



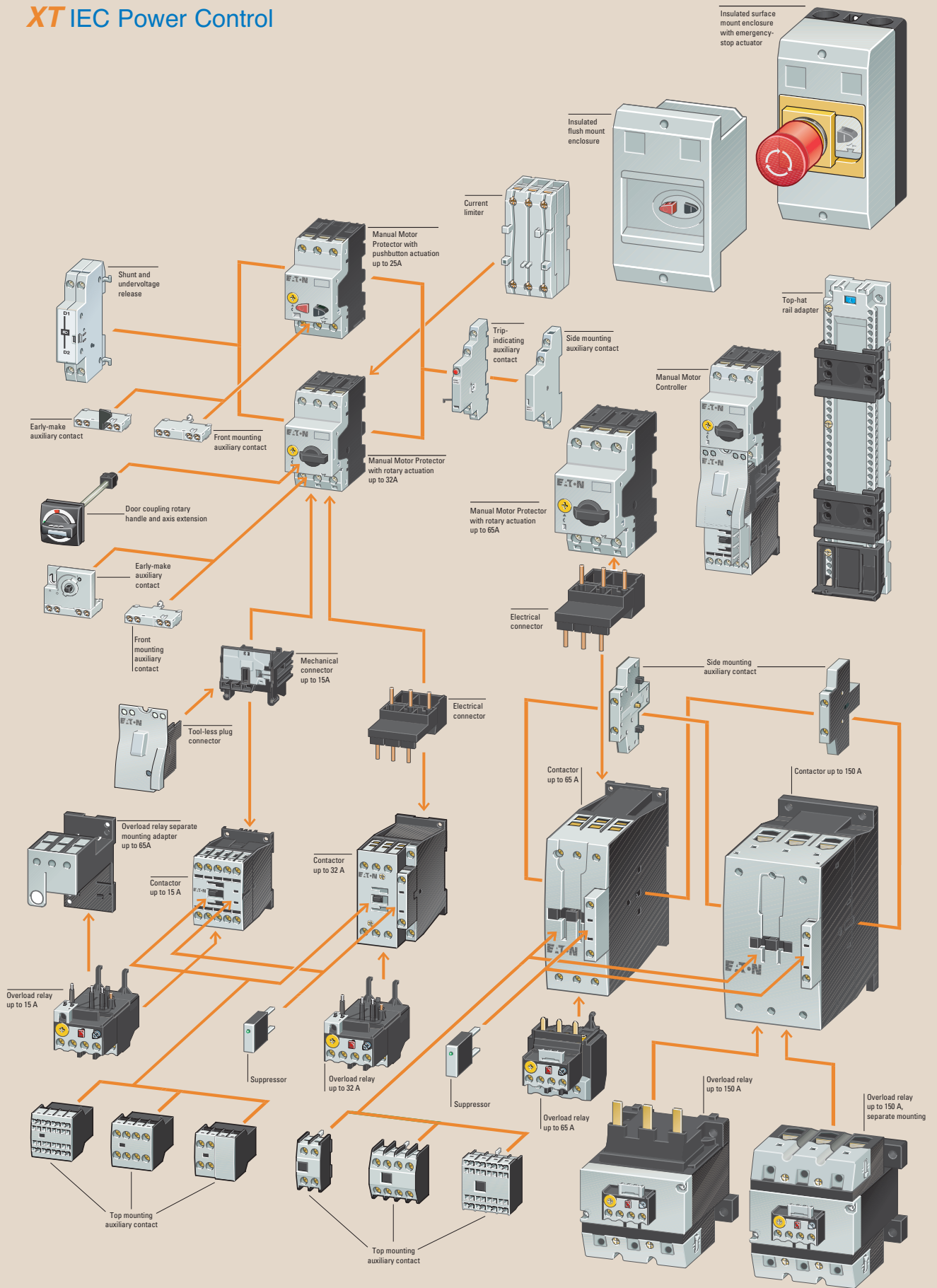
XT IEC Power Control

Quick Reference Guide

Contactors
Starters
Manual Motor
Protectors






XT IEC Power Control



Also available (not shown):

- XT Mini Contactors, 6-9A
- XT Contactors up to 2000A
- XT Overload Relays up to 630A

XT Manual Motor Protectors

						
Catalog Number Selection	kW@ 400V	Max hp @ 460V	Amp Range	Pushbutton B-Frame	Rotary B-Frame	Rotary D-Frame
Example: XTPB P16 B C1 Prefix Frame Size Max Overload Setting Trip Class C1 = 10	⓪	⓪	0.1 – 0.16	XTPBP16BC1	XTPRP16BC1	
	0.06	⓪	0.16 – 0.25	XTPBP25BC1	XTPRP25BC1	
	0.09	⓪	0.25 – 0.40	XTPBP40BC1	XTPRP40BC1	
	0.12	⓪	0.40 – 0.63	XTPBP63BC1	XTPRP63BC1	
	0.25	1/2	0.63 – 1.0	XTPB001BC1	XTPR001BC1	
	0.55	3/4	1.0 – 1.6	XTPB1P6BC1	XTPR1P6BC1	
	0.75	1	1.6 – 2.5	XTPB2P5BC1	XTPR2P5BC1	
	1.5	2	2.5 – 4.0	XTPB004BC1	XTPR004BC1	
	2.2	3	4.0 – 6.3	XTPB6P3BC1	XTPR6P3BC1	
	4.0	7-1/2	6.3 – 10	XTPB010BC1	XTPR010BC1	
	5.5	7-1/2	8 – 12	XTPB012BC1	—	
	7.5	10	9 – 12	—	XTPR012BC1	
	7.5	10	10 – 16	XTPB016BC1	XTPR016BC1	XTPR016DC1
	9.0	10	16 – 20	XTPB020BC1	XTPR020BC1	XTPR025DC1
	12.5	15	20 – 25	XTPB025BC1	XTPR025BC1	XTPR025DC1
	15	25	25 – 32		XTPR032BC1	XTPR032DC1
	20	30	32 – 40			XTPR040DC1
	25	30 ^⓪	40 – 50			XTPR050DC1
	30	40 ^⓪	50 – 58			XTPR058DC1
	34	—	55 – 65			XTPR063DC1
Width		mm		45	45	55
Height		mm		93	93	140
Depth		mm		90.5	76	160
Auxiliary contact modules, front mount				XTPAXFA ^⓪		
Auxiliary contact modules, side mount				XTPAXSA ^⓪		
Short circuit breaking capacity I _{cu} at 10A / 400V		kA		50 AC/60 DC	150 AC/60 DC	—
Short circuit breaking capacity I _{cu} at 12A / 400V		kA		50 AC/60 DC	50 AC/60 DC	—
Short circuit breaking capacity I _{cu} at 25A / 400V		kA		50 AC/60 DC	50 AC/40 DC	150 AC/60 DC
Short circuit breaking capacity I _{cu} at 32A / 400V		kA		—	50 AC/40 DC	50 AC/60 DC
Short circuit breaking capacity I _{cu} at 65A / 400V		kA		—	—	50 AC/60 DC
Electrical lifespan		Operations		50,000	100,000	30,000
Single-phasing sensitivity				yes	yes	yes
Undervoltage release				XTPAXUVR120V60H ^⓪		
Shunt release				XTPAXSR120V60H ^⓪		
Three-phase commoning link (number of MMPs on bus bar)		MMPs only		2 – 5	2 – 5	2 – 4
		With 1 aux		2 – 5	2 – 5	2 – 4
		With 2 aux		2 or 4	2 or 4	2 or 4

⓪ Use motor current for sizing.

⓪ Consult Eaton for availability.

⓪ Consult catalog for available auxiliary contact configurations.

⓪ Consult catalog for other voltage options.

General Applications

Enclosed manual motor protectors (MMPs) are often specified for small fans and blower motors in commercial and industrial applications. OEM opportunities include woodworking machinery, small machine tools, pumps and compressors.

Group Motor Applications

XT manual motor protectors are UL listed for group motor installations. A group motor installation consists of two or more motor circuits protected by a single set of fuses or circuit breaker. This eliminates the need for individual branch fusing or circuit protection.

The reduced cost of components, panel size, wiring, assembly charges and labor are substantial with group motor installations.

Consult NEC Article 430-52 for sizing the branch circuit protective device for a group motor application.

XT IEC Power Control

	Frame Size A				Frame Size B				Frame Size C				Frame Size D				Frame Size F				Frame Size G			

Contactor: Basic Catalog Number	XTMC6A		XTMC9A		XTCE007B		XTCE009B		XTCE012B		XTCE015B		XTCE018C		XTCE025C		XTCE032C		XTCE040D		XTCE050D		XTCE065D		XTCE080F		XTCE095F		XTCE115G		XTCE150G	
Current Ratings (I) IEC 60947-4-1 AC-1 Thermal Current I _{th}	20 Amperes		20 Amperes		20 Amperes		20 Amperes		20 Amperes		20 Amperes		35 Amperes		40 Amperes		40 Amperes		50 Amperes		60 Amperes		72 Amperes		110 Amperes		110 Amperes		160 Amperes		160 Amperes	
AC-3 Operational Power Ratings I _e	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp
200V	—	1-1/2	—	2	—	1-1/2	—	3	—	3	—	5	—	5	7-1/2	—	10	—	10	—	15	—	20	—	25	—	25	—	40	—	40	
220/230V	1.5	2	2.2	3	2.2	2	2.5	3	3.5	3	4	5	5	5	7.5	7-1/2	10	10	12.5	15	15.5	20	20	25	25	30	30	40	37	50	48	60
380/400V	3	—	4	—	3	—	4	—	5.5	—	7.5	—	7.5	—	11	—	15	—	18.5	—	22	—	30	—	37	—	45	—	55	—	75	—
460V	—	3	—	5	—	3	—	5	—	10	—	10	—	10	—	15	—	20	—	30	—	40	—	50	—	60	—	75	—	100	—	125
575V	—	3	—	5	—	5	—	7-1/2	—	10	—	10	—	15	—	20	—	25	—	40	—	50	—	60	—	75	—	100	—	125	—	125
660/690V [®]	3	—	4	—	3.5	—	4.5	—	6.5	—	7	—	11	—	14	—	17	—	23	—	30	—	35	—	63	—	75	—	90	—	96	—
1000V [®]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Built-in Auxiliary Contacts	10 = 1NO 01 = 1NC																00 = 0NO-0NC																			
Coil Options	Coil Voltage 110V 50 Hz, 120V 60 Hz 220V 50 Hz, 240V 60 Hz 230V 50 Hz 24V 50/60 Hz 24V DC Code A B F T TD [®]				Coil Voltage 415V 50 Hz, 480V 60 Hz 550V 50 Hz, 600V 60 Hz 208V 60 Hz 190V 50 Hz, 220V 60 Hz 240V 50 Hz, 277V 60 Hz 380V 50 Hz, 440V 60 Hz Code C D E G H L				Coil Voltage 400V 50 Hz 380V 60 Hz 12V 50/60 Hz 24V 50 Hz 42V 50 Hz, 48V 60 Hz 48V 50 Hz Code N P R U W Y				Coil Voltage 120V DC 220V DC 12V DC 48V DC Code AD [®] BD [®] RD [®] WD [®]				Coil Voltage 110V 50 Hz, 120V 60 Hz 220V 50 Hz, 240V 60 Hz 230V 50 Hz 24V 50/60 Hz 24 - 27V DC Code A B F T TD [®]				Coil Voltage 415V 50 Hz, 480V 60 Hz 550V 50 Hz, 600V 60 Hz 208V 60 Hz 190V 50 Hz, 220V 60 Hz 240V 50 Hz, 277V 60 Hz 380V 50 Hz, 440V 60 Hz Code N P R U W Y				Coil Voltage 110 - 130V DC 200 - 240V DC 12 - 14V DC 48 - 60V DC Code AD [®] BD [®] RD [®] WD [®]				Coil Voltage 100 - 120V 50/60 Hz 190 - 240V 50/60 Hz 24V 50/60 Hz 24 - 27V DC 480 - 500V 50/60 Hz 380 - 440V 50/60 Hz Code A B T TD [®] C L				Coil Voltage 42 - 48V 50/60 Hz 110 - 130V DC 200 - 240V DC 48 - 60V DC Code W AD [®] BD [®] WD [®]			

AC Magnet Coil Data	Pick-Up VA	50/60 Hz	25	25	24 - 29	24 - 29	24 - 29	24 - 29	24 - 29	50 - 62	50 - 62	50 - 62	50 - 62	50 - 62	150 - 185	150 - 185	150 - 185	150 - 185	150 - 185	150 - 185	150 - 185	150 - 185	150 - 185	150 - 185	150 - 185	150 - 185	150 - 185	150 - 185	150 - 185	150 - 185	150 - 185	150 - 185	150 - 185	150 - 185
Sealed VA	50/60 Hz	4.6	4.6	4.0 - 4.4	4.0 - 4.4	4.0 - 4.4	4.0 - 4.4	4.0 - 4.4	4.0 - 4.4	8.0 - 9.1	8.0 - 9.1	8.0 - 9.1	8.0 - 9.1	8.0 - 9.1	16.0 - 19.0	16.0 - 19.0	16.0 - 19.0	16.0 - 19.0	16.0 - 19.0	16.0 - 19.0	16.0 - 19.0	16.0 - 19.0	16.0 - 19.0	16.0 - 19.0	16.0 - 19.0	16.0 - 19.0	16.0 - 19.0	16.0 - 19.0	16.0 - 19.0	16.0 - 19.0	16.0 - 19.0	16.0 - 19.0	16.0 - 19.0	16.0 - 19.0

Wire Ranges	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²
Main Cable [®]	18 - 14	1 x (0.75-1.5) 2 x (0.75-1.5)	18 - 14	1 x (0.75-1.5) 2 x (0.75-1.5)	18 - 14	1 x (0.75-4) 2 x (0.75-2.5)	18 - 14	1 x (0.75-4) 2 x (0.75-2.5)	18 - 14	1 x (0.75-4) 2 x (0.75-2.5)	18 - 14	1 x (0.75-4) 2 x (0.75-2.5)	18 - 14	1 x (0.75-4) 2 x (0.75-2.5)	18 - 6	1 x (0.75-16) 2 x (0.75-10)	18 - 6	1 x (0.75-16) 2 x (0.75-10)	18 - 6	1 x (0.75-16) 2 x (0.75-10)	12 - 2	1 x (2.5-35) 2 x (2.5-25)	12 - 2	1 x (2.5-35) 2 x (2.5-25)	12 - 2	1 x (2.5-35) 2 x (2.5-25)	8 - 250MCM	1 x (10-95) 2 x (10-70)	8 - 250MCM	1 x (10-95) 2 x (10-70)	8 - 3/0	1 x (10-95) 6 - 2/0	8 - 3/0	1 x (10-95) 2 x (10-70)
Control Circuits [®]	18 - 14	1 x (0.75-1.5) 2 x (0.75-1.5)	18 - 14	1 x (0.75-1.5) 2 x (0.75-1.5)	18 - 14	1 x (0.75-4) 2 x (0.75-2.5)	18 - 14	1 x (0.75-4) 2 x (0.75-2.5)	18 - 14	1 x (0.75-4) 2 x (0.75-2.5)	18 - 14	1 x (0.75-4) 2 x (0.75-2.5)	18 - 14	1 x (0.75-4) 2 x (0.75-2.5)	18 - 14	1 x (0.75-4) 2 x (0.75-4)	18 - 14	1 x (0.75-4) 2 x (0.75-4)	18 - 14	1 x (0.75-4) 2 x (0.75-4)	18 - 14	1 x (0.75-4) 2 x (0.75-4)	18 - 14	1 x (0.75-4) 2 x (0.75-4)	18 - 14	1 x (0.75-4) 2 x (0.75-4)	18 - 14	1 x (0.75-4) 2 x (0.75-4)	18 - 14	1 x (0.75-4) 2 x (0.75-4)	18 - 14	1 x (0.75-4) 2 x (0.75-4)	18 - 14	1 x (0.75-4) 2 x (0.75-4)

Auxiliary Contacts	XTMCX	F	A	C	02	XTCEX	F	A	C	C	11	XTCEX	F	A	G	C	22
		F = Front mount	Blank = Screw terminals C = Spring cage terminals		02 = 2NC 04 = 4NC 11 = 1NO-1NC 13 = 1NO-3NC 40 = 4NO		F = Front mount	Blank = Screw terminals C = Spring cage terminals	C = Frames B - C		02 = 2NC 04 = 4NC 11 = 1NO-1NC 13 = 1NO-3NC 20 = 2NO 22 = 2NO-2NC 31 = 3NO-1NC 40 = 4NO		F = Front mount S = Side mount	A = seq A B = seq B BL = seq BL	G = Front mount, frames D-G N = Side mount, frames D-N	Blank = Screw terminals C = Spring cage terminals	02 = 2NC 04 = 4NC 11 = 1NO-1NC 13 = 1NO-3NC 20 = 2NO 22 = 2NO-2NC 31 = 3NO-1NC 40 = 4NO

Overload Relay	XTOM	004	A	C1	XTOB	001	B	C1	XTOB	010	C	C1	XTOB	040	D	C1	XTOB	100	F	C1	
		P16 = 0.10 - 0.16A P24 = 0.16 - 0.24A P40 = 0.24 - 0.40A P60 = 0.40 - 0.60A 001 = 0.60 - 1A 1P6 = 1.0 - 1.6A 2P4 = 1.6 - 2.4A 004 = 2.4 - 4A 006 = 4 - 6A 009 = 6 - 10A 012 = 9 - 12A		C1 = Class 10		P16 = 0.10 - 0.16A P24 = 0.16 - 0.24A P40 = 0.24 - 0.40A P60 = 0.40 - 0.60A 001 = 0.60 - 1A 1P6 = 1.0 - 1.6A 2P4 = 1.6 - 2.4A 004 = 2.4 - 4A 006 = 4 - 6A 010 = 6 - 10A 012 = 9 - 12A 016 = 12 - 16A		C1 = Class 10		P16 = 0.10 - 0.16A P24 = 0.16 - 0.24A P40 = 0.24 - 0.40A P60 = 0.40 - 0.60A 001 = 0.60 - 1A 1P6 = 1.0 - 1.6A 2P4 = 1.6 - 2.4A 004 = 2.4 - 4A 006 = 4 - 6A 010 = 6 - 10A 012 = 9 - 12A 024 = 16 - 24A 032 = 24 - 32A		C1 = Class 10		010 = 6 - 10A 016 = 10 - 16A 024 = 16 - 24A 040 = 24 - 40A 057 = 40 - 57A 065 = 50 - 65A		C1 = Class 10		035 = 25 - 35A 050 = 35 - 50A 070 = 50 - 70A 100 = 70 - 100A 125 = 95 - 125A G-frame only 150 = 120 - 150A		F = 80 - 95A G = 115 - 150A	C1 = Class 10

Catalog Numbering System	Mini Contactors Example:	Contactors Example:	Starters Example:
	XTMC 6 A 01 A XTMC: XT Non-reversing Mini Contactor 6: Amp Rating A: Frame 01: Auxiliary Contact Configuration A: Coil Code	XTCE 007 B 01 A XTCE: XT Non-reversing Contactor 007: Amp Rating B: Frame 01: Auxiliary Contact Configuration A: Coil Code	XTAE 007 B 10 A 004 XTAE: XT Non-reversing Starter 007: Amp Rating B: Frame 10: Auxiliary Contact Configuration A: Coil Code 004: Overload Relay Amp Range

® For 185 - 2000A Contactors at 660/690V or 1000V: Do not reverse directly. ® 7 - 65A - flexible with ferrule cable, 185 - 2000A - flexible with cable lug. ® Flexible with ferrule cable. ®With DC Operation: Integrated diode-resistor combination, coil rating 2.6W. ®Contact Eaton for availability.


	Frame Size L						Frame Size M						Frame Size N						Frame Size P		Frame Size R	

Contactor: Basic Catalog Number	XTCE185L		XTCE225L		XTCE250L		XTCE300M		XTCE400M		XTCE500M		XTCE580N		XTCE650N		XTCE750N		XTCE820N		XTCEC10N		XTCEC14P		XTCEC20R	
Current Ratings (I) IEC 60947-4-1 AC-1 Thermal Current I_{th}	275 Amperes		315 Amperes		350 Amperes		400 Amperes		500 Amperes		700 Amperes		800 Amperes		850 Amperes		900 Amperes		1000 Amperes		1000 Amperes		1400 Amperes		2000 Amperes	
AC-3 Operational Power Ratings I_e	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp	kW	hp
200V	—	50	—	60	—	75	—	100	—	125	—	150	—	200	—	200	—	250	—	290	—	—	—	—	—	—
220/230V	55	60	70	75	75	100	90	125	125	150	155	200	185	200	205	250	240	300	260	350	315	—	—	—	—	—
380/400V	90	—	110	—	132	—	160	—	200	—	250	—	315	—	355	—	400	—	450	—	560	—	—	—	—	—
460V	—	125	—	150	—	200	—	250	—	300	—	400	—	400	—	500	—	600	—	700	—	—	—	—	—	—
575V	—	150	—	200	—	250	—	300	—	400	—	500	—	600	—	600	—	700	—	860	—	—	—	—	—	—
660/690V [®]	175	—	215	—	240	—	286	—	344	—	344	—	516	—	630	—	720	—	750	—	1000	—	—	—	—	—
1000V [®]	108	—	108	—	108	—	132	—	132	—	132	—	600	—	600	—	800	—	800	—	1000	—	—	—	—	—

Built-in Auxiliary Contacts	22 = 2NO-2NC																							
Coil Options	Coil Voltage 110 – 250V 40 – 60 Hz AC/DC 250 – 500V 40 – 60 Hz AC/DC 48 – 110V 40 – 60 Hz AC/DC 24 – 48V AC/DC Code A C y [®] TD [®]																		Coil Voltage 220 – 250V 50/60 Hz DC Code B					

AC Magnet Coil Data																										
Pick-Up VA 50/60 Hz	250		250		250		450		450		450		800		800		800		800		800		800		1600	
Sealed VA 50/60 Hz	4.3		4.3		4.3		4.3		4.3		4.3		7.5		7.5		7.5		7.5		7.5		7.5		15	
Wire Ranges	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²	AWG	mm ²
Main Cable [®]	1/0-250MCM	50-240	1/0-250MCM	50-240	1/0-250MCM	50-240	1/0-250MCM	50-240	1/0-250MCM	50-240	1/0-250MCM	50-240	2/0-500MCM	50-240	2/0-500MCM	50-240	2/0-500MCM	50-240	2/0-500MCM	50-240	2/0-500MCM	50-240	2/0-500MCM	50-240	2/0-500MCM	50-240
Control Circuits [®]	2 x (18-12)	1 x (0.75-2.5) 2 x (0.75-2.5)	2 x (18-12)	1 x (0.75-2.5) 2 x (0.75-2.5)	2 x (18-12)	1 x (0.75-2.5) 2 x (0.75-2.5)	2 x (18-12)	1 x (0.75-2.5) 2 x (0.75-2.5)	2 x (18-12)	1 x (0.75-2.5) 2 x (0.75-2.5)	2 x (18-12)	1 x (0.75-2.5) 2 x (0.75-2.5)	2 x (18-12)	1 x (0.75-2.5) 2 x (0.75-2.5)	2 x (18-12)	1 x (0.75-2.5) 2 x (0.75-2.5)	2 x (18-12)	1 x (0.75-2.5) 2 x (0.75-2.5)	2 x (18-12)	1 x (0.75-2.5) 2 x (0.75-2.5)	2 x (18-12)	1 x (0.75-2.5) 2 x (0.75-2.5)	2 x (18-12)	1 x (0.75-2.5) 2 x (0.75-2.5)	2 x (18-12)	1 x (0.75-2.5) 2 x (0.75-2.5)

Auxiliary Contacts



XTCEX

F = Side mount
 B = seq B
 BL = seq BL
 N = Frames D – N
 Blank = Screw terminals
 C = Spring cage terminals
 11 = 1NO-1NC

Overload Relay

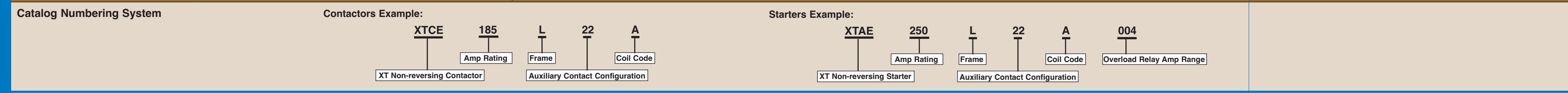
XTOB 125 L C1

070 = 50 – 70A
 100 = 70 – 100A
 125 = 95 – 125A
 160 = 120 – 160A
 220 = 160 – 220A
 250 = 200 – 250A
 C1 = Class 10



XTOT 160 C3 S

063 = 42 – 63A
 090 = 60 – 90A
 125 = 85 – 125A
 160 = 110 – 160A
 240 = 160 – 240A
 290 = 190 – 290A
 400 = 270 – 400A
 540 = 360 – 540A
 630 = 420 – 630A
 C3 = Class 30
 S = Separate mounting only for XTOT



[®] For 185 – 2000A Contactors at 660/690V or 1000V: Do not reverse directly. [®] 7 – 65A — flexible with ferrule cable, 185 – 2000A — flexible with cable lug. [®] Flexible with ferrule cable. [®]With DC Operation: Integrated diode-resistor combination, coil rating 2.6W.



Eaton's electrical business is a global leader in electrical control, power distribution, and industrial automation products and services. Through advanced product development, world-class manufacturing methods, and global engineering services and support, Eaton's electrical business provides customer-driven solutions under brand names such as Cutler-Hammer®, Powerware®, Durant®, Heinemann®, Holec® and MEM®, which globally serve the changing needs of the industrial, utility, light commercial, residential, and OEM markets. For more information, visit www.EatonElectrical.com.

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