

# Aluminum Service Entrance (SE) Cable



Type SE, Style SER and SEU Service Entrance Cable. 600 Volt. Alumaflex® Brand Aluminum Alloy (AA-8176) Conductors. Individual Conductors Rated XHHW or THHN/THWN Jacket and Inner Conductors are Sunlight Resistant.



## APPLICATIONS

Southwire Type SE, service entrance cable is used to convey power from the service drop to the meter base and from the meter base to the distribution panelboard; however, it may be used in all applications where Type SE cable is permitted. SE may be used in wet or dry above ground locations at temperatures not to exceed 90°C. The voltage rating is 600 volts.

## STANDARDS & REFERENCES

Southwire Type SE cable complies with the following:

- ASTM- B-800 and B-801
- UL Standard 44 for XHHW-2
- UL Standard 83 for THHN/THWN-2
- Federal Specification A-A-59544
- National Electrical Code, NFPA 70, 2011 Edition
- RoHS

## CONSTRUCTION

Southwire Type SE cable is constructed with Alumaflex® AA-8000 series aluminum alloy, compacted stranded conductors. The conductors are covered with a sunlight resistant Type XHHW-2 or Type THHN/THWN-2-insulation. A reinforcement tape is wrapped around the conductors for added strength and conformity. A gray sunlight-resistant polyvinyl chloride (PVC) outer jacket covers the entire assembly. Style SEU cable has two phase conductors surrounded by a concentric neutral while the SER style has two, three or four phase conductors and a bare neutral.

Southwire Style SER Cable's phase conductors are identified by a colored stripe on the insulation.

3 conductor – Black and Black with Red Stripe

4 conductor – Black, Black with White Stripe and Black with Red Stripe

5 conductor – Black, Black with White Stripe, Black with Red Stripe and Black with Blue Stripe



| Conductor<br>Size/Const. AWG or kcmil  | Stranding                       |                                  | Nominal<br>O.D.<br>(Mils) | Allowable Ampacities |      |      |          | Approximate<br>Net Weight<br>Per 1000'<br>(Lbs) | Standard<br>Package |
|--|---------------------------------|----------------------------------|---------------------------|----------------------|------|------|----------|---|---------------------|
|  | Phase<br>Conductor &<br>Neutral | Equipment<br>Ground<br>Conductor |                           | 60°C                 | 75°C | 90°C | Dwelling |   |                     |
| SER Aluminum Two-Conductor With Bare Ground (Formerly referred to as "EZ-SE")            |                                 |                                  |                           |                      |      |      |          |   |                     |
| 6-6-6  | 7                               | -                                | 650                       | 40                   | 50   | 60   | -        | 150   | B                   |
| 4-4-4  | 7                               | -                                | 745                       | 55                   | 65   | 75   | -        | 203   | B                   |
| 4-4-6  | 7                               | -                                | 745                       | 55                   | 65   | 75   | -        | 203   | B                   |
| 2-2-2  | 7                               | -                                | 864                       | 75                   | 90   | 100  | 100      | 290   | B                   |
| SER Aluminum Three Conductor With Bare Ground (Formerly referred to as "Four Conductor") |                                 |                                  |                           |                      |      |      |          |   |                     |
| 8-8-8-8  | 1                               | 1                                | 612                       | 30                   | 40   | 45   | -        | 136   | B                   |
| 6-6-6-6  | 7                               | 7                                | 717                       | 40                   | 50   | 60   | -        | 196   | B                   |
| 4-4-4-6  | 7                               | 7                                | 823                       | 55                   | 65   | 75   | -        | 252   | B                   |
| 2-2-2-4  | 7                               | 7                                | 956                       | 75                   | 90   | 100  | 100      | 359   | B                   |
| 1-1-1-3  | 8                               | 7                                | 1079                      | 85                   | 100  | 115  | 110      | 449   | C                   |
| 1/0-1/0-1/0-2  | 10                              | 1                                | 1168                      | 100                  | 120  | 135  | 125      | 540   | C                   |
| 2/0-2/0-2/0-1  | 12                              | 1                                | 1264                      | 115                  | 135  | 150  | 150      | 652   | C                   |
| 3/0-3/0-3/0-1/0  | 16                              | 1                                | 1371                      | 130                  | 155  | 175  | 175      | 786   | C                   |
| 4/0-4/0-4/0-2/0  | 19                              | 1                                | 1496                      | 150                  | 180  | 205  | 200      | 960   | C                   |
| 250-250-250-3/0  | 22                              | 1                                | 1839                      | 170                  | 205  | 230  | 225      | 1458  | C                   |
| SER Aluminum Four Conductor With Bare Ground (Formerly referred to as "Five Conductor")  |                                 |                                  |                           |                      |      |      |          |   |                     |
| 2-2-2-2-4  | 6                               | 7                                | 1059                      | 75                   | 90   | 100  | 100      | 452   | B                   |
| 2/0-2/0-2/0-2/0-1  | 12                              | 1                                | 1404                      | 115                  | 135  | 150  | 150      | 827   | C                   |
| 4/0-4/0-4/0-2/0  | 19                              | 1                                | 1672                      | 150                  | 180  | 205  | 200      | 1228  | C                   |
| 250-250-250-250-3/0  | 22                              | 1                                | 1847                      | 170                  | 205  | 230  | 225      |   | C                   |

| Conductor<br>Size/Const. AWG or kcmil  | Stranding                       |                                  | Nominal O.D.<br>(Mils) | Allowable Ampacities |      |      |          | Approximate<br>Net Weight<br>Per 1000'<br>(Lbs) | Standard<br>Package |
|--|---------------------------------|----------------------------------|------------------------|----------------------|------|------|----------|---|---------------------|
|  | Phase<br>Conductor &<br>Neutral | Equipment<br>Ground<br>Conductor |                        | 60°C                 | 75°C | 90°C | Dwelling |   |                     |
| SEU Aluminum Two Conductor With Bare Concentric Ground (Formerly referred to as "Three Conductor") |                                 |                                  |                        |                      |      |      |          |   |                     |
| 6-6-6  | 7                               | 8                                | 430x687                | 40                   | 50   | 60   | -        | 145   | B,C,E               |
| 4-4-4  | 7                               | 12                               | 499x800                | 55                   | 65   | 75   | -        | 198   | B                   |
| 4-4-6  | 7                               | 15                               | 474x775                | 55                   | 65   | 75   | -        | 181   | B                   |
| 2-2-2  | 7                               | 14                               | 569x925                | 75                   | 90   | 100  | 100      | 283   | B,C,G               |
| 2-2-4  | 7                               | 18                               | 554x910                | 75                   | 90   | 100  | 100      | 259   | B,C,G               |
| 2/0-2/0-2/0  | 18                              | 18                               | 736x1221               | 115                  | 135  | 150  | 150      | 514   | C                   |
| 2/0-2/0-1  | 18                              | 14                               | 720x1205               | 115                  | 135  | 150  | 150      | 468   | C                   |
| 4/0-4/0-4/0  | 18                              | 18                               | 878x1462               | 150                  | 180  | 205  | 205      | 765   | C                   |
| 4/0-4/0-2/0  | 18                              | 18                               | 835x1419               | 150                  | 180  | 205  | 205      | 691   | C                   |

Table values reflect XHHW-2 conductors. Allowable ampacities shown are for general use as specified by the National Electrical Code, 2011 Edition, Section 310.15.

60°C - When terminated to equipment for circuits rated 100 amperes or less or marked for 14 through 1 AWG conductors. See NEC Article 338.10 (B)(4).

75°C - When terminated to equipment for circuits rated 100 amperes or marked for conductors larger than 1 AWG conductors. May not apply, see NEC Article 338.10 (B)(4).

90°C - Wet or dry locations. For ampacity de-rating purposes.

Dwelling - For units, conductors shall be permitted at listed ampacities as 120/240-volt, 3-wire, single-phase services and feeders per NEC Article 310.15.

\*For compact-stranded construction, the number of wires, as permitted by UL Standard 854 and ASTM B-801 may be reduced as follows: 19-wire constructions - 18 wires minimum.

Package Codes:  
B - 1,000'  
C - 500'  
E-250'  
G-200'

#### RECOMMENDED SAMPLE SPECIFICATIONS:

SER Sample Specification: Cable shall be UL-listed Type SE, Style SER, suitable for operation at 600 volts or less as specified in the National Electrical Code. Conductors shall be AlumaFlex™ aluminum alloy, weather resistant PVC jacketed, as manufactured by Southwire Company or approved equal. SEU Sample Specification: Cable shall be UL-listed Type SE, Style SEU, suitable for operation at 600 volts or less as specified in the National Electrical Code. Conductors shall be AlumaFlex™ aluminum alloy, weather resistant PVC jacketed, as manufactured by Southwire Company or approved equal.



| Conductor  | Stranding                 |                            |  |
|--|---------------------------|----------------------------|--|
| Size/Const. AWG or kcmil   | Phase Conductor & Neutral | Equipment Ground Conductor | Stock Numbers                          |
| SER Aluminum Two-Conductor With Bare Ground (Formerly referred to as "EZ-SE")            |                           |                            |  |
| 6-6-6  | 7                         | -                          | <b>Stock #: 326678</b>                 |
| 4-4-4  | 7                         | -                          | <b>Stock #: 326660</b>                 |
| 4-4-6  | 7                         | -                          | <b>Stock #: 552500</b>                 |
| 2-2-2  | 7                         | -                          | <b>Stock #: N/A</b>                    |
| SER Aluminum Three Conductor With Bare Ground (Formerly referred to as "Four Conductor") |                           |                            |  |
| 8-8-8-8  | 1                         | 1                          | <b>Stock #: 130989</b>                 |
| 6-6-6-6  | 7                         | 7                          | <b>Stock #: 130997 (T), 592331 (X)</b> |
| 4-4-4-6  | 7                         | 7                          | <b>Stock #: 131003</b>                 |
| 2-2-2-4  | 7                         | 7                          | <b>Stock #: 131029</b>                 |
| 1-1-1-3  | 8                         | 7                          | <b>Stock #: 131037</b>                 |
| 1/0-1/0-1/0-2  | 10                        | 1                          | <b>Stock #: 131045</b>                 |
| 2/0-2/0-2/0-1  | 12                        | 1                          | <b>Stock #: 131052</b>                 |
| 3/0-3/0-3/0-1/0  | 16                        | 1                          | <b>Stock #: 131060</b>                 |
| 4/0-4/0-4/0-2/0  | 19                        | 1                          | <b>Stock #: 131078</b>                 |
| 250-250-250-3/0  | 22                        | 1                          | <b>Stock #: 552504</b>                 |
| SER Aluminum Four Conductor With Bare Ground (Formerly referred to as "Five Conductor")  |                           |                            |  |
| 2-2-2-2-4  | 6                         | 7                          | <b>Stock #: 277186</b>                 |
| 2/0-2/0-2/0-2/0-1  | 12                        | 1                          | <b>Stock #: 327445</b>                 |
| 4/0-4/0-4/0-4/0-2/0  | 19                        | 1                          | <b>Stock #: 279968</b>                 |
| 250-250-250-250-3/0  | 22                        | 1                          | <b>Stock #: 555869</b>                 |

| Conductor   | Stranding                 |                            |                        |
|---|---------------------------|----------------------------|------------------------|
| Size/Const. AWG or kcmil  | Phase Conductor & Neutral | Equipment Ground Conductor | Stock Numbers          |
| SEU Aluminum Two Conductor With Bare Conentric Ground (Formerly referred to as "Three Conductor") |                           |                            |                        |
| 6-6-6   | 7                         | 8                          | <b>Stock #: 130864</b> |
| 4-4-4   | 7                         | 12                         | <b>Stock #: 130872</b> |
| 4-4-6   | 7                         | 15                         | <b>Stock #: 130948</b> |
| 2-2-2   | 7                         | 14                         | <b>Stock #: 130880</b> |
| 2-2-4   | 7                         | 18                         | <b>Stock #: 130955</b> |
| 2/0-2/0-2/0   | 18                        | 18                         | <b>Stock #: 130914</b> |
| 2/0-2/0-1   | 18                        | 14                         | <b>Stock #: 130963</b> |
| 4/0-4/0-4/0   | 18                        | 18                         | <b>Stock #: 130930</b> |
| 4/0-4/0-2/0   | 18                        | 18                         | <b>Stock #: 130971</b> |



# Aluminum Service Entrance (SE) Cable



Type SE, Style SER and SEU Service Entrance Cable. 600 Volt. Alumaflex® Brand Aluminum Alloy (AA-8176) Conductors. Individual Conductors Rated XHHW or THHN/THWN Jacket and Inner Conductors are Sunlight Resistant.



## APPLICATIONS

Southwire Type SE, service entrance cable is used to convey power from the service drop to the meter base and from the meter base to the distribution panelboard; however, it may be used in all applications where Type SE cable is permitted. SE may be used in wet or dry above ground locations at temperatures not to exceed 90°C. The voltage rating is 600 volts.

## STANDARDS & REFERENCES

Southwire Type SE cable complies with the following:

- ASTM- B-800 and B-801
- UL Standard 44 for XHHW-2
- UL Standard 83 for THHN/THWN-2
- Federal Specification A-A-59544
- National Electrical Code, NFPA 70, 2011 Edition
- RoHS

## CONSTRUCTION

Southwire Type SE cable is constructed with Alumaflex® AA-8000 series aluminum alloy, compacted stranded conductors. The conductors are covered with a sunlight resistant Type XHHW-2 or Type THHN/THWN-2-insulation. A reinforcement tape is wrapped around the conductors for added strength and conformity. A gray sunlight-resistant polyvinyl chloride (PVC) outer jacket covers the entire assembly. Style SEU cable has two phase conductors surrounded by a concentric neutral while the SER style has two, three or four phase conductors and a bare neutral.

Southwire Style SER Cable's phase conductors are identified by a colored stripe on the insulation.

3 conductor – Black and Black with Red Stripe

4 conductor – Black, Black with White Stripe and Black with Red Stripe

5 conductor – Black, Black with White Stripe, Black with Red Stripe and Black with Blue Stripe



| Conductor<br>Size/Const. AWG or kcmil  | Stranding                       |                                  | Nominal<br>O.D.<br>(Mils) | Allowable Ampacities |      |      |          | Approximate<br>Net Weight<br>Per 1000'<br>(Lbs) | Standard<br>Package |
|--|---------------------------------|----------------------------------|---------------------------|----------------------|------|------|----------|---|---------------------|
|  | Phase<br>Conductor &<br>Neutral | Equipment<br>Ground<br>Conductor |                           | 60°C                 | 75°C | 90°C | Dwelling |   |                     |
| SER Aluminum Two-Conductor With Bare Ground (Formerly referred to as "EZ-SE")            |                                 |                                  |                           |                      |      |      |          |   |                     |
| 6-6-6  | 7                               | -                                | 650                       | 40                   | 50   | 60   | -        | 150   | B                   |
| 4-4-4  | 7                               | -                                | 745                       | 55                   | 65   | 75   | -        | 203   | B                   |
| 4-4-6  | 7                               | -                                | 745                       | 55                   | 65   | 75   | -        | 203   | B                   |
| 2-2-2  | 7                               | -                                | 864                       | 75                   | 90   | 100  | 100      | 290   | B                   |
| SER Aluminum Three Conductor With Bare Ground (Formerly referred to as "Four Conductor") |                                 |                                  |                           |                      |      |      |          |   |                     |
| 8-8-8-8  | 1                               | 1                                | 612                       | 30                   | 40   | 45   | -        | 136   | B                   |
| 6-6-6-6  | 7                               | 7                                | 717                       | 40                   | 50   | 60   | -        | 196   | B                   |
| 4-4-4-6  | 7                               | 7                                | 823                       | 55                   | 65   | 75   | -        | 252   | B                   |
| 2-2-2-4  | 7                               | 7                                | 956                       | 75                   | 90   | 100  | 100      | 359   | B                   |
| 1-1-1-3  | 8                               | 7                                | 1079                      | 85                   | 100  | 115  | 110      | 449   | C                   |
| 1/0-1/0-1/0-2  | 10                              | 1                                | 1168                      | 100                  | 120  | 135  | 125      | 540   | C                   |
| 2/0-2/0-2/0-1  | 12                              | 1                                | 1264                      | 115                  | 135  | 150  | 150      | 652   | C                   |
| 3/0-3/0-3/0-1/0  | 16                              | 1                                | 1371                      | 130                  | 155  | 175  | 175      | 786   | C                   |
| 4/0-4/0-4/0-2/0  | 19                              | 1                                | 1496                      | 150                  | 180  | 205  | 200      | 960   | C                   |
| 250-250-250-3/0  | 22                              | 1                                | 1839                      | 170                  | 205  | 230  | 225      | 1458  | C                   |
| SER Aluminum Four Conductor With Bare Ground (Formerly referred to as "Five Conductor")  |                                 |                                  |                           |                      |      |      |          |   |                     |
| 2-2-2-2-4  | 6                               | 7                                | 1059                      | 75                   | 90   | 100  | 100      | 452   | B                   |
| 2/0-2/0-2/0-2/0-1  | 12                              | 1                                | 1404                      | 115                  | 135  | 150  | 150      | 827   | C                   |
| 4/0-4/0-4/0-2/0  | 19                              | 1                                | 1672                      | 150                  | 180  | 205  | 200      | 1228  | C                   |
| 250-250-250-250-3/0  | 22                              | 1                                | 1847                      | 170                  | 205  | 230  | 225      |   | C                   |

| Conductor<br>Size/Const. AWG or kcmil  | Stranding                       |                                  | Nominal O.D.<br>(Mils) | Allowable Ampacities |      |      |          | Approximate<br>Net Weight<br>Per 1000'<br>(Lbs) | Standard<br>Package |
|--|---------------------------------|----------------------------------|------------------------|----------------------|------|------|----------|---|---------------------|
|  | Phase<br>Conductor &<br>Neutral | Equipment<br>Ground<br>Conductor |                        | 60°C                 | 75°C | 90°C | Dwelling |   |                     |
| SEU Aluminum Two Conductor With Bare Concentric Ground (Formerly referred to as "Three Conductor") |                                 |                                  |                        |                      |      |      |          |   |                     |
| 6-6-6  | 7                               | 8                                | 430x687                | 40                   | 50   | 60   | -        | 145   | B,C,E               |
| 4-4-4  | 7                               | 12                               | 499x800                | 55                   | 65   | 75   | -        | 198   | B                   |
| 4-4-6  | 7                               | 15                               | 474x775                | 55                   | 65   | 75   | -        | 181   | B                   |
| 2-2-2  | 7                               | 14                               | 569x925                | 75                   | 90   | 100  | 100      | 283   | B,C,G               |
| 2-2-4  | 7                               | 18                               | 554x910                | 75                   | 90   | 100  | 100      | 259   | B,C,G               |
| 2/0-2/0-2/0  | 18                              | 18                               | 736x1221               | 115                  | 135  | 150  | 150      | 514   | C                   |
| 2/0-2/0-1  | 18                              | 14                               | 720x1205               | 115                  | 135  | 150  | 150      | 468   | C                   |
| 4/0-4/0-4/0  | 18                              | 18                               | 878x1462               | 150                  | 180  | 205  | 205      | 765   | C                   |
| 4/0-4/0-2/0  | 18                              | 18                               | 835x1419               | 150                  | 180  | 205  | 205      | 691   | C                   |

Table values reflect XHHW-2 conductors. Allowable ampacities shown are for general use as specified by the National Electrical Code, 2011 Edition, Section 310.15.

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75°C - When terminated to equipment for circuits rated 100 amperes or marked for conductors larger than 1 AWG conductors. May not apply, see NEC Article 338.10 (B)(4).

90°C - Wet or dry locations. For ampacity de-rating purposes.

Dwelling - For units, conductors shall be permitted at listed ampacities as 120/240-volt, 3-wire, single-phase services and feeders per NEC Article 310.15.

\*For compact-stranded construction, the number of wires, as permitted by UL Standard 854 and ASTM B-801 may be reduced as follows: 19-wire constructions - 18 wires minimum.

Package Codes:  
B - 1,000'  
C - 500'  
E-250'  
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#### RECOMMENDED SAMPLE SPECIFICATIONS:

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| Conductor  | Stranding                 |                            |  |
|--|---------------------------|----------------------------|--|
| Size/Const. AWG or kcmil   | Phase Conductor & Neutral | Equipment Ground Conductor | Stock Numbers                          |
| SER Aluminum Two-Conductor With Bare Ground (Formerly referred to as "EZ-SE")            |                           |                            |  |
| 6-6-6  | 7                         | -                          | <b>Stock #: 326678</b>                 |
| 4-4-4  | 7                         | -                          | <b>Stock #: 326660</b>                 |
| 4-4-6  | 7                         | -                          | <b>Stock #: 552500</b>                 |
| 2-2-2  | 7                         | -                          | <b>Stock #: N/A</b>                    |
| SER Aluminum Three Conductor With Bare Ground (Formerly referred to as "Four Conductor") |                           |                            |  |
| 8-8-8-8  | 1                         | 1                          | <b>Stock #: 130989</b>                 |
| 6-6-6-6  | 7                         | 7                          | <b>Stock #: 130997 (T), 592331 (X)</b> |
| 4-4-4-6  | 7                         | 7                          | <b>Stock #: 131003</b>                 |
| 2-2-2-4  | 7                         | 7                          | <b>Stock #: 131029</b>                 |
| 1-1-1-3  | 8                         | 7                          | <b>Stock #: 131037</b>                 |
| 1/0-1/0-1/0-2  | 10                        | 1                          | <b>Stock #: 131045</b>                 |
| 2/0-2/0-2/0-1  | 12                        | 1                          | <b>Stock #: 131052</b>                 |
| 3/0-3/0-3/0-1/0  | 16                        | 1                          | <b>Stock #: 131060</b>                 |
| 4/0-4/0-4/0-2/0  | 19                        | 1                          | <b>Stock #: 131078</b>                 |
| 250-250-250-3/0  | 22                        | 1                          | <b>Stock #: 552504</b>                 |
| SER Aluminum Four Conductor With Bare Ground (Formerly referred to as "Five Conductor")  |                           |                            |  |
| 2-2-2-2-4  | 6                         | 7                          | <b>Stock #: 277186</b>                 |
| 2/0-2/0-2/0-2/0-1  | 12                        | 1                          | <b>Stock #: 327445</b>                 |
| 4/0-4/0-4/0-4/0-2/0  | 19                        | 1                          | <b>Stock #: 279968</b>                 |
| 250-250-250-250-3/0  | 22                        | 1                          | <b>Stock #: 555869</b>                 |

| Conductor   | Stranding                 |                            |                        |
|---|---------------------------|----------------------------|------------------------|
| Size/Const. AWG or kcmil  | Phase Conductor & Neutral | Equipment Ground Conductor | Stock Numbers          |
| SEU Aluminum Two Conductor With Bare Conentric Ground (Formerly referred to as "Three Conductor") |                           |                            |                        |
| 6-6-6   | 7                         | 8                          | <b>Stock #: 130864</b> |
| 4-4-4   | 7                         | 12                         | <b>Stock #: 130872</b> |
| 4-4-6   | 7                         | 15                         | <b>Stock #: 130948</b> |
| 2-2-2   | 7                         | 14                         | <b>Stock #: 130880</b> |
| 2-2-4   | 7                         | 18                         | <b>Stock #: 130955</b> |
| 2/0-2/0-2/0   | 18                        | 18                         | <b>Stock #: 130914</b> |
| 2/0-2/0-1   | 18                        | 14                         | <b>Stock #: 130963</b> |
| 4/0-4/0-4/0   | 18                        | 18                         | <b>Stock #: 130930</b> |
| 4/0-4/0-2/0   | 18                        | 18                         | <b>Stock #: 130971</b> |