

Product Identification



Notes

Basic Units

- ① XTPB pushbutton manual motor protectors (see [Page V5-T1-163](#))
 - Rated operational current up to 25A
 - Switching capacity 50 kA/415V
 - Short-circuit release, adjustable $0.6-1 \times I_n$
 - Single-phasing sensitive
- ② XTPR rotary manual motor protectors (see [Page V5-T1-164](#))
 - Rated operational current up to 32A, 65A
 - Switching capacity 150/50 kA/415V
 - Short-circuit release, fixed setting to $14 \times I_n$
 - Overload release, adjustable $0.6-1 \times I_n$
 - Single-phasing sensitive
 - With screws or spring-loaded terminals

Mounting Accessories

- ③ Rotary handle mechanism (see [Page V5-T1-169](#))
 - ON/OFF/tripped switch position indication
 - Lockable door/cover interlock
 - Extendable y plug fit extension shaft
 - Handle latched in switch positions
 - Optionally also without locking and door interlock function
- Insulated enclosures (see [Page V5-T1-172](#))
 - Surface mounting, enclosures, IP40, IP55 and IP40 and IP55 front flush mounting enclosure
- Mounting/wiring (see [Page V5-T1-169](#))
 - Component adapter for busbar mounting
 - Three-phase commoning link for side-by-side-mounting
 - Mounting kits for rapid mounting of direct-on-line, reversing and star-delta starters

Add-On Functions

- ④ Voltage releases (see [Page V5-T1-168](#))
 - Undervoltage release
 - Shunt releases
 - With screws or spring-loaded terminals
- ⑤ Standard auxiliary contacts (see [Page V5-T1-166](#))
 - ON/OFF indication
 - Differential fault indication overload/short-circuit release
 - ON/OFF for (high capacity) contact module
 - ON/OFF for starter combination
 - With early-make contacts
 - With screws or spring-loaded terminals
- ⑥ Current limiter (see [Page V5-T1-168](#))
 - Increases the switching capacity of the 10–25A manual motor protectors to 100 kA/440V
 - Can be used for individual group protection

1

Catalog Number Selection

XT Manual Motor Protectors



Product Selection

Product Selection for Manual Motor Starter Applications

When ordering, specify catalog numbers according to the following stipulations:

XT manual motor protectors are selected based on the overload current range required for a given motor. This current range is determined from the motor full load ampere rating and motor service factor usually found on the motor nameplate.

For motors with service factors less than 1.15, multiply the motor FLA by 0.90 to select appropriate MMP.

Example: For motor having FLA of 6.4A and service factor of 1.0 ($6.4A \times 0.90 = 5.76A$) select catalog number XTPB6P3B01.

See Application Note—
AP03402001E.

For motor with service factor of 1.15 or greater, use motor nameplate full load amperes to select the appropriate MMP.

Example: For motor having FLA of 11A and service factor of 1.15, select catalog number XTPR012BC1.

Frame B



XTPB Pushbutton Manual Motor Protectors—Global and North American Ratings—Frame B

Type 1 and Type 2 Coordination Motor Protective Device with Thermal and Magnetic Trip

Rated Uninterrupted Current— $I_u = I_o$ (Amps)	FLA Adjustment Range/Overload Release— I_r (Amps)	Short Circuit Release— I_m (Amps)	Maximum Motor Ratings ^①							Maximum hp Rating—P (hp) UL 508/CSA C22.2 No. 14				Screw Terminal Catalog Number
			Maximum kW Rating AC-3—P (kW)							Three-Phase				
			220–240V	380–415V	440V	500V	660–690V	200V	240V	480V	600V			
0.16	0.1–0.16	2.2	—	—	—	—	0.06	②	②	②	②	XTPBP16BC1		
0.25	0.16–0.25	3.5	—	0.06	0.06	0.06	0.12	②	②	②	②	XTPBP25BC1		
0.4	0.25–0.4	5.6	0.06	0.09	0.12	0.12	0.18	②	②	②	②	XTPBP40BC1		
0.63	0.4–0.63	8.8	0.09	0.12	0.18	0.25	0.25	②	②	②	②	XTPBP63BC1		
1	0.63–1	14	0.12	0.25	0.25	0.37	0.55	②	②	2	1/2	XTPB001BC1		
1.6	1–1.6	22	0.25	0.55	0.55	0.75	1.1	②	②	3/4	3/4	XTPB1P6BC1		
2.5	1.6–2.5	35	0.37	0.75	1.1	1.1	1.5	1/2	1/2	1	1-1/2	XTPB2P5BC1		
4	2.5–4	56	0.75	1.5	1.5	2.2	3	3/4	3/4	2	3	XTPB004BC1		
6.3	4–6.3	88	1.1	2.2	3	3	4	1	1-1/2	3	5	XTPB6P3BC1		
10	6.3–10	140	2.2	4	4	4	7.5	3	3	7-1/2	10	XTPB010BC1		
12	8–12	168	3	5.5	5.5	5.5	11	3	3	7-1/2	10	XTPB012BC1		
16	10–16	224	4	7.5	9	9	12.5	3	5	10	10	XTPB016BC1		
20	16–20	280	5.5	9	11	12.5	15	5	—	—	15	XTPB020BC1		
25	20–25	350	5.5	12.5	12.5	15	22	—	7-1/2	15	20	XTPB025BC1		

Notes

Single-phasing sensitivity to IEC/EN 60947-4-1, VDE 0660 Part 102.

Can be snap-fit to IEC/EN 60715 top-hat (DIN) with 7.5 or 15 mm height.

Service Factor (SF)—Setting I_r of current scale in dependence of load factor:

$$SF = 1.15 \rightarrow I_r = 1 \times I_{n \text{ mot}}$$

$$SF = 1 \rightarrow I_r = 0.9 \times I_{n \text{ mot}}$$

For manual motor protective circuit breaker switching capacity, see **Page V5-T1-181**.

① Select manual motor protectors by full load amperes. Maximum motor ratings (kW, hp) are for reference only.

② In this range, calculate motor rating according to rated current. Specified values to NEC 430.6(A)(1).

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Frame B



XTPR Rotary Manual Motor Protectors with Screw Terminals— Global Ratings and North American Ratings—Frame B

Type 1 and Type 2 Coordination Motor Protective Device with Thermal and Magnetic Trip

Rated Uninterrupted Current— $I_u = I_g$ (Amps)	FLA Adjustment Range/ Overload Release— I_r (Amps)	Short Circuit Release— I_m (Amps)	Maximum Motor Ratings ① Maximum kW Rating AC-3—P (kW)					Maximum hp Rating—P (hp) UL 508/CSA C22.2 No. 14				Screw Terminal Catalog Number
			Three-Phase					Three-Phase				
			220– 240V	380– 415V	440V	500V	660– 690V	200V	240V	480V	600V	
0.16	0.1–0.16	2.2	—	—	—	—	0.06	②	②	②	②	XTPRP16BC1
0.25	0.16–0.25	3.5	—	0.06	0.06	0.06	0.12	②	②	②	②	XTPRP25BC1
0.4	0.25–0.4	5.6	0.06	0.09	0.12	0.12	0.18	②	②	②	②	XTPRP40BC1
0.63	0.4–0.63	8.8	0.09	0.12	0.18	0.25	0.25	②	②	②	②	XTPRP63BC1
1	0.63–1	14	0.12	0.25	0.25	0.37	0.55	②	②	②	②	XTPR001BC1
1.6	1–1.6	22	0.25	0.55	0.55	0.75	1.1	②	②	3/4	3/4	XTPR1P6BC1
2.5	1.6–2.5	35	0.37	0.75	1.1	1.1	1.5	1/2	1/2	1	1-1/2	XTPR2P5BC1
4	2.5–4	56	0.75	1.5	1.5	2.2	3	3/4	3/4	2	3	XTPR004BC1
6.3	4–6.3	88	1.1	2.2	3	3	4	1	1-1/2	3	5	XTPR6P3BC1
10	6.3–10	140	2.2	4	4	4	7.5	3	3	7-1/2	10	XTPR010BC1
12	8–12	168	3	5.5	5.5	5.5	11	3	3	7-1/2	10	XTPR012BC1
16	10–16	224	4	7.5	9	9	12.5	3	5	10	10	XTPR016BC1
20	16–20	280	5.5	9	11	12.5	15	5	—	—	15	XTPR020BC1
25	20–25	350	5.5	12.5	12.5	15	22	—	7-1/2	15	20	XTPR025BC1
32	25–32	448	7.5	15	15	22	30	7-1/2	10	20	25	XTPR032BC1

Frame D



XTPR Rotary Manual Motor Protectors with Screw Terminals— Global Ratings and North American Ratings—Frame D

Type 1 and Type 2 Coordination Motor Protective Device with Thermal and Magnetic Trip

Rated Uninterrupted Current— $I_u = I_g$ (Amps)	FLA Adjustment Range/ Overload Release— I_r (Amps)	Short Circuit Release— I_m (Amps)	Maximum Motor Ratings ① Maximum kW Rating AC-3—P (kW)					Maximum hp Rating—P (hp) UL 508/CSA C22.2 No. 14				Screw Terminal Catalog Number
			Three-Phase					Three-Phase				
			220– 240V	380– 415V	440V	500V	660– 690V	200V	240V	480V	600V	
16	10–16	224	4	7.5	9	9	12.5	3	5	10	15	XTPR016DC1
25	16–25	350	5.5	12.5	12.5	15	22	7-1/2	7-1/2	15	20	XTPR025DC1
32	25–32	448	7.5	15	17.5	22	22	10	10	20	30	XTPR032DC1
40	32–40	560	11	20	22	24	30	10	15	30	30	XTPR040DC1
50	40–50	700	14	25	30	30	45	10	15	30	40	XTPR050DC1
58	50–58	812	17	30	37	37	55	15	15	40	50	XTPR058DC1
65	55–65	882	18.5	34	37	45	55	15	15	40	50	XTPR063DC1

Notes

Single-phasing sensitivity to IEC/EN 60947-4-1, VDE 0660 Part 102.

Can be snap-fit to IEC/EN 60715 top-hat (DIN) with 7.5 or 15 mm height.

Service Factor (SF)—Setting I_r of current scale in dependence of load factor:

$$SF = 1.15 \rightarrow I_r = 1 \times I_{n \text{ mot}}$$

$$SF = 1 \rightarrow I_r = 0.9 \times I_{n \text{ mot}}$$

For manual motor protective circuit breaker switching capacity, see **Page V5-T1-181**.

① Select manual motor protectors by full load amperes. Maximum motor ratings (kW, hp) are for reference only.

② In this range, calculate motor rating according to rated current. Specified values to NEC 430.6(A)(1).

Frame B



XTPR Manual Self-Protected Motor Starters—North American Ratings, UL 508 Type E—Frame B^①

Motor Protective Device with Thermal and Magnetic Trip

Rated Uninterrupted Current— I_u (Amps)	FLA Adjustment Range/Overload Release— I_r (Amps)	Short Circuit Release— I_{rm} (Amps)	Maximum Motor Ratings ^② Maximum hp Rating—P (hp) Three-Phase				Rated Short-Circuit Breaking Capacity (kA)			Line Side Adapter ^③ Catalog Number	Manual Motor Protector—Screw Terminal Catalog Number
			200V	240V	480V/ 277V	600V/ 247V	480/ 277V	600/ 347V			
0.16	0.1–0.16	2.2	③	③	1/2	1/2	50	50	XTPAXLSA	XTPRP16BC1	
0.25	0.16–0.25	3.4	③	③	1/2	1/2	50	50	XTPAXLSA	XTPRP25BC1	
0.4	0.25–0.4	5.6	③	③	1/2	1/2	50	50	XTPAXLSA	XTPRP40BC1	
0.63	0.4–0.63	8.8	③	③	1/2	1/2	50	50	XTPAXLSA	XTPRP63BC1	
1	0.63–1	14	③	③	1/2	1/2	50	50	XTPAXLSA	XTPR001BC1	
1.6	1–1.6	22	③	③	3/4	3/4	50	50	XTPAXLSA	XTPR1P6BC1	
2.5	1.6–2.5	35	1/2	1/2	1	1-1/2	50	50	XTPAXLSA	XTPR2P5BC1	
4	2.5–4	56	3/4	1	2	3	50	50	XTPAXLSA	XTPR004BC1	
6.3	4–6.3	88	1	1-1/2	3	5	65	50	XTPAXLSA	XTPR6P3BC1	
10	6.3–11	140	3	3	7-1/2	10	65	50	XTPAXLSA	XTPR010BC1	
12	8–12	168	3	3	7-1/2	—	65	—	XTPAXLSA	XTPR012BC1	
16	10–16	224	3	5	10	—	42	—	XTPAXLSA	XTPR016BC1	
20	16–20	280	5	5	—	—	18	—	XTPAXLSA	XTPR020BC1	
25	20–25	350	5	7-1/2	15	—	18	—	XTPAXLSA	XTPR025BC1	
32	25–32	448	7-1/2	10	25	—	18	—	XTPAXLSA	XTPR032BC1	

Frame D



XTPR Circuit Breaker According to UL 489—Frame D

Rated Uninterrupted Current— I_u (Amps)	FLA Adjustment Range/Overload Release— I_r (Amps)	Short Circuit Release— I_{rm} (Amps)	Maximum Motor Ratings ^② Maximum hp Rating—P (hp) Three-Phase				Rated Short-Circuit Breaking Capacity (kA)			Manual Motor Protector—Screw Terminal Catalog Number
			200V	240V	480V/ 277V	600V/ 247V	240V	480/ 277V	600/ 347V	
16	10–16	224	3	5	10	10	65	65	25	XTPR016DCB
25	16–25	350	7-1/2	7-1/2	20	25	65	65	25	XTPR025DCB
32	24–32	448	10	10	25	30	65	65	25	XTPR032DCB

Frame D



XTPR Manual Self-Protected Motor Starters—North American Ratings, UL 508 Type E—Frame D^①

Motor Protective Device with Thermal and Magnetic Trip

Rated Uninterrupted Current— I_u (Amps)	FLA Adjustment Range/Overload Release— I_r (Amps)	Short Circuit Release— I_{rm} (Amps)	Maximum Motor Ratings ^② Maximum hp Rating—P (hp) Three-Phase				Rated Short-Circuit Breaking Capacity (kA)			Line Side Adapter ^③ Catalog Number	Manual Motor Protector—Screw Terminal Catalog Number
			200V	240V	480V/ 277V	600V/ 247V	240V	480/ 277V	600/ 347V		
16	10–16	224	3	5	10	10	65	65	25	XTPAXLSAD	XTPR016DC1
25	16–25	350	7-1/2	7-1/2	20	25	65	65	25	XTPAXLSAD	XTPR025DC1
32	25–32	448	10	10	25	30	65	65	25	XTPAXLSAD	XTPR032DC1
40	32–40	560	10	—	30	30	65	65	25	XTPAXLSAD	XTPR040DC1
50	40–50	700	—	15	30	—	65	65	—	XTPAXLSAD	XTPR050DC1
58	50–58	812	—	—	40	—	65	65	—	XTPAXLSAD	XTPR058DC1
65	55–65	882	—	—	40	—	65	65	—	XTPAXLSAD	XTPR063DC1

Notes

A UL 508 Type E self-protected manual combination starter (XTPR) consists of a manual motor protector (XTPR) and a UL Listed line side adapter (for example, XTPAXLSA). The Type E self-protected manual combination starter alone is a legitimate short-circuit protective device and disconnect means for the downstream motor, while the contactor has been added to provide remote operation of the motor circuit. Conductor size for XTPAXLSA is 14–6 AWG, XTPAXLSAD is 8 AWG–1/0.

① UL 508 Type E starters are assembled from a standard XTMR and a special incoming terminal line side adapter (XTPAXLSA or XTPAXLSAD).

② Select manual motor protectors by full load amperes. Maximum motor ratings (kW, hp) are for reference only.

③ In this range, calculate motor rating according to rated current. Specified values to NEC 430.6(A)(1).

Product Identification



Notes

Basic Units

- ① XTPB pushbutton manual motor protectors (see [Page V5-T1-163](#))
 - Rated operational current up to 25A
 - Switching capacity 50 kA/415V
 - Short-circuit release, adjustable $0.6-1 \times I_n$
 - Single-phasing sensitive
- ② XTPR rotary manual motor protectors (see [Page V5-T1-164](#))
 - Rated operational current up to 32A, 65A
 - Switching capacity 150/50 kA/415V
 - Short-circuit release, fixed setting to $14 \times I_n$
 - Overload release, adjustable $0.6-1 \times I_n$
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Mounting Accessories

- ③ Rotary handle mechanism (see [Page V5-T1-169](#))
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 - Lockable door/cover interlock
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 - Surface mounting, enclosures, IP40, IP55 and IP40 and IP55 front flush mounting enclosure
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Add-On Functions

- ④ Voltage releases (see [Page V5-T1-168](#))
 - Undervoltage release
 - Shunt releases
 - With screws or spring-loaded terminals
- ⑤ Standard auxiliary contacts (see [Page V5-T1-166](#))
 - ON/OFF indication
 - Differential fault indication overload/short-circuit release
 - ON/OFF for (high capacity) contact module
 - ON/OFF for starter combination
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- ⑥ Current limiter (see [Page V5-T1-168](#))
 - Increases the switching capacity of the 10–25A manual motor protectors to 100 kA/440V
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When ordering, specify catalog numbers according to the following stipulations:

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For motors with service factors less than 1.15, multiply the motor FLA by 0.90 to select appropriate MMP.

Example: For motor having FLA of 6.4A and service factor of 1.0 ($6.4A \times 0.90 = 5.76A$) select catalog number XTPB6P3B01.

See Application Note—
AP03402001E.

For motor with service factor of 1.15 or greater, use motor nameplate full load amperes to select the appropriate MMP.

Example: For motor having FLA of 11A and service factor of 1.15, select catalog number XTPR012BC1.

Frame B



XTPB Pushbutton Manual Motor Protectors—Global and North American Ratings—Frame B Type 1 and Type 2 Coordination Motor Protective Device with Thermal and Magnetic Trip

Rated Uninterrupted Current— $I_u = I_o$ (Amps)	FLA Adjustment Range/ Overload Release— I_r (Amps)	Short Circuit Release— I_m (Amps)	Maximum Motor Ratings ^①							Maximum hp Rating—P (hp) UL 508/CSA C22.2 No. 14				Screw Terminal Catalog Number
			Maximum kW Rating AC-3—P (kW)			Three-Phase				Three-Phase				
			220–240V	380–415V	440V	500V	660–690V	200V	240V	480V	600V			
0.16	0.1–0.16	2.2	—	—	—	—	0.06	②	②	②	②		XTPBP16BC1	
0.25	0.16–0.25	3.5	—	0.06	0.06	0.06	0.12	②	②	②	②		XTPBP25BC1	
0.4	0.25–0.4	5.6	0.06	0.09	0.12	0.12	0.18	②	②	②	②		XTPBP40BC1	
0.63	0.4–0.63	8.8	0.09	0.12	0.18	0.25	0.25	②	②	②	②		XTPBP63BC1	
1	0.63–1	14	0.12	0.25	0.25	0.37	0.55	②	②	2	1/2		XTPB001BC1	
1.6	1–1.6	22	0.25	0.55	0.55	0.75	1.1	②	②	3/4	3/4		XTPB1P6BC1	
2.5	1.6–2.5	35	0.37	0.75	1.1	1.1	1.5	1/2	1/2	1	1-1/2		XTPB2P5BC1	
4	2.5–4	56	0.75	1.5	1.5	2.2	3	3/4	3/4	2	3		XTPB004BC1	
6.3	4–6.3	88	1.1	2.2	3	3	4	1	1-1/2	3	5		XTPB6P3BC1	
10	6.3–10	140	2.2	4	4	4	7.5	3	3	7-1/2	10		XTPB010BC1	
12	8–12	168	3	5.5	5.5	5.5	11	3	3	7-1/2	10		XTPB012BC1	
16	10–16	224	4	7.5	9	9	12.5	3	5	10	10		XTPB016BC1	
20	16–20	280	5.5	9	11	12.5	15	5	—	—	15		XTPB020BC1	
25	20–25	350	5.5	12.5	12.5	15	22	—	7-1/2	15	20		XTPB025BC1	

Notes

Single-phasing sensitivity to IEC/EN 60947-4-1, VDE 0660 Part 102.

Can be snap-fit to IEC/EN 60715 top-hat (DIN) with 7.5 or 15 mm height.

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$$SF = 1.15 \rightarrow I_r = 1 \times I_{n \text{ mot}}$$

$$SF = 1 \rightarrow I_r = 0.9 \times I_{n \text{ mot}}$$

For manual motor protective circuit breaker switching capacity, see **Page V5-T1-181**.

① Select manual motor protectors by full load amperes. Maximum motor ratings (kW, hp) are for reference only.

② In this range, calculate motor rating according to rated current. Specified values to NEC 430.6(A)(1).

1

Frame B



XTPR Rotary Manual Motor Protectors with Screw Terminals— Global Ratings and North American Ratings—Frame B

Type 1 and Type 2 Coordination Motor Protective Device with Thermal and Magnetic Trip

Rated Uninterrupted Current— $I_u = I_e$ (Amps)	FLA Adjustment Range/ Overload Release— I_r (Amps)	Short Circuit Release— I_m (Amps)	Maximum Motor Ratings ① Maximum kW Rating AC-3—P (kW)					Maximum hp Rating—P (hp) UL 508/CSA C22.2 No. 14				Screw Terminal Catalog Number
			Three-Phase					Three-Phase				
			220– 240V	380– 415V	440V	500V	660– 690V	200V	240V	480V	600V	
0.16	0.1–0.16	2.2	—	—	—	—	0.06	②	②	②	②	XTPRP16BC1
0.25	0.16–0.25	3.5	—	0.06	0.06	0.06	0.12	②	②	②	②	XTPRP25BC1
0.4	0.25–0.4	5.6	0.06	0.09	0.12	0.12	0.18	②	②	②	②	XTPRP40BC1
0.63	0.4–0.63	8.8	0.09	0.12	0.18	0.25	0.25	②	②	②	②	XTPRP63BC1
1	0.63–1	14	0.12	0.25	0.25	0.37	0.55	②	②	②	②	XTPR001BC1
1.6	1–1.6	22	0.25	0.55	0.55	0.75	1.1	②	②	3/4	3/4	XTPR1P6BC1
2.5	1.6–2.5	35	0.37	0.75	1.1	1.1	1.5	1/2	1/2	1	1-1/2	XTPR2P5BC1
4	2.5–4	56	0.75	1.5	1.5	2.2	3	3/4	3/4	2	3	XTPR004BC1
6.3	4–6.3	88	1.1	2.2	3	3	4	1	1-1/2	3	5	XTPR6P3BC1
10	6.3–10	140	2.2	4	4	4	7.5	3	3	7-1/2	10	XTPR010BC1
12	8–12	168	3	5.5	5.5	5.5	11	3	3	7-1/2	10	XTPR012BC1
16	10–16	224	4	7.5	9	9	12.5	3	5	10	10	XTPR016BC1
20	16–20	280	5.5	9	11	12.5	15	5	—	—	15	XTPR020BC1
25	20–25	350	5.5	12.5	12.5	15	22	—	7-1/2	15	20	XTPR025BC1
32	25–32	448	7.5	15	15	22	30	7-1/2	10	20	25	XTPR032BC1

Frame D



XTPR Rotary Manual Motor Protectors with Screw Terminals— Global Ratings and North American Ratings—Frame D

Type 1 and Type 2 Coordination Motor Protective Device with Thermal and Magnetic Trip

Rated Uninterrupted Current— $I_u = I_e$ (Amps)	FLA Adjustment Range/ Overload Release— I_r (Amps)	Short Circuit Release— I_m (Amps)	Maximum Motor Ratings ① Maximum kW Rating AC-3—P (kW)					Maximum hp Rating—P (hp) UL 508/CSA C22.2 No. 14				Screw Terminal Catalog Number
			Three-Phase					Three-Phase				
			220– 240V	380– 415V	440V	500V	660– 690V	200V	240V	480V	600V	
16	10–16	224	4	7.5	9	9	12.5	3	5	10	15	XTPR016DC1
25	16–25	350	5.5	12.5	12.5	15	22	7-1/2	7-1/2	15	20	XTPR025DC1
32	25–32	448	7.5	15	17.5	22	22	10	10	20	30	XTPR032DC1
40	32–40	560	11	20	22	24	30	10	15	30	30	XTPR040DC1
50	40–50	700	14	25	30	30	45	10	15	30	40	XTPR050DC1
58	50–58	812	17	30	37	37	55	15	15	40	50	XTPR058DC1
65	55–65	882	18.5	34	37	45	55	15	15	40	50	XTPR063DC1

Notes

Single-phasing sensitivity to IEC/EN 60947-4-1, VDE 0660 Part 102.

Can be snap-fit to IEC/EN 60715 top-hat (DIN) with 7.5 or 15 mm height.

Service Factor (SF)—Setting I_r of current scale in dependence of load factor:

$$SF = 1.15 \rightarrow I_r = 1 \times I_{n \text{ mot}}$$

$$SF = 1 \rightarrow I_r = 0.9 \times I_{n \text{ mot}}$$

For manual motor protective circuit breaker switching capacity, see **Page V5-T1-181**.

① Select manual motor protectors by full load amperes. Maximum motor ratings (kW, hp) are for reference only.

② In this range, calculate motor rating according to rated current. Specified values to NEC 430.6(A)(1).

Frame B



XTPR Manual Self-Protected Motor Starters—North American Ratings, UL 508 Type E—Frame B^①

Motor Protective Device with Thermal and Magnetic Trip

Rated Uninterrupted Current— I_u (Amps)	FLA Adjustment Range/Overload Release— I_r (Amps)	Short Circuit Release— I_{rm} (Amps)	Maximum Motor Ratings ^② Maximum hp Rating—P (hp) Three-Phase				Rated Short-Circuit Breaking Capacity (kA)			Line Side Adapter ^③ Catalog Number	Manual Motor Protector—Screw Terminal Catalog Number
			200V	240V	480V/ 277V	600V/ 247V	480/ 277V	600/ 347V			
0.16	0.1–0.16	2.2	③	③	1/2	1/2	50	50	XTPAXLSA	XTPRP16BC1	
0.25	0.16–0.25	3.4	③	③	1/2	1/2	50	50	XTPAXLSA	XTPRP25BC1	
0.4	0.25–0.4	5.6	③	③	1/2	1/2	50	50	XTPAXLSA	XTPRP40BC1	
0.63	0.4–0.63	8.8	③	③	1/2	1/2	50	50	XTPAXLSA	XTPRP63BC1	
1	0.63–1	14	③	③	1/2	1/2	50	50	XTPAXLSA	XTPR001BC1	
1.6	1–1.6	22	③	③	3/4	3/4	50	50	XTPAXLSA	XTPR1P6BC1	
2.5	1.6–2.5	35	1/2	1/2	1	1-1/2	50	50	XTPAXLSA	XTPR2P5BC1	
4	2.5–4	56	3/4	1	2	3	50	50	XTPAXLSA	XTPR004BC1	
6.3	4–6.3	88	1	1-1/2	3	5	65	50	XTPAXLSA	XTPR6P3BC1	
10	6.3–11	140	3	3	7-1/2	10	65	50	XTPAXLSA	XTPR010BC1	
12	8–12	168	3	3	7-1/2	—	65	—	XTPAXLSA	XTPR012BC1	
16	10–16	224	3	5	10	—	42	—	XTPAXLSA	XTPR016BC1	
20	16–20	280	5	5	—	—	18	—	XTPAXLSA	XTPR020BC1	
25	20–25	350	5	7-1/2	15	—	18	—	XTPAXLSA	XTPR025BC1	
32	25–32	448	7-1/2	10	25	—	18	—	XTPAXLSA	XTPR032BC1	

Frame D



XTPR Circuit Breaker According to UL 489—Frame D

Rated Uninterrupted Current— I_u (Amps)	FLA Adjustment Range/Overload Release— I_r (Amps)	Short Circuit Release— I_{rm} (Amps)	Maximum Motor Ratings ^② Maximum hp Rating—P (hp) Three-Phase				Rated Short-Circuit Breaking Capacity (kA)			Manual Motor Protector—Screw Terminal Catalog Number
			200V	240V	480V/ 277V	600V/ 247V	240V	480/ 277V	600/ 347V	
16	10–16	224	3	5	10	10	65	65	25	XTPR016DCB
25	16–25	350	7-1/2	7-1/2	20	25	65	65	25	XTPR025DCB
32	24–32	448	10	10	25	30	65	65	25	XTPR032DCB

Frame D



XTPR Manual Self-Protected Motor Starters—North American Ratings, UL 508 Type E—Frame D^①

Motor Protective Device with Thermal and Magnetic Trip

Rated Uninterrupted Current— I_u (Amps)	FLA Adjustment Range/Overload Release— I_r (Amps)	Short Circuit Release— I_{rm} (Amps)	Maximum Motor Ratings ^② Maximum hp Rating—P (hp) Three-Phase				Rated Short-Circuit Breaking Capacity (kA)			Line Side Adapter ^③ Catalog Number	Manual Motor Protector—Screw Terminal Catalog Number
			200V	240V	480V/ 277V	600V/ 247V	240V	480/ 277V	600/ 347V		
16	10–16	224	3	5	10	10	65	65	25	XTPAXLSAD	XTPR016DC1
25	16–25	350	7-1/2	7-1/2	20	25	65	65	25	XTPAXLSAD	XTPR025DC1
32	25–32	448	10	10	25	30	65	65	25	XTPAXLSAD	XTPR032DC1
40	32–40	560	10	—	30	30	65	65	25	XTPAXLSAD	XTPR040DC1
50	40–50	700	—	15	30	—	65	65	—	XTPAXLSAD	XTPR050DC1
58	50–58	812	—	—	40	—	65	65	—	XTPAXLSAD	XTPR058DC1
65	55–65	882	—	—	40	—	65	65	—	XTPAXLSAD	XTPR063DC1

Notes

A UL 508 Type E self-protected manual combination starter (XTPR) consists of a manual motor protector (XTPR) and a UL Listed line side adapter (for example, XTPAXLSA). The Type E self-protected manual combination starter alone is a legitimate short-circuit protective device and disconnect means for the downstream motor, while the contactor has been added to provide remote operation of the motor circuit. Conductor size for XTPAXLSA is 14–6 AWG, XTPAXLSAD is 8 AWG–1/0.

① UL 508 Type E starters are assembled from a standard XTMR and a special incoming terminal line side adapter (XTPAXLSA or XTPAXLSAD).

② Select manual motor protectors by full load amperes. Maximum motor ratings (kW, hp) are for reference only.

③ In this range, calculate motor rating according to rated current. Specified values to NEC 430.6(A)(1).