

# CUBEFuse™ Compact Circuit Protector Base (cat. no. CCP2B)



## Features

- Uses finger-safe, current-limiting Class CF CUBEFuse with Class J performance available in time-delay or fast-acting versions from 1 to 100 amps
- Patented amp rating rejection feature helps prevent overfusing
- High 200 kA short-circuit current rating
- Disconnect rated to provide a means for load isolation
- 2- and 3-pole versions straight voltage rated at 600 Vac
- Up to 125 Vdc ratings
- UL 98 Listed for branch circuit disconnect
- 1-, 2- and 3-pole versions are horsepower rated
- UL and cULus Listed
- Open fuse indication lamp per pole speeds troubleshooting
- Additional open fuse indication can be provided by using the time-delay indicating CUBEFuse in ratings from 6 to 100 amps
- Built-in switch/fuse interlock prevents removing or installing a fuse while energized
- Permanent lockout/tagout and lock-on provision using a 1/4" lock

## Description

The revolutionary Bussmann™ series Compact Circuit Protector Base (CCP2B) with CUBEFuse™ is a UL® 98 horsepower rated fused branch circuit disconnect. Primarily used in the Bussmann series Quik-Spec™ Coordination Panelboard, the CCP2B with CUBEFuse simplifies selective coordination for code compliance and features a lockout/tagout feature for isolating individual branch circuit loads to promote safe work practices.



Powering Business Worldwide

**Specifications:**

**Switch amp ratings and rejection breaks**

- 15, 20, 30, 40, 50, 60, 70, 90 and 100 A

**Poles**

- 1-, 2- and 3-poles

**Volts**

- 347 Vac (1-pole switches)
- 600 Vac (2- and 3-pole switches)
- 125 Vdc\*

\* Switch amp rating and installed fuse amp rating dependent, see catalog number table for details.

**Agency information**

- UL 98 Listed, Guide WHTY, File E302370
- cULus to Canadian Standard 22.2 No. 4, Guide WHTY7, File E302370
- RoHS compliant
- CE

**Lineside bolt-on bus connector and torque**

- Bolt-mounted design fits into Quik-Spec Coordination Panelboard bus
- #10-32 UNC hex flange Phillips screw; 2.8 N•m (25 lb-in)

**Loadside box lug terminal conductor data**

- See conductor table for details

**Loadside fork terminal**

- Max. 30 A suitable for use with:
  - 10-24 screw for switches up to 60 A
  - 1/4-28 screw for switches from 70 to 100 A

**Lockout/tagout**

- 1/4" lock

**Local open fuse indication light**

- Light illumination requires closed circuit and minimum 90 volts

**Carton quantity and shipping weight**

| Item                   | Poles | lbs (kg)   |
|------------------------|-------|------------|
| up to 60 amp switches  | 6     | 1.7 (0.77) |
| 70 to 100 amp switches | 6     | 2.6 (1.18) |

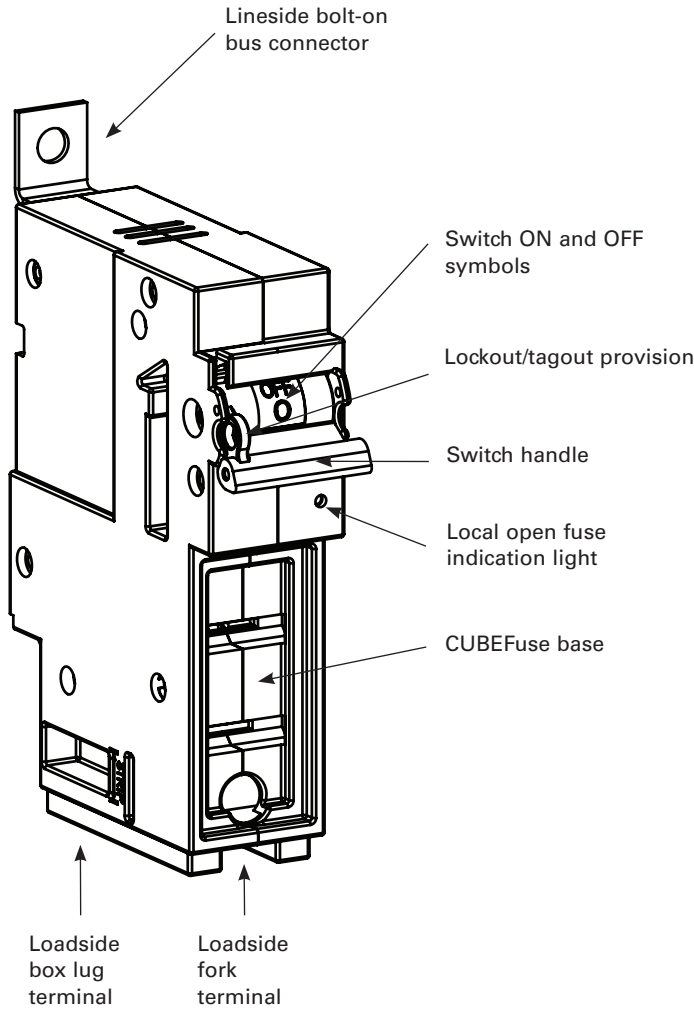
**Environmental data**

Storage and operating temperature -20°C to 75°C\*\*

\*\* For fuse performance under or above 25°C, consult fuse performance derating charts.

**Available Bussmann series fuses**

| UL fuse class | Type/description                                       | Volts               | Data sheet no. |
|---------------|--------------------------------------------------------|---------------------|----------------|
| CF            | Indicating time-delay, Low-Peak™ CUBEFuse (6-100 A)    | 600 Vac/<br>300 Vdc | 9000           |
|               | Non-indicating time-delay, Low-Peak CUBEFuse (1-100 A) |                     |                |
|               | Non-indicating fast-acting CUBEFuse (1-100 A)          | 600 Vac/dc          | 2147           |



## Catalog numbers and ratings

| Catalog numbers | Poles | Voltage ratings    | Accepts CUBEFuse amp range | Typical installed fuse amp range         |                        |                                          | Max. fuse amp††† | SCCR                   | Hp ratings (Vac)††††                             |
|-----------------|-------|--------------------|----------------------------|------------------------------------------|------------------------|------------------------------------------|------------------|------------------------|--------------------------------------------------|
|                 |       |                    |                            | Time-delay non-indicating                | Time-delay indicating† | Fast-acting non-indicating††             |                  |                        |                                                  |
| CCP2B-1-15CF    | 1     | 347 Vac, 125 Vdc   | 1 to 15                    | TCF1RN, TCF3RN, TCF6RN, TCF10RN, TCF15RN | TCF6, TCF10, TCF15     | FCF1RN, FCF3RN, FCF6RN, FCF10RN, FCF15RN | 15               |                        | 0.5 Hp @ 120 V                                   |
| CCP2B-2-15CF    | 2     | 600 Vac, 125 Vdc   |                            |                                          |                        |                                          |                  |                        | 1.5 Hp @ 240 V                                   |
| CCP2B-3-15CF    | 3     | 600 Vac            |                            |                                          |                        |                                          |                  |                        | 3 Hp @ 240 V<br>5 Hp @ 480 V<br>7.5 Hp @ 600 V   |
| CCP2B-1-20CF    | 1     | 347 Vac, 125 Vdc   | 1 to 20                    | TCF17-1/2RN, TCF20RN                     | TCF17-1/2, TCF20       | FCF20RN                                  | 20               |                        | 0.75 Hp @ 120 V                                  |
| CCP2B-2-20CF    | 2     | 600 Vac, 125 Vdc   |                            |                                          |                        |                                          |                  |                        | 2 Hp @ 240 V                                     |
| CCP2B-3-20CF    | 3     | 600 Vac            |                            |                                          |                        |                                          |                  |                        | 3 Hp @ 240 V<br>7.5 Hp @ 480 V<br>10 Hp @ 600 V  |
| CCP2B-1-30CF    | 1     | 347 Vac, 125 Vdc   | 1 to 30                    | TCF25RN, TCF30RN                         | TCF25, TCF30           | FCF25RN, FCF30RN                         | 30               |                        | 1.5 Hp @ 120 V                                   |
| CCP2B-2-30CF    | 2     | 600 Vac, 125 Vdc   |                            |                                          |                        |                                          |                  |                        | 3 Hp @ 240 V                                     |
| CCP2B-3-30CF    | 3     | 600 Vac            |                            |                                          |                        |                                          |                  |                        | 5 Hp @ 240 V<br>15 Hp @ 480 V<br>10 Hp @ 600 V   |
| CCP2B-1-40CF    | 1     | 347 Vac, 125 Vdc   | 1 to 40                    | TCF35RN, TCF40RN                         | TCF35, TCF40           | FCF35RN, FCF40RN                         | 40               |                        | 2.0 Hp @ 120 V                                   |
| CCP2B-2-40CF    | 2     | 600 Vac, 125 Vdc   |                            |                                          |                        |                                          |                  |                        | 3 Hp @ 240 V                                     |
| CCP2B-3-40CF    | 3     | 600 Vac            |                            |                                          |                        |                                          |                  |                        | 7.5 Hp @ 240 V<br>20 Hp @ 480 V<br>10 Hp @ 600 V |
| CCP2B-1-50CF    | 1     | 347 Vac, 125 Vdc*  | 1 to 50                    | TCF45RN, TCF50RN                         | TCF45, TCF50           | FCF45RN, FCF50RN                         | 50               | 200 kA AC<br>100 kA DC | 3.0 Hp @ 120 V                                   |
| CCP2B-2-50CF    | 2     | 600 Vac, 125 Vdc*  |                            |                                          |                        |                                          |                  |                        | 5 Hp @ 240 V                                     |
| CCP2B-3-50CF    | 3     | 600 Vac            |                            |                                          |                        |                                          |                  |                        | 7.5 Hp @ 240 V<br>20 Hp @ 480 V<br>10 Hp @ 600 V |
| CCP2B-1-60CF    | 1     | 347 Vac, 125 Vdc*  | 1 to 60                    | TCF60RN                                  | TCF60                  | FCF60RN                                  | 60               |                        | 3.0 Hp @ 120 V                                   |
| CCP2B-2-60CF    | 2     | 600 Vac, 125 Vdc*  |                            |                                          |                        |                                          |                  |                        | 7.5 Hp @ 240 V                                   |
| CCP2B-3-60CF    | 3     | 600 Vac            |                            |                                          |                        |                                          |                  |                        | 7.5 Hp @ 240 V<br>20 Hp @ 480 V<br>10 Hp @ 600 V |
| CCP2B-1-70CF    | 1     | 347 Vac, 125 Vdc   | 1 to 70                    | TCF70RN                                  | TCF70                  | FCF70RN                                  | 70               |                        | 3.0 Hp @ 120 V                                   |
| CCP2B-2-70CF    | 2     | 600 Vac, 125 Vdc   |                            |                                          |                        |                                          |                  |                        | 7.5 Hp @ 240 V                                   |
| CCP2B-3-70CF    | 3     | 600 Vac            |                            |                                          |                        |                                          |                  |                        | 15 Hp @ 240 V<br>30 Hp @ 480 V<br>40 Hp @ 600 V  |
| CCP2B-1-90CF    | 1     | 347 Vac, 125 Vdc** | 1 to 90                    | TCF90RN                                  | TCF90                  | FCF80RN, FCF90RN                         | 90               |                        | 5.0 Hp @ 120 V                                   |
| CCP2B-2-90CF    | 2     | 600 Vac, 125 Vdc** |                            |                                          |                        |                                          |                  |                        | 10 Hp @ 240 V                                    |
| CCP2B-3-90CF    | 3     | 600 Vac            |                            |                                          |                        |                                          |                  |                        | 20 Hp @ 240 V<br>50 Hp @ 480 V<br>40 Hp @ 600 V  |
| CCP2B-1-100CF   | 1     | 347 Vac, 125 Vdc** | 1 to 100                   | TCF100RN                                 | TCF100                 | FCF100RN                                 | 100              |                        | 5.0 Hp @ 120 V                                   |
| CCP2B-2-100CF   | 2     | 600 Vac, 125 Vdc** |                            |                                          |                        |                                          |                  |                        | 10 Hp @ 240 V                                    |
| CCP2B-3-100CF   | 3     | 600 Vac            |                            |                                          |                        |                                          |                  |                        | 20 Hp @ 240 V<br>50 Hp @ 480 V<br>40 Hp @ 600 V  |

† 1 and 3 A indicating CUBEFuse not available. Correct fit with CCP2B disconnect requires indicating CUBEFuse with date code R38 or later.

†† Not for use with motors.

††† Any amp rating less than or equal to the switch max fuse rating may be installed. E.g., TCF15 can be installed in the CCP2B-1-20CF.

†††† Indicating or non-indicating time-delay CUBEFuse only.

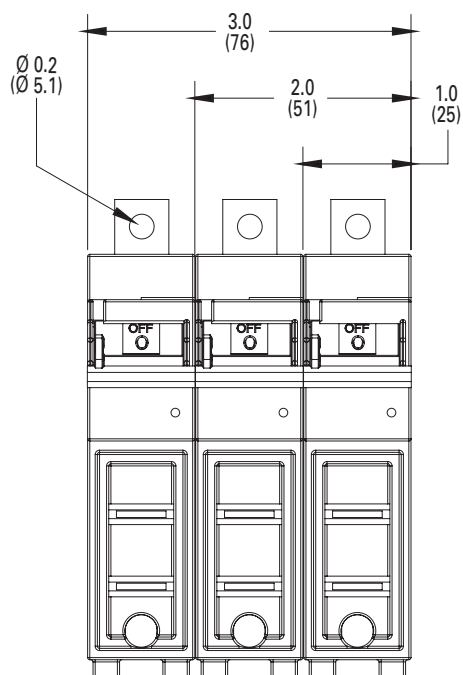
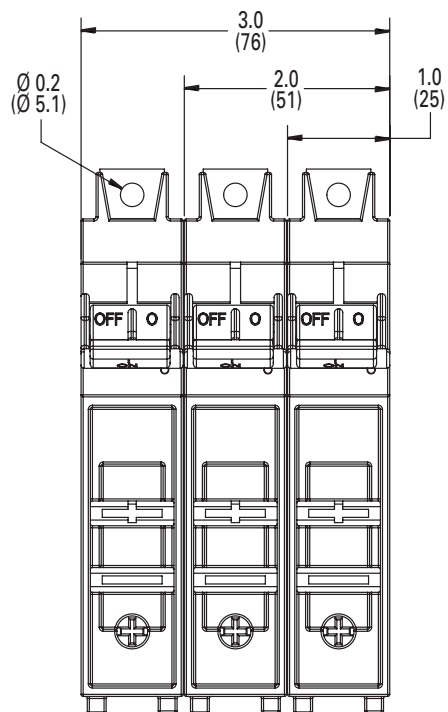
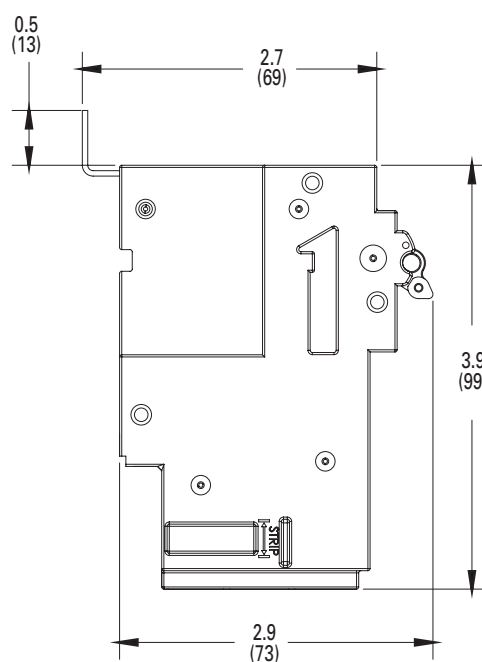
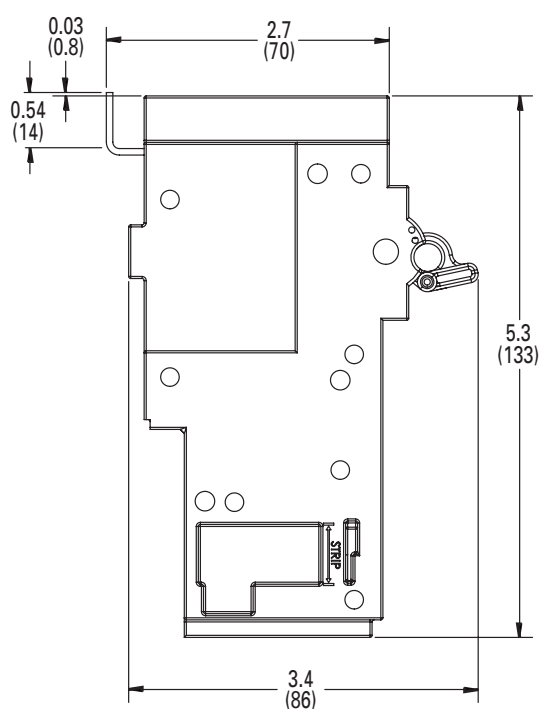
\* 125 Vdc for installed fuse amp ratings up to 40 A. 24 Vdc for installed fuse amp ratings from 45 to 60 A.

\*\* 125 Vdc for installed fuse amp ratings up to 80 A, 24 Vdc for installed fuse amp ratings from 90 to 100 A.

### Box lug conductor data

| Wire type            | AWG range | Class                           | Quantity    | Torque N·m (lb-in) |
|----------------------|-----------|---------------------------------|-------------|--------------------|
| 15 to 60 A switches  |           |                                 |             |                    |
| 75°C Cu              | 4-6       | Stranded, Class B to K          | Single      | 3.95 (35)          |
|                      | 8-18      |                                 |             | 2.26 (20)          |
|                      | 6-8       | Stranded, Class B/C             | Dual        | 3.39 (30)          |
|                      |           | Stranded, Class K               |             | 2.26 (20)          |
|                      | 10-18     | Stranded, Class B to K          | Single/dual | 2.26 (20)          |
|                      | 10-18     | Solid                           |             | 2.26 (20)          |
|                      | 4-18      | Stranded, UL ferrule, Class B/C | Single      | 3.39 (30)          |
|                      | 6-18      |                                 | Twin†       |                    |
|                      | 4-18      | Stranded, UL ferrule, Class K   | Single      | 2.82 (25)          |
| 6-18                 | Twin†     |                                 |             |                    |
| 70 to 100 A switches |           |                                 |             |                    |
| 75°C Cu              | 12-18     | Stranded, Class B to K          | Single      | 2.26 (20)          |
|                      | 10        |                                 |             | 2.82 (25)          |
|                      | 8         |                                 |             | 4.52 (40)          |
|                      | 4-6       |                                 |             | 5.08 (45)          |
|                      | 1-3       |                                 |             | 6.21 (55)          |
|                      | 3-12      | Stranded, Class B to K          | Dual        | 3.95 (35)          |
|                      | 12-18     |                                 |             | 2.26 (20)          |
|                      | 10        | Stranded, UL ferrule, Class B/C | Single      | 3.95 (35)          |
|                      | 1-8       |                                 | 4.52 (40)   |                    |
|                      | 10-18     |                                 | Twin†       | 2.26 (20)          |
|                      | 6-8       |                                 | 2.82 (25)   |                    |
|                      | 10-18     | Solid                           | Single      | 2.26 (20)          |
|                      | 10-18     |                                 | Dual        | 2.26 (20)          |
|                      | 8-18      | Class K                         | Single      | 2.26 (20)          |
|                      | 1-6       |                                 | 3.39 (30)   |                    |
|                      | 3-10      |                                 | Dual        | 5.08 (45)          |
|                      | 8-18      | Class K, UL ferrule             | Single      | 2.26 (20)          |
|                      | 1-6       |                                 | 3.39 (30)   |                    |
|                      | 6-18      |                                 | Twin        | 2.26 (20)          |

† Two stranded conductors placed in one UL Listed twin ferrule.

**Dimensions — in (mm)****15-60 A switches****70-100 A switches**

For details on the CCP2B and its use in the Quik-Spec Coordination Panelboard, see data sheet no. 1160.

## Technical Data 1161

Effective August 2018

### Motor sizing table:

#### Low-Peak™ TCF\_ and TCF\_RN time-delay Class CF fuses

| Voltage          | Motor size (Hp) | Motor FLA (amps) | Optimal protection (amps) | Code max (amps) | Heavy start* (amps) |
|------------------|-----------------|------------------|---------------------------|-----------------|---------------------|
| 115 Vac, 1-Phase | 0.167           | 4.4              | 10                        | 10              | 10                  |
|                  | 0.25            | 5.8              | 10                        | 15              | 15                  |
|                  | 0.333           | 7.2              | 15                        | 15              | 15                  |
|                  | 0.5             | 9.8              | 15                        | 20              | 20                  |
|                  | 0.75            | 13.8             | 25                        | 25              | 30                  |
|                  | 1               | 16               | 25                        | 30              | 35                  |
|                  | 1.5             | 20               | 30                        | 35              | 45                  |
|                  | 2               | 24               | 40                        | 45              | 50                  |
|                  | 3               | 34               | 50                        | 60              | N/A                 |
|                  | 5**             | 56               | 90                        | 100             | N/A                 |
| 230 Vac, 1-Phase | 0.167           | 2.2              | 6                         | 6               | 6                   |
|                  | 0.25            | 2.9              | 6                         | 6               | 6                   |
|                  | 0.333           | 3.6              | 6                         | 10              | 10                  |
|                  | 0.5             | 4.9              | 10                        | 10              | 10                  |
|                  | 0.75            | 6.9              | 15                        | 15              | 15                  |
|                  | 1               | 8                | 15                        | 15              | 17.5                |
|                  | 1.5             | 10               | 15                        | 20              | 20                  |
|                  | 2               | 12               | 20                        | 25              | 25                  |
|                  | 3               | 17               | 25                        | 30              | 35                  |
|                  | 5               | 28               | 45                        | 50              | 60                  |
| 200 Vac, 3-Phase | 7.5             | 40               | 60                        | N/A             | N/A                 |
|                  | 10**            | 50               | 80                        | 90              | N/A                 |
|                  | 0.5             | 2.5              | 6                         | 6               | 6                   |
|                  | 0.75            | 3.7              | 6                         | 10              | 10                  |
|                  | 1               | 4.8              | 10                        | 10              | 10                  |
|                  | 1.5             | 6.9              | 15                        | 15              | 15                  |
|                  | 2               | 7.8              | 15                        | 15              | 17.5                |
|                  | 3               | 11               | 17.5                      | 20              | 20                  |
|                  | 5               | 17.5             | 30                        | 35              | 35                  |
|                  | 7.5             | 25.3             | 40                        | 45              | 50                  |
| 208 Vac, 3-Phase | 20**            | 62.1             | 100                       | N/A             | N/A                 |
|                  | 0.5             | 2.4              | 6                         | 6               | 6                   |
|                  | 0.75            | 3.5              | 6                         | 10              | 10                  |
|                  | 1               | 4.6              | 10                        | 10              | 10                  |
|                  | 1.5             | 6.6              | 10                        | 15              | 15                  |
|                  | 2               | 7.5              | 15                        | 15              | 15                  |
|                  | 3               | 10.6             | 17.5                      | 20              | 20                  |
|                  | 5               | 16.7             | 25                        | 30              | 35                  |
|                  | 7.5             | 24.2             | 40                        | 45              | 50                  |
|                  | 20**            | 59.4             | 90                        | N/A             | N/A                 |

## CUBEFuse Compact Circuit Protector Base (CCP2B)

| Voltage          | Motor size (Hp) | Motor FLA (amps) | Optimal protection (amps) | Code max (amps) | Heavy start* (amps) |
|------------------|-----------------|------------------|---------------------------|-----------------|---------------------|
| 230 Vac, 3-Phase | 0.5             | 2.2              | 6                         | 6               | 6                   |
|                  | 0.75            | 3.2              | 6                         | 6               | 6                   |
|                  | 1               | 4.2              | 10                        | 10              | 10                  |
|                  | 1.5             | 6                | 10                        | 15              | 15                  |
|                  | 2               | 6.8              | 15                        | 15              | 15                  |
|                  | 3               | 9.6              | 15                        | 20              | 20                  |
|                  | 5               | 15.2             | 25                        | 30              | 30                  |
|                  | 7.5             | 22               | 35                        | 40              | 45                  |
|                  | 20**            | 54               | 90                        | 100             | N/A                 |
|                  | 0.5             | 1.1              | 3                         | 3               | 3                   |
| 460 Vac, 3-Phase | 0.75            | 1.6              | 3                         | 3               | 3                   |
|                  | 1               | 2.1              | 6                         | 6               | 6                   |
|                  | 1.5             | 3                | 6                         | 6               | 6                   |
|                  | 2               | 3.4              | 6                         | 6               | 6                   |
|                  | 3               | 4.8              | 10                        | 10              | 10                  |
|                  | 5               | 7.6              | 15                        | 15              | 15                  |
|                  | 7.5             | 11               | 17.5                      | 20              | 20                  |
|                  | 10              | 14               | 25                        | 25              | 30                  |
|                  | 15              | 21               | 35                        | 40              | 45                  |
|                  | 20              | 27               | 40                        | 50              | 60                  |
| 575 Vac, 3-Phase | 50**            | 65               | 100                       | N/A             | N/A                 |
|                  | 0.5             | 0.9              | 3                         | 3               | 3                   |
|                  | 0.75            | 1.3              | 3                         | 3               | 3                   |
|                  | 1               | 1.7              | 3                         | 3               | 3                   |
|                  | 1.5             | 2.4              | 6                         | 6               | 6                   |
|                  | 2               | 2.7              | 6                         | 6               | 6                   |
|                  | 3               | 3.9              | 6                         | 10              | 10                  |
|                  | 5               | 6.1              | 10                        | 15              | 15                  |
|                  | 7.5             | 9                | 15                        | 20              | 20                  |
|                  | 10              | 11               | 17.5                      | 20              | 20                  |
|                  | 40**            | 41               | 70                        | 80              | 80                  |

**Note:** Use Code max column for low to moderate reverse/jog/plug applications.

\* Heavy Start permitted only if Code Max does not allow motor start-up.

\*\* If equipment terminations are rated for 60°C conductors only, the 60°C conductor ampacities must be utilized and therefore larger conductor sizes or conduit sizes may be required.

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