182070                 | FAZ-D40/2-DU      | 185060                 | 1/60              |                         |
| <b>3-pole</b> |                            |   |   |                               |   |        |                |                        |                   |                        |                   |                         |
| 0.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D0,5/3-RT  | 182072                 | FAZ-D0,5/3-DU     | 185081                 | 1/40              |                         |
| 1             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D1/3-RT    | 182074                 | FAZ-D1/3-DU       | 185082                 | 1/40              |                         |
| 1.5           | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D1,5/3-RT  | 182076                 | FAZ-D1,5/3-DU     | 185083                 | 1/40              |                         |
| 2             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D2/3-RT    | 182078                 | FAZ-D2/3-DU       | 185084                 | 1/40              |                         |
| 3             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D3/3-RT    | 182080                 | FAZ-D3/3-DU       | 185085                 | 1/40              |                         |
| 4             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D4/3-RT    | 182082                 | FAZ-D4/3-DU       | 185086                 | 1/40              |                         |
| 5             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D5/3-RT    | 182084                 | FAZ-D5/3-DU       | 185087                 | 1/40              |                         |
| 6             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D6/3-RT    | 182086                 | FAZ-D6/3-DU       | 185088                 | 1/40              |                         |
| 7             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 18 | FAZ-D7/3-RT    | 182088                 | FAZ-D7/3-DU       | 185089                 | 1/40              |                         |
| 8             | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-D8/3-RT    | 182090                 | FAZ-D8/3-DU       | 185090                 | 1/40              |                         |
| 10            | 415                        | 15  | 480Y/277  | 10                            | SWD   | AWG 16 | FAZ-D10/3-RT   | 182092                 | FAZ-D10/3-DU      | 185091                 | 1/40              |                         |
| 13            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D13/3-RT   | 182094                 | FAZ-D13/3-DU      | 185092                 | 1/40              |                         |
| 15            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D15/3-RT   | 182096                 | FAZ-D15/3-DU      | 185093                 | 1/40              |                         |
| 16            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D16/3-RT   | 182098                 | FAZ-D16/3-DU      | 185094                 | 1/40              |                         |
| 20            | 415                        | 15  | 480Y/277  | 14                            | SWD   |        | FAZ-D20/3-RT   | 182100                 | FAZ-D20/3-DU      | 184984                 | 1/40              |                         |
| 25            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-D25/3-RT   | 182102                 | FAZ-D25/3-DU      | 184985                 | 1/40              |                         |
| 30            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-D30/3-RT   | 182104                 | FAZ-D30/3-DU      | 184986                 | 1/40              |                         |
| 32            | 415                        | 15  | 480Y/277  | 10                            |   |        | FAZ-D32/3-RT   | 182106                 | FAZ-D32/3-DU      | 184987                 | 1/40              |                         |
| 35            | 415                        | 15  | 240   | 10                            |   |        | FAZ-D35/3-RT   | 182108                 | FAZ-D35/3-DU      | 184988                 | 1/40              |                         |
| 40            | 415                        | 15  | 240   | 10                            |   |        | FAZ-D40/3-RT   | 182110                 | FAZ-D40/3-DU      | 184989                 | 1/40              |                         |

## FAZ-NA, -RT, -DU Miniature Circuit Breakers

### Accessories:

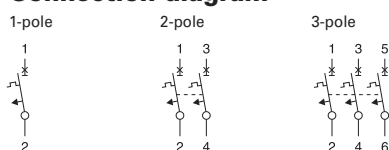
|   |                      |        |
|---|----------------------|--------|
| Auxiliary switch for subsequent installation        | Z-IHK-NA             | 113895 |
| Tripping signal contact for subsequent installation | Z-NHK                | 248434 |
| Shunt trip release                                  | FAZ-XAA-NA12-110VAC  | 102037 |
|   | FAZ-XAA-NA110-415VAC | 102036 |
| Switching interlock                                 | IS/SPE-1TE           | 101911 |
|   | Z-IS/SPE-1TE         | 274418 |

## Specifications FAZ-NA, -RT, -DU

### Technical data IEC/EN

|   | FAZ-...-NA, -RT, -DU                                  |  |
|---|---|--|
| Productstandard                             | IEC/EN 60947-2  |  |
| Number of poles                             | 1, 2, 3   |  |
| <b>Mechanical specifications</b>            |   |  |
| Device width                                | 17.7mm (1-pole), 35.4 mm (2-poles), 53.1 mm (3-poles) |  |
| Frame size                                  | 45 mm   |  |
| Socket size                                 | 105 mm  |  |
| Device depth                                | 60 mm   |  |
| Terminals                                   | lift terminal / ring-tongue                           |  |
| Terminal capacity rigid solid/stranded wire | 1-25 mm <sup>2</sup>                                  |  |
| Terminal screw                              | M5 (with slotted screw Pozidriv PZ2)                  |  |
| Terminal torque                             | max. 2.4 Nm   |  |
| Snap on fixing                              | tristable (on DIN Rail acc. to IEC/EN 60715)          |  |
| Degree of Protection (DIN VDE 0470)         |   |  |
| Surface mounted                             | IP 20   |  |
| Built-in behind panel                       | IP 40   |  |
| Contact position indicator                  | red / green   |  |
| <b>Electrical specifications</b>            |   |  |
| Rated voltage                               | $U_n$   | 240/415 V AC   |
| Rated current                               | $I_n$   | 0.5, 1, 1.5, 2, 3, 4, 5, 6, 7, 8, 10, 13, 15, 16, 20, 25, 30, 32, 35, 40 A   |
| Rated insulation voltage                    | $U_i$   | 440 V AC   |
| Rated impulse withstand voltage             | $U_{imp}$   | 4 kV (1.2/50)µsec  |
| <b>Tripping characteristic</b>              |   |  |
| Conventional non-tripping current           | $I_{nt}$  | $I_{nt}=1.05 I_n$  |
| Conventional tripping current               | $I_t$   | $I_t=1.30 I_n$   |
| Reference temperature                       | 30 °C   |  |
| Temperature factor                          | 0.5% /K   |  |
| Instantaneous tripping current              | $I_{mt}$  | type B: $3 I_n < I_{mt} = 5 I_n$ ; $t(I_{mt}) < 0.1$ sec (IEC/EN 60898-1)<br>type C: $5 I_n < I_{mt} = 10 I_n$ ; $t(I_{mt}) < 0.1$ sec (IEC/EN 60898-1)<br>type D: $10 I_n < I_{mt} = 20 I_n$ ; $t(I_{mt}) < 0.1$ sec (IEC/EN 60898-1) |
| Rated short-circuit braking capacity        | $I_{cu}$  | 15 kA  |
| Service short circuit capacity              | $I_{cs}$  | 7.5 kA   |
| Selectivity class                           | 3 (acc. to EN 60898)                                  |  |
| Number of electrical operations             | > 1500  |  |
| Number of mechanical operations             | > 10000   |  |
| Climatic conditions                         | acc. to IEC 68-2 (25..55°C / 90..95% RH)              |  |
| Operating temperature range                 | -40°C to +75°C  |  |

### Connection diagram

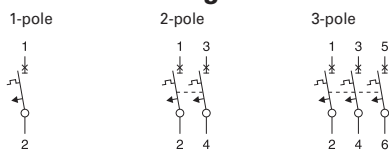


## Specifications FAZ-NA, -RT, -DU

### Technical data UL

|  |          | FAZ-...-NA, -RT, -DU  |
|--|----------|---|
| Productstandard                        |          | UL 489 CSA C22.2 No. 5-02   |
| Number of poles                        |          | 1, 2, 3   |
| <b>Mechanical specifications</b>       |          |   |
| Device width                           |          | 0.697 in. (1-pole), 1.394 in. (2-poles), 2.090 in. (3-poles)  |
| Frame size                             |          | 1.772 in.   |
| Socket size                            |          | 4.134 in.   |
| Device depth                           |          | 2.362 in.   |
| Terminals                              |          | lift terminal / ring-tongue   |
| Terminal capacity                      |          | 1 Wire: #18-6 AWG (Cu only)<br>2 Wires: #18-10 AWG (Cu only)  |
| Terminal screw                         |          | M5 (with slotted screw Pozidriv PZ2)  |
| Terminal torque                        |          | #18-12 AWG: 21 lb-in<br>#10-8 AWG: 25 lb-in<br>#6 AWG: 36 lb-in   |
| Snap on fixing                         |          | tristable (on DIN Rail acc. to IEC/EN 60715)  |
| Contact position indicator             |          | red / green   |
| <b>Electrical specifications</b>       |          |   |
| Rated voltage                          | $U_n$    | 0.5-32 A: 480Y/277 V AC, 35-40 A: 240 V AC  |
| Rated current                          | $I_n$    | 0.5, 1, 1.5, 2, 3, 4, 5, 6, 7, 8, 10, 13, 15, 16, 20, 25, 30, 32, 35, 40 A  |
| <b>Tripping characteristic</b>         |          |   |
| Conventional non-tripping current      |          | $I_{nt}=1.00 I_n$   |
| Conventional tripping current          |          | $I_t=1.35 I_n$  |
| Reference temperature                  |          | 40 °C   |
| Temperature factor                     |          | 0.5% /K   |
| Instantaneous tripping current         | $I_{mt}$ | type C: $5 I_n < I_{mt} = 10 I_n$ ; $t(I_{mt}) < 0.1$ sec<br>type D: $10 I_n < I_{mt} = 20 I_n$ ; $t(I_{mt}) < 0.1$ sec |
| Current interrupting rating            |          | 10 kA, 14 kA (types D13, B/C/D15, 16, 20, B/C25 A)  |
| Current-Limiting at 240 V / 10 kA      |          | 1p, 2p, 3p to $I^2t = 43 \text{ kA}^2\text{s}$ and $I_{peak} = 6.2 \text{ kA}$  |
| Current-Limiting at 480Y/277 V / 10 kA |          | 1p, 2p, 3p to $I^2t = 60 \text{ kA}^2\text{s}$ and $I_{peak} = 6.2 \text{ kA}$  |
| Current-Limiting at 480Y/277 V / 14 kA |          | 1p, 2p, 3p to $I^2t = 65 \text{ kA}^2\text{s}$ and $I_{peak} = 7.5 \text{ kA}$  |
| Selectivity class                      |          | 3 (acc. to EN 60898)  |
| Number of electrical operations        |          | 6000  |
| Number of mechanical operations        |          | 10000   |
| Climatic conditions                    |          | acc. to IEC 68-2 (25..55°C / 90..95% RH)  |
| Operating temperature range            |          | -5°C to +40°C   |

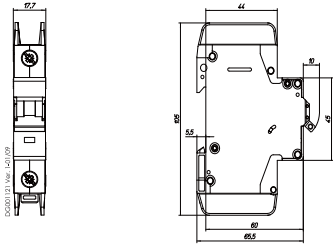
### Connection diagram



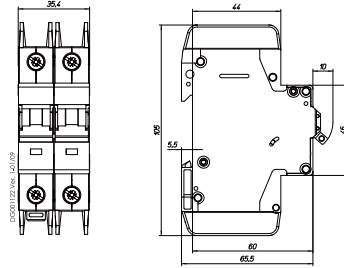


## Dimensions (mm) FAZ-...-NA, -RT, -DU

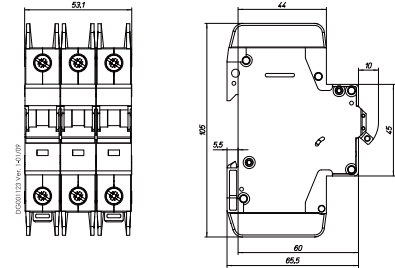
1-pole



2-pole

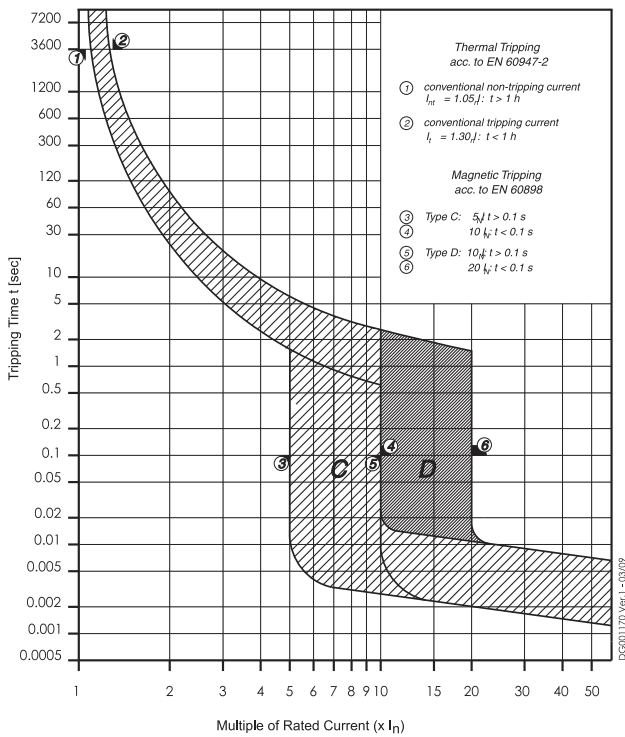


3-pole

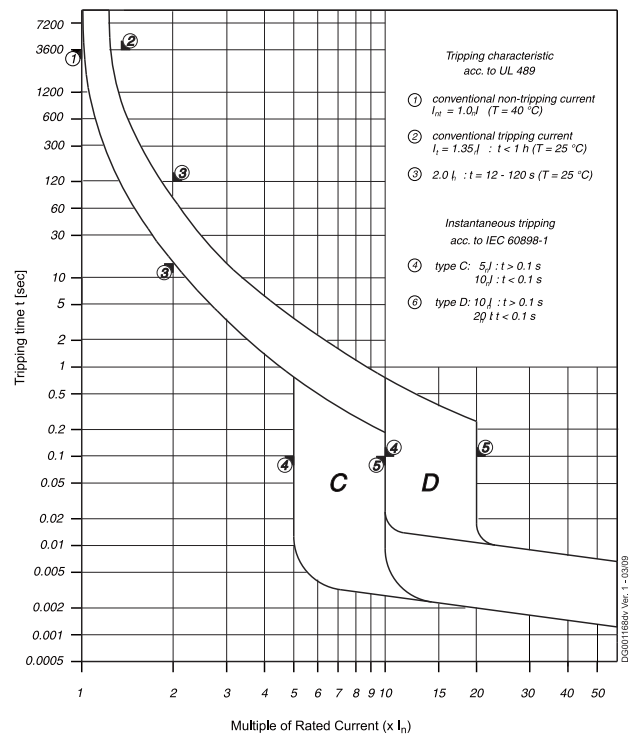


## Tripping Characteristic FAZ-...-NA, -RT, -DU

Characteristics C and D - EN/IEC 60947-2



Characteristics C and D - UL 489



## Internal Resistance FAZ-...-NA, -RT, -DU

### Type C

At room temperature (single pole)

| $I_n$ [A] | $Z^*$ [m $\Omega$ ] | $R$ [m $\Omega$ ] |
|-----------|---------------------|-------------------|
| 0.5       | 6400                | 6300              |
| 1         | 1100                | 1080              |
| 1.5       | 560                 | 550               |
| 2         | 340                 | 330               |
| 3         | 132                 | 130               |
| 4         | 86                  | 85                |
| 5         | 70                  | 69                |
| 6         | 31                  | 30                |
| 7         | 28                  | 27                |
| 8         | 20                  | 19.6              |
| 10        | 15.8                | 15.5              |
| 13        | 12.3                | 12.1              |
| 15        | 7.1                 | 7.0               |
| 16        | 7.1                 | 7.0               |
| 20        | 6.0                 | 5.9               |
| 25        | 4.1                 | 4.0               |
| 30        | 2.8                 | 2.7               |
| 32        | 2.8                 | 2.7               |
| 35        | 2.5                 | 2.5               |
| 40        | 2.1                 | 2.1               |

\* 50Hz

### Type D

At room temperature (single pole)

| $I_n$ [A] | $Z^*$ [m $\Omega$ ] | $R$ [m $\Omega$ ] |
|-----------|---------------------|-------------------|
| 0.5       | 6400                | 6300              |
| 1         | 770                 | 755               |
| 1.5       | 460                 | 450               |
| 2         | 250                 | 245               |
| 3         | 132                 | 130               |
| 4         | 86                  | 85                |
| 5         | 57                  | 56                |
| 6         | 31                  | 30                |
| 7         | 28                  | 27                |
| 8         | 18                  | 17.6              |
| 10        | 13.5                | 13.2              |
| 13        | 10.5                | 10.3              |
| 15        | 5.9                 | 5.8               |
| 16        | 5.9                 | 5.8               |
| 20        | 4.0                 | 3.9               |
| 25        | 3.4                 | 3.3               |
| 30        | 2.5                 | 2.5               |
| 32        | 2.5                 | 2.5               |
| 35        | 2.5                 | 2.5               |
| 40        | 2.0                 | 2.0               |

\* 50Hz

## Power Loss at $I_n$ FAZ-...-NA, -RT, -DU

### Type C

| $I_n$ [A] | 1p        | 2p        | 3p        |
|-----------|-----------|-----------|-----------|
|           | $P^*$ [W] | $P^*$ [W] | $P^*$ [W] |
| 0.5       | 1.6       | 3.2       | 4.7       |
| 1         | 1.1       | 2.2       | 3.4       |
| 1.5       | 1.3       | 2.6       | 3.9       |
| 2         | 1.4       | 2.8       | 4.3       |
| 3         | 1.2       | 2.4       | 3.6       |
| 4         | 1.4       | 2.9       | 4.3       |
| 5         | 1.9       | 3.7       | 5.6       |
| 6         | 1.2       | 2.3       | 3.5       |
| 7         | 1.4       | 2.8       | 4.3       |
| 8         | 1.4       | 2.8       | 4.2       |
| 10        | 1.8       | 3.6       | 5.3       |
| 13        | 2.4       | 4.7       | 7.1       |
| 15        | 1.9       | 3.8       | 5.6       |
| 16        | 2.1       | 4.3       | 6.4       |
| 20        | 2.9       | 5.8       | 8.7       |
| 25        | 3.1       | 6.2       | 9.3       |
| 30        | 3.0       | 6.0       | 9.0       |
| 32        | 3.4       | 6.8       | 10.2      |
| 35        | 3.7       | 7.4       | 11.0      |
| 40        | 4.0       | 8.1       | 12.1      |

\*50Hz

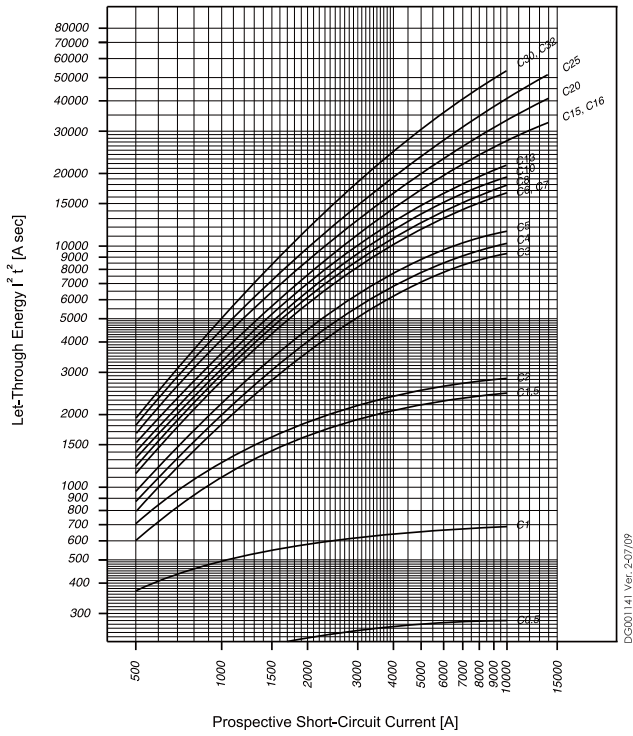
### Type D

| $I_n$ [A] | 1p        | 2p        | 3p        |
|-----------|-----------|-----------|-----------|
|           | $P^*$ [W] | $P^*$ [W] | $P^*$ [W] |
| 0.5       | 1.6       | 3.2       | 4.8       |
| 1         | 0.8       | 1.5       | 2.3       |
| 1.5       | 1.0       | 2.1       | 3.1       |
| 2         | 1.0       | 2.1       | 3.1       |
| 3         | 1.2       | 2.4       | 3.6       |
| 4         | 1.4       | 2.9       | 4.3       |
| 5         | 1.5       | 2.9       | 4.4       |
| 6         | 1.2       | 2.3       | 3.5       |
| 7         | 1.4       | 2.8       | 4.3       |
| 8         | 1.2       | 2.4       | 3.7       |
| 10        | 1.5       | 3.0       | 4.5       |
| 13        | 2.0       | 4.1       | 6.1       |
| 15        | 1.5       | 3.1       | 4.6       |
| 16        | 1.7       | 3.5       | 5.2       |
| 20        | 1.8       | 3.7       | 5.5       |
| 25        | 2.6       | 5.1       | 7.7       |
| 30        | 2.7       | 5.4       | 8.1       |
| 32        | 3.1       | 6.2       | 9.3       |
| 35        | 3.8       | 7.6       | 11.3      |
| 40        | 3.9       | 7.8       | 11.6      |

\*50Hz

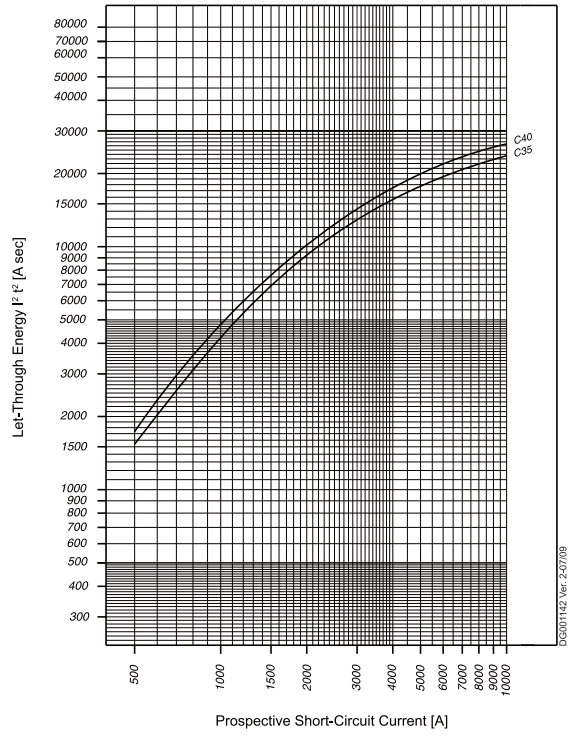
## Maximum Let-Through Energy FAZ-...-NA, -RT, -DU

**Type C (0.5 - 32 A), 277 V**



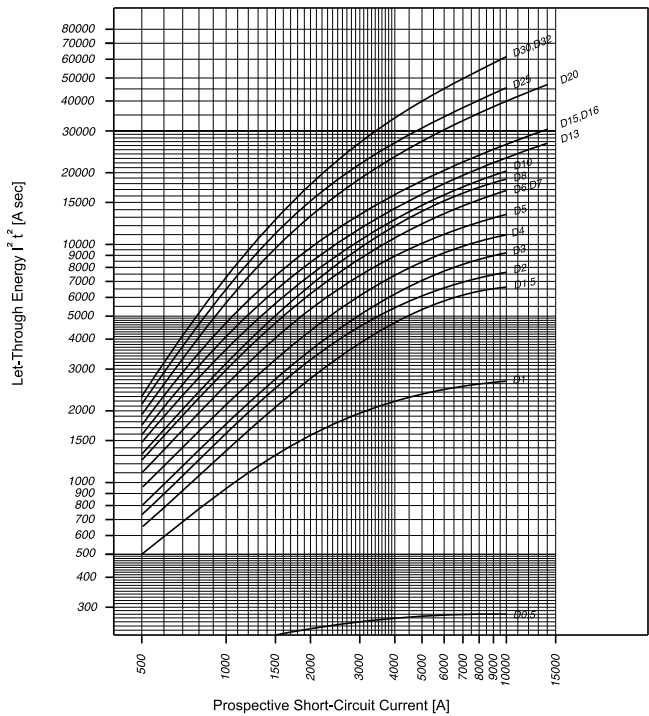
DC001141 Ver. 2-07/09

**Type C (35 - 40 A), 240 V**



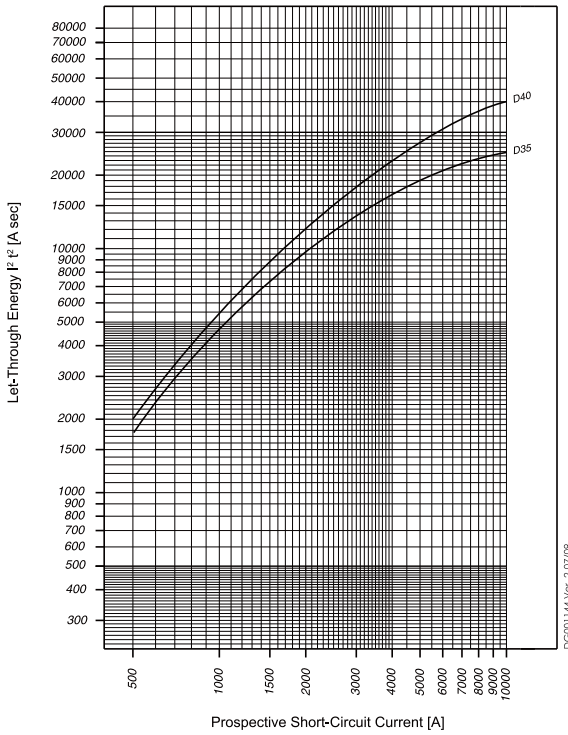
DC001142 Ver. 2-07/09

**Type D (0.5 - 32 A), 277 V**



DC001143 Ver. 2-07/09

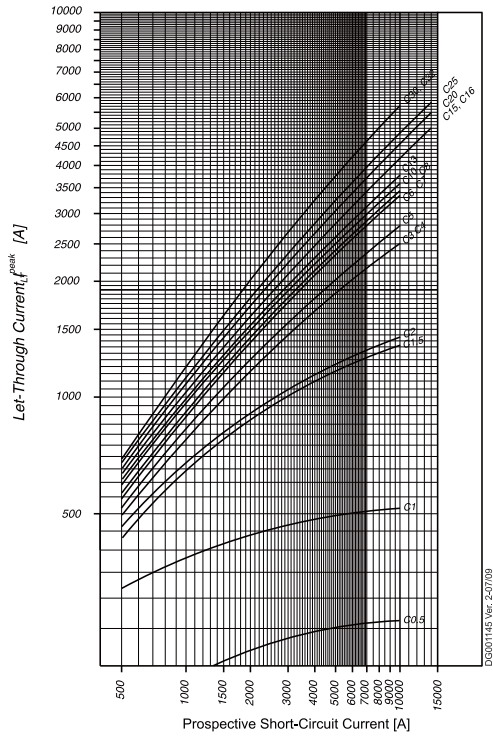
**Type D (35 - 40 A), 240 V**



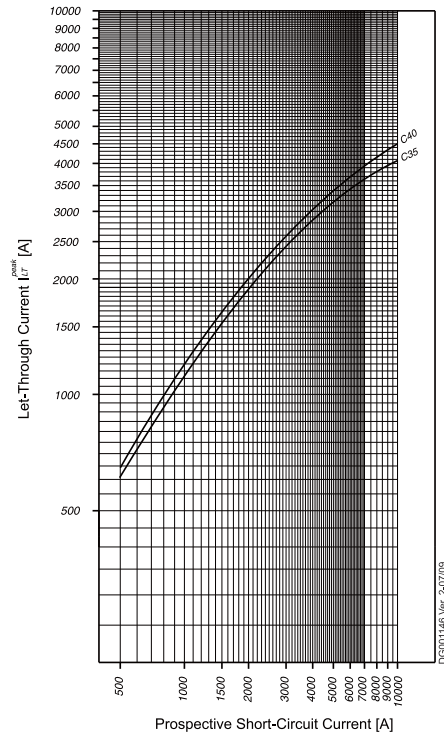
DC001144 Ver. 2-07/09

## Maximum Let-Through Current FAZ-...-NA, -RT, -DU

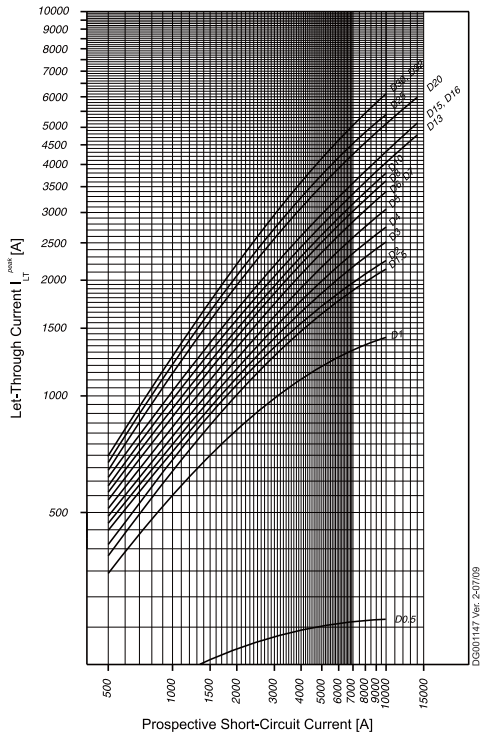
**Type C (0.5 - 32 A), 277 V**



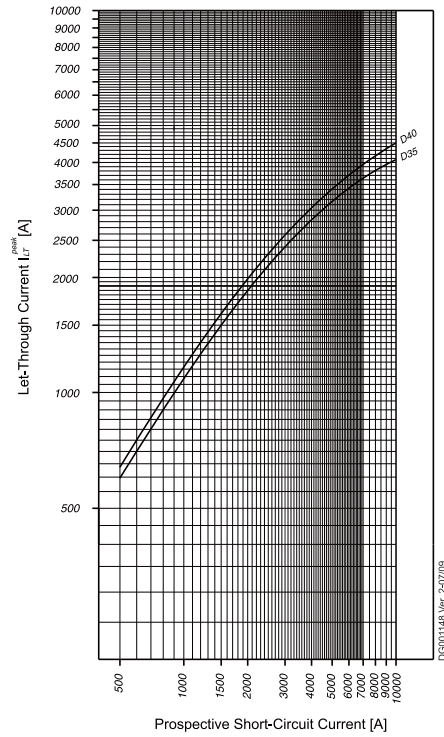
**Type C (35 - 40 A), 240 V**



**Type D (0.5 - 32 A), 277 V**



**Type D (35 - 40 A), 240 V**



## Miniature Circuit Breakers FAZ-NA-DC

SG56612



### FAZ-NA-DC

- High-quality miniature circuit breakers for DC-applications
- Contact position indicator red - green
- Guide for secure terminal connection (not for FAZ-NA)
- 3-position DIN rail clip, permits removal from existing busbar system
- Comprehensive range of accessories suitable for subsequent installation
- Rated currents up to 40 A
- Tripping characteristic C
- Rated breaking capacity 10 kA according to IEC/EN 60947-2
- Up to 125 V DC per pole

## FAZ...-NA-DC Miniature Circuit Breakers (MCBs)

### Characteristic C

|               | Rated current<br>$I_n$ (A) | Rated voltage<br>IEC/EN<br>60947-2<br>(V DC) | Breaking capacity<br>acc. to<br>IEC/EN<br>60947-2<br>(kA) | Rated voltage<br>UL489<br>(V) | Breaking capacity<br>acc. to<br>UL489<br>(kA) | SWD | NFPA 79 | Type<br>Designation | Article No. | Units<br>per<br>package |
|---------------|----------------------------|--|---|-------------------------------|---|-----|---------|---------------------|-------------|-------------------------|
| <b>1-pole</b> |                            |  |   |                               |   |     |         |                     |             |                         |
|               | 2                          | 220  | 10  | 125                           | 10  |     |         | FAZ-C2/1-NA-DC      | 113752      | 12/120                  |
|               | 3                          | 250  | 10  | 125                           | 10  |     |         | FAZ-C3/1-NA-DC      | 113753      | 12/120                  |
|               | 4                          | 250  | 10  | 125                           | 10  |     |         | FAZ-C4/1-NA-DC      | 113754      | 12/120                  |
|               | 5                          | 250  | 10  | 125                           | 10  |     |         | FAZ-C5/1-NA-DC      | 113755      | 12/120                  |
|               | 6                          | 250  | 10  | 125                           | 10  |     |         | FAZ-C6/1-NA-DC      | 113756      | 12/120                  |
|               | 7                          | 250  | 10  | 125                           | 10  |     |         | FAZ-C7/1-NA-DC      | 113757      | 12/120                  |
|               | 8                          | 250  | 10  | 125                           | 10  |     |         | FAZ-C8/1-NA-DC      | 113758      | 12/120                  |
|               | 10                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C10/1-NA-DC     | 113759      | 12/120                  |
|               | 13                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C13/1-NA-DC     | 113760      | 12/120                  |
|               | 15                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C15/1-NA-DC     | 113761      | 12/120                  |
|               | 16                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C16/1-NA-DC     | 113762      | 12/120                  |
|               | 20                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C20/1-NA-DC     | 113763      | 12/120                  |
|               | 25                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C25/1-NA-DC     | 113764      | 12/120                  |
|               | 30                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C30/1-NA-DC     | 113765      | 12/120                  |
|               | 32                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C32/1-NA-DC     | 113766      | 12/120                  |
|               | 35                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C35/1-NA-DC     | 113767      | 12/120                  |
|               | 40                         | 250  | 10  | 125                           | 10  |     |         | FAZ-C40/1-NA-DC     | 113768      | 12/120                  |

SG56512



SG56612



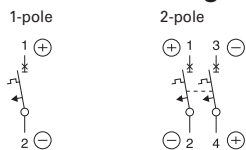
|               |    |     |    |     |    |  |  |                 |        |      |
|---------------|----|-----|----|-----|----|--|--|-----------------|--------|------|
| <b>2-pole</b> |    |     |    |     |    |  |  |                 |        |      |
|               | 2  | 440 | 10 | 250 | 10 |  |  | FAZ-C2/2-NA-DC  | 137239 | 1/60 |
|               | 3  | 500 | 10 | 250 | 10 |  |  | FAZ-C3/2-NA-DC  | 137250 | 1/60 |
|               | 4  | 500 | 10 | 250 | 10 |  |  | FAZ-C4/2-NA-DC  | 137251 | 1/60 |
|               | 5  | 500 | 10 | 250 | 10 |  |  | FAZ-C5/2-NA-DC  | 137252 | 1/60 |
|               | 6  | 500 | 10 | 250 | 10 |  |  | FAZ-C6/2-NA-DC  | 120638 | 1/60 |
|               | 7  | 500 | 10 | 250 | 10 |  |  | FAZ-C7/2-NA-DC  | 120639 | 1/60 |
|               | 8  | 500 | 10 | 250 | 10 |  |  | FAZ-C8/2-NA-DC  | 120640 | 1/60 |
|               | 10 | 500 | 10 | 250 | 10 |  |  | FAZ-C10/2-NA-DC | 120641 | 1/60 |
|               | 13 | 500 | 10 | 250 | 10 |  |  | FAZ-C13/2-NA-DC | 120642 | 1/60 |
|               | 15 | 500 | 10 | 250 | 10 |  |  | FAZ-C15/2-NA-DC | 120643 | 1/60 |
|               | 16 | 500 | 10 | 250 | 10 |  |  | FAZ-C16/2-NA-DC | 120644 | 1/60 |
|               | 20 | 500 | 10 | 250 | 10 |  |  | FAZ-C20/2-NA-DC | 120645 | 1/60 |
|               | 25 | 500 | 10 | 250 | 10 |  |  | FAZ-C25/2-NA-DC | 120646 | 1/60 |
|               | 30 | 500 | 10 | 250 | 10 |  |  | FAZ-C30/2-NA-DC | 120647 | 1/60 |
|               | 32 | 500 | 10 | 250 | 10 |  |  | FAZ-C32/2-NA-DC | 120648 | 1/60 |
|               | 35 | 500 | 10 | 250 | 10 |  |  | FAZ-C35/2-NA-DC | 120649 | 1/60 |
|               | 40 | 500 | 10 | 250 | 10 |  |  | FAZ-C40/2-NA-DC | 120650 | 1/60 |

## Specifications FAZ-NA-DC

### Technical data

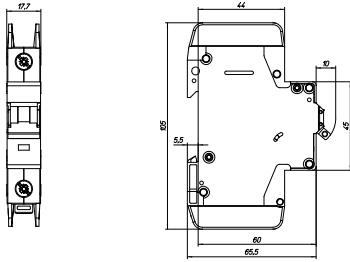
|   |           | <b>FAZ-NA-DC</b>  |
|---|-----------|---|
| Productstandard                             |           | UL 489, CSA C22.2 No 5-02                                       |
| Number of poles                             |           | 1, 2  |
| <b>Mechanical specifications</b>            |           |   |
| Device width                                |           | 1 pole = 0.697 inch, 2 poles = 1.394 inch                       |
| Frame size                                  |           | 1.772 inch  |
| Socket size                                 |           | 4.134 inch  |
| Device depth                                |           | 2.362 inch  |
| Terminals                                   |           | lift terminal / ring-tongue                                     |
| Terminal capacity rigid solid/stranded wire |           | 1 Wire: AWG 18-6 (Cu only)<br>2 Wires: AWG 18-10 (Cu only)      |
| Terminal screw                              |           | M5 (with slotted screw Pozidriv PZ2)                            |
| Terminal torque                             |           | #18-12 AWG: 21 lb-in<br>#10-8 AWG: 25 lb-in<br>#6 AWG: 36 lb-in |
| Snap on fixing                              |           | tristable (on DIN Rail acc. to IEC/EN 60715)                    |
| Finger proof                                |           | acc.to VBG4, ÖVE EN-6   |
| Contact position indicator                  |           | red / green   |
| <b>Electrical specifications</b>            |           |   |
| Rated voltage DC                            | $U_n$     | 125 V d.c. (1p)<br>250 V d.c. (2p)                              |
| Rated current                               | $I_n$     | 2, 3, 4, 5, 6, 7, 8, 10, 13, 15, 16, 20, 25, 30, 32, 35, 40 A   |
| Rated impulse withstand voltage             | $U_{imp}$ | 4 kV (1.2/50) $\mu$ sec   |
| <b>Tripping characteristic</b>              |           |   |
| Conventional non-tripping current           |           | $I_{nt}=1.0 I_n$  |
| Conventional tripping current               |           | $I_t=1.35 I_n$  |
| Reference temperature                       |           | 40 °C   |
| Temperature factor                          |           | 0.5% /K   |
| Instantaneous tripping current              | $I_{mt}$  | $7 I_n < I_{mt} = 15 I_n \cdot t (I_{mt}) < 0.1 \text{ sec}$    |
| Current interrupting rating                 |           | 10 kA   |
| Number of electrical operating cycles       |           | 6000  |
| Number of mechanical operating cycles       |           | 10000   |
| Climatic conditions                         |           | acc. to IEC 68-2 (25..55°C / 90..95% RH)                        |
| Operating temperature range                 |           | -25°C to +55°C  |

### Connection diagram

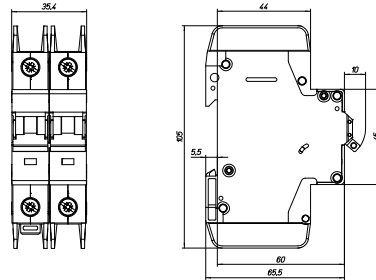


## Dimensions (mm) FAZ-NA-DC

1-pole

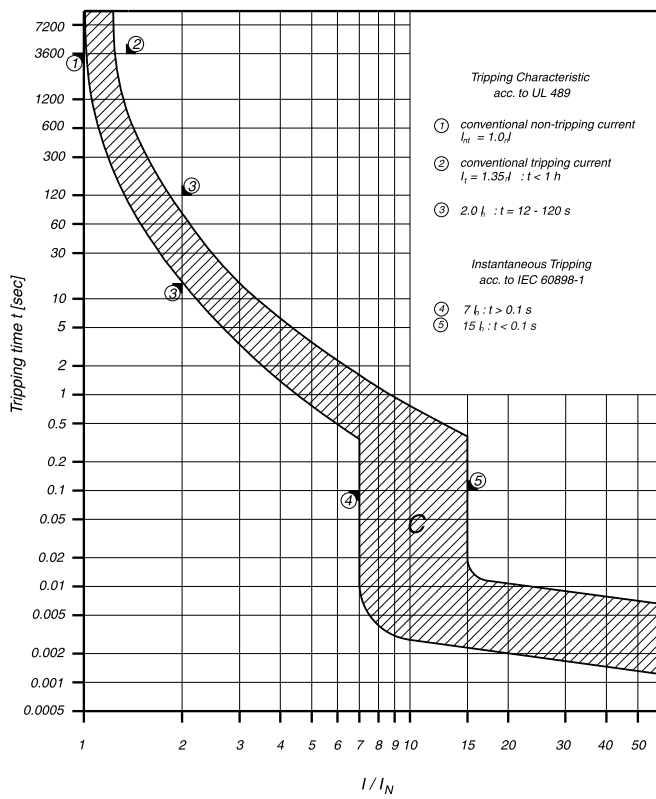


2-pole



## Tripping Characteristic FAZ-NA-DC

### Characteristics C - UL 489










## Miniature Circuit Breakers AZ

SG51412







- High-quality miniature circuit breakers for commercial and industrial applications
- Contact position indicator red - green
- Accessories suitable for subsequent installation
- Rated currents up to 125 A
- Tripping characteristics C, D
- Rated breaking capacity up to 25 kA according to EN 60947-2

## AZ Miniature Circuit Breakers (MCBs) Characteristic C

|   | Rated current<br>$I_n$ (A) | Type Designation | Article No. | Units per package |
|---|----------------------------|------------------|-------------|-------------------|
| SG51212<br>      | <b>1-pole</b>              |                  |             |                   |
|   | 20                         | AZ-C20           | 211769      | 12                |
|   | 25                         | AZ-C25           | 211774      | 12                |
|   | 32                         | AZ-C32           | 211779      | 12                |
|   | 40                         | AZ-C40           | 211784      | 12                |
|   | 50                         | AZ-C50           | 211789      | 12                |
|   | 63                         | AZ-C63           | 211794      | 12                |
|   | 80                         | AZ-C80           | 211799      | 12                |
|   | 100                        | AZ-C100          | 211804      | 12                |
| 125   | AZ-C125                    | 211809           | 12          |                   |
| SG51312<br>      | <b>2-pole</b>              |                  |             |                   |
|   | 20                         | AZ-2-C20         | 211770      | 2                 |
|   | 25                         | AZ-2-C25         | 211775      | 2                 |
|   | 32                         | AZ-2-C32         | 211780      | 2                 |
|   | 40                         | AZ-2-C40         | 211785      | 2                 |
|   | 50                         | AZ-2-C50         | 211790      | 2                 |
|   | 63                         | AZ-2-C63         | 211795      | 2                 |
|   | 80                         | AZ-2-C80         | 211800      | 2                 |
|   | 100                        | AZ-2-C100        | 211805      | 2                 |
| 125   | AZ-2-C125                  | 211810           | 2           |                   |
| wa_sg00314<br> | <b>3-pole</b>              |                  |             |                   |
|   | 20                         | AZ-3-C20         | 211771      | 1                 |
|   | 25                         | AZ-3-C25         | 211776      | 1                 |
|   | 32                         | AZ-3-C32         | 211781      | 1                 |
|   | 40                         | AZ-3-C40         | 211786      | 1                 |
|   | 50                         | AZ-3-C50         | 211791      | 1                 |
|   | 63                         | AZ-3-C63         | 211796      | 1                 |
|   | 80                         | AZ-3-C80         | 211801      | 1                 |
|   | 100                        | AZ-3-C100        | 211806      | 1                 |
| 125   | AZ-3-C125                  | 211811           | 1           |                   |
| wa_sg00214<br> | <b>3+N-pole</b>            |                  |             |                   |
|   | 20                         | AZ-3N-C20        | 211773      | 1                 |
|   | 25                         | AZ-3N-C25        | 211778      | 1                 |
|   | 32                         | AZ-3N-C32        | 211783      | 1                 |
|   | 40                         | AZ-3N-C40        | 211788      | 1                 |
|   | 50                         | AZ-3N-C50        | 211793      | 1                 |
|   | 63                         | AZ-3N-C63        | 211798      | 1                 |
|   | 80                         | AZ-3N-C80        | 211803      | 1                 |
|   | 100                        | AZ-3N-C100       | 211808      | 1                 |
| 125   | AZ-3N-C125                 | 211813           | 1           |                   |
| SG51412<br>    | <b>4-pole</b>              |                  |             |                   |
|   | 20                         | AZ-4-C20         | 211772      | 1                 |
|   | 25                         | AZ-4-C25         | 211777      | 1                 |
|   | 32                         | AZ-4-C32         | 211782      | 1                 |
|   | 40                         | AZ-4-C40         | 211787      | 1                 |
|   | 50                         | AZ-4-C50         | 211792      | 1                 |
|   | 63                         | AZ-4-C63         | 211797      | 1                 |
|   | 80                         | AZ-4-C80         | 211802      | 1                 |
|   | 100                        | AZ-4-C100        | 211807      | 1                 |
| 125   | AZ-4-C125                  | 211812           | 1           |                   |

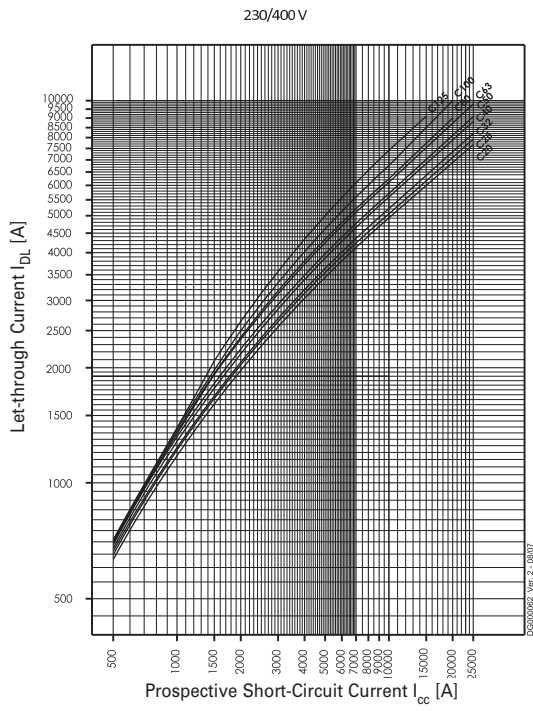
## AZ Miniature Circuit Breakers (MCBs)

### Characteristic D

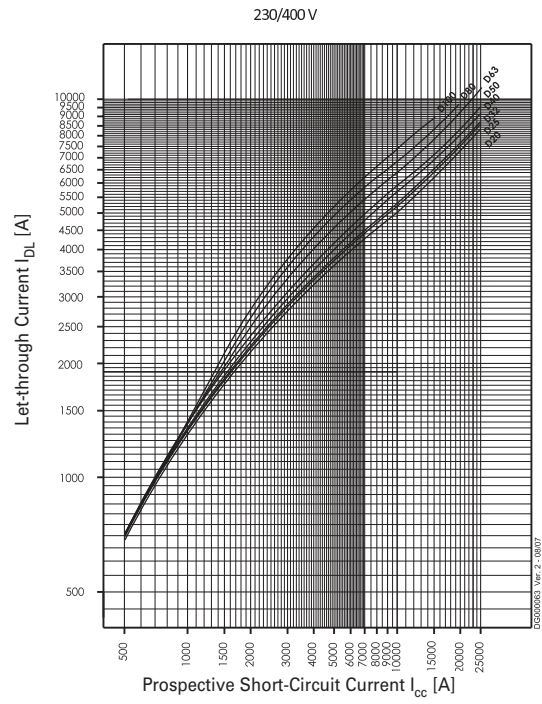
|   | Rated current<br>$I_n$ (A) | Type Designation | Article No. | Units per package |
|---|----------------------------|------------------|-------------|-------------------|
| SG51212<br>      | <b>1-pole</b>              |                  |             |                   |
|   | 50                         | AZ-D50           | 211814      | 12                |
|   | 63                         | AZ-D63           | 211818      | 12                |
|   | 80                         | AZ-D80           | 211822      | 12                |
|   | 100                        | AZ-D100          | 211826      | 12                |
| SG51312<br>      | <b>2-pole</b>              |                  |             |                   |
|   | 50                         | AZ-2-D50         | 211815      | 2                 |
|   | 63                         | AZ-2-D63         | 211819      | 2                 |
|   | 80                         | AZ-2-D80         | 211823      | 2                 |
|   | 100                        | AZ-2-D100        | 211827      | 2                 |
| wa_sg00314<br>  | <b>3-pole</b>              |                  |             |                   |
|   | 50                         | AZ-3-D50         | 211816      | 1                 |
|   | 63                         | AZ-3-D63         | 211820      | 1                 |
|   | 80                         | AZ-3-D80         | 211824      | 1                 |
|   | 100                        | AZ-3-D100        | 211828      | 1                 |
| wa_sg00214<br> | <b>3+N-pole</b>            |                  |             |                   |
|   | 50                         | AZ-3N-D50        | 211817      | 1                 |
|   | 63                         | AZ-3N-D63        | 211821      | 1                 |
|   | 80                         | AZ-3N-D80        | 211825      | 1                 |
|   | 100                        | AZ-3N-D100       | 211829      | 1                 |

## Maximum Let-Through Current AZ

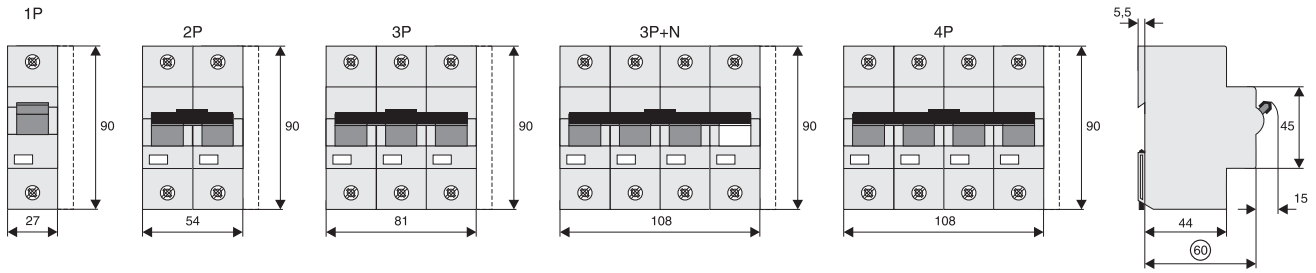
Type C



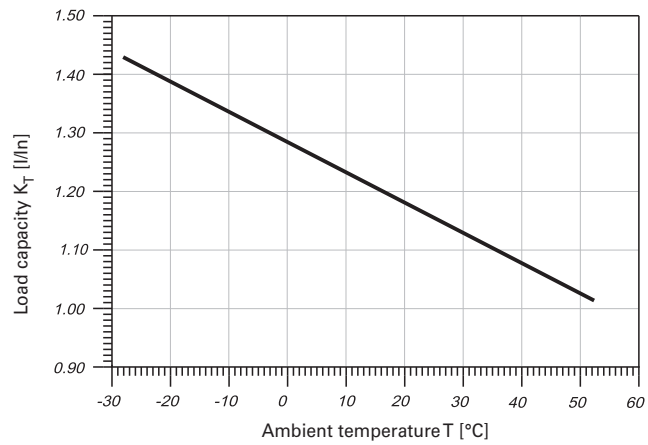
Type D



## Dimensions (mm)



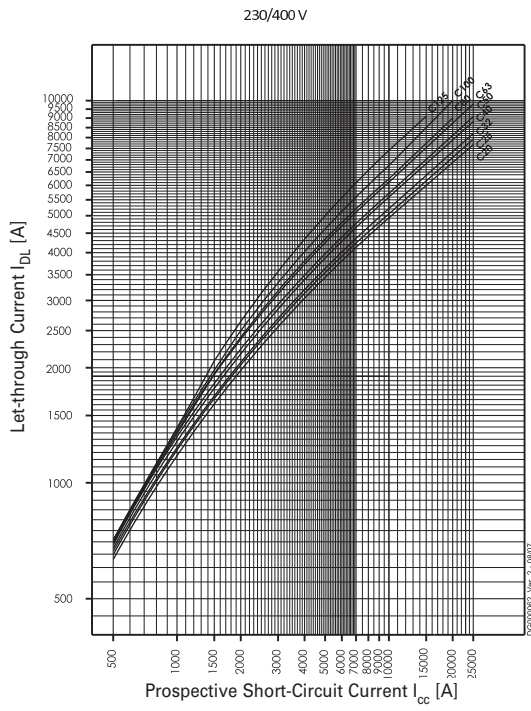
## Effect of ambient temperature AZ



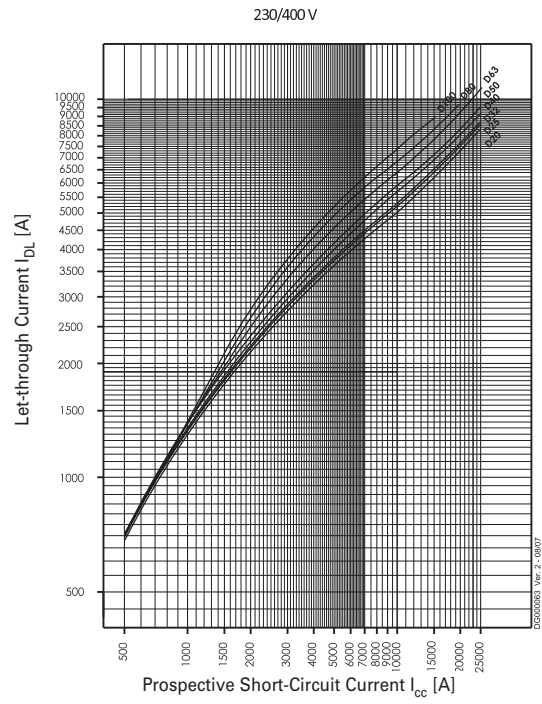
Permitted permanent load at ambient temperature T [°C] with n devices:  $I_{DL} = I_n K_T(T) K_N(N)$ .

## Maximum Let-Through Current AZ

Type C



Type D



## Short Circuit Selectivity AZ

In case of short circuit, there is selectivity between the miniature circuit breakers AZ and the upstream protection devices up to the specified values of the selectivity limit current  $I_s$  [kA] (i. e. in case of short-circuit currents  $I_{ks}$  under  $I_s$ , only the MCB will trip, in case of short circuit currents above this value both protective devices will respond).

### AZ towards back-up fuses D01, D02, D03

| Rated current $I_n$<br>AZ in A | Rated current of the back-up fuse in A |     |     |     |     |     |     |
|--------------------------------|--|-----|-----|-----|-----|-----|-----|
|                                | 25                                     | 35  | 50  | 63  | 80  | 100 |     |
| <b>C</b> -<br>Characteristic   | 20                                     | 0,5 | 1,0 | 2,0 | 2,9 | 3,9 | 7,6 |
|                                | 25                                     |     | 1,0 | 1,9 | 2,8 | 3,8 | 7,3 |
|                                | 32                                     |     | 1,0 | 1,8 | 2,7 | 3,6 | 7,0 |
|                                | 40                                     |     |     | 1,6 | 2,2 | 3,0 | 5,6 |
|                                | 50                                     |     |     |     | 2,1 | 2,8 | 5,2 |
|                                | 63                                     |     |     |     |     | 2,7 | 4,8 |
|                                | 80                                     |     |     |     |     |     | 4,3 |
|                                | 100                                    |     |     |     |     |     |     |
|                                | 125                                    |     |     |     |     |     |     |
| <b>D</b> -Characteristic       | 20                                     | 0,5 | 0,9 | 1,7 | 2,5 | 3,4 | 6,7 |
|                                | 25                                     |     | 0,9 | 1,6 | 2,3 | 3,2 | 6,2 |
|                                | 32                                     |     | 0,9 | 1,5 | 2,3 | 3,0 | 6,0 |
|                                | 40                                     |     |     | 1,4 | 2,0 | 2,6 | 4,7 |
|                                | 50                                     |     |     |     | 1,8 | 2,3 | 4,3 |
|                                | 63                                     |     |     |     |     | 2,1 | 3,7 |
|                                | 80                                     |     |     |     |     |     | 3,1 |
|                                | 100                                    |     |     |     |     |     |     |
|                                | 125                                    |     |     |     |     |     |     |

### AZ towards back-up fuses NH Gr. 00

| Rated current $I_n$<br>AZ in A | Rated current of the back-up fuse in A |      |     |     |     |     |     |     |      |      |      |
|--------------------------------|--|------|-----|-----|-----|-----|-----|-----|------|------|------|
|                                | 25                                     | 35   | 40  | 50  | 63  | 80  | 100 | 125 | 160  | 200  |      |
| <b>C</b> -<br>Characteristic   | 20                                     | 0,5  | 1,0 | 1,3 | 1,9 | 2,7 | 3,7 | 6,7 | 17,0 | 25,0 | 25,0 |
|                                | 25                                     |      | 0,9 | 1,3 | 1,8 | 2,6 | 3,5 | 6,5 | 17,0 | 25,0 | 25,0 |
|                                | 32                                     |      | 0,9 | 1,2 | 1,7 | 2,4 | 3,3 | 6,0 | 15,0 | 23,0 | 25,0 |
|                                | 40                                     |      |     |     | 1,4 | 2,1 | 2,9 | 4,8 | 12,0 | 18,0 | 25,0 |
|                                | 50                                     |      |     |     |     | 1,9 | 2,7 | 4,5 | 11,0 | 17,0 | 25,0 |
|                                | 63                                     |      |     |     |     |     |     | 4,2 | 10,0 | 15,0 | 25,0 |
|                                | 80                                     |      |     |     |     |     |     | 3,8 | 8,5  | 12,0 | 25,0 |
|                                | 100                                    |      |     |     |     |     |     |     | 7,0  | 10,0 | 25,0 |
|                                | 125                                    |      |     |     |     |     |     |     |      | 7,5  | 25,0 |
| <b>D</b> -<br>Characteristic   | 20                                     | <0,5 | 0,8 | 1,1 | 1,5 | 2,3 | 3,1 | 5,6 | 16,0 | 25,0 | 25,0 |
|                                | 25                                     |      | 0,7 | 1,0 | 1,4 | 2,1 | 3,0 | 5,3 | 14,0 | 23,0 | 25,0 |
|                                | 32                                     |      | 0,7 | 1,0 | 1,3 | 2,1 | 2,9 | 5,0 | 13,0 | 22,0 | 25,0 |
|                                | 40                                     |      |     |     | 1,1 | 1,8 | 2,5 | 4,2 | 10,0 | 15,0 | 25,0 |
|                                | 50                                     |      |     |     |     | 1,6 | 2,3 | 3,8 | 8,5  | 13,0 | 22,0 |
|                                | 63                                     |      |     |     |     |     | 2,1 | 3,2 | 7,0  | 10,5 | 18,0 |
|                                | 80                                     |      |     |     |     |     |     | 2,8 | 5,5  | 8,4  | 15,0 |
|                                | 100                                    |      |     |     |     |     |     |     | 4,8  | 7,5  | 12,5 |
|                                | 125                                    |      |     |     |     |     |     |     |      |      |      |


## AZ towards NZM 1

Short circuit selectivity **characteristic C** towards **NZM\***)

| AZ                 | NZM...1-A gL/gG |     |     |      |      |      |
|--------------------|-----------------|-----|-----|------|------|------|
| I <sub>n</sub> [A] | 40              | 50  | 63  | 80   | 100  | 125  |
| 20                 | 0.3             | 0.4 | 0.5 | 0.75 | 0.9  | 1.25 |
| 25                 | 0.3             | 0.4 | 0.5 | 0.7  | 0.9  | 1.2  |
| 32                 |                 | 0.4 | 0.5 | 0.7  | 0.85 | 1.2  |
| 40                 |                 |     | 0.5 | 0.6  | 0.85 | 1.1  |
| 50                 |                 |     |     | 0.6  | 0.85 | 1.1  |
| 63                 |                 |     |     |      | 0.8  | 1    |
| 80                 |                 |     |     |      |      | 1    |
| 100                |                 |     |     |      |      |      |
| 125                |                 |     |     |      |      |      |

Short circuit selectivity **characteristic D** towards **NZM\***)

| AZ                 | NZM...1-A gL/gG |    |    |    |     |     |
|--------------------|-----------------|----|----|----|-----|-----|
| I <sub>n</sub> [A] | 40              | 50 | 63 | 80 | 100 | 125 |
| 50                 |                 |    |    |    |     |     |
| 63                 |                 |    |    |    |     |     |
| 80                 |                 |    |    |    |     |     |
| 100                |                 |    |    |    |     |     |

 no selectivity


## AZ towards NZM 2

Short circuit selectivity **characteristic C** towards **NZM\***)

| AZ                 | NZM...2-A gL/gG |     |     |      |      |      |      |     |     |
|--------------------|-----------------|-----|-----|------|------|------|------|-----|-----|
| I <sub>n</sub> [A] | 40              | 50  | 63  | 80   | 100  | 125  | 160  | 200 | 250 |
| 20                 | 0.3             | 0.4 | 0.5 | 0.75 | 0.9  | 1.25 | 1.8  | 2.5 | 3.5 |
| 25                 | 0.3             | 0.4 | 0.5 | 0.7  | 0.9  | 1.2  | 1.7  | 2.4 | 3.3 |
| 32                 |                 | 0.4 | 0.5 | 0.7  | 0.85 | 1.2  | 1.65 | 2.3 | 3.2 |
| 40                 |                 |     | 0.5 | 0.6  | 0.85 | 1.1  | 1.5  | 2.1 | 2.9 |
| 50                 |                 |     |     | 0.6  | 0.85 | 1.1  | 1.5  | 2   | 2.8 |
| 63                 |                 |     |     |      | 0.8  | 1    | 1.4  | 1.8 | 2.5 |
| 80                 |                 |     |     |      |      | 1    | 1.4  | 1.8 | 2.4 |
| 100                |                 |     |     |      |      |      | 1.3  | 1.7 | 2.3 |
| 125                |                 |     |     |      |      |      |      | 1.6 | 2.1 |

Short circuit selectivity **characteristic D** towards **NZM\***)

| AZ                 | NZM...2-A gL/gG |    |    |    |     |     |     |     |     |
|--------------------|-----------------|----|----|----|-----|-----|-----|-----|-----|
| I <sub>n</sub> [A] | 40              | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 |
| 50                 |                 |    |    |    |     |     | 1   | 1.4 | 2.6 |
| 63                 |                 |    |    |    |     |     | 1   | 1.3 | 2.3 |
| 80                 |                 |    |    |    |     |     |     |     | 2.1 |
| 100                |                 |    |    |    |     |     |     |     |     |

 no selectivity



## Back-up Protection AZ

The up-stream protective devices will protect the down-stream AZ up to the short-circuit current specified.

### AZ and NZM(B)(C)(N)(H)1

| $I_n$ [A] | <b>AZ-<math>I_n/1(2,3,4)</math> / C(D) + NZMB1</b><br>$U_e = 230/400$ V |
|-----------|---|
| 20        | 25 kA   |
| 25        | 25 kA   |
| 32        | 25 kA   |
| 40        | 25 kA   |
| 50        | 25 kA   |
| 63        | 25 kA   |
| 80        | 25 kA   |
| 100       | 25 kA   |
| 125       | 25 kA   |

| $I_n$ [A] | <b>AZ-<math>I_n/1(2,3,4)</math> / C(D) + NZMC1</b><br>$U_e = 230/400$ V |
|-----------|---|
| 20        | 36 kA   |
| 25        | 36 kA   |
| 32        | 36 kA   |
| 40        | 36 kA   |
| 50        | 36 kA   |
| 63        | 36 kA   |
| 80        | 36 kA   |
| 100       | 36 kA   |
| 125       | 36 kA   |

| $I_n$ [A] | <b>AZ-<math>I_n/1(2,3,4)</math> / C(D) + NZMN1</b><br>$U_e = 230/400$ V |
|-----------|---|
| 20        | 50 kA   |
| 25        | 50 kA   |
| 32        | 50 kA   |
| 40        | 50 kA   |
| 50        | 50 kA   |
| 63        | 50 kA   |
| 80        | 50 kA   |
| 100       | 50 kA   |
| 125       | 50 kA   |

| $I_n$ [A] | <b>AZ-<math>I_n/1(2,3,4)</math> / C(D) + NZMH1</b><br>$U_e = 230/400$ V |
|-----------|---|
| 20        | 80 kA   |
| 25        | 80 kA   |
| 32        | 80 kA   |
| 40        | 80 kA   |
| 50        | 80 kA   |
| 63        | 80 kA   |
| 80        | 80 kA   |
| 100       | 80 kA   |
| 125       | 80 kA   |

### AZ and NZM(B)(C)(N)(H)2

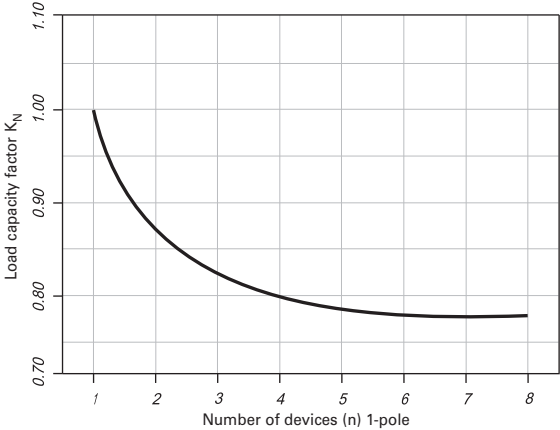
| $I_n$ [A] | <b>AZ-<math>I_n/1(2,3,4)</math> / C(D) + NZMB2</b><br>$U_e = 230/400$ V |
|-----------|---|
| 20        | 25 kA   |
| 25        | 25 kA   |
| 32        | 25 kA   |
| 40        | 25 kA   |
| 50        | 25 kA   |
| 63        | 25 kA   |
| 80        | 25 kA   |
| 100       | 25 kA   |
| 125       | 25 kA   |

| $I_n$ [A] | <b>AZ-<math>I_n/1(2,3,4)</math> / C(D) + NZMC2</b><br>$U_e = 230/400$ V |
|-----------|---|
| 20        | 36 kA   |
| 25        | 36 kA   |
| 32        | 36 kA   |
| 40        | 36 kA   |
| 50        | 36 kA   |
| 63        | 36 kA   |
| 80        | 36 kA   |
| 100       | 36 kA   |
| 125       | 36 kA   |

| $I_n$ [A] | <b>AZ-<math>I_n/1(2,3,4)</math> / C(D) + NZMN2</b><br>$U_e = 230/400$ V |
|-----------|---|
| 20        | 50 kA   |
| 25        | 50 kA   |
| 32        | 50 kA   |
| 40        | 50 kA   |
| 50        | 50 kA   |
| 63        | 50 kA   |
| 80        | 50 kA   |
| 100       | 50 kA   |
| 125       | 50 kA   |

| $I_n$ [A] | <b>AZ-<math>I_n/1(2,3,4)</math> / C(D) + NZMH2</b><br>$U_e = 230/400$ V |
|-----------|---|
| 20        | 65 kA   |
| 25        | 65 kA   |
| 32        | 65 kA   |
| 40        | 65 kA   |
| 50        | 65 kA   |
| 63        | 65 kA   |
| 80        | 65 kA   |
| 100       | 65 kA   |
| 125       | 65 kA   |

## Load capacity in case of block installation AZ







## Main Load Disconnecter Switch (Isolator) IS

SG10911




- Load circuit breaker with isolating function
- Highly wear resistant contacts
- Quick make
- Terminal capacity 50 mm<sup>2</sup>
- Compatible busbars
- 1-, 2-, 3-, 4-pole

## Main Load Disconnecter Switch (Isolator) IS

|   | Rated Current (A)  | Poles | Type Designation | Article No. | Units per package |        |
|---|--|-------|------------------|-------------|-------------------|--------|
| <br>SG10611  | 16   | 1     | IS-16/1          | 276254      | 12/120            |        |
|   | 16   | 2     | IS-16/2          | 276255      | 1/60              |        |
|   | 16   | 3     | IS-16/3          | 276256      | 1/40              |        |
|   | 16   | 4     | IS-16/4          | 276257      | 1/30              |        |
|   | 20   | 1     | IS-20/1          | 276258      | 12/120            |        |
|   | 20   | 2     | IS-20/2          | 276259      | 1/60              |        |
|   | 20   | 3     | IS-20/3          | 276260      | 1/40              |        |
|   | 20   | 4     | IS-20/4          | 276261      | 1/30              |        |
|   | <br>SG10711   | 25    | 1                | IS-25/1     | 276262            | 12/120 |
|   |  | 25    | 2                | IS-25/2     | 276263            | 1/60   |
| 25  |  | 3     | IS-25/3          | 276264      | 1/40              |        |
| 25  |  | 4     | IS-25/4          | 276265      | 1/30              |        |
| 32  |  | 1     | IS-32/1          | 276266      | 12/120            |        |
| 32  |  | 2     | IS-32/2          | 276267      | 1/60              |        |
| 32  |  | 3     | IS-32/3          | 276268      | 1/40              |        |
| 32  |  | 4     | IS-32/4          | 276269      | 1/30              |        |
| <br>SG10811 |  | 40    | 1                | IS-40/1     | 276270            | 12/120 |
|   |  | 40    | 2                | IS-40/2     | 276271            | 1/60   |
|   | 40   | 3     | IS-40/3          | 276272      | 1/40              |        |
|   | 40   | 4     | IS-40/4          | 276273      | 1/30              |        |
|   | 63   | 1     | IS-63/1          | 276274      | 12/120            |        |
|   | 63   | 2     | IS-63/2          | 276275      | 1/60              |        |
|   | 63   | 3     | IS-63/3          | 276276      | 1/40              |        |
|   | 63   | 4     | IS-63/4          | 276277      | 1/30              |        |
|   | <br>SG10911 | 80    | 1                | IS-80/1     | 276278            | 12/120 |
|   |  | 80    | 2                | IS-80/2     | 276279            | 1/60   |
| 80  |  | 3     | IS-80/3          | 276280      | 1/40              |        |
| 80  |  | 4     | IS-80/4          | 276281      | 1/30              |        |
| 100   |  | 1     | IS-100/1         | 276282      | 12/120            |        |
| 100   |  | 2     | IS-100/2         | 276283      | 1/60              |        |
| 100   |  | 3     | IS-100/3         | 276284      | 1/40              |        |
| 100   |  | 4     | IS-100/4         | 276285      | 1/30              |        |
|   |  | 125   | 1                | IS-125/1    | 276286            | 12/120 |
|   |  | 125   | 2                | IS-125/2    | 276287            | 1/60   |
|   | 125  | 3     | IS-125/3         | 276288      | 1/40              |        |
|   | 125  | 4     | IS-125/4         | 276289      | 1/30              |        |

## Accessories

|  | Description  | Type Designation | Article No. | Units per package |
|--|--|------------------|-------------|-------------------|
| <br>SG47812 | Switching interlock without lock for Isolators, RCDs, combined RCD/MCBs, ... | IS/SPE-1TE       | 101911      | 5/30              |
|  | Terminal cover   | Z-IS/AK-1TE      | 276290      | 10/600            |

### Switching interlock IS/SPE-1TE

- Without lock
- Also suitable for PFIM, CF16, PKNM, CKN6

### Terminal Cover Caps Z-IS/AK-1TE

- Can be sealed with leads
- Modular design, width 1 MU

## Specifications | Main Load Disconnect Switch (Isolator) IS

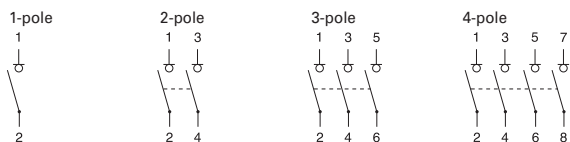
### Description

- Load circuit breaker with isolating function
- Design according to IEC/EN 60947-3
- Highly wear resistant contacts
- Quick make, black toggle
- Terminal capacity 50 mm<sup>2</sup>
- Compatible busbars with switchgear series Xpole by use of the mouth terminal in combination with standard fork busbar

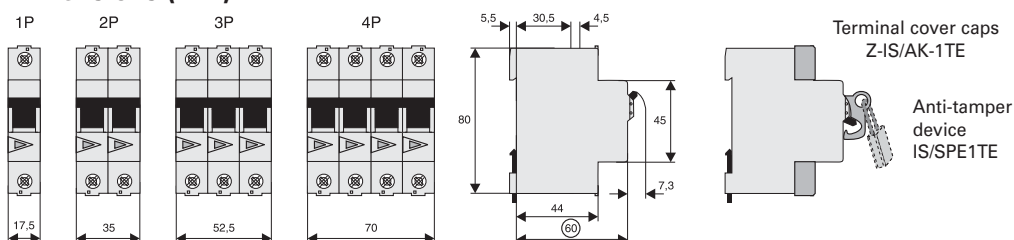
### Technical Data

|   | IS-16   | IS-20   | IS-25   | IS-32   | IS-40   | IS-63   | IS-80   | IS-100  | IS-125  |
|---|---|---------|---------|---------|---------|---------|---------|---------|---------|
| <b>Electrical</b>   |   |         |         |         |         |         |         |         |         |
| Design  | according to IEC/EN 60947-3                                       |         |         |         |         |         |         |         |         |
| Rated voltage   | 240/415 V   |         |         |         |         |         |         |         |         |
| Frequency   | 50/60 Hz  |         |         |         |         |         |         |         |         |
| Rated insulation voltage  | $U_i$   | 690 V~  |         |         |         |         |         |         |         |
| Rated peak withstand voltage  | $U_{imp}$   | 6 kV    |         |         |         |         |         |         |         |
| Pollution degree  | 3   |         |         |         |         |         |         |         |         |
| Rated short-time withstand current                                      | $I_{cw}$  | 2 kA    |         |         |         |         |         |         |         |
| Rated short-circuit making capacity                                     | $I_{cm}$  | 2.8 kA  |         |         |         |         |         |         |         |
| Rated current   |   |         |         |         |         |         |         |         |         |
| 240/415V, AC23A   | 16 A  | 20 A    | 25 A    | 32 A    | 40 A    | 63 A    | 80 A    | 100 A   | 125 A   |
| Number of poles   | 1-, 2-, 3-, 4-pole  |         |         |         |         |         |         |         |         |
| Maximum back-up fuse  | 125 A gG  |         |         |         |         |         |         |         |         |
| Short circuit strength - with back-up fuse acc. to the applicable rules |   |         |         |         |         |         |         |         |         |
| IEC/EN 60947-3  | 12.5 kA   | 12.5 kA | 12.5 kA | 12.5 kA | 12.5 kA | 12.5 kA | 12.5 kA | 10 kA   | 10 kA   |
| <b>Endurance</b>  |   |         |         |         |         |         |         |         |         |
| electrical components operation cycles                                  | ≥3.000  | ≥3.000  | ≥3.000  | ≥3.000  | ≥3.000  | ≥3.000  | ≥3.000  | ≥3.000  | ≥2.000  |
| mechanical components operation cycles                                  | ≥16.000   | ≥16.000 | ≥16.000 | ≥16.000 | ≥16.000 | ≥16.000 | ≥16.000 | ≥16.000 | ≥14.000 |
| <b>Mechanical</b>   |   |         |         |         |         |         |         |         |         |
| Frame size  | 45 mm   |         |         |         |         |         |         |         |         |
| Device height   | 80 mm   |         |         |         |         |         |         |         |         |
| Device width  | 17.5mm/pole   |         |         |         |         |         |         |         |         |
| Mounting  | quick fastening with 2 lock-in positions on DIN rail IEC/EN 60715 |         |         |         |         |         |         |         |         |
| Degree of protection, built-in  | IP40  |         |         |         |         |         |         |         |         |
| Terminal protection   | finger and hand touch safe according to BGV A3                    |         |         |         |         |         |         |         |         |
| Terminals   | open mouthed/lift terminals                                       |         |         |         |         |         |         |         |         |
| Terminal capacity   | 2.5 - 50 mm <sup>2</sup>  |         |         |         |         |         |         |         |         |
| Busbar thickness  | 0.8 - 2 mm  |         |         |         |         |         |         |         |         |
| Fastening torque of terminal screws                                     | 2.5 - 5 Nm  |         |         |         |         |         |         |         |         |
| Function  | irrespective of the position of installation                      |         |         |         |         |         |         |         |         |

### Connection diagram

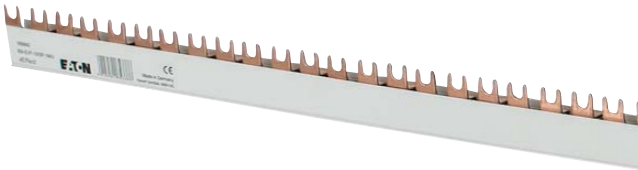


### Dimensions (mm)



## Busbar System xEffect BB-EV

SG13113



Busbar System xEffect is the modular design system for busbars. xEffect busbars are available as yard goods with 1, 2 or 3 poles. Now, there is a special feature: each bar can easily be extended by one-pole bar as you like. The additional pole can be added completely without tools by easy clamping technique. The lugs or forks in the xEffect bars - available in 10 and 16 mm<sup>2</sup> and all common distances - can be broken out at a predetermined breaking point. There is actually no more flexibility available.

### Busbar System xEffect saves time and material

The yard good can be cut with a saw of course. However, there is no need neither for deburring nor for cutting the conductor. Just cut to the required dimension and close with the fitting end cap -ready! The end caps have also breakable edges, which enable further connecting of the Busbar System xEffect. By overlapping assembly, doubling the cross section can be achieved.

### Busbar System xEffect in use

Busbar System xEffect is especially well suited for solving flexible busbar applications rack-mounted models in series. Fork-pin combinations for 1+N- applications can be realized by individual combinations - for this also the one-pole version with blue isolation is available besides the one with grey isolation. Even different cross sections can be combined in this case.

Accessories, such as feeder terminals and self adhesive phase marking labels will complete the comfortable total package. Existing contact prevention caps can be used.

### Busbar System xEffect at a glance:

- Yard goods can be cut
- No cutting back of copper required
- No deburring required
- Almost no waste during cutting
- End caps available with 1- to 4-poles, end caps can be broken out for further extensions
- 4-pole end cap molded in pairs (left and right)
- Overlapping rail extension possible
- Rails can be extended on demand by 1-pole rails (plug-in technology)
- All step distances
- 10 and 16 mm<sup>2</sup>
- Fork and stud
- Lugs can be broken out at any predetermined breaking point
- Self adhesive phase indication labels available
- Contact preventing caps (ZV-BS-G) can be used
- Simple, flexible handling
- All assembly requirements can be covered by the Busbar System xEffect
- Low storage space requirements due to modular system
- Less time consuming (no deburring, no cutting back)
- Individual and self configurable
- Fork-pin combination for 1+N application possible, feeding through rail (terminal clamp) not possible.
- Protected technology

| Description | Step Distance (mm) | Cu-factor | Type Designation | Article No. | Units per package |
|-------------|--------------------|-----------|------------------|-------------|-------------------|
|-------------|--------------------|-----------|------------------|-------------|-------------------|

## xEffect busbar 1m 10mm<sup>2</sup>, 16mm<sup>2</sup> (Fork) BB-EVF

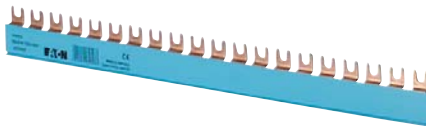
for MCBs, RCCBs, RCBOs, SPDs

- Delivered without end caps

SG13113



SG13413



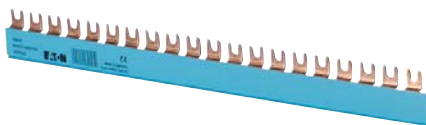
### 10 mm<sup>2</sup>, Rated Current 63 A

|               |            |      |                      |        |    |
|---------------|------------|------|----------------------|--------|----|
| 1-phase       | 17.8       | 0.22 | BB-EVF-10/1P-1MU     | 168826 | 10 |
|               | 27         | 0.24 | BB-EVF-10/1P-2MU     | 168830 | 10 |
|               | 36         | 0.24 | BB-EVF-10/1P-3MU     | 168834 | 10 |
| 2-phase       | 17.8       | 0.31 | BB-EVF-10/2P-1MU     | 168838 | 10 |
|               | 27         | 0.36 | BB-EVF-10/2P-2MU     | 168840 | 10 |
| 3-phase       | 17.8       | 0.46 | BB-EVF-10/3P-1MU     | 168842 | 10 |
|               | 27         | 0.58 | BB-EVF-10/3P-2MU     | 168844 | 10 |
|               | 36         | 0.56 | BB-EVF-10/3P-3MU     | 168850 | 10 |
| 3-phase + AUX | 3x17.5+1x9 | 0.58 | BB-EVF-10/3P-1MU/AUX | 168846 | 10 |
|               | 3x17.5+2x9 | 0.57 | BB-EVF-10/3P-1MU2AUX | 168848 | 10 |
| Neutral       | 17.8       | 0.22 | BB-EVF-10/N-1MU      | 168828 | 10 |
|               | 27         | 0.24 | BB-EVF-10/N-2MU      | 168832 | 10 |
|               | 36         | 0.24 | BB-EVF-10/N-3MU      | 168836 | 10 |

SG13213



SG13613



### 16 mm<sup>2</sup>, Rated Current 80 A

|               |            |      |                      |        |    |
|---------------|------------|------|----------------------|--------|----|
| 1-phase       | 17.8       | 0.33 | BB-EVF-16/1P-1MU     | 168827 | 10 |
|               | 27         | 0.36 | BB-EVF-16/1P-2MU     | 168831 | 10 |
|               | 36         | 0.32 | BB-EVF-16/1P-3MU     | 168835 | 10 |
| 2-phase       | 17.8       | 0.46 | BB-EVF-16/2P-1MU     | 168839 | 10 |
|               | 27         | 0.54 | BB-EVF-16/2P-2MU     | 168841 | 10 |
| 3-phase       | 17.8       | 0.69 | BB-EVF-16/3P-1MU     | 168843 | 10 |
|               | 27         | 0.87 | BB-EVF-16/3P-2MU     | 168845 | 10 |
|               | 36         | 0.84 | BB-EVF-16/3P-3MU     | 168851 | 10 |
| 3-phase + AUX | 3x17.5+1x9 | 0.87 | BB-EVF-16/3P-1MU/AUX | 168847 | 10 |
|               | 3x17.5+2x9 | 0.86 | BB-EVF-16/3P-1MU2AUX | 168849 | 10 |
| Neutral       | 17.8       | 0.33 | BB-EVF-16/N-1MU      | 168829 | 10 |
|               | 27         | 0.36 | BB-EVF-16/N-2MU      | 168833 | 10 |
|               | 36         | 0.32 | BB-EVF-16/N-3MU      | 168837 | 10 |

| Description | Step Distance (mm) | Cu-factor | Type Designation | Article No. | Units per package |
|-------------|--------------------|-----------|------------------|-------------|-------------------|
|-------------|--------------------|-----------|------------------|-------------|-------------------|

## xEffect busbar 1m 10mm<sup>2</sup>, 16mm<sup>2</sup> (Pin) BB-EVP

for MCBs, RCCBs, RCBOs, SPDs

- Delivered without end caps

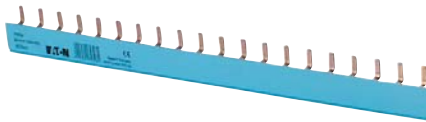
SG13013



### 10 mm<sup>2</sup>, Rated Current 63 A

|               |            |      |                      |        |    |
|---------------|------------|------|----------------------|--------|----|
| 1-phase       | 17.8       | 0.22 | BB-EVP-10/1P-1MU     | 168852 | 10 |
|               | 27         | 0.24 | BB-EVP-10/1P-2MU     | 168856 | 10 |
|               | 36         | 0.24 | BB-EVP-10/1P-3MU     | 168860 | 10 |
| 2-phase       | 17.8       | 0.31 | BB-EVP-10/2P-1MU     | 168864 | 10 |
|               | 27         | 0.36 | BB-EVP-10/2P-2MU     | 168866 | 10 |
| 3-phase       | 17.8       | 0.46 | BB-EVP-10/3P-1MU     | 168868 | 10 |
|               | 27         | 0.58 | BB-EVP-10/3P-2MU     | 168870 | 10 |
| 3-phase + AUX | 3x17.5+1x9 | 0.58 | BB-EVP-10/3P-1MU/AUX | 168872 | 10 |
|               | 3x17.5+2x9 | 0.57 | BB-EVP-10/3P-1MU2AUX | 168874 | 10 |
| Neutral       | 17.8       | 0.22 | BB-EVP-10/N-1MU      | 168854 | 10 |
|               | 27         | 0.24 | BB-EVP-10/N-2MU      | 168858 | 10 |
|               | 36         | 0.24 | BB-EVP-10/N-3MU      | 168862 | 10 |

SG13513



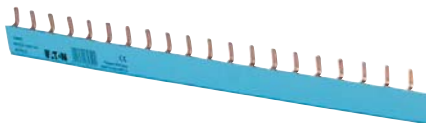
SG12913



### 16 mm<sup>2</sup>, Rated Current 80 A

|               |            |      |                      |        |    |
|---------------|------------|------|----------------------|--------|----|
| 1-phase       | 17.8       | 0.33 | BB-EVP-16/1P-1MU     | 168853 | 10 |
|               | 27         | 0.36 | BB-EVP-16/1P-2MU     | 168857 | 10 |
|               | 36         | 0.32 | BB-EVP-16/1P-3MU     | 168861 | 10 |
| 2-phase       | 17.8       | 0.46 | BB-EVP-16/2P-1MU     | 168865 | 10 |
|               | 27         | 0.54 | BB-EVP-16/2P-2MU     | 168867 | 10 |
| 3-phase       | 17.8       | 0.69 | BB-EVP-16/3P-1MU     | 168869 | 10 |
|               | 27         | 0.87 | BB-EVP-16/3P-2MU     | 168871 | 10 |
|               | 36         | 0.84 | BB-EVP-16/3P-3MU     | 168877 | 10 |
| 3-phase + AUX | 3x17.5+1x9 | 0.87 | BB-EVP-16/3P-1MU/AUX | 168873 | 10 |
|               | 3x17.5+2x9 | 0.86 | BB-EVP-16/3P-1MU2AUX | 168875 | 10 |
| Neutral       | 17.8       | 0.33 | BB-EVP-16/N-1MU      | 168855 | 10 |
|               | 27         | 0.36 | BB-EVP-16/N-2MU      | 168859 | 10 |
|               | 36         | 0.32 | BB-EVP-16/N-3MU      | 168863 | 10 |

SG13313



| Description | Cu-factor | Type Designation | Article No. | Units per package |
|-------------|-----------|------------------|-------------|-------------------|
|-------------|-----------|------------------|-------------|-------------------|

## Accessories

### End caps BB-EV-EC

wa\_sg05612



|           |   |               |        |    |
|-----------|---|---------------|--------|----|
| 1-phase   | - | BB-EV-EC/1P   | 168878 | 40 |
| 2+3-phase | - | BB-EV-EC/2-3P | 168823 | 40 |
| 4-phase   | - | BB-EV-EC/4P   | 168824 | 20 |
| Neutral   | - | BB-EV-EC/N    | 168879 | 20 |

### Terminal BB-EV-TE/35

wa\_sg05312



|  |      |             |        |   |
|--|------|-------------|--------|---|
|  | 0.04 | BB-EV-TE/35 | 168825 | 3 |
|--|------|-------------|--------|---|

### Sticker phase sequence

SG08713



|  |   |         |        |   |
|--|---|---------|--------|---|
|  | - | BB-S-PS | 169831 | 5 |
|--|---|---------|--------|---|

### Busbar Tag Shrouds ZV-BS-G

SG05705



|  |   |         |        |        |
|--|---|---------|--------|--------|
|  | - | ZV-BS-G | 104903 | 10/600 |
|--|---|---------|--------|--------|

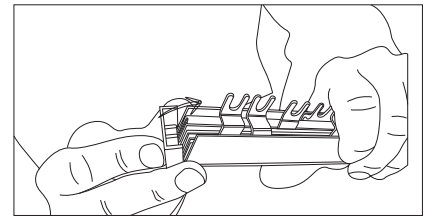
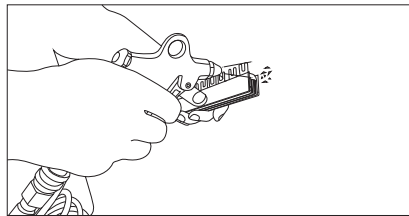
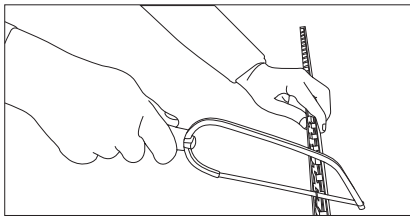


## Technical Data

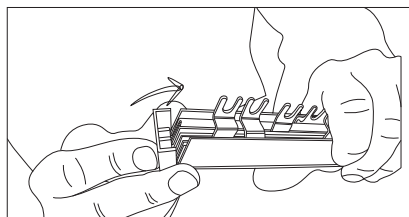
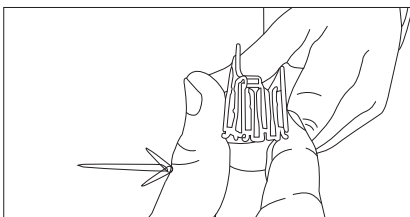
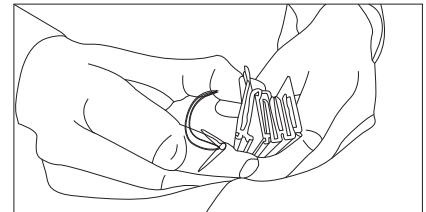
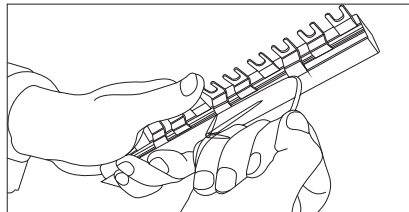
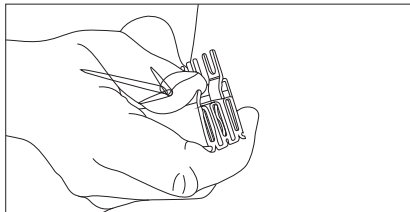
| <b>BB-EV.</b>                        |   |
|--------------------------------------|---|
| <b>General</b>                       |   |
| Heat deflection temperature          | ≥80°C UL94 V0                                       |
| Standards                            | EN 60947-1:2007 / IEC 60947-1:2007 / IEC 60999:2000 |
| Climate stability                    | according to DIN EN 60068                           |
| Insulation coordination              | Overvoltage category III / Degree of pollution 2    |
| <b>Electrical</b>                    |   |
| Impulse voltage strenght             | ≥4.5 kV   |
| Min. air distance                    | >5.5 mm   |
| Min. creeping distance               | >5 mm   |
| Max. operating voltage               | 690 V AC/DC<br>1,000 V DC 1-pole only               |
| Max. current I <sub>g</sub> /Phase   |   |
| 10 mm <sup>2</sup>                   | 63 A  |
| 16 mm <sup>2</sup>                   | 80 A  |
| Protection class                     | IP20  |
| Short circuit rating I <sub>CC</sub> | 25kA - NH3 355A<br>gC500V JM                        |
| Dielectric strenght                  | PC - ABS >32 kV / mm                                |

## Assembly instruction:

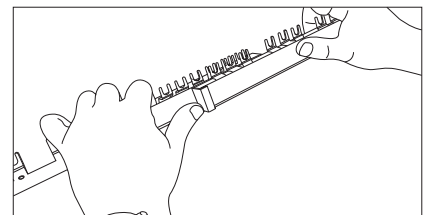
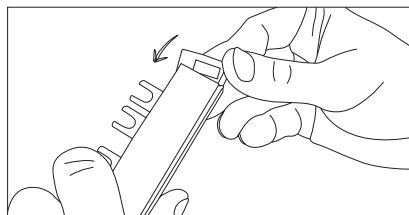
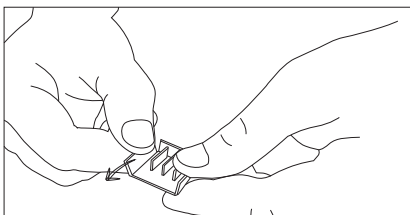
### Cutting



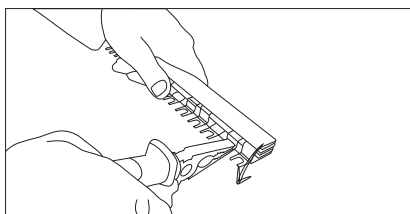
### Mounting of an extension busbar



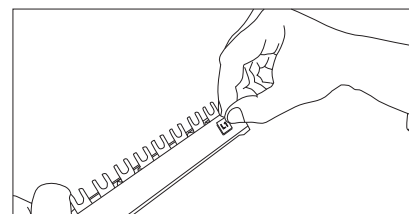
### Overlapping mounting or further connection, resp.



### Bracking out of connection lugs



### Sticking on phase marking



## Busbar UL489 Z-BB/UL

SG13713



- For MCB FAZ-NA/RT/DU
- Sliceable
- 18 and 25 mm<sup>2</sup>
- Pin busbar
- Accessories available:
  - End cap
  - Terminal
  - Busbar tag shrouds
- Length 1 m

| Description | Step Distance (mm) | Cu-factor | Type Designation | Article No. | Units per package |
|-------------|--------------------|-----------|------------------|-------------|-------------------|
|-------------|--------------------|-----------|------------------|-------------|-------------------|

## Busbar UL489 sliceable 1m 18mm<sup>2</sup>, 25mm<sup>2</sup> (Pin), Z-BB/UL

for FAZ-NA/RT/DU

- Delivered without end caps

SG13713



### 18 mm<sup>2</sup>, Rated Current 80 A

|                  |                |       |                          |        |    |
|------------------|----------------|-------|--------------------------|--------|----|
| 1-phase          | 17.6           | 0.39  | Z-BB/UL18/1P1MU/57       | 171128 | 10 |
| 1-phase + AUX    | 26.4           | 0.378 | Z-BB/UL18/1P1MU+AUX/37   | 171134 | 10 |
| 2x 1-phase + AUX | 26.4           | 0.56  | Z-BB/UL18/2X1P1MU+AUX/38 | 171142 | 10 |
| 3x 1-phase + AUX | 26.4           | 0.945 | Z-BB/UL18/3X1P1MU+AUX/39 | 171140 | 10 |
| 2-phase          | 17.6           | 0.625 | Z-BB/UL18/2P1MU/56       | 171129 | 10 |
| 2-phase + AUX    | 17.6 + 26.4    | 0.625 | Z-BB/UL18/2P1MU+AUX/46   | 171135 | 10 |
| 3-phase          | 17.6           | 0.95  | Z-BB/UL18/3P1MU/57       | 171130 | 10 |
| 3-phase + AUX    | 2x 17.6 + 26.4 | 0.93  | Z-BB/UL18/3P1MU+AUX/48   | 171136 | 10 |

SG14213



### 25 mm<sup>2</sup>, Rated Current 100 A

|                  |                |       |                          |        |    |
|------------------|----------------|-------|--------------------------|--------|----|
| 1-phase          | 17.6           | 0.535 | Z-BB/UL25/1P1MU/57       | 171131 | 10 |
| 1-phase + AUX    | 26.4           | 0.745 | Z-BB/UL25/1P1MU+AUX/37   | 171137 | 10 |
| 2x 1-phase + AUX | 26.4           | 0.78  | Z-BB/UL25/2X1P1MU+AUX/38 | 171143 | 10 |
| 3x 1-phase + AUX | 26.4           | 1.315 | Z-BB/UL25/3X1P1MU+AUX/39 | 171141 | 10 |
| 2-phase          | 17.6           | 0.888 | Z-BB/UL25/2P1MU/56       | 171132 | 10 |
| 2-phase + AUX    | 17.6 + 26.4    | 0.87  | Z-BB/UL25/2P1MU+AUX/46   | 171138 | 10 |
| 3-phase          | 17.6           | 1.31  | Z-BB/UL25/3P1MU/57       | 171133 | 10 |
| 3-phase + AUX    | 2x 17.6 + 26.4 | 1.28  | Z-BB/UL25/3P1MU+AUX/48   | 171139 | 10 |

| Description | Cu-factor | Type Designation | Article No. | Units per package |
|-------------|-----------|------------------|-------------|-------------------|
|-------------|-----------|------------------|-------------|-------------------|

## Accessories

### End cap Z-ECUL

|   |   |        |        |    |
|---|---|--------|--------|----|
| - | - | Z-ECUL | 171145 | 10 |
|---|---|--------|--------|----|

### Terminal Z-TEUL35

|       |   |          |        |    |
|-------|---|----------|--------|----|
| 0,038 | - | Z-TEUL35 | 171144 | 10 |
|-------|---|----------|--------|----|









### Busbar Tag Shrouds Z-FPUL

SG08613



|   |   |        |        |    |
|---|---|--------|--------|----|
| - | - | Z-FPUL | 171146 | 10 |
|---|---|--------|--------|----|

## Description of the Busbar UL489, Z-BB/UL for FAZ-NA, -RT, -DU

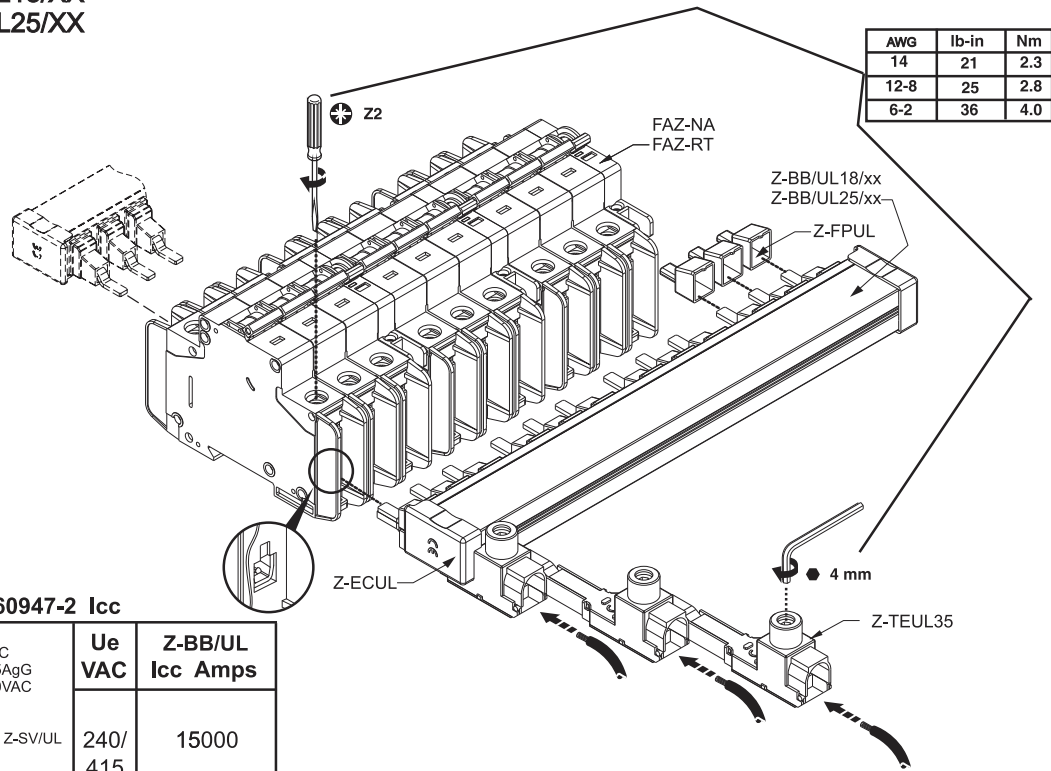
|                        |        |  |  |  |  |  |  |  |  |
|------------------------|--------|---|---|---|---|---|--|---|---|
| Z-BB/UL18/1P1MU/57     | 171128 | 57  | -   | -   | -   | -   | -  | -   | -   |
| Z-BB/UL18/2P1MU/56     | 171129 | -   | 56  | -   | -   | -   | -  | -   | -   |
| Z-BB/UL18/3P1MU/57     | 171130 | -   | -   | 57  | -   | -   | -  | -   | -   |
| Z-BB/UL25/1P1MU/57     | 171131 | 57  | -   | -   | -   | -   | -  | -   | -   |
| Z-BB/UL25/2P1MU/56     | 171132 | -   | 56  | -   | -   | -   | -  | -   | -   |
| Z-BB/UL25/3P1MU/57     | 171133 | -   | -   | 57  | -   | -   | -  | -   | -   |
| Z-BB/UL18/1P1MU+AUX/37 | 171134 | -   | -   | -   | 37  | -   | -  | -   | -   |
| Z-BB/UL18/2P1MU+AUX/46 | 171135 | -   | -   | -   | -   | -   | -  | 46  | -   |
| Z-BB/UL18/3P1MU+AUX/48 | 171136 | -   | -   | -   | -   | -   | -  | -   | 48  |
| Z-BB/UL25/1P1MU+AUX/37 | 171137 | -   | -   | -   | 37  | -   | -  | -   | -   |
| Z-BB/UL25/2P1MU+AUX/46 | 171138 | -   | -   | -   | -   | -   | -  | 46  | -   |
| Z-BB/UL25/3P1MU+AUX/48 | 171139 | -   | -   | -   | -   | -   | -  | -   | 48  |
| Z-BB/UL18/3X1MU+AUX/39 | 171140 | -   | -   | -   | -   | -   | 39   | -   | -   |
| Z-BB/UL25/3X1MU+AUX/39 | 171141 | -   | -   | -   | -   | -   | 39   | -   | -   |
| Z-BB/UL18/2X1MU+AUX/38 | 171142 | -   | -   | -   | -   | 38  | -  | -   | -   |
| Z-BB/UL25/2X1MU+AUX/38 | 171143 | -   | -   | -   | -   | 38  | -  | -   | -   |
| Z-TEUL35               | 171144 | -   | -   | -   | -   | -   | -  | -   | -   |
| Z-ECUL                 | 171145 | -   | -   | -   | -   | -   | -  | -   | -   |
| Z-FPUL                 | 171146 | -   | -   | -   | -   | -   | -  | -   | -   |

## Technical Data

|                                      |  | Z-BB/UL  |
|--------------------------------------|--|--|
| <b>General</b>                       |  |  |
| Heat deflection temperature          |  | >100°C - UL94 V0                                 |
| Standards                            |  | UL489, EN 60947-1, IEC 60947-1:2004              |
| Climate stability                    |  | according to DIN EN 60068                        |
| Insulation coordination              |  | Overvoltage category III / Degree of pollution 2 |
| <b>Electrical</b>                    |  |  |
| Impulse voltage strenght             |  | ≥10 kV   |
| Min. air distance                    |  | ≥1" ext.   |
| Min. creeping distance               |  | ≥2" ext.   |
| Max. operating voltage               |  |  |
| 1-pole                               |  | 1,000 V AC/DC                                    |
| 2-, 3-pole                           |  | 600 V AC/DC                                      |
| Max. current I <sub>s</sub> /Phase   |  |  |
| 18 mm <sup>2</sup>                   |  | 80 A   |
| 25 mm <sup>2</sup>                   |  | 100 A  |
| Protection class                     |  | IP20   |
| Short circuit rating I <sub>CC</sub> |  | 10 kA  |
| Dielectric strenght                  |  | PA66-V0, >35 kV                                  |

## Mounting example of busbar UL489, Z-BB/UL for FAZ-NA, -RT, -DU

Z-BB/UL18/XX  
Z-BB/UL25/XX



### IEC/EN 60947-2 Icc

| Ue<br>HRC<br>315AgG<br>500VAC | Ue<br>VAC   | Z-BB/UL<br>Icc Amps |
|-------------------------------|-------------|---------------------|
| Z-SV/UL                       | 240/<br>415 | 15000               |

### UL SCCR

| Ue<br>Z-SV/UL    | FAZ-NA<br>FAZ-RT<br>In<br>Amps | Ue<br>VAC    | Z-BB/UL<br>SCCR RMS<br>Sym Amps |
|------------------|--------------------------------|--------------|---------------------------------|
| FAZ-NA<br>FAZ-RT | 0.5-32                         | 480Y/<br>277 | 10000                           |
|                  | 35-40                          | 240          | 10000                           |

## Busbar UL508 BB/UL

- For MCB FAZ
- Sliceable
- 18 and 25 mm<sup>2</sup>
- Pin busbar
- Accessories available:
  - End caps
  - Terminals
  - Busbar tag shrouds
- Length 1 m

| Description | Step Distance (mm) | Cu-factor | Type Designation | Article No. | Units per package |
|-------------|--------------------|-----------|------------------|-------------|-------------------|
|-------------|--------------------|-----------|------------------|-------------|-------------------|

## Busbar UL508 sliceable 1m 18mm<sup>2</sup>, 25mm<sup>2</sup> (Pin), BB/UL

for FAZ

- Delivered without end caps

### 18 mm<sup>2</sup>, Rated Current 80 A

|               |                |       |                        |        |    |
|---------------|----------------|-------|------------------------|--------|----|
| 1-phase       | 17.8           | 0.33  | BB-UL-18/1P-1M/57      | 121981 | 10 |
| 2-phase       | 17.8           | 0.508 | BB-UL-18/2P-2M/56      | 121982 | 10 |
| 3-phase       | 17.8           | 0.8   | BB-UL-18/3P-3M/57      | 121983 | 10 |
| 1-phase + AUX | 27             | 0.33  | BB-UL-18/1P-1,5M/37    | 121984 | 10 |
| 2-phase + AUX | 17.8 + 26.7    | 0.52  | BB-UL-18/2P+AS-2,5M/46 | 121987 | 10 |
| 3-phase + AUX | 2x 17.8 + 26.7 | 0.8   | BB-UL-18/3P+AS-3,5M/48 | 121988 | 10 |

### 25 mm<sup>2</sup>, Rated Current 100 A

|               |                |      |                        |        |    |
|---------------|----------------|------|------------------------|--------|----|
| 1-phase       | 17.8           | 0.45 | BB-UL-25/1P-1M/57      | 121989 | 10 |
| 2-phase       | 17.8           | 0.68 | BB-UL-25/2P-2M/56      | 121990 | 10 |
| 3-phase       | 17.8           | 1.07 | BB-UL-25/3P-3M/57      | 121991 | 10 |
| 1-phase + AUX | 27             | 0.45 | BB-UL-25/1P-1,5M/37    | 121992 | 10 |
| 2-phase + AUX | 17.8 + 26.7    | 0.69 | BB-UL-25/2P+AS-2,5M/46 | 121995 | 10 |
| 3-phase + AUX | 2x 17.8 + 26.7 | 1.03 | BB-UL-25/3P+AS-3,5M/48 | 121996 | 10 |

| Description | Cu-factor | Type Designation | Article No. | Units per package |
|-------------|-----------|------------------|-------------|-------------------|
|-------------|-----------|------------------|-------------|-------------------|

## Accessories

### End caps BB-UL-EC

|          |   |            |        |    |
|----------|---|------------|--------|----|
| 1-phasig | - | BB-UL-EC/1 | 122000 | 10 |
| 3-phasig | - | BB-UL-EC/3 | 122001 | 10 |

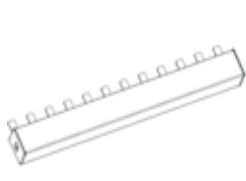


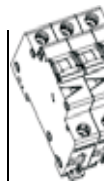
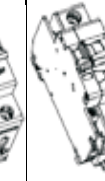
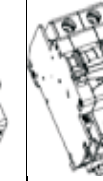
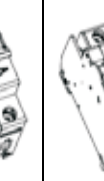
### Terminals BB-UL-TE

|   |       |               |        |    |
|---|-------|---------------|--------|----|
| 6 - 35mm <sup>2</sup> (single and multi wire) | 0,035 | BB-UL-TEP/35  | 121997 | 10 |
| 6 - 50mm <sup>2</sup>                         | 0,038 | BB-UL-TEPA/35 | 169823 | 10 |
| 6 - 50mm <sup>2</sup> (single and multi wire) | 0,038 | BB-UL-TE/50   | 121998 | 10 |

### Busbar Tag Shrouds BB-IP/5

|            |   |         |        |    |
|------------|---|---------|--------|----|
| for 5 pins | - | BB-IP/5 | 121999 | 10 |
|------------|---|---------|--------|----|

## Description of the Busbar UL508, BB/UL for FAZ

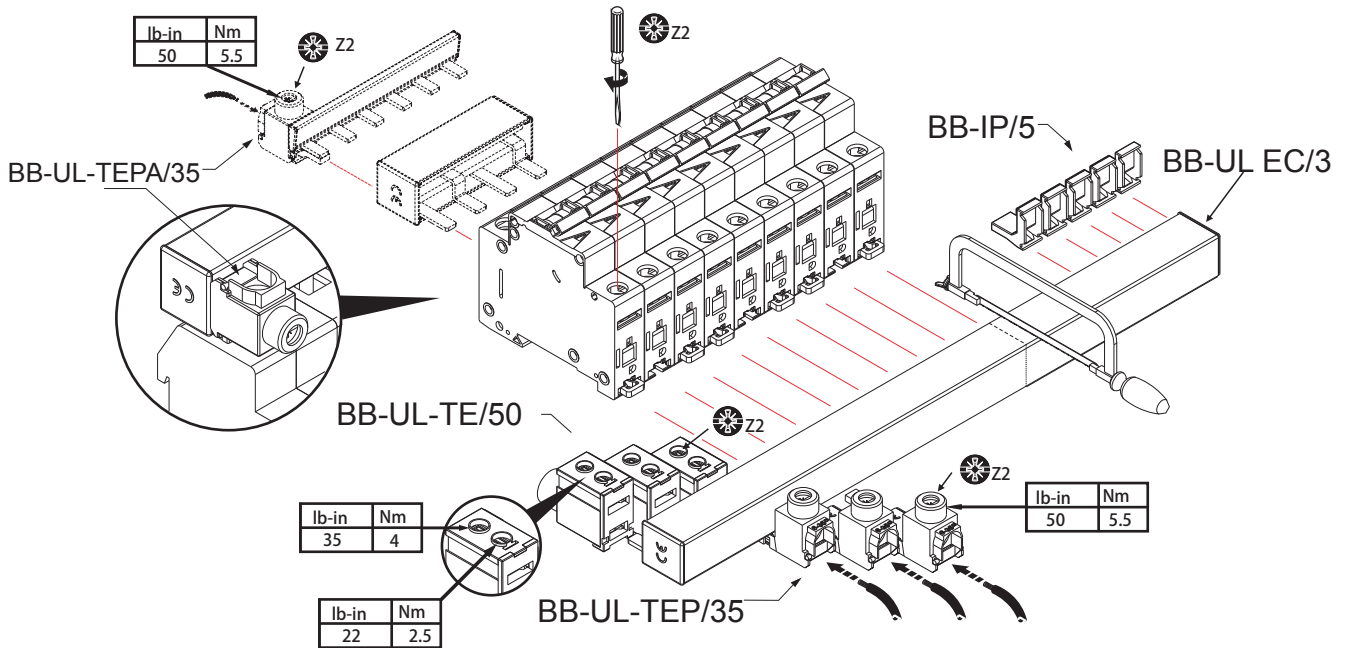
| Article No. |  |  |  |  |  |  |  |
|-------------|---|---|---|---|--|---|---|
| 121981      | BB-UL-18/1P-1M/57   | 57  | -   | -   | -  | -   | -   |
| 121982      | BB-UL-18/2P-2M/56   | -   | 28  | -   | -  | -   | -   |
| 121983      | BB-UL-18/3P-3M/57   | -   | -   | 19  | -  | -   | -   |
| 121984      | BB-UL-18/1P-1,5M/37   | -   | -   | -   | 37   | -   | -   |
| 121987      | BB-UL-18/2P+AS-2,5M/46  | -   | -   | -   | -  | 23  | -   |
| 121988      | BB-UL-18/3P+AS-3,5M/48  | -   | -   | -   | -  | -   | 16  |
| 121989      | BB-UL-25/1P-1M/57   | 57  | -   | -   | -  | -   | -   |
| 121990      | BB-UL-25/2P-2M/56   | -   | 28  | -   | -  | -   | -   |
| 121991      | BB-UL-25/3P-3M/57   | -   | -   | 19  | -  | -   | -   |
| 121992      | BB-UL-25/1P-1,5M/37   | -   | -   | -   | 37   | -   | -   |
| 121995      | BB-UL-25/2P+AS-2,5M/46  | -   | -   | -   | -  | 23  | -   |
| 121996      | BB-UL-25/3P+AS-3,5M/48  | -   | -   | -   | -  | -   | 16  |
| 121997      | BB-UL-TEP/35  | -   | -   | -   | -  | -   | -   |
| 169823      | BB-UL-TEPA/35   | -   | -   | -   | -  | -   | -   |
| 121998      | BB-UL-TE/50   | -   | -   | -   | -  | -   | -   |
| 121999      | BB-IP/5   | -   | -   | -   | -  | -   | -   |
| 122000      | BB-UL-EC/1  | -   | -   | -   | -  | -   | -   |
| 122001      | BB-UL-EC/3  | -   | -   | -   | -  | -   | -   |




## Technical Data


| <b>Z-BB/UL</b>                     |   |
|------------------------------------|---|
| <b>General</b>                     |   |
| Heat deflection temperature        | 125°C - UL94 V0   |
| Standards                          | DIN EN 60947-2, VDE 0660 - 101 = IEC 60947-2, IEC 60999:2000, UL508, UL486A, CSA C22.2      |
| Climate stability                  | according to DIN EN 60068   |
| Insulation coordination            | Overvoltage category III / Degree of pollution 2  |
| <b>Electrical</b>                  |   |
| Impulse voltage strenght           | ≥9.5 kV   |
| Min. air distance                  | >9.5 mm   |
| Min. creeping distance             | >12.7 mm  |
| Max. operating voltage             |   |
| 1-pole                             | 1,000 V AC/DC   |
| 2-, 3-pole                         | IEC/EN 690 V AC/DC<br>600 V AC/DC UL Fuse<br>480 V AC/DC UL-SP                              |
| Terminals                          | 1, 000 V AC/DC  |
| Max. current I <sub>g</sub> /Phase |   |
| 18 mm <sup>2</sup>                 | 80 A (feed in the center: 160 A)  |
| 25 mm <sup>2</sup>                 | 100 A (feed in the center: 200 A)   |
| Protection class                   | IP20  |
| Short circuit rating               | 10kA 3 cycles@480V / 100 kA Fuse Class J<br>175A@18mm <sup>2</sup> - 200A@25mm <sup>2</sup> |
| Dielectric strenght                | >32 kV/mm   |

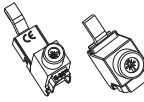




## Mounting example of busbar UL508, BB/UL for FAZ



|   |                          |                                |
|---|--------------------------|--------------------------------|
| BB-UL-TE/50   |                          |                                |
|  | UL508                    | EN/IEC 60947-2                 |
| $U_e$   | 480 V AC                 | 240/690V AC                    |
| $f$   | 50/60 Hz                 | 50/60 Hz                       |
| $I_e$   | 115 A @ 40° C            | 160 A @ 30° C                  |
|  | #1-14 AWG<br>60/75° C Cu | 1.5 – 50 mm <sup>2</sup><br>Cu |
|  | 0.56 in                  | 14 mm                          |

|   |                  |                  |
|---|------------------|------------------|
| BB-UL   |                  |                  |
|  | UL508            | EN/IEC 60947-2   |
| $U_e$   | 480 V AC         | 690V AC          |
| $f$   | 50/60 Hz         |                  |
| $I_{pk}$  | 10kA             | 15kA             |
| $I_e$   | 18mm $\boxtimes$ | 25mm $\boxtimes$ |
| Infeed at the start of the busbar   | 80A@40° C        | 100A@30° C       |
| Infeed at the center of the busbar  | 160A@40° C       | 200A@30° C       |

|   |                          |                                |
|---|--------------------------|--------------------------------|
| BB-UL-TEP/35 /<br>BB-UL-TEPA/35   |                          |                                |
|  | UL508                    | EN/IEC 60947-2                 |
| $U_e$   | 480 V AC                 | 240/690V AC                    |
| $f$   | 50/60 Hz                 | 50/60 Hz                       |
| $I_e$   | 115 A@40° C              | 80 A@30° C                     |
|  | #2-14 AWG<br>60/75° C Cu | 2.5 – 35 mm <sup>2</sup><br>Cu |
|  | 0.56 in                  | 14 mm                          |

### \*-UL508 SHORT CIRCUIT RATINGS

-SUITABLE FOR USE ON A CIRCUIT CAPABLE OF DELIVERING NOT MORE THAN 10,000 RMS SYMMETRICAL AMPERES, 600 VOLTS MAXIMUM.

-SUITABLE FOR USE ON A CIRCUIT CAPABLE OF DELIVERING NOT MORE THAN 100,000 RMS SYMMETRICAL AMPERES, 600 VOLTS MAXIMUM WHEN PROTECTED BY A CLASS J FUSE RATED 175A.

## Busbar UL489 Z-SV/UL16

wa\_sg03511



- For MCB FAZ-NA/RT/DU
- 16 mm<sup>2</sup>
- Pin busbar
- Accessories available:
  - Terminals
  - Busbar tag shrouds
- Several length

| Description | Step Distance (mm) | Cu-factor | Type Designation | Article No. | Units per package |
|-------------|--------------------|-----------|------------------|-------------|-------------------|
|-------------|--------------------|-----------|------------------|-------------|-------------------|

## Busbar UL489 16mm<sup>2</sup> (Pin), Z-SV/UL16

for FAZ-NA/RT/DU, not sliceable!!

- Delivered with end caps

wa\_sg03511



### 16 mm<sup>2</sup>, Rated Current 80 A

|               |      |       |                      |        |    |
|---------------|------|-------|----------------------|--------|----|
| 1-phase, 6MU  | 17.6 | 0.035 | Z-SV/UL-16/1P-1MU/6  | 104892 | 10 |
| 1-phase, 12MU | 17.6 | 0.07  | Z-SV/UL-16/1P-1MU/12 | 104893 | 10 |
| 1-phase, 18MU | 17.6 | 0.105 | Z-SV/UL-16/1P-1MU/18 | 104894 | 10 |
| 2-phase, 6MU  | 17.6 | 0.07  | Z-SV/UL-16/2P-2MU/6  | 104895 | 10 |
| 2-phase, 12MU | 17.6 | 0.14  | Z-SV/UL-16/2P-2MU/12 | 104896 | 10 |
| 2-phase, 18MU | 17.6 | 0.21  | Z-SV/UL-16/2P-2MU/18 | 104897 | 10 |
| 3-phase, 6MU  | 17.6 | 0.14  | Z-SV/UL-16/3P-3MU/6  | 104898 | 10 |
| 3-phase, 12MU | 17.6 | 0.221 | Z-SV/UL-16/3P-3MU/12 | 104899 | 10 |
| 3-phase, 18MU | 17.6 | 0.332 | Z-SV/UL-16/3P-3MU/18 | 104900 | 10 |

| Description | Cu-factor | Type Designation | Article No. | Units per package |
|-------------|-----------|------------------|-------------|-------------------|
|-------------|-----------|------------------|-------------|-------------------|

## Accessories

### Terminals Z-TEUL35

SG07506



|                         |       |            |        |   |
|-------------------------|-------|------------|--------|---|
| 2.5 - 35mm <sup>2</sup> | 0.035 | Z-EK/35/UL | 104901 | 3 |
| 1.5 - 50mm <sup>2</sup> | 0.038 | Z-EB/50/UL | 104902 | 3 |

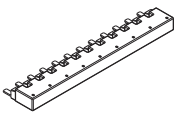
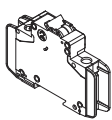
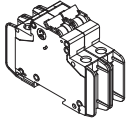
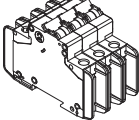
### Busbar Tag Shrouds Z-FPUL

SG07706



|            |   |          |        |    |
|------------|---|----------|--------|----|
| for 3 pins | - | ZV-BS-UL | 104904 | 10 |
|------------|---|----------|--------|----|

## Description of the Busbar UL489, Z-SV/UL-16 for FAZ-NA/RT/DU

| Article No. |  |  |  |  |
|-------------|---|---|---|--|
| 104892      | Z-SV/UL-16/1P-1TE/6   | 6   | -   | -  |
| 104893      | Z-SV/UL-16/1P-1TE/12  | 12  | -   | -  |
| 104894      | Z-SV/UL-16/1P-1TE/18  | 18  | -   | -  |
| 104895      | Z-SV/UL-16/2P-2TE/6   | -   | 3   | -  |
| 104896      | Z-SV/UL-16/2P-2TE/12  | -   | 6   | -  |
| 104897      | Z-SV/UL-16/2P-2TE/18  | -   | 9   | -  |
| 104898      | Z-SV/UL-16/3P-3TE/6   | -   | -   | 2  |
| 104899      | Z-SV/UL-16/3P-3TE/12  | -   | -   | 4  |
| 104900      | Z-SV/UL-16/3P-3TE/18  | -   | -   | 6  |
| 104901      | Z-EK/35/UL  | -   | -   | -  |
| 104902      | Z-EB/50/UL  | -   | -   | -  |
| 104904      | ZV-BS-UL  | -   | -   | -  |

## Technical Data

| <b>Z-SV/UL16</b>                   |   |
|------------------------------------|---|
| <b>General</b>                     |   |
| Heat deflection temperature        | 125°C - UL94 V0   |
| Standards                          |   |
| Busbar                             | UL489, DIN EN 60947-1, VDE 0660 part 100 = IEC 60947-1:2004, IEC 60947-2:2003 |
| Terminal                           | IEC 60999:2000, UL489, UL486A, CSA C22.2                                      |
| Climate stability                  | according to DIN EN 60068   |
| Insulation coordination            | Overvoltage category III / Degree of pollution 2                              |
| <b>Electrical</b>                  |   |
| Impulse voltage strenght           | ≥9.5 kV (1kV / mmLS)  |
| Min. air distance                  | >9.5mm/25.4mm (intern/external)   |
| Min. creeping distance             | >12.7mm/50.8mm (intern/external)  |
| Max. operating voltage             |   |
| 1-, 3-phase                        | 690 V IEC<br>480Y/277V & 240V AC  |
| Terminals                          | 1,000 V AC/DC   |
| Max. current I <sub>g</sub> /Phase | 80 A  |
| Protection class                   | IP20  |
| Short circuit rating               | 15kA with NH3 355 A gL 500V JM / 7.5kA 3 cycles @ 600V                        |
| Dielectric strenght                | >30 kV/mm   |

## Mounting example of busbar UL489, Z-SV/UL-16 for FAZ-NA, -RT, -DU



**ATTENTION:** Maximum of 3 commoning links allowed. Any combination of same pole configuration.

**ATTENTION:** 3 liaisons communes autorisées au maximum. Toute combinaison de configurations de polarité identiques.

**ACHTUNG:** Maximal 3 Schienenblöcke. Beliebige Kombination gleichpoliger Konfigurationen.

**ATTENZIONE:** Sono consentiti al massimo 3 pettini di collegamento in qualsiasi combinazione della stessa configurazione di poli.

**ATENCIÓN:** Se permite un máximo de 3 enlaces comunes.

Cualquier combinación del mismo tipo de configuración de polo



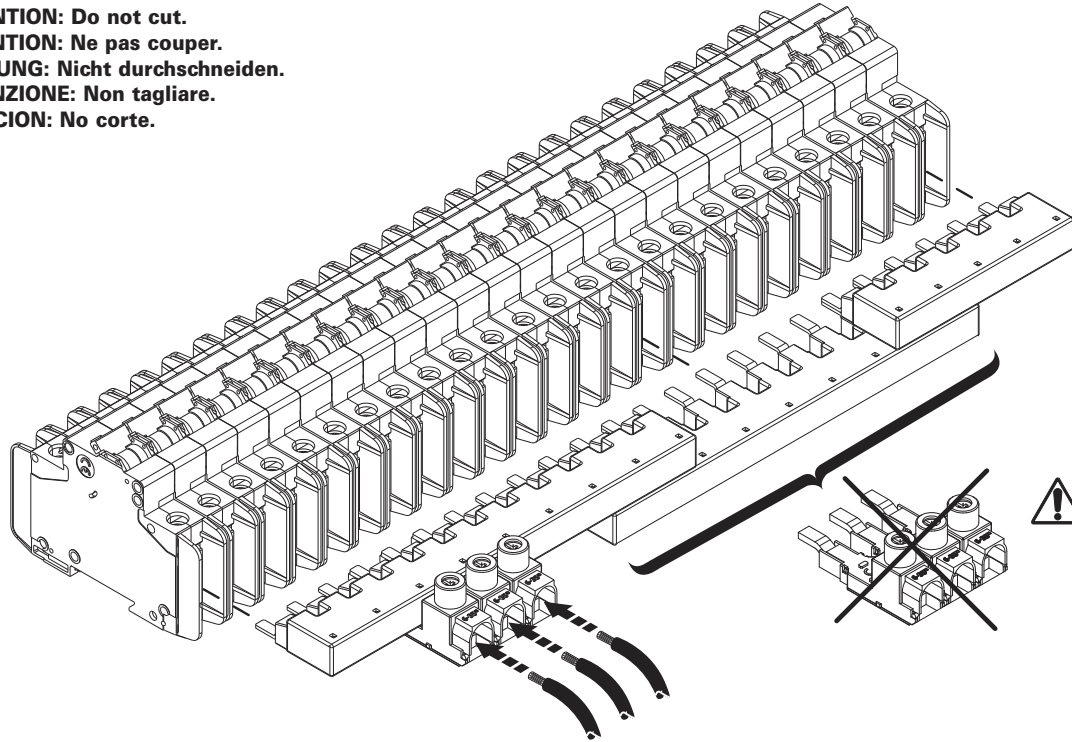
**ATTENTION:** Do not cut.

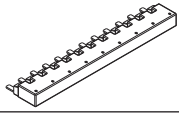
**ATTENTION:** Ne pas couper.




**ACHTUNG:** Nicht durchschneiden.

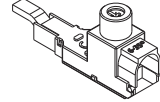


**ATTENZIONE:** Non tagliare.

**ATENCIÓN:** No corte.

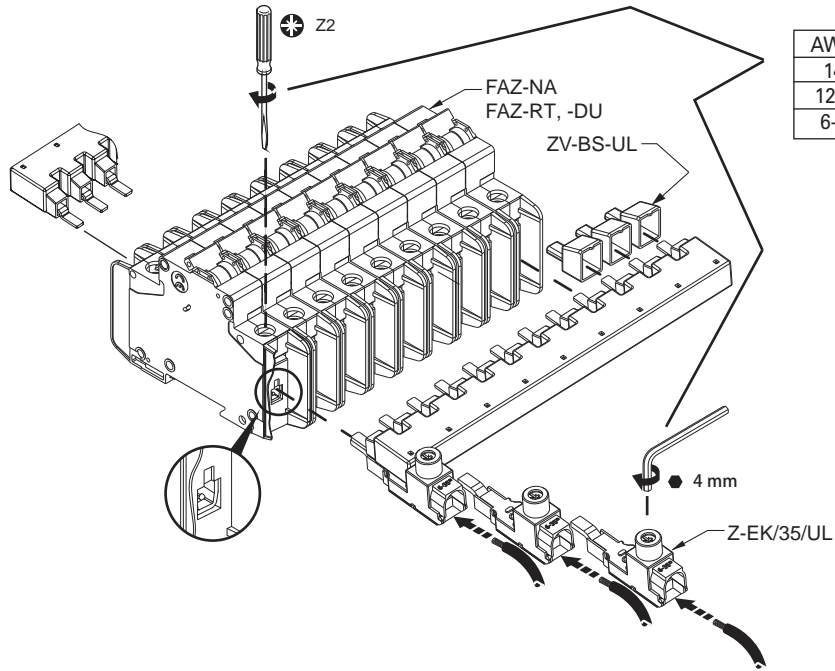


|   |             |         |                    |
|---|-------------|---------|--------------------|
|  | UL489       |         | EN/IEC<br>00947-2  |
| $U_e$   | 480 V AC    | 96 V DC | 240/415 V AC       |
| $f$   | 50/60 Hz    | -----   | 50/60 Hz           |
| $U_{imp}$   | -----       |         | 9.5 kV             |
| $I_e$   | 80 A @ 40°C |         | 80 A @ 30°C        |
| Cross section   | -----       |         | 16 mm <sup>2</sup> |

|   |                         |                              |                   |
|---|-------------------------|------------------------------|-------------------|
|  | UL489                   |                              | EN/IEC<br>00947-2 |
| $U_e$   | 480 V AC                | 96 V DC                      | 240/415 V AC      |
| $f$   | 50/60 Hz                | -----                        | 50/60 Hz          |
| $U_{imp}$   | -----                   |                              | 9.5 kV            |
|  | #1-14 AWG<br>60/75°C Cu | 1.5-50 mm <sup>2</sup><br>Cu |                   |
|  | 0.56 in                 |                              | 14 mm             |

|  |                         |                              |                   |
|--|-------------------------|------------------------------|-------------------|
|  | UL489                   |                              | EN/IEC<br>00947-2 |
| $U_e$  | 480 V AC                | 96 V DC                      | 240/415 V AC      |
| $f$  | 50/60 Hz                | -----                        | 50/60 Hz          |
| $U_{imp}$  | -----                   |                              | 9.5 kV            |
| $I_e$  | 80 A @ 40°C             |                              | 80 A @ 30°C       |
|  | #2-14 AWG<br>60/75°C Cu | 2.5-35 mm <sup>2</sup><br>Cu |                   |
|  | 0.56 in                 |                              | 14 mm             |

## Mounting example of busbar UL489, Z-SV/UL-16 for FAZ-NA, -RT, -DU



| AWG  | lb-in | Nm  |
|------|-------|-----|
| 14   | 21    | 2.3 |
| 12-8 | 25    | 2.8 |
| 6-2  | 36    | 4.0 |

### IEC/EN 60947-2 Icc

|  | Ue          | Z-SV/UL  |
|--|-------------|----------|
|  | VAC         | Icc Amps |
|  | 240/<br>415 | 15000    |

### UL SCCR

|  | FAZ-NA<br>FAZ-RT/-DU<br>In<br>Amps | Ue           | Z-SV/UL<br>SCCR RMS<br>Sym Amps |
|--|------------------------------------|--------------|---------------------------------|
|  |                                    | VAC          |                                 |
|  | 0.5-32                             | 480Y/<br>277 | 10000                           |
|  | 35-40                              | 240          | 10000                           |

## Accessories for RCDs, MCBs, Combined RCD/MCB Devices

SG60811







- Auxiliary Switch
- RCD-Tripping Module
- Shunt Trip Release
- Undervoltage Release
- Remote Control and Automatic Switching Device
- Switching Interlocks
- Terminal Covers

SG60811



## Auxiliary Switch Z-HK, Z-AHK, Z-HD; Tripping Signal Switch Z-NHK

### Design: for screwing

|  | For Protective Device / Function | Type Designation | Article No. | Units per package |
|--|----------------------------------|------------------|-------------|-------------------|
|  <p>SG34812</p>   | RCCB / 1NO+1NC                   | Z-HK             | 248432      | 4/120             |
|  <p>SG60911</p>   | MCB, RCBO, RCCB / 1NO+1NC        | Z-AHK            | 248433      | 4/120             |
|  <p>SG61011</p>  | MCB, RCBO, RCCB / 2CO            | Z-NHK            | 248434      | 4/120             |
|  <p>SG34412</p> | RCCB / 1CO+1NC                   | Z-HD             | 265620      | 1                 |

## Specifications | Auxiliary Switch Z-HK, Z-AHK; Tripping Signal Switch Z-NHK

### Description

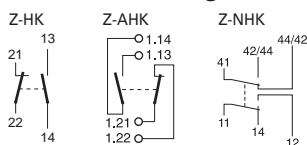
- Design according to IEC/EN 60947-5-1, IEC/EN 62019
- Can be mounted subsequently (screws) onto FRCmM, FRCdM
- The specified minimum voltages are per contact.  
Take into account particularly in case of series connection!
- **Z-AHK, Z-NHK:** Contact function with relative movement (self-cleaning contacts)
- Contact material and design particularly suitable for extra low voltage
- **Z-NHK:** The function of one of the two change-over contacts can be switched from "auxiliary switch" to "tripping signal switch"
- Tripping signal contact transmits message of electric tripping, not mechanical switch-off
- Test key for contact function "electrical tripping"



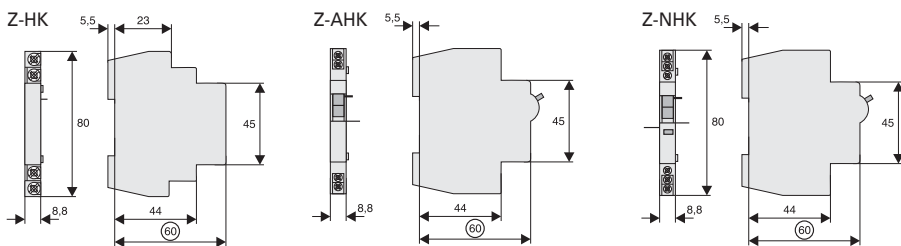
## Technical Data

|   | Z-HK   | Z-AHK                   | Z-NHK                   |
|---|--|-------------------------|-------------------------|
| <b>Electrical</b>                             |  |                         |                         |
| Contact function                              | 1NO + 1NC  | 1NO + 1NC               | 2CO                     |
| Rated voltage                                 | 250 V  | 250 V                   | 250 V                   |
| Frequency                                     | 50/60 Hz   | 50/60 Hz                | 50/60 Hz                |
| Rated current                                 | 8 A  | 4 A                     | 4 A                     |
| Rated thermal current                         | $I_{th}$ 8 A   | 4 A                     | 4 A                     |
| Utilisation category AC13                     |  |                         |                         |
| Rated operational current                     | $I_e$ 6A/250V AC<br>2A/440V AC                           | 3A/250V AC<br>-         | 3A/250V AC<br>-         |
| Utilisation category AC15                     |  |                         |                         |
| Rated operational current                     | $I_e$ -  | 2A/250V AC              | 2A/250V AC              |
| Utilisation category DC12                     |  |                         |                         |
| Rated operational current                     | $I_e$ -  | 0.5A/110V DC            | 0.5A/110V DC            |
| Utilisation category DC13                     |  |                         |                         |
| Rated operational current                     | $I_e$ 0.5A/230V DC<br>2A/110V DC<br>4A/60V DC            | -<br>-<br>-             | -<br>-<br>-             |
| Rated insulation voltage                      | $U_i$ 250 V AC   | 250 V AC                | 250 V AC                |
| Minimum operational voltage per contact       | $U_{min}$ 24 V AC/DC                                     | 5 V DC                  | 5 V DC                  |
| Minimum operational current                   | $I_{min}$ 50 mA AC/DC                                    | 10 mA DC                | 10 mA DC                |
| Rated peak withstand voltage                  | $U_{imp}$ (1.2/50 $\mu$ ) 2.5 kV                         | 2.5 kV                  | 2.5 kV                  |
| Conditional short circuit current             | $I_k$  |                         |                         |
| with back-up fuse 6A or FAZ-B4-HS             | 1 kA   | 1 kA                    | 1 kA                    |
| Max. back-up fuse, overload and short circuit | 6 A gL / FAZ-4/..B-HS                                    | 4 A gL / FAZ-4/..B-HS   | 4 A gL / FAZ-4/..B-HS   |
| <b>Mechanical</b>                             |  |                         |                         |
| Can be mounted from the left onto             | RCCB   | MCB, RCBO               | MCB, RCBO               |
| Can be mounted from the right onto            | -  | -                       | RCCB                    |
| Tripping indicator "electrical tripping"      | -  | -                       | blue/white              |
| Frame size                                    | 45 mm  | 45 mm                   | 45 mm                   |
| Device height                                 | 80 mm  | 80 mm                   | 80 mm                   |
| Device width                                  | 8.8 mm (0.5MU)   | 8.8 mm (0.5MU)          | 8.8 mm (0.5MU)          |
| Mounting                                      | onto switching device                                    | onto switching device   | onto switching device   |
| Degree of protection, built-in                | IP40   | IP40                    | IP40                    |
| Terminal protection                           | finger and hand touch safe according to BGV A3, ÖVE-EN 6 |                         |                         |
| Terminals                                     | lift terminals   | lift terminals          | lift terminals          |
| Terminal capacity                             | 0.5-2.5 mm <sup>2</sup>                                  | 0.5-2.5 mm <sup>2</sup> | 0.5-2.5 mm <sup>2</sup> |
| Terminal screws                               | M3 (Pozidrive Z0)  | M3 (Pozidrive Z0)       | M3 (Pozidrive Z0)       |
| Fastening torque of terminal screws           | max. 0.8-1.0 Nm  | max.0.8-1.0 Nm          | max. 0.8-1.0 Nm         |

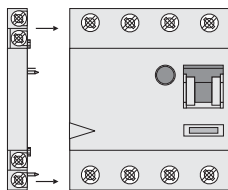
## Connection diagram



## Dimensions (mm)

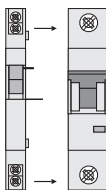


**Example: Z-HK+RCCB**



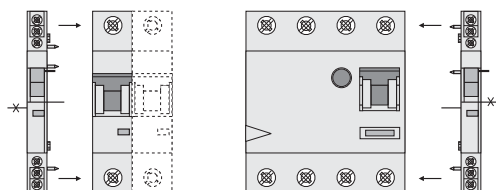
1NO+1NC 24V 50mA min.

**Example: Z-AHK+MCB**



1NO+1NC 5V 10mA min.

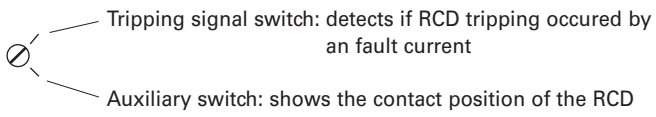
**Example: Z-NHK+MCB RCCB+Z-NHK**



2CO 5V 10mA min.

## Specifications | Auxiliary Switch Z-HD

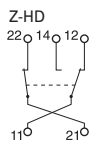
### Function Auxiliary Switch Z-HD



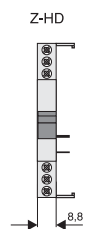
### Technical Data

| <b>Z-HD</b>                              |                           |
|--|---------------------------|
| <b>Electrical</b>                        |                           |
| Subsequent installation to the left onto | FRCmM-125A                |
| Contacts                                 | 1CO + 1NC                 |
| Load rating                              |                           |
| AC11                                     | 6 A / 230 V AC            |
| DC11                                     | 1 A / 230 V DC            |
| <b>Mechanical</b>                        |                           |
| Terminal capacity                        | up to 2.5 mm <sup>2</sup> |

### Connection diagram






### Dimensions (mm)



## Auxiliary Switch ZP-AHK, ZP-IHK, ZP-WHK; Tripping Signal Switch ZP-NHK

### Design: for snapping

|   | For Protective Device / Function | Type Designation | Article No. | Units per package |
|---|----------------------------------|------------------|-------------|-------------------|
|  <p>SG60811</p>  | MCB, RCBO / 1NO+1NC              | ZP-IHK           | 286052      | 4/120             |
|  <p>SG34612</p>  | MCB, RCBO / 1CO                  | ZP-WHK           | 286053      | 4/120             |
|  <p>SG34512</p> | MCB, RCBO / 2CO                  | ZP-NHK           | 248437      | 4/120             |

## Specifications | Auxiliary Switch ZP-IHK, ZP-WHK; Tripping Signal Switch ZP-NHK

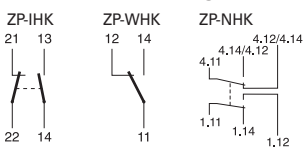
### Description

- Design according to IEC/EN 62019
- No screws required. Can be snapped onto FAZ and FRBmM-1N subsequently
- **ZP-IHK, ZP-WHK:** Can be snapped on additionally 1 time onto itself
- The specified minimum voltages are per contact. Take into account particularly in case of series connection!
- Contact material and design particularly suitable for extra low voltage.
- Contact function with relative movement (self-cleaning contacts)e)
- **ZP-NHK:** The function of one of the two change-over contacts can be switched from "auxiliary switch" to "tripping signal switch"
- Tripping signal contact transmits message of electric tripping, not mechanical switch-off
- **ZP-NHK:** The "Service button" is used to check whether or not the auxiliary switch is correctly wired in the tripping-signal-switch position. Activating the "service button" will mechanically simulate an electrical switch-off, so the mechanism for the electrical switchoff will disengage and can be checked. The main switchgear (MCB or combined MCB/RCD) connected to the ZP-NHK auxiliary switch does not need to trip as well during an inspection through the service button.

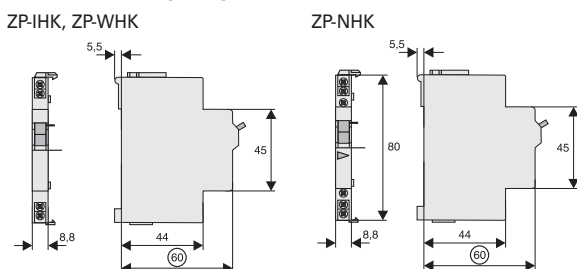
## Technical Data

|   | ZP-IHK   | ZP-WHK                  | ZP-NHK                  |
|---|--|-------------------------|-------------------------|
| <b>Electrical</b>                             |  |                         |                         |
| Contact function                              | 1NO + 1NC  | 1CO                     | 2CO                     |
| Rated voltage                                 | 250 V  | 250 V                   | 250 V                   |
| Frequency                                     | 50/60 Hz   | 50/60 Hz                | 50/60 Hz                |
| Rated current                                 | 6 A  | 6 A                     | 4 A                     |
| Rated thermal current                         | $I_{th}$ 6 A   | 6 A                     | 4 A                     |
| Utilisation category AC13                     |  |                         |                         |
| Rated operational current                     | $I_e$ 3A/250V AC   | 3A/250V AC              | 3A/250V AC              |
| Utilisation category AC15                     |  |                         |                         |
| Rated operational current                     | $I_e$ 2A/250V AC   | 2A/250V AC              | 2A/250V AC              |
| Utilisation category DC12                     |  |                         |                         |
| Rated operational current                     | $I_e$ 0.5A/110V DC                                       | 0.5A/110V DC            | 0.5A/110V DC            |
| Rated insulation voltage                      | $U_I$ 250 V AC   | 250 V AC                | 250 V AC                |
| Minimum operational voltage per contact       | $U_{min}$ 5 V DC   | 5 V DC                  | 5 V DC                  |
| Minimum operational current                   | $I_{min}$ 10 mA DC                                       | 10 mA DC                | 10 mA DC                |
| Rated peak withstand voltage                  | $U_{imp}$ (1.2/50 $\mu$ ) 2.5 kV                         | 2.5 kV                  | 2.5 kV                  |
| Conditional short circuit current             |  |                         |                         |
| with back-up fuse 6A or PLSM-B4-HS            | $I_k$ 1 kA   | 1 kA                    | 1 kA                    |
| Max. back-up fuse, overload and short circuit | 6 A gL / FAZ-B4-HS                                       | 6 A gL / FAZ-B4-HS      | 6 A gL / FAZ-B4-HS      |
| <b>Mechanical</b>                             |  |                         |                         |
| Can be mounted from the left onto             | MCB, RCBO  | MCB, RCBO               | MCB, RCBO               |
| Accessories:                                  | ZP-ASA   | ZP-ASA                  | ZP-ASA                  |
| Tripping indicator "electrical tripping"      | –  | –                       | blue/white              |
| Frame size                                    | 45 mm  | 45 mm                   | 45 mm                   |
| Device height                                 | 80 mm  | 80 mm                   | 80 mm                   |
| Device width                                  | 8.8 mm (0.5MU)   | 8.8 mm (0.5MU)          | 8.8 mm (0.5MU)          |
| Degree of protection, built-in                | IP40   | IP40                    | IP40                    |
| Terminal protection                           | finger and hand touch safe according to BGV A3, ÖVE-EN 6 |                         |                         |
| Terminals                                     | lift terminals   | lift terminals          | lift terminals          |
| Terminal capacity                             | 0.5-2.5 mm <sup>2</sup>                                  | 0.5-2.5 mm <sup>2</sup> | 0.5-2.5 mm <sup>2</sup> |
| Terminal screws                               | M4 (Pozidrive Z2)  | M4 (Pozidrive Z2)       | M3 (Pozidrive Z0)       |
| Fastening torque of terminal screws           | max. 1.2 Nm  | max. 1.2 Nm             | max. 0.8-1.0 Nm         |

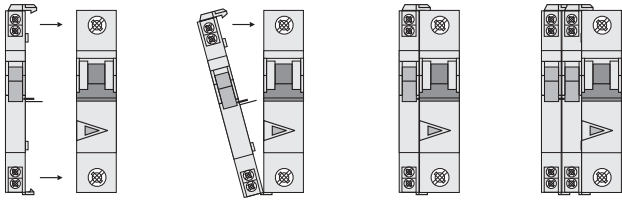
## Connection diagram



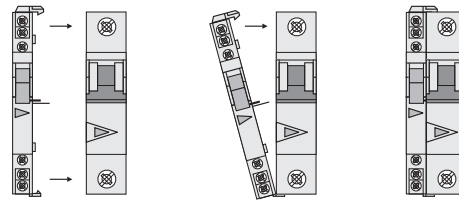
## Dimensions (mm)





## Example: ZP-IHK/(ZP-WHK)+MCB



## Example: ZP-NHK+MCB



## RCCB-Tripping Module Z-.AM

|  | For Protective Device | Type Designation | Article No. | Units per package |
|--|-----------------------|------------------|-------------|-------------------|
|  <p>SG16011</p> | RCCB                  | Z-FAM            | 248293      | 1/60              |
|  <p>SG16211</p> | RCBO                  | Z-KAM            | 248294      | 1/60              |

## Specifications | RCCB Tripping Module Z-FAM, Z-KAM

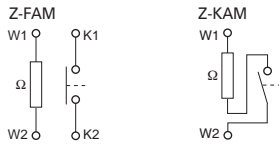
### Description

- For remote switch-off of RCCBs, standard and electronic combined RCD/MCB devices
- Remote switch-off by one or several parallel potential-free contacts, e.g. pushbutton max. rated current 3 A at 250 V, take into account maximum pushbutton voltage
- Remote tripping test by means of remote testing module Z-FW
- Can be mounted subsequently, to be wired according to connection diagram with the respective terminals of the RCCB
- No undesired voltage rise in the consumer system during remote switch-off thanks to integrated breaker contact K1-K2

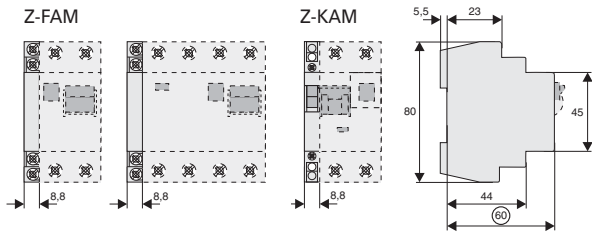
### Technical Data

|                                | Z-FAM   | Z-KAM                     |
|--------------------------------|---|---------------------------|
| <b>Electrical</b>              |   |                           |
| Rated voltage                  | 230(400) V AC   | 230(400) V AC             |
| Frequency                      | 50-60 Hz  | 50-60 Hz                  |
| Rated tripping current         | $I_{\Delta n}$ 0.01 - 0.3 A                               | 0.01 - 0.3 A              |
| Function                       | 1NO   | 1NO                       |
| <b>Mechanical</b>              |   |                           |
| Tripping module for            | RCCB  | RCBO                      |
| Frame size                     | 45 mm   | 45 mm                     |
| Device height                  | 80 mm   | 80 mm                     |
| Device width                   | 8.8 mm (0.5MU)  | 8.8 mm (0.5MU)            |
| Degree of protection, built-in | IP40  | IP40                      |
| Terminal capacity              | 1 - 2x2.5 mm <sup>2</sup>                                 | 1 - 2x2.5 mm <sup>2</sup> |
| Terminal protection            | finger and hand touch safe, according to BGV A3, ÖVE-EN 6 |                           |

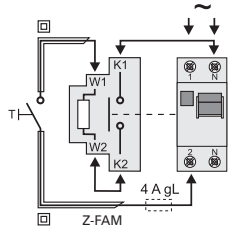
## Connection diagram



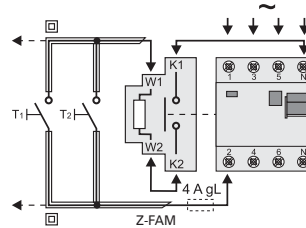
## Dimensions (mm)



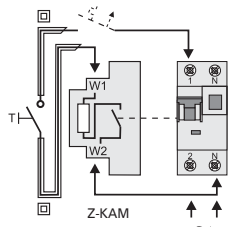
## Connection examples Lay lines to the switching devices with double insulation **and** overload protection, e.g. 4A gL or CLS6-4..-HS



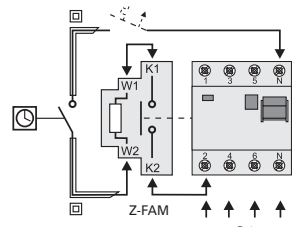
Connection diagram:  
RCCB-2p, RCCB feed above



Connection diagram:  
RCCB-4p, RCCB feed above



Connection diagram:  
RCBO-2p, RCBO feed below



Connection diagram:  
RCCB-4p, RCCB feed below



## Shunt Trip Release Z-ASA, ZP-ASA

| Operational voltage range (V-) | Type Designation | Article No. | Units per package |
|--------------------------------|------------------|-------------|-------------------|
|--------------------------------|------------------|-------------|-------------------|

SG00712



### To be glued on

|         |           |        |      |
|---------|-----------|--------|------|
| 12-110  | Z-ASA/24  | 248286 | 1/60 |
| 110-415 | Z-ASA/230 | 248287 | 1/60 |

SG00212



### To be snapped on

|         |            |        |      |
|---------|------------|--------|------|
| 12-110  | ZP-ASA/24  | 248438 | 1/60 |
| 110-415 | ZP-ASA/230 | 248439 | 1/60 |

## Specifications | Shunt Trip Release Z-ASA, ZP-ASA

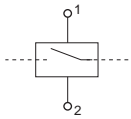
### Description

- Remote release for subsequent mounting onto FAZ, FRBmM-1N, Z-MS
- Module width 1MU
- Additional installation of standard auxiliary switch is possible
- Position indicator red - green
- Type ZP-ASA for snap-on mounting

### Technical Data

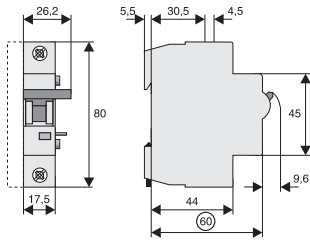
|   | Z-ASA24                 | Z-ASA230                | ZP-ASA24                     | ZP-ASA230                    |
|---|-------------------------|-------------------------|------------------------------|------------------------------|
| <b>Electrical</b>                             |                         |                         |                              |                              |
| Minimum pulse duration                        | 15 ms                   | 10 ms                   | 15 ms                        | 10 ms                        |
| Internal resistance                           | 2.2 Ω                   | 215 Ω                   | 2.2 Ω                        | 215 Ω                        |
| Duty cycle                                    | 100%                    | 100%                    | 100%                         | 100%                         |
| Tripping time                                 | < 20 ms                 | < 20 ms                 | < 20 ms                      | < 20 ms                      |
| Rated peak withstand voltage (1.2/50μs)       | 2.5 kV                  | 2.5 kV                  | 2.5 kV                       | 2.5 kV                       |
| Endurance                                     | > 4000 operating cycles | > 4000 operating cycles | > 4000 operating cycles      | > 4000 operating cycles      |
| <b>AC voltage range</b>                       |                         |                         |                              |                              |
| Operating limit                               | 10 V                    | 60 V                    | 10 V                         | 60 V                         |
| Operational voltage range                     | 12-110 V                | 110-415 V               | 12-110 V                     | 110-415 V                    |
| Maximum current consumption during switch-on  | 15 A                    |                         | 2.1 A                        | 15 A                         |
| Current flow time at max. current consumption | 10 ms                   |                         | 10 ms                        | 10 ms                        |
| <b>DC voltage range</b>                       |                         |                         |                              |                              |
| Operating limit                               | 9 V                     | 72 V                    | 9 V                          | 72 V                         |
| Operational voltage range                     | 10-60 V                 | 110-220 V               | 10-60 V                      | 110-220 V                    |
| Maximum current consumption during switch-on  | 21 A                    |                         | 1 A                          | 21 A                         |
| Current flow time at max. current consumption | 2 ms                    |                         | 2 ms                         | 2 ms                         |
| <b>Mechanical</b>                             |                         |                         |                              |                              |
| Frame size                                    | 45 mm                   | 45 mm                   | 45 mm                        | 45 mm                        |
| Device height                                 | 80 mm                   | 80 mm                   | 80 mm                        | 80 mm                        |
| Device width                                  | 17.5 mm (1MU)           | 17.5 mm (1MU)           | 17.5 mm (1MU)                | 17.5 mm (1MU)                |
| Mounting                                      | bonding                 | bonding                 | to snap on                   | to snap on                   |
| Degree of protection, built-in                | IP40                    | IP40                    | IP40                         | IP40                         |
| Terminals above/below                         | open mouthed/lift       | open mouthed/lift       | open mouthed/lift with guide | open mouthed/lift with guide |
| Klemmquerschnitt                              | 1-25 mm <sup>2</sup>    | 1-25 mm <sup>2</sup>    | 1-25 mm <sup>2</sup>         | 1-25 mm <sup>2</sup>         |
| Fastening torque of terminal screws           | max. 2.4 Nm             | max. 2.4 Nm             | max. 2.4 Nm                  | max. 2.4 Nm                  |

## Connection diagram

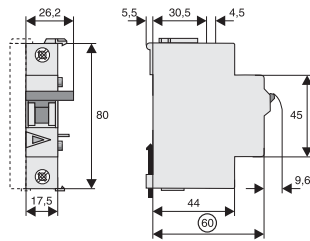


## Dimensions (mm)

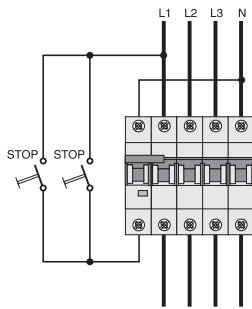
Z-ASA



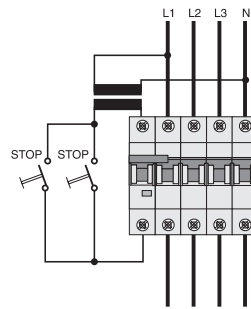
ZP-ASA



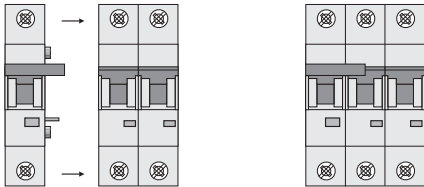
## Connection Example 230 V



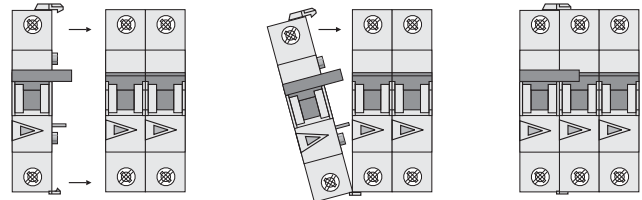
## Connection Example 24 V



## Example: Z-ASA + MCB



## Example: ZP-ASA + MCB



## Undervoltage Release Z-USA, Z-USD

SG78811



| Operational voltage range (V-) / Function | Type Designation | Article No. | Units per package |
|---|------------------|-------------|-------------------|
| <b>To be screwed on</b>                   |                  |             |                   |
| 115 / undelayed                           | Z-USA/115        | 248288      | 1/60              |
| 230 / undelayed                           | Z-USA/230        | 248289      | 1/60              |
| 400 / undelayed                           | Z-USA/400        | 248290      | 1/60              |
| 115 / delayed 0.4s                        | Z-USD/115        | 248292      | 1/60              |
| 230 / delayed 0.4s                        | Z-USD/230        | 248291      | 1/60              |

## Specifications | Undervoltage Release Z-USA, Z-USD

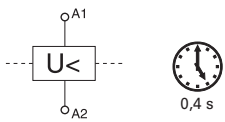
### Description

- Tripping:  
Instantaneous Z-USA  
Delayed Z-USD, typ. 0,4 s
- Voltage control indicator blue/white
- Service key for zero voltage switch-on for testing purposes
- Can be used with FAZ

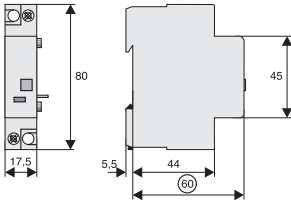
### Technical Data

|                                | Z-US./115   | Z-US./230                 | Z-US./400                 |
|--------------------------------|---|---------------------------|---------------------------|
| <b>Electrical</b>              |   |                           |                           |
| Rated voltage                  | $U_n$ 115 V AC  | 230 V AC                  | 400 V AC                  |
| Frequency                      | 50-60 Hz  | 50-60 Hz                  | 50-60 Hz                  |
| Making threshold               | 80% of $U_n$  | 80% of $U_n$              | 80% of $U_n$              |
| Tripping threshold             | 50% of $U_n$  | 50% of $U_n$              | 50% of $U_n$              |
| <b>Mechanical</b>              |   |                           |                           |
| Frame size                     | 45 mm   | 45 mm                     | 45 mm                     |
| Device height                  | 80 mm   | 80 mm                     | 80 mm                     |
| Device width                   | 17.5 mm (1MU)   | 17.5 mm (1MU)             | 17.5 mm (1MU)             |
| Mounting                       | quick fastening on DIN rail IEC/EN 60715                  |                           |                           |
| Degree of protection, built-in | IP40  | IP40                      | IP40                      |
| Terminals                      | open mouthed/lift   | open mouthed/lift         | open mouthed/lift         |
| Terminal capacity              | 1 - 2x2.5 mm <sup>2</sup>                                 | 1 - 2x2.5 mm <sup>2</sup> | 1 - 2x2.5 mm <sup>2</sup> |
| Terminal protection            | finger and hand touch safe, according to BGV A3, ÖVE-EN 6 |                           |                           |

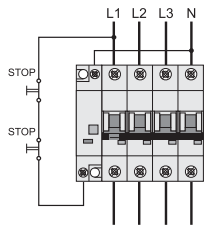
## Connection diagram



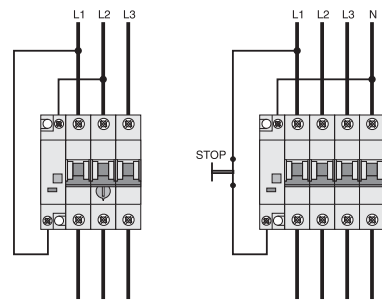
## Dimensions (mm)



## Connection Example Release




## Connection Examples 400V and 230V



Connection example  
Z-USA/400 + Z-MS

Connection example  
Z-USA/230 + MCB

## Switching interlocks IS/SPE-1TE, Z-IS/SPE-1TE

|   | Description  | Type Designation | Article No. | Units per package |
|---|--|------------------|-------------|-------------------|
|  | Switching interlock without lock for Isolators, RCDs, combined RCD/MCBs, ... | IS/SPE-1TE       | 101911      | 5/30              |
|   | Switching interlock without lock for MCBs and Circuit Breaker ZP-A           | Z-IS/SPE-1TE     | 274418      | 5/30              |

## Specifications | Switching interlocks IS/SPE-1TE, Z-IS/SPE-1TE

### Description

- Without lock

**Type IS/SPE-1TE:**

- for Isolators, RCDs, combined RCD/MCBs, ...


**Type Z-IS/SPE-1TE:**

- for MCB



## Accessories for Add-on Residual Current Protection Unit FBHmV

### Shunt Trip Release Kit Z-BHASA

|   | Operational voltage range V~ | Type Designation | Article No. | Units per package |
|---|------------------------------|------------------|-------------|-------------------|
|  | 110-415                      | Z-BHASA/230      | 248445      | 8                 |
|   | 12-60                        | Z-BHASA/24       | 248444      | 8                 |

## Specifications | Shunt Trip Release Kit Z-BHASA

### Description

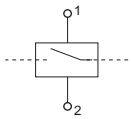
- Can be mounted subsequently
- Contact position indicator red - green
- Wide operational voltage range
- Sufficient power of extra low voltage source must be ensured  
FBHmV-ASA/24: min. 90 VA
- Screws for mounting included FBHmV => BHASA => AZ

## Accessories for Add-on Residual Current Protection Unit FBHmV

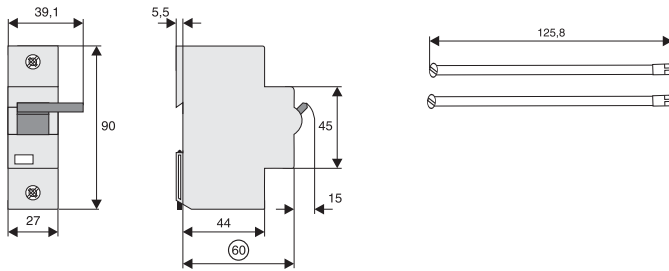
### Technical Data

|   | Z-BHASA/24                               | Z-BHASA/230             |
|---|--|-------------------------|
| <b>Electrical</b>                             |  |                         |
| Minimum pulse duration                        | 15 ms                                    | 10 ms                   |
| Internal resistance                           | 2 W                                      | 130 W                   |
| Duty  | 100%                                     | 100%                    |
| Tripping time                                 | < 20 ms                                  | < 20 ms                 |
| Peak withstand voltage (1.2/50µs)             | 2 kV                                     | 2 kV                    |
| Endurance                                     | >4,000 operating cycles                  | >4,000 operating cycles |
| <b>AC voltage range:</b>                      |  |                         |
| Responding limit                              | 8 V                                      | 70 V                    |
| Operational voltage range                     | 12-60 V                                  | 110-415 V               |
| Maximum current consumption during switch-on  | 14 A                                     | 3.4 A                   |
| Current flow time at max. current consumption | 4.0 ms                                   | 4.5 ms                  |
| <b>DC voltage range:</b>                      |  |                         |
| Responding limit                              | 11 V                                     | 90 V                    |
| Operational voltage range                     | 12-60 V                                  | 110-230 V               |
| Maximum current consumption during switch-on  | 23.5 A typ.                              | 1.7 A typ.              |
| Current flow time at max. current consumption | 2 ms                                     | 4 ms                    |
| <b>Mechanical</b>                             |  |                         |
| Frame size                                    | 45 mm                                    | 45 mm                   |
| Device height                                 | 90 mm                                    | 90 mm                   |
| Device width                                  | 27 mm                                    | 27 mm                   |
| Mounting                                      | quick fastening on DIN rail IEC/EN 60715 |                         |
| Degree of protection, built-in                | IP40                                     | IP40                    |
| Upper and lower terminal screws               | lift terminals                           | lift terminals          |
| Terminal capacity                             | 2.5-30 mm <sup>2</sup>                   | 2.5-30 mm <sup>2</sup>  |
| Fastening torque of terminal screws           | 4 Nm                                     | 4 Nm                    |

## Connection diagram




## Dimensions (mm)



## Accessories for Miniature Circuit Breakers AZ

### Shunt Trip Release Z-LHASA

|   | Operational voltage range V~ | Type Designation | Article No. | Units per package |
|---|------------------------------|------------------|-------------|-------------------|
|  | 110-415                      | Z-LHASA/230      | 248442      | 8                 |
|   | 12-60                        | Z-LHASA/24       | 248441      | 8                 |

## Specifications | Shunt Trip Release Z-LHASA

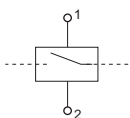
### Description

- Can be mounted subsequently
- Contact position indicator red - green
- Wide operational voltage range
- Sufficient power of extra low voltage source must be ensured  
Z-LHASA/24: min. 90 VA

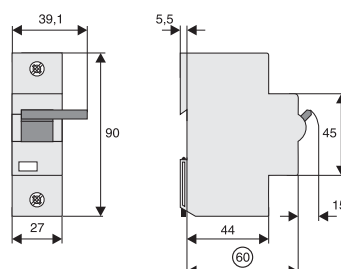
### Technical Data

|   | Z-LHASA/24                               | Z-LHASA/230             |
|---|--|-------------------------|
| <b>Electrical</b>                             |  |                         |
| Minimum pulse duration                        | 15 ms                                    | 10 ms                   |
| Internal resistance                           | 2 W                                      | 130 W                   |
| Duty  | 100%                                     | 100%                    |
| Tripping time                                 | < 20 ms                                  | < 20 ms                 |
| Peak withstand voltage (1.2/50µs)             | 2 kV                                     | 2 kV                    |
| Endurance                                     | >4,000 operating cycles                  | >4,000 operating cycles |
| <b>AC voltage range:</b>                      |  |                         |
| Responding limit                              | 8 V                                      | 70 V                    |
| Operational voltage range                     | 12-60 V                                  | 110-415 V               |
| Maximum current consumption during switch-on  | 14 A                                     | 3.4 A                   |
| Current flow time at max. current consumption | 4.0 ms                                   | 4.5 ms                  |
| <b>DC voltage range:</b>                      |  |                         |
| Responding limit                              | 11 V                                     | 90 V                    |
| Operational voltage range                     | 12-60 V                                  | 110-230 V               |
| Maximum current consumption during switch-on  | 23.5 A typ.                              | 1.7 A typ.              |
| Current flow time at max. current consumption | 2 ms                                     | 4 ms                    |
| <b>Mechanical</b>                             |  |                         |
| Frame size                                    | 45 mm                                    | 45 mm                   |
| Device height                                 | 90 mm                                    | 90 mm                   |
| Device width                                  | 27 mm                                    | 27 mm                   |
| Mounting                                      | quick fastening on DIN rail IEC/EN 60715 |                         |
| Degree of protection, built-in                | IP40                                     | IP40                    |
| Upper and lower terminal screws               | lift terminals                           | lift terminals          |
| Terminal capacity                             | 2.5-30 mm <sup>2</sup>                   | 2.5-30 mm <sup>2</sup>  |
| Fastening torque of terminal screws           | 4 Nm                                     | 4 Nm                    |

### Connection diagram



### Dimensions (mm)





## Accessories for Miniature Circuit Breakers AZ

### Auxiliary Switch Z-LHK

| Function | Type Designation | Article No. | Units per package |
|----------|------------------|-------------|-------------------|
| 1NO+1NC  | Z-LHK            | 248440      | 10/100            |

SG16111



## Specifications | Auxiliary Switch Z-LHK

### Description

- Auxiliary switch according to IEC 947-5-1
- Can be mounted subsequently

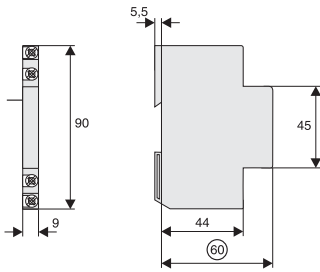
### Technical Data

|   |                       | Z-LHK  |
|---|-----------------------|--|
| <b>Electrical</b>                             |                       |  |
| Contact function                              |                       | 1NO + 1NC  |
| Rated voltage                                 |                       | 250 V  |
| Frequency                                     |                       | 50/60 Hz   |
| Rated current                                 |                       | 8 A  |
| Rated thermal current                         | $I_{th}$              | 8 A  |
| Utilisation category AC13                     |                       |  |
| Rated operational current                     | $I_e$                 | 6A/250V AC<br>2A/440V AC                                 |
| Utilisation category AC15                     |                       |  |
| Rated operational current                     | $I_e$                 | –  |
| Utilisation category DC12                     |                       |  |
| Rated operational current                     | $I_e$                 | –  |
| Utilisation category DC13                     |                       |  |
| Rated operational current                     | $I_e$                 | 0.5A/230V DC<br>2A/110V DC<br>4A/60V DC                  |
| Rated insulation voltage                      | $U_I$                 | 250 V AC   |
| Minimum operational voltage per contact       | $U_{min}$             | 24 V AC/DC   |
| Minimum operational current                   | $I_{min}$             | 50 mA AC/DC  |
| Rated peak withstand voltage                  | $U_{imp} (1.2/50\mu)$ | 2.5 kV   |
| Conditional short circuit current             | $I_k$                 | 1 kA   |
| with back-up fuse 6A or FAZ-B4-HS             |                       |  |
| Max. back-up fuse, overload and short circuit |                       | 6 A gL / FAZ-4/..B-HS                                    |
| <b>Mechanical</b>                             |                       |  |
| Can be mounted from the left onto             |                       | AZ   |
| Can be mounted from the right onto            |                       | –  |
| Tripping indicator "electrical tripping"      |                       | –  |
| Frame size                                    |                       | 45 mm  |
| Device height                                 |                       | 80 mm  |
| Device width                                  |                       | 8.8 mm (0.5MU)   |
| Mounting                                      |                       | onto switching device                                    |
| Degree of protection, built-in                |                       | IP40   |
| Terminal protection                           |                       | finger and hand touch safe according to BGV A3, ÖVE-EN 6 |
| Terminals                                     |                       | lift terminals   |
| Terminal capacity                             |                       | 0.5-2.5 mm <sup>2</sup>                                  |
| Terminal screws                               |                       | M3 (PoziDrive Z0)  |
| Fastening torque of terminal screws           |                       | max. 0.8-1.0 Nm  |

## Connection diagram



## Dimensions (mm)



## Accessories for Miniature Circuit Breakers AZ

### Interlocks LH-SP

| Function            | Type Designation | Article No. | Units per package |
|---------------------|------------------|-------------|-------------------|
| Tripping interlock  | LH-SPL           | 285752      | 1                 |
| Tripping interlock  | LH-SPE           | 215999      | 1                 |
| Switchoff interlock | LH-SPA           | 216000      | 1                 |

### Specifications | Anti-Tamper Device LH-SPE, LH-SPL

#### Description

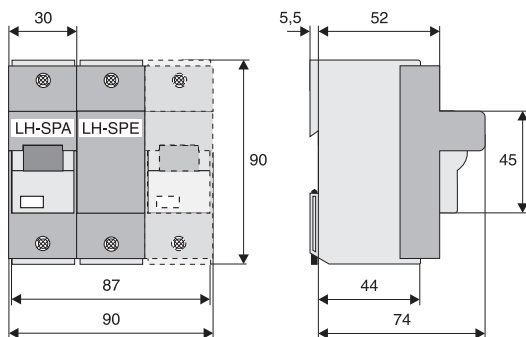
- Prevents undesired switching ON or OFF

### Specifications | Switchoff Interlock LH-SPA

#### Description


- Prevents undesired switch-OFF

### Dimensions (mm)



## Accessories for Miniature Circuit Breaker FAZ-...-NA, -RT, -DU

### Auxiliary Contact Z-IHK-NA

|   | Operational Voltage Range | Type Designation | Article No. | Units per package |
|---|---------------------------|------------------|-------------|-------------------|
|  | 250 VAC                   | Z-IHK-NA         | 113895      | 1                 |

## Specifications | Auxiliary Contact Z-IHK-NA

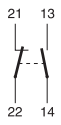
### Description

- Design according to IEC/EN 60947-5-1, IEC/EN 62019
- Field installable
- The specified minimum voltages are per contact—take into account particularly in case of series connection
- Self-cleaning contacts
- Contact material and design particularly suitable for extra low voltage
- Tripping signal contact transmits message of electric tripping, not mechanical switch-off
- Test key for contact function “electrical tripping”
- Will allow for > 480Y/277 VAC rating

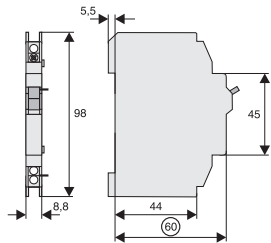
### Technical Data

|   |                       | Z-IHK-NA   |
|---|-----------------------|--|
| <b>Electrical</b>                             |                       |  |
| Contact function                              |                       | 1NO + 1NC  |
| Rated voltage                                 |                       | 250V   |
| Rated current                                 |                       | 6A   |
| Rated thermal current                         | $I_{th}$              | 6A   |
| Utilization category AC13                     |                       |  |
| Rated operational current                     | $I_e$                 | 3A/250 Vac   |
| Utilization category AC15                     |                       |  |
| Rated operational current                     | $I_e$                 | 2A/250 Vac   |
| Utilization category DC12                     |                       |  |
| Rated operational current                     | $I_e$                 | 0.5A/110 Vdc   |
| Rated insulation voltage                      | $U_i$                 | 250 Vac  |
| Minimum operational voltage per contact       | $U_{min}$             | 5 Vdc  |
| Minimum operational current                   | $I_{min}$             | 10 mA AC/DC  |
| Rated peak withstand voltage                  | $U_{imp} (1.2/50\mu)$ | 4 kV   |
| Conditional short circuit current             | $I_k$                 |  |
| with Back-Up Fuse 6A                          |                       | 1 kA   |
| Max. back-up fuse, overload and short circuit |                       | 6 A gL / FAZ-4/..B-HS                                    |
| <b>Mechanical</b>                             |                       |  |
| Tripping indicator “electrical tripping”      |                       | —  |
| Frame size                                    |                       | 45 mm  |
| Device height                                 |                       | 80 mm  |
| Device width                                  |                       | 8.8 mm (0.5MU)   |
| Mounting                                      |                       | —  |
| Degree of protection, built-in                |                       | IP40   |
| Terminal protection                           |                       | Finger and hand touch safe according to BGV A3, ÖVE-EN 6 |
| Terminals                                     |                       | Lift terminals   |
| Terminal capacity                             |                       | 0.5–2.5 mm <sup>2</sup>                                  |
| Terminal screws                               |                       | M3 (Pozidrive Z2)  |
| Tightening torque of terminal screws          |                       | max. 1.2 Nm  |

## Connection diagram



## Dimensions (mm)



## Accessories for Miniature Circuit Breaker FAZ-..-NA, -RT, -DU

### Shunt Trip FAZ-XAA-NA

SG13511



| Operational Voltage Range  | Type Designation     | Article No. | Units per package |
|----------------------------|----------------------|-------------|-------------------|
| 12–110 VAC<br>12–60 VDC    | FAZ-XAA-NA12-110VAC  | 102037      | 1                 |
| 110–415 VAC<br>110–230 VDC | FAZ-XAA-NA110-415VAC | 102036      | 1                 |

## Specifications | Shunt Trip FAZ-XAA-NA

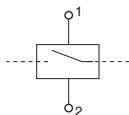
### Description

- Remote release for subsequent mounting onto FAZ-NA
- Additional installation of standard auxiliary switch is possible
- Position indicator red–green

### Technical Data

|                                      | FAZ-XAA-NA12-110VAC                                      | FAZ-XAA-NA110-415VAC                                     |
|--------------------------------------|--|--|
| <b>Electrical</b>                    |  |  |
| Can be mounted onto                  | FAZ-NA / FAZ-NA-DC / FAZ-RT/-DU                          | FAZ-NA / FAZ-NA-DC / FAZ-RT/-DU                          |
| Operational voltage range            | 12–110 Vac<br>12–60 Vdc                                  | 110–415 Vac<br>110–230 Vdc                               |
| Frequency                            | 50/60 Hz   | 50/60 Hz   |
| <b>Mechanical</b>                    |  |  |
| Frame size                           | 45 mm  | 45 mm  |
| Device height                        | 105 mm   | 105 mm   |
| Device width                         | 17.5 mm  | 17.5 mm  |
| Mounting                             | Quick fastening with two lock-in positions on EN 50022   |  |
| Degree of protection, built-in       | IP40   | IP40   |
| Terminal protection                  | Finger and hand touch safe according to BGV A3, ÖVE-EN 6 | Finger and hand touch safe according to BGV A3, ÖVE-EN 6 |
| Terminals                            | Open mouthed/lift  | Open mouthed/lift  |
| Terminal capacity, one and two wires | 18–10 AWG  | 18–10 AWG  |

### Connection diagram



## Terminal Covers

| Description | Type Designation | Article No. | Units per package |
|-------------|------------------|-------------|-------------------|
|-------------|------------------|-------------|-------------------|

### Terminal Covers for RCDs

|        |             |        |    |
|--------|-------------|--------|----|
| 2-pole | Z-RC/AK-2TE | 285385 | 10 |
| 4-pole | Z-RC/AK-4TE | 101062 | 10 |

### Terminal Covers for Add-on Device

|          |              |           |    |
|----------|--------------|-----------|----|
| 2-pole   | Z-CV/AO-2P   | 221957600 | 10 |
| 3+4-pole | Z-CV/AO-3-4P | 221957500 | 10 |



### Terminal Covers for MCB, RCBO

|        |            |           |    |
|--------|------------|-----------|----|
| 2-pole | Z-CV/SD-2P | 221954800 | 10 |
| 3-pole | Z-CV/SD-3P | 221954900 | 10 |
| 4-pole | Z-CV/SD-4P | 221953900 | 10 |


### Terminal Cover for MCB

|        |           |           |    |
|--------|-----------|-----------|----|
| 1-pole | Z7-AK-1TE | 750754200 | 10 |
|--------|-----------|-----------|----|


## Remote Control and Automatic Switching Device Z-ZW

| Function   | Type Designation   | Article No. | Units per package |      |
|--|--|-------------|-------------------|------|
| <br>SG30811 | Automatic restarting 230VAC  | Z-FW-LP     | 248296            | 1/20 |
|  | Automatic restarting 24-48VDC  | Z-FW-LPD    | 265244            | 1/20 |
| <br>SG30711 | + Remote control ON/OFF/TEST<br>(only in connection with Z-FW-LP, -LPD from delivery date 2006!) | Z-FW-MO     | 284730            | 1    |

## Pre-mounted sets Z-FW

| Operational voltage range   | Type Designation | Article No. | Units per package |      |
|---|------------------|-------------|-------------------|------|
| <br>SG31311 | 230 VAC          | Z-FW-LP/MO  | 290171            | 1/12 |
|   | 24-48 VDC        | Z-FW-LPD/MO | 290172            | 1/12 |

## Remote Testing Module Z-FW (for Z-FW-LP/MO set use only)

| Operational voltage range  | Type Designation | Article No. | Units per package |       |
|--|------------------|-------------|-------------------|-------|
| <br>SG12111 | 0.01 A           | Z-FW/001    | 248297            | 4/120 |
|  | 0.03 A           | Z-FW/003    | 248298            | 4/120 |
|  | 0.1 A            | Z-FW/010    | 248299            | 4/120 |
|  | 0.3 A            | Z-FW/030    | 248300            | 4/120 |
|  | 0.5 A            | Z-FW/050    | 248301            | 4/120 |

## Specifications | Remote Control and Automatic Switching Z-FW

### Description

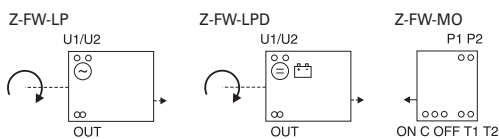
- Shape compatible switching device suitable for subsequent installation for automatic re-setting and remote control of CLS6, PFIM, PFHM-4p, dRCM, Z-A40, PFR, Z-MS
- Mechanical interlock, can be sealed with leads
- Mechanical switching capability up to max. PFIM-100/4p, CLS6-100/4p
- Operating and alarm display by green and red LED
- Function extension with Switching Modul Z-FW-MO  
Operating and trouble display by LED pre-assembled only with Z-FW...



## Technical Data

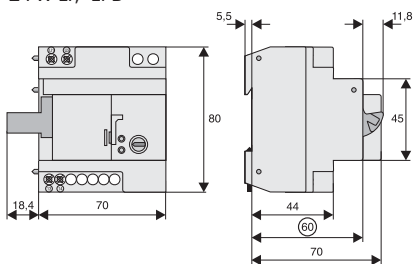
|  | Z-FW-LP  | Z-FW-LPD  | Z-FW-MO   |
|--|--|---|---|
| <b>Electrical</b>  |  |   |   |
| Possible operating voltages                              | 220-240 V AC   | 24-48 V DC  | –   |
| Frequency  | 50/60 Hz   | –   | –   |
| Testing module (0.5MU) for remote testing of RCDs        | Z-FW...  | Z-FW...   | –   |
| Control voltage for remote control                       | –  | –   | 24-230 V AC/DC  |
| Relay output for tripping test with Z-FW                 | –  | –   | 400 V AC max.   |
| Relay output for alarm, potential-free                   | 5A/250V AC   | 5A/250V AC  | –   |
| Functions  | automatic restarting   | automatic restarting                                  | +ON/OFF/TEST  |
| Function selector  | Automatic 5x,<br>OFF/RESET   | Automatic 5x,<br>OFF/RESET                            | ON, OFF/RESET   |
| Remote control function via telephone with Telecommander | –  | –   | –   |
| <b>Mechanical</b>  |  |   |   |
| Frame size   | 45 mm  | 45 mm   | 45 mm   |
| Device height  | 80 mm  | 80 mm   | 80 mm   |
| Device width   | 70 mm  | 70 mm   | 35 mm   |
| Mounting   | quick fastening with 2 lock-in positions<br>on DIN rail IEC/EN 60715 |   | –   |
| Degree of protection, built-in                           | IP40   | IP40  | IP40  |
| Terminal protection                                      | finger and hand touch safe according to BGV A3, ÖVE-EN 6             |   |   |
| Terminals  | lift terminals   | lift terminals  | lift terminals  |
| Terminal capacity  | 2 x 1.5 mm <sup>2</sup> or<br>1 x 2.5 mm <sup>2</sup>                | 2 x 1.5 mm <sup>2</sup> or<br>1 x 2.5 mm <sup>2</sup> | 4 x 1.5 mm <sup>2</sup> or<br>2 x 2.5 mm <sup>2</sup> |
| Scope of delivery  | –  | –   | Coupling plug   |

## Connection diagram

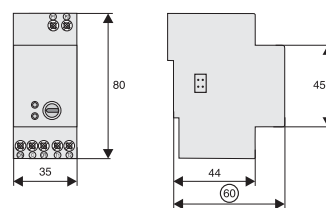


## Dimensions (mm)

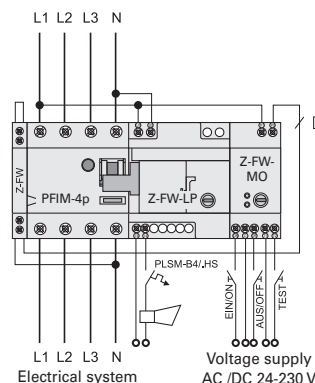
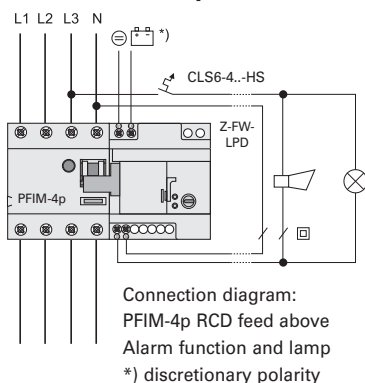
Z-FW-LP, -LPD



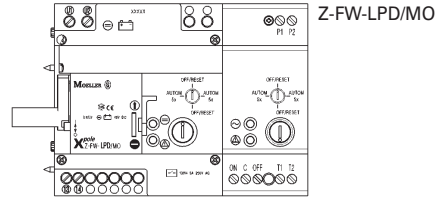
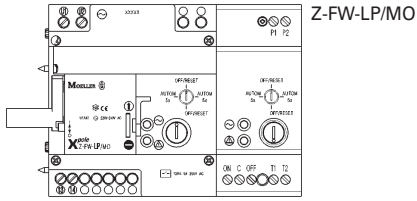
Z-FW-MO



## Connection example



## Pre-mounted Sets

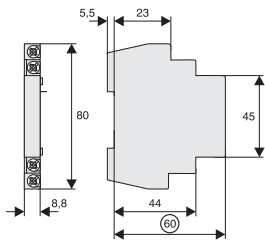


## Specifications | Remote Testing Module Z-FW (for Z-FW-LP)

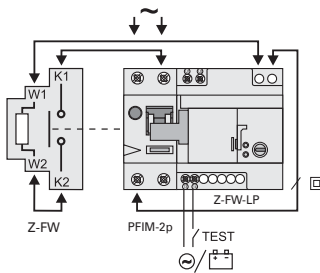
### Description

- External testing module with testing resistor for RCDs
- Proper "external" test key function according to the applicable rules thanks to design adapted to the rated tripping current
- For remote testing with remote control and automatic switching device Z-FW-LP
- No undesired voltage rise in the consumer system during remote switch-off thanks to integrated breaker contact K1-K2
- Can also be used as a remote tripping module for PFIM, PFHM

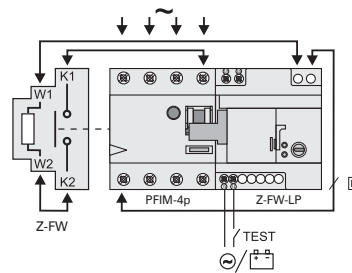
### Dimensions (mm)



### Connection examples



Connection diagram:  
PFIM-2p, RCD feed above



Connection diagram:  
PFIM-4p, RCD feed above