

**XTSC and XTSR Manual Motor Controllers (MMC)/Starter Combinations**

Frame B MMP +  
Frame B Contactor



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

**FLA Adjustment  
Range/Overload  
Release— $I_r$   
(Amps)**



	Short-Circuit Release— $I_m$ (Amps)	Three-Phase				Assembled Manual Motor Controller ②	
		200V	240V	480V	600V	Non-Reversing Catalog Number ③	Reversing Catalog Number
0.1–0.16	3.2	④	④	1/2	1/2	XTSCP16BB_	XTSRP16BB_
0.16–0.25	3.5	④	④	1/2	1/2	XTSCP25BB_	XTSRP25BB_
0.25–0.4	5.6	④	④	1/2	1/2	XTSCP40BB_	XTSRP40BB_
0.4–0.63	8.82	④	④	1/2	1/2	XTSCP63BB_	XTSRP63BB_
0.63–1	14	④	④	1/2	1/2	XTSC001BB_	XTSR001BB_
1–1.6	22.4	④	④	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_	—

**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 “M” prior to ( \_ ) coil suffix will be assembled with standard connector XTPAXEMCB, non-reversing only.
- ④ In this range, calculate motor rating according to rated current. Specified values to NEC 430.6(A)(1).

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Frame B MMP +  
Frame B Contactor



#### Factory-Assembled Motor Protective Device with Thermal and Magnetic Trip + Contactor— Maximum IEC Ratings<sup>①</sup>

FLA Adjustment  
Range/Overload  
Release— $I_r$   
(Amps)



	Short-Circuit Release— $I_m$ (Amps)	Three-Phase				Assembled Manual Motor Controller <sup>②</sup>	
		220– 240V	380– 415V	500V	660– 690V	Non-Reversing Catalog Number	Reversing Catalog Number
0.1–0.16	3.2	—	—	—	0.06	XTSCP16BB_	XTSRP16BB_
0.16–0.25	3.5	—	0.06	0.06	0.12	XTSCP25BB_	XTSRP25BB_
0.25–0.4	5.6	0.06	0.09	0.12	0.18	XTSCP40BB_	XTSRP40BB_
0.4–0.63	8.82	0.09	0.18	0.25	0.25	XTSCP63BB_	XTSRP63BB_
0.63–1	14	0.12	0.25	0.37	0.55	XTSC001BB_	XTSR001BB_
1–1.6	22.4	0.25	0.55	0.75	1.1	XTSC1P6BB_	XTSR1P6BB_
1.6–2.5	35	0.37	0.75	1.1	1.5	XTSC2P5BB_	XTSR2P5BB_
2.5–4	56	0.75	1.5	2.2	3	XTSC004BB_	XTSR004BB_
4–6.3	88.2	1.1	2.2	3	4	XTSC6P3BB_	XTSR6P3BB_
6.3–10	140	2.2	4	4	7.5	XTSC010BB_	XTSR010BB_
8–12	168	3	5.5	5.5	11	XTSC012BB_	XTSR012BB_
10–16	224	4	7.5	9	12.5	XTSC016BB_	—

Frame B MMP +  
Frame C Contactor



#### Factory-Assembled Manual Motor Controller—Frame B MMP + Frame C Contactor— Maximum UL Ratings<sup>①</sup>

FLA Adjustment  
Range/Overload  
Release— $I_r$   
(Amps)



	Short-Circuit Release— $I_m$ (Amps)	Three-Phase				Assembled Manual Motor Controller <sup>②</sup>	
		200V	240V	480V	600V	Non-Reversing Catalog Number	Reversing Catalog Number
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<sup>①</sup>

FLA Adjustment  
Range/Overload  
Release— $I_r$   
(Amps)



	Short-Circuit Release— $I_m$ (Amps)	Three-Phase				Assembled Manual Motor Controller <sup>②</sup>	
		220– 240V	380– 415V	500V	660– 690V	Non-Reversing Catalog Number	Reversing Catalog Number
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**.

Frame D MMP +  
Frame C ContactorFactory-Assembled Manual Motor Controller—Frame D MMP + Frame C Contactor—  
Maximum UL Ratings ①FLA Adjustment  
Range/Overload  
Release— $I_r$   
(Amps)

	Short-Circuit Release— $I_{rm}$ (Amps)	Three-Phase				Assembled Manual Motor Controller ②	
		200V	240V	480V	600V	Non-Reversing Catalog Number	Reversing Catalog Number
10–16	224	3	5	10	15	XTSC016DC_	XTSR016DC_
16–25	350	5	7-1/2	15	20	XTSC025DC_	XTSR025DC_
25–32	448	7-1/2	10	20	30	XTSC032DC_	XTSR032DC_

Frame D MMP +  
Frame C ContactorFactory-Assembled Manual Motor Controller—Frame D MMP + Frame C Contactor—  
Maximum IEC Ratings ①FLA Adjustment  
Range/Overload  
Release— $I_r$   
(Amps)

	Short-Circuit Release— $I_{rm}$ (Amps)	Three-Phase				Assembled Manual Motor Controller ②	
		220– 240V	380– 415V	500V	660– 690V	Non-Reversing Catalog Number	Reversing Catalog Number
10–16	224	4	7.5	9	12.5	XTSC016DC_	XTSR016DC_
16–25	350	5.5	12.5	12.5	22	XTSC025DC_	XTSR025DC_
25–32	448	7.5	15	17.5	22	XTSC032DC_	XTSR032DC_

Frame D MMP +  
Frame D ContactorFactory-Assembled Manual Motor Controller—Frame D MMP + Frame D Contactor—  
Maximum UL Ratings ①FLA Adjustment  
Range/Overload  
Release— $I_r$   
(Amps)

	Short-Circuit Release— $I_{rm}$ (Amps)	Three-Phase				Assembled Manual Motor Controller ②	
		200V	240V	480V	600V	Non-Reversing Catalog Number	Reversing Catalog Number
32–40	560	10	15	30	30	XTSC040DD_	XTSR040DD_
40–50	700	15	15	30	—	XTSC050DD_	XTSR050DD_
50–58	812	15	15	40	—	XTSC058DD_	XTSR058DD_
55–65	882	15	15	40	—	XTSC063DD_	XTSR063DD_

**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**.

**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— $I_m$ (Amps)	Three-Phase				Assembled Manual Motor Controller ②	
		220– 240V	380– 415V	500V	660– 690V	Non-Reversing Catalog Number	Reversing Catalog Number
32–40	560	11	20	22	30	<b>XTSC040DD_</b>	<b>XTSR040DD_</b>
40–50	700	14	25	30	45	<b>XTSC050DD_</b>	<b>XTSR050DD_</b>
50–58	812	17	30	37	55	<b>XTSC058DD_</b>	<b>XTSR058DD_</b>
55–65	882	18.5	34	37	55	<b>XTSC063DD_</b>	<b>XTSR063DD_</b>

**AC and DC Coil Suffixes**

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

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

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

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

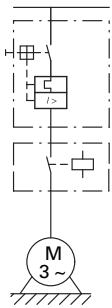
$$SF = 1.15 \rightarrow I_r = 1 \times I_{n \text{ mot}}$$

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

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**

