

### Application Description

These Cutler-Hammer® ampere and horsepower rated devices from Eaton's electrical business are designed for service in applications such as Refrigeration, Air Conditioning and Resistance Heating and are manufactured to traditional Cutler-Hammer standards for quality and reliability. They are subjected to stringent quality assurance inspections and

testing procedures. The life expectancy, both electrical and mechanical, will meet or exceed industry performance requirements for Definite Purpose devices.

If more detailed technical information is required — specifications, ratings, etc. — contact your local Eaton distributor or sales office.

### Catalog Number Selection

Table 1. Definite Purpose Control Catalog Numbering System

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                             |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------|--|--|--|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>C 25 D N A 2 15 A A 161 - 84</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                             |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| <b>Model</b><br>C = Contactor<br>A = Three-Phase Starter<br>B = Single-Phase Starter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                             |  |  |  |  |  | <b>Bulk Packaging</b><br>Blank = individual pkg.<br>-84 = 20 pc./pkg. (C25D_)<br>50 pc./pkg. (C25A_, C25B_, C25C_)<br>-86 = Rotate coil terminals 180° for 15A – 50A Contactors                                                                                                                                                                                                                                                                        |  |
| <b>Type</b><br>25 = Non-reversing Contactors & Starters<br>27 = Non-reversing Starters<br>29 = Non-reversing Starters<br>65 = Reversing Contactors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                             |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| <b>Contactor Frame Size</b><br>A = Compact 1-Pole<br>B = Compact 2-Pole<br>C = Compact 1-Pole W/Shunt<br>D = 15 – 50A, 2- and 3-Pole<br>E = 25 – 40A, 4-Pole<br>F = 60 – 75A, 2- and 3-Pole<br>G = 90A, 2- and 3-Pole<br>H = 120A, 2- and 3-Pole<br>K = 200 and 300A, 3-Pole<br>L = 360A, 3-Pole<br><b>For Starters Only</b><br>C = Common Control Wiring<br>S = Separate Control Wiring                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                                                                             |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| <b>Enclosure Type</b><br>N = Open with Metal Mounting Plate<br>R = Open with DIN Rail Mounting Adapter (2- and 3-Pole, 15 – 50A Contactors Only)<br>G = NEMA Type 1 Enclosed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |                                                                             |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| <b>Power Terminals</b><br>A = Binding Head Screw<br>B = Binding Head Screw and Quick Connect Terminals (side by side)<br>C = Screw/Pressure Plate ①<br>D = Screw/Pressure Plate and Quick Connect Terminals (side by side) ①<br>E = Box Lugs (Posidrive Setscrew)<br>F = Box Lugs (Posidrive Setscrew) and Quick Connect Terminals (side by side)<br>G = Binding Head Screw and Quick Connect Terminals (vertical in-line)<br>H = Screw/Pressure Plate and Quick Connect Terminals (vertical in-line) ①<br>J = Box Lugs (Posidrive Setscrew) and Quick Connect Terminals (vertical in-line)<br>K = Box Lugs (Hex Socket Allen Head Setscrew)<br>L = Box Lugs (Hex Socket Allen Head Setscrew) and Quick Connect Terminals (side by side)<br>M = Box Lugs (Hex Socket Allen Head Setscrew) and Quick Connect Terminals (vertical in-line) |  |                                                                             |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                             |  |  |  |  |  | <b>Fuse Blocks</b><br>161 = Class M, 600V, 30A<br>237 = Class G, 300V, 15A<br>238 = Class G, 300V, 20A<br>231 = Class G, 300V, 30A<br>232 = Class G, 300V, 60A<br>361 = Class J, 600V, 30A<br>362 = Class J, 600V, 60A<br>431 = Class T, 300V, 30A<br>432 = Class T, 300V, 60A<br>461 = Class T, 600V, 30A<br>462 = Class T, 600V, 60A<br>521 = Class H, 250V, 30A<br>522 = Class H, 250V, 60A<br>621 = Class R, 250V, 30A<br>622 = Class R, 250V, 60A |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                             |  |  |  |  |  | <b>Auxiliary Contacts (Side Mount)</b><br>A = 1NO Pressure Plate<br>B = 1NC Pressure Plate<br>C = 1NO-1NC Pressure Plate<br>D = 2NO Pressure Plate<br>E = 2NC Pressure Plate<br>F = 1NO Pressure Plate and QC<br>G = 1NC Pressure Plate and QC<br>H = 1NO-1NC Pressure Plate and QC<br>J = 2NO Pressure Plate and QC<br>K = 2NC Pressure Plate and QC<br>L = 1NO-1NC Snap Switch QC Only<br>M = 2NO-2NC Snap Switch QC Only                            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                             |  |  |  |  |  | <b>Coil Selection</b><br>A = 110 – 120V AC, 50/60 Hz<br>B = 208 – 240V AC, 50/60 Hz<br>C = 440 – 480V AC, 50/60 Hz<br>D = 550 – 600V AC, 50/50 Hz<br>H = 277V AC, 60 Hz<br>J = 220 – 240 V AC, 50/60 Hz<br>L = 380 – 415V AC, 50 Hz<br>R = 12V AC, 50/60 Hz<br>T = 24V AC, 50/60 Hz<br>1R = 12V DC<br>1T = 24V DC<br>1W = 48V DC<br>1A = 120V DC                                                                                                       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                             |  |  |  |  |  | <b>Current Rating</b><br>15 = 15A<br>25 = 25A<br>30 = 30A<br>40 = 40A<br>50 = 50A<br>60 = 60A<br>75 = 75A<br>90 = 90A<br>120 = 120A<br>200 = 200A<br>300 = 300A<br>360 = 360A                                                                                                                                                                                                                                                                          |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | <b>No. of Poles</b><br>1 = 1-Pole<br>2 = 2-Pole<br>3 = 3-Pole<br>4 = 4-Pole |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| ① Not available on 50A devices.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                             |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |

① Not available on 50A devices.

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Compact 2-Pole

## Product Description

Cutler-Hammer® 20 – 40A, single- and double-pole, Type C25 contactors from Eaton's electrical business feature a compact, efficient design with a low VA coil and straight-through wiring. New contactor housing design effectively limits dust and other contaminants from magnet structure — reduces or eliminates noise. These economically priced, UL recognized/CSA certified, ampere rated devices are well suited for use in heating/air conditioning, refrigeration, data processing and food service applications.

## Standards and Certifications

- UL Recognized Components: UL File Number E1491, Guides NLDX2 and NLDX8
- CSA Certified Components: CSA C22.2 No. 14-05, File Number 238083 Class 3211 84
- IEC 60947-4-1
- EN 60947-4-1



- ARI 780/790 Standard
- RoHS Compliance



## Technical Data — Specifications

- Insulation Voltage: 690V
- Current Rated and hp/kW Rated
- Contacts: Double Break
- Magnet Coil: Class F, 155°C
- Contact Arc Covers are standard on all Contactors
- Standard Power Terminals —
  - 5/16" Hex Washer Head Screws
  - Quad (4) Quick Connect Terminals on all Line and Load Terminals
  - Box Lugs available as option
- Contactors are marked with Line and Load Terminal Designations
- Operating Temperature Range: -13 to 158°F (-25 to 70°C)
- Terminal Wire Range —
  - Hex Washer Head Screws: 16 – 10 AWG, 30 lb-in torque rating
  - Box Lugs: 16 – 10 AWG, 35 lb-in torque rating; 8 AWG, 40 lb-in torque rating; 6 – 4 AWG, 45 lb-in torque rating
- Mounting Position: Vertical, Horizontal or Tabletop

Table 2. Coil Characteristics

| AC Coil Voltage<br>50/60 Hz | Max. Inrush<br>VA | Max. Sealed<br>VA | Max. Sealed<br>Watts |
|-----------------------------|-------------------|-------------------|----------------------|
| <b>One-Pole</b>             |                   |                   |                      |
| 24                          | 33                | 6                 | 2                    |
| 120                         | 33                | 6                 | 2                    |
| 208/240                     | 33                | 6                 | 2                    |
| 277                         | 33                | 6                 | 2                    |
| <b>Two-Pole</b>             |                   |                   |                      |
| 24                          | 41                | 6.5               | 3                    |
| 120                         | 41                | 6.5               | 3                    |
| 208/240                     | 41                | 6.5               | 3                    |
| 277                         | 41                | 6.5               | 3                    |
| 480                         | 41                | 6.5               | 3                    |

## Options

Table 3. Compact Options — Factory Installed

| Description                                                                                                                                                                                                  | * |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| <b>Box lugs with quick connects for 20 – 40A contactors:</b><br>1-Pole<br>1-Pole with shunt<br>2-Pole<br>To order replace letter in the 6th position of Catalog Number with letter F.<br>EXAMPLE: C25BNF240A |   |

Discount Symbol . . . . . **1CD-5C**

\* Consult Sales Office for Pricing



Compact 1-Pole



Compact 1-Pole with Shunt



Compact 2-Pole

### Product Selection

#### When Ordering Specify

- Catalog Number plus Magnet Coil Suffix.
- Modify Catalog Number for any options required — see factory installed Options **Page 2**.

Table 4. Catalog Numbering System

|                           |                    |
|---------------------------|--------------------|
| <b>C25BNB230</b>          | <b>A</b>           |
| Incomplete Catalog Number | Magnet Coil Suffix |

Table 5. Compact Contactors Product Selection— Open Type

| Ampere Ratings <sup>①</sup>   |           |              |      |      | Max. Motor Horsepower |       | Max. Motor Kilowatts |      | Catalog Number <sup>②③</sup> | * |
|-------------------------------|-----------|--------------|------|------|-----------------------|-------|----------------------|------|------------------------------|---|
| Inductive Full Load           | Resistive | Locked Rotor |      |      | 115V                  | 230V  | 115V                 | 230V |                              |   |
|                               |           | 240 – 277V   | 480V | 600V |                       |       |                      |      |                              |   |
| <b>Single-Pole</b>            |           |              |      |      |                       |       |                      |      |                              |   |
| 25                            | 30        | 150          | 50   | 40   | 2                     | 3     | 1.5                  | 2.2  | C25ANB125_                   |   |
| 30                            | 40        | 150          | 75   | 50   | 2                     | 5     | 1.5                  | 3.7  | C25ANB130_                   |   |
| 40                            | 50        | 240          | 200  | 160  | 3                     | 7-1/2 | 2.2                  | 5.5  | C25ANB140_                   |   |
| <b>Single-Pole with Shunt</b> |           |              |      |      |                       |       |                      |      |                              |   |
| 25                            | 30        | 150          | 50   | 40   | 2                     | 3     | 1.5                  | 2.2  | C25CNB125_                   |   |
| 30                            | 40        | 150          | 75   | 50   | 2                     | 5     | 1.5                  | 3.7  | C25CNB130_                   |   |
| 40                            | 50        | 240          | 200  | 160  | 3                     | 7-1/2 | 2.2                  | 5.5  | C25CNB140_                   |   |
| <b>Double-Pole</b>            |           |              |      |      |                       |       |                      |      |                              |   |
| 20                            | 30        | 120          | 100  | 80   | 1-1/2                 | 3     | 1.1                  | 2.2  | C25BNB220_                   |   |
| 25                            | 35        | 150          | 125  | 100  | 2                     | 3     | 1.5                  | 2.2  | C25BNB225_                   |   |
| 30                            | 40        | 150          | 125  | 100  | 2                     | 5     | 1.5                  | 3.7  | C25BNB230_                   |   |
| 40                            | 50        | 240          | 200  | 160  | 3                     | 7-1/2 | 2.2                  | 5.5  | C25BNB240_                   |   |

<sup>①</sup> Rating per pole.

<sup>②</sup> Incomplete Catalog Number. Replace underscore (\_) in Catalog Number with Coil Suffix letter from **Table 6**.

<sup>③</sup> Bulk pack quantities are available in quantities of 50, contact local sales office.

Table 6. Magnet Coil Selection

| AC Coil Voltage<br>50/60 Hz          | Coil<br>Suffix |
|--------------------------------------|----------------|
| 24                                   | T              |
| 110 – 120                            | A              |
| 208 – 240                            | B              |
| 277                                  | H              |
| 380 – 415 (50 Hz); 440 – 480 (60 Hz) | C              |

### Dimensions

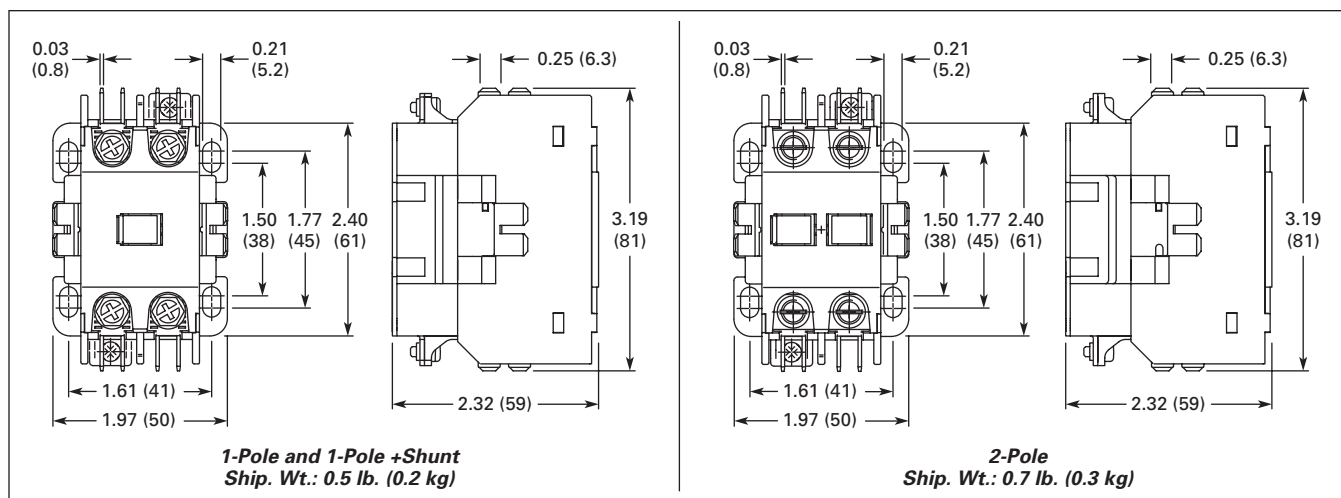


Figure 1. Compact Approximate Dimensions in Inches (mm) and Shipping Weights

Technical Data..... **Page 2**  
Options ..... **Page 2**  
Discount Symbol ..... **1CD-5C**

\* Consult Sales Office for Pricing



50 mm DP Contactor

## Product Description

Cutler-Hammer® Type C25 Definite Purpose Contactors 15A through 360A, from Eaton's electrical business incorporate most competitive contactor mounting dimensions into a single baseplate. Contactors are dual-rated with inductive and resistive ratings as well as horsepower and kilowatt ratings. C25 contactors are furnished with pressure plates and quick connect terminals as standard on 15, 25 and 30A devices and with box lugs and quick-connect terminals on 40, 50, 60 and 75A. Other terminal configurations are available, see **Table 14**. Contactors will accept add-on auxiliary contacts — order factory assembled or as kits for field installation.

The separately available snap-on mechanical interlock permits interlocking two contactors for reversing or two-speed applications.

Contactors rated 15 – 50A only are available with DIN rail mount as a factory installed option.

## Standards and Certifications

- UL Recognized Components  
UL File #E-1491, Guide NLDX2
- CSA Certified Components  
File #LR353, Class 3211 04, 481301 & 122201
- IEC 60947-4-1
- EN 60947-4-1



- RoHS Compliance (15A to 50A Only)



## Technical Data and Specifications

- Magnet coil:
  - Class B (C25E, F, G, H and K), 130°C
  - Class F (C25D and L), 155°C
  - Class H (C25D), 180°C (Available as factory installed option)

- Contacts: Double break
- Coil terminals: 10 – 14 AWG
- Ambient temperature: 150°F (65°C) maximum
- UL recognized, CSA certified and conform to ARI 780
- CE mark
- Terminal wire range:
  - #8–32 binding head screw: 14 – 12 AWG (one conductor-solid)
  - #8–32 screw/pressure plate:
    - 14 – 8 AWG (one conductor)
    - 14 – 8 AWG (two conductors)
  - Box lugs — 15 – 50A:
    - # 2 posidrive screw or 5/32 hex socket screw
    - Upper Level: 14 – 4 AWG (one conductor)
    - Lower Level: 14 – 6 AWG (one conductor)

- Box lugs — 60 – 75A
  - Upper Level: 14 – 2 AWG
  - Lower Level: 14 – 6 AWG

**Note:** The box lugs on the 15 – 75A device can accept two conductors per pole.

- Box lugs — 90A: 1/0 – 14 AWG
- Box lugs — 120A: 3/0 – 8 AWG
- Box lugs — 200 – 300A: 350 MCM – 6 AWG
- Box lugs — 360A: 750 MCM – 2 AWG

**Table 7. Lighting Duty Ratings (25A to 50A Only)**

| C25D_ Inductive Rating | Tungsten & Ballast (480V) |
|------------------------|---------------------------|
| 25A                    | 30A                       |
| 30A                    | 40A                       |
| 40A                    | 50A                       |
| 50A                    | 60A                       |

**Table 8. IEC/CE Ratings (IEC 60947-4-1, EN 60947-4-1) for 15A through 50A C25D\_ Contactors**

| C25D_ Inductive Rating | AC-1 (Ic) |      | AC-3 (Ie) |      | AC-4 (Ie) |      | AC-8a |      |
|------------------------|-----------|------|-----------|------|-----------|------|-------|------|
|                        | 480V      | 600V | 480V      | 600V | 480V      | 600V | 480V  | 600V |
| 15A                    | 20A       | 20A  | 15A       | 15A  | 15A       | —    | 15A   | 15A  |
| 25A                    | 30A       | 30A  | 25A       | 25A  | 25A       | —    | 25A   | 25A  |
| 30A                    | 40A       | 40A  | 30A       | 30A  | 30A       | —    | 30A   | 30A  |
| 40A                    | 50A       | —    | 40A       | —    | 40A       | —    | 40A   | —    |
| 50A                    | 65A       | 65A  | 50A       | 50A  | 50A       | —    | 50A   | 50A  |

**Table 9. DC Ratings (15A to 50A Only)**

| Voltage                   | 2-Pole, 15 – 30A Inductive |      |                | 2-Pole, 40A Inductive |     |                | 3-Pole, 15 – 30A Inductive |      |                | 3-Pole, 40A Inductive |     |                |
|---------------------------|----------------------------|------|----------------|-----------------------|-----|----------------|----------------------------|------|----------------|-----------------------|-----|----------------|
|                           | UL/CSA                     |      | DC-3/DC-5      | UL/CSA                |     | DC-3/DC-5      | UL/CSA                     |      | DC-3/DC-5      | UL/CSA                |     | DC-3/DC-5      |
|                           | FLA                        | hp   | I <sub>e</sub> | FLA                   | hp  | I <sub>e</sub> | FLA                        | hp   | I <sub>e</sub> | FLA                   | hp  | I <sub>e</sub> |
| 240V DC 3 Poles in Series | —                          | —    | —              | —                     | —   | —              | 4                          | 3/4  | 4              | 5                     | 1   | 5              |
| 120V DC 3 Poles in Series | —                          | —    | —              | —                     | —   | —              | 8                          | 3/4  | 8              | 10                    | 1   | 10             |
| 120V DC 2 Poles in Series | 5.5                        | 1/2  | 5.5            | 8                     | 3/4 | 8              | 5.5                        | 1/2  | 5.5            | 8                     | 3/4 | 8              |
| 120V DC per Pole          | 2                          | 1/10 | 2              | 3.5                   | 1/4 | 3.5            | 2                          | 1/10 | 2              | 3.5                   | 1/4 | 3.5            |
| 24V DC per Pole           | 15                         | —    | 15             | 20                    | —   | 20             | 15                         | —    | 15             | 20                    | —   | 20             |

**Table 10. Contactor Torque Ratings**

| Contactor Size | Terminal                | Wire Range                                  | Tightening Torque                            |
|----------------|-------------------------|---------------------------------------------|----------------------------------------------|
| 15 – 50A ①     | 8–32 Binding Head Screw | 12 – 14 AWG                                 | 22 lb-in                                     |
|                | Screw/Pressure Plate    | 8 – 14 AWG                                  | 15 lb-in                                     |
|                | Box Lug                 | 12 – 14 AWG<br>10 AWG<br>8 AWG<br>4 – 6 AWG | 15 lb-in<br>25 lb-in<br>40 lb-in<br>45 lb-in |
| 60 – 75A ②     | Box Lug                 | 10 – 14 AWG<br>8 AWG<br>3 – 6 AWG           | 40 lb-in<br>45 lb-in<br>50 lb-in             |
| 90A            | Box Lug                 | 1/0 – 14 AWG                                | 60 lb-in                                     |
| 120A           | Box Lug                 | 8 AWG<br>4 – 6 AWG<br>3 – 1/0 AWG           | 40 lb-in<br>45 lb-in<br>50 lb-in             |
| 200 – 300A     | Box Lug                 | 6 – 350 MCM                                 | 200 lb-in                                    |
| 360A           | Box Lug                 | 2 – 750 MCM                                 | 550 lb-in                                    |

① The box lugs on the 15 – 50A device can accept 2 conductors per pole, the upper section will accept 4 – 14 AWG and the lower section will accept 6 – 14 AWG.

② The box lugs on the 60 – 75A device can accept 2 conductors per pole, the upper section will accept 3 – 14 AWG and the lower section will accept 6 – 14 AWG.

## Product Selection

## When Ordering Specify

- Catalog Number plus Magnet Coil Suffix, below.

- Modify Catalog Number for any options required — see Options, **Page 6**.
- Catalog Numbers of accessory kits required, **Page 6**.

Table 11. Catalog Numbering System

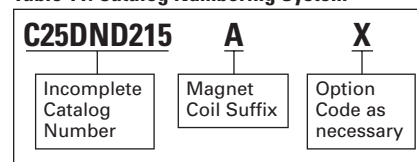


Table 12. C25 Contactors Product Selection—Open Type

| Rating, Amperes     |                    |                          |                          | Maximum Motor Horsepower |                        | Maximum Motor Kilowatts |                        | Number of Poles | Open Type with Metal Mounting Plate |   | Open Type with DIN Rail Adapter |   |
|---------------------|--------------------|--------------------------|--------------------------|--------------------------|------------------------|-------------------------|------------------------|-----------------|-------------------------------------|---|---------------------------------|---|
| Inductive Full Load | Resistive per Pole | Line Voltage             | Locked Rotor             | 1-Phase                  | 3-Phase                | 1-Phase                 | 3-Phase                |                 | Catalog Number ①②                   | * | Catalog Number ①②               | * |
| 15                  | 20                 | 115<br>230<br>460<br>575 | 90<br>90<br>75<br>60     | 3/4<br>2<br>—<br>—       | —<br>3<br>5<br>5       | 0.40<br>1.5<br>—<br>—   | —<br>2.2<br>3.7<br>3.7 | 2<br>3          | C25DND215<br>C25DND315              |   | C25DRD215<br>C25DRD315          |   |
| 25                  | 35                 | 115<br>230<br>460<br>575 | 150<br>150<br>125<br>100 | 2<br>3<br>—<br>—         | —<br>7-1/2<br>10<br>10 | 1.5<br>2.2<br>—<br>—    | —<br>5.5<br>7.5<br>7.5 | 2<br>3<br>4     | C25DND225<br>C25DND325<br>C25END425 |   | C25DRD225<br>C25DRD325          |   |
| 30                  | 40                 | 115<br>230<br>460<br>575 | 180<br>180<br>150<br>120 | 2<br>5<br>—<br>—         | —<br>10<br>15<br>15    | 1.5<br>3.7<br>—<br>—    | —<br>7.5<br>11<br>11   | 2<br>3<br>4     | C25DND230<br>C25DND330<br>C25END430 |   | C25DRD230<br>C25DRD330          |   |
| 40                  | 50                 | 115<br>230<br>460<br>575 | 240<br>240<br>200<br>160 | 3<br>7-1/2<br>—<br>—     | —<br>10<br>20<br>20    | 2.2<br>5.5<br>—<br>—    | —<br>7.5<br>15<br>15   | 2<br>3<br>4     | C25DNF240<br>C25DNF340<br>C25ENF440 |   | C25DRF240<br>C25DRF340          |   |
| 50                  | 65                 | 115<br>230<br>460<br>575 | 300<br>300<br>250<br>200 | 3<br>10<br>—<br>—        | —<br>15<br>30<br>30    | 2.2<br>7.5<br>—<br>—    | —<br>11<br>22<br>22    | 2<br>3          | C25DNJ250<br>C25DNJ350              |   | C25DRJ250<br>C25DRJ350          |   |
| 60                  | 75                 | 115<br>230<br>460<br>575 | 360<br>360<br>300<br>240 | 5<br>10<br>—<br>—        | —<br>20<br>40<br>40    | 3.7<br>7.5<br>—<br>—    | —<br>15<br>30<br>30    | 2<br>3          | C25FNF260<br>C25FNF360              |   | NA                              |   |
| 75                  | 90                 | 115<br>230<br>460<br>575 | 450<br>450<br>375<br>300 | 5<br>15<br>—<br>—        | —<br>20<br>50<br>50    | 3.7<br>11<br>—<br>—     | —<br>18.5<br>37<br>37  | 2<br>3          | C25FNF275<br>C25FNF375              |   | NA                              |   |
| 90                  | 120                | 115<br>230<br>460<br>575 | 540<br>540<br>450<br>360 | 7-1/2<br>20<br>—<br>—    | —<br>30<br>50<br>50    | 5.7<br>15.1<br>—<br>—   | —<br>22<br>37<br>37    | 2<br>3          | C25GNF290<br>C25GNF390              |   | NA                              |   |
| 120                 | 140                | 230<br>460<br>575        | 720<br>720<br>570        | —<br>—<br>—              | —<br>—<br>—            | —<br>—<br>—             | —<br>—<br>—            | 3               | C25HNE3120                          |   | NA                              |   |
| 200                 | 200                | 240<br>480<br>600        | 1200<br>1200<br>1000     | —<br>—<br>—              | —<br>—<br>—            | —<br>—<br>—             | —<br>—<br>—            | 3               | C25KNE3200                          |   | NA                              |   |
| 300                 | 300                | 240<br>480<br>600        | 1800<br>1800<br>1500     | —<br>—<br>—              | —<br>—<br>—            | —<br>—<br>—             | —<br>—<br>—            | 3               | C25KNE3300                          |   | NA                              |   |
| 360                 | 360                | 240<br>480<br>600        | 2320<br>2320<br>1900     | —<br>—<br>—              | —<br>—<br>—            | —<br>—<br>—             | —<br>—<br>—            | 3               | C25LNE3360                          |   | NA                              |   |

- ① Incomplete Catalog Number. Replace underscore ( \_ ) in Catalog Number with Magnet Coil Suffix from table below.
- ② Carton quantities including 20 individually packaged units are available for 2- and 3-pole units through 60A inductive.
- ③ Contactors with DC coils (only available up to 75A) include an early break NC auxiliary contact, C320KGD1. See **Page 33** for more details.
- ④ Available only for 15A through 75A contactors and 4-pole contactors.
- ⑤ Available through 75A.
- ⑥ Available through 120A.
- ⑦ Available 120 – 360A.
- ⑧ Available 15 – 90A, others 240V.
- ⑨ Available through 50A.

Table 13. Magnet Coil Selection

| Voltage     |             | Coil Suffix |
|-------------|-------------|-------------|
| 60 Hertz    | 50 Hertz    |             |
| AC ①        |             |             |
| 12 ⑤        | 12          | R           |
| 24 ⑥        | 24          | T           |
| 110 – 120 ⑩ | 110 – 120 ⑩ | A           |
| 208 ⑦       | —           | E           |
| 208 – 240 ⑧ | 208 – 240   | B           |
| 240 ⑨       | 220         | J           |
| 277         | —           | H           |
| —           | 380 – 415   | L           |
| 440 – 480   | 440 – 480   | C           |
| 550 – 600   | 550 – 600   | D           |
| DC ③        |             |             |
| 12          |             | 1R          |
| 24          |             | 1T          |
| 48          |             | 1W          |
| 120         |             | 1A ④        |

- ⑩ 104 – 120V 50/60 Hz for 60A, 75A and all 4-Pole Contactors (25A – 40A).
- ⑪ Class H AC Coils available as option for 15A – 50A Contactor. Add 2 before AC Coil Suffix letter.

Technical Data..... **Pages 4, 34**  
Options ..... **Page 6**  
Accessories..... **Page 6**  
Dimensions..... **Page 30**  
Discount Symbol..... **1CD-5C**

\* Consult Sales Office for Pricing

## Options — Factory Installed

To order C25, C65, A25 and B25 Contactors and Starters with the factory installed options listed below, change the basic Catalog Number listed in the Product Selection Table as noted.

**Table 14. Factory Installed Options**

| Description                                                                                                                 | Code Letter | Number of Poles  | * |
|-----------------------------------------------------------------------------------------------------------------------------|-------------|------------------|---|
| <b>Terminals — 15A through 50A</b>                                                                                          |             |                  |   |
| <b>Binding Head Screws</b>                                                                                                  |             |                  |   |
| Without Quick Connect Terminals                                                                                             | <b>A</b>    | 2-, 3-, 4-Pole   |   |
| With Quick Connect Terminals (Side-by-Side)                                                                                 | <b>B</b>    | 2-, 3-, 4-Pole   |   |
| With Quick Connect Terminals (Vertical In-Line)                                                                             | <b>G</b>    | 2-, 3-Pole       |   |
| <b>Screw/Pressure Plate</b> ②                                                                                               |             |                  |   |
| Without Quick Connect Terminals                                                                                             | <b>C</b>    | 2-, 3-, 4-Pole   |   |
| With Quick Connect Terminals (Side-by-Side)                                                                                 | <b>D</b>    | 2-, 3-, 4-Pole   |   |
| With Quick Connect Terminals (Vertical In-Line)                                                                             | <b>H</b>    | 2-, 3-Pole       |   |
| <b>Box Lugs</b>                                                                                                             |             |                  |   |
| <b>(#2 Posidrive/Slotted Screw)</b>                                                                                         |             |                  |   |
| Without Quick Connect Terminals                                                                                             | <b>E</b>    | 2-, 3-, 4-Pole ① |   |
| With Quick Connect Terminals (Side-by-Side)                                                                                 | <b>F</b>    | 2-, 3-, 4-Pole ① |   |
| With Quick Connect Terminals (Vertical In-Line)                                                                             | <b>J</b>    | 2-, 3-Pole       |   |
| <b>Box Lugs</b>                                                                                                             |             |                  |   |
| <b>(Hex Socket Allen Head Screw)</b>                                                                                        |             |                  |   |
| Without Quick Connect Terminals                                                                                             | <b>K</b>    | 2-, 3-Pole       |   |
| With Quick Connect Terminals (Side-by-Side)                                                                                 | <b>L</b>    | 2-, 3-Pole       |   |
| With Quick Connect Terminals (Vertical In-Line)                                                                             | <b>M</b>    | 2-, 3-Pole       |   |
| <b>Terminals — 60A through 75A</b>                                                                                          |             |                  |   |
| Replace letter in the 6th position of Catalog Number with Code Letter listed below. EXAMPLE: Change C25FNF250 to C25FNE250. |             |                  |   |
| <b>Box Lugs (Slotted Screw)</b>                                                                                             |             |                  |   |
| Without Quick Connect Terminals                                                                                             | <b>E</b>    | 2-, 3-Pole       |   |
| With Quick Connect Terminals                                                                                                | <b>F</b>    | 2-, 3-Pole       |   |

① 4-Pole contactors have box lugs with slotted screws.

② Screw/Pressure Plate terminals are not available on 50A Contactors.

## Auxiliary Contacts (Side Mount)

**Table 15. Auxiliary Contacts — Factory Installed**

| Add Code Letter listed below to complete Catalog Number. EXAMPLE: Change C25DND215A to C25DND215AA. |                                        |   |                              |   |                                                 |
|-----------------------------------------------------------------------------------------------------|----------------------------------------|---|------------------------------|---|-------------------------------------------------|
| Description                                                                                         | With Standard Pressure Plate Terminals |   | With Quick Connect Terminals |   | Snap Switch Design with Quick Connect Terminals |
|                                                                                                     | Code Letter                            | * | Code Letter                  | * | Code Letter *                                   |
| <b>For 15 through 90A</b> ③                                                                         |                                        |   |                              |   |                                                 |
| 1NO                                                                                                 | <b>A</b>                               |   | <b>F</b>                     |   | —                                               |
| 1NC                                                                                                 | <b>B</b>                               |   | <b>G</b>                     |   | —                                               |
| 1NO-1NC                                                                                             | <b>C</b>                               |   | <b>H</b>                     |   | —                                               |
| 2NO                                                                                                 | <b>D</b>                               |   | <b>J</b>                     |   | —                                               |
| 2NC                                                                                                 | <b>E</b>                               |   | <b>K</b>                     |   | —                                               |
| <b>For 15 through 75A</b>                                                                           |                                        |   |                              |   |                                                 |
| 1NO-1NC                                                                                             | —                                      |   | —                            |   | <b>L</b>                                        |
| 2NO-2NC                                                                                             | —                                      |   | —                            |   | <b>M</b>                                        |
| <b>For 120 through 360A</b>                                                                         |                                        |   |                              |   |                                                 |
| 1NO                                                                                                 | <b>A</b>                               |   | —                            |   | —                                               |
| 1NO-1NC                                                                                             | <b>C</b>                               |   | —                            |   | —                                               |
| 2NO                                                                                                 | <b>D</b>                               |   | —                            |   | —                                               |
| 2NC                                                                                                 | <b>E</b>                               |   | —                            |   | —                                               |

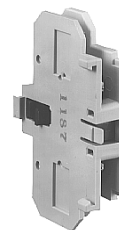
### Special Marking

Special contactor marking, consult local sales office.

③ 90A available only with binding head screw and quick connect terminals.

## Accessories

### Auxiliary Contact Kits (Side Mounted)



*Side Mounted Auxiliary Contact*

**Table 16. Heavy-Duty Pilot Rated for 10A at 600V AC**

| Circuit                     | With Standard Pressure Plate Terminals |   | With Pressure Plate and Quick Connect Terminals |   |
|-----------------------------|----------------------------------------|---|-------------------------------------------------|---|
|                             | Catalog Number                         | * | Catalog Number                                  | * |
| <b>For 15 through 75A</b>   |                                        |   |                                                 |   |
| 1NO                         | <b>C320KG1</b>                         |   | <b>C320KG11</b>                                 |   |
| 1NC                         | <b>C320KG2</b>                         |   | <b>C320KG12</b>                                 |   |
| 1NO-1NC                     | <b>C320KG3</b>                         |   | <b>C320KG13</b>                                 |   |
| 2NO                         | <b>C320KG4</b>                         |   | <b>C320KG14</b>                                 |   |
| 2NC                         | <b>C320KG5</b>                         |   | <b>C320KG15</b>                                 |   |
| <b>For 90A</b>              |                                        |   |                                                 |   |
| 1NO                         | —                                      |   | <b>C320DPG10</b>                                |   |
| 1NC                         | —                                      |   | <b>C320DPG01</b>                                |   |
| 1NO-1NC                     | —                                      |   | <b>C320DPG11</b>                                |   |
| 2NO                         | —                                      |   | <b>C320DPG20</b>                                |   |
| <b>For 120 through 360A</b> |                                        |   |                                                 |   |
| 1NO                         | <b>C320KGS20</b>                       |   | —                                               |   |
| 1NC                         | <b>C320KGS21</b>                       |   | —                                               |   |
| 1NO-1NC                     | <b>C320KGS22</b>                       |   | —                                               |   |



*Side Mounted Snap Switch*

**Table 17. Snap Switch Design Side Mounted Auxiliary Contacts**

| Circuit | Snap Switch Design with Quick Connect Terminals |   |
|---------|-------------------------------------------------|---|
|         | Catalog Number                                  | * |
| 1NO-1NC | <b>C320SNP11</b>                                |   |
| 2NO-2NC | <b>C320SNP22</b>                                |   |

Discount Symbol ..... **1CD-5C**

\* Consult Sales Office for Pricing

### Magnet Coil Quick Connect Terminal

**Table 18. Magnet Coil Quick Connect Terminal**

| Description                                                               | * |
|---------------------------------------------------------------------------|---|
| Extra Dual Quick Connect Terminals (U-shaped) for Magnet Coil Terminals ① |   |

① To order, add Suffix Number 9 to the complete Catalog Number.  
Example: C25DND215A9.

### Auxiliary Contact Kits (Top Mounted)



*Top Mounted Auxiliary Contact*

**Table 19. Heavy-Duty Pilot Rated for 10A at 600V AC**

| Circuit                                 | With Standard Pressure Plate Terminals                       |   |
|-----------------------------------------|--------------------------------------------------------------|---|
|                                         | Catalog Number                                               | * |
| <b>For 15 through 75A ②</b>             |                                                              |   |
| 1NO<br>1NC                              | C320KGT1<br>C320KGT2                                         |   |
| 1NO-1NC<br>2NO<br>2NC                   | C320KGT3<br>C320KGT4<br>C320KGT5                             |   |
| 3NO<br>2NO-1NC<br>1NO-2NC<br>3NC<br>4NO | C320KGT9<br>C320KGT10<br>C320KGT11<br>C320KGT12<br>C320KGT13 |   |
| 3NO-1NC<br>2NO-2NC<br>1NO-3NC<br>4NC    | C320KGT14<br>C320KGT15<br>C320KGT16<br>C320KGT17             |   |

② Not available for 4-pole contactors (15 – 40 Amp).

### Mechanical Interlock Kit



*Mechanical Interlock*

**Table 20. Mechanical Interlock Kit for 15 through 75A**

| Catalog Number | * |
|----------------|---|
| C321KM60B      |   |

### Solid-State ON DELAY Timer



*Solid-State ON DELAY Timer*

#### Side Mounted on C25D, C25E and C25F Frame

This timer is designed to be **wired in series with the load** (typically a coil). When the START button is pushed (power applied to timer), the ON DELAY timing function starts. At the completion of the set timing period, timer and series wired load will both be energized.

**Table 21. Solid-State ON DELAY Timer**

| Timing Range                                                             | Catalog Number ③④⑤                                     | * |
|--------------------------------------------------------------------------|--------------------------------------------------------|---|
| .1 – 1.0 Seconds<br>1 – 30 Seconds<br>30 – 300 Seconds<br>5 – 30 Minutes | C320TDN1_<br>C320TDN30_<br>C320TDN300_<br>C320TDN3000_ |   |

③ Add operating voltage Suffix to Catalog Number. **A** = 120V, **B** = 240V, **E** = 208V

④ Rated .5 ampere pilot duty — not to be used on larger contactors.

⑤ Terminal connections are quick connects only. Two per side.

### Separate Enclosures



*NEMA 1 Enclosure —  
Cat. No. C799B19*

**Table 22. Separate Enclosures — NEMA 1**

| Application                                     | Catalog Number | * |
|-------------------------------------------------|----------------|---|
| 15 through 50A, 2- and 3-Pole                   | C799B18        |   |
| 60A, 2- and 3-Pole or<br>25 through 40A, 4-Pole | C799B19        |   |

Discount Symbol ..... **1CD-5C**

\* Consult Sales Office for Pricing

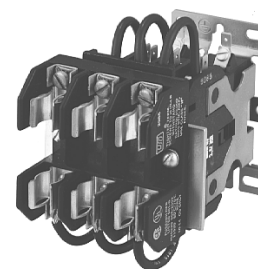
## 15 – 40A, 3-Pole Fuse Block

### Optional 3-Pole Fuse Block

#### Available only on 3-Pole, 15 – 50A Contactors

Designed to save space and reduce installation costs, these 3-pole Fuse Blocks will accommodate a variety of fuse classes and fuse holders to satisfy a wide range of electrical/electronic applications such as commercial space and water heaters, dishwashers, food coolers and sterilizing equipment. They are supplied either factory assembled, mounted and wired to the contactor or in kit form.

To order factory assembled, add Suffix Number from table below to Catalog Number of contactor listed on **Page 5** and make necessary price addition. EXAMPLE: C25DND325A**361**.



3-Pole Fuse Block

Table 23. 3-Pole Fuse Block

| Fuse Holder    |         | Fuse Dimensions in Inches (mm) |             | Terminal Type and Maximum Wire Size |             | Factory Installed Ordering Suffix | Field Installation Kit Catalog Number | * |
|----------------|---------|--------------------------------|-------------|-------------------------------------|-------------|-----------------------------------|---------------------------------------|---|
| Volts          | Amperes | Diameter                       | Length      |                                     |             |                                   |                                       |   |
| <b>Class M</b> |         |                                |             |                                     |             |                                   |                                       |   |
| 600            | 30      | 0.41 (10.4)                    | 1.50 (38.1) | Pressure Plate                      | 10 AWG Cu   | <b>161</b>                        | <b>C350KM61</b>                       |   |
| <b>Class G</b> |         |                                |             |                                     |             |                                   |                                       |   |
| 600            | 15      | 0.41 (10.4)                    | 1.31 (33.3) | Pressure Plate                      | 10 AWG Cu   | <b>237</b>                        | <b>C350KG37</b>                       |   |
|                | 20      |                                | 1.41 (35.8) | Pressure Plate                      | 10 AWG Cu   | <b>238</b>                        | <b>C350KG38</b>                       |   |
| 480            | 30      | 0.41 (10.4)                    | 1.63 (41.4) | Pressure Plate                      | 10 AWG Cu   | <b>231</b>                        | <b>C350KG31</b>                       |   |
|                | 60      |                                | 2.25 (57.2) | Box Lug                             | 2 AWG Cu/Al | <b>232</b>                        | <b>C350KG32</b>                       |   |
| <b>Class J</b> |         |                                |             |                                     |             |                                   |                                       |   |
| 600            | 30      | 0.81 (20.6)                    | 2.25 (57.2) | Pressure Plate                      | 10 AWG Cu   | <b>361</b>                        | <b>C350KJ61</b>                       |   |
|                | 60      | 1.06 (26.9)                    | 2.38 (60.5) | Box Lug                             | 2 AWG Cu/Al | <b>362</b>                        | <b>C350KJ62</b>                       |   |
| <b>Class T</b> |         |                                |             |                                     |             |                                   |                                       |   |
| 300            | 30      | 0.41 (10.4)                    | 0.88 (22.4) | Box Lug                             | 6 AWG Cu    | <b>431</b>                        | <b>C350KT31</b>                       |   |
|                | 60      | 0.56 (14.2)                    | 0.88 (22.4) | Box Lug                             | 2 AWG Cu/Al | <b>432</b>                        | <b>C350KT32</b>                       |   |
| 600            | 30      | 0.56 (14.2)                    | 1.50 (38.1) | Box Lug                             | 6 AWG Cu    | <b>461</b>                        | <b>C350KT61</b>                       |   |
|                | 60      | 0.81 (20.6)                    | 1.56 (39.6) | Box Lug                             | 2 AWG Cu/Al | <b>462</b>                        | <b>C350KT62</b>                       |   |
| <b>Class H</b> |         |                                |             |                                     |             |                                   |                                       |   |
| 250            | 30      | 0.56 (14.2)                    | 2.00 (50.8) | Pressure Plate                      | 10 AWG Cu   | <b>521</b>                        | <b>C350KH21</b>                       |   |
|                | 60      | 0.81 (20.6)                    | 3.00 (76.2) | Box Lug                             | 2 AWG Cu/Al | <b>522</b>                        | <b>C350KH22</b>                       |   |
| <b>Class R</b> |         |                                |             |                                     |             |                                   |                                       |   |
| 250            | 30      | 0.56 (14.2)                    | 2.00 (50.8) | Pressure Plate                      | 10 AWG Cu   | <b>621</b>                        | <b>C350KR21</b>                       |   |
|                | 60      | 0.81 (20.6)                    | 3.00 (76.2) | Box Lug                             | 2 AWG Cu/Al | <b>622</b>                        | <b>C350KR22</b>                       |   |

### Dimensions

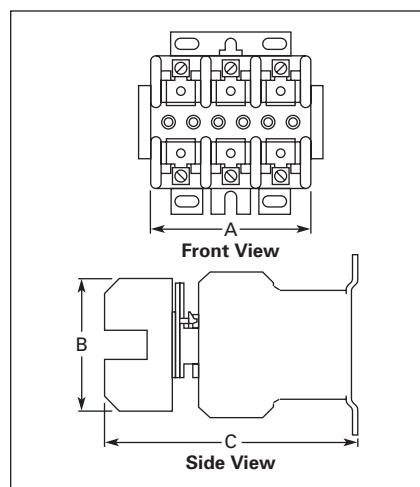


Figure 2. 3-Pole Fuse Block and Contactor Dimensions

Table 24. Approximate Dimensions for 3-Pole Fuse Block and Contactor

| Fuse Size                                |      |       | Dimensions in Inches (mm) |            |            |
|------------------------------------------|------|-------|---------------------------|------------|------------|
| Class                                    | Amps | Volts | Wide A                    | High B     | Deep C     |
| For Dimensions Not Shown, See Next Page. |      |       |                           |            |            |
| G                                        | 15   | 600   | 2.41 (61)                 | 2.81 (71)  | 5.14 (131) |
|                                          | 20   |       | 2.41 (61)                 | 2.81 (71)  | 5.14 (131) |
|                                          | 30   | 480   | 2.41 (61)                 | 2.81 (71)  | 5.14 (131) |
|                                          | 60   |       | 2.62 (67)                 | 4.25 (108) | 5.18 (132) |
| H                                        | 30   | 250   | 3.00 (76)                 | 3.03 (77)  | 5.33 (135) |
|                                          | 60   |       | 4.22 (107)                | 4.75 (121) | 5.86 (149) |
| J                                        | 30   | 600   | 4.81 (122)                | 4.12 (105) | 5.92 (150) |
|                                          | 60   |       | 4.81 (122)                | 4.12 (105) | 5.92 (150) |
| M                                        | 30   | 600   | 2.41 (61)                 | 2.81 (71)  | 5.14 (131) |
| R                                        | 30   | 250   | 3.00 (76)                 | 3.03 (77)  | 5.33 (135) |
|                                          | 60   |       | 4.22 (107)                | 4.75 (121) | 5.86 (149) |
| T                                        | 30   | 300   | 3.44 (87)                 | 2.75 (70)  | 5.43 (138) |
|                                          | 60   | 300   | 3.44 (87)                 | 2.75 (70)  | 5.43 (138) |
|                                          | 30   | 600   | 3.75 (95)                 | 3.19 (81)  | 5.36 (136) |
|                                          | 60   | 600   | 4.87 (124)                | 2.94 (75)  | 5.68 (144) |

Discount Symbol ..... **1CD-5C**

\* Consult Sales Office for Pricing