# Square body DIN 43 620 — 690V/700V (IEC/UL): 40-1000A

## 690V/700V (IEC/UL) 40-1000A

**Specifications**

**Description:** Square body DIN 43 620 blade style high speed fuses.

**Dimensions:** See dimensions illustration.

**Ratings:**

Volts: — 690Vac (IEC)
— 700Vac (UL)

Amps: — 40-1000A

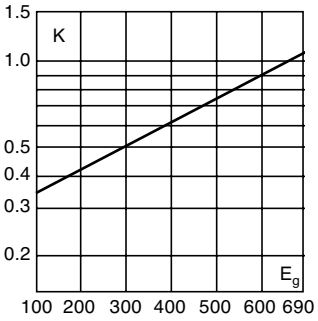
IR: — 200kA RMS Sym.

**Agency Information:** CE, Designed and tested to IEC 60269: Part 4, UL Recognized.

### Electrical Characteristics

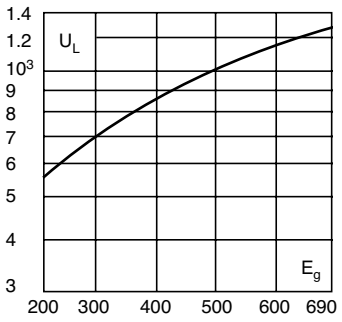
#### Total Clearing $I^2t$

The total clearing $I^2t$ at rated voltage and at power factor of 15% are given in the electrical characteristics. For other voltages, the clearing $I^2t$ is found by multiplying by correction factor, K, given as a function of applied working voltage, $E_g$, (rms).



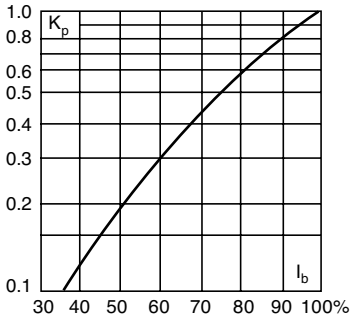

#### Arc Voltage

This curve gives the peak arc voltage, $U_L$, which may appear across the fuse during its operation as a function of the applied working voltage, $E_g$, (rms) at a power factor of 15%.




#### Power Losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the power losses at load currents lower than the rated current. The correction factor, $K_p$, is given as a function of the RMS load current, $I_b$, in % of the rated current.




### Features and Benefits

- Excellent dc performance
- Low arc voltage and low energy let-through ($I^2t$)
- Low watts loss
- Superior cycling capability

### Typical Applications

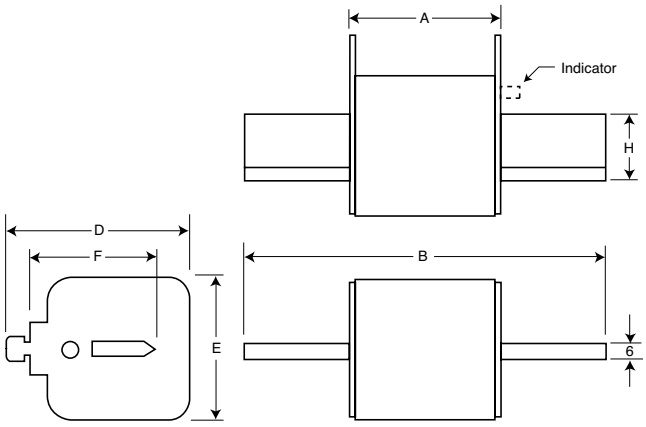
- DC common bus
- DC drives
- Power converters/rectifiers
- Reduced voltage starters

### Dimensions (mm)

Type DIN 1*, DIN 2, DIN 3

| Size | A | B | D | E | F | H |
|---|---|---|---|---|---|---|
| 1* | 69 | 135 | 58 | 45 | 40 | 20 |
| 2 | 69 | 150 | 71 | 55 | 48 | 26 |
| 3 | 68 | 150 | 88 | 76 | 60 | 33 |

1mm = 0.0394" / 1" = 25.4mm



# Square body DIN 43 620 — 690V/700V (IEC/UL): 40-1000A

## Catalog Numbers

| Catalog Numbers | | Electrical Characteristics | | | |
|---|---|---|---|---|---|
| DIN Type T Indicator for Micro | Size | Rated Current RMS-Amps | I²t (A²Sec) Pre-arc | I²t (A²Sec) Clearing at 660V | Watts Loss |
| 170M3808 | 1* | 40 | 40 | 270 | 9 |
| 170M3809 | | 50 | 77 | 515 | 11 |
| 170M3810 | | 63 | 115 | 770 | 14 |
| 170M3811 | | 80 | 185 | 1250 | 18 |
| 170M3812 | | 100 | 360 | 2450 | 21 |
| 170M3813 | | 125 | 550 | 3700 | 26 |
| 170M3814 | | 160 | 1100 | 7500 | 30 |
| 170M3815 | | 200 | 2200 | 15000 | 35 |
| 170M3816 | | 250 | 4200 | 28500 | 40 |
| 170M3817 | | 315 | 7000 | 46500 | 50 |
| 170M3818 | | 350 | 10000 | 68500 | 55 |
| 170M3819 | | 400 | 15000 | 105000 | 60 |
| 170M5808 | 2 | 400 | 11000 | 74000 | 65 |
| 170M5809 | | 450 | 15500 | 105000 | 70 |
| 170M5810 | | 500 | 21500 | 145000 | 75 |
| 170M5811 | | 550 | 28000 | 190000 | 80 |
| 170M5812 | | 630 | 41000 | 275000 | 90 |
| 170M5813 | | 700 | 60500 | 405000 | 95 |
| 170M6808 | 3 | 500 | 14000 | 95000 | 95 |
| 170M6809 | | 550 | 19500 | 135000 | 100 |
| 170M6810 | | 630 | 31000 | 210000 | 105 |
| 170M6811 | | 700 | 44500 | 300000 | 110 |
| 170M6812 | | 800 | 69500 | 465000 | 115 |
| 170M6813 | | 900 | 100000 | 670000 | 120 |
| 170M6814 | | 1000 | 140000 | 945000 | 125 |

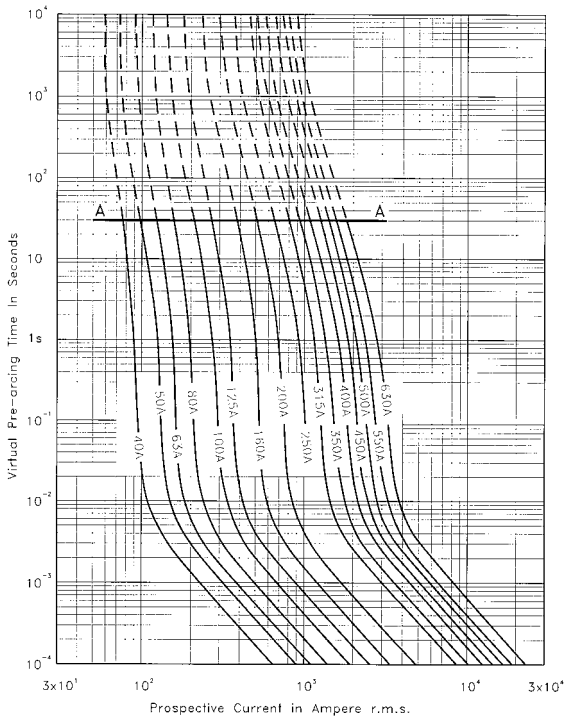
• Watts loss provided at rated current.
• Microswitch indicator ordered separately. See accessories on pages 179-180.

### Rated Current

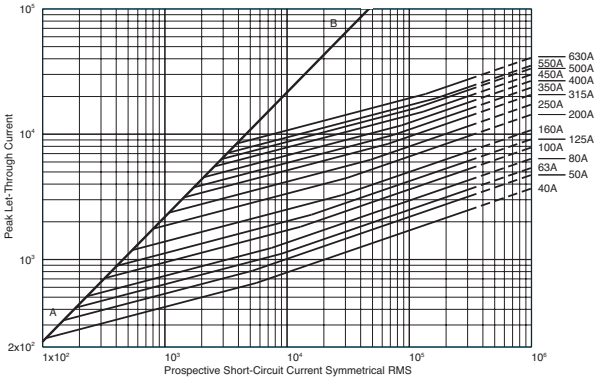
The rated current of this fuse range has been given with copper conductors that have a current density of 1.3 A/mm² (IEC 60269-4). For conductor cross section according to IEC 60269-1, the fuses must be derated. Please contact Cooper Bussmann for application assistance.

## Size 1* — 40-630A: 690V

### Time-Current Curve




### Peak Let-Through Curve

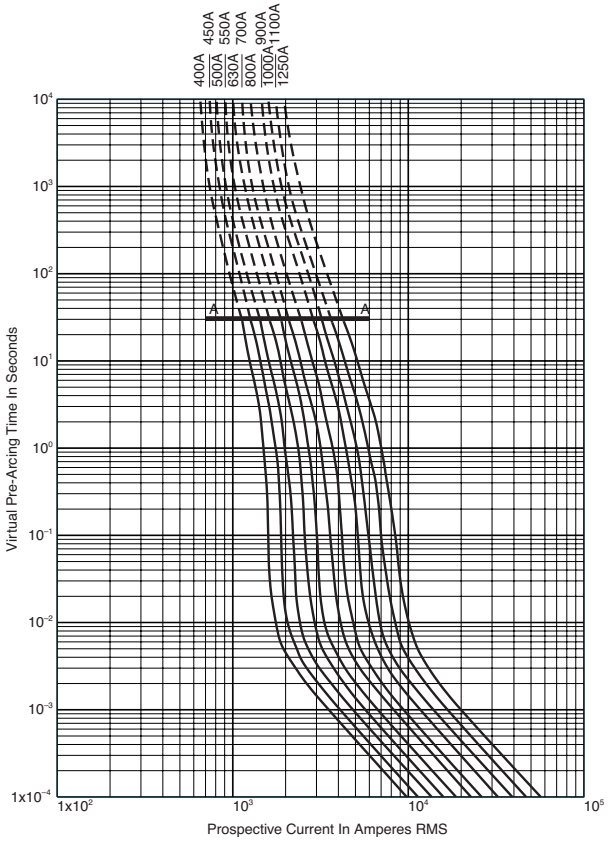



**Data Sheet: 17056314**

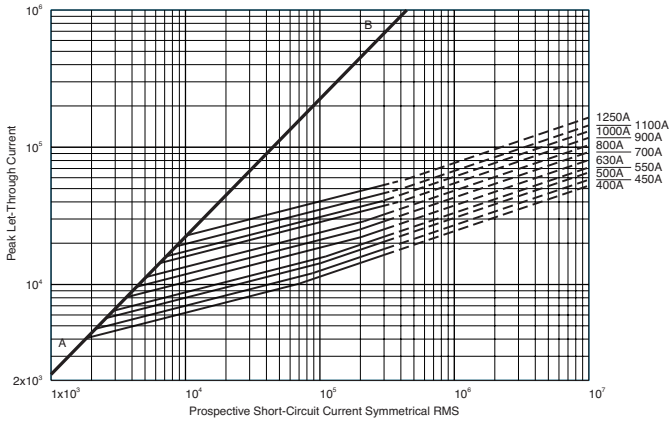
# Square body DIN 43 620 — 690V/700V (IEC/UL): 40-1000A

## Size 2 — 400-1250A: 690V

### Time-Current Curve



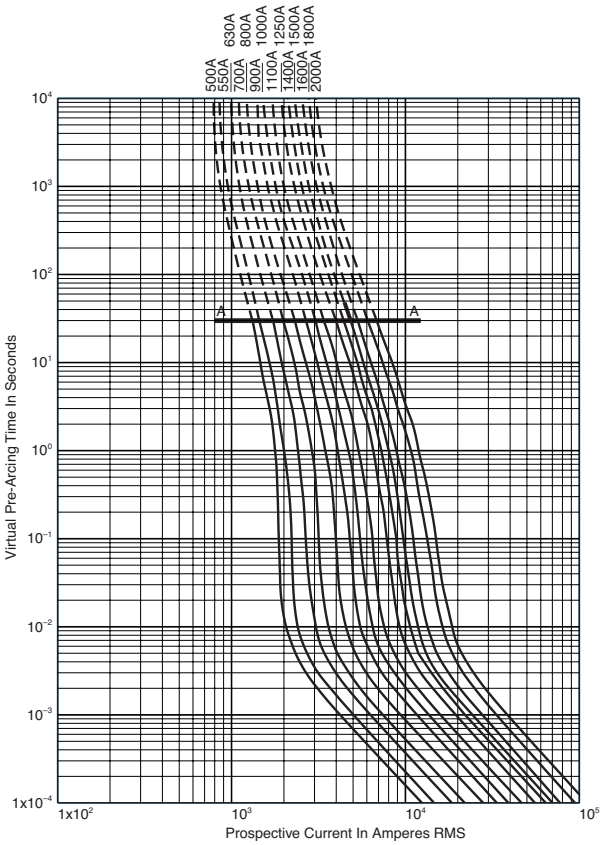

### Peak Let-Through Curve



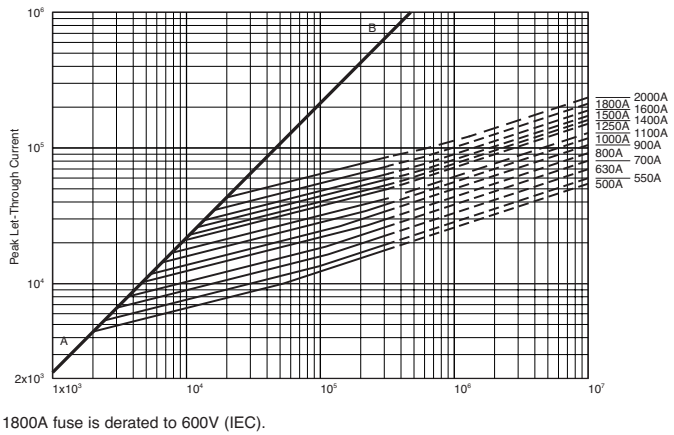

**Data Sheet: 17056318**

## Size 3 — 500-2000A: 690V

### Time-Current Curve




### Peak Let-Through Curve




1800A fuse is derated to 600V (IEC).
2000A fuse is derated to 550V (IEC).

**Data Sheet: 17056320**