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Features and Benefits

- ON/OFF rotary handle with lockout provision
- Visible trip indication
- Class 10 overload protection
- Phase loss sensitivity
- Ambient temperature compensation to IEC/EN 60947, VDE 0660
- Fixed short-circuit trip—14 times maximum setting of overload FLA dial
- Type 2 coordination per IEC 947
- Identification markers standard on starter faceplate
- Motor applications from 0.1A to 65A
- Built-in heater and magnetic trip elements to protect the motor
- Adjustment dial for setting motor FLA
- DIN rail mount
- Terminal types available:
 - Screw terminals
 - Screw (line) and spring cage (load) terminals
 - Spring cage terminals
- Accessories include:
 - Front and side auxiliary contacts
 - Trip indicating contacts
 - Tamperproof cover for OLR dial
 - Undervoltage release
 - Shunt trip
 - Through-the-door operators
 - Enclosures
 - Three-phase line side connecting links

Standards and Certifications

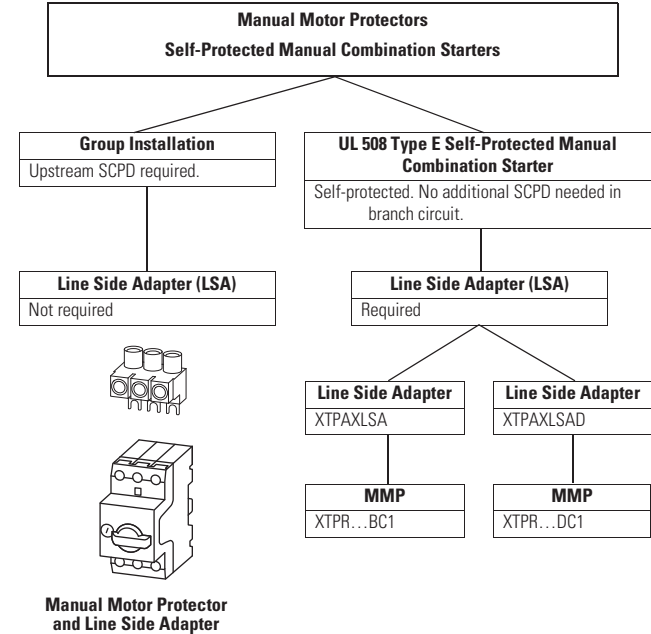
- ATEX
- CE approved
- UL listed File No. E36332
- UL listed File No. E123500
- UL 508 group motor and Type E compliant
- IEC/EN 60947
- CSA File 229767, Class 3211-05
- DIN VDE 0660 Part 100, Part 101 and Part 102



Note: For Type 2 Coordination of MMCs, see **Page V5-T1-237**.

Line Side Adapters—When to Use Them

Note: Line side adapters are not required for non-US applications. Most countries outside of the US classify the MMP as a thermal magnetic circuit breaker.



1

Catalog Number Selection

XT Manual Motor Protectors



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— $I_u = I_g$ (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).

1

Frame B MMP +
Frame B Contactor



Factory-Assembled Motor Protective Device with Thermal and Magnetic Trip + Contactor— Maximum IEC Ratings ^①

FLA Adjustment Range/Overload Release— I_r (Amps)	Short-Circuit Release— I_{sc} (Amps)	Maximum Motor Ratings Maximum kW Rating AC-3—P (kW)				Assembled Manual Motor Controller ^②	
		Three-Phase				Non-Reversing Catalog Number	Reversing Catalog Number
		220– 240V	380– 415V	500V	660– 690V		
0.1–0.16	3.2	③	③	1/2	1/2	XTSCP16BB_	XTSRP16BB_
0.16–0.25	3.5	③	③	1/2	1/2	XTSCP25BB_	XTSRP25BB_
0.25–0.4	5.6	③	③	1/2	1/2	XTSCP40BB_	XTSRP40BB_
0.4–0.63	8.82	③	③	1/2	1/2	XTSCP63BB_	XTSRP63BB_
0.63–1	14	③	③	1/2	1/2	XTSC001BB_	XTSR001BB_
1–1.6	22.4	③	③	3/4	1	XTSC1P6BB_	XTSR1P6BB_
1.6–2.5	35	1/2	1/2	1	1-1/2	XTSC2P5BB_	XTSR2P5BB_
2.5–4	56	1	1	2	3	XTSC004BB_	XTSR004BB_
4–6.3	88.2	1-1/2	1-1/2	3	5	XTSC6P3BB_	XTSR6P3BB_
6.3–10	140	3	3	7-1/2	7.5	XTSC010BB_	XTSR010BB_
8–12	168	3	3	7-1/2	7.5	XTSC012BB_	XTSR012BB_
10–16	224	3	3	10	7.5	XTSC016BB_	—

Frame B MMP +
Frame C Contactor



Factory-Assembled Manual Motor Controller—Frame B MMP + Frame C Contactor— Maximum UL Ratings ^①

FLA Adjustment Range/Overload Release— I_r (Amps)	Short-Circuit Release— I_{sc} (Amps)	Maximum hp Rating—P (hp) UL 508/CSA C22.2 No. 14				Assembled Manual Motor Controller ^②	
		Three-Phase				Non-Reversing Catalog Number	Reversing Catalog Number
		200V	240V	480V	600V		
10–16	224	3	3	10	10	XTSC016BC_	XTSR016BC_
16–20	280	5	5	10	15	XTSC020BC_	XTSR020BC_
20–25	350	5	7-1/2	15	20	XTSC025BC_	XTSR025BC_
25–32	448	7-1/2	10	20	25	XTSC032BC_	XTSR032BC_

Frame B MMP +
Frame C Contactor



Factory-Assembled Manual Motor Controller—Frame B MMP + Frame C Contactor— Maximum IEC Ratings ^①

FLA Adjustment Range/Overload Release— I_r (Amps)	Short-Circuit Release— I_{sc} (Amps)	Maximum Motor Ratings Maximum kW Rating AC-3—P (kW)				Assembled Manual Motor Controller ^②	
		Three-Phase				Non-Reversing Catalog Number	Reversing Catalog Number
		220– 240V	380– 415V	500V	660– 690V		
10–16	224	4	7.5	9	12.5	XTSC016BC_	XTSR016BC_
16–20	280	5.5	9	12.5	15	XTSC020BC_	XTSR020BC_
20–25	350	5.5	11	15	22	XTSC025BC_	XTSR025BC_
25–32	448	7.5	15	22	30	XTSC032BC_	XTSR032BC_

Notes

- ① Select manual motor controllers by full load amperes. Maximum motor ratings (kW, hp) are for reference only.
- ② Underscore (_) indicates magnetic coil suffix required. See **Page V5-T1-198**.
- ③ In this range, calculate motor rating according to rated current. Specified values to NEC 430.6(A)(1).

XT Electronic Manual Motor Protector**XT Electronic Manual Motor Protector****Product Description**

The **XT** Electronic Manual Motor Protector provides the same functionality as the **XT** thermal manual motor protector, but with an added level of flexibility and selectability. The XTPE incorporates electronic control technology to enable more options and larger dial setting ranges. The trip units are interchangeable, allowing users to exchange as needed using the same base. The reduced number of part numbers decreases bill of material complexity while reducing inventory demands. The XTPE electronic manual motor protector includes the following features:

- 4:1 max to min overcurrent dial setting range
- Selectable trip class (5, 10, 15, 20)
- Interchangeable trip units
- Three base units (12, 32 and 65A)
- Common accessories with the XTPR

Features and Benefits**Advanced Trip Unit**

In addition to the selectability, the XTPE is also available with an advanced trip unit that can communicate system data and protector data thru SmartWire-DT. SmartWire-DT is an innovative cost effective connection technology that enables quick installation of control wiring to the starter through a single green cable. When on SmartWire-DT, the XTPE can communicate the following:

- Current Values
 - Maximum phase current
 - Overload warning

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Standards and Certifications

- CE approved
- UL Listed File No. E36332
- UL 508 group motor and Type E
- IEC/EN 60947
- CSA File 012528, Class 3211-05



- Diagnostics Data
 - Overload fault
 - Cause of trip (overcurrent or short circuit)
 - Phase loss
 - Trip via TEST
- Status Messages
 - Control unit type
 - Overload setting
 - Time-lag
 - Switching status

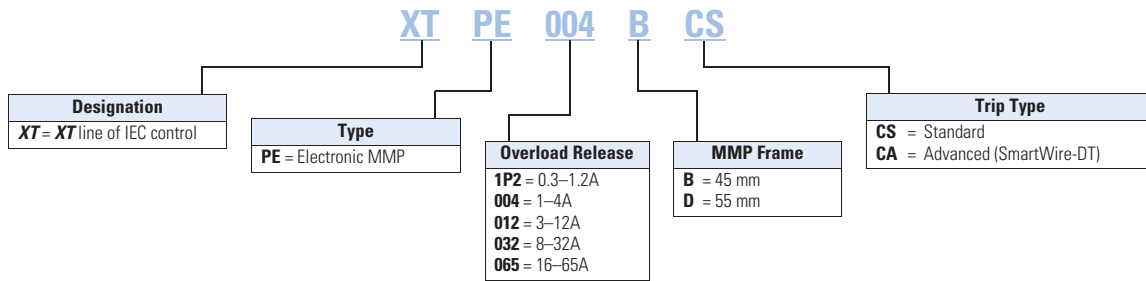
XTPE Electronic MMP

The XTPE Electronic MMP provides the selectability, control, and insight options that give panel builders and OEMs the solutions necessary to enhance motor control designs while reducing total costs.

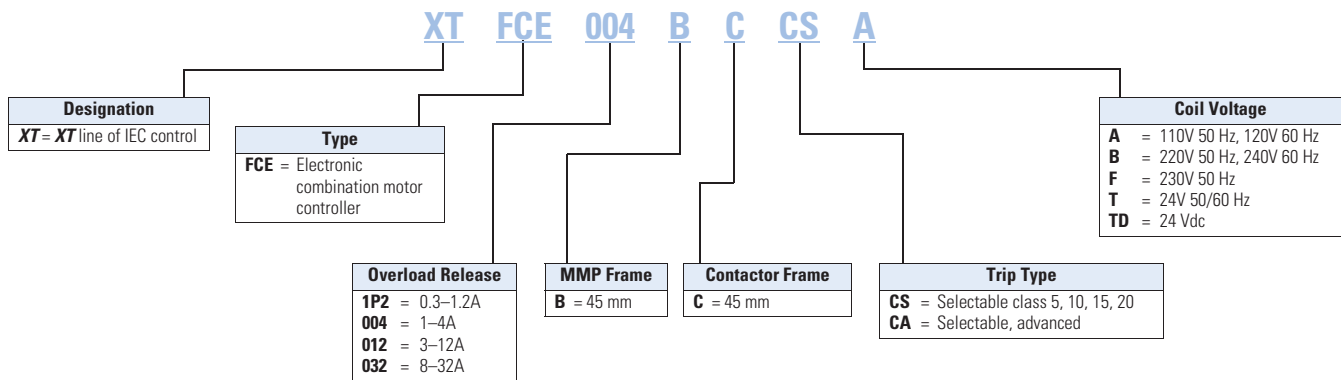
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Catalog Number Selection

XT—Manual Motor Protector



XT—Combinations



Product Selection

XT Electronic Manual Motor Protector

B Frame



MMP Base

Maximum Amperage	UL/CSA Maximum Three-Phase hp Ratings				IEC Maximum Motor kW Ratings						Base Unit	
	200V	240V	480V	600V	220V 230V 240V	380V 400V 415V	440V	500V	600V 690V	Type Number	Catalog Number	
	12	3	3	7.5	10	3	5.5	5.5	5.5	7.5	PKE12	XTPE012B
32	5	7.5	15	20	7.5	15	15	18.5	30	PKE32	XTPE032B	
65	15	15	40	40	18.5	30	37	45	55	PKE65	XTPE065D	

B Frame



MMP Trip Units

Overload Release Setting Amp Range	For Use with Base Catalog Number	UL/CSA Maximum Three-Phase hp Ratings				IEC Maximum Motor kW Ratings					Trip Unit	
		200V	240V	480V	600V	220V 230V 240V	380V 400V 415V	440V	500V	600V 690V	Type Number	Catalog Number
		0.3–1.2	XTPE012B	①	①	0.5	0.5	0.18	0.37	0.37	0.37	0.75
1–4	XTPE012B	0.75	0.75	2	3	0.75	1.5	1.5	2.2	3	PKE-XTU-4	XTPEXT004B
3–12	XTPE012B XTPE032B	3	3	7.5	10	3	5.5	5.5	5.5	7.5	PKE-XTU-12	XTPEXT012B
8–32	XTPE032B	5	7.5	15	20	7.5	15	15	18.5	30	PKE-XTU-32	XTPEXT032B
8–32	XTPE065D	7.5	7.5	20	25	7.5	15	15	18.5	30	PKE-XTUW-32	XTPEXT032D
16–65	XTPE065D	15	15	40	40	18.5	30	37	45	55	PKE-XTU-65	XTPEXT065D

B Frame



MMP Advanced Trip Units Used with SmartWire-DT

Overload Release Setting Amp Range	For Use with Base Catalog Number	UL/CSA Maximum Three-Phase hp Ratings				IEC Maximum Motor kW Ratings					Trip Unit	
		200V	240V	480V	600V	220V 230V 240V	380V 400V 415V	440V	500V	600V 690V	Type Number	Catalog Number
		0.3–1.2	XTPE012B	①	①	0.5	0.5	0.18	0.37	0.37	0.37	0.75
1–4	XTPE012B	0.75	0.75	2	3	0.75	1.5	1.5	2.2	3	PKE-XTUA-4	XTPEXTA004B
3–12	XTPE012B XTPE032B	3	3	7.5	10	3	5.5	5.5	5.5	7.5	PKE-XTUA-12	XTPEXTA012B
8–32	XTPE032B	5	7.5	15	20	7.5	15	15	18.5	30	PKE-XTUA-32	XTPEXTA032B
8–32	XTPE065D	7.5	7.5	20	25	7.5	15	15	18.5	30	PKE-XTUWA-32	XTPEXTA032D
16–65	XTPE065D	15	15	40	40	18.5	30	37	45	55	PKE-XTUA-65	XTPEXTA065D

D Frame



MMP Complete Assembly

Overload Release Setting Amp Range	UL/CSA Maximum Three-Phase hp Ratings				IEC Maximum Motor kW Ratings					Complete Manual Motor Protector	
	200V	240V	480V	600V	220V 230V 240V	380V 400V 415V	440V	500V	600V 690V	Type Number	Catalog Number
	0.3–1.2	①	①	0.5	0.5	0.18	0.37	0.37	0.37	0.75	PKE12/XTU-1,2
1–4	0.75	0.75	2	3	0.75	1.5	1.5	2.2	3	PKE12/XTU-4	XTPE004BCS
3–12	3	3	7.5	10	3	5.5	5.5	5.5	7.5	PKE12/XTU-12	XTPE012BCS
8–32	5	7.5	15	20	7.5	15	15	18.5	30	PKE32/XTU-32	XTPE032BCS
8–32	7.5	7.5	20	25	7.5	15	15	18.5	30	PKE65/XTUW-32	XTPE032DCS
16–65	15	15	40	40	18.5	30	37	45	55	PKE65/XTU-65	XTPE065DCS

Note

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