Compact All-in-One Solutions



Powering Business Worldwide

- Eliminate the overload relay with a manual motor protector or combination motor controller
- Get a disconnect, starter, and overload and motor protection in one compact device
- A complete motor protector and remote control solution easily assembled
- UL 508F ratings means no need for protection upstream when using a combination motor controller

Manual Motor Protectors & Controllers Product Overview

				
Description	**XTPB Pushbutton Manual Motor Protector**	**XTPR Rotary Manual Motor Protector**	**XTSC Manual Motor Controller**	**XTFC Combination Motor Controller**
Page	Page 42	Page 42	Page 49	Page 49
Operator Style	Pushbutton	Rotary	Rotary	Rotary
Components	Manual Motor Protector	Manual Motor Protector	Manual Motor Protector Contactor Connector Kit	Manual Motor Protector Contactor Connector Kit Line Side Adapter
UL 508 Type E	—	Yes, Line Side Adapter	—	—
UL 508 Type F	—	—	—	Yes, Line Side Adapter
Branch Motor Circuit Functions	Disconnect Controller (manual) Short Circuit Protection Motor Overload Protection	Disconnect Controller (manual) Short Circuit Protection Motor Overload Protection	Disconnect Controller (manual & remote) Short Circuit Protection Motor Overload Protection	Disconnect Controller (manual & remote) Short Circuit Protection Motor Overload Protection
FLA Range	0.1 – 25A	0.1 – 65A	0.1 – 65A	0.1 – 65A

Circuit & Motor Protection

Manual Motor Protectors & Controllers

CATALOG SELECTION

XT IEC Manual Motor Protectors — Catalog Numbering System

XT PR 012 B C1

Designation

XT = ***XT*** IEC Power Control

Type

PB = Manual Motor Protector — Pushbutton
PR = Manual Motor Protector — Rotary

Current Ratings

B Frame

P16 = 0.16A	**6P3** = 6.3A
P25 = 0.25A	**010** = 10A
P40 = 0.40A	**012** = 12A
P63 = 0.63A	**016** = 16A
001 = 1A	**020** = 20A
1P6 = 1.6A	**025** = 25A
2P5 = 2.5A	**032** = 32A
004 = 4A	

D Frame

016 = 16A	**050** = 50A
025 = 25A	**058** = 58A
032 = 32A	**063** = 63A
040 = 40A	

Frame Size

B = 45 mm
D = 55 mm

Trip Class

C1 = Class 10
Blank = Magnetic Only (No Thermal Trip)

For our complete product offering, see the Control Products Catalog **(CA08102001E)**.

XT IEC Manual Motor Protectors

- ON / OFF rotary handle with lockout provision
- Class 10 overload protection
- Motor applications from 0.1A to 63A
- Built-in heater and magnetic trip elements to protect the motor
- Adjustment dial for setting motor FLA
- XTPR Rotary MMP with a lineside adapter is rated for UL 508 Type E



XTPB Pushbutton Manual Motor Protectors — Global and North American Ratings

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_{rm} (Amps)	Maximum Motor Ratings ①									Catalog Number — Screw Terminals
			Maximum kW Rating AC-3 — P (kW)					Maximum hp Rating — P (hp) UL 508 / CSA C 22.2 No. 14				
			3-Phase					3-Phase				
			220 – 240V	380 – 415V	440V	500V	660 – 690V	200V	240V	480V	600V	
Frame B												
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	1/2	1/2	**XTPB001BC1**
1.6	1 – 1.6	22	0.25	0.55	0.55	0.75	1.1	②	②	3/4	1	**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	1	1	2	3	**XTPB004BC1**
6.3	4 – 6.3	88	1.1	2.2	3	3	4	1-1/2	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	5	10	15	**XTPB020BC1**
25	20 – 25	350	5.5	12.5	12.5	15	22	5	7-1/2	15	20	**XTPB025BC1**

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).

Note: Service Factor (SF) — Setting I_r of current scale in dependence of load factor:
SF = 1.15 -> $I_r = 1 \times I_n$ mot
SF = 1 -> $I_r = 0.9 \times I_n$ mot

Circuit & Motor Protection

Manual Motor Protectors & Controllers

PRODUCT SELECTION

XT IEC Manual Motor Protectors

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

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_{rm} (Amps)	Maximum Motor Ratings ①									Catalog Number — Screw Terminals ③
			Maximum kW Rating AC-3 — P (kW)					Maximum hp Rating — P (hp) UL 508 / CSA C 22.2 No. 14				
			3-Phase					3-Phase				
			220 – 240V	380 – 415V	440V	500V	660 – 690V	200V	240V	480V	600V	
Frame B												
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	1/2	1/2	**XTPR001BC1**
1.6	1 – 1.6	22	0.25	0.55	0.55	0.75	1.1	②	②	3/4	1	**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	1	1	2	3	**XTPR004BC1**
6.3	4 – 6.3	88	1.1	2.2	3	3	4	1-1/2	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	5	10	15	**XTPR020BC1**
25	20 – 25	350	5.5	12.5	12.5	15	22	5	7-1/2	15	20	**XTPR025BC1**
32	25 – 32	448	7.5	15	15	22	30	7-1/2	10	25	30	**XTPR032BC1**
Frame D												
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	20	25	**XTPR025DC1**
32	25 – 32	448	7.5	15	17.5	22	22	10	10	25	30	**XTPR032DC1**
40	32 – 40	560	11	20	22	24	30	10	15	30	40	**XTPR040DC1**
50	40 – 50	700	14	25	30	30	45	10	15	30	40	**XTPR050DC1**
58	50 – 58	812	17	30	37	37	55	—	—	40	—	**XTPR058DC1**
65	55 – 65	882	18.5	34	37	45	55	—	—	—	—	**XTPR063DC1**

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).

③ Catalog number shown comes with screw terminals. For Frame B devices up to 16A, spring cage terminals are available.
For spring cage terminals on line and load sides, insert a "C" into the catalog number in the 5th position — Example: XTPR**C** _BC1.
For spring cage terminals on the load side only, insert an "SC" into the catalog number in the 5th and 6th positions — Example: XTPR**SC** _BC1.

Note: Service Factor (SF) — Setting I_r of current scale in dependence of load factor:
SF = 1.15 -> $I_r = 1 \times I_n$ mot
SF = 1 -> $I_r = 0.9 \times I_n$ mot

For our complete product offering, see the Control Products Catalog **(CA08102001E)**.

XT IEC Manual Motor Protectors

XTPR Manual Self-Protected Motor Starters — North American Ratings, UL 508 Type E 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				Rated Short-Circuit Breaking Capacity (kA)			Line Side Adapter ①	Manual Motor Protector — Screw Terminals
			Maximum hp Rating — P (hp)								
			3-Phase								
			200V	240V	480V/ 277V	600V/ 247V	240V	480/ 277V	600/ 347V	Catalog Number	Catalog Number
Frame B											
0.16	0.1 – 0.16	2.2	③	③	1/2	1/2	50	50	50	**XTPAXLSA**	**XTPRP16BC1**
0.25	0.16 – 0.25	3.4	③	③	1/2	1/2	50	50	50	**XTPAXLSA**	**XTPRP25BC1**
0.4	0.25 – 0.4	5.6	③	③	1/2	1/2	50	50	50	**XTPAXLSA**	**XTPRP40BC1**
0.63	0.4 – 0.63	8.8	③	③	1/2	1/2	50	50	50	**XTPAXLSA**	**XTPRP63BC1**
1	0.63 – 1	14	③	③	1/2	1/2	50	50	50	**XTPAXLSA**	**XTPR001BC1**
1.6	1 – 1.6	22	③	③	3/4	3/4	50	50	50	**XTPAXLSA**	**XTPR1P6BC1**
2.5	1.6 – 2.5	35	1/2	1/2	1	1-1/2	50	50	50	**XTPAXLSA**	**XTPR2P5BC1**
4	2.5 – 4	56	3/4	1	2	3	50	50	50	**XTPAXLSA**	**XTPR004BC1**
6.3	4 – 6.3	88	1	1-1/2	3	5	50	50	50	**XTPAXLSA**	**XTPR6P3BC1**
10	6.3 – 11	140	3	3	7-1/2	10	50	50	50	**XTPAXLSA**	**XTPR010BC1**
12	8 – 12	168	3	3	7-1/2	—	42	42	—	**XTPAXLSA**	**XTPR012BC1**
16	10 – 16	224	3	5	10	—	42	42	—	**XTPAXLSA**	**XTPR016BC1**
20	16 – 20	280	5	5	—	—	42	42	—	**XTPAXLSA**	**XTPR020BC1**
25	20 – 25	350	5	7-1/2	15	—	18	18	—	**XTPAXLSA**	**XTPR025BC1**
32	25 – 32	448	7-1/2	10	25	—	18	18	—	**XTPAXLSA**	**XTPR032BC1**
Frame D											
16	10 – 16	224	3	5	10	10	50	50	50	**XTPAXLSAD**	**XTPR016DC1**
25	16 – 25	350	7-1/2	7-1/2	20	25	50	50	50	**XTPAXLSAD**	**XTPR025DC1**
32	25 – 32	448	10	10	25	30	50	50	50	**XTPAXLSAD**	**XTPR032DC1**
40	32 – 40	560	10	10	30	40	50	50	50	**XTPAXLSAD**	**XTPR040DC1**
50	40 – 50	700	10	15	30	—	65	65	—	**XTPAXLSAD**	**XTPR050DC1**
58	50 – 58	812	15	15	40	—	65	65	—	**XTPAXLSAD**	**XTPR058DC1**
65	55 – 65	882	15	15	40	—	65	65	—	**XTPAXLSAD**	**XTPR063DC1**

① UL 508 Type E starters are assembled from a standard XTPR 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).

Note: 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 (e.g., 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.

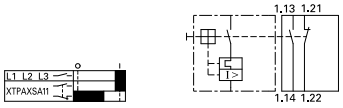
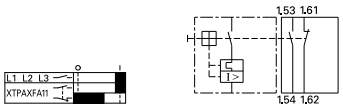
Circuit & Motor Protection

Manual Motor Protectors & Controllers

PRODUCT SELECTION

XT IEC Manual Motor Protectors — Accessories

Auxiliary Contacts

Contact Configuration	Contact Sequence	Screw Terminals	
		Pkg. Qty.	Catalog Number
Side-Mount			
1NO-1NC		5	**XTPAXSA11**
Front-Mount			
1NO-1NC		5	**XTPAXFA11**

IP65 Rotary Handle Mechanism ①②③

	Description	Pkg. Qty.	Catalog Number
Complete Kits — Includes Handle, Shaft and Required Hardware			
	Rotary Handle Mechanism IP65 Black — For use on main switches to IEC / EN 60204.	1	**XTPAXRHMB**
	Rotary Handle Mechanism IP65 Red / Yellow — For use on main switch with Emergency-Stop function to IEC / EN 60204.	1	**XTPAXRHMRY**
	Rotary Handle Mechanism IP65 Black — For use on main switches to IEC / EN 60204 where XTPR is mounted 90° from vertical.	1	**XTPAXRHM90B**
	Rotary Handle Mechanism IP65 Red / Yellow — For use on main switch with Emergency-Stop function to IEC / EN 60204 where XTPR is mounted 90° from vertical.	1	**XTPAXRHM90RY**

① With ON/OFF switch position and "+" (tripped), lockable with 3 padlocks, 4 – 8 mm hasp. Can be locked in the OFF position, if required.

② Rotary handle mechanisms ship with door interlock disabled. See instruction publication with product for how to enable door interlock.

③ Not for use with XTPAXFAEM20 early-make front-mount auxiliary contact.

Shunt Release

	Catalog Number — Screw Terminals	Pkg. Qty.
	**XTPAXSR120V60H**	2
	XTPAXSR240V60H	2
	XTPAXSR480V60H	2
	XTPAXSR24VDC	2

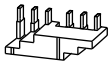
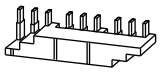
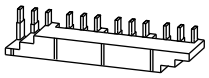
Undervoltage Release

	Catalog Number — Screw Terminals	Pkg. Qty.
	**XTPAXUVR120V60H**	2
	XTPAXUVR240V60H	2
	XTPAXUVR480V60H	2

For our complete product offering, see the Control Products Catalog **(CA08102001E)**.

XT IEC Manual Motor Protectors — Accessories

Three-Phase Commoning Links ①

	For Use with...	Qty MMP	Length of Link (mm)	Unit Width (mm)	Pkg Qty.	Catalog Number
Frame B						
	MMP With No Side-Mounted Auxiliaries or Voltage Releases	2	90	45	10	**XTPAXCLKA2**
		3	135	45	10	**XTPAXCLKA3**
		4	180	45	10	**XTPAXCLKA4**
		5	225	45	10	**XTPAXCLKA5**
Frame D						
	MMP With No Side-Mounted Auxiliaries or Voltage Releases	2	110	55	1	**XTPAXCLKA2D**
		3	165	55	1	**XTPAXCLKA3D**
		4	220	55	1	**XTPAXCLKA4D**

① Protected against accidental contact. B-Frame short circuit proof Ue = 690V, Iu = 63A; D-Frame short circuit proof Ue = 690V, Iu = 128A. Frame B links can be combined by rotating mounting. Frame D links cannot be combined.

Incoming Terminal for Three-Phase Commoning Link ①

	For Use with...	Pkg Qty.	Catalog Number
	B-Frame XTPR, XTPB	5	**XTPAXIT**

① For three-phase commoning link, protected against accidental contact, Ue = 690V, Iu = 63A; for conductor cross-sections: 2.5 – 25 mm^2 stranded; 2.5 – 16 mm^2 flexible with ferrules, AWG 14-6.

Line-Side Adapter ①

	For Use with...	Pkg Qty.	Catalog Number
	B-Frame XTPR to Create a UL 508 Type E/F Manual Combination Starter	5	**XTPAXLSA**
	D-Frame XTPR to Create a UL 508 Type E/F Manual Combination Starter	1	**XTPAXLSAD** ②

① XTPAXLSA is for three-phase commoning link, finger- and back-of-hand proof, Ue = 690V, Iu = 60A; for conductor cross sections: 2.5 – 25 mm^2 stranded, 2.5 – 16 mm^2 flexible with ferrule, AWG 14-6.

② XTPAXLSAD cannot be combined with three-phase commoning links.

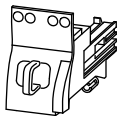
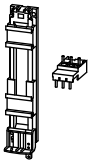
Circuit & Motor Protection

Manual Motor Protectors & Controllers

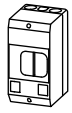
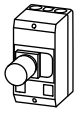
PRODUCT SELECTION

XT IEC Manual Motor Protectors — Accessories

Combination Connection Kits for Connection of XTPR MMP with XTCE Contactor

	For Use with...	Description	Std. Pack	Catalog Number
Non-Reversing Starters				
	XTPR...B + XTCE...B	Comprised of: • Mechanical connection element for XTPR...B and contactor • Main current wiring between XTPR...B and contactor in tool-less plug connection • Cable guidance Use contactor auxiliary switch XTCEXFAT_. Control cable guidance: max. 6 cables up to 2.5 mm² external diameter or 4 cables up to 3.5 mm² external diameter.	1	**XTPAXTPCB**
	XTPR...B + XTCE...C	Comprised of: • DIN-Rail adapter plate • Main current wiring between XTPR and contactor	1	**XTPAXTPCC**
	XTPR...D + XTCE...D		1	**XTPAXTPCD**

Insulated Enclosures for Surface Mounting

	Degree of Protection	For Use with...	Description	Catalog Number
XTPB Pushbutton Manual Motor Protectors — North American Usage ①②				
	IP65 NEMA 3R, 4X, 12, 13	XTPB MMP Only or with: XTPAXFA..., XTPBXFAEM20, XTPAXSA..., XTPAXUVR..., XTPAXSR..., XTPAXCL	With actuating diaphragm	**XTPBXENAS65**
	IP65 NEMA 3R, 4X, 12, 13	XTPB MMP Only or with: XTPAXFA..., XTPBXFAEM20, XTPAXUVR..., XTPAXSR..., XTPAXCL	With Emergency-Stop (E-Stop) pushbutton actuator, Red-Yellow	**XTPBXENASES65**
B-Frame (0.1 – 32A) XTPR Rotary Manual Motor Protectors — North American Usage ③				
	IP55 NEMA 1, 12, 3R	B-Frame XTPR Only or with: XTPAXSA... and XTPAXFA..., XTPAXUVR...and XTPAXFA..., XTPAXSR...and XTPAXFA..., XTPAXCL	With red/yellow rotary handle for use as Emergency-Stop switch to VDE 0113	**XTPAXENAS55RY**
D-Frame (10 – 65A) XTPR Rotary Manual Motor Protectors ④⑤				
	IP65 NEMA 1, 12, 3R, 4X	D-Frame XTPR Only or with: XTPAXFA..., XTPAXFAEM20, XTPAXSA..., XTPAXSATR..., XTPAXUVR..., XTPAXSR..., XTPAXCL	With red/yellow rotary handle for use as Emergency-Stop switches to IEC / EN 60204	**XTPAXENCSD65RY**

① Built-in terminal for PE(N).

② North American enclosures come with conduit adapters for use with 1/2" NPT.

③ Built-in N and PE terminal, lower part without knockouts.

④ Integrated terminal for PE(N) connection.

⑤ % Metric knockouts:
Top ÷ bottom: M25/M32
In backplate: M25/M32
Control cable entry: M20

For our complete product offering, see the Control Products Catalog **(CA08102001E)**.