

**Frame D MMP +
Frame D Contactor**

**Factory-Assembled Manual Motor Controller—Frame D MMP + Frame D 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		
32–40	560	11	20	22	30	XTSC040DD_	XTSR040DD_
40–50	700	14	25	30	45	XTSC050DD_	XTSR050DD_
50–58	812	17	30	37	55	XTSC058DD_	XTSR058DD_
55–65	882	18.5	34	37	55	XTSC063DD_	XTSR063DD_

AC and DC Coil Suffixes

Coil Voltage	Suffix Code
Frame B Contactors	
110V 50 Hz, 120V 60 Hz	A
220V 50 Hz, 240V 60 Hz	B
230V 50 Hz	F
24V 50/60 Hz	T
24 Vdc	TD ^③
415V 50 Hz, 480V 60 Hz	C
600V 60 Hz	D
208V 60 Hz	E
190V 50 Hz, 220V 60 Hz	G
240V 50 Hz, 277V 60 Hz	H

Coil Voltage	Suffix Code
380V 50 Hz, 440V 60 Hz	L
400V 50 Hz	N
380V 60 Hz	P
12V 50/60 Hz	R
42V 50 Hz, 48V 60 Hz	W
48V 50 Hz	Y
120 Vdc	AD ^③
220 Vdc	BD ^③
12 Vdc	RD ^③
48 Vdc	WD ^③

Coil Voltage	Suffix Code
Frame C and D Contactors	
110V 50 Hz, 120V 60 Hz	A
220V 50 Hz, 240V 60 Hz	B
230V 50 Hz	F
24V 50/60 Hz	T
24–27 Vdc	TD ^③
415V 50 Hz, 480V 60 Hz	C
550V 50 Hz, 600V 60 Hz	D
208V 60 Hz	E
190V 50 Hz, 220V 60 Hz	G
240V 50 Hz, 277V 60 Hz	H

Coil Voltage	Suffix Code
380V 50 Hz, 440V 60 Hz	L
400V 50 Hz	N
380V 60 Hz	P
12V 50/60 Hz	R
42V 50 Hz, 48V 60 Hz	W
48V 50 Hz	Y
110–130 Vdc	AD ^③
200–240 Vdc	BD ^③
12–14 Vdc	RD ^③
48–60 Vdc	WD ^③

Notes

The assembled manual motor controller (MMC) consists of an XTPR manual motor protector (MMP) and an XTCE contactor. For Frame B MMP + Frame B contactor assemblies, the XTSC and XTSR can be mounted directly on DIN rail without an adapter. The contactors are supported mechanically with a mechanical connection element (included in XTPAXTPCB, XTPAXRPCRB). For MMCs using a Frame C or Frame D contactor, the assembly is mounted via a DIN rail adapter plate (XTPAXTPCPC, XTPAXTPCPD) and the electrical connection is made with electrical contact modules (XTPAXECMC, XTPAXECMD), both included in XTPAXTPCC and XTPAXTPCD.

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

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

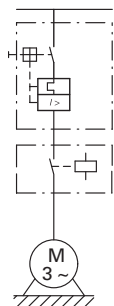
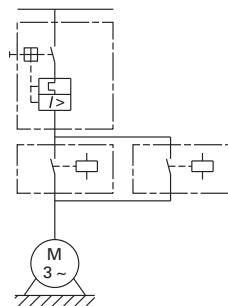
$$SF = 1 \rightarrow I_r = 0.9 \times I_{n \text{ mot}}$$

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

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 AC and DC coil suffixes above.

③ With DC operation: Integrated diode-resistor combination, coil rating 2.6W.

**Non-Reversing Manual
Motor Controller Power
Circuit**

**Reversing Manual
Motor Controller Power
Circuit**


AC and DC Coil Suffixes

Coil Voltage	Suffix Code
Frame B Contactors	
110V 50 Hz, 120V 60 Hz	A
220V 50 Hz, 240V 60 Hz	B
230V 50 Hz	F
24V 50/60 Hz	T
24 Vdc	TD ①
415V 50 Hz, 480V 60 Hz	C
600V 60 Hz	D
208V 60 Hz	E
190V 50 Hz, 220V 60 Hz	G
240V 50 Hz, 277V 60 Hz	H

Coil Voltage	Suffix Code
380V 50 Hz, 440V 60 Hz	L
400V 50 Hz	N
380V 60 Hz	P
12V 50/60 Hz	R
42V 50 Hz, 48V 60 Hz	W
48V 50 Hz	Y
120 Vdc	AD ①
220 Vdc	BD ①
12 Vdc	RD ①
48 Vdc	WD ①

Coil Voltage	Suffix Code
Frame C and D Contactors	
110V 50 Hz, 120V 60 Hz	A
220V 50 Hz, 240V 60 Hz	B
230V 50 Hz	F
24V 50/60 Hz	T
24–27 Vdc	TD ①
415V 50 Hz, 480V 60 Hz	C
550V 50 Hz, 600V 60 Hz	D
208V 60 Hz	E
190V 50 Hz, 220V 60 Hz	G
240V 50 Hz, 277V 60 Hz	H

Coil Voltage	Suffix Code
380V 50 Hz, 440V 60 Hz	L
400V 50 Hz	N
380V 60 Hz	P
12V 50/60 Hz	R
42V 50 Hz, 48V 60 Hz	W
48V 50 Hz	Y
110–130 Vdc	AD ①
200–240 Vdc	BD ①
12–14 Vdc	RD ①
48–60 Vdc	WD ①

Notes

The assembled manual motor controller (MMC) consists of an XTPR manual motor protector (MMP) and an XTCE contactor. For Frame B MMP + Frame B contactor assemblies, the XTSC and XTSR can be mounted directly on DIN rail without an adapter. The contactors are supported mechanically with a mechanical connection element (included in XTPAXTPCB, XTPAXRPCRB). For 16A and above, the assembly is mounted via a DIN rail adapter plate (XTPAXTPCPC, XTPAXTPCPD) and the electrical connection is made with electrical contact modules (XTPAXECMC, XTPAXECMD), both included in XTPAXTPCC and XTPAXTPCD.

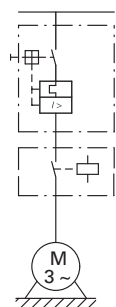
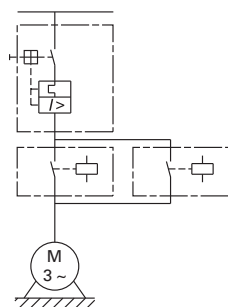
Service Factor (SF)—Setting I_r of current scale in dependence of load factor:

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

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

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

① With DC operation: Integrated diode-resistor combination, coil rating 2.6W.

XTFC Manual Motor Controller**XTFR Manual Motor Controller**

Technical Data and Specifications

XTSC Non-Reversing Manual Motor Controllers (MMC)—Component Bill of Material

Factory Assembled Manual Motor Protector + Contactor

Assembled Manual Motor Controller ①	FLA Adjustment Range/Overload Release—I _r (Amps)	Component Catalog Numbers		Contactor ①	Manual Motor Protector Auxiliary Contact
		Manual Motor Protector	Combination Connection Kit		
XTSC Frame B MMP + Frame B Contactor					
XTSCP16BB_	0.1–0.16	XTPRP16BC1	XTPAXTPCB	XTCE007B10_	XTPAXFA11
XTSCP25BB_	0.16–0.25	XTPRP25BC1	XTPAXTPCB	XTCE007B10_	XTPAXFA11
XTSCP40BB_	0.25–0.4	XTPRP40BC1	XTPAXTPCB	XTCE007B10_	XTPAXFA11
XTSCP63BB_	0.4–0.63	XTPRP63BC1	XTPAXTPCB	XTCE007B10_	XTPAXFA11
XTSC001BB_	0.63–1	XTPR001BC1	XTPAXTPCB	XTCE007B10_	XTPAXFA11
XTSC1P6BB_	1–1.6	XTPR1P6BC1	XTPAXTPCB	XTCE007B10_	XTPAXFA11
XTSC2P5BB_	1.6–2.5	XTPR2P5BC1	XTPAXTPCB	XTCE007B10_	XTPAXFA11
XTSC004BB_	2.5–4	XTPR004BC1	XTPAXTPCB	XTCE007B10_	XTPAXFA11
XTSC6P3BB_	4–6.3	XTPR6P3BC1	XTPAXTPCB	XTCE007B10_	XTPAXFA11
XTSC10BB_	6.3–10	XTPR010BC1	XTPAXTPCB	XTCE009B10_	XTPAXFA11
XTSC12BB_	8–12	XTPR012BC1	XTPAXTPCB	XTCE012B10_	XTPAXFA11
XTSC16BB_	10–16	XTPR016BC1	XTPAXTPCB	XTCE015B10_	XTPAXFA11
XTSC Frame B MMP + Frame C Contactor					
XTSC020BC_	16–20	XTPR020BC1	XTPAXTPCC	XTCE025C10_	XTPAXFA11
XTSC025BC_	20–25	XTPR025BC1	XTPAXTPCC	XTCE025C10_	XTPAXFA11
XTSC032BC_	25–32	XTPR032BC1	XTPAXTPCC	XTCE032C10_	XTPAXFA11
XTSC Frame D MMP + Frame C Contactor					
XTSC016DC_	10–16	XTPR016DC1	②	XTCE018C10_	XTPAXFA1
XTSC025DC_	16–25	XTPR025DC1	②	XTCE025C10_	XTPAXFA11
XTSC032DC_	25–32	XTPR032DC1	②	XTCE032C10_	XTPAXFA11
XTSC Frame D MMP + Frame D Contactor					
XTSC040DD_	32–40	XTPR040DC1	XTPAXTPCD ③	XTCE040D00_	XTPAXFA11
XTSC050DD_	40–50	XTPR050DC1	XTPAXTPCD ③	XTCE050D00_	XTPAXFA11
XTSC058DD_	50–58	XTPR058DC1	XTPAXTPCD ③	XTCE065D00_	XTPAXFA11
XTSC063DD_	55–65	XTPR063DC1	XTPAXTPCD ③	XTCE065D00_	XTPAXFA11

Notes

① Underscore (_) indicates magnetic coil suffix required. See **Page V5-T1-196**.

② 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 (XTPAXTPCPD).

③ The reversing connection between the XTPR...DC1 and the (2) XTCE...C_ contactors will be accomplished by using the non-reversing combination connection kit (XTPAXTPCD), Frame D reversing link kit (XTCEXRLD), additional DIN rail adapter plate (XTPAXTPCPD) and DIN adapter connection element (XTPAXCNE).

XTFC Non-Reversing Combination Motor Controllers—Component Bill of Material

Factory Assembled Manual Motor Protector + Contactor + Line Side Adapter

Assembled Combination Motor Controller ①	FLA Adjustment Range/ Overload Release— I_r (Amps)	Component Catalog Numbers Line Side Adapter	Manual Motor Protector	Combination Connection Kit	Contactor ①	Manual Motor Protector Auxiliary Contact
XTFC Frame B MMP + Frame B Contactor						
XTFCP16BB_②	0.1–0.16	XTPAXLSA ③	XTPRP16BC1	XTPAXTPCB	XTCE007B10_	XTPAXFA11
XTFCP25BB_②	0.16–0.25	XTPAXLSA ③	XTPRP25BC1	XTPAXTPCB	XTCE007B10_	XTPAXFA11
XTFCP40BB_②	0.25–0.4	XTPAXLSA ③	XTPRP40BC1	XTPAXTPCB	XTCE007B10_	XTPAXFA11
XTFCP63BB_②	0.4–0.63	XTPAXLSA ③	XTPRP63BC1	XTPAXTPCB	XTCE007B10_	XTPAXFA11
XTFC001BB_②	0.63–1	XTPAXLSA ③	XTPR001BC1	XTPAXTPCB	XTCE007B10_	XTPAXFA11
XTFC1P6BB_②	1–1.6	XTPAXLSA ③	XTPR1P6BC1	XTPAXTPCB	XTCE007B10_	XTPAXFA11
XTFC2P5BB_②	1.6–2.5	XTPAXLSA ③	XTPR2P5BC1	XTPAXTPCB	XTCE007B10_	XTPAXFA11
XTFC004BB_②	2.5–4	XTPAXLSA ③	XTPR004BC1	XTPAXTPCB	XTCE007B10_	XTPAXFA11
XTFC6P3BB_	4–6.3	XTPAXLSA ③	XTPR6P3BC1	XTPAXTPCB	XTCE007B10_	XTPAXFA11
XTFC010BB_	6.3–10	XTPAXLSA ③	XTPR010BC1	XTPAXTPCB	XTCE009B10_	XTPAXFA11
XTFC012BB_	8–12	XTPAXLSA ③	XTPR012BC1	XTPAXTPCB	XTCE012B10_	XTPAXFA11
XTFC016BB_	10–16	XTPAXLSA ③	XTPR016BC1	XTPAXTPCB	XTCE015B10_	XTPAXFA11
XTFC Frame B MMP + Frame C Contactor						
XTFC6P3BC_②	4–6.3	XTPAXLSA ③	XTPR6P3BC1	XTPAXTPCC	XTCE018C10_	XTPAXFA11
XTFC010BC_②	6.3–10	XTPAXLSA ③	XTPR010BC1	XTPAXTPCC	XTCE018C10_	XTPAXFA11
XTFC012BC_②	8–12	XTPAXLSA ③	XTPR012BC1	XTPAXTPCC	XTCE018C10_	XTPAXFA11
XTFC016BC_②	10–16	XTPAXLSA ③	XTPR016BC1	XTPAXTPCC	XTCE018C10_	XTPAXFA11
XTFC020BC_	16–20	XTPAXLSA ③	XTPR020BC1	XTPAXTPCC	XTCE025C10_	XTPAXFA11
XTFC025BC_	20–25	XTPAXLSA ③	XTPR025BC1	XTPAXTPCC	XTCE025C10_	XTPAXFA11
XTFC032BC_	25–32	XTPAXLSA ③	XTPR032BC1	XTPAXTPCC	XTCE032C10_	XTPAXFA11
XTFC Frame D MMP + Frame C Contactor						
XTFC016DC_	10–16	XTPAXLSAD	XTPR016DC1	④	XTCE018C10_	XTPAXFA11
XTFC025DC_	16–25	XTPAXLSAD	XTPR025DC1	④	XTCE025C10_	XTPAXFA11
XTFC032DC_	25–32	XTPAXLSAD	XTPR032DC1	④	XTCE032C10_	XTPAXFA11
XTFC Frame D MMP + Frame D Contactor						
XTFC016DD_②	10–16	XTPAXLSAD	XTPR016DC1	XTPAXTPCD	XTCE040D00_	XTPAXFA11
XTFC025DD_②	16–20	XTPAXLSAD	XTPR025DC1	XTPAXTPCD	XTCE040D00_	XTPAXFA11
XTFC032DD_②	20–25	XTPAXLSAD	XTPR032DC1	XTPAXTPCD	XTCE040D00_	XTPAXFA11
XTFC040DD_②	32–40	XTPAXLSAD	XTPR040DC1	XTPAXTPCD ⑤	XTCE040D00_	XTPAXFA11
XTFC050DD_②	40–50	XTPAXLSAD	XTPR050DC1	XTPAXTPCD ⑤	XTCE050D00_	XTPAXFA11
XTFC058DD_②	50–58	XTPAXLSAD	XTPR058DC1	XTPAXTPCD ⑤	XTCE065D00_	XTPAXFA11
XTFC063DD_	55–65	XTPAXLSAD	XTPR063DC1	XTPAXTPCD ⑤	XTCE065D00_	XTPAXFA11

Notes

① Underscore (_) indicates magnetic coil suffix required. See **Page V5-T1-196**.

② Indicates Type E with contactor UL 508 combination. Not all XTFC part numbers feature UL 508 Type E with contactor combinations.

③ XTPAXLSA can be replaced with tool free XTPAXLSA.

④ 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 (XTPAXTPCPD).

⑤ The reversing connection between the XTPR...DC1 and the (2) XTCE...C_ contactors will be accomplished by using the non-reversing combination connection kit (XTPAXTPCD), Frame D reversing link kit (XTCEXRDL), additional DIN rail adapter plate (XTPAXTPCPD) and DIN adapter connection element (XTPAXCNE).

Note: Type E UL 508 combinations can be assembled in the field and DO NOT require the manual motor protector auxiliary contact XTPAXFA11. The connection can also be wired and does not require use of the XT connector.