

# Medium Voltage Fuses



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Medium  
Voltage  
Fuses

## Medium Voltage Fuses

### Worldwide Circuit Protection Solutions

Cooper Bussmann is a world-leading supplier of medium voltage fuses. Each product is backed by an efficient worldwide distribution network with unrivaled service and technical support. Cooper Bussmann circuit protection solutions comply with major international standards: ANSI, BS, DIN, IEC and UL.

#### Fuse Types

Medium voltage fuses generally fit into two categories – expulsion fuses and current limiting fuses. The definitions per ANSI C37.40 are:

**Expulsion Fuse:** “A vented fuse in which the expulsion effect of the gases produced by internal arcing, either alone or aided by other mechanisms results in current interruption.” Expulsion fuses will limit the duration of an overcurrent event, but they will not limit the magnitude of fault current. Cooper Bussmann offers two types of expulsion fuses: replacement fuse links for fused cutouts and boric acid fuses.

**Current Limiting Fuse:** “A fuse unit that, when in its current-responsive element is melted by a current within the fuse’s specified current-limiting range, abruptly introduces a high resistance to reduce current magnitude and duration, resulting in subsequent current interruption.” A current limiting fuse will reduce the magnitude a fault current as well as limit the duration of the overcurrent event when operating in its current limiting range. Cooper Bussmann offers a broad range of current limiting fuses for protection of feeders, transformers and motor circuits designed to ANSI, BS, DIN and IEC standards.

#### Medium Voltage Current Limiting Fuses

Current limiting fuses are classified into three categories:

1. **Full Range** – defined by ANSI C37.40 as “a fuse capable of interrupting all currents from the maximum rated interrupting current down to the minimum continuous current that causes the melting of the fusible element(s), when the fuse is applied at the maximum ambient temperature specified by the manufacturer.” It is able to interrupt any current that will melt its element.

2. **General Purpose** – defined by ANSI C37.40 as “a fuse capable of interrupting all currents from the maximum rated interrupting current down to the current that causes melting of the fusible element(s) in one hour.” Not all currents fall within this range. It is possible for the fuse to be exposed to an overcurrent lower than the value given by the one hour criteria. In that case, a different overcurrent protection device would be required to interrupt the overcurrent.

3. **Back-up** – defined by ANSI C37.40 as “a fuse capable of interrupting all currents from the maximum interrupting rating current down to the minimum interrupting current.” The minimum interrupting current is the lowest current that the fuse will be able to clear properly. This creates a need to place a low current interrupting device, such as motor overloads, in series with the back-up rated fuse.

#### E- and R-Rated Fuses

In North America, current limiting fuses typically fall into the category of E-Rated fuses and R-Rated fuses. Cooper Bussmann also offers a wide range of current limiting fuses designed to BS, DIN and IEC standards.

E-Rated fuses are used to protect feeder circuits, power transformers and potential transformers. E-Rated fuses have defined current response times specified by ANSI C37.46. E-Rated fuses 100A and below must melt in 300sec at an rms current within the range of 200% to 240% of the continuous current rating. E-Rated fuses above 100A must melt in 600sec at an rms current within the range of 240% to 264% of the continuous current rating of the fuse. Cooper Bussmann offers a wide variety of full range and general purpose E-Rated fuses from 2.4kV up to 38kV.

R-Rated fuses are back-up fuses that provide short-circuit protection for motor circuits. They are applied with MV motor starters which provide the overload protection for the circuit. R-Rated fuses also have defined current response times specified by ANSI C37.46. R-Rated fuses will melt in a range of 15 – 35sec at a current equal to 100 times the “R” rating. Cooper Bussmann offers 2.4kV, 5.08kV, 7.2kV and 8.3kV R-Rated fuses for motor circuit protection.

## E-rated Fuses for Transformers and Feeders

### MV055 and MV155



#### Specifications

**Description:** E-rated medium, voltage current-limiting fuses: for transformer and feeder protection.

**Dimensions:** See Catalog Numbers table.

**Construction:** Silver ribbon element surrounded by silica filler housed in a fiberglass tube and plated endcaps. An epoxy paint protects the fuse tube from the surrounding environment.

#### Ratings:

- Volts: — 5.5kV (5-450A)  
 — 15.5kV (5-200A)  
 Amps: — 5-450A (5.5kV)  
 — 5-200A (15.5kV)  
 IR: — 50kA Sym. Max

**Agency Information:** Meets E requirements per ANSI C37.46, Meets full range requirements per ANSI C37.40.

#### MV055 Features and Benefits

- Standard clip center distance of 12 inches with 2 and 3 inch barrel diameters for retrofitting in existing hardware
- Open fuse indicator for ease in troubleshooting
- Full range rating with 50,000 Interrupting Rating
- Double pulsed at 90% of minimum I<sup>2</sup>t to establish manufacturing reliability

#### MV055 Typical Applications

- 5.0kV Transformer Primary Protection
- 5.0kV Feeder Circuit Protection
- 5.0kV Voltage Switches
- 5.0kV Metal-enclosed Switchgear

#### MV155 Features and Benefits

- Standard clip center distance of 15 and 18 inches with 2 and 3 inch barrel diameters for retrofitting in existing hardware
- Open fuse indicator for ease in troubleshooting
- Full range rating with 50,000 Interrupting Rating
- Double pulsed at 90% of minimum I<sup>2</sup>t to establish manufacturing reliability

#### MV155 Typical Applications

- 15.0kV Transformer Primary Protection
- 15.0kV Feeder Circuit Protection
- 15.0kV Voltage Switches
- 15.0kV Metal-enclosed Switchgear

#### 5.5kV Catalog Numbers

| Catalog Numbers | Amp Rating | Min Melt Pt | Max Clear Pt | Dimensions (in)* |      |             |         |
|-----------------|------------|-------------|--------------|------------------|------|-------------|---------|
|                 |            |             |              | Length           | Dia. | Clip Center | Barrels |
| MV055F1CAX5E    | 5          | 180         | 2,400        | 15.75            | 2    | 12          | 1       |
| MV055F1CAX7E    | 7          | 850         | 8,000        |                  |      |             |         |
| MV055F1CAX10E   | 10         | 850         | 8,000        |                  |      |             |         |
| MV055F1CAX15E   | 15         | 2,070       | 11,000       |                  |      |             |         |
| MV055F1CAX20E   | 20         | 2,370       | 23,000       |                  |      |             |         |
| MV055F1CAX25E   | 25         | 4,650       | 31,000       |                  |      |             |         |
| MV055F1CAX30E   | 30         | 9,490       | 45,000       |                  |      |             |         |
| MV055F1CAX40E   | 40         | 9,490       | 45,000       |                  |      |             |         |
| MV055F1CAX50E   | 50         | 13,600      | 90,000       |                  |      |             |         |
| MV055F1CAX65E   | 65         | 30,700      | 181,000      |                  |      |             |         |
| MV055F1DAX10E   | 10         | 850         | 8,000        |                  |      |             |         |
| MV055F1DAX15E   | 15         | 2,070       | 12,000       |                  |      |             |         |
| MV055F1DAX20E   | 20         | 2,370       | 23,000       | 15.75            | 3    | 12          | 1       |
| MV055F1DAX25E   | 25         | 4,650       | 31,000       |                  |      |             |         |
| MV055F1DAX30E   | 30         | 9,490       | 45,000       |                  |      |             |         |
| MV055F1DAX40E   | 40         | 9,490       | 45,000       |                  |      |             |         |
| MV055F1DAX50E   | 50         | 13,600      | 90,000       |                  |      |             |         |
| MV055F1DAX65E   | 65         | 30,700      | 181,000      |                  |      |             |         |
| MV055F1DAX80E   | 80         | 54,600      | 270,000      |                  |      |             |         |
| MV055F1DAX100E  | 100        | 116,200     | 580,000      |                  |      |             |         |
| MV055F1DAX125E  | 125        | 167,400     | 600,000      |                  |      |             |         |
| MV055F1DAX150E  | 150        | 218,700     | 786,000      |                  |      |             |         |
| MV055F1DAX175E  | 175        | 227,900     | 1,100,000    |                  |      |             |         |
| MV055F1DAX200E  | 200        | 297,600     | 1,520,000    |                  |      |             |         |
| MV055F2DAX250E  | 250        | 669,600     | 2,400,000    | 15.75            | 3    | 12          | 2       |
| MV055F2DAX300E  | 300        | 874,800     | 3,149,000    |                  |      |             |         |
| MV055F2DAX350E  | 350        | 911,600     | 4,376,000    |                  |      |             |         |
| MV055F2DAX400E  | 400        | 1,190,400   | 6,071,000    |                  |      |             |         |
| MV055F2DAX450E  | 450        | 1,555,000   | 9,796,000    |                  |      |             |         |

1" = 25.4mm

Recommended Fuse Clips - see page 91

#### Data Sheet: 6700

#### 15.5kV Catalog Numbers

| Catalog Numbers | Amp Rating | Min Melt Pt | Max Clear Pt | Dimensions* |      |             |         |
|-----------------|------------|-------------|--------------|-------------|------|-------------|---------|
|                 |            |             |              | Length      | Dia. | Clip Center | Barrels |
| MV155F1CBX5E    | 5          | 180         | 2,900        | 18.75       | 2    | 15          | 1       |
| MV155F1CBX7E    | 7          | 850         | 8,000        |             |      |             |         |
| MV155F1CBX10E   | 10         | 850         | 8,000        |             |      |             |         |
| MV155F1CBX15E   | 15         | 2,070       | 12,000       |             |      |             |         |
| MV155F1CBX20E   | 20         | 2,370       | 23,000       |             |      |             |         |
| MV155F1CBX25E   | 25         | 4,650       | 31,000       |             |      |             |         |
| MV155F1CBX30E   | 30         | 9,490       | 45,000       |             |      |             |         |
| MV155F1DBX10E   | 10         | 850         | 8,000        |             |      |             |         |
| MV155F1DBX15E   | 15         | 2,070       | 12,000       |             |      |             |         |
| MV155F1DBX20E   | 20         | 2,370       | 23,000       |             |      |             |         |
| MV155F1DBX25E   | 25         | 4,650       | 31,000       |             |      |             |         |
| MV155F1DBX30E   | 30         | 9,490       | 45,000       |             |      |             |         |
| MV155F1DBX40E   | 40         | 9,490       | 45,000       | 18.75       | 3    | 18          | 2       |
| MV155F1DBX50E   | 50         | 13,600      | 90,000       |             |      |             |         |
| MV155F1DBX65E   | 65         | 30,700      | 181,000      |             |      |             |         |
| MV155F1DBX80E   | 80         | 54,600      | 270,000      |             |      |             |         |
| MV155F1DBX100E  | 100        | 116,200     | 600,000      |             |      |             |         |
| MV155F2DBX125E  | 125        | 123,000     | 677,000      |             |      |             |         |
| MV155F2DBX150E  | 150        | 218,700     | 1,287,000    |             |      |             |         |
| MV155F2DBX175E  | 175        | 314,700     | 1,689,000    |             |      |             |         |
| MV155F2DBX200E  | 200        | 465,100     | 2,405,000    |             |      |             |         |
| MV155F1DCX65E   | 65         | 30,700      | 181,000      |             |      |             |         |
| MV155F1DCX80E   | 80         | 54,600      | 270,000      |             |      |             |         |
| MV155F1DCX100E  | 100        | 116,200     | 600,000      |             |      |             |         |
| MV155F2DCX125E  | 125        | 123,000     | 677,000      | 21.75       | 3    | 18          | 1       |
| MV155F2DCX150E  | 150        | 218,700     | 1,287,000    |             |      |             |         |
| MV155F2DCX175E  | 175        | 314,700     | 1,689,000    |             |      |             |         |
| MV155F2DCX200E  | 200        | 465,100     | 2,405,000    |             |      |             |         |

\*1" = 25.4mm.

Recommended Fuse Clips - see page 91

#### Data Sheet: 6701 (MV155)

## E-rated Fuses for Transformer & Feeders

### JCX, JCY, JCU, JCZ and JDZ

#### Specifications

**Description:** Indoor/enclosure E-rated medium voltage, current-limiting fuses for feeders and power transformers with blown fuse indication.

**Dimensions:** See Catalog Numbers table.

**Construction:** plated ferrules.

#### Ratings:

Volts: — 2750-8300V (See Catalog Numbers table for details)

Amps: — ½-750A

IR: — 40-63kA Sym

— 60-100kA ASYM

— See Catalog Numbers table for details



#### Features and Benefits

- Physically dimensioned for retrofitting in existing hardware
- Open fuse indicator for ease in troubleshooting
- Full range ANSI classification

#### Typical Applications

- Medium Voltage Transformer Primary Protection
- Medium Voltage Feeder Circuit Protection
- Medium Voltage Switches
- Medium Voltage Metal-enclosed Switchgear

#### Catalog Numbers

| Catalog Numbers                  | Amp Rating | Maximum Design Voltage | Construction | Maximum Interrupting Capacity |             | Dimensions - in (mm) |             |
|----------------------------------|------------|------------------------|--------------|-------------------------------|-------------|----------------------|-------------|
|                                  |            |                        |              | Amps (Asym.)                  | Amps (Sym.) | Length               | Diameter    |
| 2400V; E-Rated; Indoor/Enclosure |            |                        |              |                               |             |                      |             |
| JCX-½E                           | 0.5        | 2750                   | Single       | 60,000                        | 40,000      | 9.19 (233.38)        | 2 (50.8)    |
| JCX-1E                           | 1          | 2750                   | Single       | 60,000                        | 40,000      | 9.19 (233.38)        | 2 (50.8)    |
| JCX-2E                           | 2          | 2750                   | Single       | 60,000                        | 40,000      | 9.19 (233.38)        | 2 (50.8)    |
| JCX-3E                           | 3          | 2750                   | Single       | 60,000                        | 40,000      | 9.19 (233.38)        | 2 (50.8)    |
| JCX-5E                           | 5          | 2750                   | Single       | 60,000                        | 40,000      | 9.19 (233.38)        | 2 (50.8)    |
| JCX-7E                           | 7          | 2750                   | Single       | 60,000                        | 40,000      | 9.19 (233.38)        | 2 (50.8)    |
| JCX-10E                          | 10         | 2750                   | Single       | 60,000                        | 40,000      | 9.19 (233.38)        | 2 (50.8)    |
| JCX-15E                          | 15         | 2750                   | Single       | 80,000                        | 50,000      | 9.5 (241.3)          | 2.1 (53.34) |
| JCX-20E                          | 20         | 2750                   | Single       | 80,000                        | 50,000      | 9.5 (241.3)          | 2.1 (53.34) |
| JCX-25E                          | 25         | 2750                   | Single       | 80,000                        | 50,000      | 9.5 (241.3)          | 2.1 (53.34) |
| JCX-30E                          | 30         | 2750                   | Single       | 80,000                        | 50,000      | 10.81 (276.35)       | 3 (76.2)    |
| JCX-40E                          | 40         | 2750                   | Single       | 80,000                        | 50,000      | 10.81 (276.35)       | 3 (76.2)    |
| JCX-50E                          | 50         | 2750                   | Single       | 80,000                        | 50,000      | 10.81 (276.35)       | 3 (76.2)    |
| JCX-65E                          | 65         | 2750                   | Single       | 80,000                        | 50,000      | 10.81 (276.35)       | 3 (76.2)    |
| JCX-80E                          | 80         | 2750                   | Single       | 80,000                        | 50,000      | 10.81 (276.35)       | 3 (76.2)    |
| JCX-100E                         | 100        | 2750                   | Single       | 80,000                        | 40,000      | 10.81 (276.35)       | 3 (76.2)    |
| JCX-125E                         | 125        | 2750                   | Single       | 80,000                        | 50,000      | 10.81 (276.35)       | 3 (76.2)    |
| JCX-150E                         | 150        | 2750                   | Single       | 80,000                        | 50,000      | 10.81 (276.35)       | 3 (76.2)    |
| JCX-200E                         | 200        | 2750                   | Single       | 80,000                        | 50,000      | 10.81 (276.35)       | 3 (76.2)    |
| JCX-225E                         | 225        | 2750                   | Single       | 80,000                        | 50,000      | 10.81 (276.35)       | 3 (76.2)    |
| JCX-250E/280X                    | 250/280    | 2750                   | Double       | 80,000                        | 50,000      | 10.81 (276.35)       | 3 (76.2)    |
| JCX-300E/325X                    | 300/325    | 2750                   | Double       | 80,000                        | 50,000      | 10.81 (276.35)       | 3 (76.2)    |
| JCX-350X                         | 350        | 2750                   | Double       | 80,000                        | 50,000      | 10.81 (276.35)       | 3 (76.2)    |
| JCX-400X                         | 400        | 2750                   | Double       | 80,000                        | 50,000      | 10.81 (276.35)       | 3 (76.2)    |
| JCX-450X                         | 450        | 2750                   | Double       | 80,000                        | 50,000      | 10.81 (276.35)       | 3 (76.2)    |
| 5500V; E-Rated; Indoor/Enclosure |            |                        |              |                               |             |                      |             |
| JCY-½E                           | 0.5        | 5500                   | Single       | 60,000                        | 40,000      | 11.19 (284.18)       | 2 (50.8)    |
| JCY-1E                           | 1          | 5500                   | Single       | 60,000                        | 40,000      | 11.19 (284.18)       | 2 (50.8)    |
| JCY-2E                           | 2          | 5500                   | Single       | 60,000                        | 40,000      | 11.19 (284.18)       | 2 (50.8)    |
| JCY-3E                           | 3          | 5500                   | Single       | 60,000                        | 40,000      | 11.19 (284.18)       | 2 (50.8)    |
| JCY-5E                           | 5          | 5500                   | Single       | 60,000                        | 40,000      | 11.19 (284.18)       | 2 (50.8)    |
| JCY-7E                           | 7          | 5500                   | Single       | 60,000                        | 40,000      | 11.19 (284.18)       | 2 (50.8)    |
| JCY-10E                          | 10         | 5500                   | Single       | 60,000                        | 40,000      | 11.19 (284.18)       | 2 (50.8)    |
| JCY-15E                          | 15         | 5500                   | Single       | 60,000                        | 40,000      | 11.19 (284.18)       | 2 (50.8)    |
| JCY-20E                          | 20         | 5500                   | Single       | 60,000                        | 40,000      | 11.19 (284.18)       | 2 (50.8)    |
| JCY-25E                          | 25         | 5500                   | Single       | 60,000                        | 40,000      | 11.19 (284.18)       | 2 (50.8)    |

Contact Cooper Bussmann for the latest product information on E-Rated fuses for transformer and feeder protection. Recommended fuseclips: see page 91 - 1A0065, 9078A67G04, A3354730

## E-rated Fuses for Transformer & Feeders

Medium  
Voltage  
Fuses

### Catalog Numbers: E-Rated; Indoor/Enclosure

| Catalog Numbers                  | Amp Rating | Maximum Design Voltage | Construction | Maximum Interrupting Capacity |              | Dimensions - in (mm) |             |
|----------------------------------|------------|------------------------|--------------|-------------------------------|--------------|----------------------|-------------|
|                                  |            |                        |              | Amps. (Asym.)                 | Amps. (Sym.) | Length               | Diameter    |
| 5500V; E-Rated; Indoor/Enclosure |            |                        |              |                               |              |                      |             |
| JCU-10E                          | 10         | 5500                   | Single       | 80,000                        | 50,000       | 17.81 (452.4)        | 3 (76.2)    |
| JCU-15E                          | 15         | 5500                   | Single       | 80,000                        | 50,000       | 12.88 (327.0)        | 2.1 (53.34) |
| JCU-20E                          | 20         | 5500                   | Single       | 80,000                        | 50,000       | 12.88 (327.0)        | 2.1 (53.34) |
| JCU-25E                          | 25         | 5500                   | Single       | 80,000                        | 50,000       | 12.88 (327.0)        | 2.1 (53.34) |
| JCU-30E                          | 30         | 5500                   | Single       | 100,000                       | 63,000       | 17.88 (454.15)       | 3 (76.20)   |
| JCU-40E                          | 40         | 5500                   | Single       | 100,000                       | 63,000       | 17.88 (454.15)       | 3 (76.20)   |
| JCU-50E                          | 50         | 5500                   | Single       | 100,000                       | 63,000       | 17.88 (454.15)       | 3 (76.20)   |
| JCU-65E                          | 60         | 5500                   | Single       | 100,000                       | 63,000       | 17.88 (454.15)       | 3 (76.20)   |
| JCU-80E                          | 80         | 5500                   | Single       | 100,000                       | 63,000       | 17.88 (454.15)       | 3 (76.20)   |
| JCU-100E                         | 100        | 5500                   | Single       | 100,000                       | 63,000       | 17.88 (454.15)       | 3 (76.20)   |
| JCU-125E                         | 125        | 5500                   | Single       | 100,000                       | 63,000       | 17.88 (454.15)       | 3 (76.20)   |
| JCU-150E                         | 150        | 5500                   | Single       | 100,000                       | 63,000       | 17.88 (454.15)       | 3 (76.20)   |
| JCU-175E                         | 175        | 5500                   | Single       | 100,000                       | 63,000       | 17.88 (454.15)       | 3 (76.20)   |
| JCU-200E                         | 200        | 5500                   | Single       | 100,000                       | 63,000       | 17.88 (454.15)       | 3 (76.20)   |
| JCU-250E                         | 250        | 5500                   | Single       | 100,000                       | 63,000       | 17.88 (454.15)       | 3 (76.20)   |
| JCU-300E                         | 300        | 5500                   | Double       | 100,000                       | 63,000       | 17.88 (454.15)       | 3 (76.20)   |
| JCU-350E                         | 350        | 5500                   | Double       | 100,000                       | 63,000       | 17.88 (454.15)       | 3 (76.20)   |
| JCU-400E                         | 400        | 5500                   | Double       | 100,000                       | 63,000       | 17.88 (454.15)       | 3 (76.20)   |
| JCU-450E                         | 450        | 5500                   | Double       | 100,000                       | 63,000       | 17.88 (454.15)       | 3 (76.20)   |
| JCU-600E                         | 600        | 5500                   | *            | 80,000                        | 50,000       | 28.81 (731.77)       | 4 (101.60)  |
| JCU-750E                         | 750        | 5500                   | *            | 80,000                        | 50,000       | 28.81 (731.77)       | 4 (101.60)  |
| 8300V; E-Rated; Indoor/Enclosure |            |                        |              |                               |              |                      |             |
| JCZ-15E                          | 15         | 8300                   | Single       | 80,000                        | 50,000       | 15.51 (393.95)       | 2.1 (53.34) |
| JCZ-20E                          | 20         | 8300                   | Single       | 80,000                        | 50,000       | 15.51 (393.95)       | 2.1 (53.34) |
| JCZ-25E                          | 25         | 8300                   | Single       | 80,000                        | 50,000       | 15.51 (393.95)       | 2.1 (53.34) |
| JCZ-30E                          | 30         | 8300                   | Single       | 80,000                        | 50,000       | 17.88 (454.15)       | 3 (76.2)    |
| JCZ-40E                          | 40         | 8300                   | Single       | 80,000                        | 50,000       | 17.88 (454.15)       | 3 (76.2)    |
| JCZ-50E                          | 50         | 8300                   | Single       | 80,000                        | 50,000       | 17.88 (454.15)       | 3 (76.2)    |
| JCZ-65E                          | 65         | 8300                   | Single       | 80,000                        | 50,000       | 17.88 (454.15)       | 3 (76.2)    |
| JCZ-80E                          | 80         | 8300                   | Single       | 80,000                        | 50,000       | 17.88 (454.15)       | 3 (76.2)    |
| JCZ-100E                         | 100        | 8300                   | Single       | 80,000                        | 50,000       | 17.88 (454.15)       | 3 (76.2)    |
| JCZ-125E                         | 125        | 8300                   | Single       | 80,000                        | 50,000       | 17.88 (454.15)       | 3 (76.2)    |
| JCZ-150E                         | 150        | 8300                   | Single       | 80,000                        | 50,000       | 17.88 (454.15)       | 3 (76.2)    |
| JCZ-200E                         | 200        | 8300                   | Double       | 80,000                        | 50,000       | 17.88 (454.15)       | 3 (76.2)    |
| JDZ-20E                          | 20         | 8300                   | Single       | 80,000                        | 50,000       | 15.88 (403.2)        | 3 (76.2)    |
| JDZ-25E                          | 25         | 8300                   | Single       | 80,000                        | 50,000       | 15.88 (403.2)        | 3 (76.2)    |
| JDZ-30E                          | 30         | 8300                   | Single       | 80,000                        | 50,000       | 15.88 (403.2)        | 3 (76.2)    |
| JDZ-40E                          | 40         | 8300                   | Single       | 80,000                        | 50,000       | 15.88 (403.2)        | 3 (76.2)    |
| JDZ-50E                          | 50         | 8300                   | Single       | 80,000                        | 50,000       | 15.88 (403.2)        | 3 (76.2)    |
| JDZ-65E                          | 65         | 8300                   | Single       | 80,000                        | 50,000       | 15.88 (403.2)        | 3 (76.2)    |
| JDZ-80E                          | 80         | 8300                   | Double       | 80,000                        | 50,000       | 15.88 (403.2)        | 3 (76.2)    |
| JDZ-100E                         | 100        | 8300                   | Double       | 80,000                        | 50,000       | 15.88 (403.2)        | 3 (76.2)    |
| JDZ-125E                         | 125        | 8300                   | Double       | 80,000                        | 50,000       | 15.88 (403.2)        | 3 (76.2)    |

Recommended fuseclips: see page 91 - 1A0065, 9078A67G04, A3354730

#### General Notes:

1. All fuses are fitted with a striker pin which can be used for indication or tripping purposes.
2. The fuses are suitable for use either indoors or outdoors.
3. These fuses are interchangeable with corresponding fuses produced by most other leading North American manufacturers.

Contact Cooper Bussmann for the latest product information on E-Rated fuses for transformer and feeder protection.

\*Bolt on mounting

## E-rated Fuses: CL-14 & Bolt-In

### ECL055

#### Specifications

**Description:** E-rated medium voltage, current-limiting fuses for transformer and feeder protection.

**Construction:** Filament wound, glass epoxy fuse tube, with silica filler, and silver-plated copper terminals and endcaps containing a silver element in a double concentric helical configuration.

#### Ratings:

Volts: — 5.5kV

Amps: — 10-900A

IR: — 63kA Sym. Max

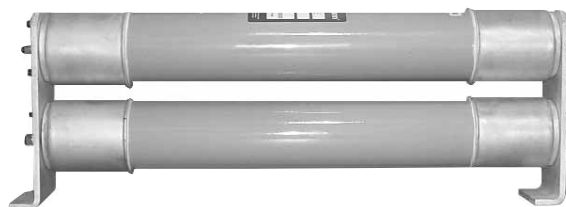
**Agency Information:** Meets E requirements per ANSI C37.46, Meets General Purpose requirements per ANSI C37.40.

#### Features and Benefits

- Clip-lock and bolt-in style available in double and triple barrel fuse designs for application flexibility
- The filament wound, glass epoxy fuse tube provides UV and moisture protection, making these medium voltage fuses suitable for both indoor and outdoor applications
- Open fuse indication (indicator travel distance is 16mm) easily integrates into automation schemes
- 50/60Hz operating frequency make these fuses applicable world-wide

#### Typical Applications

- 5.0kV Transformer Primary Protection
- 5.0kV Feeder Circuit Protection
- 5.0kV Voltage Switches
- 5.0kV Metal-enclosed Switchgear



#### Catalog Numbers

| Catalog Numbers | Amp Rating | Voltage | IR Max Sym. | # of Barrels | Style     |
|-----------------|------------|---------|-------------|--------------|-----------|
| ECL055-10E      | 10         | 5.5kV   | 63kA        | 1            | Clip-Lock |
| ECL055-15E      | 15         | —       |             |              |           |
| ECL055-20E      | 20         | —       |             |              |           |
| ECL055-25E      | 25         | —       |             |              |           |
| ECL055-30E      | 30         | —       |             |              |           |
| ECL055-40E      | 40         | —       |             |              |           |
| ECL055-50E      | 50         | —       |             |              |           |
| ECL055-65E      | 65         | —       |             |              |           |
| ECL055-80E      | 80         | —       |             |              |           |
| ECL055-100E     | 100        | —       |             |              |           |
| ECL055-125E     | 125        | —       |             |              |           |
| ECL055-150E     | 150        | —       |             |              |           |
| ECL055-200E     | 200        | —       |             | 2            | Clip-Lock |
| ECL055-250E     | 250        | —       |             |              |           |
| ECL055-300E     | 300        | —       |             |              |           |
| ECL055-400E     | 400        | —       |             |              |           |
| ECL055-450E     | 450        | —       |             |              |           |
| ECL055-500E     | 500        | —       |             | 3            | Bolt-In   |
| ECL055-600E     | 600        | —       |             |              |           |
| ECL055-750E     | 750        | —       |             |              |           |
| ECL055-900E     | 900        | —       |             |              |           |

#### Catalog Number Construction (Example)

| Catalog Number | Voltage Rating | Amp Rating |
|----------------|----------------|------------|
| ECL            | 055            | 500E       |
|                | 055 = 5.5 kV   |            |

#### Catalog Number Cross Reference

| Cooper Bussmann Catalog Numbers | Ferraz-Shawmut New Catalog # | Ferraz-Shawmut Old Catalog # |
|---------------------------------|------------------------------|------------------------------|
| ECL055-10E                      | A055C1DORO-10E               | 225-007-937                  |
| ECL055-15E                      | A055C1DORO-15E               | 225-007-938                  |
| ECL055-20E                      | A055C1DORO-20E               | 225-007-939                  |
| ECL055-25E                      | A055C1DORO-25E               | 225-007-940                  |
| ECL055-30E                      | A055C1DORO-30E               | 225-007-941                  |
| ECL055-40E                      | A055C1DORO-40E               | 225-007-942                  |
| ECL055-50E                      | A055C1DORO-50E               | 225-007-943                  |
| ECL055-65E                      | A055C1DORO-65E               | 225-007-944                  |
| ECL055-80E                      | A055C1DORO-80E               | 225-007-945                  |
| ECL055-100E                     | A055C1DORO-100E              | 225-007-946                  |
| ECL055-125E                     | A055C1DORO-125E              | 225-007-947                  |
| ECL055-150E                     | A055C1DORO-150E              | 225-007-948                  |
| ECL055-200E                     | A055C1DORO-200E              | 225-007-949                  |
| ECL055-250E                     | A055C1DORO-250E              | 225-007-950                  |
| ECL055-300E                     | A055C1DORO-300E              | 225-007-951                  |
| ECL055-400E                     | A055C1DORO-400E              | 225-007-952                  |
| ECL055-450E                     | A055C2DORO-450E              | 225-007-953                  |
| ECL055-500E                     | A055C2DORO-500E              | 225-007-954                  |
| ECL055-600E                     | A055C2DORO-600E              | 225-007-955                  |
| ECL055-750E                     | A055B3DORO-750E              | A055X750E-4                  |
| ECL055-900E                     | A055B3DORO-900E              | A055X900E-4                  |

Data Sheet: 9002

## E-rated Fuses: CL-14

### ECL155

#### Specifications

**Description:** E-rated medium voltage, current-limiting fuses for transformer and feeder protection.

**Construction:** Filament wound, glass epoxy fuse tube, with silica filler, and silver-plated copper terminals and endcaps containing a silver element in a double concentric helical configuration.

#### Ratings:

Volts: — 15.5kV

Amps: — 10-300A

IR: — 63kA Sym. (10-200A)

— 50kA Sym. (250-300A)

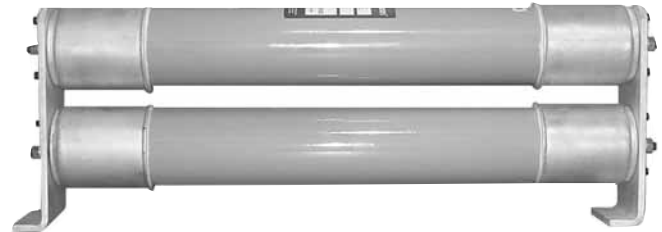
**Agency Information:** Meets E requirements per ANSI C37.46, Meets General Purpose requirements per ANSI C37.40.

#### Features and Benefits

- Clip-lock double barrel fuse design assures positive installation
- The filament wound, glass epoxy fuse tube provides UV and moisture protection, making these medium voltage fuses suitable for both indoor and outdoor applications
- Open fuse indication (indicator travel distance is 16mm) easily integrates into automation schemes
- 50/60 Hz operating frequency make these fuses applicable world-wide

#### Typical Applications

- 15.0kV Transformer Primary Protection
- 15.0kV Feeder Circuit Protection
- 15.0kV Voltage Switches
- 15.0kV Metal-enclosed Switchgear



#### Catalog Numbers

| Catalog Numbers | Amp Rating | Voltage | IR Voltage Max Sym. | # of Barrels | Style     |
|-----------------|------------|---------|---------------------|--------------|-----------|
| ECL155-10E      | 10         | 15.5kV  | 63kA                | 1            | Clip-Lock |
| ECL155-15E      | 15         |         |                     |              |           |
| ECL155-20E      | 20         |         |                     |              |           |
| ECL155-25E      | 25         |         |                     |              |           |
| ECL155-30E      | 30         |         |                     |              |           |
| ECL155-40E      | 40         |         |                     |              |           |
| ECL155-50E      | 50         |         |                     |              |           |
| ECL155-65E      | 65         |         |                     |              |           |
| ECL155-80E      | 80         |         |                     |              |           |
| ECL155-100E     | 100        |         |                     |              |           |
| ECL155-125E     | 125        |         |                     |              |           |
| ECL155-150E     | 150        |         |                     |              |           |
| ECL155-200E     | 200        |         |                     |              |           |
| ECL155-250E     | 250        |         |                     |              |           |
| ECL155-300E     | 300        |         |                     |              |           |
|                 |            |         | 50kA                | 2            |           |

#### Catalog Number Construction (Example)

| Catalog Number | Voltage Rating | Amp Rating |
|----------------|----------------|------------|
| ECL            | 155            | 300E       |
|                | 155 = 15.5 kV  |            |

#### Catalog Number Cross Reference

| Cooper Bussmann Catalog Numbers | Ferraz-Shawmut New Catalog # | Ferraz-Shawmut Old Catalog # |
|---------------------------------|------------------------------|------------------------------|
| ECL155-10E                      | A155C1DORO-10E               | 225-007-967                  |
| ECL155-15E                      | A155C1DORO-15E               | 225-007-968                  |
| ECL155-20E                      | A155C1DORO-20E               | 225-007-969                  |
| ECL155-25E                      | A155C1DORO-25E               | 225-007-970                  |
| ECL155-30E                      | A155C1DORO-30E               | 225-007-971                  |
| ECL155-40E                      | A155C1DORO-40E               | 225-007-972                  |
| ECL155-50E                      | A155C1DORO-50E               | 225-007-973                  |
| ECL155-65E                      | A155C1DORO-65E               | 225-007-974                  |
| ECL155-80E                      | A155C1DORO-80E               | 225-007-975                  |
| ECL155-100E                     | A155C1DORO-100E              | 225-007-976                  |
| ECL155-125E                     | A155C2DORO-125E              | 225-007-977                  |
| ECL155-150E                     | A155C3DORO-150E              | 225-007-978                  |
| ECL155-200E                     | A155C3DORO-200E              | 225-007-979                  |
| ECL155-250E                     | A155C3DORO-250E              | 225-007-980                  |
| ECL155-300E                     | A155C3DORO-300E              | 225-007-981                  |

## E-rated Fuses for Potential & Small Power Transformers

### JCD, JCW, JCQ, JCI & JCT

#### Specifications

**Description:** Indicating and non-indicating E-rated medium voltage, current-limiting fuses for potential and small power transformers.

**Dimensions:** See Catalog Numbers table.

**Construction:** Plated ferrules.

#### Ratings:

Volts: — 2.4-15.5kV (See Catalog Numbers table for details)

Amps: — ½-10A

IR: — 25-80kA Sym

— 40-130kA ASYM

— See Catalog Numbers table for details



#### Features and Benefits

- Sized for retrofitting in existing hardware
- Space saving size

#### Typical Applications

- Primary protection of medium voltage potential transformers
- Primary protection of small medium voltage service transformers
- Primary protection of small medium voltage control transformers

#### Catalog Numbers

| Catalog Numbers | Amp Rating | Maximum Design Voltage | IR RMS Sym. | Dimensions - in (mm) |          |
|-----------------|------------|------------------------|-------------|----------------------|----------|
|                 |            |                        |             | Length               | Diameter |

#### 2400V; E-Rated Fuse; Non-Indicating

|        |     |        |      |            |              |
|--------|-----|--------|------|------------|--------------|
| JCD-½E | 0.5 | 2.75kV | 63kA | 4.50 (114) | 0.80 (20.32) |
| JCD-1E | 1   | 2.75kV | 40kA | 4.50 (114) | 0.80 (20.32) |
| JCD-2E | 2   | 2.75kV | 40kA | 4.50 (114) | 0.80 (20.32) |
| JCD-5E | 5   | 2.75kV | 25kA | 4.50 (114) | 0.80 (20.32) |

#### 2450/5500V; E-Rated Fuse; Non-Indicating

|        |     |            |      |                |               |
|--------|-----|------------|------|----------------|---------------|
| JCW-½E | 0.5 | 2.75/5.5kV | 40kA | 7.312 (185.72) | 1.563 (39.70) |
| JCW-1E | 1   | 2.75/5.5kV | 40kA | 7.312 (185.72) | 1.563 (39.70) |
| JCW-2E | 2   | 2.75/5.5kV | 40kA | 7.312 (185.72) | 1.563 (39.70) |
| JCW-3E | 3   | 2.75/5.5kV | 40kA | 7.312 (185.72) | 1.563 (39.70) |
| JCW-5E | 5   | 2.75/5.5kV | 40kA | 7.312 (185.72) | 1.563 (39.70) |

#### 5500V; E-Rated Fuse; Indicating

|         |     |       |      |             |             |
|---------|-----|-------|------|-------------|-------------|
| JCQ-½E  | 0.5 | 5.5kV | 80kA | 9.5 (241.3) | 1.6 (40.64) |
| JCQ-1E  | 1   | 5.5kV | 80kA | 9.5 (241.3) | 1.6 (40.64) |
| JCQ-1½E | 1.5 | 5.5kV | 80kA | 9.5 (241.3) | 1.6 (40.64) |
| JCQ-3E  | 3   | 5.5kV | 80kA | 9.5 (241.3) | 1.6 (40.64) |
| JCQ-5E  | 5   | 5.5kV | 80kA | 9.5 (241.3) | 1.6 (40.64) |
| JCQ-10E | 10  | 5.5kV | 80kA | 9.5 (241.3) | 1.6 (40.64) |

#### 8300V; E-Rated Fuse; Indicating

|         |     |       |      |                |             |
|---------|-----|-------|------|----------------|-------------|
| JCI-½E  | 0.5 | 8.3kA | 80kA | 9.5 (241.3)    | 1.6 (40.64) |
| JCI-3E  | 3   | 8.3kA | 80kA | 12.88 (327.15) | 1.6 (40.64) |
| JCI-5E  | 5   | 8.3kA | 50kA | 12.88 (327.15) | 1.6 (40.64) |
| JCI-10E | 10  | 8.3kA | 50kA | 12.88 (327.15) | 1.6 (40.64) |

#### 15,500V; E-Rated Fuse; Indicating

|         |     |        |      |                |             |
|---------|-----|--------|------|----------------|-------------|
| JCT-½E  | 0.5 | 15.5kV | 80kA | 12.93 (328.42) | 1.6 (40.64) |
| JCT-1E  | 1   | 15.5kV | 80kA | 12.93 (328.42) | 1.6 (40.64) |
| JCT-1½E | 1.5 | 15.5kV | 80kA | 12.93 (328.42) | 1.6 (40.64) |
| JCT-3E  | 3   | 15.5kV | 80kA | 17.5 (444.5)   | 1.6 (40.64) |
| JCT-5E  | 5   | 15.5kV | 80kA | 17.5 (444.5)   | 1.6 (40.64) |
| JCT-10E | 10  | 15.5kV | 80kA | 17.5 (444.5)   | 1.6 (40.64) |

Fuse clip for 1.56 and 1.6 inch diameter fuses - 1A0835.  
Fuse clip for 0.81 inch diameter fuses - 1A1837.

## E-rated Fuses for Potential & Small Power Transformers

### AB, AD, AM and CAV



#### Ratings:

- Volts: — 5.5-38kV
- Amps: — 0.5-15A
- IR: — 40kA-80kA Sym.
- See Catalog Numbers table for details

#### Features and Benefits

- Sized for retrofitting in existing hardware
- Space saving size

#### Typical Applications

- Primary protection of medium voltage potential transformers
- Primary protection of small medium voltage service transformers
- Primary protection of small medium voltage control transformers

Medium Voltage Fuses

#### Specifications

**Description:** Indicating and non-indicating E-rated medium voltage, current-limiting fuses for potential and small power transformers.

**Dimensions:** See Catalog Numbers table.

#### Catalog Numbers

| Catalog Numbers | Amp Rating | Maximum Design Voltage | IR RMS Sym. | Dimensions - in (mm) |             |
|-----------------|------------|------------------------|-------------|----------------------|-------------|
|                 |            |                        |             | Length               | Diameter    |
| 5.5ABWNA0.5E    | 0.5        | 5.5kV                  | 50kA        | 5.6 (142.2)          | 1 (25.4)    |
| 5.5ABWNA1E      | 1          | 5.5kV                  | 50kA        | 5.6 (142.2)          | 1 (25.4)    |
| 5.5ABWNA2E      | 2          | 5.5kV                  | 50kA        | 5.6 (142.2)          | 1 (25.4)    |
| 5.5ABWNA3E      | 3          | 5.5kV                  | 50kA        | 5.6 (142.2)          | 1 (25.4)    |
| 5.5ABWNA5E      | 5          | 5.5kV                  | 50kA        | 5.6 (142.2)          | 1 (25.4)    |
| 5.5AMWNA0.5E    | 0.5        | 5.5kV                  | 50kA        | 5.6 (142.2)          | 0.81 (20.6) |
| 5.5AMWNA1.0E    | 1.5        | 5.5kV                  | 50kA        | 5.6 (142.2)          | 0.81 (20.6) |
| 5.5AMWNA2.0E    | 2.5        | 5.5kV                  | 50kA        | 5.6 (142.2)          | 0.81 (20.6) |
| 5.5AMWNA3.0E    | 3.5        | 5.5kV                  | 50kA        | 5.6 (142.2)          | 0.81 (20.6) |
| 5.5AMWNA4.0E    | 4.5        | 5.5kV                  | 50kA        | 5.6 (142.2)          | 0.81 (20.6) |
| 5.5AMWNA5.0E    | 5.5        | 5.5kV                  | 50kA        | 5.6 (142.2)          | 0.81 (20.6) |
| 5.5CAVH0.5E     | 0.5        | 5.5kV                  | 63kA        | 7.375 (187.3)        | 1.63 (41.4) |
| 5.5CAVH1E       | 1          | 5.5kV                  | 63kA        | 7.375 (187.3)        | 1.63 (41.4) |
| 5.5CAVH2E       | 2          | 5.5kV                  | 63kA        | 7.375 (187.3)        | 1.63 (41.4) |
| 5.5CAV15E       | 15         | 5.5kV                  | 63kA        | 7.375 (187.3)        | 1.63 (41.4) |
| 7.2AMWNA0.5E    | 0.5        | 7.2kV                  | 50kA        | 5.6 (142.2)          | 0.81 (20.6) |
| 7.2AMWNA1.0E    | 1          | 7.2kV                  | 50kA        | 5.6 (142.2)          | 0.81 (20.6) |
| 7.2AMWNA2.0E    | 2          | 7.2kV                  | 50kA        | 5.6 (142.2)          | 0.81 (20.6) |
| 7.2AMWNA3.0E    | 3          | 7.2kV                  | 50kA        | 5.6 (142.2)          | 0.81 (20.6) |
| 7.2AMWNA4.0E    | 4          | 7.2kV                  | 50kA        | 5.6 (142.2)          | 0.81 (20.6) |
| 7.2AMWNA5.0E    | 5          | 7.2kV                  | 50kA        | 5.6 (142.2)          | 0.81 (20.6) |
| 15.5CAV(H)0.5E* | 0.5        | 15.5kV                 | 80kA        | 12.87 (326.9)        | 1.63 (41.4) |
| 15.5CAV(H)1E*   | 1          | 15.5kV                 | 80kA        | 12.87 (326.9)        | 1.63 (41.4) |
| 15.5CAV(H)2E*   | 2          | 15.5kV                 | 80kA        | 12.87 (326.9)        | 1.63 (41.4) |
| 15.5CAV3E       | 3          | 15.5kV                 | 80kA        | 12.87 (326.9)        | 1.63 (41.4) |
| 15.5CAV5E       | 5          | 15.5kV                 | 80kA        | 12.87 (326.9)        | 1.63 (41.4) |
| 15.5CAV7E       | 7          | 15.5kV                 | 80kA        | 12.87 (326.9)        | 1.63 (41.4) |
| 38ADMNA7E       | 7          | 38kV                   | 40kA        | 17.4 (442)           | 2 (50.8)    |
| 38ADMNA10E      | 10         | 38kV                   | 40kA        | 17.4 (442)           | 2 (50.8)    |
| 38CAV(H)0.5E*   | 0.5        | 38KV                   | 40kA        | 17.32 (439.9)        | 1.63 (41.4) |
| 38CAV(H)1E*     | 1          | 38KV                   | 40kA        | 17.32 (439.9)        | 1.63 (41.4) |
| 38CAV(H)2E*     | 2          | 38KV                   | 40kA        | 17.32 (439.9)        | 1.63 (41.4) |
| 38CAV4E         | 4          | 38KV                   | 40kA        | 17.32 (439.9)        | 1.63 (41.4) |

\*Type CAVH fuses are fitted with a striker pin for indication. Omit 'H' for non-indicating fuses.

Fuseclip for 0.8 inch diameter fuses - 1A1837.

Fuseclip for 1 inch diameter fuses - A3354705.

Fuseclip for 1.6 inch diameter fuses - 1A0835.

## R-rated Fuses for Motor Circuit Protection

**JCG, JCH, JCK,  
JCK-A, JCK-B, JCL,  
JCL-A, JCL-B, JCR-A,  
& JCR-B**

### Specifications

**Description:** Indoor/enclosure R-rated medium voltage, current-limiting fuses for motor circuit protection.

**Dimensions:** See Dimensions illustrations.

### Ratings:

Volts: — 2.4-7.2kV (See Catalog Numbers table for details)

Amps: — 25-450A (See Catalog Numbers table for details)

IR: — 50kA Sym

— 80kA ASYM

— See Catalog Numbers table for details



**Agency Information:** UL Recognized: 2540Vac — JCK, JCK-A, 5080Vac — JCL, JCL-A, UL Recognized (Guide #MSSS2, File #E96676).

### Features and Benefits

- Physically dimensioned for retrofitting in existing hardware
- Open fuse indicator for ease in troubleshooting
- Available with optional Cutler Hammer® hookeye for ease of insertion and removal
- Classified as back-up fuses for current-limited protection of medium voltage motor controllers

### Typical Applications

- Medium Voltage Motor Controllers

### Dimensions - mm (in)

**Figure 1**

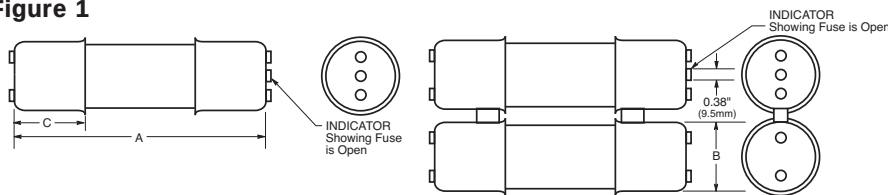


**Figure 2**

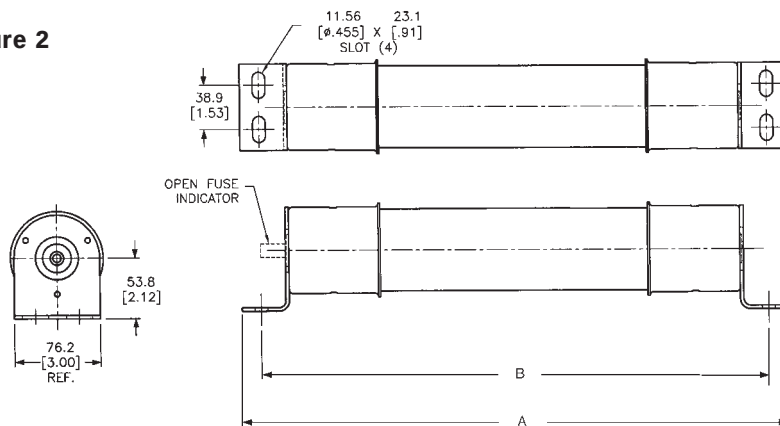
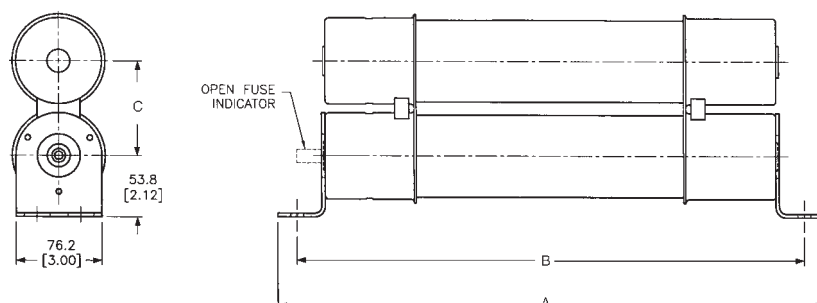


**Figure 3**



## R-rated Fuses for Motor Circuit Protection

### Catalog Numbers: R-Rated; Indoor/Enclosure

| Catalog Numbers      | Amp Ratings | Maximum Design Voltage | Dimensions - in (mm)* |            |            | Construction | Max Int. Cap. Amps (Asym.) | Amps (Sym.) | Min Int. Cap. Amps (Sym.) |
|----------------------|-------------|------------------------|-----------------------|------------|------------|--------------|----------------------------|-------------|---------------------------|
|                      |             |                        | A                     | B          | C          |              |                            |             |                           |
| 2400V (See Figure 1) |             |                        |                       |            |            |              |                            |             |                           |
| JCK-2R               | 70          | 2540                   | 11.24 (285.5)         | 3.0 (76.2) | 3.0 (76.2) | Single       | 80,000                     | 50,000      | 165                       |
| JCK-3R               | 100         | 2540                   | 11.24 (285.5)         | 3.0 (76.2) | 3.0 (76.2) | Single       | 80,000                     | 50,000      | 220                       |
| JCK-4R               | 130         | 2540                   | 11.24 (285.5)         | 3.0 (76.2) | 3.0 (76.2) | Single       | 80,000                     | 50,000      | 320                       |
| JCK-5R               | 150         | 2540                   | 11.24 (285.5)         | 3.0 (76.2) | 3.0 (76.2) | Single       | 80,000                     | 50,000      | 410                       |
| JCK-6R               | 170         | 2540                   | 11.24 (285.5)         | 3.0 (76.2) | 3.0 (76.2) | Single       | 80,000                     | 50,000      | 480                       |
| JCK-9R               | 200         | 2540                   | 11.24 (285.5)         | 3.0 (76.2) | 3.0 (76.2) | Single       | 80,000                     | 50,000      | 720                       |
| JCK-12R              | 230         | 2540                   | 11.24 (285.5)         | 3.0 (76.2) | 3.0 (76.2) | Single       | 80,000                     | 50,000      | 970                       |
| JCK-18R              | 390         | 2540                   | 11.24 (285.5)         | 3.0 (76.2) | 3.0 (76.2) | Double       | 80,000                     | 50,000      | 1,430                     |
| JCK-24R              | 450         | 2540                   | 11.24 (285.5)         | 3.0 (76.2) | 3.0 (76.2) | Double       | 80,000                     | 50,000      | 1,880                     |

### 2400V — With Westinghouse Ampguard Hookeye (See Figure 1)

|           |     |      |               |            |            |        |        |        |       |
|-----------|-----|------|---------------|------------|------------|--------|--------|--------|-------|
| JCK-A-2R  | 70  | 2540 | 11.24 (285.5) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 165   |
| JCK-A-3R  | 100 | 2540 | 11.24 (285.5) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 220   |
| JCK-A-4R  | 130 | 2540 | 11.24 (285.5) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 320   |
| JCK-A-5R  | 150 | 2540 | 11.24 (285.5) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 410   |
| JCK-A-6R  | 170 | 2540 | 11.24 (285.5) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 480   |
| JCK-A-9R  | 200 | 2540 | 11.24 (285.5) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 720   |
| JCK-A-12R | 230 | 2540 | 11.24 (285.5) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 970   |
| JCK-A-18R | 390 | 2540 | 11.24 (285.5) | 3.0 (76.2) | 3.0 (76.2) | Double | 80,000 | 50,000 | 1,430 |
| JCK-A-24R | 450 | 2540 | 11.24 (285.5) | 3.0 (76.2) | 3.0 (76.2) | Double | 80,000 | 50,000 | 1,880 |

### 2400V — Bolt-On (See Figures 2 & 3)

|           |     |      |               |               |             |        |        |        |       |
|-----------|-----|------|---------------|---------------|-------------|--------|--------|--------|-------|
| JCK-B-30  | 25  | 2540 | 14.18 (360.2) | 12.81 (325.4) | -           | Single | 80,000 | 50,000 | 90    |
| JCK-B-2R  | 70  | 2540 | 14.18 (360.2) | 12.81 (325.4) | -           | Single | 80,000 | 50,000 | 170   |
| JCK-B-3R  | 100 | 2540 | 14.18 (360.2) | 12.81 (325.4) | -           | Single | 80,000 | 50,000 | 245   |
| JCK-B-4R  | 130 | 2540 | 14.18 (360.2) | 12.81 (325.4) | -           | Single | 80,000 | 50,000 | 340   |
| JCK-B-5R  | 150 | 2540 | 14.18 (360.2) | 12.81 (325.4) | -           | Single | 80,000 | 50,000 | 430   |
| JCK-B-6R  | 170 | 2540 | 14.18 (360.2) | 12.81 (325.4) | -           | Single | 80,000 | 50,000 | 500   |
| JCK-B-9R  | 200 | 2540 | 14.18 (360.2) | 12.81 (325.4) | -           | Single | 80,000 | 50,000 | 1,000 |
| JCK-B-12R | 230 | 2540 | 14.18 (360.2) | 12.81 (325.4) | -           | Single | 80,000 | 50,000 | 1,250 |
| JCK-B-18R | 390 | 2540 | 14.18 (360.2) | 12.81 (325.4) | 3.56 (90.4) | Double | 80,000 | 50,000 | 1,700 |
| JCK-B-24R | 450 | 2540 | 14.18 (360.2) | 12.81 (325.4) | 3.56 (90.4) | Double | 80,000 | 50,000 | 1,210 |

### 2400V — Hermetically Sealed, For Use with Ampguard Motor Starters (See Figure 1)

|         |     |      |               |            |            |        |        |        |       |
|---------|-----|------|---------------|------------|------------|--------|--------|--------|-------|
| JCH-30  | 25  | 2540 | 10.81 (275.6) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 90    |
| JCH-2R  | 70  | 2540 | 10.81 (275.6) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 170   |
| JCH-3R  | 100 | 2540 | 10.81 (275.6) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 245   |
| JCH-4R  | 130 | 2540 | 10.81 (275.6) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 340   |
| JCH-5R  | 150 | 2540 | 10.81 (275.6) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 430   |
| JCH-6R  | 170 | 2540 | 10.81 (275.6) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 500   |
| JCH-9R  | 200 | 2540 | 10.81 (275.6) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 1,000 |
| JCH-12R | 230 | 2540 | 10.81 (275.6) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 1,250 |
| JCH-18R | 390 | 2540 | 10.81 (275.6) | 3.0 (76.2) | 3.0 (76.2) | Double | 80,000 | 50,000 | 1,700 |
| JCH-24R | 450 | 2540 | 10.81 (275.6) | 3.0 (76.2) | 3.0 (76.2) | Double | 80,000 | 50,000 | 2,100 |

### 4800V (See Figure 1)

|         |     |      |               |            |            |        |        |        |       |
|---------|-----|------|---------------|------------|------------|--------|--------|--------|-------|
| JCL-2R  | 70  | 5080 | 15.76 (400.3) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 165   |
| JCL-3R  | 100 | 5080 | 15.76 (400.3) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 220   |
| JCL-4R  | 130 | 5080 | 15.76 (400.3) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 320   |
| JCL-5R  | 150 | 5080 | 15.76 (400.3) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 410   |
| JCL-6R  | 170 | 5080 | 15.76 (400.3) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 480   |
| JCL-9R  | 200 | 5080 | 15.76 (400.3) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 720   |
| JCL-12R | 230 | 5080 | 15.76 (400.3) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 970   |
| JCL-18R | 390 | 5080 | 15.76 (400.3) | 3.0 (76.2) | 3.0 (76.2) | Double | 80,000 | 50,000 | 1,430 |
| JCL-24R | 450 | 5080 | 15.76 (400.3) | 3.0 (76.2) | 3.0 (76.2) | Double | 80,000 | 50,000 | 1,880 |

\* See previous page Figure 2 for single construction and Figure 3 for double construction information.

Recommended fuseclips: see page 91 - 1A0065, A3354730, 9078A67G04.

## R-rated Fuses for Motor Circuit Protection

### Catalog Numbers: R-Rated; Indoor/Enclosure

| Catalog Numbers                                           | Amp Ratings | Maximum Design Voltage | Dimensions - in (mm) |            |            | Construction | Max Int. Cap. Amps (Asym.) | Amps (Sym.) | Min Int. Cap. Amps (Sym.) |
|-----------------------------------------------------------|-------------|------------------------|----------------------|------------|------------|--------------|----------------------------|-------------|---------------------------|
|                                                           |             |                        | A                    | B          | C          |              |                            |             |                           |
| 4800V — With Westinghouse Ampguard Hookeye (See Figure 1) |             |                        |                      |            |            |              |                            |             |                           |
| JCL-A-2R                                                  | 70          | 5080                   | 15.76 (400.3)        | 3.0 (76.2) | 3.0 (76.2) | Single       | 80,000                     | 50,000      | 165                       |
| JCL-A-3R                                                  | 100         | 5080                   | 15.76 (400.3)        | 3.0 (76.2) | 3.0 (76.2) | Single       | 80,000                     | 50,000      | 220                       |
| JCL-A-4R                                                  | 130         | 5080                   | 15.76 (400.3)        | 3.0 (76.2) | 3.0 (76.2) | Single       | 80,000                     | 50,000      | 320                       |
| JCL-A-5R                                                  | 150         | 5080                   | 15.76 (400.3)        | 3.0 (76.2) | 3.0 (76.2) | Single       | 80,000                     | 50,000      | 410                       |
| JCL-A-6R                                                  | 170         | 5080                   | 15.76 (400.3)        | 3.0 (76.2) | 3.0 (76.2) | Single       | 80,000                     | 50,000      | 480                       |
| JCL-A-9R                                                  | 200         | 5080                   | 15.76 (400.3)        | 3.0 (76.2) | 3.0 (76.2) | Single       | 80,000                     | 50,000      | 720                       |
| JCL-A-12R                                                 | 230         | 5080                   | 15.76 (400.3)        | 3.0 (76.2) | 3.0 (76.2) | Single       | 80,000                     | 50,000      | 970                       |
| JCL-A-18R                                                 | 390         | 5080                   | 15.76 (400.3)        | 3.0 (76.2) | 3.0 (76.2) | Double       | 80,000                     | 50,000      | 1,430                     |
| JCL-A-24R                                                 | 450         | 5080                   | 15.76 (400.3)        | 3.0 (76.2) | 3.0 (76.2) | Double       | 80,000                     | 50,000      | 1,880                     |

### 4800V — Bolt-On (See Figures 2 & 3)

|           |     |      |               |               |             |        |        |        |       |
|-----------|-----|------|---------------|---------------|-------------|--------|--------|--------|-------|
| JCL-B-30  | 30  | 5080 | 19.25 (488.9) | 17.88 (454.1) | -           | Single | 80,000 | 50,000 | 95    |
| JCL-B-2R  | 70  | 5080 | 19.25 (488.9) | 17.88 (454.1) | -           | Single | 80,000 | 50,000 | 180   |
| JCL-B-3R  | 100 | 5080 | 19.25 (488.9) | 17.88 (454.1) | -           | Single | 80,000 | 50,000 | 270   |
| JCL-B-4R  | 130 | 5080 | 19.25 (488.9) | 17.88 (454.1) | -           | Single | 80,000 | 50,000 | 350   |
| JCL-B-5R  | 150 | 5080 | 19.25 (488.9) | 17.88 (454.1) | -           | Single | 80,000 | 50,000 | 450   |
| JCL-B-6R  | 170 | 5080 | 19.25 (488.9) | 17.88 (454.1) | -           | Single | 80,000 | 50,000 | 540   |
| JCL-B-9R  | 200 | 5080 | 19.25 (488.9) | 17.88 (454.1) | -           | Single | 80,000 | 50,000 | 700   |
| JCL-B-12R | 230 | 5080 | 19.25 (488.9) | 17.88 (454.1) | -           | Single | 80,000 | 50,000 | 1,000 |
| JCL-B-18R | 390 | 5080 | 19.25 (488.9) | 17.88 (454.1) | 3.31 (84.1) | Double | 80,000 | 50,000 | 1,450 |
| JCL-B-24R | 450 | 5080 | 19.25 (488.9) | 17.88 (454.1) | 3.31 (84.1) | Double | 80,000 | 50,000 | 2,000 |

### 4800V — Hermetically Sealed, For Use with Ampguard Motor Starters (See Figure 1)

|           |     |      |               |            |            |        |        |        |       |
|-----------|-----|------|---------------|------------|------------|--------|--------|--------|-------|
| JCG-30    | 30  | 5080 | 15.91 (404.1) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 95    |
| JCG-2R    | 70  | 5080 | 15.91 (404.1) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 180   |
| JCG-3R    | 100 | 5080 | 15.91 (404.1) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 270   |
| JCG-4R    | 130 | 5080 | 15.91 (404.1) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 350   |
| JCG-5R    | 150 | 5080 | 15.91 (404.1) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 450   |
| JCG-6R    | 170 | 5080 | 15.91 (404.1) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 540   |
| JCG-9R    | 200 | 5080 | 15.91 (404.1) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 700   |
| JCG-12R   | 230 | 5080 | 15.91 (404.1) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 1,000 |
| JCG-A-18R | 390 | 5080 | 15.91 (404.1) | 3.0 (76.2) | 3.0 (76.2) | Double | 80,000 | 50,000 | 1,450 |
| JCG-A-24R | 450 | 5080 | 15.91 (404.1) | 3.0 (76.2) | 3.0 (76.2) | Double | 80,000 | 50,000 | 2,000 |

### 7200V — With Ampguard Hookeye (See Figure 1)

|           |     |      |               |            |            |        |        |        |       |
|-----------|-----|------|---------------|------------|------------|--------|--------|--------|-------|
| JCR-A-2R  | 70  | 8300 | 15.85 (402.6) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 160   |
| JCR-A-3R  | 100 | 8300 | 15.85 (402.6) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 250   |
| JCR-A-4R  | 130 | 8300 | 15.85 (402.6) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 325   |
| JCR-A-5R  | 150 | 8300 | 15.85 (402.6) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 390   |
| JCR-A-6R  | 170 | 8300 | 15.85 (402.6) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 500   |
| JCR-A-9R  | 200 | 7200 | 15.85 (402.6) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 750   |
| JCR-A-12R | 230 | 7200 | 15.85 (402.6) | 3.0 (76.2) | 3.0 (76.2) | Single | 80,000 | 50,000 | 1,000 |
| JCR-A-18R | 390 | 7200 | 15.85 (402.6) | 3.0 (76.2) | 3.0 (76.2) | Double | 80,000 | 50,000 | 1,450 |
| JCR-A-24R | 450 | 7200 | 15.85 (402.6) | 3.0 (76.2) | 3.0 (76.2) | Double | 80,000 | 50,000 | 2,500 |

### 7200V — Bolt-On (See Figures 2 & 3)

|           |     |      |               |               |             |        |        |        |       |
|-----------|-----|------|---------------|---------------|-------------|--------|--------|--------|-------|
| JCR-B-2R  | 70  | 8300 | 19.25 (488.9) | 17.88 (454.1) | -           | Single | 80,000 | 50,000 | 160   |
| JCR-B-3R  | 100 | 8300 | 19.25 (488.9) | 17.88 (454.1) | -           | Single | 80,000 | 50,000 | 250   |
| JCR-B-4R  | 130 | 8300 | 19.25 (488.9) | 17.88 (454.1) | -           | Single | 80,000 | 50,000 | 325   |
| JCR-B-5R  | 150 | 8300 | 19.25 (488.9) | 17.88 (454.1) | -           | Single | 80,000 | 50,000 | 390   |
| JCR-B-6R  | 170 | 8300 | 19.25 (488.9) | 17.88 (454.1) | -           | Single | 80,000 | 50,000 | 500   |
| JCR-B-9R  | 200 | 7200 | 19.25 (488.9) | 17.88 (454.1) | -           | Single | 80,000 | 50,000 | 750   |
| JCR-B-12R | 230 | 7200 | 19.25 (488.9) | 17.88 (454.1) | -           | Single | 80,000 | 50,000 | 1,000 |
| JCR-B-18R | 390 | 7200 | 19.25 (488.9) | 17.88 (454.1) | 3.31 (84.1) | Double | 80,000 | 50,000 | 1,450 |
| JCR-B-24R | 450 | 7200 | 19.25 (488.9) | 17.88 (454.1) | 3.31 (84.1) | Double | 80,000 | 50,000 | 2,500 |

Recommended fuseclips: see page 91 - 1A0065, A3354730, 9078A67G04.

## British Standard Dimensioned IEC Fuses for Motor Circuit Protection

The Cooper Bussmann range of motor fuses are designed to meet the specific requirements necessary for motor protection. During the starting cycle of direct on-line motors, the fuse elements will reach a considerably higher temperature than during normal operation; (this is due to the high amount of current the motor will draw as it starts, typically, six times its normal load current value). This results in expansion and contraction of the fuse elements and could cause premature operation of the fuse.

Cooper Bussmann motor fuses encompass an advanced design to minimize this effect. This therefore, negates the need to over specify the fuse rating due to high values of motor starting current.

Cooper Bussmann motor fuses operate extremely quickly under heavy fault currents, resulting from the time / current characteristic. Low power dissipation ensures low temperature rise, important in multi-tier starters for example. Switching (arc), voltages are lower than permitted values, therefore, 5.5kV fuses are also suitable for 4.8kV and 2.4kV circuits.



Medium Voltage Fuses

**Table of Ratings**

| Basic Cat. Number | Volts | Breaking Capacity | Amp Ratings                             | Dimensions - in (mm) |            | Dimensional Standard                              |
|-------------------|-------|-------------------|-----------------------------------------|----------------------|------------|---------------------------------------------------|
|                   |       |                   |                                         | Length               | Diameter   |                                                   |
| 3.6WJON6          | 3.6kV | 50kA              | 5, 6.3, 10, 16, 20, 25, 31.5, 40, 50    | 7.56 (192)           | 1.4 (35.6) | BS 2692 (TA1) Interchangeable with GEC type K2 PA |
| 3.6WDOH6          | 3.6kV | 50kA              | 50, 63, 80, 100, 125                    | 7.56 (192)           | 2 (50.8)   | BS 2692 (TA1) or DIN 43625                        |
| 3.6WFOH6          | 3.6kV | 50kA              | 160, 200                                | 7.56 (192)           | 3 (76.2)   | BS 2692 (TA1) or DIN 43625                        |
| 3.6WDLSJ          | 3.6kV | 50kA              | 50, 63, 80, 100, 125                    | 11.5 (292.1)         | 2 (50.8)   | DIN 43625                                         |
| 3.6WFLSJ          | 3.6kV | 50kA              | 160, 200                                | 11.5 (292.1)         | 3 (76.2)   | DIN 43625                                         |
| 3.6WDFHO          | 3.6kV | 50kA              | 50, 63, 80, 100, 125                    | 10 (254)             | 2 (51)     | BS 2692 (TA2)                                     |
| 3.6WFFHO          | 3.6kV | 50kA              | 160, 200                                | 10 (254)             | 3 (76.2)   | BS 2692 (TA2)                                     |
| 3.6WKFHO          | 3.6kV | 50kA              | 250, 315, 355, 400                      | 10 (254)             | 3 (76.2)   | BS 2692 (TA2)                                     |
| 5.5VFNHA          | 5.5kV | 60kA              | 2R-6R                                   | 15.86 (402.8)        | 3 (76.2)   | ANSI R-rated                                      |
| 5.5VKNHA          | 5.5kV | 60kA              | 9R-24R                                  | 15.86 (402.8)        | 3 (76.2)   | ANSI R-rated                                      |
| 7.2WFNHO          | 7.2kV | 40kA              | 25, 31.5, 40, 50, 63, 80, 100, 125, 160 | 15.86 (402.8)        | 3 (76.2)   | BS 2692 (TA4)                                     |
| 7.2WKNHO          | 7.2kV | 40kA              | 200, 224, 250, 315                      | 15.86 (402.8)        | 3 (76.2)   | BS 2692 (TA4)                                     |
| 7.2WFMSJ          | 7.2kV | 63kA              | 25, 31.5, 40, 50, 63, 80, 125, 160      | 17.40 (442)          | 3 (76.2)   | DIN 43625                                         |
| 7.2WKMSJ          | 7.2kV | 63kA              | 200, 224, 250, 315, 355                 | 17.40 (442)          | 3 (76.2)   | DIN 43625                                         |

### Catalog Number Build-A-Code

|     |                      |      |
|-----|----------------------|------|
| kV  | Basic Catalog Number | Amps |
| --- | -----                | ---  |

## DIN Dimensioned IEC Fuses for Transformer Protection

### DIN Dimension Fuses

To Spec. DIN 43625



### Specifications

**Catalog Symbol:** See Basic Catalog Numbers table.

**Description:** DIN dimension fuses to Specification DIN 43625 covering current-limiting fuses with performance in compliance with IEC 60282-1. These are in accordance with the R10 and, in some cases, the R20 series of preferred numbers.

**Dimensions:** See Catalog Numbers table.

Volts: — See voltage associated with the Basic Catalog Numbers in the table.

Amps: — See amp rating associated with the Basic Catalog Numbers in the table.

IR: — See IR associated with the Basic Catalog Numbers in the table.

**Agency Information:** Comply with DIN dimensional standard DIN 43625, VDE 0670 part 4, VDE 0670 part 40Z and with IEC 60282-1 (2005).

### Features and Benefits

- DIN dimensioned for retrofitting in existing hardware
- Open fuse indicator for ease in troubleshooting
- Designed for use in IEC equipment

### Typical Applications

- Medium Voltage IEC designed equipment

### Catalog Number Build-A-Code

|     |                      |      |
|-----|----------------------|------|
| kV  | Basic Catalog Number | Amps |
| --- | -----                | ---  |

### Catalog Numbers

| kV   | Catalog Numbers | Amp Ratings                             | Dimensions - in (mm) Diameter x Length | IR RMS Sym |
|------|-----------------|-----------------------------------------|----------------------------------------|------------|
| 3.6  | 3.6ADOSJ(amp)   | 6.3, 10, 16, 20, 25, 31.5, 40           | 2.00 x 7.56 (51 x 192)                 | 50kA       |
|      | 3.6WDOSJ(amp)   | 50, 63, 80, 100, 125                    | 2.00 x 7.56 (51 x 192)                 |            |
|      | 3.6WFOSJ(amp)   | 160, 200                                | 3.00 x 7.56 (76 x 192)                 |            |
|      | 3.6ADLSJ(amp)   | 25, 40                                  | 2.00 x 11.50 (51 x 292)                |            |
|      | 3.6WDLSJ(amp)   | 50, 63, 80, 100, 125                    | 2.00 x 11.50 (51 x 292)                |            |
|      | 3.6WFLSJ(amp)   | 160, 200                                | 3.00 x 11.50 (76 x 292)                |            |
|      | 3.6WKLSJ(amp)   | 250, 315, 400                           | 3.00 x 11.50 (76 x 292)                |            |
| 7.2  | 7.2DLSJ(amp)    | 6.3, 10, 16, 20, 25, 31.5, 40, 50, 63   | 2.00 x 11.50 (51 x 292)                | 40kA       |
|      | 7.2FLSJ(amp)    | 80, 100, 125, 160                       | 3.00 x 11.50 (76 x 292)                |            |
|      | 7.2WKMSJ(amp)   | 200, 225, 250, 315, 355                 | 3.00 x 17.41 (76 x 442)                |            |
| 12   | 12TDLEJ(amp)    | 6.3, 10, 16, 20, 25, 31.5, 40, 50, 63   | 2.00 x 11.50 (51 x 292)                | 63kA       |
|      | 12THLEJ(amp)    | 80, 100                                 | 2.52 x 11.50 (64 x 292)                |            |
|      | 12TKLEJ(amp)    | 125                                     | 3.00 x 11.50 (76 x 292)                |            |
|      | 12TXLEJ(amp)*   | 160, 200                                | 3.50 x 11.50 (88 x 292)                |            |
| 17.5 | 17.5DLSJ(amp)*  | 6.3, 10, 16, 20, 25, 31.5, 40           | 2.00 x 11.50 (51 x 292)                | 50kA       |
|      | 17.5FLSJ(amp)*  | 50                                      | 3.00 x 11.50 (76 x 292)                |            |
|      | 17.5DMEJ(amp)   | 6.3, 10, 16, 20, 25, 31.5, 40, 50, 63   | 2.00 x 17.41 (51 x 442)                |            |
|      | 17.5HMEJ(amp)   | 80, 100                                 | 2.52 x 17.41 (64 x 442)                |            |
|      | 17.5TKMEJ(amp)  | 125                                     | 3.00 x 17.41 (76 x 442)                |            |
| 24   | 24DMEJ(amp)     | 6.3, 10, 16, 20, 25, 31.5, 40, 50       | 2.00 x 17.41 (51 x 442)                | 50kA       |
|      | 24HMEJ(amp)     | 63                                      | 2.52 x 17.41 (64 x 442)                |            |
|      | 24TFMEJ(amp)    | 80, 100* <sup>1</sup>                   | 3.00 x 17.41 (76 x 442)                |            |
|      | 24TXMEJ(amp)*   | 125 <sup>2</sup> , 160                  | 3.46 x 17.41 (88 x 442)                |            |
| 36   | 36TDQSJ(amp)    | 3.15 <sup>3</sup> , 6.3, 10, 16, 20, 25 | 2.00 x 21.16 (51 x 537)                | 35.5kA     |
|      | 36TFQSJ(amp)    | 31.5, 40, 50                            | 3.00 x 21.16 (76 x 537)                |            |
|      | 36TXQEJ(amp)*   | 63                                      | 3.46 x 21.16 (88 x 537)                |            |

Recommended fuseclips for DIN style fuses – 270303, A3354745 see page 91.

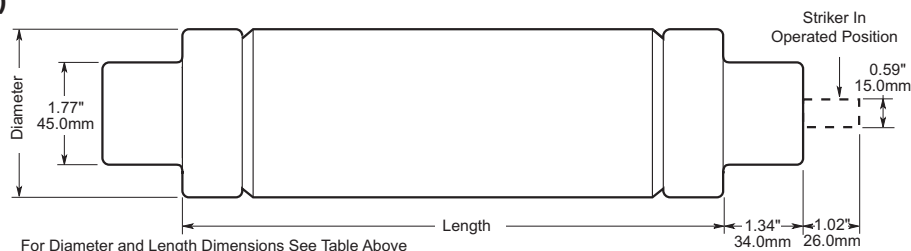
\*Not compliant with VDE 0670, part 402.

<sup>1</sup>-IR RMS Sym is 63kA

<sup>2</sup>-IR RMS Sym is 40kA

<sup>3</sup>-IR RMS Sym is 20kA

### Dimensions - In (mm)



## Potential Transformer Fuses

### AB, AM and CAV



#### Specifications

**Description:** British Standard VT fuses with low current ratings for use in voltage transformers or operating transformers to provide isolation of the associated system in the event of faults in the transformer circuit.

**Dimensions:** See Basic Catalog Numbers table.

#### Ratings:

E-Rated: — See single asterisk in Basic Catalog Numbers table

Volts: — 3.6-38kV (See Basic Catalog Numbers table)

Amps: — 2-15A (See Basic Catalog Numbers table)

IR: — 25-80kA (See Basic Catalog Numbers table)

**Agency Information:** BS2692-1 and IEC60282-1

#### Features and Benefits

- Physically dimensioned for retrofitting in existing hardware.
- Space saving size.

#### Typical Applications

- Medium Voltage Potential Transformers
- Small Medium Voltage Service Transformers

### Basic Catalog Numbers for “AB” & “AM” Series

| Basic Cat. Numbers | Volts  | Amp Ratings                  | Type | Dimensions - in (mm) |             | IR     |
|--------------------|--------|------------------------------|------|----------------------|-------------|--------|
|                    |        |                              |      | Length               | Diameter    |        |
| 3.6ABWNA           | 3.6kV  | 3.15, 6.3                    | AB   | 5.6 (142.2)          | 1 (25.4)    | 50KA   |
| 3.6ABCNA           | 3.6kV  | 3.15, 6.3, 10                | AB   | 7.69 (195.3)         | 1 (25.4)    | 50KA   |
| 5.5ABWNA*          | 5.5kV  | 0.5, 1, 2, 3, 5              | AB   | 5.6 (142.2)          | 1 (25.4)    | 50KA   |
| 5.5AMWNA*          | 5.5kV  | 0.5, 1.0, 2.0, 3.0, 4.0, 5.0 | AM   | 5.6 (142.2)          | 0.81 (20.6) | 50KA   |
| 7.2ABWNA           | 7.2kV  | 3.15, 6.3                    | AB   | 5.6 (142.2)          | 1 (25.4)    | 45KA   |
| 7.2ABCNA           | 7.2kV  | 3.15, 6.3                    | AB   | 7.69 (195.3)         | 1 (25.4)    | 45KA   |
| 12ABCNA            | 12.0kV | 3.15                         | AB   | 7.69 (195.3)         | 1 (25.4)    | 45KA   |
| 15.5ABFNA          | 15.5kV | 3.15                         | AB   | 10.00 (254)          | 1 (25.4)    | 32KA   |
| 17.5ABGNA          | 17.5kV | 3.15                         | AB   | 14.13 (358.9)        | 1 (25.4)    | 35KA   |
| 24ABGNA            | 24.0kV | 3.15                         | AB   | 14.13 (358.9)        | 1 (25.4)    | 25KA   |
| 36ABGNA**          | 36.0kV | 3.15                         | AB   | 14.13 (358.9)        | 1 (25.4)    | 31.5KA |

Recommended fuse clip for 1 diameter fuses – A3354705.

### Basic Catalog Numbers for “CAV” Series

| Basic Cat. Number | Volts  | Amp Ratings        | Dimensions - in (mm) |             | IR   |
|-------------------|--------|--------------------|----------------------|-------------|------|
|                   |        |                    | Length               | Diameter    |      |
| 3.6CAV            | 3.6kV  | 2                  | 8.66 (220)           | 1.63 (41.4) | 50KA |
| 5.5CAV*           | 5.5kV  | 15                 | 7.375 (187.3)        | 1.63 (41.4) | 63KA |
| 5.5CAVH*          | 5.5kV  | 0.5, 1, 2          | 7.375 (187.3)        | 1.63 (41.4) | 63KA |
| 7.2CAV            | 7.2kV  | 2, 4, 6, 10        | 8.66 (220)           | 1.63 (41.4) | 63KA |
| 12CAV             | 12kV   | 2                  | 8.66 (220)           | 1.63 (41.4) | 40KA |
| 15.5CAV*          | 15.5kV | 0.5, 1, 2, 3, 5, 7 | 12.87 (326.9)        | 1.63 (41.4) | 80KA |
| 15.5CAVH*         | 15.5kV | 0.5, 1, 2          | 12.87 (326.9)        | 1.63 (41.4) | 80KA |
| 17.5CAV           | 17.5kV | 2, 4, 6, 10        | 8.66 (220)           | 1.63 (41.4) | 40KA |
| 24CAV             | 24kV   | 2, 3, 4            | 13.39 (340.1)        | 1.63 (41.4) | 40KA |
| 36CAV             | 36kV   | 2, 4               | 17.32 (439.9)        | 1.63 (41.4) | 40KA |
| 36CAVH            | 36kV   | 2                  | 17.32 (439.9)        | 1.63 (41.4) | 40KA |
| 38CAV*            | 38kV   | 4                  | 17.32 (439.9)        | 1.63 (41.4) | 40KA |
| 38CAVH*           | 38kV   | 0.5, 1, 2          | 17.32 (439.9)        | 1.63 (41.4) | 40KA |

Type CAVH are fitted with a striker pin for indication.

\* E-Rated fuses

\*\*For clean indoor applications only.

### Catalog Number Build-A-Code

kV      Basic Catalog Number      Amps

— — — — —      — — — — —      — — — — —

Recommended Fuse Clips: 1" dia. - A3354705, 1.63" dia. - 1A0835, .819 dia. - 1A1837  
Contact Cooper Bussmann for complete specifications on potential transformer fuses

## British Standard IEC Fuses for Use in Oil Filled Distribution Switchgear

### OEFMMA

#### Specifications

**Description:** BS 2692-1 medium voltage fuses for use on the primary circuit of three-phase 50Hz transformers in oil field switchgear. Fitted with powerful pyrotechnic striker pin.

#### Ratings:

Volts: — 3.6-24kV

Amps: — 6.3-200A

IR: — 25-50kA (See Catalog Number table below)

**Agency Information:** Fuses comply with IEC 60282-1, BS2692-1 and ESI Standard 12-8. 7.2 and 12kV fuses tested at highest system voltage and approved by the UK Electricity Association approvals panel.

#### Features and Benefits

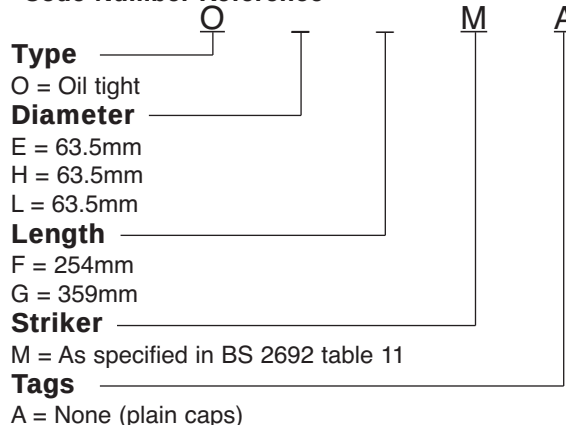
- Physically sized for replacement of British Standard fuse links

#### Typical Applications

- Medium Voltage BS Designed Equipment



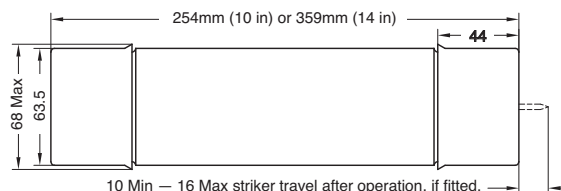
#### Code Number Reference



#### Dimensions:

Current-limiting fuse for use in oil switchgear

Fuse types: OEF, OEG, OHF, OHG, OLG



#### Catalog Numbers

| Transformer | Catalog Numbers/Transformer Primary Voltage |              |                    |               |
|-------------|---------------------------------------------|--------------|--------------------|---------------|
| kVA         | 3.3kV                                       |              |                    |               |
| 200         | 3.6OEFMA63                                  | 6.6kV        | 11kV/ESI 12-8 Ref. | 13.8kV        |
| 250         | 3.6OEFMA80                                  | 12OEFMA31.5  | 12OEFMA25/01       | 15.5OEFMA16   |
| 300/315     | 3.6OEFMA100                                 | 12OEFMA40    | 12OEFMA25/—        | 15.5OEFMA20   |
| 400         | 3.6OEFMA125                                 | 12OEFMA50    | 12OEFMA31.5/02     | 15.5OEFMA25   |
| 500         | 3.6OEFMA160                                 | 12OEFMA63    | 12OEFMA40/—        | 15.5OEFMA31.5 |
| 630         | 3.6OEFMA200                                 | 12OHFMA71    | 12OEFMA50/03       | 15.5OEFMA40   |
| 750/800     | 3.6OLGMA250                                 | 7.2OEFMA100  | 12OEFMA63/—        | 15.5OEFMA50   |
| 1000        | 3.6OLGMA250*                                | 7.2OHGMA125  | 12OHFMA80/04       | 15.5OEFMA63   |
| 1250        | —                                           | 7.2OHGMA140  | 12OHGMA90**/05     | 15.5OHGMA71   |
| 1600        | —                                           | 7.2OHGMA160* | 12OHGMA100/—       | 15.5OHGMA90   |
|             |                                             |              | 12OLGMA125*/—      | 15.5OLGMA100* |

#### This Catalog Number selection table is based upon the following criteria:

1. Withstand against magnetizing inrush current taken as 12 times full-load current for 0.1 second.
2. Withstand against 150% permissible overload current. Recommendations marked with asterisks have the following significance:-
  - \*Limited to permissible overloads of 130%.
  - \*\*Permits use of a 12kV OHFMA 80A fuse with a 100kVA transformer where permissible overload does not exceed 130%.
3. For 6.6kV systems, 12kV fuses are recommended where possible in the interests of standardization.
4. Wherever possible, 10 inch long FO1 fuses are offered rather than equivalent 14 inch FO2 types.
5. The above recommendations are not generally applicable to transformers feeding motor circuits with starting currents in excess of the transformer full load current. In this event, please consult Cooper Bussmann.

#### Catalog Numbers

| Basic Cat. Number | Voltage | Dimensional Ref. BS 2692 | Amp Ratings                                                   | Breaking Capacity (kA) |
|-------------------|---------|--------------------------|---------------------------------------------------------------|------------------------|
| 3.6OEFMA          | 3.6kV   | FO1                      | 6.3, 10, 16, 20, 25, 31.5, 40, 50, 63, 80, 100, 125, 160, 200 | 50                     |
| 3.6OEGMA          | 3.6kV   | FO2                      | 100, 125, 160, 200                                            | 50                     |
| 3.6OLGMA          | 3.6kV   | FO2                      | 250                                                           | 50                     |
| 7.2OEFMA          | 7.2kV   | FO1                      | 80, 100, 112                                                  | 45                     |
| 7.2OHGMA          | 7.2kV   | FO2                      | 125, 140, 160                                                 | 45                     |
| 12OEFMA           | 12.0kV  | FO1                      | 6.3, 10, 16, 20, 25, 31.5, 40, 50, 63                         | 40                     |
| 12OHFMA           | 12.0kV  | FO1                      | 71, 80                                                        | 40                     |
| 12OHGMA           | 12.0kV  | FO2                      | 6.3, 10, 16, 20, 25, 31.5, 40, 50, 63, 71, 80, 90, 100        | 40                     |
| 12OLGMA           | 12.0kV  | FO2                      | 125                                                           | 40                     |
| 15.5OEFMA         | 15.5kV  | FO1                      | 6.3, 10, 16, 20, 25, 31.5, 40, 50, 63                         | 40                     |
| 15.5OHGMA         | 15.5kV  | FO2                      | 71, 80, 90                                                    | 40                     |
| 15.5OLGMA         | 15.5kV  | FO2                      | 100                                                           | 40                     |
| 17.5OHGMA         | 17.5kV  | FO2                      | 6.3, 10, 16, 20, 25, 31.5, 40, 50, 63, 80                     | 35                     |
| 24OEGMA           | 24.0kV  | FO2                      | 6.3, 10, 16, 20, 25, 31.5, 40, 50                             | 25                     |

Contact Cooper Bussmann for complete specifications on medium voltage fuses.

#### Catalog Number Build-A-Code

| kV  | Basic Catalog Number | Amps |
|-----|----------------------|------|
| --- | ---                  | ---  |

## Fast-acting Fuses

**HVA, HVB,  
HVJ, HVL,  
HVR, HVT,  
HVV, HVW &  
HVX**



### Specifications

**Description:** Medium voltage, non-time delay, fast-acting fuses.

**Dimensions:** See Basic Catalog Numbers table.

### Ratings:

Volts: — 1-10kV (See Basic Catalog Numbers table)

Amps: — 1/6-10A (See Basic Catalog Numbers table)

### Features and Benefits

- Physical size varies with electrical rating of fuse to prevent over-fusing.
- Space saving size.

### Typical Applications

- Medium Voltage Instrument Protection
- Medium Voltage Circuit Protection

### Test Specifications

| Basic Catalog Numbers   | Load / Opening Time                         |
|-------------------------|---------------------------------------------|
| HVA, HVB, HVJ, HVL      | 110% / 4 Hours (min)<br>135% / 1 Hour (max) |
| HVR, HVT, HVU, HVW, HVX | 100% / 4 Hours (min)<br>150% / 1 Hour (max) |



**Fuse blocks:** 4528, 4529, 4530 & 2960

**Voltage Rating:** 1000 to 10,000V

| Basic Catalog Numbers | Fuse Block Catalog Number | Fuse Clip Catalog Number |
|-----------------------|---------------------------|--------------------------|
| HVA, HVR              | 4528                      | 5960                     |
| HVB, HVT              | 4529                      | 5960                     |
| HVJ, HVU              | 4530                      | 4180                     |
| HVL, HVX              | 2960                      | 4180                     |

Use #8 screws on blocks 4528 and 4529.

Use #10 screws on blocks 4530 and 2960.

| Basic Catalog Number | kV  | Amp Ratings                                                         | Maximum S.C.       | Dimensions - in (mm) |              |
|----------------------|-----|---------------------------------------------------------------------|--------------------|----------------------|--------------|
|                      |     |                                                                     |                    | Diameter             | Length       |
| HVA                  | 1   | 1/6, 1/10, 1/8, 3/10, 1/4, 3/10, 1/2, 3/4, 1, 1 1/2, 2, 3, 4, 6, 10 | 20kW dc/30kVA ac   | 0.41 (10.4)          | 3 (76.1)     |
| HVB                  | 2.5 | 1/2, 3/4, 1, 1 1/2, 2, 3                                            | 20kW dc/30kVA ac   | 0.41 (10.4)          | 4.5 (114.2)  |
| HVJ                  | 5   | 1/6, 1/8, 1/4, 1/2, 3/4, 1, 1 1/2, 2, 4, 6, 10                      | 20kW dc/30kVA ac   | 0.81 (20.6)          | 5 (126.9)    |
| HVL                  | 10  | 1/6, 1/8, 1/4, 1/2, 1, 1 1/2, 2, 3                                  | 20kW dc/30kVA ac   | 0.81 (20.6)          | 10 (254)     |
| HVR                  | 1   | 1/2, 1, 2, 3, 4, 5                                                  | kVA-500 ac only    | 0.41 (10.4)          | 3 (76.2)     |
| HVV                  | 1.2 | 1, 2, 3, 4, 5, 8                                                    | kVA-12,000 ac only | 0.41 (10.4)          | 2.25 (57.1)  |
| HVT                  | 2.5 | 1/2, 1, 2, 3, 5                                                     | kVA-1250 ac only   | 0.41 (10.4)          | 4.5 (114.2)  |
| HVU                  | 5   | 1/2, 1, 2, 3, 4, 5                                                  | kVA-2500 ac only   | 0.81 (20.6)          | 5 (126.9)    |
| HVX                  | 10  | 1/2, 1, 3, 5                                                        | kVA-5,000 ac only  | 0.41 (10.4)          | 10.0 (253.8) |

Catalog Number Build-A-Code

Basic Catalog Number      Amps

— — — — —

— — —

## EEI-NEMA Type K & T and Type H & N

### FL: Type H and EEI-NEMA Type K & T Fuses

#### Specifications

**Description:** Medium voltage fuses: Type H (high surge), EEI-NEMA Type K (fast-acting), EEI-NEMA Type T (slow-acting).

#### Ratings:

Amps: — 1-200A  
(See Catalog Numbers tables)

#### Features and Benefits

- Wide range of EEI-NEMA type fuse links for use in open fuse cutouts
- Voltage ratings up to 27kV.
- Can be coordinated with other overcurrent protective devices for sectionalizing to isolate feeder branches.

#### Typical Applications

- Medium Voltage Fused Cutouts

#### High-Surge Type H Fuses

High-surge, Type H fuses are manufactured in ratings of 1, 2, 3, 5, and 8A. They have been developed principally for primary fusing of small-sized transformers. Type H links are manufactured in the universal buttonhead design.

#### Type N Fuses

Type N fuses conform to previous NEMA standards and have been superseded by Type K and T links. Type N fuses are manufactured in the universal button design in ratings of 5 through 200A for use in NEMA standard dimensioned cutouts rated through 27kV.



### Catalog Numbers

#### EEI-NEMA and High-Surge Universal Tin Element

#### Fuses for Cutouts — Rated to 27kV

Non-Removable Button-Head For Standard Open or Enclosed Cutouts

| Catalog Numbers           |                              |                              |      |
|---------------------------|------------------------------|------------------------------|------|
| Type H<br>(High<br>Surge) | EEI-NEMA<br>Type K<br>(Fast) | EEI-NEMA<br>Type T<br>(Slow) | Amps |
| FL11H1                    | FL11K1                       | FL11T1                       | 1    |
| FL11H2                    | FL11K2                       | FL11T2                       | 2    |
| FL11H3                    | FL11K3                       | FL11T3                       | 3    |
| FL11H5                    | FL11K5                       | FL11T5                       | 5    |
| —                         | FL11K6                       | FL11T6                       | 6    |
| FL11H8                    | FL11K8                       | FL11T8                       | 8    |
| —                         | FL11K10                      | FL11T10                      | 10   |
| —                         | FL11K12                      | FL11T12                      | 12   |
| —                         | FL11K15                      | FL11T15                      | 15   |
| —                         | FL11K20                      | FL11T20                      | 20   |
| —                         | FL11K25                      | FL11T25                      | 25   |
| —                         | FL11K30                      | FL11T30                      | 30   |
| —                         | FL11K40                      | FL11T40                      | 40   |
| —                         | FL11K50                      | FL11T50                      | 50   |
| —                         | FL11K65                      | FL11T65                      | 65   |
| —                         | FL11K80                      | FL11T80                      | 80   |
| —                         | FL11K100                     | FL11T100                     | 100  |
| —                         | FL11K140                     | FL11T140                     | 140  |
| —                         | FL11K200                     | FL11T200                     | 200  |

Removable Button-Head For Cutouts Requiring Removable-Button Links

| Catalog Numbers              |                              |      |
|------------------------------|------------------------------|------|
| EEI-NEMA<br>Type K<br>(Fast) | EEI-NEMA<br>Type T<br>(Slow) | Amps |
| FL3K1                        | FL3T1                        | 1    |
| FL3K2                        | FL3T2                        | 2    |
| FL3K3                        | FL3T3                        | 3    |
| FL3K5                        | FL3T5                        | 5    |
| FL3K6                        | FL3T6                        | 6    |
| FL3K8                        | FL3T8                        | 8    |
| FL3K10                       | FL3T10                       | 10   |
| FL3K12                       | FL3T12                       | 12   |
| FL3K15                       | FL3T15                       | 15   |
| FL3K20                       | FL3T20                       | 20   |
| FL3K25                       | FL3T25                       | 25   |
| FL3K30                       | FL3T30                       | 30   |
| FL3K40                       | FL3T40                       | 40   |
| FL3K50                       | FL3T50                       | 50   |
| FL3K65                       | FL3T65                       | 65   |
| FL3K80                       | FL3T80                       | 80   |
| FL3K100                      | FL3T100                      | 100  |
| FL3K140                      | FL3T140                      | 140  |
| FL3K200                      | FL3T200                      | 200  |

Adapter-type removable-button links with ferrule adapter to convert to double-leader links are available in K and T types. Order by description.

#### EEI-NEMA Type K Universal Silver-Element Fuses

#### for Cutouts — Rated through 27kV

Non-Removable Button-Head For Standard Open or Enclosed Cutouts

| Catalog Numbers    |      |
|--------------------|------|
| EEI-NEMA<br>Type K | Amps |
| FL12K8             | 8    |
| FL12K10            | 10   |
| FL12K12            | 12   |
| FL12K15            | 15   |
| FL12K25            | 25   |
| FL12K50            | 50   |

## BBU Boric Acid Fuses

### BBU

#### Specifications

**Description:** Boric acid fuses for power transformers, feeder circuits, distribution transformers, metal-enclosed and pad-mounted switchgear

#### Construction:

Principle parts of the replaceable BBU fuse unit are shown in the cross section views. A glass epoxy tube encloses the assembly containing the silver fuse element, arcing rod, boric acid cylinder and spring. Using a pure silver element and nichrome wire strain element makes the BBU less susceptible to failure caused by vibration, corona corrosion and fuse element aging. The components are housed in a fiberglass reinforced resin tube with plated copper contacts. BBU fuses can directly replace competitive equivalent units.



that elongate the arc through a boric acid chamber upon release by the fuse element to interrupt short circuits within one-half cycle and prevent the arc from re-striking after a current zero.

**BBU End Fittings:** BBU end fittings complete the electrical connection between the fuse unit and the fuse mounting. Positioned on the top and bottom of the fuse, unit end fittings can be used over again if they remain undamaged. They are completely interchangeable with other manufacturers' equivalent fuse units and mountings.

**Indoor Fittings:** The indoor end fittings are made of high-impact plastic and high-conducting copper alloy. The blown fuse indicator, located on the top end fitting, provides visual indication of a faulted fuse unit. When engaged into the mounting, the spring-loaded plastic mounting handle actuates the latch mechanism and readily accepts a hookstick to install or remove the assembled fuse unit.

The bottom indoor fitting is threaded to accept a muffler constructed of a plated steel housing, containing copper mesh screening, that absorbs and contains the noise and exhaust materials during a fault condition, and prevents contamination of indoor components and mechanisms located within the switchgear. Containment also prevents accidental flash-over from phase-to-phase or phase-to-ground by limiting airborne particles and gases.

**BBU Melt Curve Constructions:** The BBU fuse is offered in three constructions to meet specific melt curves for an application. The construction is designated in the Catalog Number suffix as follows;

- E (Standard)
- K (Fast), and
- SE (Slow)

The curves for the SE construction are less inverse and allow for more of a time-delay at high currents. Consult Cooper Bussmann for application assistance.

#### Ratings:

**Volts:** — The maximum voltage rating of the BBU fuse is the highest RMS voltage at which the fuse

is designed to operate. Its dielectric withstand level corresponds to insulation levels of power class equipment, thus the name "power fuse." Maximum voltage ratings for BBU fuses are: 17kV, 27kV and 38kV.

**Amps:** — The continuous amp rating of a BBU fuse should equal or exceed the maximum load current where the fuse is applied. They are designed to carry their rated continuous current without exceeding the temperature rise outlined in NEMA and ANSI standards. The BBU is available with continuous current ratings up to 200 amps. The current ratings carry an "E" designation as defined by ANSI and NEMA. For example, the current responsive element rated 100E amps or below will melt in 300 seconds at an RMS current within the range of 200 to 240 percent of the continuous current ratings. Above 100E amps, melting takes place in 600 seconds at an RMS current within the range of 220 to 264 percent of the continuous current rating.

**IR:** — BBU fuses have interrupting capabilities from 10kA to 14kA symmetrical.

#### Features and Benefits

- Voltage ratings of up to 38kV coupled with ratings to 200A provide a wide range of circuit protection.
- Time-current characteristics allow for easier coordination with downstream devices.
- Provides replacement of a variety of existing systems.

#### Typical Applications

- Power and Distribution Transformer Protection
- Medium Voltage Feeder Circuit Protection
- Distribution Transformers
- Medium Voltage Metal-enclosed Switchgear
- Medium Voltage Pad-mounted Switches



Element  
Melts

Rod withdraws,  
elongating arc  
and vaporizing  
Boric Acid

Vapor  
quenches  
arc at first  
current zero

**Operation:** The BBU fuse uses boric acid to create the de-ionizing action to interrupt the arc. At high temperatures, boric acid decomposes to produce a blast of water vapor and inert boric anhydride. Fault interruption is achieved by an arcing rod and a charged spring

## BBU Boric Acid Fuses for Indoor Use

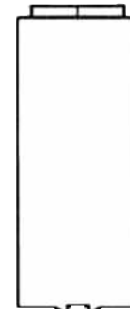
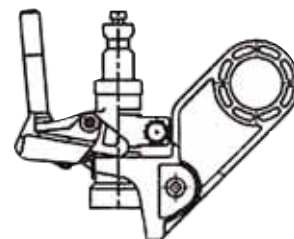
| Catalog Numbers* | Amps | Fuse Type | Voltage kV | Max Int. kA Sym. | Catalog Numbers* | Amps | Fuse Type | Voltage kV | Max Int. kA Sym. | Catalog Numbers | Amps | Fuse Type | Voltage kV | Max Int. kA Sym. |
|------------------|------|-----------|------------|------------------|------------------|------|-----------|------------|------------------|-----------------|------|-----------|------------|------------------|
| BBU17-3K         | 3    | K         | 17         | 14               | BBU27-3K         | 3    | K         | 27         | 12.5             | BBU38-3K        | 3    | K         | 38         | 10               |
| BBU17-6K         | 6    |           |            |                  | BBU27-6K         | 6    |           |            |                  | BBU38-6K        | 6    |           |            |                  |
| BBU17-8K         | 8    |           |            |                  | BBU27-8K         | 8    |           |            |                  | BBU38-8K        | 8    |           |            |                  |
| BBU17-10K        | 10   |           |            |                  | BBU27-10K        | 10   |           |            |                  | BBU38-10K       | 10   |           |            |                  |
| BBU17-12K        | 12   |           |            |                  | BBU27-12K        | 12   |           |            |                  | BBU38-12K       | 12   |           |            |                  |
| BBU17-15K        | 15   |           |            |                  | BBU27-15K        | 15   |           |            |                  | BBU38-15K       | 15   |           |            |                  |
| BBU17-20K        | 20   |           |            |                  | BBU27-20K        | 20   |           |            |                  | BBU38-20K       | 20   |           |            |                  |
| BBU17-25K        | 25   |           |            |                  | BBU27-25K        | 25   |           |            |                  | BBU38-30K       | 30   |           |            |                  |
| BBU17-30K        | 30   |           |            |                  | BBU27-30K        | 30   |           |            |                  | BBU38-40K       | 40   |           |            |                  |
| BBU17-40K        | 40   |           |            |                  | BBU27-40K        | 40   |           |            |                  | BBU38-50K       | 50   |           |            |                  |
| BBU17-50K        | 50   |           |            |                  | BBU27-50K        | 50   |           |            |                  | BBU38-65K       | 65   |           |            |                  |
| BBU17-65K        | 65   |           |            |                  | BBU27-65K        | 65   |           |            |                  | BBU38-80K       | 80   |           |            |                  |
| BBU17-80K        | 80   |           |            |                  | BBU27-80K        | 80   |           |            |                  | BBU38-100K      | 100  |           |            |                  |
| BBU17-100K       | 100  |           |            |                  | BBU27-100K       | 100  |           |            |                  | BBU38-140K      | 140  |           |            |                  |
| BBU17-140K       | 140  |           |            |                  | BBU27-140K       | 140  |           |            |                  | BBU38-200K      | 200  |           |            |                  |
| BBU17-200K       | 200  |           |            |                  | BBU27-200K       | 200  |           |            |                  | BBU38-5E        | 5    | E         | 38         | 10               |
| BBU17-5E         | 5    | E         | 17         | 14               | BBU27-5E         | 5    | E         | 27         | 12.5             | BBU38-7E        | 7    |           |            |                  |
| BBU17-7E         | 7    |           |            |                  | BBU27-7E         | 7    |           |            |                  | BBU38-10E       | 10   |           |            |                  |
| BBU17-10E        | 10   |           |            |                  | BBU27-10E        | 10   |           |            |                  | BBU38-13E       | 13   |           |            |                  |
| BBU17-13E        | 13   |           |            |                  | BBU27-13E        | 13   |           |            |                  | BBU38-15E       | 15   |           |            |                  |
| BBU17-15E        | 15   |           |            |                  | BBU27-15E        | 15   |           |            |                  | BBU38-20E       | 20   |           |            |                  |
| BBU17-20E        | 20   |           |            |                  | BBU27-20E        | 20   |           |            |                  | BBU38-25E       | 25   |           |            |                  |
| BBU17-25E        | 25   |           |            |                  | BBU27-25E        | 25   |           |            |                  | BBU38-30E       | 30   |           |            |                  |
| BBU17-30E        | 30   |           |            |                  | BBU27-30E        | 30   |           |            |                  | BBU38-40E       | 40   |           |            |                  |
| BBU17-40E        | 40   |           |            |                  | BBU27-40E        | 40   |           |            |                  | BBU38-50E       | 50   |           |            |                  |
| BBU17-50E        | 50   |           |            |                  | BBU27-50E        | 50   |           |            |                  | BBU38-65E       | 65   |           |            |                  |
| BBU17-65E        | 65   |           |            |                  | BBU27-65E        | 65   |           |            |                  | BBU38-80E       | 80   |           |            |                  |
| BBU17-80E        | 80   |           |            |                  | BBU27-80E        | 80   |           |            |                  | BBU38-100E      | 100  |           |            |                  |
| BBU17-100E       | 100  |           |            |                  | BBU27-100E       | 100  |           |            |                  | BBU38-125E      | 125  |           |            |                  |
| BBU17-125E       | 125  | SE        | 17         | 14               | BBU27-125E       | 125  | SE        | 27         | 12.5             | BBU38-150E      | 150  | SE        | 38         | 10               |
| BBU17-150E       | 150  |           |            |                  | BBU27-150E       | 150  |           |            |                  | BBU38-175E      | 175  |           |            |                  |
| BBU17-175E       | 175  |           |            |                  | BBU27-175E       | 175  |           |            |                  | BBU38-200E      | 200  |           |            |                  |
| BBU17-200E       | 200  |           |            |                  | BBU27-200E       | 200  |           |            |                  | BBU38-15SE      | 15   |           |            |                  |
| BBU17-15SE       | 15   |           |            |                  | BBU27-15SE       | 15   |           |            |                  | BBU38-20SE      | 20   |           |            |                  |
| BBU17-20SE       | 20   |           |            |                  | BBU27-20SE       | 20   |           |            |                  | BBU38-25SE      | 25   |           |            |                  |
| BBU17-25SE       | 25   |           |            |                  | BBU27-25SE       | 25   |           |            |                  | BBU38-30SE      | 30   |           |            |                  |
| BBU17-30SE       | 30   |           |            |                  | BBU27-30SE       | 30   |           |            |                  | BBU38-40SE      | 40   |           |            |                  |
| BBU17-40SE       | 40   |           |            |                  | BBU27-40SE       | 40   |           |            |                  | BBU38-50SE      | 50   |           |            |                  |
| BBU17-50SE       | 50   |           |            |                  | BBU27-50SE       | 50   |           |            |                  | BBU38-65SE      | 65   |           |            |                  |
| BBU17-65SE       | 65   |           |            |                  | BBU27-65SE       | 65   |           |            |                  | BBU38-80SE      | 80   |           |            |                  |
| BBU17-80SE       | 80   |           |            |                  | BBU27-80SE       | 80   |           |            |                  | BBU38-100SE     | 100  |           |            |                  |
| BBU17-100SE      | 100  |           |            |                  | BBU27-100SE      | 100  |           |            |                  | BBU38-125SE     | 125  |           |            |                  |
| BBU17-125SE      | 125  |           |            |                  | BBU27-125SE      | 125  |           |            |                  | BBU38-150SE     | 150  |           |            |                  |
| BBU17-150SE      | 150  |           |            |                  | BBU27-150SE      | 150  |           |            |                  | BBU38-175SE     | 175  |           |            |                  |
| BBU17-175SE      | 175  |           |            |                  | BBU27-175SE      | 175  |           |            |                  | BBU38-200SE     | 200  |           |            |                  |
| BBU17-200SE      | 200  |           |            |                  | BBU27-200SE      | 200  |           |            |                  |                 |      |           |            |                  |

\* **BBU Melt Curve Constructions:** The BBU fuse is offered in three constructions to meet specific melt curves for an application. The construction is designated in the Catalog Number suffix: E (Standard), K (Fast) and SE (Slow). Contact Cooper Bussmann for application details.

### Application Notes

Low currents, usually referred to as overload currents, must be considered as BBU fuses have a rather low thermal capacity. They cannot carry overloads of the same magnitude/duration as motors and transformers of equal continuous currents. For this reason, the BBU fuse must be sized with the full load current in mind so the fuse does not open on otherwise acceptable overloads and inrush conditions. Coordination should be considered to help determine what type of fuse is applied. The BBU fuse interrupts at a natural current zero in the current wave and allows a minimum of a half-cycle of fault current to flow before the fault is cleared. The time-current characteristics associated with a BBU fuse has a rather gradual slope making it easier to coordinate with downstream equipment. In addition, the BBU is ideal for higher voltage (up to 38kV) and high current applications (up to 200A). It is important to examine the minimum melting and total clearing time-current characteristics of this fuse.

### End Fitting Detail



Note: Muffler can be ordered separately. Order Catalog number BBU-MFLR.

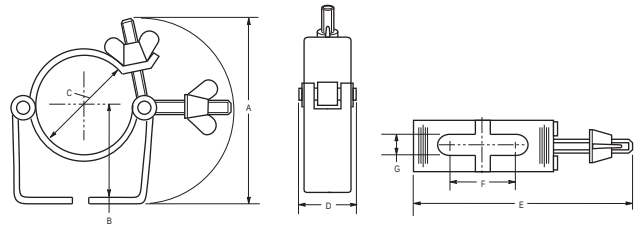
**Data Sheet: 1123**

## Fuseclips for Medium & High Voltage Fuses

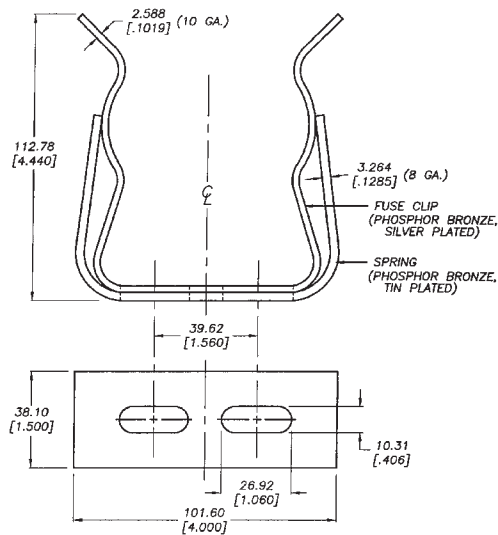
### Recommended Fuseclips for Medium Voltage Fuses

| Catalog Numbers | Fuse Diameter - in (mm) | Clip Dimensions (in) |       |       |       |       |       |       |
|-----------------|-------------------------|----------------------|-------|-------|-------|-------|-------|-------|
|                 |                         | A                    | B     | C     | D     | E     | F     | G     |
| A3354710        | 2 (50.8)                | 3.749                | 1.979 | 2.009 | 1.189 | 4.539 | 1.509 | 0.399 |
| A3354730        | 3 (76)                  | 4.139                | 2.449 | 3.009 | 1.189 | 5.639 | 1.509 | 0.399 |
| A3354745        | 1.77 (45)               | 3.50                 | 2.50  | 1.77  | 1.19  | 4.50  | 1.50  | 0.38  |

Fuseclips are for single barrel applications only. Are not sold in pairs.

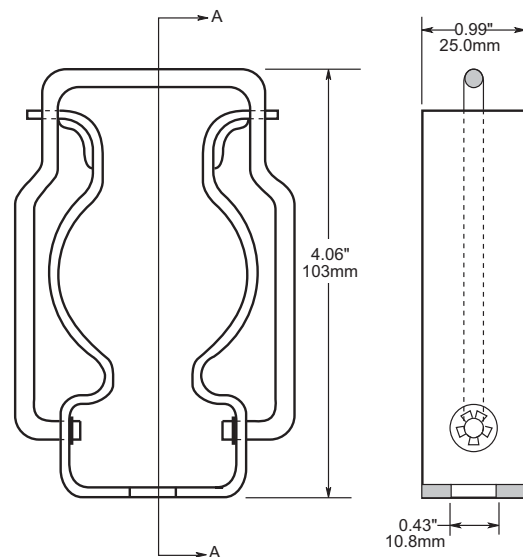


### 1A0065 3" Diameter Clip



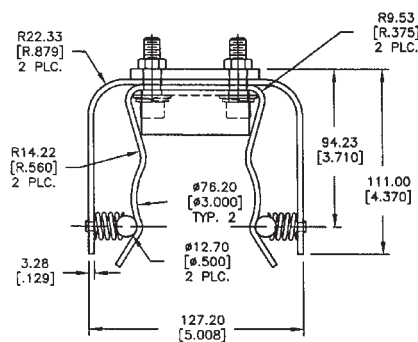
2 CLIP ASSEMBLIES PER PACKAGE.  
DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

### 270303 DIN Fuseclip



Medium  
Voltage  
Fuses

### 9078A67G04 3" Diameter Clip



2 Cup assemblies per package.  
Dimensions shown are for reference only.



## High Speed Fuses

Extensive Selection to Deliver Precise  
Protection to Critical Loads



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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