

# E-Rated Medium Voltage Fuses

## For Transformer and Feeder Protection

### 15.5 kV

MV155



CATALOG SYMBOL: MV155

E-RATED MEDIUM VOLTAGE FUSES:

Meets E requirements per ANSI C37.46

Meets Full Range requirements per ANSI C37.40

FOR TRANSFORMER AND FEEDER PROTECTION

VOLTAGE RATING: 15.5 kV

INTERRUPTING RATING: 50 kA Maximum Sym.

CURRENT LIMITING

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.

FEATURES:

- **Standard Clip Center Lengths and Barrel Diameters.**

The new line of Bussmann 15.5 kV medium voltage fuses have standard clip center distances of 15 or 18 inches and barrel diameters of 2 or 3 inches which allow fuses to retrofit existing hardware.

- **Blown Fuse Indication with Indicator.**

• **100% Tested for Reliability.** All medium voltage fuses are pulsed twice with 90% of their minimum melt I<sup>2</sup>t to guarantee undamaged elements. This test does not affect undamaged elements. A damaged element completely opens when subjected to 90% of the minimum melt I<sup>2</sup>t, allowing it to be detected by a resistance check.

• **Full Range Fuses.** Bussmann medium voltage fuses provide full range protection and are capable of interrupting fault currents of 50,000A sym.

- **Time Current Curves and Dimensional Data:**

MV155F1CB series, see page 2;

MV155F1DB and MV155F1DC series, see page 3.

- **Peak Arc Voltage Curves and Peak Let-Through Data,** see page 4.

- **Fuse Clips,** see page 4.

#### Electrical Characteristics

| Part Numbers†  | Ampere Rating | Min/ Melt I <sup>2</sup> t | Max. Clear I <sup>2</sup> t | Physical Size (inches) |      |             |         |
|----------------|---------------|----------------------------|-----------------------------|------------------------|------|-------------|---------|
|                |               |                            |                             | Length                 | Dia. | Clip Center | Barrels |
| MV155F1CBX5E   | 5A            | 180                        | 2900                        | 18.75                  | 2    | 15          | 1       |
| MV155F1CBX7E   | 7A            | 850                        | 8000                        |                        |      |             |         |
| MV155F1CBX10E  | 10A           | 850                        | 8000                        |                        |      |             |         |
| MV155F1CBX15E  | 15A           | 2070                       | 12000                       |                        |      |             |         |
| MV155F1CBX20E  | 20A           | 2370                       | 23000                       |                        |      |             |         |
| MV155F1CBX25E  | 25A           | 4650                       | 31000                       |                        |      |             |         |
| MV155F1CBX30E  | 30A           | 9490                       | 45000                       |                        |      |             |         |
| MV155F1DBX10E  | 10A           | 850                        | 8000                        | 18.75                  | 3    | 15          | 1       |
| MV155F1DBX15E  | 15A           | 2070                       | 12000                       |                        |      |             |         |
| MV155F1DBX20E  | 20A           | 2370                       | 23000                       |                        |      |             |         |
| MV155F1DBX25E  | 25A           | 4650                       | 31000                       |                        |      |             |         |
| MV155F1DBX30E  | 30A           | 9490                       | 45000                       |                        |      |             |         |
| MV155F1DBX40E  | 40A           | 9490                       | 45000                       |                        |      |             |         |
| MV155F1DBX50E  | 50A           | 13600                      | 90000                       |                        |      |             |         |
| MV155F1DBX65E  | 65A           | 30700                      | 181000                      |                        |      |             |         |
| MV155F1DBX80E  | 80A           | 54600                      | 270000                      |                        |      |             |         |
| MV155F1DBX100E | 100A          | 116200                     | 600000                      |                        |      |             |         |
| MV155F2DBX125E | 125A          | 123000                     | 677000                      | 18.75                  | 3    | 15          | 2       |
| MV155F2DBX150E | 150A          | 218700                     | 1287000                     |                        |      |             |         |
| MV155F2DBX175E | 175A          | 314700                     | 1689000                     |                        |      |             |         |
| MV155F2DBX200E | 200A          | 465100                     | 2405000                     |                        |      |             |         |
| MV155F1DCX65E  | 65A           | 30700                      | 181000                      | 21.75                  | 3    | 18          | 1       |
| MV155F1DCX80E  | 80A           | 54600                      | 270000                      |                        |      |             |         |
| MV155F1DCX100E | 100A          | 116200                     | 600000                      |                        |      |             |         |
| MV155F2DCX125E | 125A          | 123000                     | 677000                      | 21.75                  | 3    | 18          | 2       |
| MV155F2DCX150E | 150A          | 218700                     | 1287000                     |                        |      |             |         |
| MV155F2DCX175E | 175A          | 314700                     | 1689000                     |                        |      |             |         |
| MV155F2DCX200E | 200A          | 465100                     | 2405000                     |                        |      |             |         |

† To order with the optional striker pin, see Part Number Construction chart below.

#### Part Number Construction

|         | Medium Voltage | Voltage Rating |                | Number of Barrels | Barrel Diameter | Clip Center Distance | Indication Type    | Ampere Rating |
|---------|----------------|----------------|----------------|-------------------|-----------------|----------------------|--------------------|---------------|
| Example | MV             | 155            | F              | 1                 | C               | B                    | X                  | 5E            |
|         |                | 055 = 5.5 kV   | F = Full Range | 1                 | C = 2 inches    | A = 12 inches        | X = Indicator only |               |
|         |                | 155 = 15.5 kV  |                | 2                 | D = 3 inches    | B = 15 inches        | S = Striker Pin    |               |
|         |                |                |                |                   |                 | C = 18 inches        |                    |               |

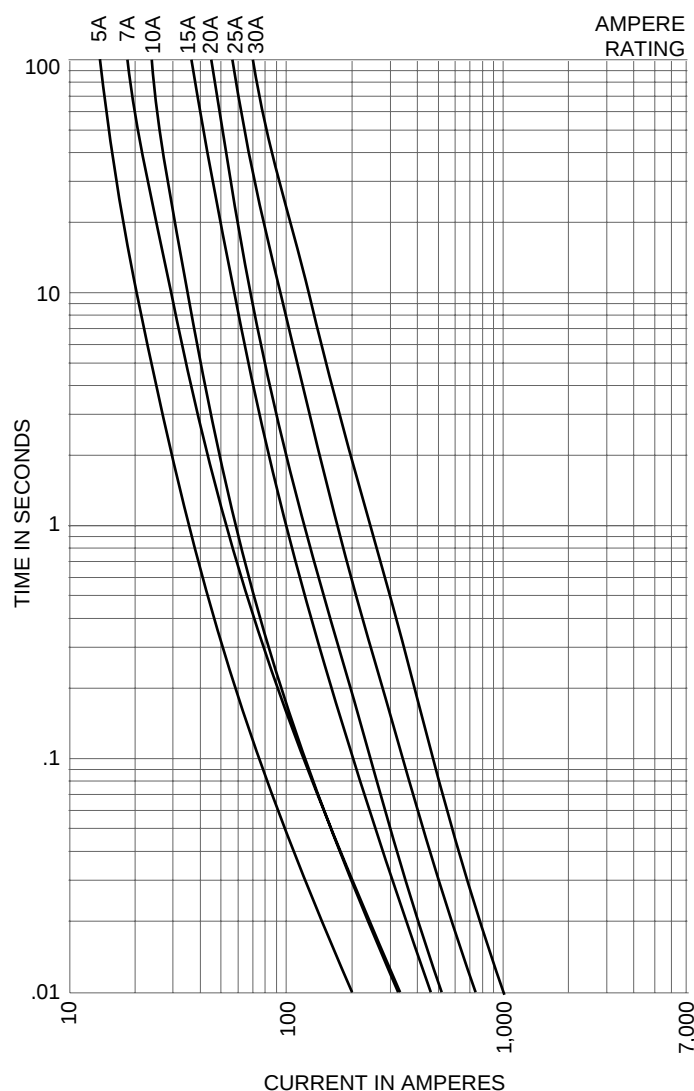
# E-Rated Medium Voltage Fuses

## For Transformer and Feeder Protection

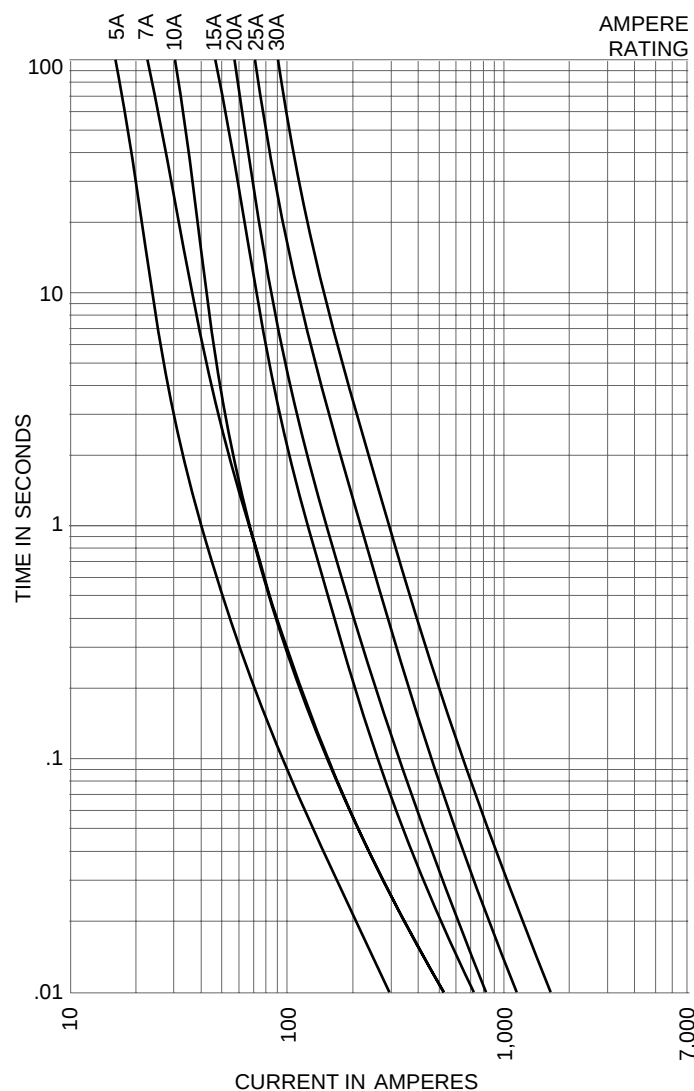
### 15.5 kV - MV155F1CB Series

MV155

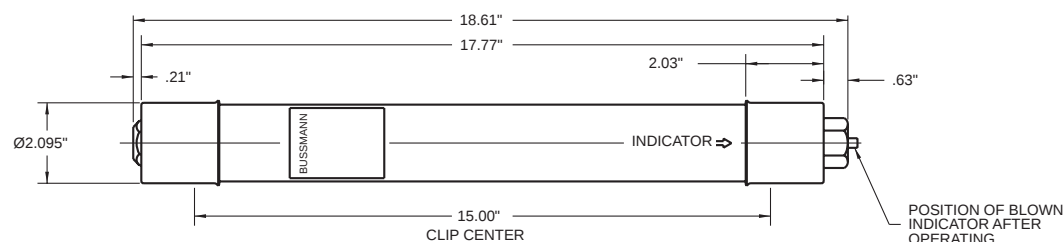
Time-Current Characteristics  
Minimum Melt



Time-Current Characteristics  
Total Clearing



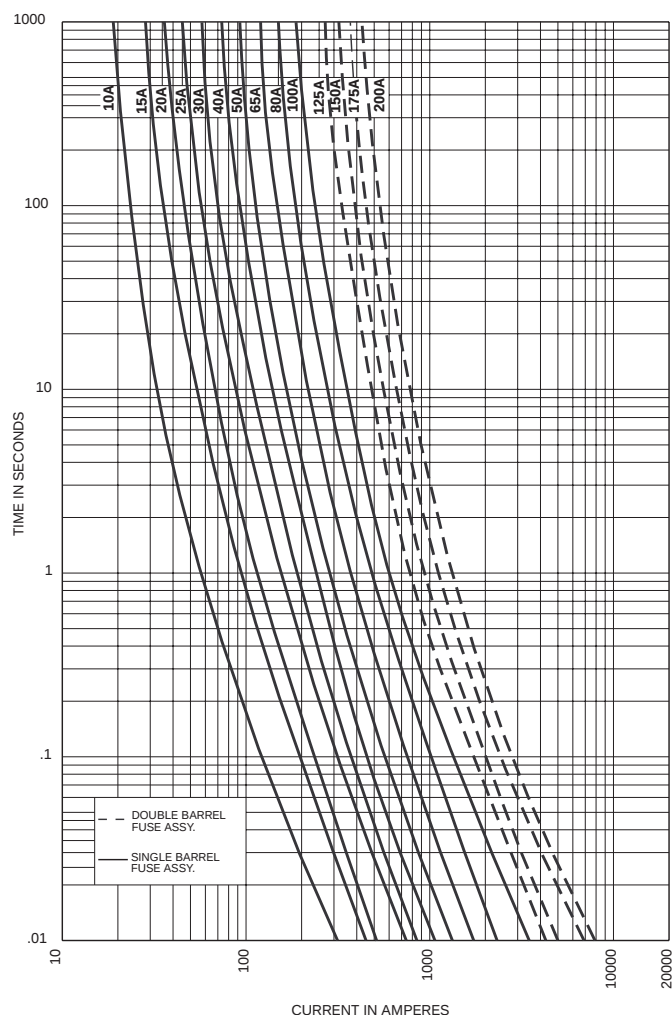
#### MV155F1CBX



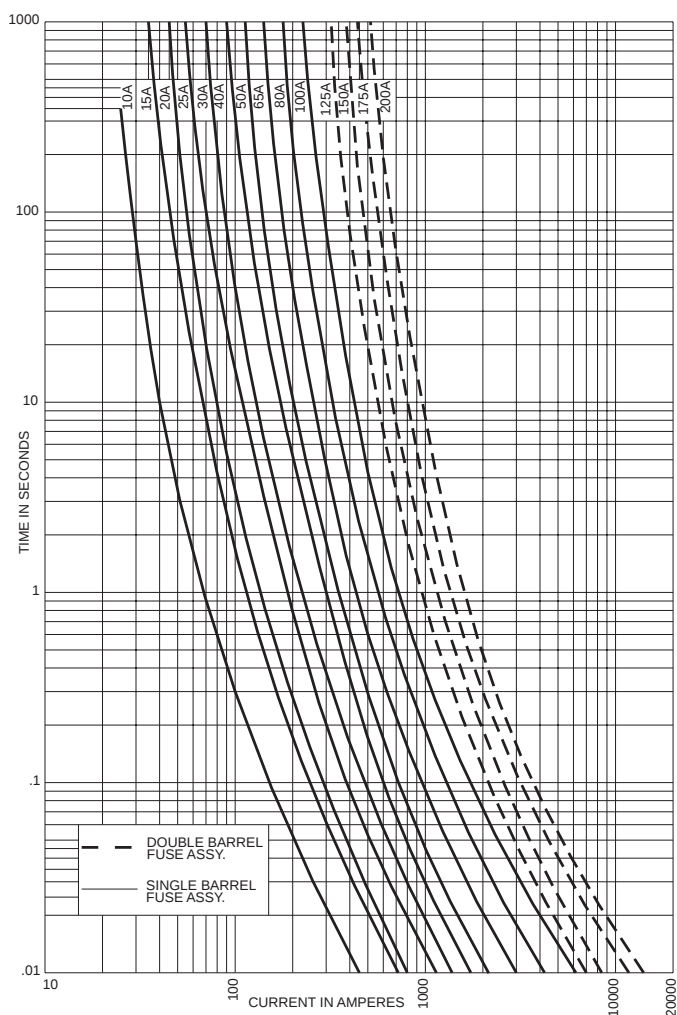
# E-Rated Medium Voltage Fuses For Transformer and Feeder Protection 15.5 kV - MV155F1DB & MV155F1DC Series

MV155

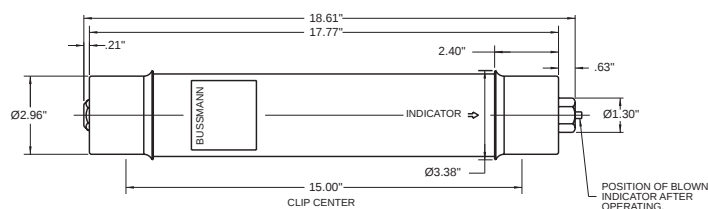
**Time-Current Characteristics  
Minimum Melt**



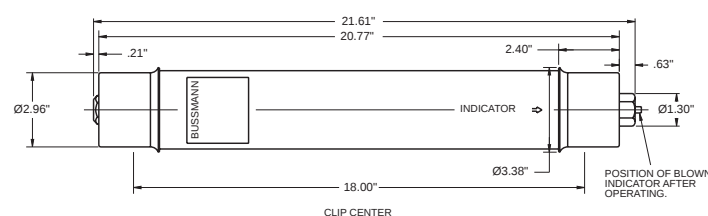
**Time-Current Characteristics  
Total Clearing**



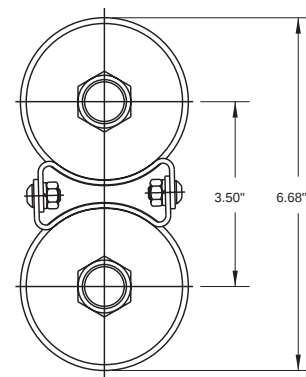
## MV155F1DBX



## MV155F1DCX



## Double Barrel Dimensions



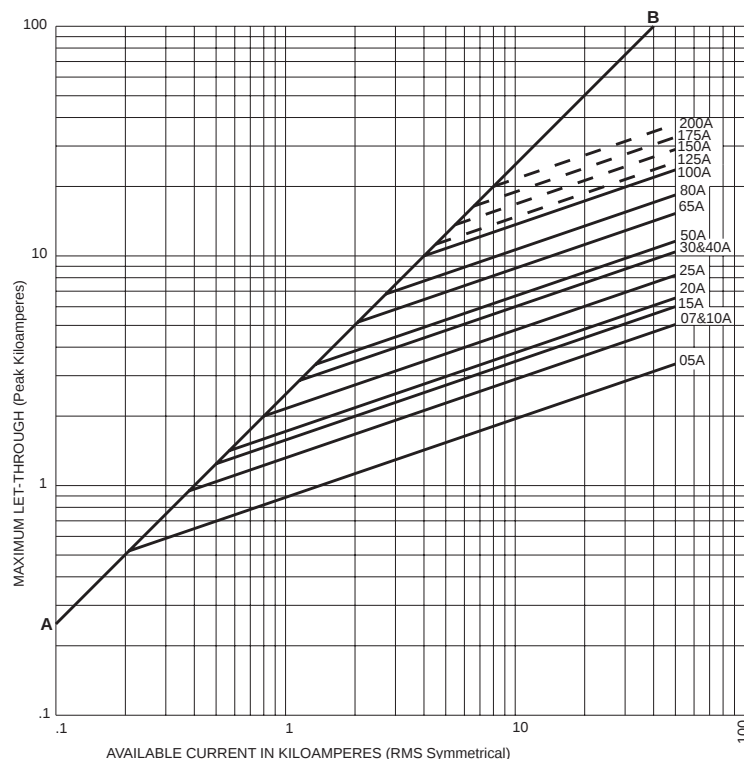
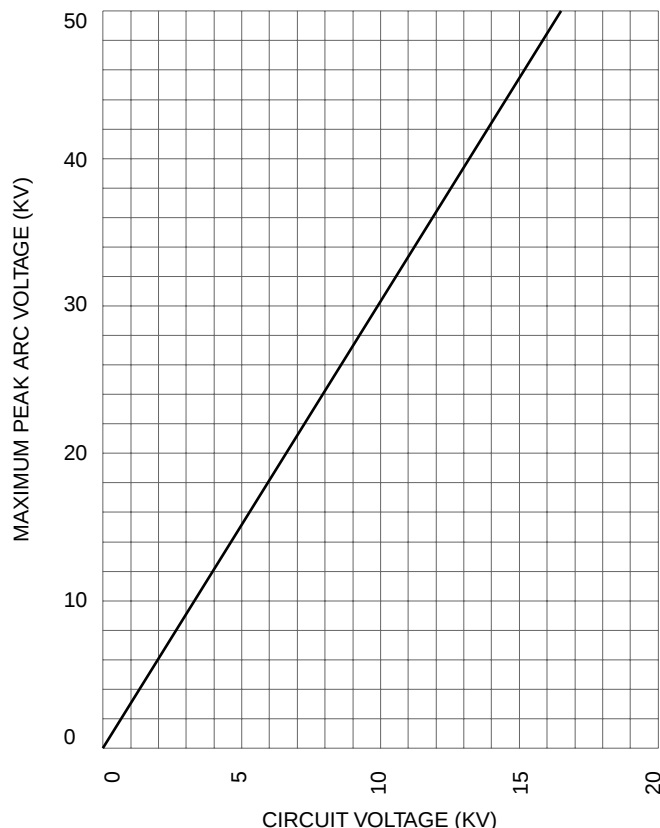
# E-Rated Medium Voltage Fuses

## For Transformer and Feeder Protection

### 15.5 kV - Peak Arc Voltage & Peak Let-Through Data

MV155

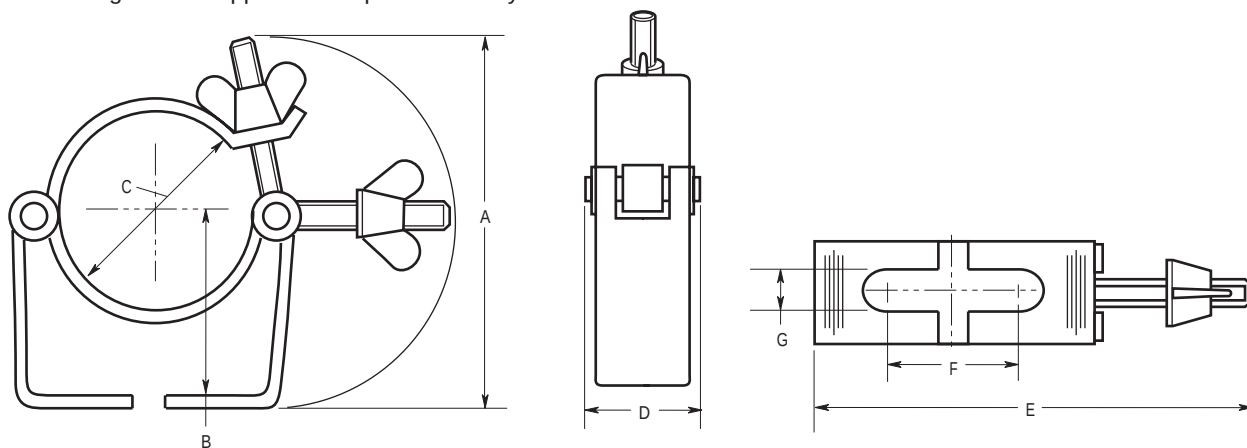
Max. Peak Let-Through Current Curves


MAXIMUM PEAK ARC VOLTAGE FOR  
"E" RATED FULL RANGE POWER FUSE  
(BUSSMANN)


#### Recommended Fuse Clips for Medium Voltage Fuses

| Part No. | Fuse Diameter | Clip Dimensions |       |       |       |       |       |      |
|----------|---------------|-----------------|-------|-------|-------|-------|-------|------|
|          |               | A               | B     | C     | D     | E     | F     | G    |
| A3354710 | 2"            | 3.74"           | 1.97" | 2.00" | 1.18" | 4.53" | 1.50" | .39" |
| A3354730 | 3"            | 4.13"           | 2.44" | 3.00" | 1.18" | 5.63" | 1.50" | .39" |

Fuseclips are for single barrel applications up to 200E only.



# E-Rated Medium Voltage Fuses

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### 15.5 kV - Cross Reference Data

MV155

#### Catalog Number Cross Reference

| Bussmann      | Gould (New)     | Gould (Old)    | Westinghouse | General Electric |            |
|---------------|-----------------|----------------|--------------|------------------|------------|
| MV155F1CBxxxE | A155F1CORO-xxxE | A1550X-xxxE-1B | ----         | ----             | ----       |
| MV155F1DBxxxE | A155F1DORO-xxxE | A1550X-xxxE-1F | 15HLE-xxxE   | 9F62DDDxxx       | 9F60FMHxxx |
| MV155F1DCxxxE | A155F1DORO-xxxE | A1550X-xxxE-1D | ----         | ----             | ----       |
| MV155F2DCxxxE | A155F2DORO-xxxE | A1550X-xxxE-1D | ----         | ----             | ----       |

#### Bussmann Medium Voltage Cross Reference

| kV      | Dia. | Clip Center | Overall Length | Sym. kA | Manufacturer      | E Ratings Available |   |    |    | S = Single Barrel |    |    |    | D = Double Barrel |    |    |     |     |     |     |     |     |     |     |     |     |  |
|---------|------|-------------|----------------|---------|-------------------|---------------------|---|----|----|-------------------|----|----|----|-------------------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|         |      |             |                |         |                   | 5                   | 7 | 10 | 15 | 20                | 25 | 30 | 40 | 50                | 65 | 80 | 100 | 125 | 150 | 175 | 200 | 250 | 300 | 350 | 400 | 450 |  |
| 15.5 kV | 2"   | 15"         | 18-3/4"        | 50      | Bussmann          | S                   | S | S  | S  | S                 | S  | S  |    |                   |    |    |     |     |     |     |     |     |     |     |     |     |  |
|         |      |             | 17-3/100"      | 50      | Gould†            | S                   | S | S  | S  | S                 | S  | S  |    |                   |    |    |     |     |     |     |     |     |     |     |     |     |  |
| 15.5 kV | 3"   | 15"         | 18-3/4"        | 50      | Bussmann          |                     |   | S  | S  | S                 | S  | S  | S  | S                 | S  | S  | S   | D   | D   | D   | D   | D   |     |     |     |     |  |
|         |      |             | 18-7/8"        | 40      | Gould†            |                     |   | S  | S  | S                 | S  | S  | S  | S                 | D  | D  | D   |     |     |     |     |     |     |     |     |     |  |
|         |      |             | 18-7/8"        | 50      | Westinghouse†     |                     |   |    |    | S                 | S  | S  | S  | S                 | S  | S  | S   | S   | D   | D   | D   | D   | D   |     |     |     |  |
|         |      |             | 18-7/8"        | 40      | General Electric† |                     |   |    |    | S                 | S  | S  | S  | S                 | S  | S  | S   | D   | D   | D   | D   | D   | D   |     |     |     |  |
| 15.5 kV | 3"   | 18"         | 21-3/4"        | 50      | Bussmann          |                     |   |    |    |                   |    |    |    |                   | S  | S  | S   | S   | S   | D   | D   | D   |     |     |     |     |  |
|         |      |             | 21-3/4"        | 50      | Gould†            |                     |   |    |    |                   |    |    |    |                   | S  | S  | S   | D   | D   | D   | D   | D   |     |     |     |     |  |

† Gould, Westinghouse and General Electric are General Purpose Fuses.

#### Current-limiting medium voltage fuses are classified into three categories:

**Full Range** - defined by ANSI as "a fuse capable of interrupting all currents from the maximum rated interrupting current down to the minimum continuous current that causes 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 normal 60 cycle current that will melt its element.

**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 in one hour." Not all currents fall within this range. It is possible to receive an overcurrent lower than the value given by the one hour criterion.

**Back-up** - defined by ANSI C37.40 as "a fuse capable of interrupting all currents from the maximum rated interrupting current down to the rated minimum interrupting current." The minimum rated 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 in series with the back-up rated fuse.

**All Bussmann MV series medium voltage fuses are E-rated and offer Full Range Protection.**

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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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