

The feature packed line of Eaton Manual Motor Controllers

The new XT IEC Open Non-reversing and Reversing Manual Motor Controllers combine a Manual Motor Protector with Contactors to provide a complete motor protection solution by combining motor disconnect function, thermal overload protection, magnetic short circuit protection and remote control operation in one compact, assembled unit.

These assembled Manual Motor Controllers cover motors with FLC ratings from 0.10A to 52A.



Manual Motor Controllers XTSC and XTSR

- Manual Motor Controller for Single and Multi Motor Panels. The pre-assembled XT Manual Motor Controllers (MMC) combine a Manual Motor Protector, a Wiring Connector Link (WCL) and Contactor. MMCs can also be field installed with separate MMP, WCL and Contactor(s). An IEC magnetic contactor has been added to allow for remote operation of the motor circuit.

Features

- ON/OFF rotary handle with lockout provision
- Visible trip indication
- Test trip function
- Motor applications from 0.11A to 50A
- Class 10 overload protection
- Built-in heater and magnetic trip elements to protect the motor
- Phase loss sensitivity
- Type 2 coordination
- Ambient compensated up to 55°C
- Control inputs located at front of starter for easy access and wiring
- Wide range of coils
- DIN Rail mount — XTSC...BB_
- Mounting plates — XTSC...BC_, XTSC...D motor controllers
- Adjustment dial for setting motor FLC
- Short circuit trip at 14 times the maximum setting of the FLC adjustment dial
- 1NO-1NC Auxiliary Contact as standard on Manual Motor Protector

Standards and Certifications

- IEC Type 2 Approved per IEC 60947-4-1
- CE Marked
- UL 508 Type F Manual Motor Controller
- UL Listed File No. E218618



XTSC016BC

Manual Motor Controllers, DOL, Frame B MMP + Frame C Contactor

FLA Adjustment Range / Overload Release — I_r (Amps)	Maximum Motor Ratings Motor kW Rating AC-3 — P (kW) 3-Phase 380 – 415V	Component Combinations			Assembled Controller ¹⁾ Eaton list number
		Manual Motor Protector	Connection Kit	Contactor ¹⁾	
10 – 16	7.5	XTPR016BC1	XTPAXTPCC	XTCE018C10_	XTSC016BC_
16 – 20	9	XTPR020BC1	XTPAXTPCC	XTCE025C10_	XTSC020BC_
20 – 25	11	XTPR025BC1	XTPAXTPCC	XTCE025C10_	XTSC025BC_
25 – 32	15	XTPR032BC1	XTPAXTPCC	XTCE032C10_	XTSC032BC_

¹⁾ Underscore (_) indicates Coil Suffix required. See Table Page 68



XTSC016DC

Manual Motor Controllers, DOL, Frame D MMP + Frame C Contactor

- The connection between the XTPR...DC1 and the XTCE...C... contactor will be made with flexible wire and mounted to the DIN Rail Adapter Plate (XTPAXTPCDP).

FLA Adjustment Range / Overload Release — I_r (Amps)	Maximum Motor Ratings Motor kW Rating AC-3 — P (kW) 3-Phase 380 – 415V	Component Combinations			Assembled Controller ¹⁾ Eaton list number
		Manual Motor Protector	Connection Kit	Contactor ¹⁾	
10 – 16	7.5	XTPR016DC1		XTCE018C10_	XTSC016DC_
16 – 25	12.5	XTPR025DC1		XTCE025C10_	XTSC025DC_
25 – 32	15	XTPR032DC1		XTCE032C10_	XTSC032DC_

¹⁾ Underscore (_) indicates Coil Suffix required. See Table Page 68



XTSC040DD

Manual Motor Controllers, DOL, Frame D MMP + Frame D Contactor

- XTPAXTPCD — Includes DIN Rail Adapter Plate (XTPAXTPCDP) and electrical contact modules (XTPAXECMD). Prior to release of XTPAXTPCD, the connection between the XTPR...DC1 and the XTCE...D... contactor will be made with flexible wire and mounted to the DIN Rail Adapter Plate (XTPAXTPCDP).

FLA Adjustment Range / Overload Release — I_r (Amps)	Maximum Motor Ratings Motor kW Rating AC-3 — P (kW) 3-Phase 380 – 415V	Component Combinations			Assembled Controller ¹⁾ Eaton list number
		Manual Motor Protector	Connection Kit	Contactor ¹⁾	
32 – 40	20	XTPR040DC1	XTPAXTPCD	XTCE040D10_	XTSC040DD_
40 – 50	25	XTPR050DC1	XTPAXTPCD	XTCE050D10_	XTSC050DD_
50 – 58	30	XTPR058DC1	XTPAXTPCD	XTCE065D10_	XTSC058DD_
55 – 63	34	XTPR063DC1	XTPAXTPCD	XTCE065D10_	XTSC063DD_

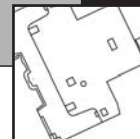
¹⁾ Underscore (_) indicates Coil Suffix required. See Table Page 68

AC and DC Coil Suffixes

Coil Voltage 50Hz			Suffix Code ¹⁾
	60Hz	DC	
Frame B Contactors			
110V	120V		A
220V ,	240V		B
230V			F
24V	24V		T
415V	480V		C
550V	600V		D
	208V		E
190V	220V		G
240V	277V		H
380V	440V		L
400V			N
	380V		P
12V	12V		R
24V			U
42V	48V		W
48V			Y
		120V	AD ²⁾
		220V	BD ²⁾
		12V	RD ²⁾
		24V	TD
		48V	WD ²⁾
Frame C and D Contactors			
110V	120V		A
220V	240V		B
230V			F
24V	24V		T
415V	480V		C
550V	600V		D
	208V		E
190V	220V		G
240V	277V		H
380V	440V		L
400V			N
	380V		P
12V	12V		R
24V			U
42V	48V		W
48V			Y
		110-130V	AD ²⁾
		200-240V	BD ²⁾
		12-14V	RD ²⁾
		24-27V	TD
		48-60V	WD ²⁾

¹⁾ Add suffix in place of underscore (_) to Eaton list number

²⁾ With DC Operation: Integrated diode-resistor combination, coil rating 2.6W.

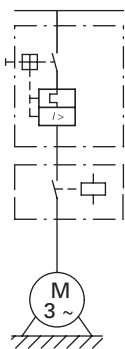


Manual Motor Protectors

For motors with service factors less than 1.15, multiply the motor FLA by .90 to select appropriate MMP.
 Example: For motor having FLA of 6.4A and service factor of 1.0 ($6.4A \times .90 = 5.76A$) select Eaton list number XTPB6P3B01.
 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 Eaton list number XTPR012BC1.

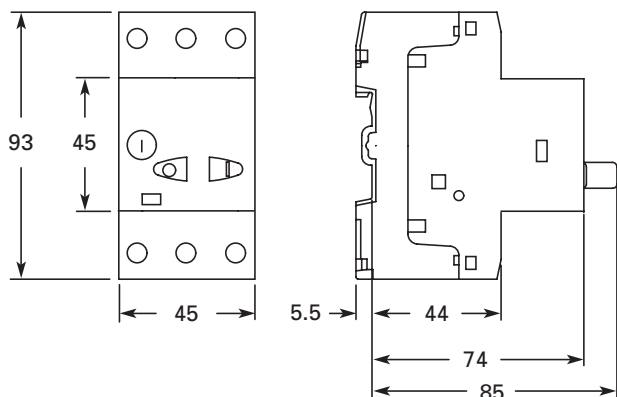
The assembled Manual Motor Controller (MMC) consists of a XTPR Manual Motor Protector (MMP) and a XTCE contactor. Up to 12A, the assembly can be mounted directly on DIN rail without an adapter. The contactors are supported mechanically with a mechanical connection element (included in XTPAXTPCB). For 16A and above, the assembly is mounted via a DIN Rail Adapter Plate (XTPAXTPCCP) and the electrical connection is made with electrical contact modules (XTPAXEMMC), both included in XTPAXTPCC.

Service Factor Settings: For motors with a service factor (SF) of 1.15, use motor nameplate Full Load Amperes (FLA) to select the appropriate motor controller $\rightarrow I_r = 1 \times I_{n \text{ mot}}$. For motors with a service factor (SF) of 1.0 or less, multiply the motor FLA by 0.9 to select the appropriate motor controller $\rightarrow I_r = 0.9 \times I_{n \text{ mot}}$.
 Single-phasing sensitivity to IEC/EN 60947-4-1, VDE 0660 Part 102.



XTSC... Manual Motor Controller

Manual Motor Protectors, Frame B, Pushbutton, dimensional drawing



Manual Motor Protectors — XTPB

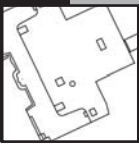
Manual Motor Protectors, MMC and Manual Motor Controllers MMC, Frames B and D, Ratings

Eaton list number		Rated Current — I_e (Amps)	FLA Adjustment Range / Overload Release — I_r (Amps)	Short Circuit Release — I_m (Amps)	Rated Short Circuit Breaking Capacity (kA)		
Non-reversing	Reversing				240V	480/277V	600/347V

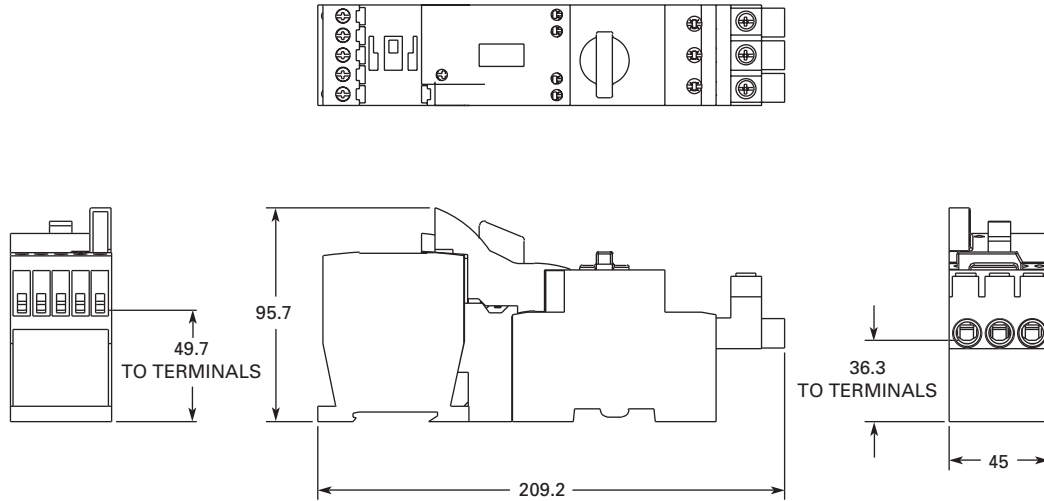


XTSC & XTSR Manual Motor Controllers (MMC) / Starter Combinations							
XTSCP25BB_	XTSRP25BB_	0.25	0.16 – 0.25	3.5	50	50	50
XTSCP40BB_	XTSRP40BB_	0.4	0.25 – 0.4	5.6	50	50	50
XTSCP63BB_	XTSRP63BB_	0.63	0.4 – 0.63	8.82	50	50	50
XTSC001BB_	XTSR001BB_	1	0.63 – 1	14	50	50	50
XTSC1P6BB_	XTSR1P6BB_	1.6	1 – 1.6	22.4	50	50	50
XTSC2P5BB_	XTSR2P5BB_	2.5	1.6 – 2.5	35	50	50	50
XTSC004BB_	XTSR004BB_	4	2.5 – 4	56	50	50	50
XTSC6P3BB_	XTSR6P3BB_	6.3	4 – 6.3	88.2	50	50	50
XTSC010BB_	XTSR010BB_	10	6.3 – 10	140	50	50	50
XTSC012BB_	XTSR012BB_	12	8 – 12	168	50	42	—
XTSC016BC_	XTSR016BC_	16	10 – 16	224	18	42	—
XTSC020BC_	XTSR020BC_	20	16 – 20	280	18	18	—
XTSC025BC_	XTSR025BC_	25	20 – 25	350	18	18	—
XTSC032BC_	XTSR032BC_	32	25 – 32	448	18	18	—
XTSC016DC_	XTSR016DC_	16	10 – 16	224	50	50	—
XTSC025DC_	XTSR025DC_	25	16 – 25	350	50	50	—
XTSC032DC_	XTSR032DC_	32	25 – 32	448	50	50	—
XTSC040DD_	XTSR040DD_	40	32 – 40	560	50	50	—
XTSC050DD_	XTSR050DD_	50	40 – 50	700	50 ¹⁾	50 ¹⁾	—
XTSC058DD_	XTSR058DD_	58	50 – 58	812	50 ¹⁾	50 ¹⁾	—
XTSC063DD_	XTSR063DD_	63	55 – 63	882	50 ¹⁾	50 ¹⁾	—
XTFC & XTFR Manual Motor Controllers (MMC), UL 508 Type F							
XTFCP25BB_	XTFRP25BB_	0.25	0.16 – 0.25	3.5	50	50	50
XTFCP40BB_	XTFRP40BB_	0.4	0.25 – 0.4	5.6	50	50	50
XTFCP63BB_	XTFRP63BB_	0.63	0.4 – 0.63	8.82	50	50	50
XTFC001BB_	XTFR001BB_	1	0.63 – 1	14	50	50	50
XTFC1P6BB_	XTFR1P6BB_	1.6	1 – 1.6	22.4	50	50	50
XTFC2P5BB_	XTFR2P5BB_	2.5	1.6 – 2.5	35	50	50	50
XTFC004BB_	XTFR004BB_	4	2.5 – 4	56	50	50	50
XTFC6P3BB_	XTFR6P3BB_	6.3	4 – 6.3	88.2	50	50	50
XTFC010BB_	XTFR010BB_	10	6.3 – 10	140	50	50	50
XTFC012BB_	XTFR012BB_	12	8 – 12	168	50	42	—
XTFC016BC_	XTFR016BC_	16	10 – 16	224	18	18	—
XTFC020BC_	XTFR020BC_	20	16 – 20	280	18	18	—
XTFC025BC_	XTFR025BC_	25	20 – 25	350	18	18	—
XTFC032BC_	XTFR032BC_	32	25 – 32	448	18	18	—
XTFC016DC_	XTFR016DC_	16	10 – 16	224	50	50	—
XTFC025DC_	XTFR025DC_	25	16 – 25	350	50	50	—
XTFC032DC_	XTFR032DC_	32	25 – 32	448	50	50	—
XTFC040DD_	XTFR040DD_	40	32 – 40	560	50	50	—

¹⁾ Ratings pending UL approval. Contact Eaton for availability.



Manual Motor Controllers Frame B, Dimensional drawing



Manual Motor Controllers Frames B and D, technical data and Specifications

Factory Assembled Motor Protective Device with Thermal and Magnetic Trip + Contactor(s)

Eaton list number		FLA	Maximum Motor Ratings — P ¹⁾				
Assembled Manual/ Manual Motor Controller — Non-reversing ⁴⁾	Assembled Manual/ Manual Motor Controller — Reversing ⁴⁾	Adjustment Range / Overload Release — I _r (Amps)	Maximum Motor kW Rating AC-3 — P (kW)				
			Three-Phase 220-240V	380-415V	440V	500V	660-690V

XTSC & XTSR Manual Motor Controllers (MMC) / Starter Combinations

XTSCP25BB_	XTSRP25BB_	0.16 – 0.25	—	0.06	0.06	0.06	0.12
XTSCP40BB_	XTSRP40BB_	0.25 – 0.4	0.06	0.09	0.12	0.12	0.18
XTSCP63BB_	XTSRP63BB_	0.4 – 0.63	0.09	0.18	0.18	0.25	0.25
XTSC001BB_	XTSR001BB_	0.63 – 1	0.12	0.25	0.25	0.37	0.55
XTSC1P6BB_	XTSR1P6BB_	1 – 1.6	0.25	0.55	0.55	0.75	1.1
XTSC2P5BB_	XTSR2P5BB_	1.6 – 2.5	0.37	0.75	1.1	1.1	1.5
XTSC004BB_	XTSR004BB_	2.5 – 4	0.75	1.5	1.5	2.2	3
XTSC6P3BB_	XTSR6P3BB_	4 – 6.3	1.1	2.2	3	3	4
XTSC010BB_	XTSR010BB_	6.3 – 10	2.2	4	4	4	7.5
XTSC012BB_	XTSR012BB_	8 – 12	3	5.5	5.5	5.5	11
XTSC016BC_	XTSR016BC_	10 – 16	4	7.5	9	9	12.5
XTSC020BC_	XTSR020BC_	16 – 20	5.5	9	11	12.5	15
XTSC025BC_	XTSR025BC_	20 – 25	5.5	11	12.5	15	22
XTSC032BC_	XTSR032BC_	25 – 32	7.5	15	15	22	30
XTSC016DC_	XTSR016DC_	10 – 16	4	7.5	9	9	12.5
XTSC025DC_	XTSR025DC_	16 – 25	5.5	12.5	12.5	12.5	22
XTSC032DC_	XTSR032DC_	25 – 32	7.5	15	17.5	17.5	22
XTSC040DD_	XTSR040DD_	32 – 40	11	20	22	22	30
XTSC050DD_	XTSR050DD_	40 – 50	14	25	30	30	45
XTSC058DD_	XTSR058DD_	50 – 58	17	30	37	37	55
XTSC063DD_	XTSR063DD_	55 – 63	18.5	34	37	37	55

¹⁾ Select Manual Motor Protectors by full load amperes. Maximum Motor Ratings (kW) are for reference only.

²⁾ In this range, calculate motor rating according to rated current. Specified values to NEC Table 430-150.

³⁾ Ratings pending UL approval. Contact Eaton for availability.

⁴⁾ Underscore (_) indicates Coil Suffix required.

