

XT Family of Contactors



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An Eaton
Green Solution

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Contactors and Starters

Product Description

The Eaton **XT** contactors and starters includes non-reversing and reversing contactors, overload relays and a variety of related accessories. Because **XT** meets IEC, UL®, CSA® and CE standards, it is the perfect product solution for IEC applications all over the world. The compact, space saving and easy to install **XT** line of IEC contactors and starters is the efficient and effective solution for customer applications from 7A to 2450A.

Application Description

The **XT** line of IEC power control was engineered to provide highly effective control and protection for a variety of loads, including motors, compressors, pumps, resistive, capacitor banks, isolation, and others. **XT** also includes IEC ratings for lighting applications as well.

XT contactors can be used in safety applications according to EN 954-1, EN ISO 13849-1 and IEC 62061 up to Category 4, PL e and SIL 3. Information concerning safety related characteristics (B10 and B10d values) is available online. The auxiliary contact modules and built-in auxiliary contacts meet IEC EN 60947-5-1 Annex L (positively driven) and IEC EN 60947-4-1 Annex F (mirror contacts).

Features and Benefits

- AC control from 12V to 600V 50/60 Hz
- DC control from 12V to 220V
- Available with screw or spring cage terminals
- Reversing or non-reversing contactors and starters
- AC-3 contactor ratings to 1000A and AC-1 contactor ratings to 2000A
- Non-reversing starters to 650A
- Panel or DIN rail mounting to 65A
- IP20 finger and back-of-hand proof
- Large ambient temperature range, -25 to 50°C [-13 to 122°F]
- AC and DC controlled contactors in the same compact frame
- Low power consumption AC and DC coils
- Built-in NO or NC auxiliary contacts to 32A
- Plug-in accessories for reduced installation time
- Coil replacement on Frames C-N (18–820A)
- Contact replacement on Frames D-N (40–820A)
- Integrated suppressor 7–150A DC operated contactors and 185–2000A AC and DC operated contactors

Standards and Certifications

- IEC EN 60947
- CE approved
- UL
- CSA
- RoHS



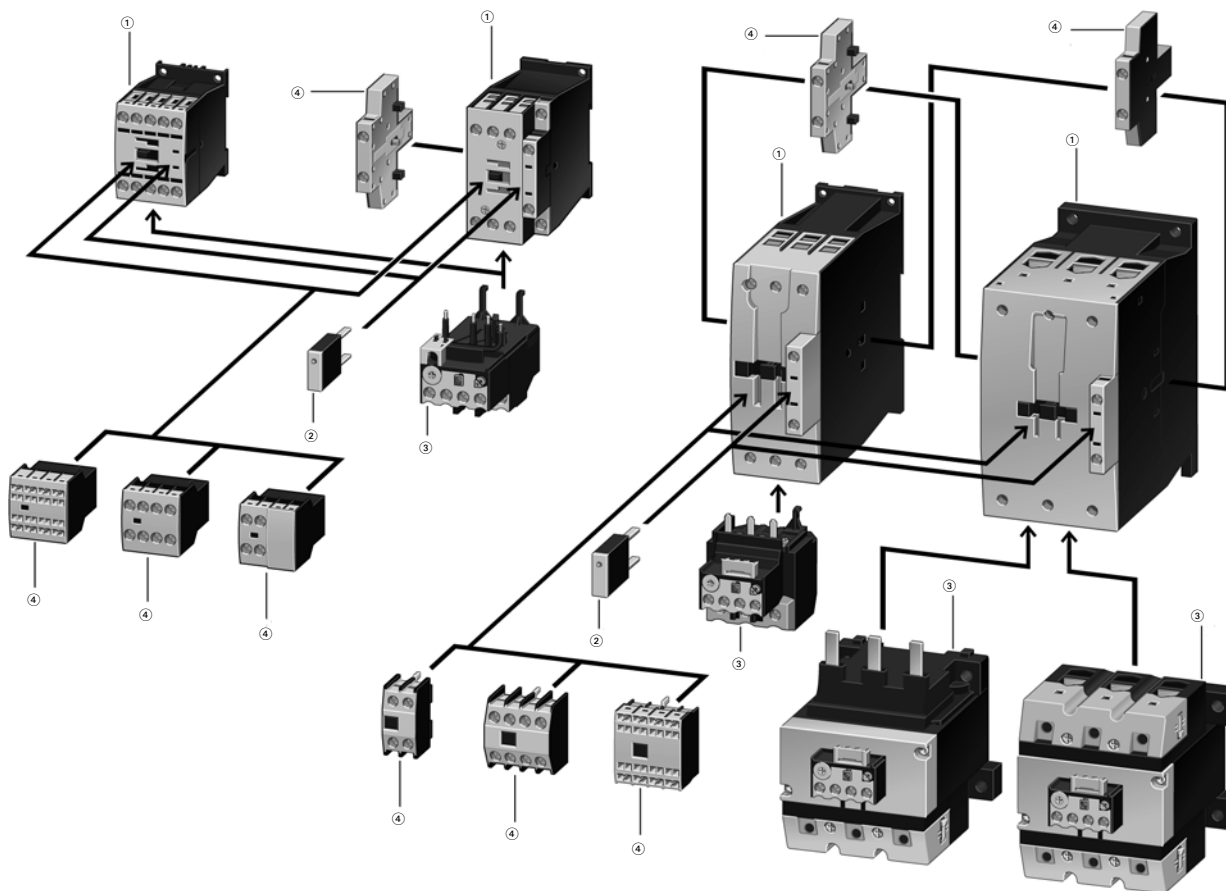
Note: For Type 2 Coordination, see **Page V5-T1-235**.

Reference

Refer to **Volume 10—Enclosed Control**, CA08100012E, Tab 3, section 3.1 for additional product information on IEC Non-Metallic Enclosed Contactors and Starters.

Product Identification

XTCE007B to XTCE170G (7 to 170A) Contactors



Notes

① Contactor up to 170A AC-3 (see Page V5-T1-39)

AC: 12–600V, 50, 60, 50/60 Hz
 $0.8\text{--}1.1 \times U_c$

DC: 12–250V

XTCE...B_ (7–15A): $0.8\text{--}1.1 \times U_c$

XTCE...C_–XTCE...G_ (18–150A): $0.7\text{--}1.2 \times U_c$

24V: $0.7\text{--}1.3 \times U_c$ at 40°C without additional auxiliary contacts
 Coils for special voltages

"Safe Isolation" to IEC 536 between coil and contacts

② Suppressors (see Page V5-T1-71)

RC suppressor

Varistor suppressor

Free-wheel diode suppressor

③ Overload Relays (see Page V5-T1-130)

Can be mounted directly

Separate mounting, possible

Protection of EEx e-motors

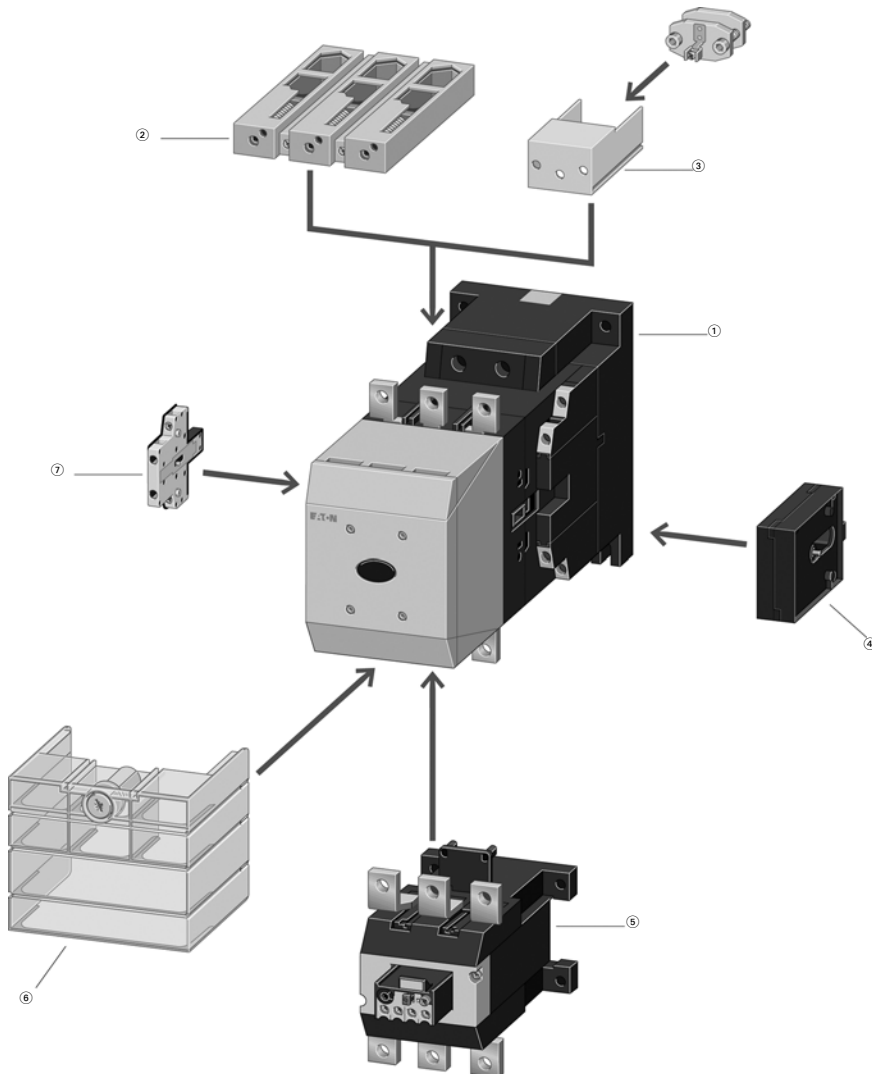
④ Auxiliary Contact Modules (see Page V5-T1-24)

Two-pole, plug-in type

Four-pole, plug-in type

Overlapping contacts

Two-pole, side-mounting

XTCE185–XTCE20 Contactors**Notes**

① **XTCE Contactors for 185–2000A**
(see [Page V5-T1-46](#))

Multi-voltage coils:
24–48 Vdc
48–110 Vac/Vdc
110–250 Vac/Vdc
250–500 Vac
0.7–1.15 × U_c

Actuation options:

Directly
From the PLC

With low-consumption contact

XTCS Contactors for 185–570A AC-3
(see [Page V5-T1-42](#))

Control voltages:

110–120V 50/60 Hz
220–240V 50/60 Hz

Conventional operation

② **Cable Terminal Block**
(see [Page V5-T1-97](#))

One or two conductors per phase
Round and flat conductor connectable
Finger-proof

③ **Flat Strip Conductor Terminals**
(see [Page V5-T1-97](#))

One or two strips per phase
Control circuit terminal
Cover for fingerproofing

④ **Mechanical Interlock**
(see [Page V5-T1-73](#))

Fits between contactors

⑤ **Overload Relays**
(see [Page V5-T1-130](#))

Can be mounted directly
Separate mounting, possible
Protection of EEx e-motors
PTB certificate

⑥ **Terminal Shroud**
(see [Page V5-T1-75](#))

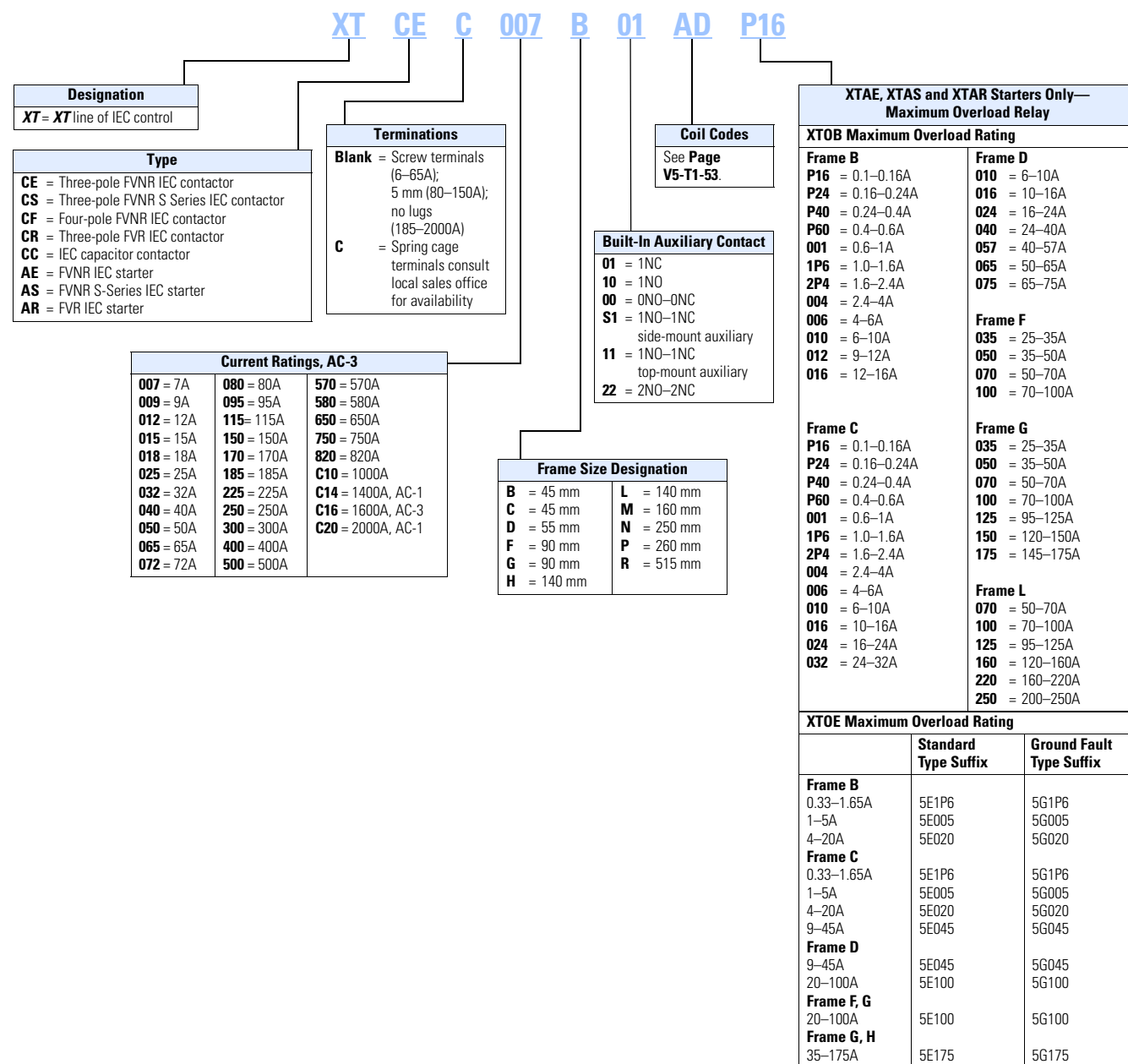
Finger-proof

⑦ **Auxiliary Contact Modules**
(see [Page V5-T1-24](#))

Two-pole, side-mounting

Catalog Number Selection

XT IEC Contactors and Starters



Bimetallic Overload Relay Suffix

Motor Full Load Amperes	Suffix Code	For Use with Contactor Ampere Range	Overload Relay Catalog Number
Frame B			
0.1–0.16	P16	7–15A	XTOBP16BC1
0.16–0.24	P24	7–15A	XTOBP24BC1
0.24–0.4	P40	7–15A	XTOBP40BC1
0.4–0.6	P60	7–15A	XTOBP60BC1
0.6–1	001	7–15A	XTOB001BC1
1–1.6	1P6	7–15A	XTOB1P6BC1
1.6–2.4	2P4	7–15A	XTOB2P4BC1
2.4–4	004	7–15A	XTOB004BC1
4–6	006	7–15A	XTOB006BC1
6–10	010	7–15A	XTOB010BC1
9–12	012	9–15A	XTOB012BC1
12–16	016	12–15A	XTOB016BC1
Frame C			
0.1–0.16	P16	18–32A	XTOBP16CC1
0.16–0.24	P24	18–32A	XTOBP24CC1
0.24–0.4	P40	18–32A	XTOBP40CC1
0.4–0.6	P60	18–32A	XTOBP60CC1
0.6–1	001	18–32A	XTOB001CC1
1–1.6	1P6	18–32A	XTOB1P6CC1
1.6–2.4	2P4	18–32A	XTOB2P4CC1
2.4–4	004	18–32A	XTOB004CC1
4–6	006	18–32A	XTOB006CC1
6–10	010	18–32A	XTOB010CC1
10–16	016	18–32A	XTOB016CC1
16–24	024	18–32A	XTOB024CC1
24–32	032	25–32A	XTOB032CC1

Motor Full Load Amperes	Suffix Code	For Use with Contactor Ampere Range	Overload Relay Catalog Number
Frame D			
6–10	010	40–72A	XTOB010DC1
10–16	016	40–72A	XTOB016DC1
16–24	024	40–72A	XTOB024DC1
24–40	04	40–72A	XTOB040DC1
40–57	057	50–72A	XTOB057DC1
50–65	065	65–72A	XTOB065DC1
65–75	075	65–72A	XTOB075DC1
Frame F			
25–35	035	80–95A	XTOB055GC1 ①
35–50	050	80–95A	XTOB050GC1 ①
50–70	070	80–95A	XTOB070GC1 ①
70–100	100	80–95A	XTOB100GC1 ①
Frame G			
25–35	035	115–170A	XTOB055GC1 ①
35–50	050	115–170A	XTOB050GC1 ①
50–70	070	115–170A	XTOB070GC1 ①
70–100	100	115–170A	XTOB100GC1 ①
95–125	125	115–170A	XTOB125GC1 ①
120–150	150	150–170A	XTOB150GC1 ①
145–175	175	150–170A	XTOB175GC1 ①

Electronic Overload Relay Suffix

XTOE Maximum Overload Rating

	Standard Type Suffix	Ground Fault Type Suffix
Frame B		
0.33–1.65A	5E1P6	5G1P6
1–5A	5E005	5G005
4–20A	5E020	5G020
Frame C		
0.33–1.65A	5E1P6	5G1P6
1–5A	5E005	5G005
4–20A	5E020	5G020
9–45A	5E045	5G045
Frame D		
9–45A	5E045	5G045
20–100A	5E100	5G100
Frame F, G		
20–100A	5E100	5G100
Frame G		
35–175A	5E175	5G175

Note

① Catalog number refers to direct mount overload relay. Add an **S** to the end of the catalog number for separate mount.

XTOB, XTOT Overload Relays



Thermal Overload Relays

Product Description

The **XT** line of IEC motor thermal overload relays provides an efficient motor protection solution, available up to 630A. XTOB units can be directly mounted to the contactor or mounted separately.

Features and Benefits

- Direct connect up to 250A
- Stand alone and CT type up to 630A
- Large thermal overcurrent range
- Test button
- Manual/automatic selectable reset
- NO-NC auxiliary as standard
- Class 10A (to 250A)
- Class 30 (CT type)

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XT Electronic Manual Motor Protector	V5-T1-217
EMS—Electronic Motor Starter	V5-T1-230
XT DC Contactors	V5-T1-232
Reference Data	V5-T1-234

Standards and Certifications

- IEC EN 60947
- CE approved
- UL
- CSA
- ATEX
- RoHS



Notes

Short-circuit protection: Observe the maximum permissible fuse of the contactor with direct device mounting. See MN03402001E for more information on overload relays for Frames B–G.

Trip Class: 10A

Suitable for protection of EEx e-motors. EC prototype test certificate available upon request.

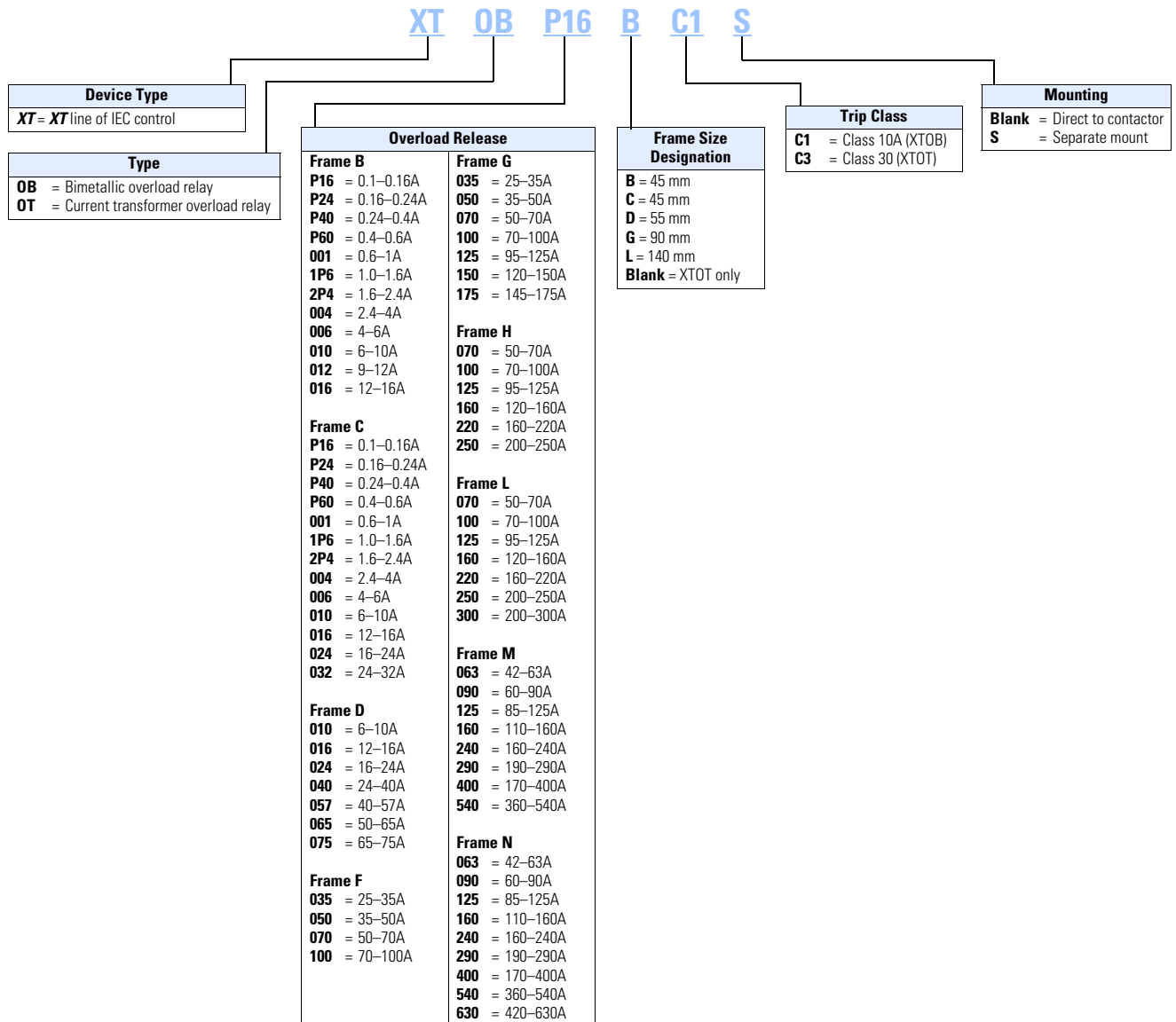
See manuals MN03402001E and MN03407001E, **Page V5-T1-133**.

Instructional Leaflets

Pub51221	XTOB, D Frame overload relays (inside of packaging)
Pub51222	XTOB, B–C Frame overload relays (inside of packaging)

Catalog Number Selection

XT IEC Overload Relays



Product Selection

Frame B



Overload Relay, Direct Mount—Frame B

Overload Releases, I _r	Contact Sequence	Contact Configuration	For Use with Contactor Amp Range	Short-Circuit Protection (A)		Maximum Circuit Breaker	CEC/NEC Fuse	Catalog Number
				Fuse Type 1 Coordination, gG/gL	Type 2 Coordination, gG/gL			
0.1–0.16		1NO-1NC	7–15A	25	0.5	25	3	XTOBP16BC1
0.16–0.24		1NO-1NC	7–15A	25	1	25	3	XTOBP24BC1
0.24–0.4		1NO-1NC	7–15A	25	2	25	3	XTOBP40BC1
0.4–0.6		1NO-1NC	7–15A	25	4	25	3	XTOBP60BC1
0.6–1		1NO-1NC	7–15A	25	4	25	3	XTOB001BC1
1–1.6		1NO-1NC	7–15A	25	6	25	6	XTOB1P6BC1
1.6–2.4		1NO-1NC	7–15A	25	10	25	6	XTOB2P4BC1
2.4–4		1NO-1NC	7–15A	25	16	25	15	XTOB004BC1
4–6		1NO-1NC	7–15A	25	20	25	20	XTOB006BC1
6–10		1NO-1NC	7–15A	50	25	25	35	XTOB010BC1
9–12		1NO-1NC	9–15A	50	25	25	45	XTOB012BC1
12–16		1NO-1NC	12–15A	50	25	30	45	XTOB016BC1

Frame C



Overload Relay, Direct Mount—Frame C

Overload Releases, I _r	Contact Sequence	Contact Configuration	For Use with Contactor Amp Range	Short-Circuit Protection (A)		Maximum Circuit Breaker	CEC/NEC Fuse	Catalog Number
				Fuse Type 1 Coordination, gG/gL	Type 2 Coordination, gG/gL			
0.1–0.16		1NO-1NC	18–32A	25	0.5	25	3	XTOBP16CC1
0.16–0.24		1NO-1NC	18–32A	25	1	25	3	XTOBP24CC1
0.24–0.4		1NO-1NC	18–32A	25	2	25	3	XTOBP40CC1
0.4–0.6		1NO-1NC	18–32A	25	4	25	3	XTOBP60CC1
0.6–1		1NO-1NC	18–32A	25	4	25	3	XTOB001CC1
1–1.6		1NO-1NC	18–32A	25	6	25	6	XTOB1P6CC1
1.6–2.4		1NO-1NC	18–32A	25	10	25	6	XTOB2P4CC1
2.4–4		1NO-1NC	18–32A	25	16	25	15	XTOB004CC1
4–6		1NO-1NC	18–32A	25	20	25	20	XTOB006CC1
6–10		1NO-1NC	18–32A	50	25	25	25	XTOB010CC1
10–16		1NO-1NC	18–32A	63	35	30	25	XTOB016CC1
16–24		1NO-1NC	18–32A	100	35	30	25	XTOB024CC1
24–32		1NO-1NC	25–32A	125	63	30	25	XTOB032CC1
32–38		1NO-1NC	32–38A	125	63	30	25	XTOB032CC1