

## Product Identification



## Notes

## Basic Units

- ① XTPB pushbutton manual motor protectors (see [Page V5-T1-163](#))
  - Rated operational current up to 25A
  - Switching capacity 50 kA/415V
  - Short-circuit release, adjustable  $0.6-1 \times I_n$
  - Single-phasing sensitive
- ② XTPR rotary manual motor protectors (see [Page V5-T1-164](#))
  - Rated operational current up to 32A, 65A
  - Switching capacity 150/50 kA/415V
  - Short-circuit release, fixed setting to  $14 \times I_n$
  - Overload release, adjustable  $0.6-1 \times I_n$
  - Single-phasing sensitive
  - With screws or spring-loaded terminals

## Mounting Accessories

- ③ Rotary handle mechanism (see [Page V5-T1-169](#))
  - ON/OFF/tripped switch position indication
  - Lockable door/cover interlock
  - Extendable y plug fit extension shaft
  - Handle latched in switch positions
  - Optionally also without locking and door interlock function
- Insulated enclosures (see [Page V5-T1-172](#))
  - Surface mounting, enclosures, IP40, IP55 and IP40 and IP55 front flush mounting enclosure
- Mounting/wiring (see [Page V5-T1-169](#))
  - Component adapter for busbar mounting
  - Three-phase commoning link for side-by-side-mounting
  - Mounting kits for rapid mounting of direct-on-line, reversing and star-delta starters

## Add-On Functions

- ④ Voltage releases (see [Page V5-T1-168](#))
  - Undervoltage release
  - Shunt releases
  - With screws or spring-loaded terminals
- ⑤ Standard auxiliary contacts (see [Page V5-T1-166](#))
  - ON/OFF indication
  - Differential fault indication overload/short-circuit release
  - ON/OFF for (high capacity) contact module
  - ON/OFF for starter combination
  - With early-make contacts
  - With screws or spring-loaded terminals
- ⑥ Current limiter (see [Page V5-T1-168](#))
  - Increases the switching capacity of the 10–25A manual motor protectors to 100 kA/440V
  - Can be used for individual group protection

#### 1

#### Catalog Number Selection

#### XT Manual Motor Protectors



## Product Selection

### Product Selection for Manual Motor Starter Applications

When ordering, specify catalog numbers according to the following stipulations:

**XT** manual motor protectors are selected based on the overload current range required for a given motor. This current range is determined from the motor full load ampere rating and motor service factor usually found on the motor nameplate.

**For motors with service factors less than 1.15,** multiply the motor FLA by 0.90 to select appropriate MMP.

Example: For motor having FLA of 6.4A and service factor of 1.0 ( $6.4A \times 0.90 = 5.76A$ ) select catalog number XTPB6P3B01.

See Application Note—  
AP03402001E.

**For motor with service factor of 1.15 or greater,** use motor nameplate full load amperes to select the appropriate MMP.

Example: For motor having FLA of 11A and service factor of 1.15, select catalog number XTPR012BC1.

### Frame B



### XTPB Pushbutton Manual Motor Protectors—Global and North American Ratings—Frame B

Type 1 and Type 2 Coordination Motor Protective Device with Thermal and Magnetic Trip

| Rated Uninterrupted Current—<br>$I_u = I_o$ (Amps) | FLA Adjustment Range/<br>Overload Release—<br>$I_r$ (Amps) | Short Circuit Release—<br>$I_m$ (Amps) | Maximum Motor Ratings <sup>①</sup> |              |      |             |              |      |       | Maximum hp Rating—P (hp)<br>UL 508/CSA C22.2 No. 14 |       |  |            | Screw Terminal Catalog Number |
|--|--|--|------------------------------------|--------------|------|-------------|--------------|------|-------|---|-------|--|------------|-------------------------------|
|  |  |  | Maximum kW Rating<br>AC-3—P (kW)   |              |      | Three-Phase |              |      |       | Three-Phase   |       |  |            |                               |
|  |  |  | 220–<br>240V                       | 380–<br>415V | 440V | 500V        | 660–<br>690V | 200V | 240V  | 480V  | 600V  |  |            |                               |
| 0.16   | 0.1–0.16   | 2.2                                    | —                                  | —            | —    | —           | 0.06         | ②    | ②     | ②   | ②     |  | XTPBP16BC1 |                               |
| 0.25   | 0.16–0.25  | 3.5                                    | —                                  | 0.06         | 0.06 | 0.06        | 0.12         | ②    | ②     | ②   | ②     |  | XTPBP25BC1 |                               |
| 0.4  | 0.25–0.4   | 5.6                                    | 0.06                               | 0.09         | 0.12 | 0.12        | 0.18         | ②    | ②     | ②   | ②     |  | XTPBP40BC1 |                               |
| 0.63   | 0.4–0.63   | 8.8                                    | 0.09                               | 0.12         | 0.18 | 0.25        | 0.25         | ②    | ②     | ②   | ②     |  | XTPBP63BC1 |                               |
| 1  | 0.63–1   | 14                                     | 0.12                               | 0.25         | 0.25 | 0.37        | 0.55         | ②    | ②     | 2   | 1/2   |  | XTPB001BC1 |                               |
| 1.6  | 1–1.6  | 22                                     | 0.25                               | 0.55         | 0.55 | 0.75        | 1.1          | ②    | ②     | 3/4   | 3/4   |  | XTPB1P6BC1 |                               |
| 2.5  | 1.6–2.5  | 35                                     | 0.37                               | 0.75         | 1.1  | 1.1         | 1.5          | 1/2  | 1/2   | 1   | 1-1/2 |  | XTPB2P5BC1 |                               |
| 4  | 2.5–4  | 56                                     | 0.75                               | 1.5          | 1.5  | 2.2         | 3            | 3/4  | 3/4   | 2   | 3     |  | XTPB004BC1 |                               |
| 6.3  | 4–6.3  | 88                                     | 1.1                                | 2.2          | 3    | 3           | 4            | 1    | 1-1/2 | 3   | 5     |  | XTPB6P3BC1 |                               |
| 10   | 6.3–10   | 140                                    | 2.2                                | 4            | 4    | 4           | 7.5          | 3    | 3     | 7-1/2   | 10    |  | XTPB010BC1 |                               |
| 12   | 8–12   | 168                                    | 3                                  | 5.5          | 5.5  | 5.5         | 11           | 3    | 3     | 7-1/2   | 10    |  | XTPB012BC1 |                               |
| 16   | 10–16  | 224                                    | 4                                  | 7.5          | 9    | 9           | 12.5         | 3    | 5     | 10  | 10    |  | XTPB016BC1 |                               |
| 20   | 16–20  | 280                                    | 5.5                                | 9            | 11   | 12.5        | 15           | 5    | —     | —   | 15    |  | XTPB020BC1 |                               |
| 25   | 20–25  | 350                                    | 5.5                                | 12.5         | 12.5 | 15          | 22           | —    | 7-1/2 | 15  | 20    |  | XTPB025BC1 |                               |

#### Notes

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

Can be snap-fit to IEC/EN 60715 top-hat (DIN) with 7.5 or 15 mm height.

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

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

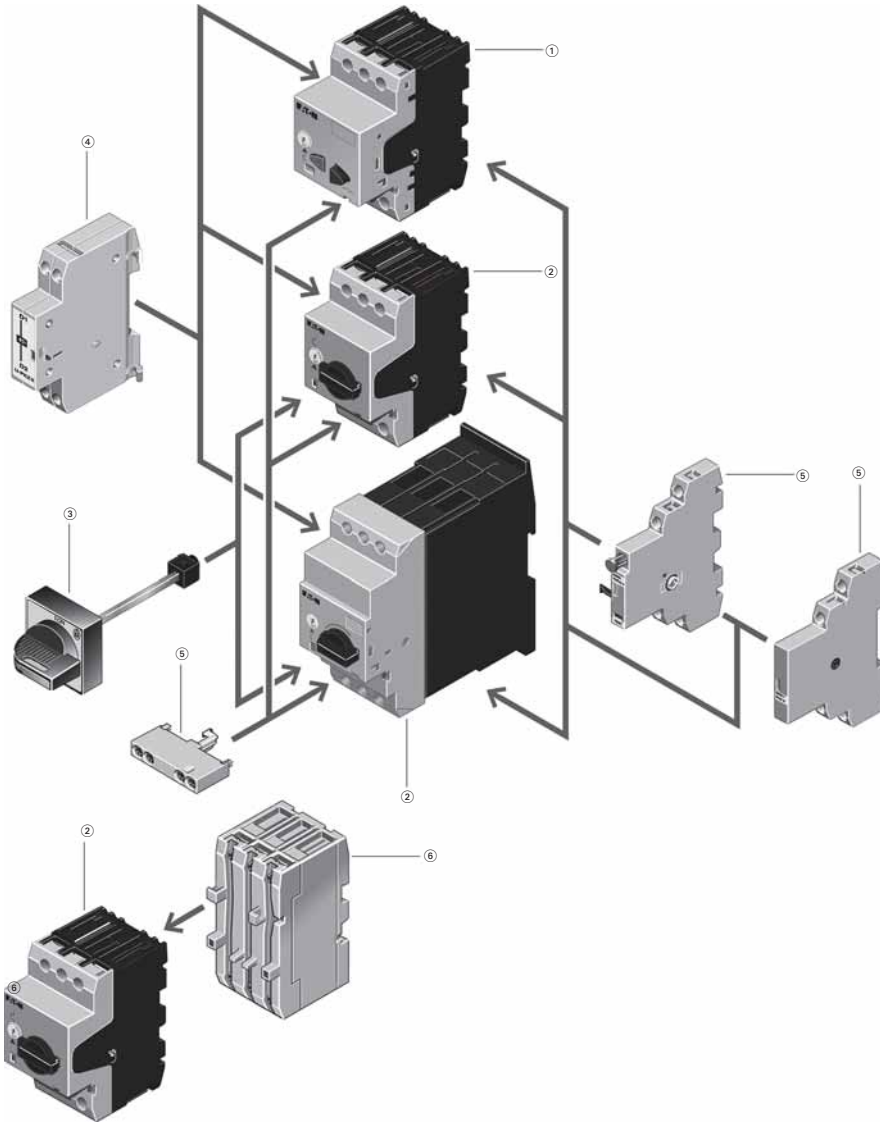
$$SF = 1 \rightarrow I_r = 0.9 \times I_{n \text{ mot}}$$

For manual motor protective circuit breaker switching capacity, see **Page V5-T1-181**.

① Select manual motor protectors by full load amperes. Maximum motor ratings (kW, hp) are for reference only.

② In this range, calculate motor rating according to rated current. Specified values to NEC 430.6(A)(1).

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Example: For motor having FLA of 6.4A and service factor of 1.0 ( $6.4A \times 0.90 = 5.76A$ ) select catalog number XTPB6P3B01.

See Application Note—  
AP03402001E.

**For motor with service factor of 1.15 or greater,** use motor nameplate full load amperes to select the appropriate MMP.

Example: For motor having FLA of 11A and service factor of 1.15, select catalog number XTPR012BC1.

Frame B



### XTPB Pushbutton Manual Motor Protectors—Global and North American Ratings—Frame B Type 1 and Type 2 Coordination Motor Protective Device with Thermal and Magnetic Trip

| Rated Uninterrupted Current—<br>$I_u = I_o$ (Amps) | FLA Adjustment Range/<br>Overload Release—<br>$I_r$ (Amps) | Short Circuit Release—<br>$I_m$ (Amps) | Maximum Motor Ratings ①          |          |      |             |          |      |       | Maximum hp Rating—P (hp)<br>UL 508/CSA C22.2 No. 14 |       |  |            | Screw Terminal Catalog Number |
|--|--|--|----------------------------------|----------|------|-------------|----------|------|-------|---|-------|--|------------|-------------------------------|
|  |  |  | Maximum kW Rating<br>AC-3—P (kW) |          |      | Three-Phase |          |      |       | Three-Phase   |       |  |            |                               |
|  |  |  | 220–240V                         | 380–415V | 440V | 500V        | 660–690V | 200V | 240V  | 480V  | 600V  |  |            |                               |
| 0.16   | 0.1–0.16   | 2.2                                    | —                                | —        | —    | —           | 0.06     | ②    | ②     | ②   | ②     |  | XTPBP16BC1 |                               |
| 0.25   | 0.16–0.25  | 3.5                                    | —                                | 0.06     | 0.06 | 0.06        | 0.12     | ②    | ②     | ②   | ②     |  | XTPBP25BC1 |                               |
| 0.4  | 0.25–0.4   | 5.6                                    | 0.06                             | 0.09     | 0.12 | 0.12        | 0.18     | ②    | ②     | ②   | ②     |  | XTPBP40BC1 |                               |
| 0.63   | 0.4–0.63   | 8.8                                    | 0.09                             | 0.12     | 0.18 | 0.25        | 0.25     | ②    | ②     | ②   | ②     |  | XTPBP63BC1 |                               |
| 1  | 0.63–1   | 14                                     | 0.12                             | 0.25     | 0.25 | 0.37        | 0.55     | ②    | ②     | 2   | 1/2   |  | XTPB001BC1 |                               |
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