

XT Family of Contactors



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).

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.

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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

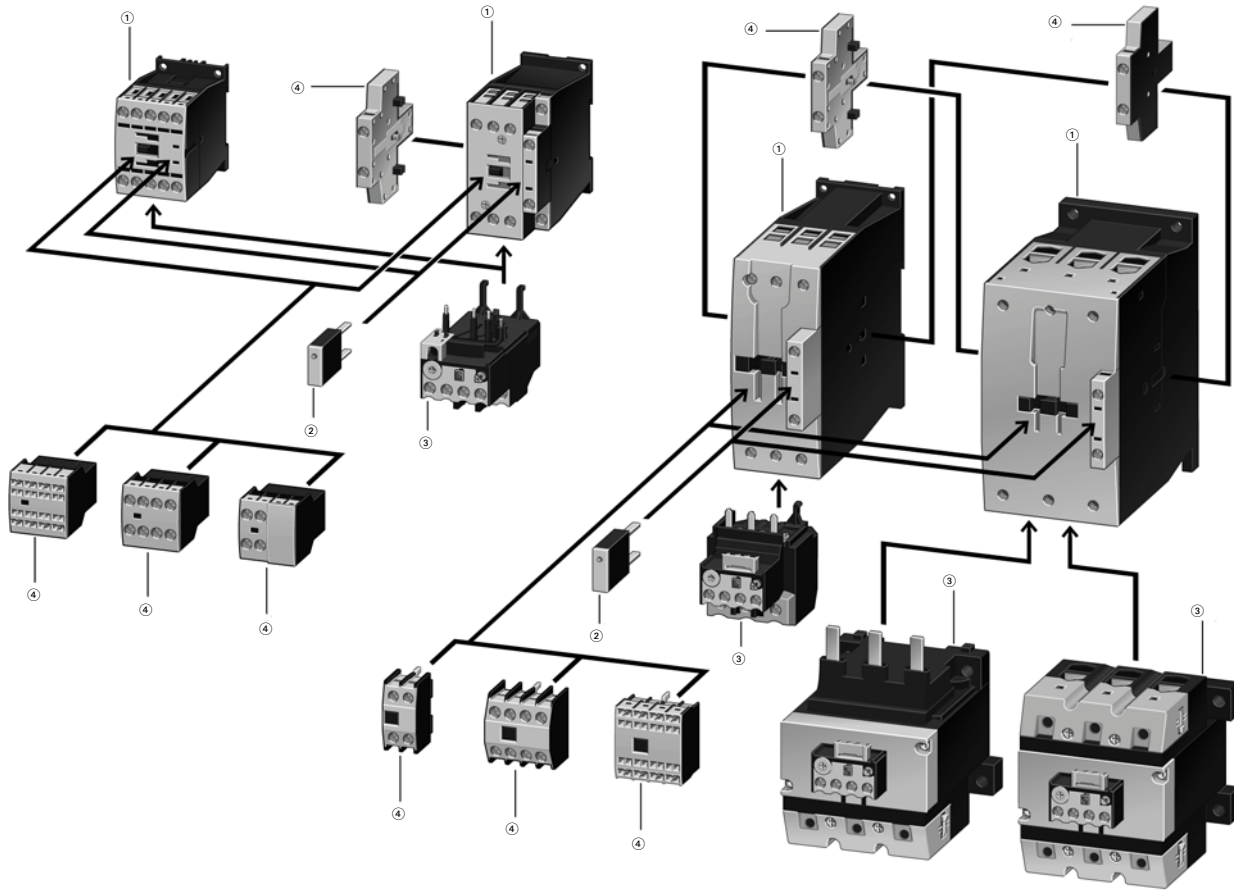
- IEC EN 60947
- CE approved
- UL
- CSA
- RoHS



Note: For Type 2 Coordination, see **Page V5-T1-232**.

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
 0.8–1.1 x U_c

DC: 12–250V

XTCE...B_ (7–15A): 0.8–1.1 x U_c

XTCE...C_–XTCE...G_ (18–150A): 0.7–1.2 x U_c

24V: 0.7–1.3 x 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

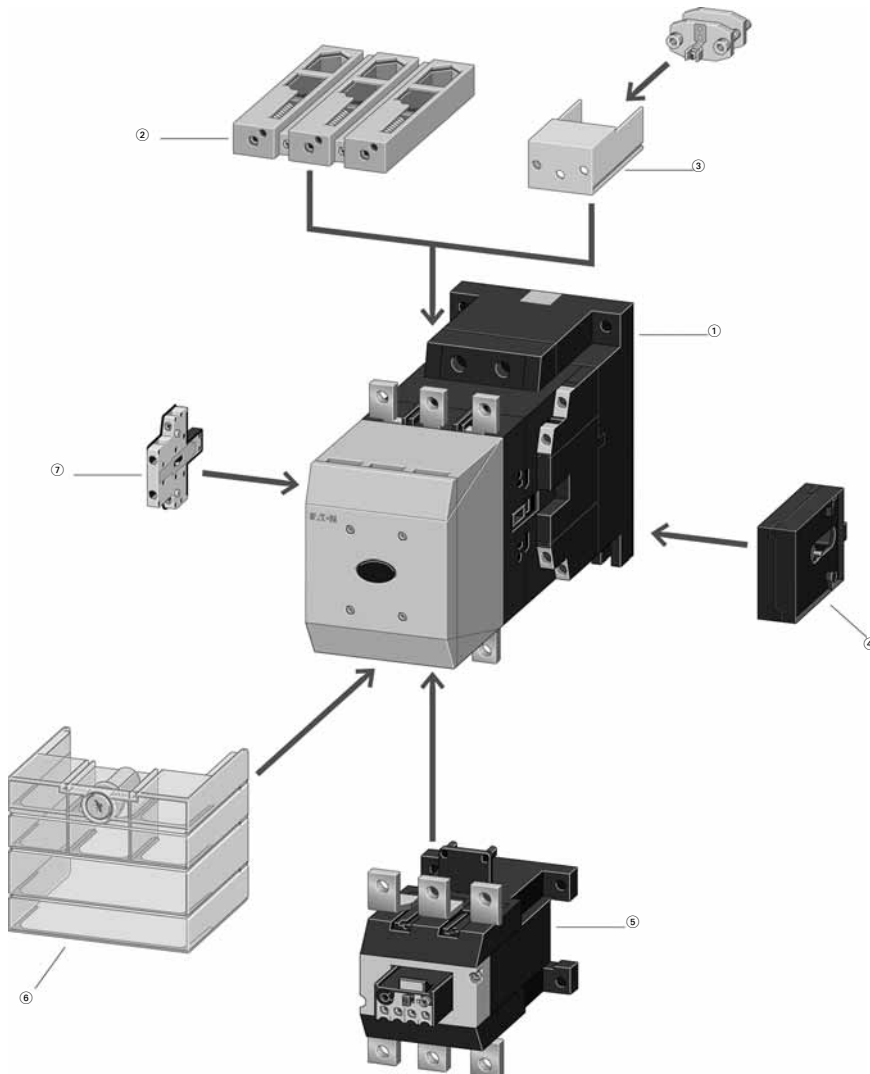
④ Auxiliary Contact Modules (see Page V5-T1-24)

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

② **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](#))

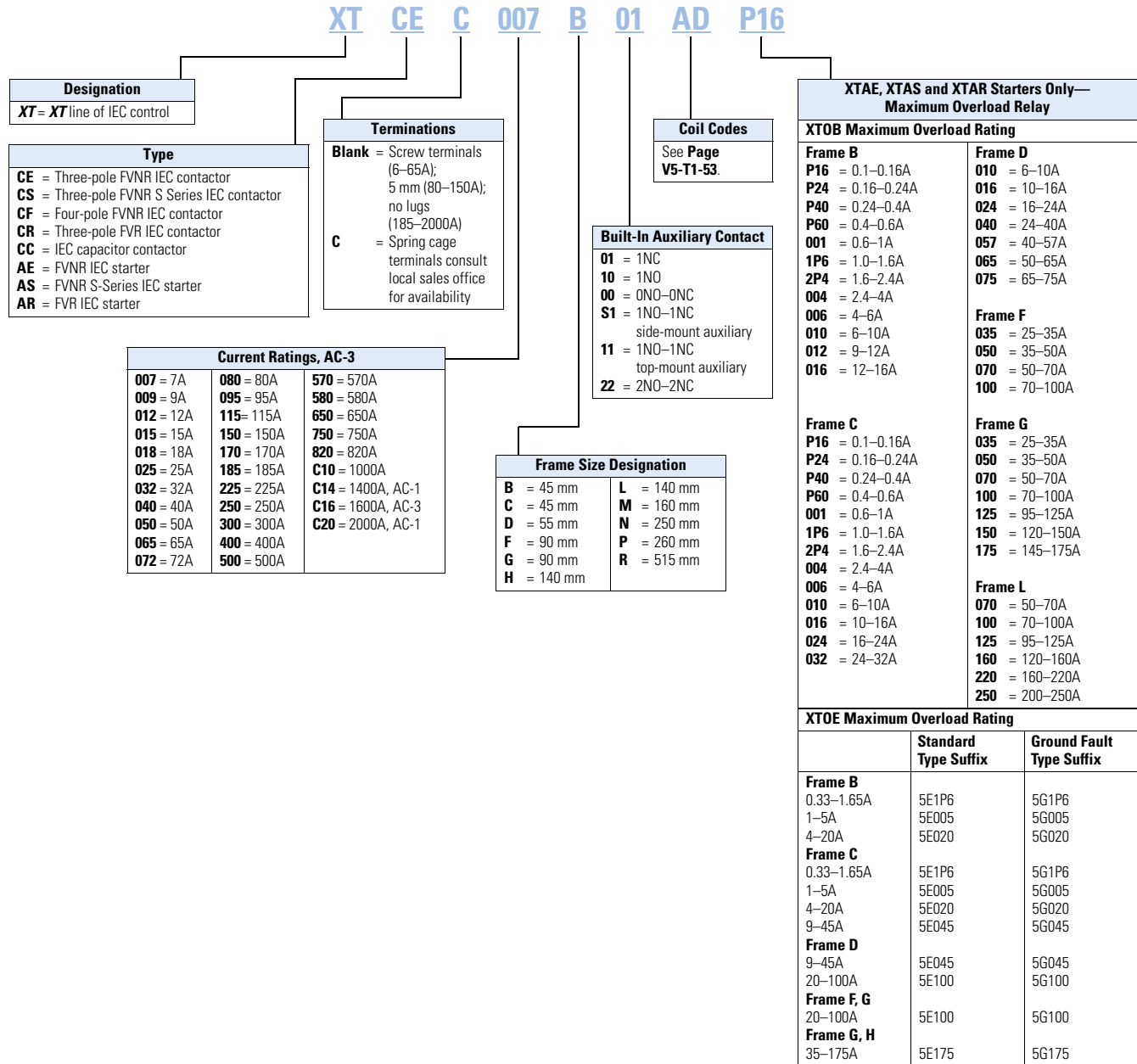
Finger-proof

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

Two-pole, side-mounting

Catalog Number Selection

XT IEC Contactors and Starters



Full Voltage, Reversing Starters, with Bimetallic or Electronic Overload**Reversing Starters with Screw Terminals, Frame B—Maximum UL/CSA Ratings**

| Single-Phase hp Ratings | | Three-Phase hp Ratings | | | | Catalog Number ^{①②} |
|-------------------------|-------|------------------------|------|------|-------|------------------------------|
| 115V | 230V | 200V | 230V | 460V | 575V | |
| 1/4 | 1 | 1-1/2 | 2 | 3 | 5 | XTAR007B21_ _ |
| 1/2 | 1-1/2 | 3 | 3 | 5 | 7-1/2 | XTAR009B21_ _ |
| 1 | 2 | 3 | 3 | 10 | 10 | XTAR012B21_ _ |

Reversing Starters with Screw Terminals, Frame B—Maximum IEC Ratings

| AC-3 I _e (A) | Three-Phase Motors 50–60 Hz | | | | Catalog Number ^{①②} |
|----------------------------|-----------------------------|----------|------|----------|------------------------------|
| | 220/230V | 380/400V | 415V | 660/690V | |
| 7 | 2.2 | 3 | 4 | 3.5 | XTAR007B21_ _ |
| 9 | 2.5 | 4 | 5.5 | 4.5 | XTAR009B21_ _ |
| 12 | 3.5 | 5.5 | 7 | 6.5 | XTAR012B21_ _ |

Reversing Starters with Screw Terminals, Frame C—Maximum UL/CSA Ratings

| Single-Phase hp Ratings | | Three-Phase hp Ratings | | | | Catalog Number ^{①②} |
|-------------------------|------|------------------------|-------|------|------|------------------------------|
| 115V | 230V | 200V | 230V | 460V | 575V | |
| 2 | 3 | 5 | 5 | 10 | 15 | XTAR018C21_ _ |
| 2 | 5 | 7-1/2 | 7-1/2 | 15 | 20 | XTAR025C21_ _ |
| 3 | 5 | 10 | 10 | 20 | 25 | XTAR032C21_ _ |

Reversing Starters with Screw Terminals, Frame C—Maximum IEC Ratings

| AC-3 I _e (A) | Three-Phase Motors 50–60 Hz | | | | Catalog Number ^{①②} |
|----------------------------|-----------------------------|----------|------|----------|------------------------------|
| | 220/230V | 380/400V | 415V | 660/690V | |
| 18 | 5 | 7.5 | 8 | 11 | XTAR018C21_ _ |
| 25 | 7.5 | 11 | 14.5 | 14 | XTAR025C21_ _ |
| 32 | 10 | 15 | 18 | 17 | XTAR032C21_ _ |

Reversing Starters with Screw Terminals, Frame D—Maximum UL/CSA Ratings

| Single-Phase hp Ratings | | Three-Phase hp Ratings | | | | Catalog Number ^{①②} |
|-------------------------|-------|------------------------|------|------|------|------------------------------|
| 115V | 230V | 200V | 230V | 460V | 575V | |
| 3 | 7-1/2 | 10 | 15 | 30 | 40 | XTAR040D11_ _ |
| 3 | 10 | 15 | 20 | 40 | 50 | XTAR050D11_ _ |
| 5 | 15 | 20 | 25 | 50 | 60 | XTAR065D11_ _ |

Reversing Starters with Screw Terminals, Frame D—Maximum IEC Ratings

| AC-3 I _e (A) | Three-Phase Motors 50–60 Hz | | | | Catalog Number ^{①②} |
|----------------------------|-----------------------------|----------|------|----------|------------------------------|
| | 220/230V | 380/400V | 415V | 660/690V | |
| 40 | 12.5 | 18.5 | 24 | 23 | XTAR040D11_ _ |
| 50 | 15.5 | 22 | 30 | 30 | XTAR050D11_ _ |
| 65 | 20 | 30 | 39 | 35 | XTAR065D11_ _ |

Notes

① Underscore (_) indicates magnet coil suffix required. See **Page V5-T1-53**.

② Underscore (_) indicates overload relay suffix required. See **Page V5-T1-54**.

Starter Application Data ^①

| Catalog Prefix | AC-3 | Electrical Life (Operations) |
|----------------|------|------------------------------|
| XTAE012B | 12A | 1 million |
| XTAE015B | 15A | 1.2 million |
| XTAE018C | 18A | 2 million |

Magnet Coil Suffix

| Coil Voltage | Suffix Code |
|------------------------|-------------|
| Frames A–B | |
| 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 |
| 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 |
| 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 |
| 220 Vdc | BD |
| 12 Vdc | RD |
| 48 Vdc | WD |

| Coil Voltage | Suffix Code |
|------------------------|-------------|
| Frames C–F | |
| 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 |
| 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 |
| 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 |
| 200–240 Vdc | BD |
| 48–60 Vdc | WD |

| Coil Voltage | Suffix Code |
|-------------------|-------------|
| Frame G | |
| 100–120V 50/60 Hz | A |
| 190–240V 50/60 Hz | B |
| 24V 50/60 Hz | T |
| 24–27 Vdc | TD |
| 480–500V 50/60 Hz | C |
| 380–440V 50/60 Hz | L |
| 42–48V 50/60 Hz | W |
| 110–130 Vdc | AD |
| 200–240 Vdc | BD |
| 48–60 Vdc | WD |
| Frame H | |
| 100–120V 50/60 Hz | A |
| 190–240V 50/60 Hz | B |
| 480–500V 50/60 Hz | C |
| 380–440V 50/60 Hz | L |
| 24V 50/60Hz | T |
| 42–48V 50/60Hz | W |
| 110–130 Vdc | AD |
| 200–240 Vdc | BD |
| 24–27 Vdc | TD |
| 48–60 Vdc | WD |

| Coil Voltage | Suffix Code |
|-----------------------------|------------------------|
| Frames L–N | |
| 110–250 Vdc 40–60 Hz | A |
| 250–500V 40–60 Hz | C |
| 48–110 Vdc 40–60 Hz | Y |
| 24–48 Vdc | TD ^② |
| Frames L–M, S-Series | |
| 110–120V 50/60 Hz | A |
| 220–240V 50/60 Hz | B |
| Frames P–R | |
| 230–250 Vdc 50–60 Hz | B |

Notes

① See **Page V5-T1-111** for electrical life curves.

② Frames L–M only.

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 |

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.

| 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 |