

# Leadership in fusible circuit protection



*Powering Business Worldwide*



We make what matters work.\*



At Eaton, we believe that power is a fundamental part of just about everything people do. That's why we're dedicated to helping our customers find new ways to manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably. To improve people's lives, the communities where we live and work, and the planet our future generations depend upon. Because this is what really matters. And we're here to make sure it works.

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**EATON**  
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**We make what matters work.**



**Eaton is the leading source of fusible circuit protection solutions in the global marketplace. Eaton's Bussmann series products are approved for use around the world and meet agency requirements and international standards: IEC, VDE, DIN,UL, CSA, BS and others.**

The headquarters for Eaton's Bussmann series product line is located in Burton-on-the-Wolds, Leicestershire (UK) and is part of Eaton's Industrial Control and Protection EMEA division.

Eaton manufactures over 50,000 Bussmann series part numbers, covering extensive fusible circuit protection solutions for a wide range of applications: residential, industrial, motor protection, power conversion and distribution.

Eaton has been a leading exponent in the design, development and manufacture of fuse links and their associated accessories for more than 100 years and has supplied fuse links to more than 90 countries worldwide.

Eaton's team of specialist Engineers and Field Applications Engineers plays a leading role in international standardisation of fuse links offering comprehensive advice on selection and applications.

With a continual commitment to meet our customers' needs with innovative high quality products with ISO 9001 'approval systems', Eaton is the supplier of choice for circuit protection solutions.

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|-------------------------------------------------|-------------------------------------|-----------------------------------|----------------------------------|---------|
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# North American fuse links

## FWA - 130 V a.c. / V d.c.(UL), 1000 A to 4000 A

### Specifications

#### Description

North American style flush end high speed fuse links for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

#### Technical data

- Rated voltage: 130 V a.c. / V d.c. (UL)
- Rated current: 1000 A to 4000 A
- Breaking capacity:
  - 200 kA RMS Sym at 130 V a.c.
  - 50 kA at 130 V d.c.

#### Standards / Agency information

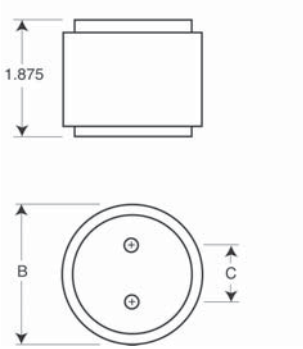
CE, UL Recognised JFHR2.E91958 on 1000 A to 2000 A fuse links

#### Catalogue numbers

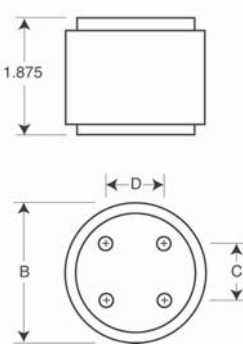
| Rated voltage            | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                        | Watts loss (W) | Catalogue numbers |
|--------------------------|----------------------|---------------------------------------|------------------------|----------------|-------------------|
|                          |                      | Pre-arcing                            | Clearing at 130 V a.c. |                |                   |
| 130 V a.c. / V d.c. (UL) | 1000                 | 170,000                               | 460,000                | 60             | FWA-1000AH        |
| 130 V a.c. / V d.c. (UL) | 1200                 | 270,000                               | 730,000                | 70             | FWA-1200AH        |
| 130 V a.c. / V d.c. (UL) | 1500                 | 520,000                               | 1,400,000              | 78             | FWA-1500AH        |
| 130 V a.c. / V d.c. (UL) | 2000                 | 860,000                               | 2,400,000              | 108            | FWA-2000AH        |
| 130 V a.c. / V d.c. (UL) | 2500                 | 1,500,000                             | 4,100,000              | 130            | FWA-2500AH        |
| 130 V a.c. / V d.c. (UL) | 3000                 | 2,100,000                             | 5,700,000              | 150            | FWA-3000AH        |
| 130 V a.c. / V d.c. (UL) | 4000                 | 3,400,000                             | 9,200,000              | 257            | FWA-4000AH        |



#### Dimensions (in) - 1000 A to 3000 A



#### Dimensions (in) - 4000 A

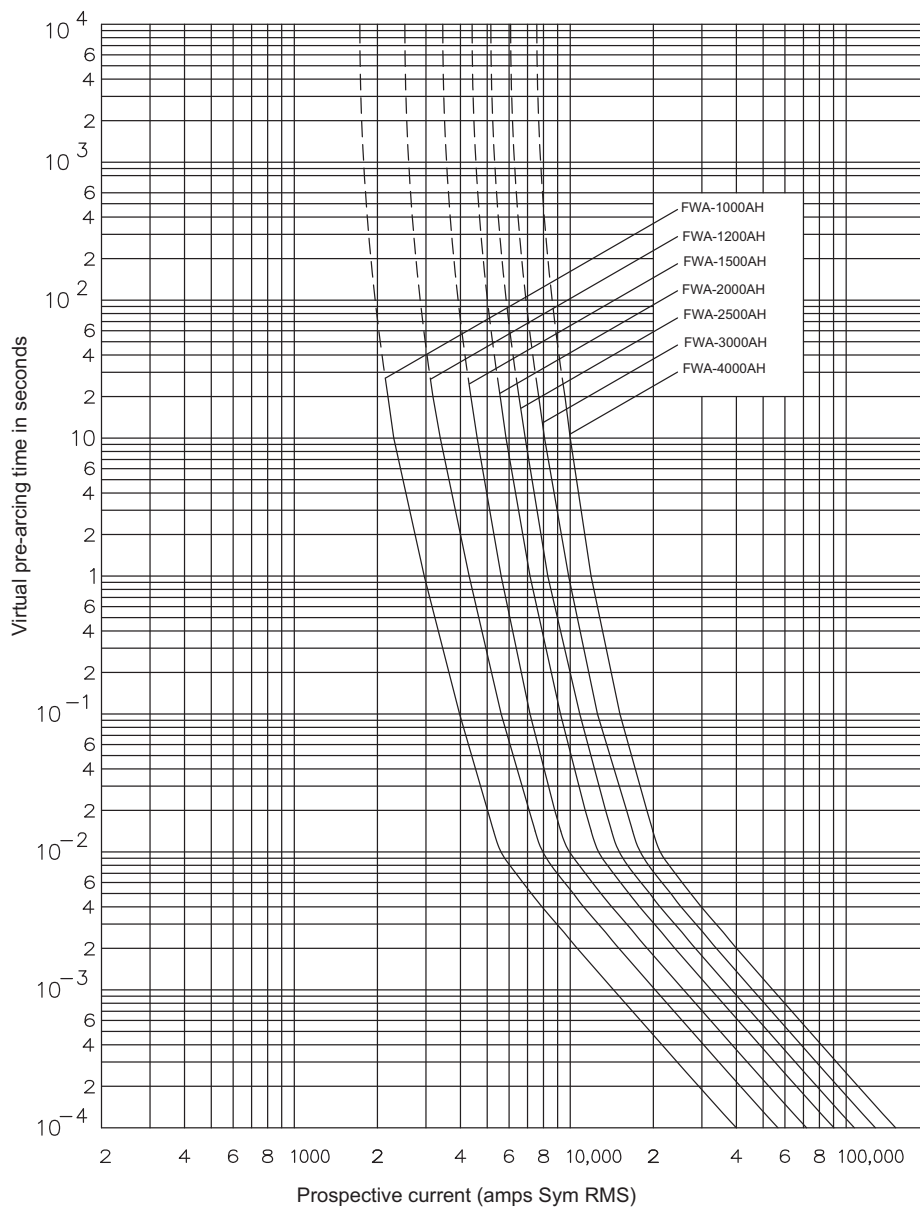


| Rated current (Amps) | B   | C   | D   | Thread depth              |
|----------------------|-----|-----|-----|---------------------------|
| 1000 to 2000         | 2   | 1   | -   | Tapped 3/8"-24 x 1/2" UNF |
| 2500 to 3000         | 3   | 1.5 | -   | Tapped 1/2"-20 x 1/2" UNF |
| 4000                 | 3.5 | 1.5 | 1.5 | Tapped 1/2"-20 x 1/2" UNF |

1" = 25.4mm

# FWA - 130 V a.c. / V d.c.(UL), 1000 A to 4000 A

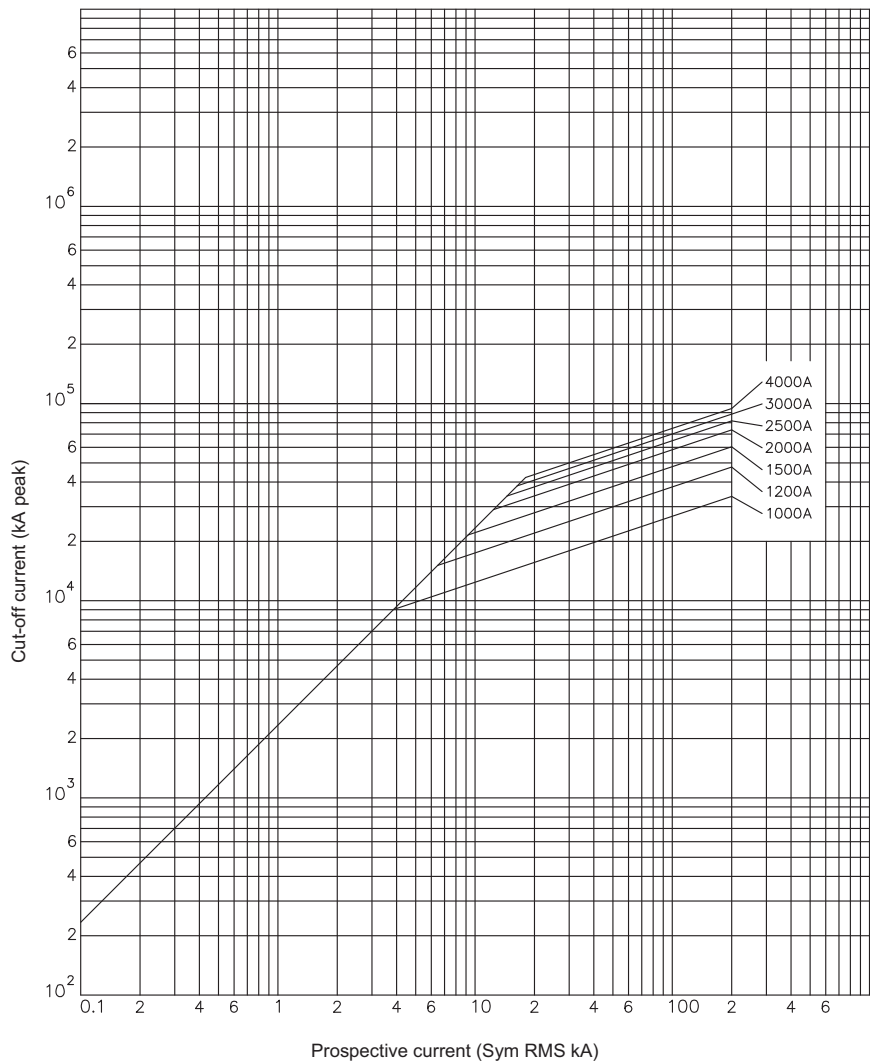
Time-current curve - 1000 A to 4000 A





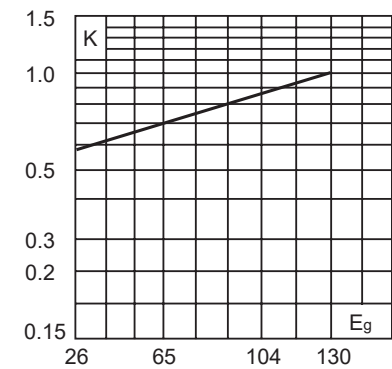
FWA - 130 V a.c. / V d.c.(UL), 1000 A to 4000 A

Cut-off curve - 1000 A to 4000 A



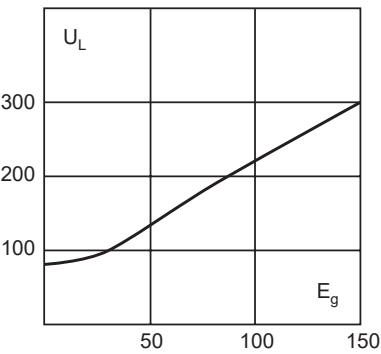
Total clearing I<sup>2</sup>t

The total clearing I<sup>2</sup>t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I<sup>2</sup>t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



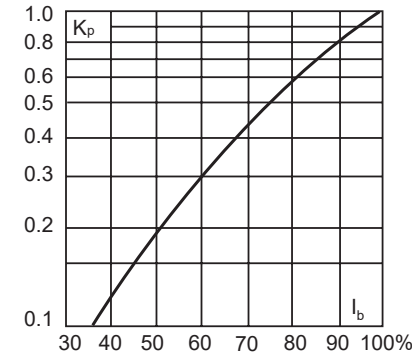
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



## FWA - 150 V a.c. / V d.c. (UL), 70 A to 1000 A

### Specifications

#### Description

North American style bolted tag high speed fuse links used for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

#### Technical Data

- Rated voltage:
  - 150 V a.c. / V d.c. (UL)
  - 80 V d.c. 1000 A only
- Rated current: 70 A to 1000 A
- Breaking capacity:
  - 100 kA RMS Sym. (70 A to 400 A) at 150 V a.c.
  - 200 kA RMS Sym. (500 A to 1000 A) at 150 V a.c.
  - 20 kA at 150 V a.c. / V d.c. (70 A to 800 A)
  - 100 kA at 80 V d.c. (70 A to 1000 A)

#### Standards / Agency information

CE, UL Recognised JFHR2.E91958

#### Catalogue numbers

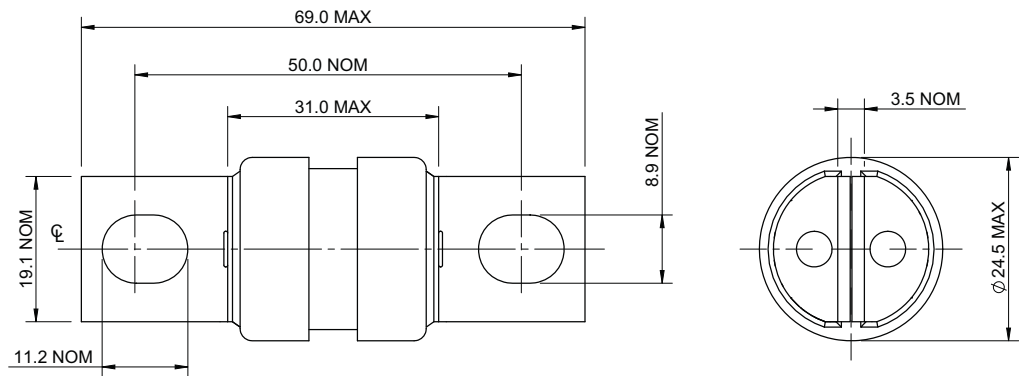
| Rated voltage /<br>Breaking capacity | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                           | Watts loss<br>(W) | Catalogue<br>numbers |
|--------------------------------------|-------------------------|---------------------------------------|---------------------------|-------------------|----------------------|
|                                      |                         | Pre-arcing                            | Clearing<br>at 150 V a.c. |                   |                      |
| 150 V a.c. / 100 kA                  | 70                      | 470                                   | 4000                      | 6.9               | FWA-70B              |
|                                      | 80                      | 670                                   | 6000                      | 7.7               | FWA-80B              |
|                                      | 100                     | 1200                                  | 12,000                    | 9                 | FWA-100B             |
|                                      | 125                     | 1870                                  | 18,000                    | 11.2              | FWA-125B             |
|                                      | 150                     | 2700                                  | 26,000                    | 13.5              | FWA-150B             |
| 80 V d.c. / 100 kA                   | 200                     | 4780                                  | 45,000                    | 17.6              | FWA-200B             |
| 150 V d.c. / 20 kA                   | 250                     | 7470                                  | 70,000                    | 22.5              | FWA-250B             |
|                                      | 300                     | 10,760                                | 100,000                   | 27                | FWA-300B             |
|                                      | 350                     | 15,700                                | 140,000                   | 30.6              | FWA-350B             |
|                                      | 400                     | 20,300                                | 180,000                   | 35.2              | FWA-400B             |
| 150 V a.c. / 200 kA                  | 500                     | 39,000                                | 120,000                   | 35                | FWA-500A             |
| 80 V d.c. / 100 kA                   | 600                     | 46,000                                | 140,000                   | 47                | FWA-600A             |
|                                      | 700                     | 75,000                                | 220,000                   | 49                | FWA-700A             |
| 150 V d.c. / 20 kA                   | 800                     | 92,000                                | 280,000                   | 58                | FWA-800A             |
| 150 V a.c. / 200 kA                  | 1000                    | 170,000                               | 510,000                   | 60                | FWA-1000A            |
| 80 V d.c. / 100 kA                   |                         |                                       |                           |                   |                      |



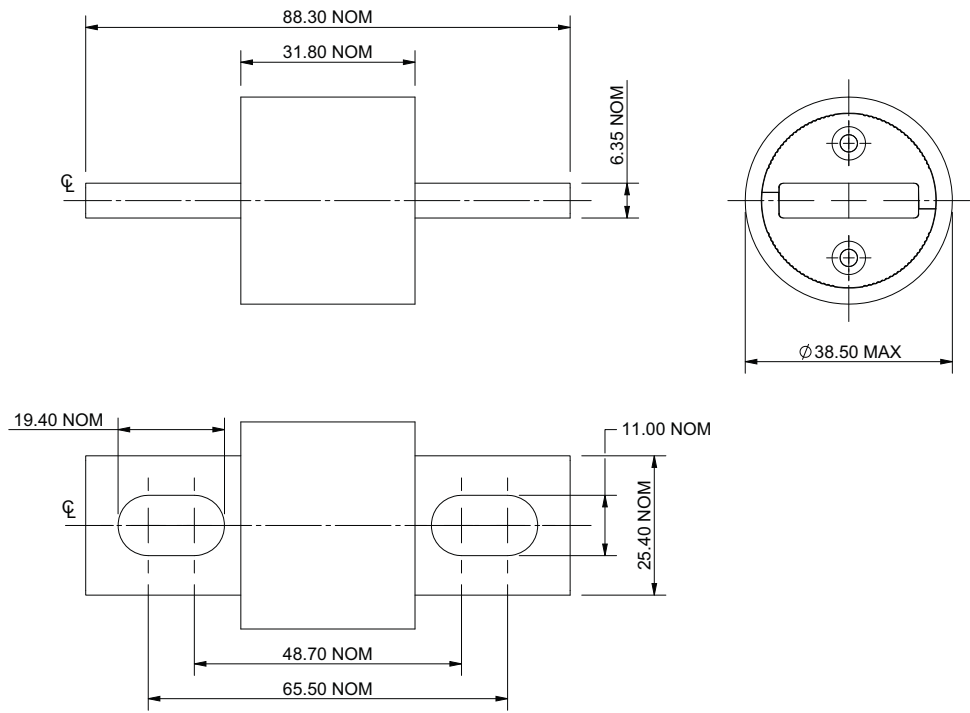
# North American fuse links

## FWA - 150 V a.c. / V d.c. (UL), 70 A to 1000 A

### Dimensions (mm) - 70 A to 400 A

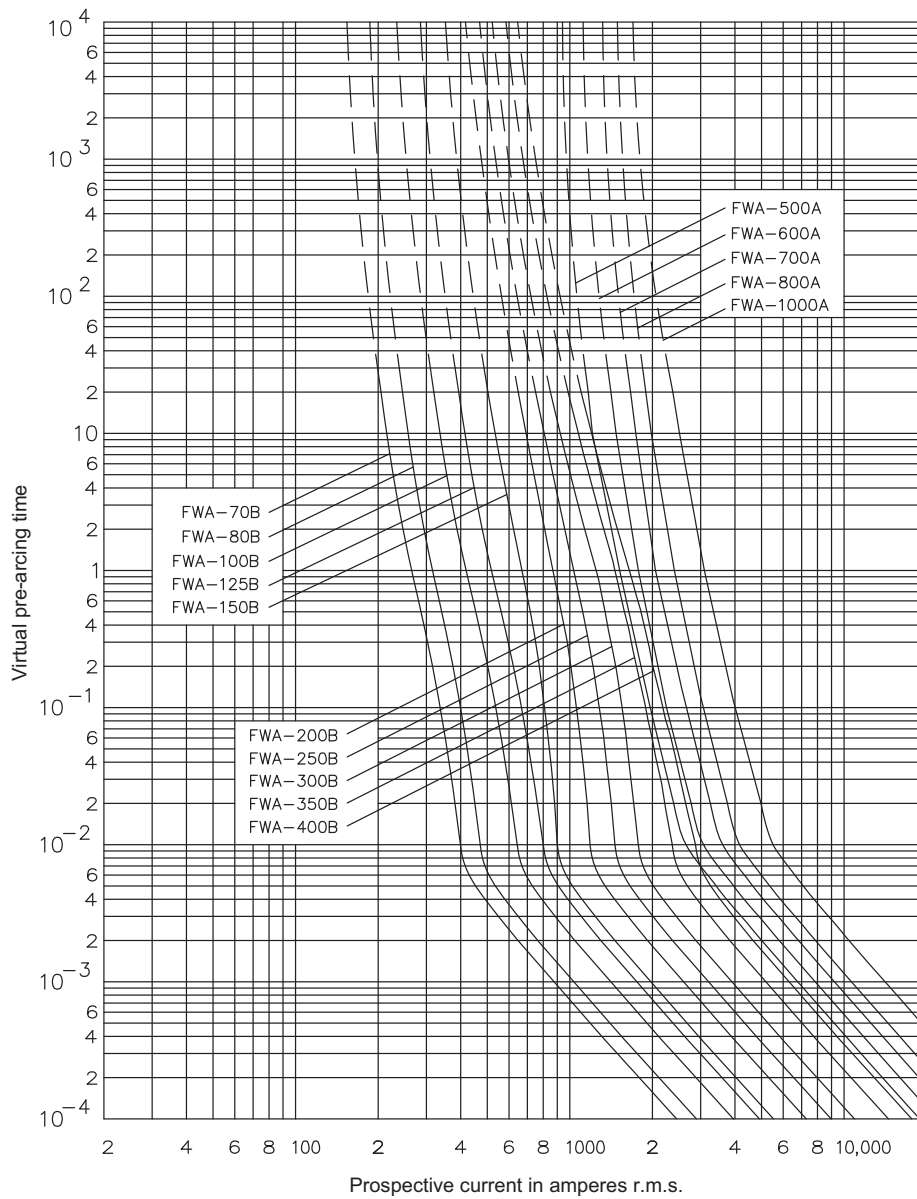


### Dimensions (mm) - 500 A to 1000 A



# FWA - 150 V a.c. / V d.c. (UL), 70 A to 1000 A

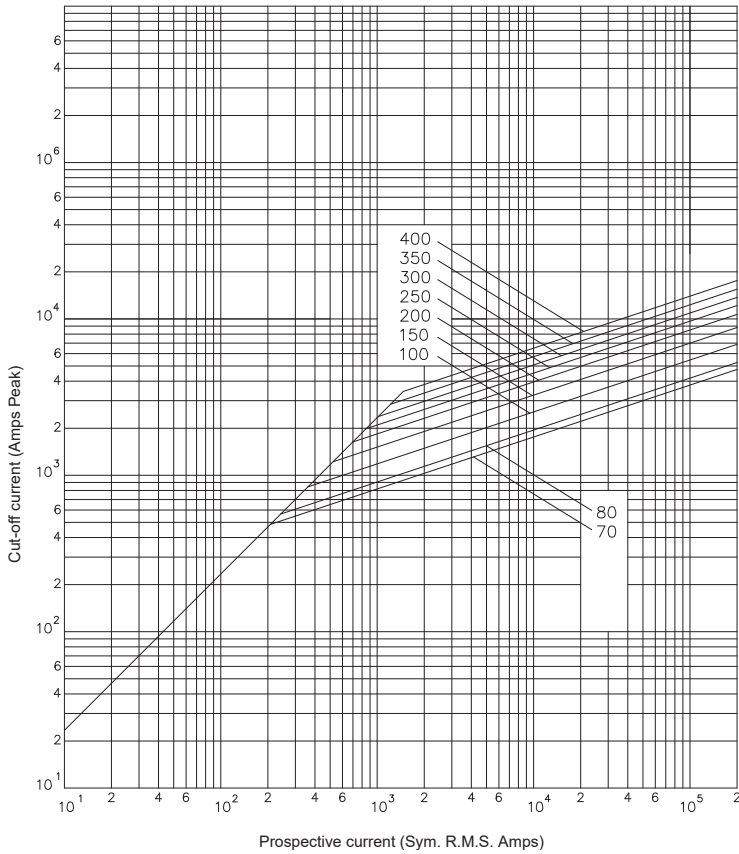
## Time-current curve - 70 A to 1000 A



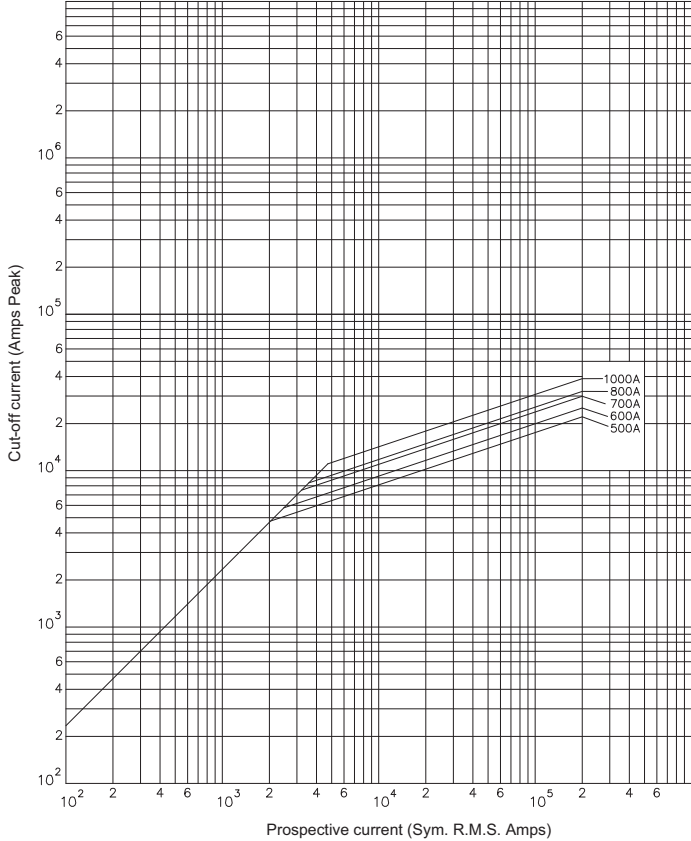


FWA - 150 V a.c. / V d.c. (UL), 70 A to 1000 A

Cut-off curve - 70 A to 400 A

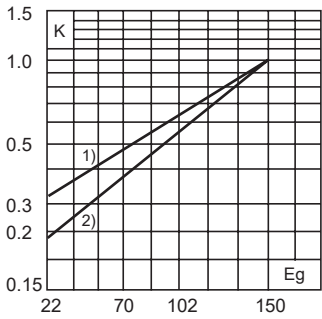


Cut-off curve - 500 A to 1000 A



Total clearing I<sup>2</sup>t

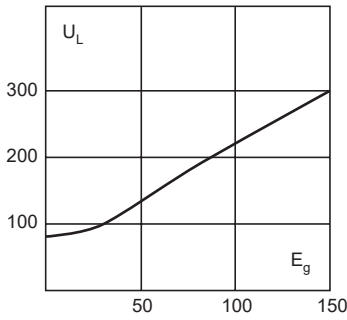
The total clearing I<sup>2</sup>t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I<sup>2</sup>t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



- 1) 500 - 1000 A
- 2) 70 - 400 A

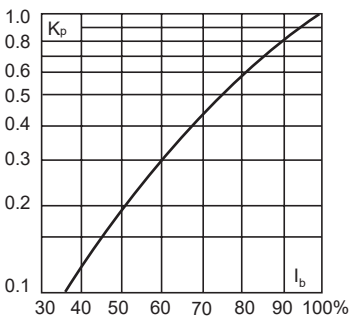
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



## FWX - 250 V a.c. / V d.c. (UL), 35 A to 2500 A

### Specifications

#### Description

North American style bolted tags and flush end high speed fuse links for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

#### Technical Data

- Rated voltage: 250 V a.c. / V d.c. (UL)
- Rated current: 35 A to 2500 A
- Breaking capacity:
  - 200 kA RMS Sym.at 250 V a.c.
  - 50 kA at 250 V d.c. (35 A to 800 A)

#### Standards / Agency information

CE, UL Recognised file JFHR2.E56412 and CSA component acceptance on 35 A to 800 A fuse links (50 kA IR at 250 V d.c.)

#### Catalogue numbers

| Rated voltage          | Rated current (Amps) | P <sub>t</sub> (A <sup>2</sup> Sec) |                        | Watts loss (W) | Catalogue numbers |
|------------------------|----------------------|-------------------------------------|------------------------|----------------|-------------------|
|                        |                      | Pre-arcing                          | Clearing at 250 V a.c. |                |                   |
| 250 V a.c./ V d.c.(UL) | 35                   | 50                                  | 230                    | 4.2            | FWX-35A           |
| 250 V a.c./ V d.c.(UL) | 40                   | 60                                  | 310                    | 5.2            | FWX-40A           |
| 250 V a.c./ V d.c.(UL) | 45                   | 80                                  | 390                    | 5.7            | FWX-45A           |
| 250 V a.c./ V d.c.(UL) | 50                   | 100                                 | 520                    | 6              | FWX-50A           |
| 250 V a.c./ V d.c.(UL) | 60                   | 140                                 | 740                    | 8.1            | FWX-60A           |
| 250 V a.c./ V d.c.(UL) | 70                   | 330                                 | 1400                   | 7.2            | FWX-70A           |
| 250 V a.c./ V d.c.(UL) | 80                   | 430                                 | 1850                   | 8.1            | FWX-80A           |
| 250 V a.c./ V d.c.(UL) | 90                   | 570                                 | 2450                   | 9              | FWX-90A           |
| 250 V a.c./ V d.c.(UL) | 100                  | 740                                 | 3150                   | 10             | FWX-100A          |
| 250 V a.c./ V d.c.(UL) | 125                  | 1130                                | 4850                   | 12.5           | FWX-125A          |
| 250 V a.c./ V d.c.(UL) | 150                  | 1620                                | 6950                   | 15.7           | FWX-150A          |
| 250 V a.c./ V d.c.(UL) | 175                  | 2170                                | 9300                   | 18.5           | FWX-175A          |
| 250 V a.c./ V d.c.(UL) | 200                  | 2790                                | 12,000                 | 22             | FWX-200A          |
| 250 V a.c./ V d.c.(UL) | 225                  | 3210                                | 14,700                 | 24             | FWX-225A          |
| 250 V a.c./ V d.c.(UL) | 250                  | 3960                                | 18,100                 | 27             | FWX-250A          |
| 250 V a.c./ V d.c.(UL) | 275                  | 4720                                | 21,600                 | 31             | FWX-275A          |
| 250 V a.c./ V d.c.(UL) | 300                  | 6000                                | 27,300                 | 32             | FWX-300A          |
| 250 V a.c./ V d.c.(UL) | 350                  | 10,600                              | 48,600                 | 39             | FWX-350A          |
| 250 V a.c./ V d.c.(UL) | 400                  | 14,500                              | 66,100                 | 44             | FWX-400A          |
| 250 V a.c./ V d.c.(UL) | 450                  | 22,100                              | 101,000                | 49             | FWX-450A          |
| 250 V a.c./ V d.c.(UL) | 500                  | 28,000                              | 128,000                | 54             | FWX-500A          |
| 250 V a.c./ V d.c.(UL) | 600                  | 41,100                              | 188,000                | 62             | FWX-600A          |
| 250 V a.c./ V d.c.(UL) | 700                  | 48,800                              | 190,000                | 72             | FWX-700A          |
| 250 V a.c./ V d.c.(UL) | 800                  | 59,000                              | 230,000                | 84             | FWX-800A          |
| 250 V a.c./ V d.c.(UL) | 1000                 | 44,000                              | 360,000                | 100            | FWX-1000AH        |
| 250 V a.c./ V d.c.(UL) | 1200                 | 92,000                              | 750,000                | 103            | FWX-1200AH        |
| 250 V a.c./ V d.c.(UL) | 1500                 | 120,000                             | 880,000                | 140            | FWX-1500AH        |
| 250 V a.c./ V d.c.(UL) | 1600                 | 160,000                             | 1,200,000              | 140            | FWX-1600AH        |
| 250 V a.c./ V d.c.(UL) | 2000                 | 320,000                             | 2,300,000              | 151            | FWX-2000AH        |
| 250 V a.c./ V d.c.(UL) | 2500                 | 670,000                             | 4,700,000              | 163            | FWX-2500AH        |

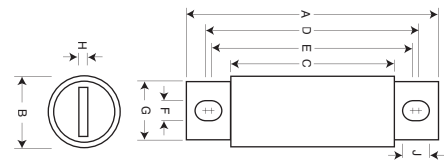


North American fuse links

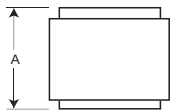
FWX - 250 V a.c. / V d.c. (UL), 35 A to 2500 A

Dimensions (in)

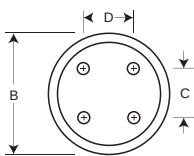
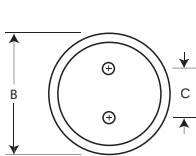
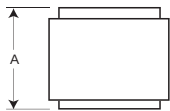
35 A to 800 A



1000 A to 1200 A



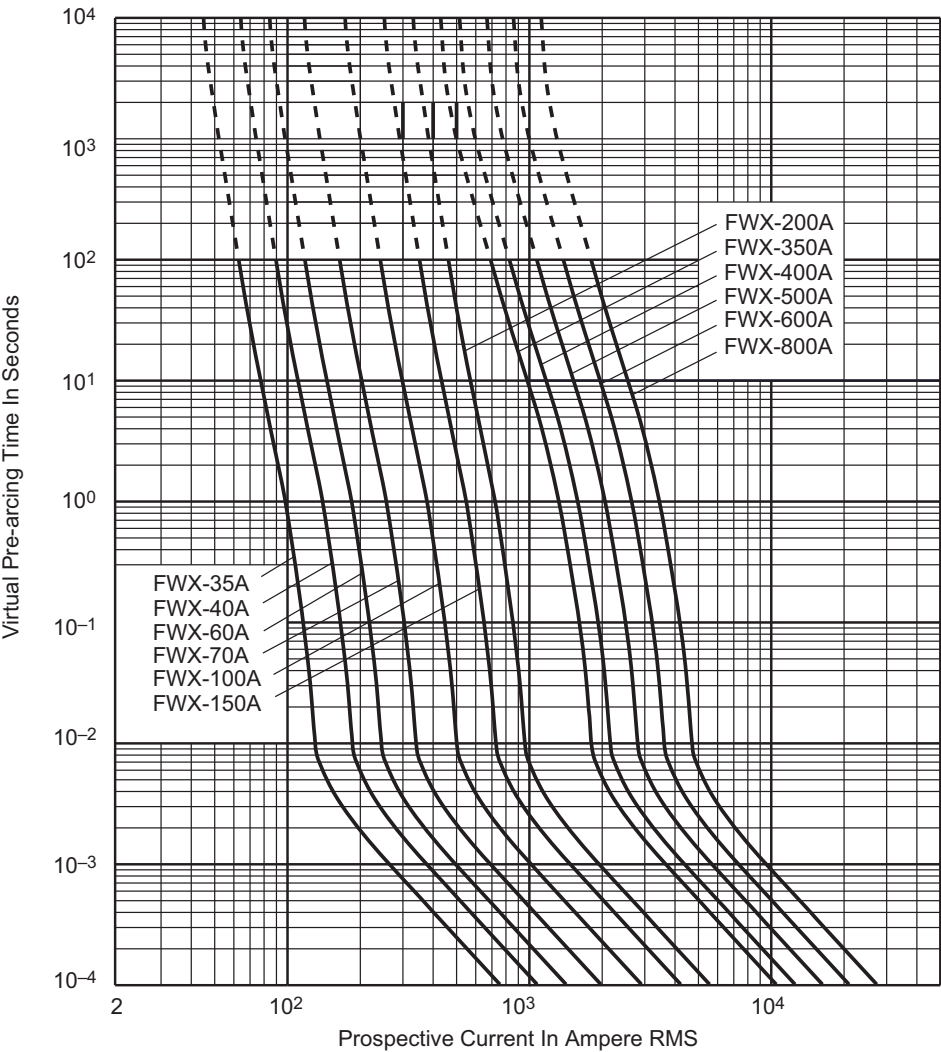
1500 A to 2500 A



| Amp range | A    | B    | C    | D    | E    | F    | G    | H    | J    | Tapped thread depth |
|-----------|------|------|------|------|------|------|------|------|------|---------------------|
| 35-60     | 3.19 | 0.81 | 1.59 | 2.59 | 2.25 | 0.34 | 0.63 | 0.13 | 0.52 | -                   |
| 70-200    | 3.13 | 1.22 | 1.59 | 2.44 | 2.19 | 0.34 | 1    | 0.19 | 0.47 | -                   |
| 225-600   | 3.84 | 1.5  | 1.59 | 2.94 | 2.25 | 0.41 | 1    | 0.25 | 0.75 | -                   |
| 700-800   | 3.84 | 2    | 1.59 | 3.03 | 2.28 | 0.41 | 1.5  | 0.25 | 0.78 | -                   |
| 1000-1200 | 2.59 | 3    | 1.5  | -    | -    | -    | -    | -    | -    | 3/8"-24 x           |
| 1500-2500 | 2.59 | 3.5  | 1.5  | 1.5  | -    | -    | -    | -    | -    | 1/2" UNF            |

1" = 25.4mm

Time-current curve - 35 A to 800 A

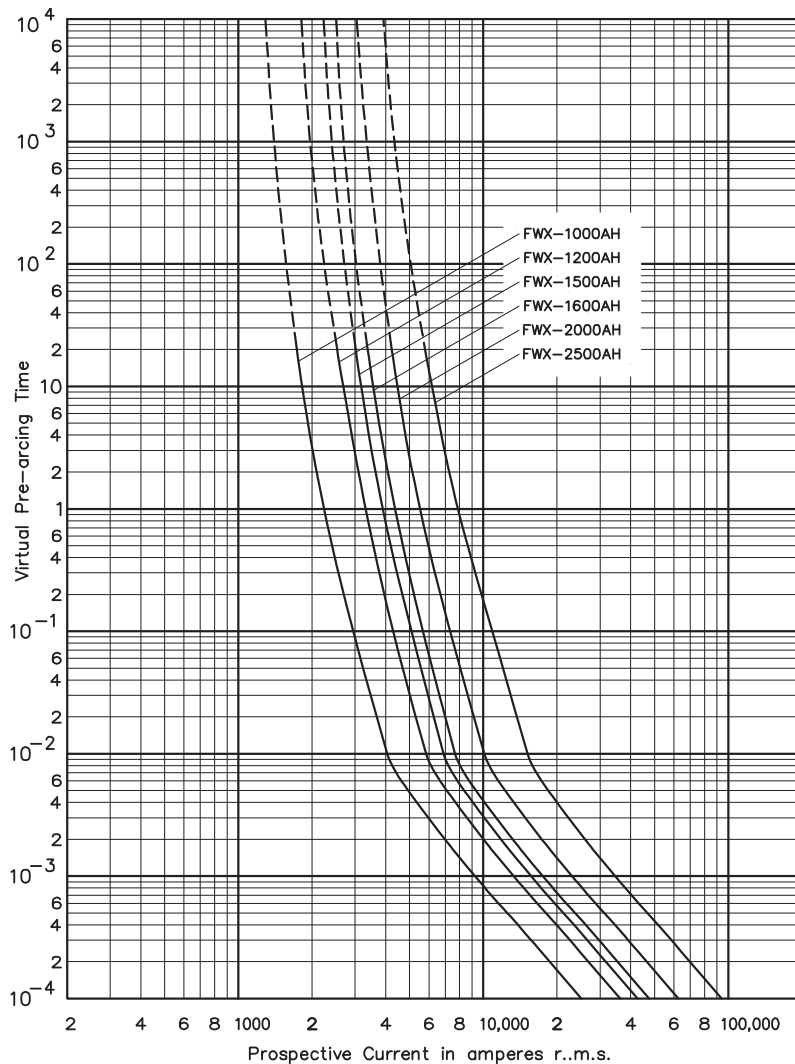


Contact [FUSETECH@eaton.com](mailto:FUSETECH@eaton.com) for the time current curves for the following ratings: 45, 50, 80, 90, 125, 175, 225, 250, 275, 300, 450 and 700 A

Data sheets: 720005, 359 (35-800 A), 5785299 (100-2500 A)

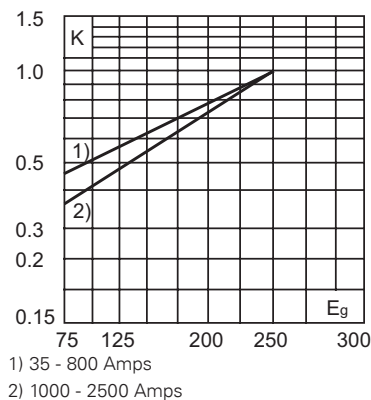
## FWX - 250 V a.c. / V d.c. (UL), 35 A to 2500 A

Time-current curve - 1000 A to 2500 A



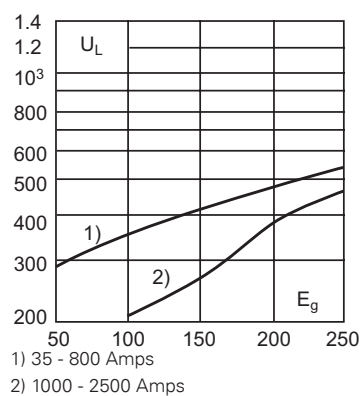
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



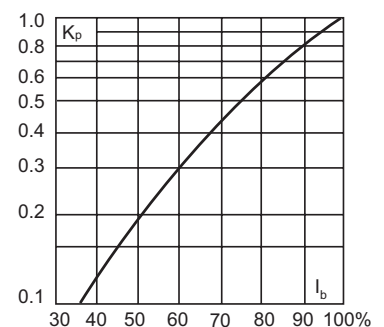
### Arc voltage

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 percent.



### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



Data sheets: 720005, 359 (35-800 A), 5785299 (100-2500 A)

# North American fuse links

## CHSF - 500 V a.c. / V d.c. (UL), 50 A to 400 A

### Specifications

#### Description

Eaton's Bussmann series compact high speed fuses feature space-saving case sizes for protecting semiconductor devices up to 500 V a.c./V d.c. in ratings from 50 to 400 Amps

#### Technical Data

- Rated voltage: 500 V a.c. / V d.c. (UL)
- Rated current: 50 A to 400 A
- Breaking capacity:
  - Maximum AC: 200 kA / Minimum AC 400%
  - Maximum DC: 50 kA / Minimum DC 800%
- Conforms to IEC aR specifications for short-circuit protection



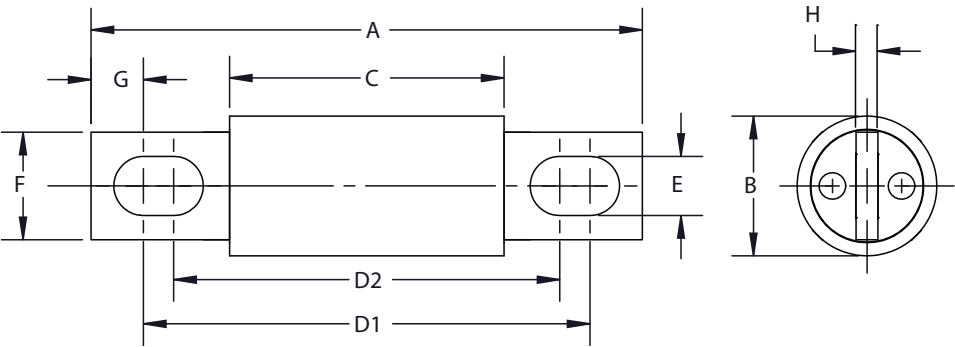
#### Standards / Agency information

UL Recognised, File E56412, guide JFHR2, CSA Component Acceptance, Class 1422-30, File 53787, IEC aR (self-certified), CE, RoHS compliant, REACH declaration available upon request

#### Catalogue numbers

| Rated voltage          | Rated current (Amps) | I²t (A² Sec)     |                                  |                                 | Watts loss (W) at 80% | Catalogue numbers |
|------------------------|----------------------|------------------|----------------------------------|---------------------------------|-----------------------|-------------------|
|                        |                      | AC/DC Pre-arcing | AC clearing at 200 kA/500 V a.c. | DC clearing at 50 kA/500 V d.c. |                       |                   |
| 500 V a.c./ V d.c.(UL) | 50                   | 304              | 1875                             | 935                             | 3.8                   | CHSF-50           |
| 500 V a.c./ V d.c.(UL) | 60                   | 438              | 2700                             | 1346                            | 4.5                   | CHSF-60           |
| 500 V a.c./ V d.c.(UL) | 70                   | 596              | 3675                             | 1833                            | 5.3                   | CHSF-70           |
| 500 V a.c./ V d.c.(UL) | 80                   | 778              | 4800                             | 2394                            | 6.1                   | CHSF-80           |
| 500 V a.c./ V d.c.(UL) | 100                  | 1216             | 7500                             | 3740                            | 7.6                   | CHSF-100          |
| 500 V a.c./ V d.c.(UL) | 125                  | 2042             | 12721                            | 6465                            | 12                    | CHSF-125          |
| 500 V a.c./ V d.c.(UL) | 150                  | 2941             | 18318                            | 9309                            | 14.3                  | CHSF-150          |
| 500 V a.c./ V d.c.(UL) | 175                  | 4003             | 24933                            | 12671                           | 16.7                  | CHSF-175          |
| 500 V a.c./ V d.c.(UL) | 200                  | 5228             | 32566                            | 16550                           | 19.1                  | CHSF-200          |
| 500 V a.c./ V d.c.(UL) | 225                  | 6835             | 48028                            | 21278                           | 26.1                  | CHSF-225          |
| 500 V a.c./ V d.c.(UL) | 250                  | 8438             | 59293                            | 26270                           | 29                    | CHSF-250          |
| 500 V a.c./ V d.c.(UL) | 300                  | 12151            | 85382                            | 37828                           | 34.8                  | CHSF-300          |
| 500 V a.c./ V d.c.(UL) | 350                  | 16539            | 116215                           | 51488                           | 40.6                  | CHSF-350          |
| 500 V a.c./ V d.c.(UL) | 400                  | 21603            | 151791                           | 67250                           | 46.4                  | CHSF-400          |

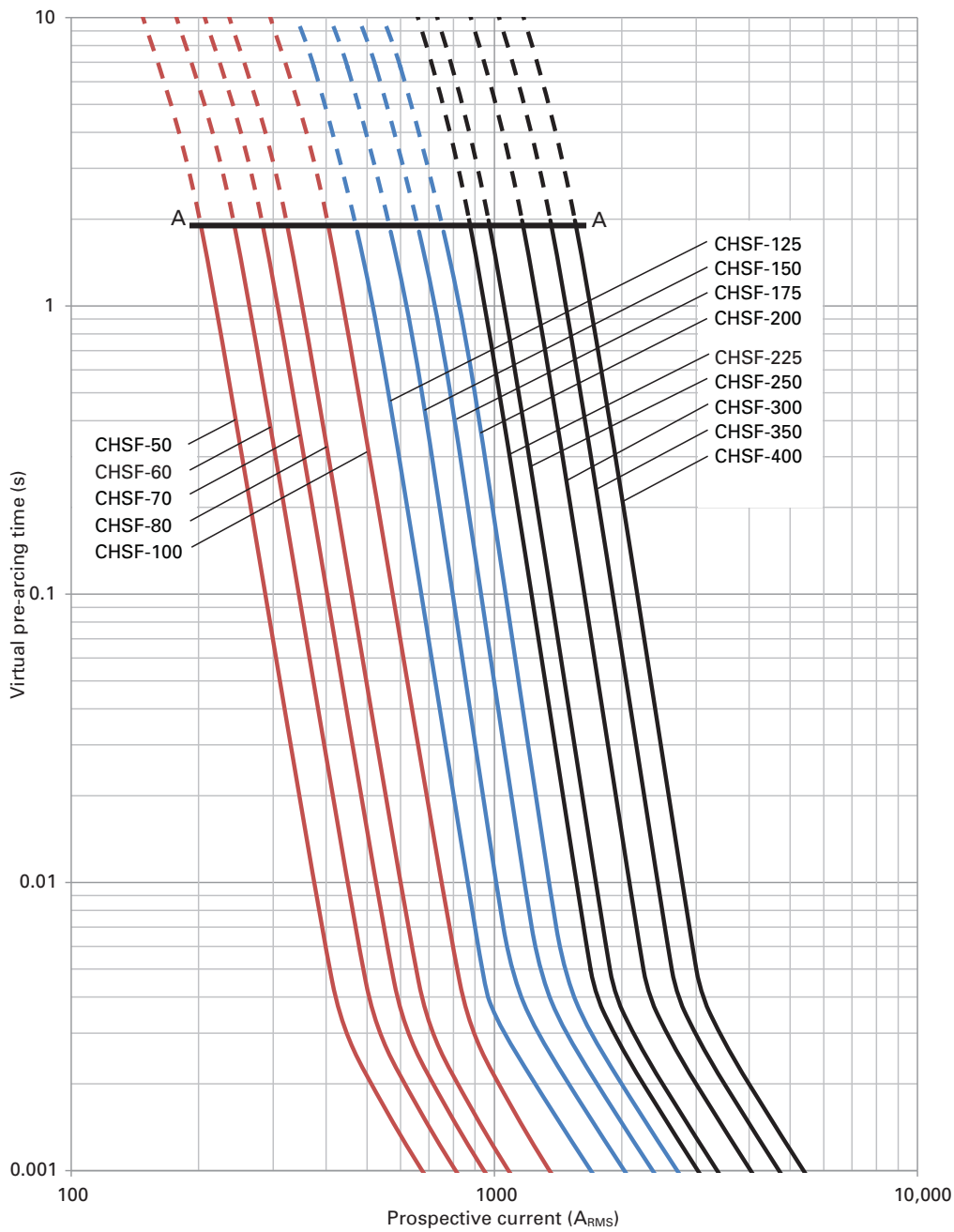
#### Dimensions (mm) - 50 A to 400 A



| Amps    | A  | B  | C  | D1 | D2 | E   | F  | G   | H   |
|---------|----|----|----|----|----|-----|----|-----|-----|
| 50-100  | 81 | 20 | 40 | 61 | 58 | 8.7 | 16 | 7.7 | 3.2 |
| 125-200 | 92 | 25 | 53 | 77 | 68 | 8.7 | 19 | 7.8 | 3.2 |
| 225-400 | 92 | 30 | 53 | 74 | 68 | 8.7 | 25 | 9   | 4.8 |

# CHSF - 500 V a.c. / V d.c. (UL), 50 A to 400 A

## AC Minimum melt curve - 50 A to 400 A

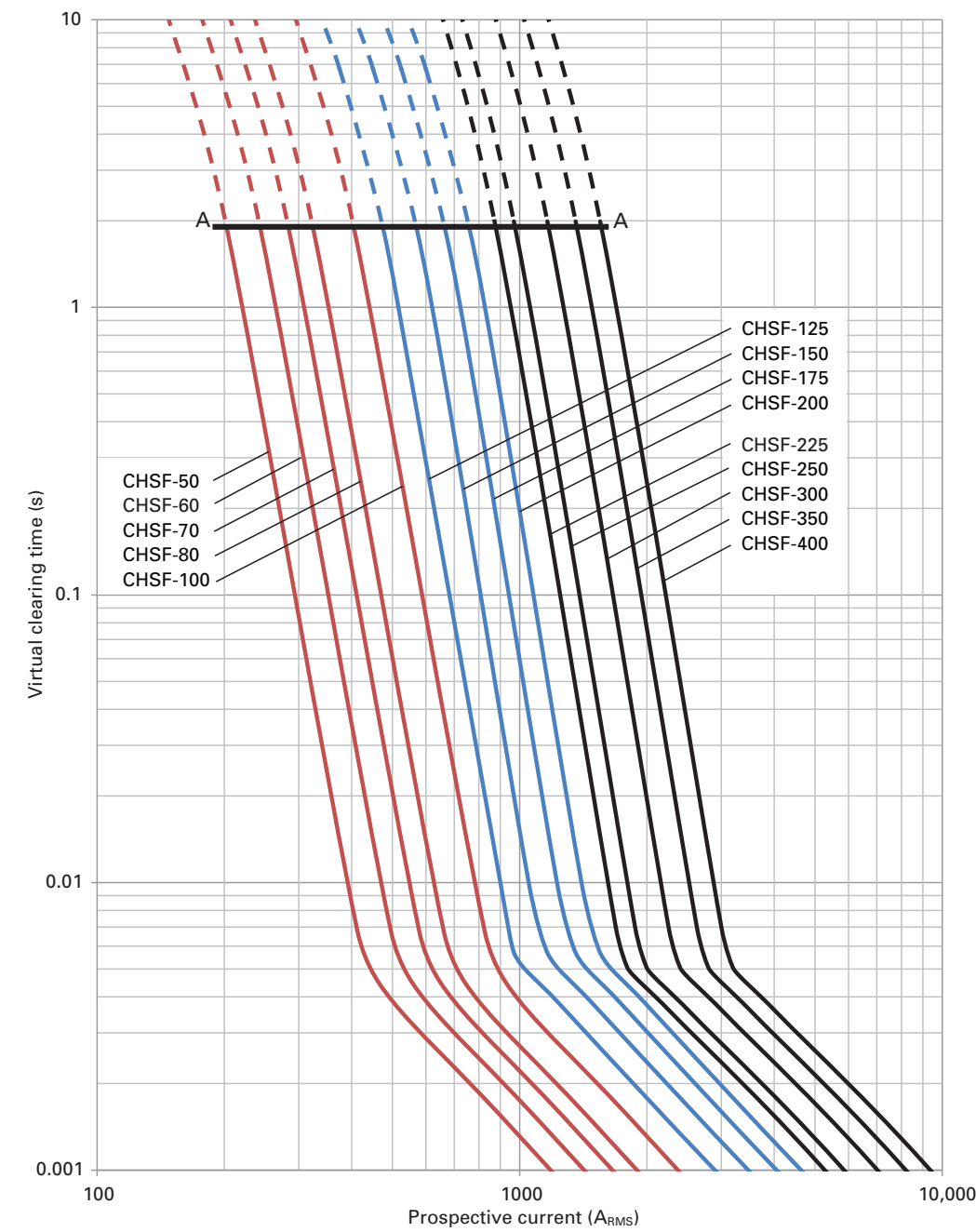




North American fuse links

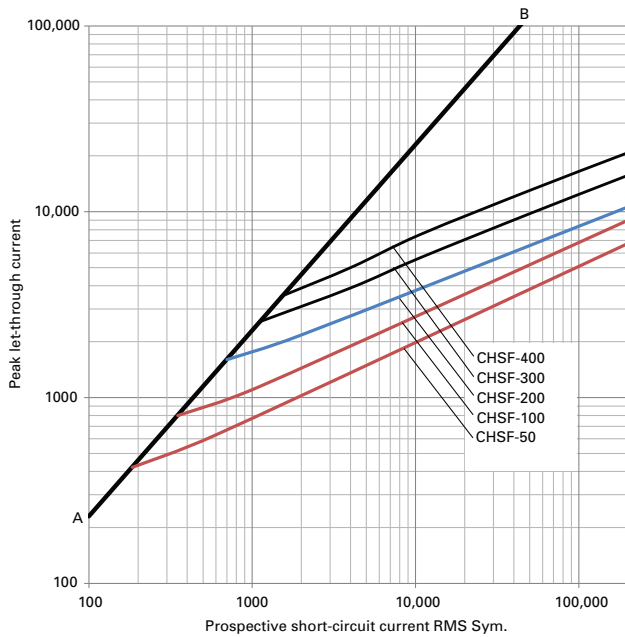
CHSF - 500 V a.c. / V d.c. (UL), 50 A to 400 A

AC Time-current curve- 50 A to 400 A

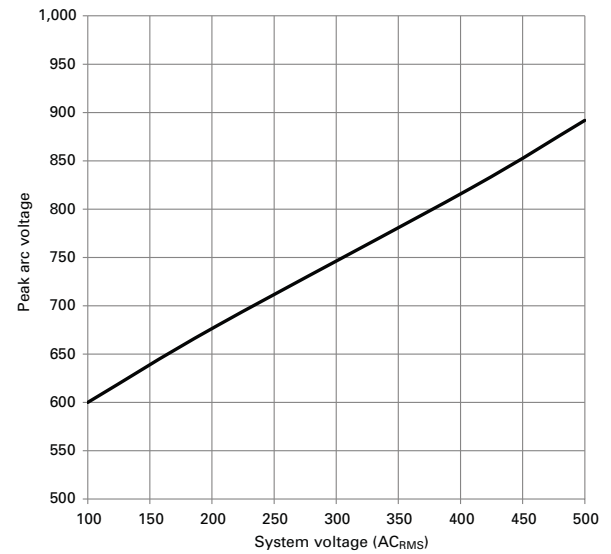


# CHSF - 500 V a.c. / V d.c. (UL), 50 A to 400 A

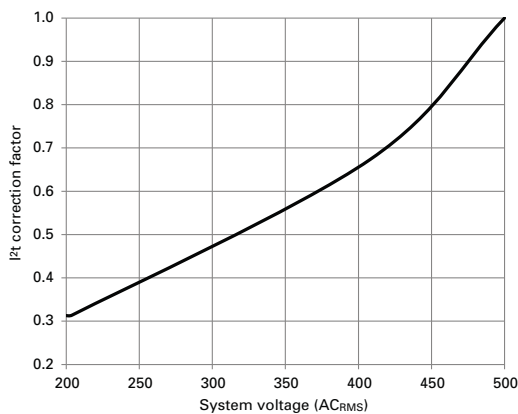
## AC Cut-off curve - 50 A to 400 A



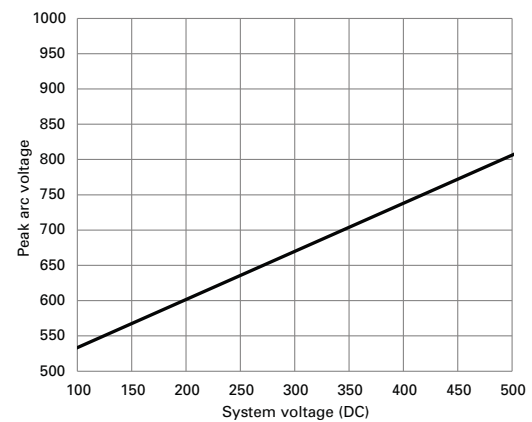
## AC Arc Voltage



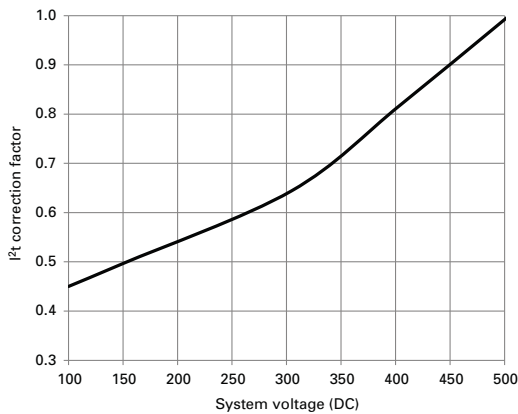
## AC clearing I²t voltage correction factor



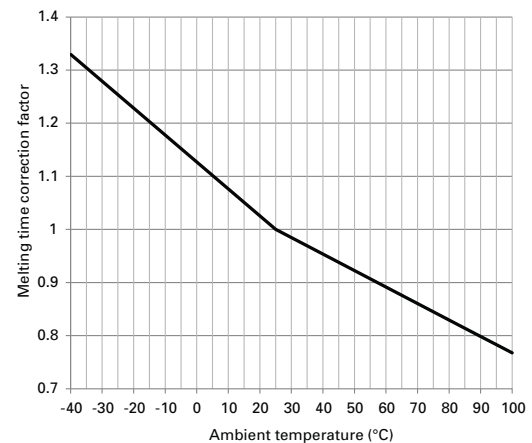
## DC Arc voltage



## DC clearing I²t voltage correction factor



## Temperature derating



Data sheet: 10414

# North American fuse links

## FWH - 500 V a.c. / V d.c. (UL), 35 A to 1600 A

### Specifications

#### Description

North American style bolted tags high speed fuse links, for the protection of DC common bus, power converters/rectifiers and reduced rated voltage starters.

#### Technical data

- Rated voltage:
  - 500 V a.c. (UL)
  - 500 V d.c. (35 A to 800 A only)
- Rated current: 35 A to 1600 A
- Breaking capacity:
  - 200 kA RMS Sym.
  - 50 kA at 500 V d.c.

#### Standards / Agency information

CE, UL Recognition JFHR2.E91958 FWH\_B (35 A to 200 A), JFHR2.E56412 FWH\_A (225 A to 800 A), CSA Component Acceptance Class 1422-30, File 53787 (35 A to 1600 A)

#### Catalogue numbers

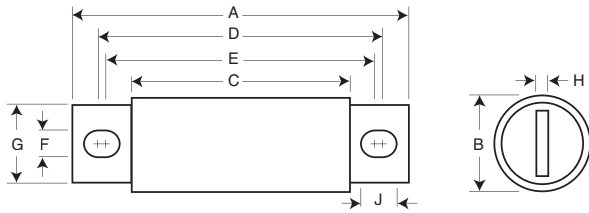
| Rated voltage          | Rated current (Amps) | I²t (A² Sec) |                        | Watts loss (W) | Catalogue numbers |
|------------------------|----------------------|--------------|------------------------|----------------|-------------------|
|                        |                      | Pre-arcing   | Clearing at 500 V a.c. |                |                   |
| 500 V a.c./V d.c. (UL) | 35                   | 34           | 150                    | 8              | FWH-35B           |
| 500 V a.c./V d.c. (UL) | 40                   | 76           | 320                    | 7.5            | FWH-40B           |
| 500 V a.c./V d.c. (UL) | 45                   | 105          | 450                    | 7.5            | FWH-45B           |
| 500 V a.c./V d.c. (UL) | 50                   | 135          | 670                    | 7.5            | FWH-50B           |
| 500 V a.c./V d.c. (UL) | 60                   | 210          | 900                    | 9.9            | FWH-60B           |
| 500 V a.c./V d.c. (UL) | 70                   | 210          | 900                    | 10.6           | FWH-70B           |
| 500 V a.c./V d.c. (UL) | 80                   | 305          | 1400                   | 12.7           | FWH-80B           |
| 500 V a.c./V d.c. (UL) | 90                   | 360          | 1600                   | 15             | FWH-90B           |
| 500 V a.c./V d.c. (UL) | 100                  | 475          | 2000                   | 17             | FWH-100B          |
| 500 V a.c./V d.c. (UL) | 125                  | 800          | 3500                   | 25             | FWH-125B          |
| 500 V a.c./V d.c. (UL) | 150                  | 1100         | 4600                   | 30             | FWH-150B          |
| 500 V a.c./V d.c. (UL) | 175                  | 1450         | 6200                   | 35             | FWH-175B          |
| 500 V a.c./V d.c. (UL) | 200                  | 1900         | 8500                   | 40             | FWH-200B          |
| 500 V a.c./V d.c. (UL) | 225                  | 4600         | 23,300                 | 39             | FWH-225A          |
| 500 V a.c./V d.c. (UL) | 250                  | 6300         | 32,200                 | 41             | FWH-250A          |
| 500 V a.c./V d.c. (UL) | 275                  | 7900         | 40,300                 | 46             | FWH-275A          |
| 500 V a.c./V d.c. (UL) | 300                  | 9800         | 49,800                 | 51             | FWH-300A          |
| 500 V a.c./V d.c. (UL) | 325                  | 13,700       | 63,800                 | 53             | FWH-325A          |
| 500 V a.c./V d.c. (UL) | 350                  | 14,500       | 72,900                 | 58             | FWH-350A          |
| 500 V a.c./V d.c. (UL) | 400                  | 19,200       | 96,700                 | 65             | FWH-400A          |
| 500 V a.c./V d.c. (UL) | 450                  | 24,700       | 127,000                | 74             | FWH-450A          |
| 500 V a.c./V d.c. (UL) | 500                  | 29,200       | 149,000                | 84             | FWH-500A          |
| 500 V a.c./V d.c. (UL) | 600                  | 41,300       | 206,000                | 108            | FWH-600A          |
| 500 V a.c./V d.c. (UL) | 700                  | 55,000       | 298,000                | 120            | FWH-700A          |
| 500 V a.c./V d.c. (UL) | 800                  | 76,200       | 409,000                | 129            | FWH-800A          |
| 500 V a.c./V d.c. (UL) | 900                  | 74,000       | 363,000                | 132            | FWH-900A          |
| 500 V a.c. (UL)        | 1000                 | 92,000       | 450,000                | 145            | FWH-1000B         |
| 500 V a.c. (UL)        | 1200                 | 122,000      | 600,000                | 180            | FWH-1200B         |
| 500 V a.c. (UL)        | 1400                 | 200,000      | 1,000,000              | 210            | FWH-1400A         |
| 500 V a.c. (UL)        | 1600                 | 290,000      | 1,400,000              | 230            | FWH-1600A         |



Data sheets: 720007, 360 (350-800 A), 5785304 (35-200 A, 1000-1600 A)

## FWH - 500 V a.c. / V d.c. (UL), 35 A to 1600 A

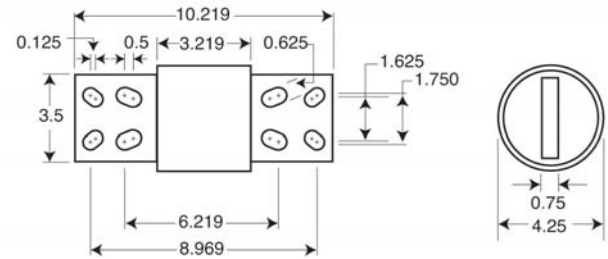
Dimensions (in) - 35 A to 1200 A



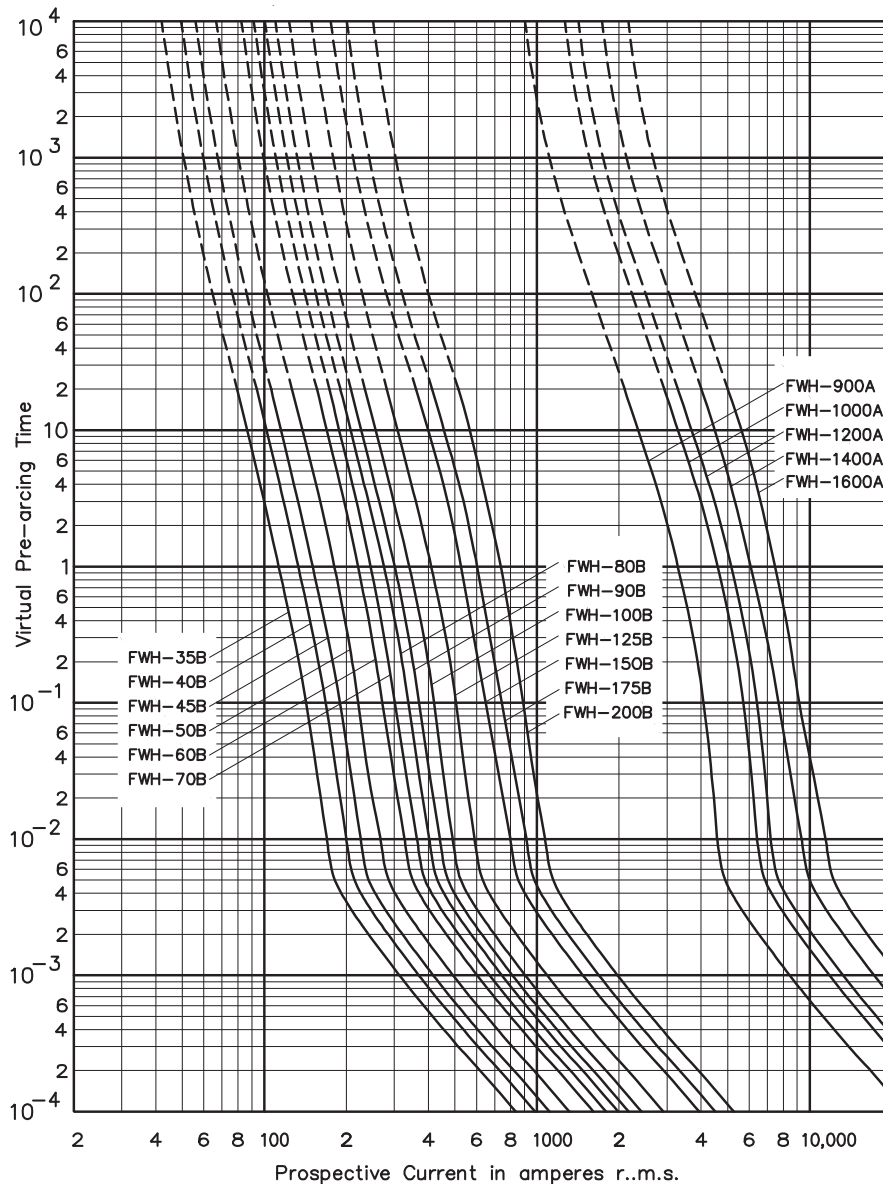
| Amp range | A    | B    | C    | D    | E    | F    | G    | H    | J    |
|-----------|------|------|------|------|------|------|------|------|------|
| 35-60     | 3.19 | 0.81 | 1.59 | 2.54 | 2.19 | 0.34 | 0.72 | 0.13 | 0.52 |
| 70-100    | 3.62 | 0.95 | 1.74 | 2.85 | 2.81 | 0.35 | 0.75 | 0.13 | 0.38 |
| 125-200   | 3.62 | 1.16 | 1.84 | 2.89 | 2.77 | 0.34 | 1    | 0.19 | 0.41 |
| 225-400   | 4.34 | 1.5  | 2.09 | 3.44 | 2.75 | 0.41 | 1    | 0.25 | 0.75 |
| 450-600   | 4.34 | 2    | 2.09 | 3.53 | 2.78 | 0.41 | 1.5  | 0.25 | 0.78 |
| 700-800   | 6.34 | 2.5  | 2.09 | 4.97 | 3.44 | 0.53 | 2    | 0.38 | 1.30 |
| 1000-1200 | 6.97 | 3    | 3.22 | 5.47 | 4.48 | 0.62 | 2.38 | 0.44 | 1.12 |

1" = 25.4mm

Dimensions (in) - 1400 A and 1600 A



Time-current curve - 35 A to 200 A and 900 A to 1600 A

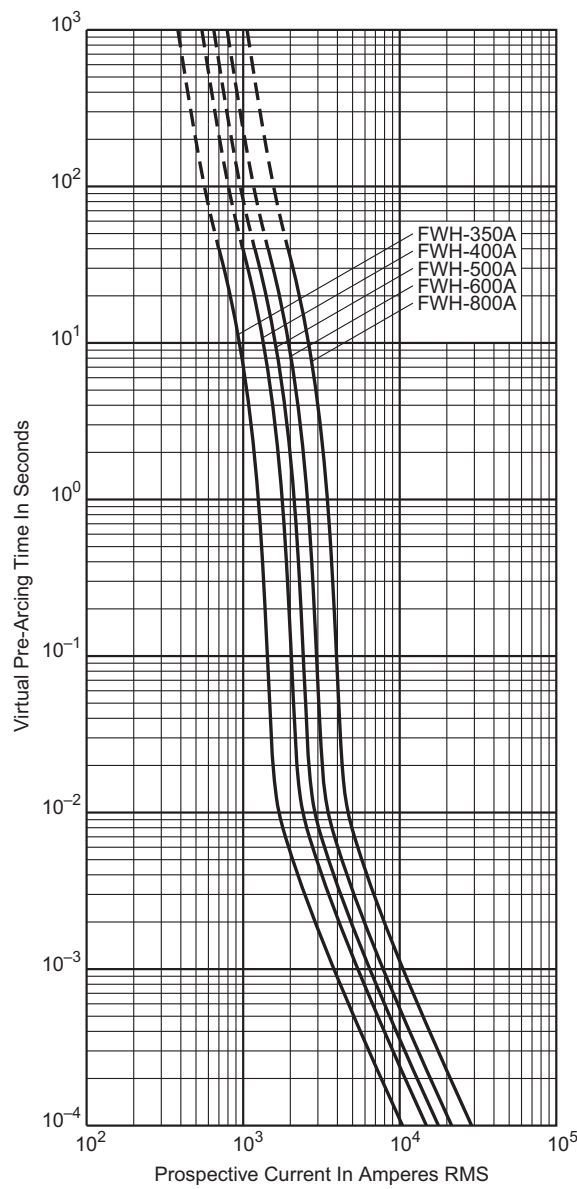


Data sheets: 720007, 360 (350-800 A), 5785304 (35-200 A, 1000-1600 A)

# North American fuse links

## FWH - 500 V a.c. / V d.c. (UL), 35 A to 1600 A

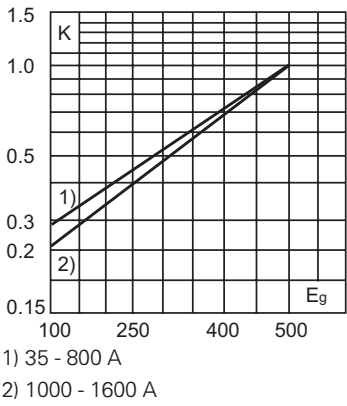
### Time-current curve - 350 A to 800 A



Contact [FUSETECH@eaton.com](mailto:FUSETECH@eaton.com) for the time current curves for the following ratings: 225 to 325 A, 450 A and 700 A

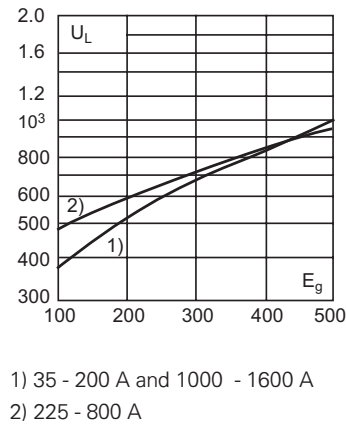
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



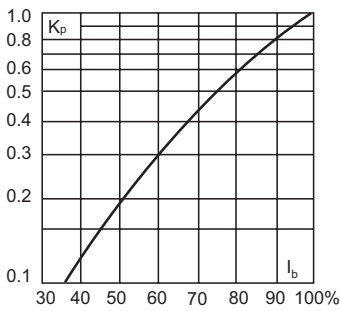
### Arc voltage

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 percent.



### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



## KAC - 600 V a.c. (UL), 1 A to 1000 A

### Specifications

#### Description

North American style bolted tags high speed fuse links. These fuse links are supplied as replacements only. For new installations, Eaton recommends the 700 V FWP fuse links see page 25.

#### Technical Data

- Rated voltage: 600 V a.c. (UL)
- Rated current: 1 A to 1000 A
- Breaking capacity: 200 kA RMS Sym.

#### Standards / Agency information

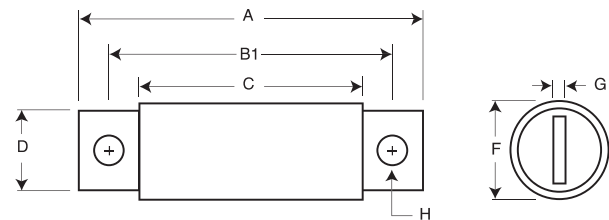
CE, UL file JFHR2.E56413 (1 A to 600 A only)

#### Catalogue numbers

| Rated voltage   | Rated current (Amps) | Catalogue numbers |
|-----------------|----------------------|-------------------|
| 600 V a.c. (UL) | 1                    | KAC-1             |
| 600 V a.c. (UL) | 2                    | KAC-2             |
| 600 V a.c. (UL) | 3                    | KAC-3             |
| 600 V a.c. (UL) | 4                    | KAC-4             |
| 600 V a.c. (UL) | 5                    | KAC-5             |
| 600 V a.c. (UL) | 6                    | KAC-6             |
| 600 V a.c. (UL) | 7                    | KAC-7             |
| 600 V a.c. (UL) | 8                    | KAC-8             |
| 600 V a.c. (UL) | 9                    | KAC-9             |
| 600 V a.c. (UL) | 10                   | KAC-10            |
| 600 V a.c. (UL) | 12                   | KAC-12            |
| 600 V a.c. (UL) | 15                   | KAC-15            |
| 600 V a.c. (UL) | 17.5                 | KAC-17.5          |
| 600 V a.c. (UL) | 20                   | KAC-20            |
| 600 V a.c. (UL) | 25                   | KAC-25            |
| 600 V a.c. (UL) | 30                   | KAC-30            |
| 600 V a.c. (UL) | 35                   | KAC-35            |
| 600 V a.c. (UL) | 40                   | KAC-40            |
| 600 V a.c. (UL) | 45                   | KAC-45            |
| 600 V a.c. (UL) | 50                   | KAC-50            |
| 600 V a.c. (UL) | 60                   | KAC-60            |
| 600 V a.c. (UL) | 70                   | KAC-70            |
| 600 V a.c. (UL) | 80                   | KAC-80            |
| 600 V a.c. (UL) | 90                   | KAC-90            |
| 600 V a.c. (UL) | 100                  | KAC-100           |
| 600 V a.c. (UL) | 110                  | KAC-110           |
| 600 V a.c. (UL) | 125                  | KAC-125           |
| 600 V a.c. (UL) | 150                  | KAC-150           |
| 600 V a.c. (UL) | 175                  | KAC-175           |
| 600 V a.c. (UL) | 200                  | KAC-200           |
| 600 V a.c. (UL) | 225                  | KAC-225           |
| 600 V a.c. (UL) | 250                  | KAC-250           |
| 600 V a.c. (UL) | 300                  | KAC-300           |
| 600 V a.c. (UL) | 350                  | KAC-350           |
| 600 V a.c. (UL) | 400                  | KAC-400           |
| 600 V a.c. (UL) | 450                  | KAC-450           |
| 600 V a.c. (UL) | 500                  | KAC-500           |
| 600 V a.c. (UL) | 600                  | KAC-600           |
| 600 V a.c. (UL) | 700                  | KAC-700           |
| 600 V a.c. (UL) | 800                  | KAC-800           |
| 600 V a.c. (UL) | 1000                 | KAC-1000          |



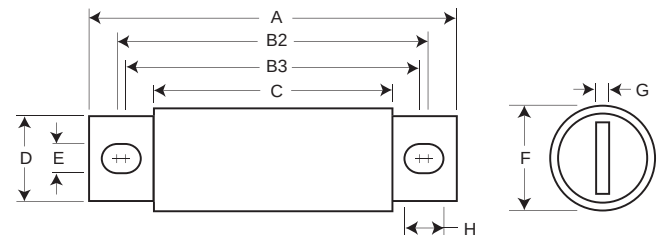
#### Dimensions (in) - 1 A to 30 A and 450 A to 1000 A



| Rated current (Amps) | A    | B1   | B2 | B3 | C    | D    | E | F    | G    | H    |
|----------------------|------|------|----|----|------|------|---|------|------|------|
| 1-30                 | 2.88 | 2.5  | -  | -  | 1.88 | 0.41 | - | 0.56 | 0.06 | 0.26 |
| 450-800              | 6.25 | 4.75 | -  | -  | 3.06 | 2    | - | 2.5  | 0.25 | 0.56 |
| 1000                 | 7.25 | 4.75 | -  | -  | 3.06 | 2.75 | - | 3.5  | 0.38 | 0.56 |

1" = 25.4mm

#### Dimensions (in) - 35 A to 400 A



| Rated current (Amps) | A    | B1 | B2   | B3   | C    | D    | E    | F    | G    | H    |
|----------------------|------|----|------|------|------|------|------|------|------|------|
| 35-60                | 4.38 | -  | 3.75 | 3.50 | 2.75 | 0.63 | 0.34 | 0.81 | 0.09 | 0.47 |
| 70-100               | 5    | -  | 4.06 | 3.66 | 2.75 | 0.75 | 0.41 | 1    | 0.13 | 0.61 |
| 110-200              | 5.14 | -  | 4.39 | 3.77 | 2.91 | 1    | 0.41 | 1.5  | 0.19 | 0.72 |
| 225-400              | 6.18 | -  | 4.82 | 4.57 | 3    | 1.63 | 0.56 | 2    | 0.25 | 0.69 |

1" = 25.4mm

# North American fuse links

## KBC - 600 V a.c. (UL), 35 A to 800 A

### Specifications

#### Description

North American style bolted tags and flush-end high speed fuse links. These fuse links are supplied as replacements only. For new installations, Eaton recommends the 700 V FWP fuse links, see page 25.

#### Technical data

- Rated voltage: 600 V a.c. (UL)
- Rated current: 35 A to 800 A
- Breaking capacity: 100 kA RMS Sym.

#### Standards / Agency information

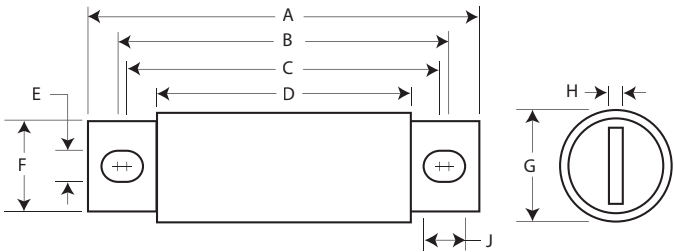
CE, UL file JFHR2.E56412 (35 A to 600 A only)

#### Catalogue numbers

| Rated voltage   | Rated current (Amps) | Catalogue numbers |
|-----------------|----------------------|-------------------|
| 600 V a.c. (UL) | 35                   | KBC-35            |
| 600 V a.c. (UL) | 40                   | KBC-40            |
| 600 V a.c. (UL) | 45                   | KBC-45            |
| 600 V a.c. (UL) | 50                   | KBC-50            |
| 600 V a.c. (UL) | 60                   | KBC-60            |
| 600 V a.c. (UL) | 70                   | KBC-70            |
| 600 V a.c. (UL) | 80                   | KBC-80            |
| 600 V a.c. (UL) | 90                   | KBC-90            |
| 600 V a.c. (UL) | 100                  | KBC-100           |
| 600 V a.c. (UL) | 110                  | KBC-110           |
| 600 V a.c. (UL) | 125                  | KBC-125           |
| 600 V a.c. (UL) | 150                  | KBC-150           |
| 600 V a.c. (UL) | 175                  | KBC-175           |
| 600 V a.c. (UL) | 200                  | KBC-200           |
| 600 V a.c. (UL) | 225                  | KBC-225           |
| 600 V a.c. (UL) | 250                  | KBC-250           |
| 600 V a.c. (UL) | 300                  | KBC-300           |
| 600 V a.c. (UL) | 350                  | KBC-350           |
| 600 V a.c. (UL) | 400                  | KBC-400           |
| 600 V a.c. (UL) | 450                  | KBC-450           |
| 600 V a.c. (UL) | 600                  | KBC-600           |
| 600 V a.c. (UL) | 800                  | KBC-800           |



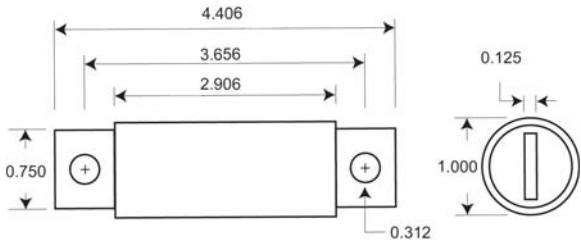
#### Dimensions (in) - 35 A to 60 A and 110 A to 600 A



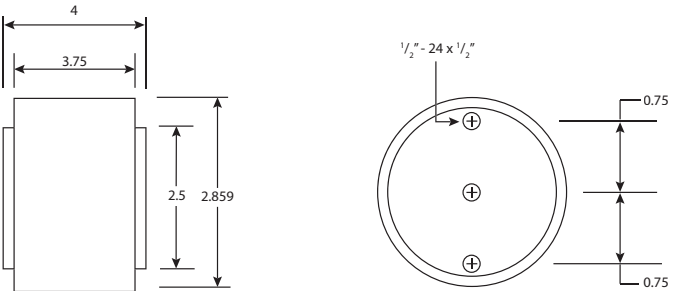
| Rated current (Amps) | A    | B    | C    | D    | E    | F    | G    | H    | J    |
|----------------------|------|------|------|------|------|------|------|------|------|
| 35-60                | 4.38 | 3.75 | 3.50 | 2.75 | 0.34 | 0.63 | 0.81 | 0.09 | 0.47 |
| 110-200              | 4.41 | 3.72 | 3.59 | 2.91 | 0.31 | 0.88 | 1.22 | 0.19 | 0.38 |
| 225-400              | 5.13 | 4.19 | 3.56 | 2.91 | 0.41 | 1    | 1.5  | 0.25 | 0.72 |
| 450-600              | 5.13 | 4.39 | 3.69 | 2.88 | 0.41 | 1.5  | 2    | 0.25 | 0.76 |

1" = 25.4mm

#### Dimensions (in) - 70 A to 100 A



#### Dimensions (in) - 800 A





**FWP - 700 V a.c. / V d.c.(UL), 5 A to 1200 A****Specifications****Description**

North American style bolted tags high speed fuse links for the protection of DC common bus, DC drives, power converters/rectifiers, reduced rated voltage starters.

**Technical data**

- Rated voltage: 700 V a.c. / V d.c. (UL)
- Rated current: 5 A to 1200 A
- Breaking capacity: see details in table below

**Standards / Agency information**

CE, UL Recognition JFHR2.E91958 FWP-\_B (5 A to 100 A, 700 A to 1200 A), JFHR2.E56412 FWP-\_A (125 A to 600 A) and CSA Component Acceptance file class 1422-30, (53787) on 5 A to 800 A

**Catalogue numbers**

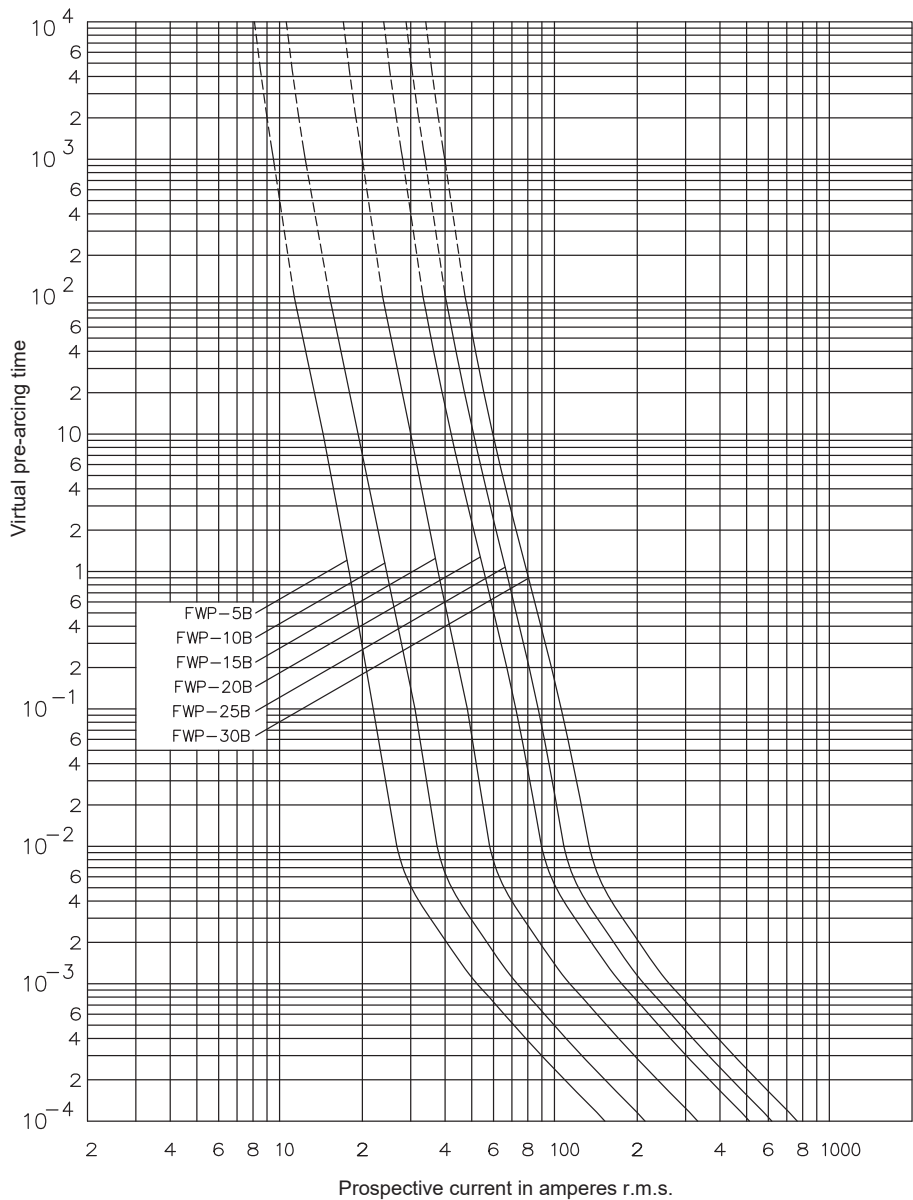
| AC            |                   | DC                 |                   | Rated current (Amps) | I <sup>2</sup> t (A² Sec) |                        | Watts loss (W) | Catalogue numbers |
|---------------|-------------------|--------------------|-------------------|----------------------|---------------------------|------------------------|----------------|-------------------|
| Rated voltage | Breaking capacity | Rated voltage      | Breaking capacity |                      | Pre-arcing                | Clearing at 700 V a.c. |                |                   |
| 700 V a.c.    | 200 kA            | 500 V d.c. (10 ms) | 50 kA             | 5                    | 1.6                       | 11                     | 1.5            | FWP-5B            |
| 700 V a.c.    | 200 kA            | 500 V d.c. (10 ms) | 50 kA             | 10                   | 3.6                       | 22                     | 4              | FWP-10B           |
| 700 V a.c.    | 200 kA            | 500 V d.c. (10 ms) | 50 kA             | 15                   | 10                        | 70                     | 5.5            | FWP-15B           |
| 700 V a.c.    | 200 kA            | 500 V d.c. (10 ms) | 50 kA             | 20                   | 26                        | 180                    | 6              | FWP-20B           |
| 700 V a.c.    | 200 kA            | 500 V d.c. (10 ms) | 50 kA             | 25                   | 44                        | 320                    | 7              | FWP-25B           |
| 700 V a.c.    | 200 kA            | 500 V d.c. (10 ms) | 50 kA             | 30                   | 58                        | 450                    | 9              | FWP-30B           |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 50 kA             | 35                   | 34                        | 160                    | 12             | FWP-35B           |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 50 kA             | 40                   | 76                        | 320                    | 12             | FWP-40B           |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 50 kA             | 50                   | 135                       | 600                    | 12             | FWP-50B           |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 50 kA             | 60                   | 210                       | 950                    | 15.5           | FWP-60B           |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 50 kA             | 70                   | 305                       | 2000                   | 18             | FWP-70B           |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 50 kA             | 80                   | 360                       | 2400                   | 21             | FWP-80B           |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 50 kA             | 90                   | 415                       | 2700                   | 25             | FWP-90B           |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 50 kA             | 100                  | 540                       | 3500                   | 27             | FWP-100B          |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 10 kA             | 125                  | 1800                      | 7300                   | 28             | FWP-125A          |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 10 kA             | 150                  | 2900                      | 11,700                 | 32             | FWP-150A          |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 10 kA             | 175                  | 4200                      | 16,700                 | 35             | FWP-175A          |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 10 kA             | 200                  | 5500                      | 22,000                 | 43             | FWP-200A          |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 10 kA             | 225                  | 7700                      | 31,300                 | 45             | FWP-225A          |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 10 kA             | 250                  | 10,500                    | 42,500                 | 48             | FWP-250A          |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 10 kA             | 300                  | 17,600                    | 71,200                 | 58             | FWP-300A          |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 10 kA             | 350                  | 23,700                    | 95,600                 | 65             | FWP-350A          |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 10 kA             | 400                  | 31,000                    | 125,000                | 78             | FWP-400A          |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 50 kA             | 450                  | 36,400                    | 137,000                | 94             | FWP-450A          |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 50 kA             | 500                  | 45,200                    | 170,000                | 107            | FWP-500A          |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 50 kA             | 600                  | 66,700                    | 250,000                | 122            | FWP-600A          |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 50 kA             | 700                  | 54,000                    | 300,000                | 125            | FWP-700A          |
| 700 V a.c.    | 200 kA            | 700 V d.c.         | 50 kA             | 800                  | 78,000                    | 450,000                | 140            | FWP-800A          |
| 700 V a.c.    | 200 kA            | N/A                | N/A               | 900                  | 91,500                    | 530,000                | 150            | FWP-900A          |
| 700 V a.c.    | 200 kA            | N/A                | N/A               | 1000                 | 120,000                   | 600,000                | 170            | FWP-1000A         |
| 700 V a.c.    | 200 kA            | N/A                | N/A               | 1200                 | 195,000                   | 1,100,000              | 190            | FWP-1200A         |

Data sheets: 720012, 5785316 (5-30 A), 361 (150-600 A), 5785308 (35-100 A, 700-1200 A)

North American fuse links

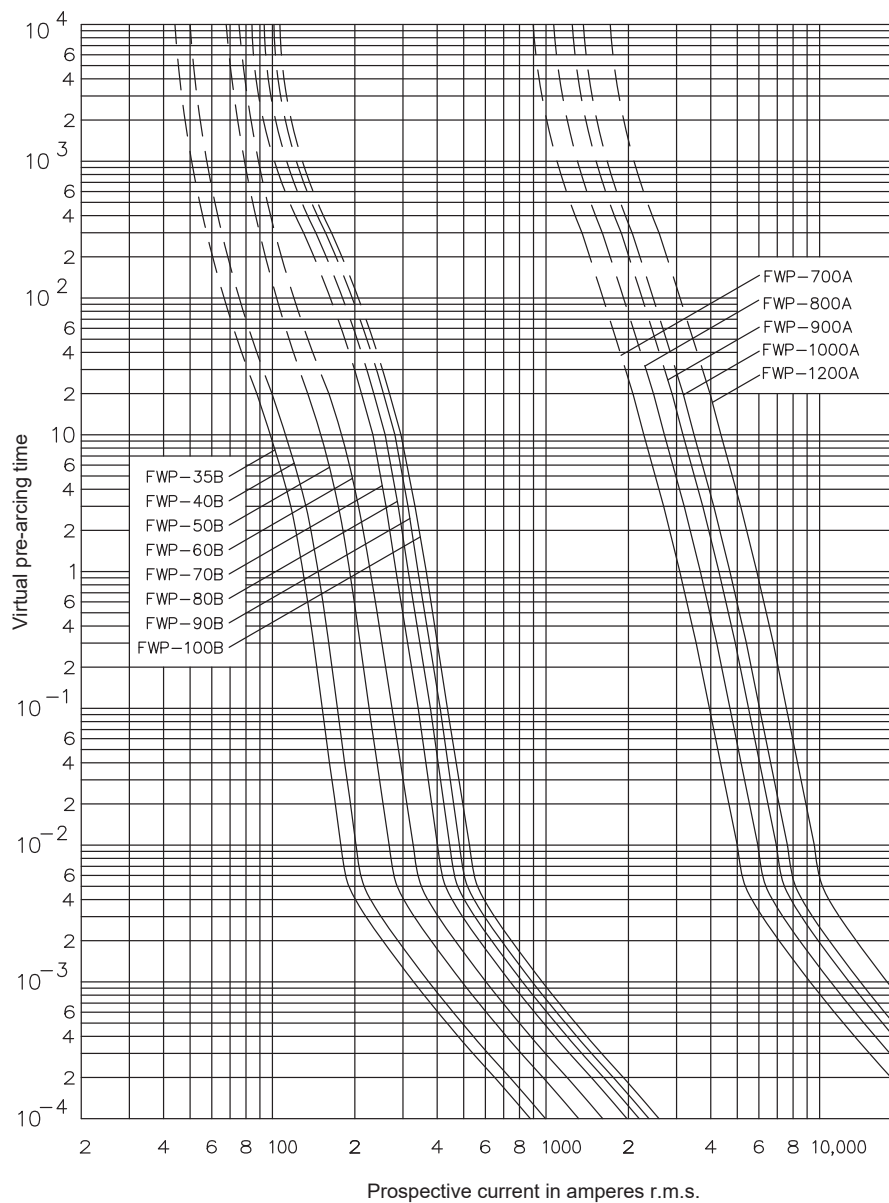
FWP - 700 V a.c. / V d.c.(UL), 5 A to 1200 A

Time-current curve - 5 A to 30 A



## FWP - 700 V a.c. / V d.c.(UL), 5 A to 1200 A

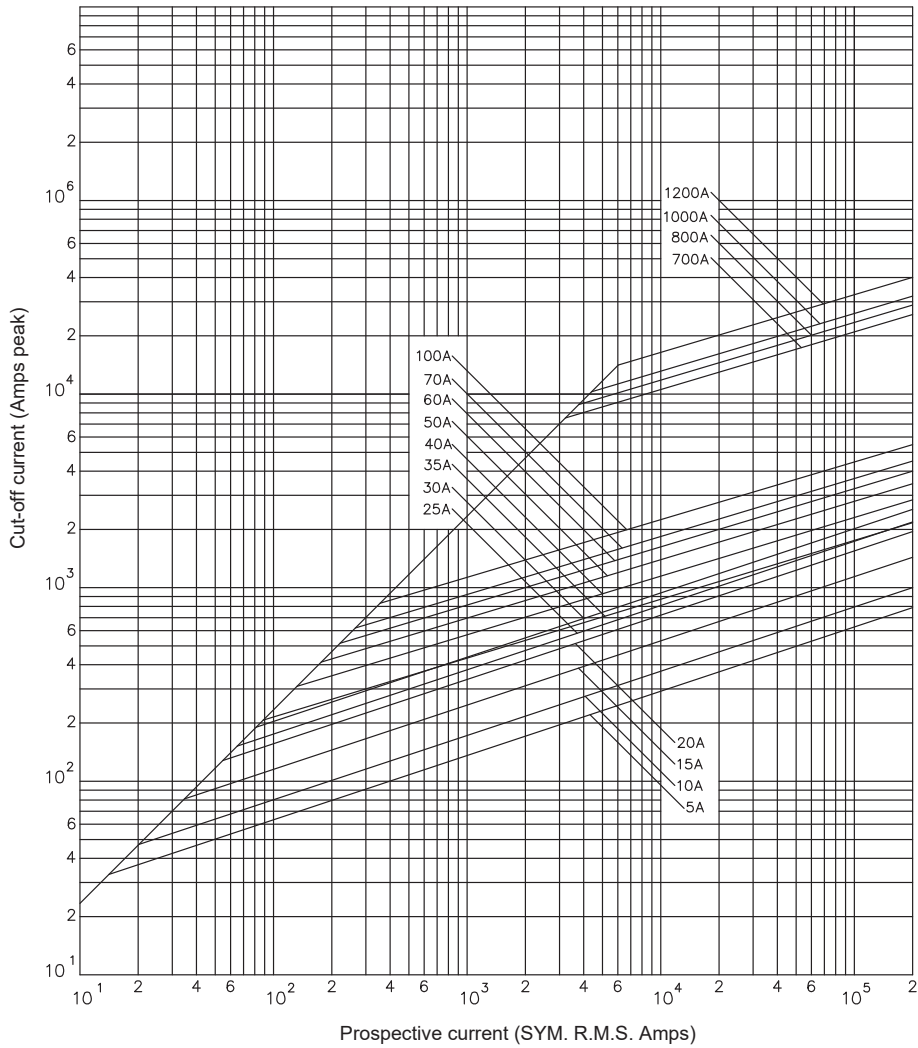
### Time-current curve - 35 A to 1200 A



Contact [FUSETECH@eaton.com](mailto:FUSETECH@eaton.com) for the time current curves for the following ratings: 125 A to 600 A

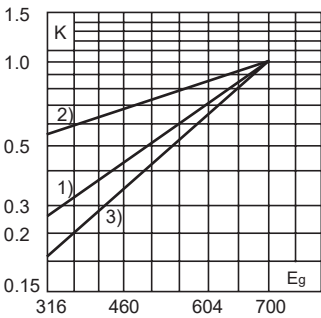
FWP - 700 V a.c. / V d.c.(UL), 5 A to 1200 A

Cut-off curve - 5 A to 1200 A



Total clearing I<sup>2</sup>t

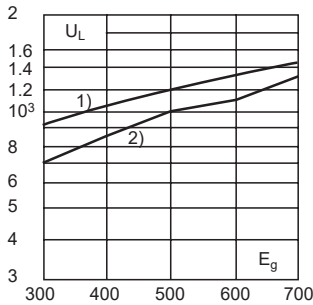
The total clearing I<sup>2</sup>t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I<sup>2</sup>t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



- 1) 35 - 100 A
- 2) 125 - 600 A
- 3) 700 to 1200 A

Arc voltage

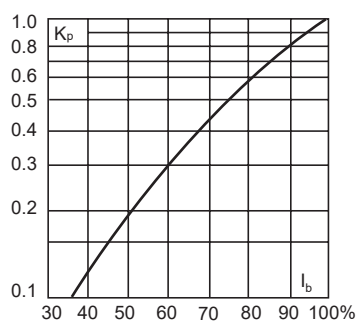
This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



- 1) 125 - 600 A
- 2) 35 - 100 and 700 - 1200 A

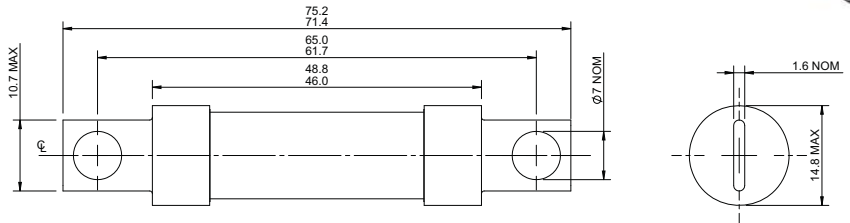
Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.

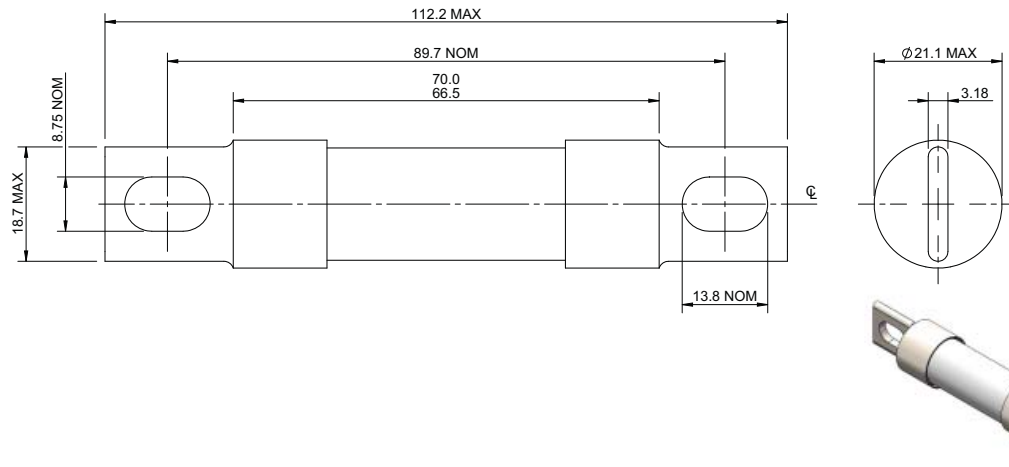


## FWP - 700 V a.c. / V d.c.(UL), 5 A to 1200 A

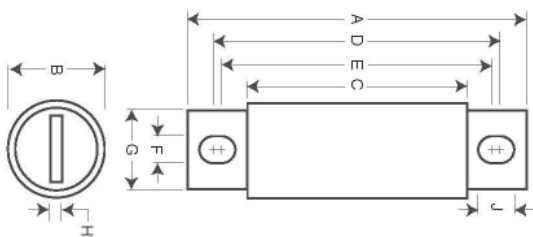
### Dimensions (in) - 5 A to 30 A



### Dimensions (in) - 35 A to 60 A



### Dimensions (in) - 70 A to 600 A



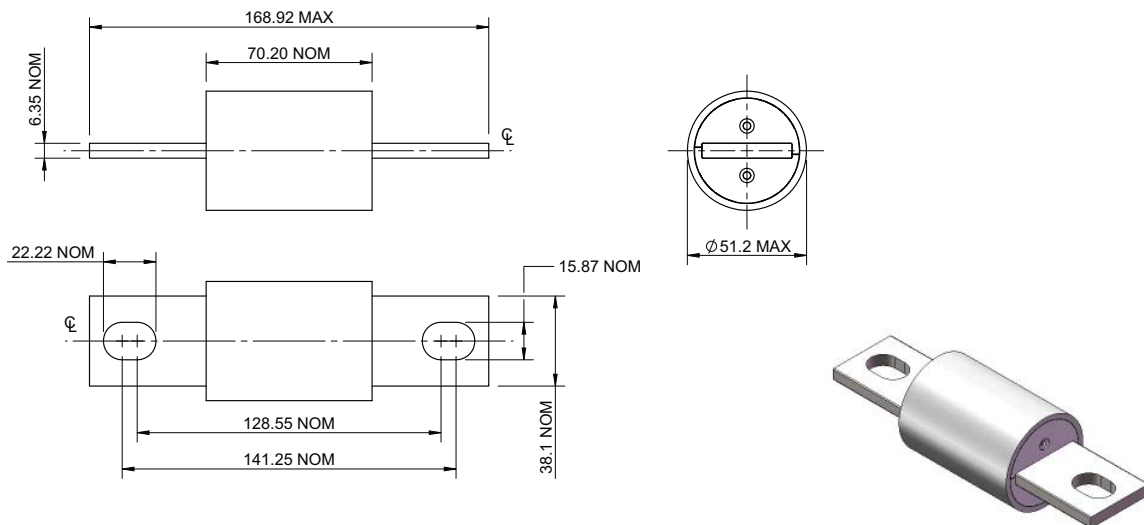
| Amp range | A    | B    | C    | D    | E    | F    | G    | H    | J    |
|-----------|------|------|------|------|------|------|------|------|------|
| 70-100    | 4.41 | 0.95 | 2.59 | 3.63 | 3.56 | 0.34 | 0.75 | 0.13 | 0.38 |
| 125-200   | 5.09 | 1.5  | 2.84 | 4.19 | 3.5  | 0.41 | 1    | 0.25 | 0.75 |
| 225-400   | 5.09 | 2    | 2.84 | 4.28 | 3.53 | 0.41 | 1.5  | 0.25 | 0.78 |
| 450-600   | 7.09 | 2.5  | 2.84 | 5.72 | 4.19 | 0.53 | 2    | 0.38 | 1.3  |

1" = 25.4mm

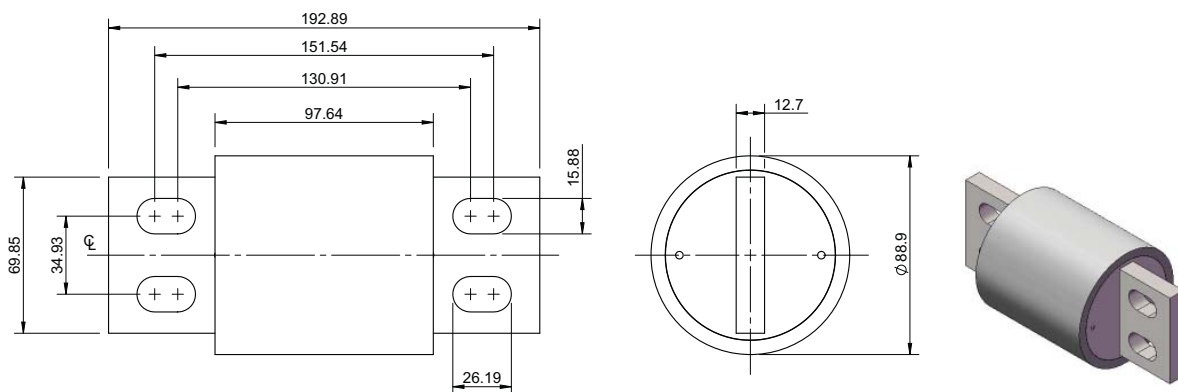
## North American fuse links

**FWP** - 700 V a.c. / V d.c.(UL), 5 A to 1200 A

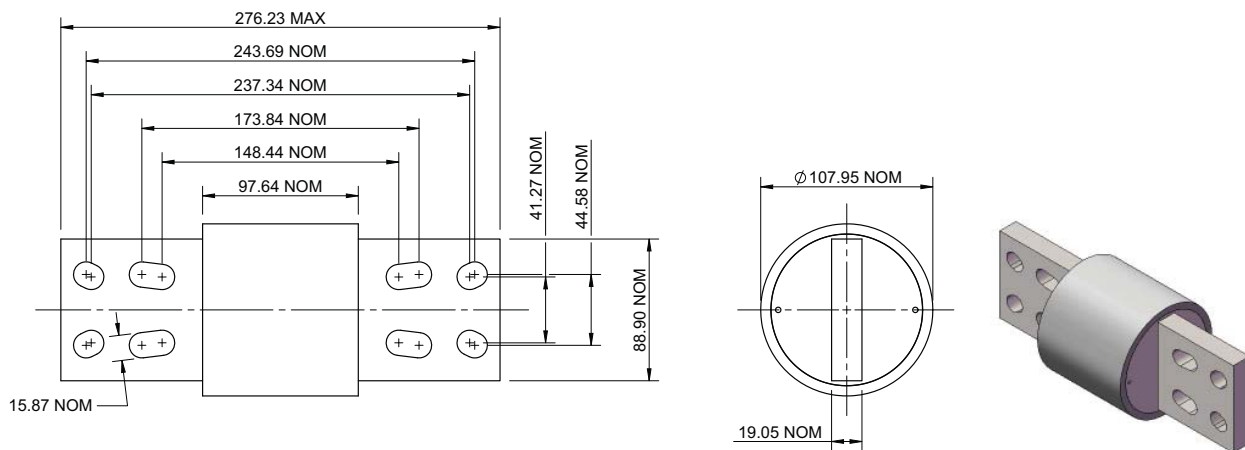
### Dimensions (in) - 700 A and 800 A



### Dimensions (in) - 900 A and 1000 A



### Dimensions (mm) - 1200 A



Data sheets: 720012, 5785316 (5-30 A), 361 (150-600 A), 5785308 (35-100 A, 700-1200 A)

**FWJ - 1000 V a.c. / 800 V d.c. (UL), 35 A to 2000 A****Specifications****Description**

North American style bolted tags high speed fuse links for the protection of DC common bus, DC drives power converters/rectifiers, reduced rated voltage starters.

**Technical data**

- Rated voltage:
  - 1000 V a.c. (UL)
  - 800 V d.c. (UL)
- Rated current: 35 A to 2000 A
- Breaking capacity:
  - 25kA RMS Sym. (35 A to 200 A)
  - 100 kA RMS Sym. (250 A to 2000 A)
  - 50 kA at 800 V d.c. (35 A to 200 A and 450 A to 600 A)

**Standards / Agency information**

CE, UL Recognition JFHR8.E91958 on 50 A to 600 A only

**Catalogue numbers**

| AC            |                   | DC            |                   | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                         | Watts loss (W) | Catalogue numbers |
|---------------|-------------------|---------------|-------------------|----------------------|---------------------------------------|-------------------------|----------------|-------------------|
| Rated voltage | Breaking capacity | Rated voltage | Breaking capacity |                      | Pre-arcing                            | Clearing at 1000 V a.c. |                |                   |
| 1000 V a.c.   | 25 kA             | 800 V d.c.    | 50 kA             | 35                   | 210                                   | 2000                    | 7              | FWJ-35A           |
|               |                   |               |                   | 40                   | 300                                   | 2500                    | 8              | FWJ-40A           |
|               |                   |               |                   | 50                   | 470                                   | 3500                    | 10             | FWJ-50A           |
|               |                   |               |                   | 60                   | 670                                   | 5000                    | 11             | FWJ-60A           |
|               |                   |               |                   | 70                   | 1100                                  | 6900                    | 12             | FWJ-70A           |
|               |                   |               |                   | 80                   | 1550                                  | 9700                    | 13             | FWJ-80A           |
|               |                   |               |                   | 90                   | 1900                                  | 12,000                  | 14             | FWJ-90A           |
|               |                   |               |                   | 100                  | 2800                                  | 17,500                  | 15             | FWJ-100A          |
|               |                   |               |                   | 125                  | 4800                                  | 35,000                  | 16             | FWJ-125A          |
|               |                   |               |                   | 150                  | 6300                                  | 45,000                  | 25             | FWJ-150A          |
|               |                   |               |                   | 175                  | 7500                                  | 65,000                  | 30             | FWJ-175A          |
|               |                   |               |                   | 200                  | 11,700                                | 80,000                  | 32             | FWJ-200A          |
| 1000 V a.c.   | 100 kA            | N/A           | N/A               | 250                  | 16,000                                | 112,000                 | 50             | FWJ-250A          |
|               |                   |               |                   | 300                  | 23,500                                | 164,000                 | 56             | FWJ-300A          |
|               |                   |               |                   | 350                  | 33,000                                | 231,000                 | 62             | FWJ-350A          |
|               |                   |               |                   | 400                  | 47,000                                | 330,000                 | 67             | FWJ-400A          |
| 1000 V a.c.   | 100 kA            | 800 V d.c.    | 50 kA             | 500                  | 39,500                                | 329,000                 | 95             | FWJ-500A          |
|               |                   |               |                   | 600                  | 61,000                                | 520,000                 | 105            | FWJ-600A          |
|               |                   |               |                   | 800                  | 87,000                                | 500,000                 | 182            | FWJ-800A          |
|               |                   |               |                   | 1000                 | 190,000                               | 1,100,000               | 206            | FWJ-1000A         |
|               |                   |               |                   | 1200                 | 370,000                               | 2,100,000               | 240            | FWJ-1200A         |
|               |                   |               |                   | 1400                 | 470,000                               | 2,700,000               | 248            | FWJ-1400A         |
|               |                   |               |                   | 1600                 | 700,000                               | 4,000,000               | 267            | FWJ-1600A         |
|               |                   |               |                   | 1800                 | 925,000                               | 5,300,000               | 239            | FWJ-1800A         |
|               |                   |               |                   | 2000                 | 1,330,000                             | 7,600,000               | 244            | FWJ-2000A         |

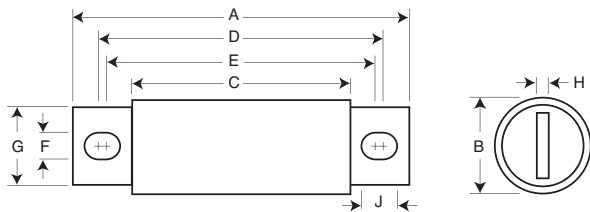




North American fuse links

FWJ - 1000 V a.c. / 800 V d.c. (UL), 35 A to 2000 A

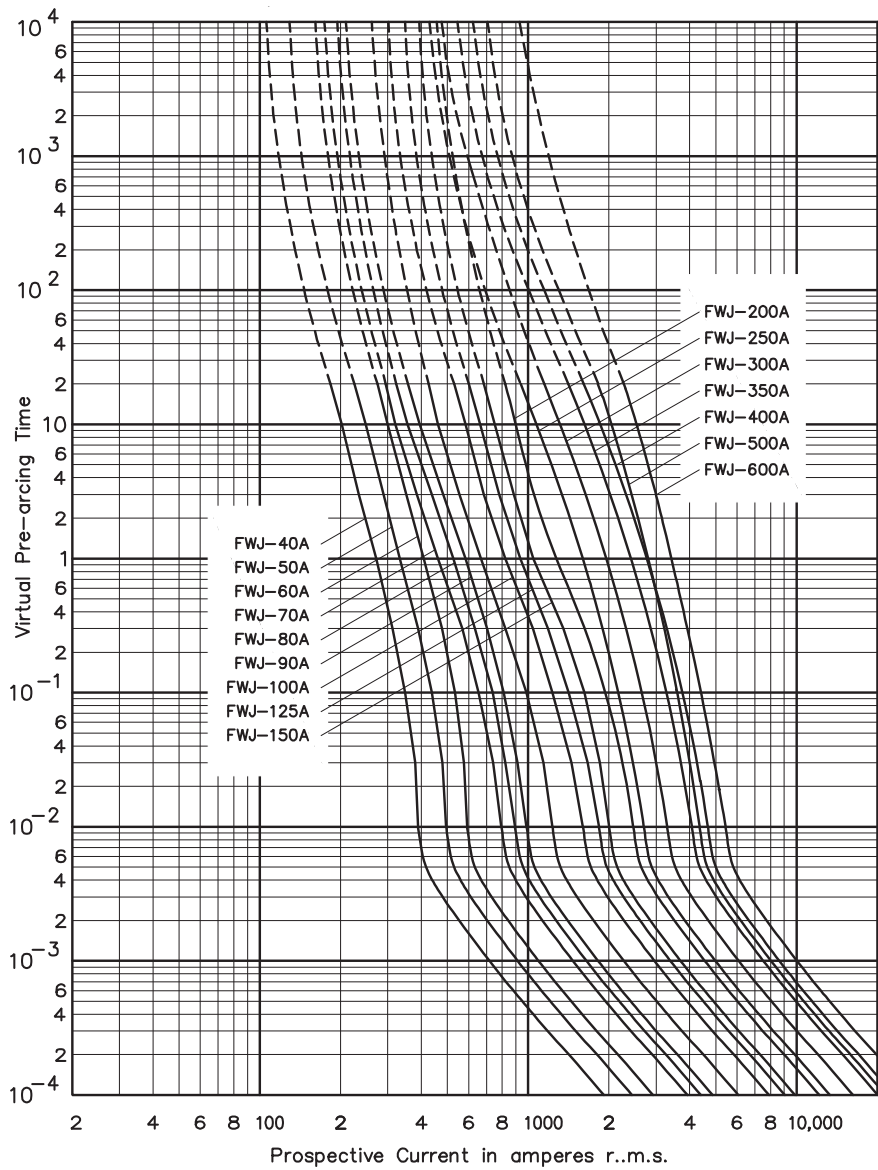
Dimensions (in) - 35 A to 2000 A



| Amp range | A    | B    | C    | D    | E    | F    | G    | H    | J    |
|-----------|------|------|------|------|------|------|------|------|------|
| 35-60     | 5    | 0.94 | 3.11 | 4.24 | 4.18 | 0.35 | 0.75 | 0.13 | 0.38 |
| 70-100    | 4.93 | 1.13 | 3.09 | 4.27 | 4.16 | 0.35 | 1    | 0.19 | 0.41 |
| 125-200   | 5.69 | 1.53 | 3.26 | 4.80 | 4.06 | 0.45 | 1    | 0.25 | 0.82 |
| 250-400   | 5.77 | 2    | 3.5  | 4.81 | 4.15 | 0.43 | 1.5  | 0.25 | 0.76 |
| 500-600   | 7.20 | 2.5  | 3.47 | 5.98 | 4.71 | 0.56 | 2    | 0.38 | 1.2  |
| 800-2000  | 6.81 | 3.5  | 3.31 | 5.47 | 4.96 | 0.63 | 2.75 | 0.5  | 0.88 |

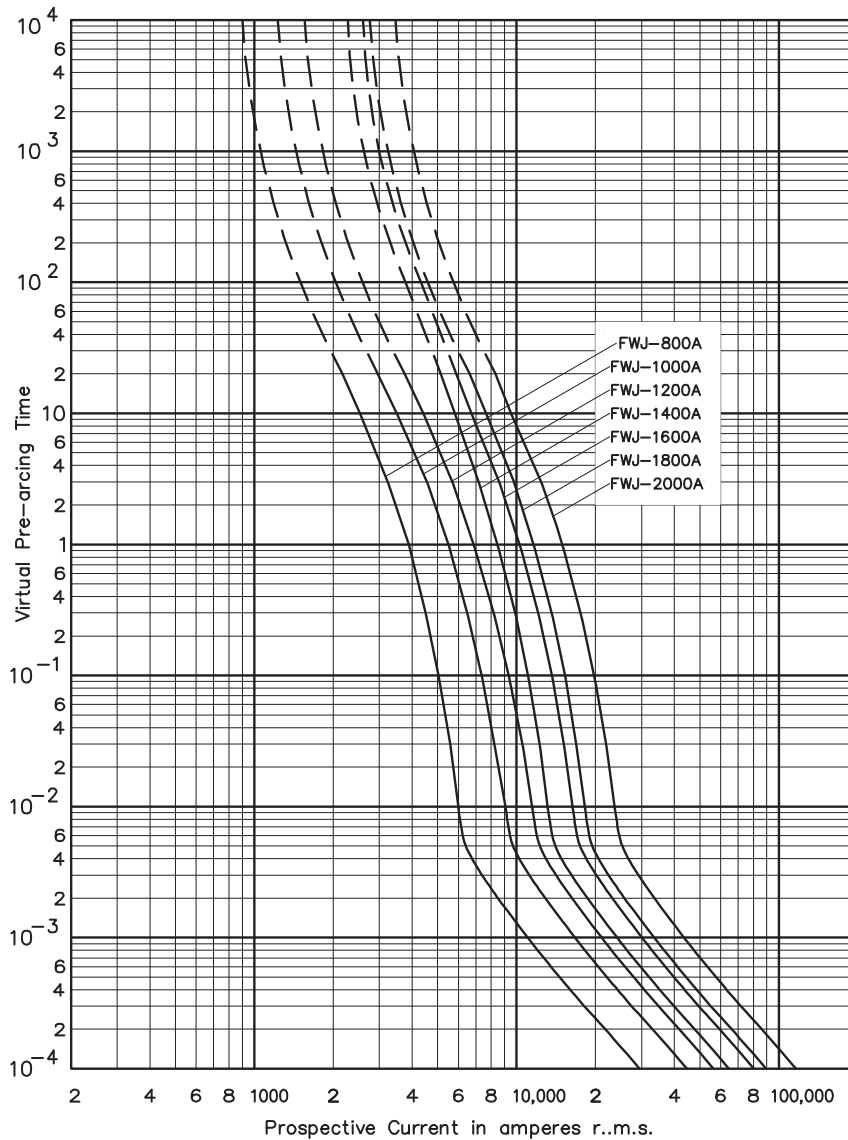
1" = 25.4mm

Time-current curve - 35 A to 600 A



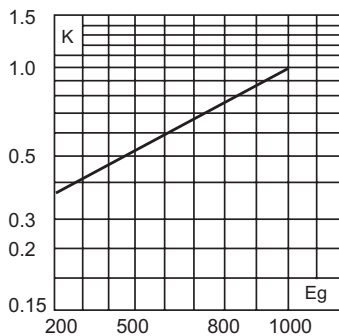
## FWJ - 1000 V a.c. / 800 V d.c. (UL), 35 A to 2000 A

Time-current curve - 800 A to 2000 A



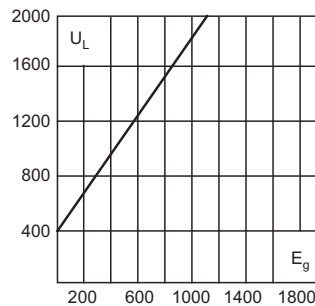
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



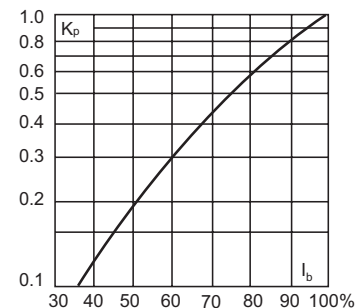
### Arc voltage

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 percent.



### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



Data sheets: 720027, 5785303 (35-600 A), 5785309 (800-2000 A), E5785173

# British standard BS88 fuse links

**LCT, LET - 240 V a.c. / 150 V d.c. (IEC), 250-280 V a.c. / 150 V d.c. (UL), 6 A to 180 A**

## Specifications

### Description

BS88 style bolted tags fuse high speed links for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters. Low Watts loss in a compact size.

### Technical Data

- Rated voltage:
  - LCT 240 V a.c. / 150 V d.c. (IEC)  
250 V a.c. / 150 V d.c. (UL)
  - LET 280 V a.c. / 150 V d.c. (UL, 25 A to 160 A)  
250 V a.c. / 150 V d.c. (UL 180 A)
- Rated current: 6 A to 180 A
- Breaking capacity:
  - 200 kA RMS Sym.
  - 50 kA DC at 150 V d.c.
- Operating Class: aR



### Compatible trip indicator and microswitch for LET fuse links

- See details page 391

### Standards / Agency information

CE, designed and tested to BS88 part 4, IEC 60269 Part 4, UL Recognised and CCC (LCT only). All fuse links have been tested at 318V a.c..Consult Eaton for specific UL recognition status.

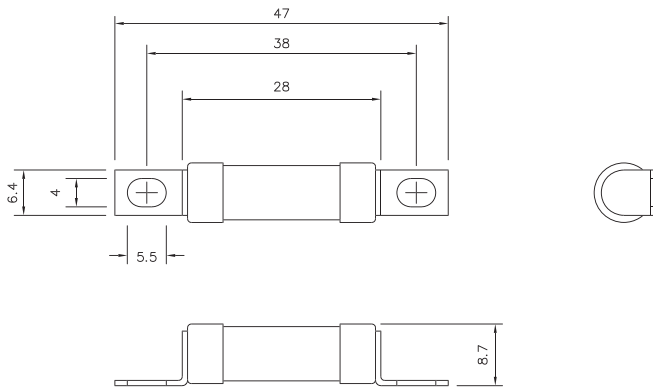
### Catalogue numbers

| Fuse link type | Rated voltage                                                 | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                        | Watts loss (W) | Catalogue numbers |
|----------------|---------------------------------------------------------------|----------------------|---------------------------------------|------------------------|----------------|-------------------|
|                |                                                               |                      | Pre-arcing                            | Clearing at 240 V a.c. |                |                   |
| LCT            | 240 V a.c. / 150 V d.c. (IEC)<br>250 V a.c. / 150 V d.c. (UL) | 6                    | 2                                     | 9                      | 1              | 6LCT              |
|                |                                                               | 10                   | 3.8                                   | 22                     | 2.5            | 10LCT             |
|                |                                                               | 12                   | 7                                     | 32                     | 2.5            | 12LCT             |
|                |                                                               | 16                   | 20                                    | 100                    | 2.5            | 16LCT             |
|                |                                                               | 20                   | 25                                    | 160                    | 4              | 20LCT             |
| LET            | 280 V a.c. / 150 V d.c. (UL)                                  | 25                   | 18                                    | 250                    | 4              | 25LET             |
|                |                                                               | 32                   | 32                                    | 450                    | 5              | 32LET             |
|                |                                                               | 35                   | 50                                    | 600                    | 5              | 35LET             |
|                |                                                               | 50                   | 100                                   | 1400                   | 7              | 50LET             |
|                |                                                               | 63                   | 180                                   | 2200                   | 9              | 63LET             |
|                |                                                               | 80                   | 300                                   | 3800                   | 10             | 80LET             |
|                |                                                               | 100                  | 600                                   | 7500                   | 10             | 100LET            |
|                |                                                               | 125                  | 600                                   | 7500                   | 16             | 125LET            |
|                |                                                               | 160                  | 1100                                  | 16,000                 | 20             | 160LET            |
|                |                                                               | 180                  | 1600                                  | 29,000                 | 21             | 180LET            |

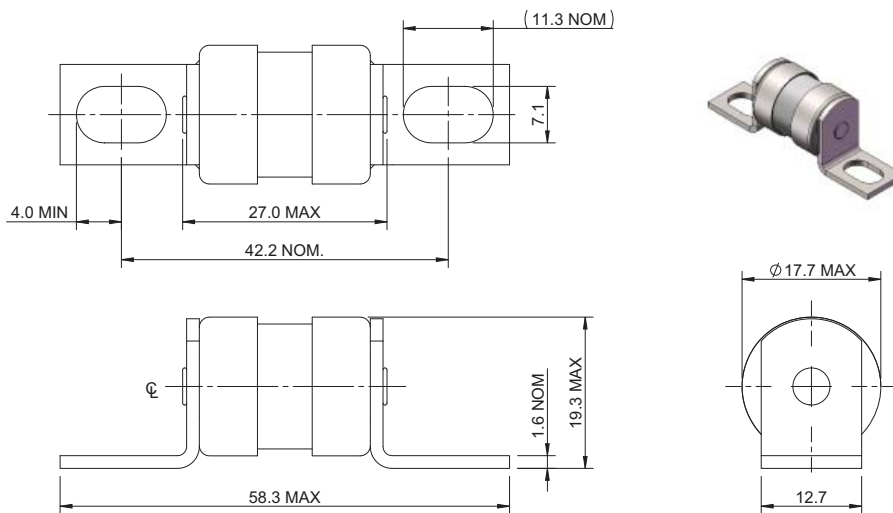
Note: 7LET, 10LET, 12LET and 16LET are available for replacement purposes on existing equipment.

**LCT, LET - 240 V a.c. / 150 V d.c. (IEC), 250-280 V a.c. / 150 V d.c. (UL), 6 A to 180 A**

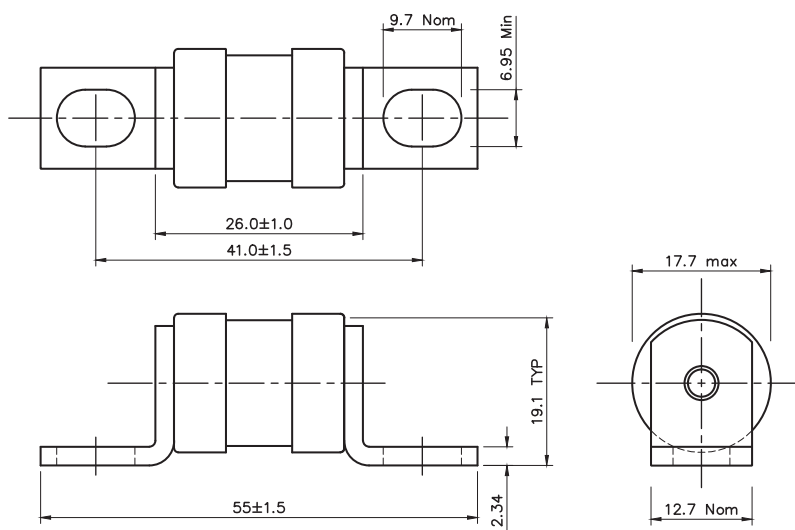
**Dimensions (mm) - LCT**



**Dimensions (mm) - LET, up to 63 A**



**Dimensions (mm) - LET, greater than 63 A**



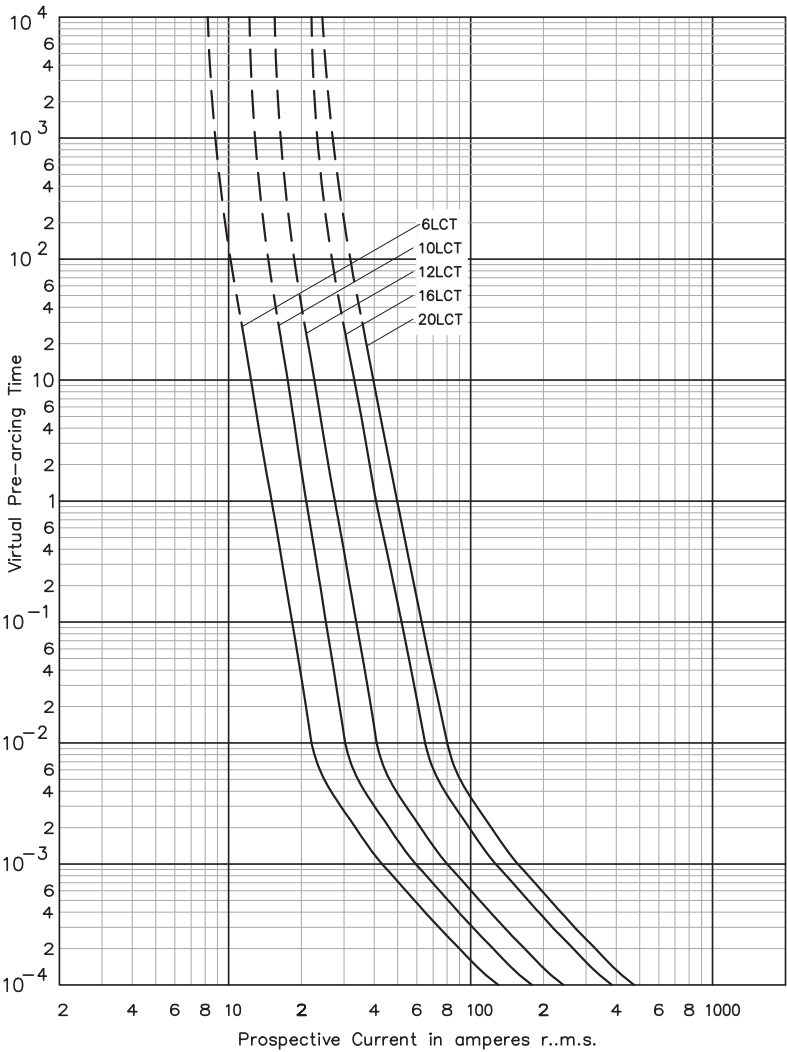
Indicator (optional).

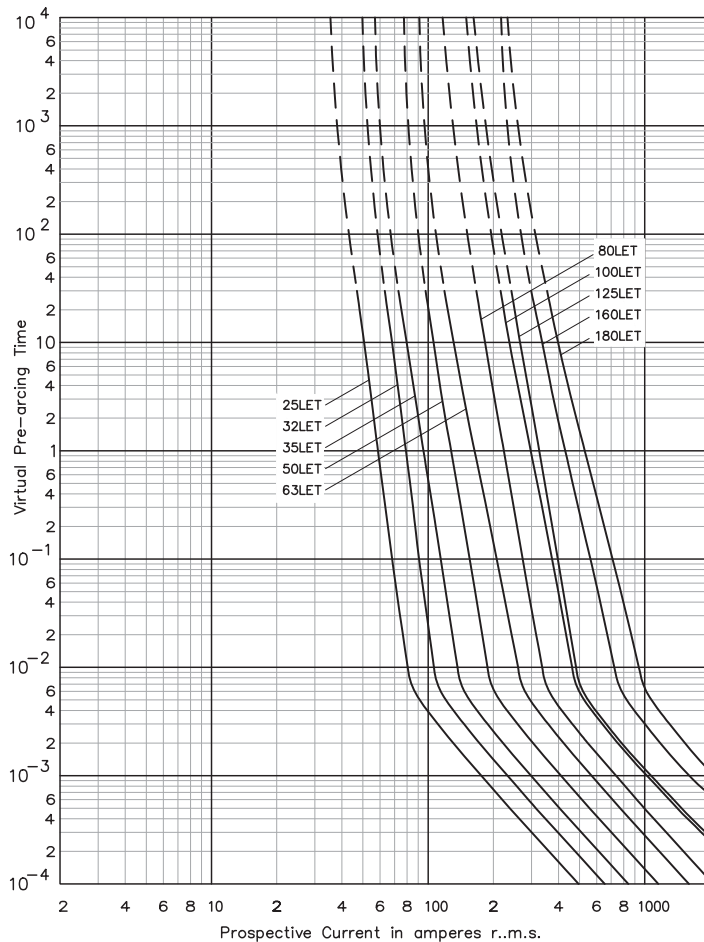
Data sheets: 720004, 5785296 (LCT), 5785293 (LET)

# British standard BS88 fuse links

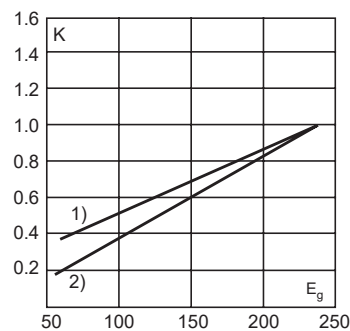
**LCT, LET** - 240 V a.c. / 150 V d.c. (IEC), 250-280 V a.c. / 150 V d.c. (UL), 6 A to 180 A

Time-current curve - LCT, 6 A to 20 A



**LCT, LET - 240 V a.c. / 150 V d.c. (IEC), 250-280 V a.c. / 150 V d.c. (UL), 6 A to 180 A****Time-current curve - LET, 25 A to 180 A****Total clearing  $I^2t$** 

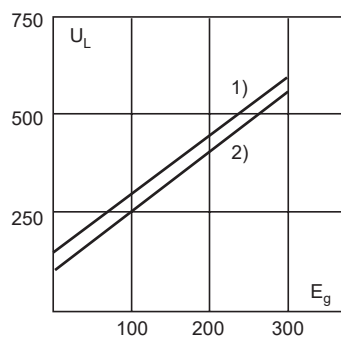
The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing  $I^2t$  is found by multiplying by correction factor,  $K$ , given as a function of applied working voltage,  $E_g$ , (RMS).



- 1) LCT  
2) LET

**Arc voltage**

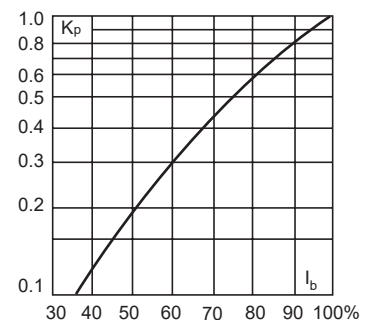
This curve gives the peak arc voltage,  $U_L$ , which may appear across the fuse during its operation as a function of the applied working voltage,  $E_g$ , (RMS) at a power factor of 15 percent.



- 1) LCT  
2) LET

**Watts losses**

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



# British standard BS88 fuse links

## LMT, LMMT - 240 V a.c. / 150 V d.c. (IEC), 250 V a.c. / 150 V d.c. (UL), 160 A to 900 A

### Specifications

#### Description

BS88 style bolted tags high speed fuse links for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rate voltage starters. Low watts loss in a compact size.

#### Technical Data

- Rated voltage:
  - 240 V a.c. / 150 V d.c. (IEC)
  - 250 V a.c. / 150 V d.c. (UL)
- Rated current: 160 A to 900 A
- Breaking capacity:
  - 200 kA RMS Sym., 40 kA at 150 V d.c. (IEC)
  - 200 kA RMS Sym., 50 kA at 150 V d.c. (UL)
- Operating Class: aR



#### Compatible trip indicator and microswitch

- See details page 391

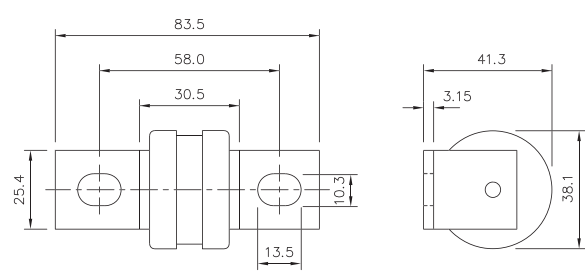
#### Standards / Agency information

CE, designed and tested to BS88 part 4, IEC 60269 Part 4, UL recognised and CCC. All fuse links have been tested at 318V a.c. Consult Eaton for specific UL recognition status.

#### Catalogue numbers

| Fuse link type        | Rated voltage                 | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                        |                        | Watts loss (W) | Catalogue numbers |
|-----------------------|-------------------------------|----------------------|---------------------------------------|------------------------|------------------------|----------------|-------------------|
|                       |                               |                      | Pre-arcing                            | Clearing at 120 V a.c. | Clearing at 240 V a.c. |                |                   |
| LMT<br>Single barrel  | 240 V a.c. / 150 V d.c. (IEC) | 160                  | 1100                                  | 7000                   | 16,000                 | 17             | 160LMT            |
|                       |                               | 200                  | 1500                                  | 10,000                 | 20,000                 | 28             | 200LMT            |
|                       |                               | 250                  | 3200                                  | 20,000                 | 40,000                 | 28             | 250LMT            |
|                       | 250 V a.c. / 150 V d.c. (UL)  | 315                  | 6000                                  | 35,000                 | 75,000                 | 35             | 315LMT            |
|                       |                               | 355                  | 8000                                  | 50,000                 | 100,000                | 35             | 355LMT            |
|                       |                               | 400                  | 14,000                                | 70,000                 | 160,000                | 40             | 400LMT            |
| LMMT<br>Double barrel | 240 V a.c. / 150 V d.c. (IEC) | 450                  | 18,000                                | 100,000                | 220,000                | 42             | 450LMT            |
|                       |                               | 400                  | 6000                                  | 35,000                 | 80,000                 | 60             | 400LMMT           |
|                       |                               | 500                  | 14,000                                | 80,000                 | 170,000                | 64             | 500LMMT           |
|                       |                               | 630                  | 24,000                                | 150,000                | 300,000                | 75             | 630LMMT           |
|                       | 250 V a.c. / 150 V d.c. (UL)  | 710                  | 32,000                                | 200,000                | 460,000                | 77             | 710LMMT           |
|                       |                               | 800                  | 52,000                                | 300,000                | 600,000                | 82             | 800LMMT           |
|                       |                               | 900                  | 75,000                                | 400,000                | 800,000                | 97             | 900LMMT           |
|                       |                               |                      |                                       |                        |                        |                |                   |

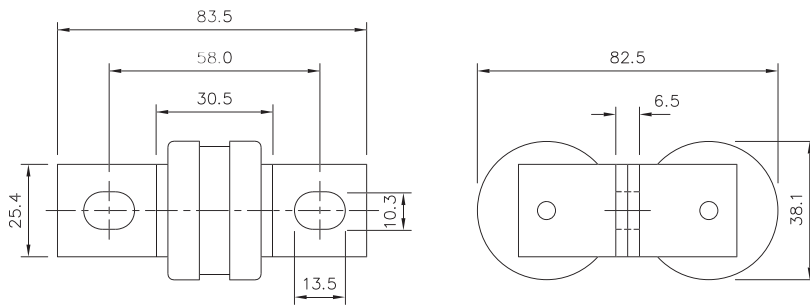
#### Dimensions (mm) - LMT (indicator optional)



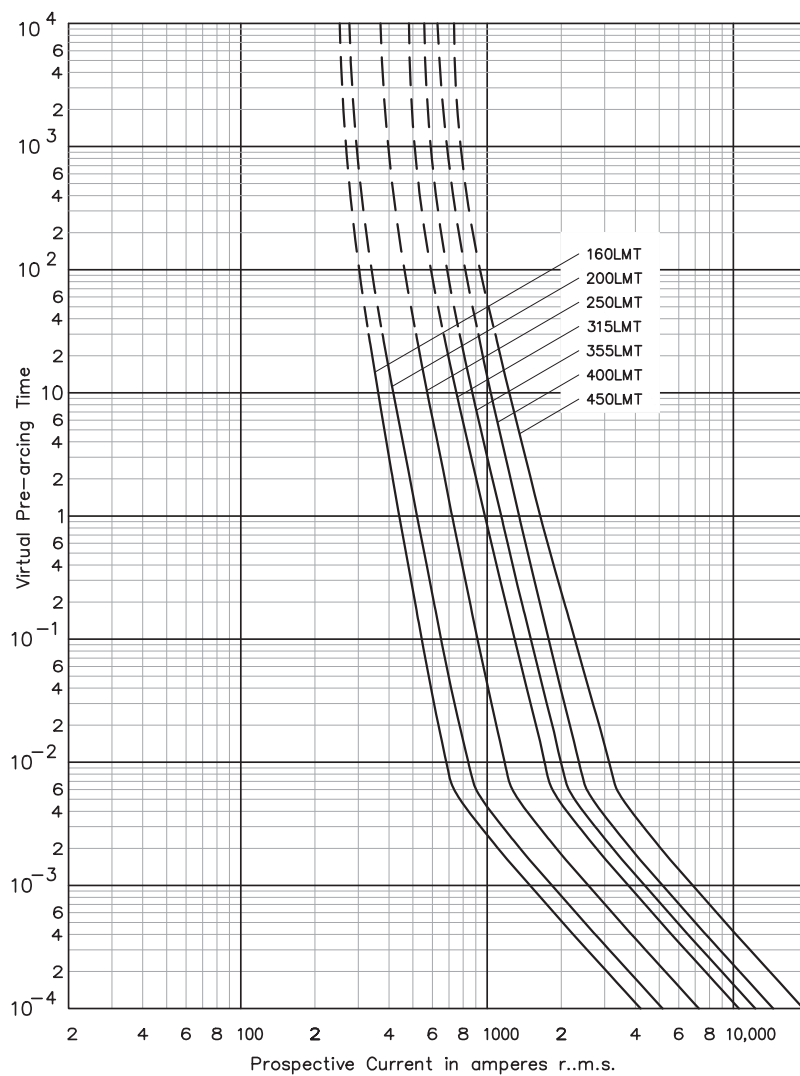
Data sheets: 720004, 5785294 (LMT), 5785295 (LMMT)

**LMT, LMMT - 240 V a.c. / 150 V d.c. (IEC), 250 V a.c. / 150 V d.c. (UL), 160 A to 900 A**

Dimensions (mm) - LMMT (indicator optional)



Time-current curve - LMT, 160 A to 450 A



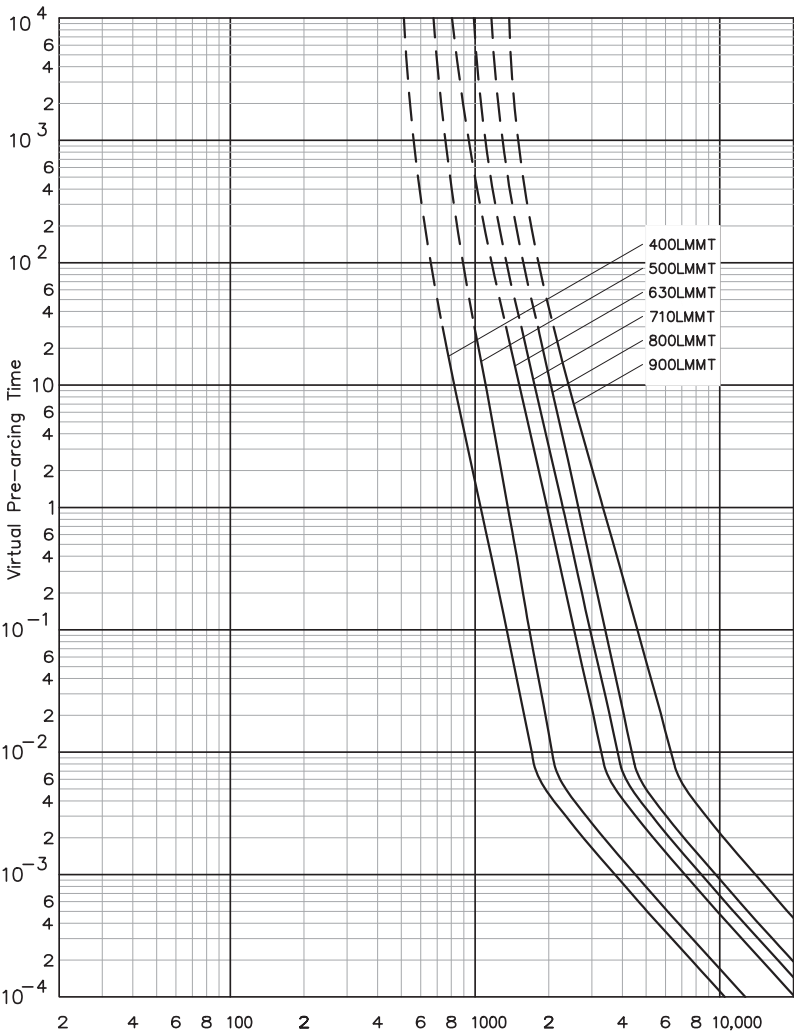
Data sheets: 720004, 5785294 (LMT), 5785295 (LMMT)



British standard BS88 fuse links

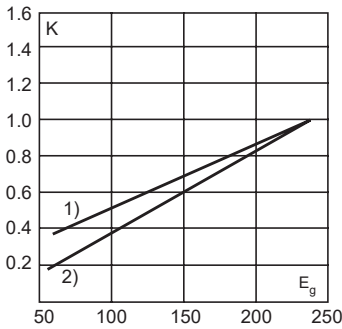
LMT, LMMT - 240 V a.c. / 150 V d.c. (IEC), 250 V a.c. / 150 V d.c. (UL), 160 A to 900 A

Time-current curve - LMMT, 400 A to 900 A



Total clearing I²t

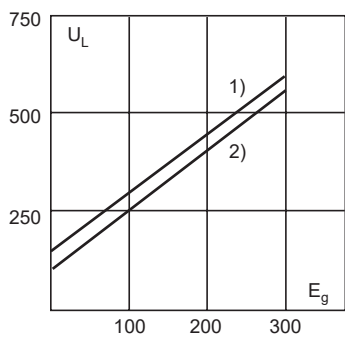
The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



2) LMT, LMMT

Arc voltage

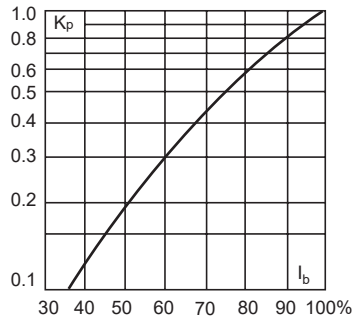
This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



2) LMT, LMMT

Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



## CT, ET, FE, EET, FEE - 690 V a.c. / 500 V d.c. (IEC), 700 V a.c. / 500 V d.c. (UL), 6 A to 200 A

### Specifications

#### Description

BS88 style bolted tags high speed fuse links for the protection of DC common bus, DC drives, power converters / rectifiers and reduced rated voltage starters.

#### Technical data

- Rated voltage:
  - 690 V a.c. / 500 V d.c. (IEC)
  - 700 V a.c. / 500 V d.c. (UL)
- Rated current: 6 A to 200 A
- Breaking capacity:
  - CT: 90 kA RMS Sym., 40 kA at 500 V d.c. (IEC)
  - 200 kA RMS Sym., 50 kA at 500 V d.c. (UL)
  - ET, EET, FE and FEE: 200 kA RMS Sym., 50 kA at 500 V d.c.
- Operating Class: aR.

#### Compatible trip indicator and microswitch

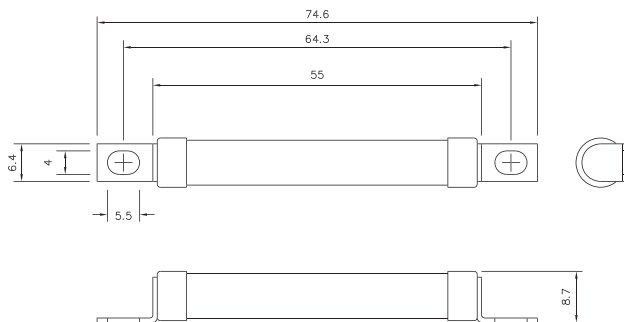
- See details page 391

#### Standards / Agency information

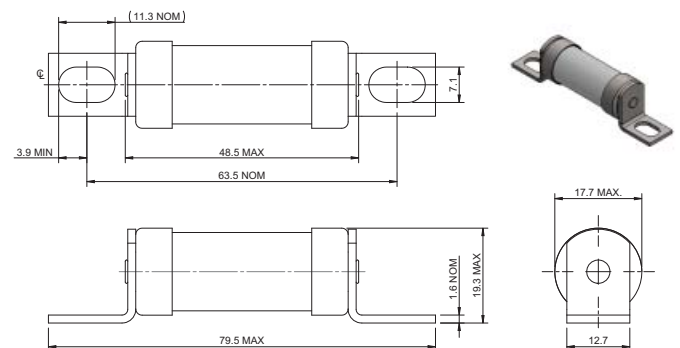
CE, designed and tested to BS88 part 4, IEC 60269 Part 4, Consult Eaton for specific UL Recognition status. CCC for ET, FE, EET, FEE.



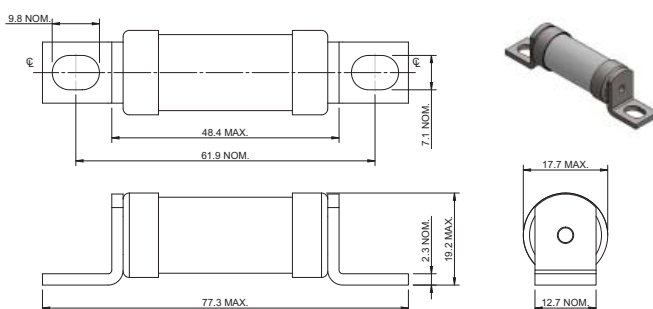
#### Dimensions (mm) - CT



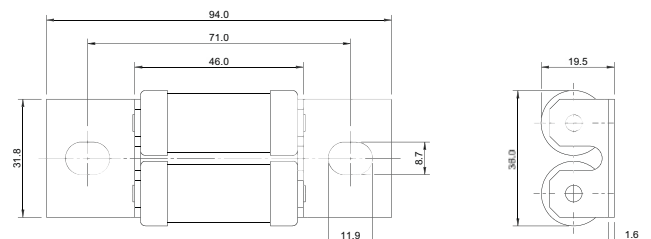
#### Dimensions (mm) - ET, FE up to 63 A



#### Dimensions (mm) - ET, FE greater than 63 A



#### Dimensions (mm) - EET and FEE



Data sheets: 720024, 5785312 (CT, ET), 5785314 (FE), 5785313 (EET), 5785292 (FEE)

## British standard BS88 fuse links

**CT, ET, FE, EET, FEE - 690 V a.c./500 V d.c. (IEC), 700 V a.c./500 V d.c. (UL), 6 A to 200 A**

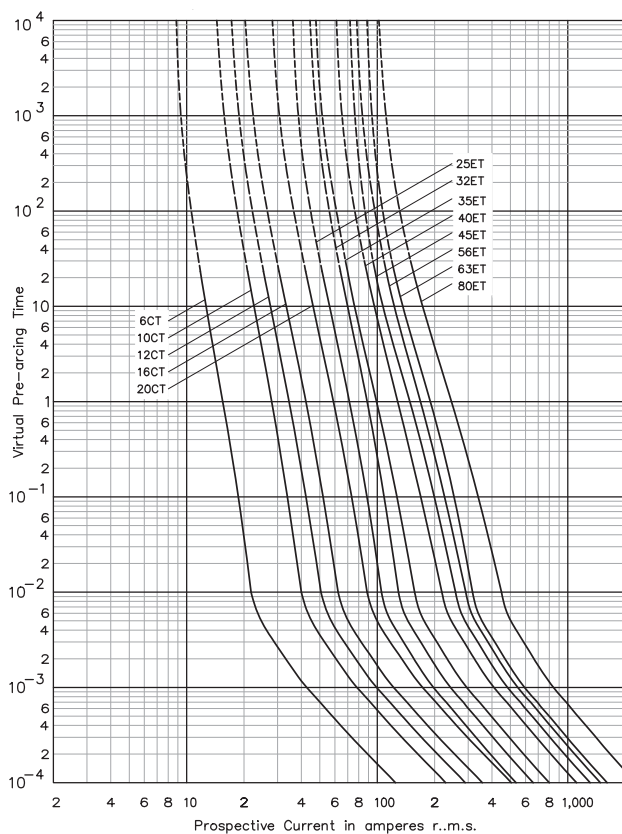
### Catalogue numbers

| Fuse link type | Rated voltage                                                 | Rated current<br>(Amps) | I²t (A² Sec) |                          |                           | Watts loss<br>(W) | Catalogue<br>numbers |
|----------------|---------------------------------------------------------------|-------------------------|--------------|--------------------------|---------------------------|-------------------|----------------------|
|                |                                                               |                         | Pre-arcing   | Clearing<br>at 415V a.c. | Clearing<br>at 660 V a.c. |                   |                      |
| CT             | 690 V a.c. / 500 V d.c. (IEC)                                 | 6                       | 1.8          | 8.5                      | 12                        | 2                 | 6CT                  |
|                |                                                               | 10                      | 7            | 30                       | 48                        | 3                 | 10CT                 |
|                | 700 V a.c. / 500 V d.c. (UL)                                  | 12                      | 10           | 40                       | 65                        | 3                 | 12CT                 |
|                |                                                               | 16                      | 16           | 66                       | 110                       | 7                 | 16CT                 |
|                |                                                               | 20                      | 32           | 150                      | 220                       | 7                 | 20CT                 |
| ET             | 690 V a.c. / 500 V d.c. (IEC)                                 | 25                      | 25           | 150                      | 250                       | 7                 | 25ET                 |
|                |                                                               | 32                      | 32           | 190                      | 350                       | 11                | 32ET                 |
|                |                                                               | 35                      | 52           | 310                      | 500                       | 11                | 35ET                 |
|                |                                                               | 40                      | 103          | 600                      | 900                       | 9                 | 40ET                 |
|                | 700 V a.c. / 500 V d.c. (UL)                                  | 45                      | 103          | 680                      | 1100                      | 11                | 45ET                 |
|                |                                                               | 56                      | 135          | 950                      | 1500                      | 14                | 56ET                 |
|                |                                                               | 63                      | 171          | 1200                     | 2000                      | 16                | 63ET                 |
|                |                                                               | 80                      | 360          | 2500                     | 4000                      | 18                | 80ET                 |
| FE             | 690 V a.c. / 500 V d.c. (IEC)<br>700 V a.c. / 500 V d.c. (UL) | 35                      | 33           | 130                      | 200                       | 9                 | 35FE                 |
|                |                                                               | 40                      | 52           | 180                      | 300                       | 9                 | 40FE                 |
|                |                                                               | 45                      | 76           | 270                      | 450                       | 11                | 45FE                 |
|                |                                                               | 50                      | 103          | 380                      | 600                       | 11                | 50FE                 |
|                |                                                               | 63                      | 135          | 480                      | 750                       | 12                | 63FE                 |
|                |                                                               | 71                      | 210          | 600                      | 950                       | 17                | 71FE                 |
|                |                                                               | 80                      | 250          | 900                      | 1500                      | 20                | 80FE                 |
|                |                                                               | 90                      | 360          | 1300                     | 2100                      | 20                | 90FE                 |
|                |                                                               | 100                     | 470          | 1800                     | 2800                      | 23                | 100FE                |
| EET            | 690 V a.c. / 500 V d.c. (IEC)                                 | 90                      | 490          | 3000                     | 4500                      | 19                | 90EET                |
|                |                                                               | 110                     | 600          | 4000                     | 6500                      | 27                | 110EET               |
|                | 700 V a.c. / 700 V d.c. (UL)                                  | 140                     | 1050         | 7000                     | 12,000                    | 35                | 140EET               |
|                |                                                               | 160                     | 1500         | 10,000                   | 17,000                    | 39                | 160EET               |
| FEE            | 690 V a.c. / 500 V d.c. (IEC)<br>700 V a.c. / 500 V d.c. (UL) | 100                     | 400          | 1600                     | 2400                      | 24                | 100FEE               |
|                |                                                               | 120                     | 540          | 1900                     | 3100                      | 32                | 120FEE               |
|                |                                                               | 140                     | 850          | 2500                     | 3800                      | 36                | 140FEE               |
|                |                                                               | 160                     | 1000         | 3700                     | 5700                      | 46                | 160FEE               |
|                |                                                               | 180                     | 1400         | 5300                     | 8400                      | 46                | 180FEE               |
|                |                                                               | 200                     | 1900         | 7100                     | 11,400                    | 52                | 200FEE               |

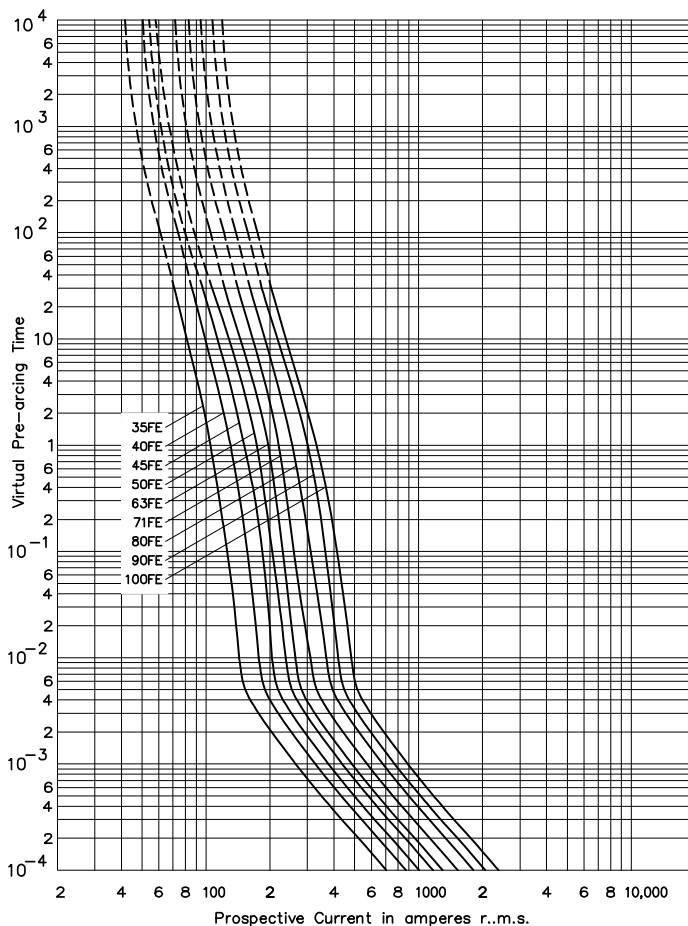
Note: FC, 8ET, 12ET, 15ET, 20ET, 65EET and 75EET are available for replacement purposes on existings equipment.

**CT, ET, FE, EET, FEE -690 V a.c. / 500 V d.c. (IEC), 700 V a.c. / 500 V d.c. (UL), 6 A to 200 A**

**Time-current curve - CT, 6 A to 20 A and ET 25 A to 80 A**



**Time-current curve - FE, 35 A to 100 A**

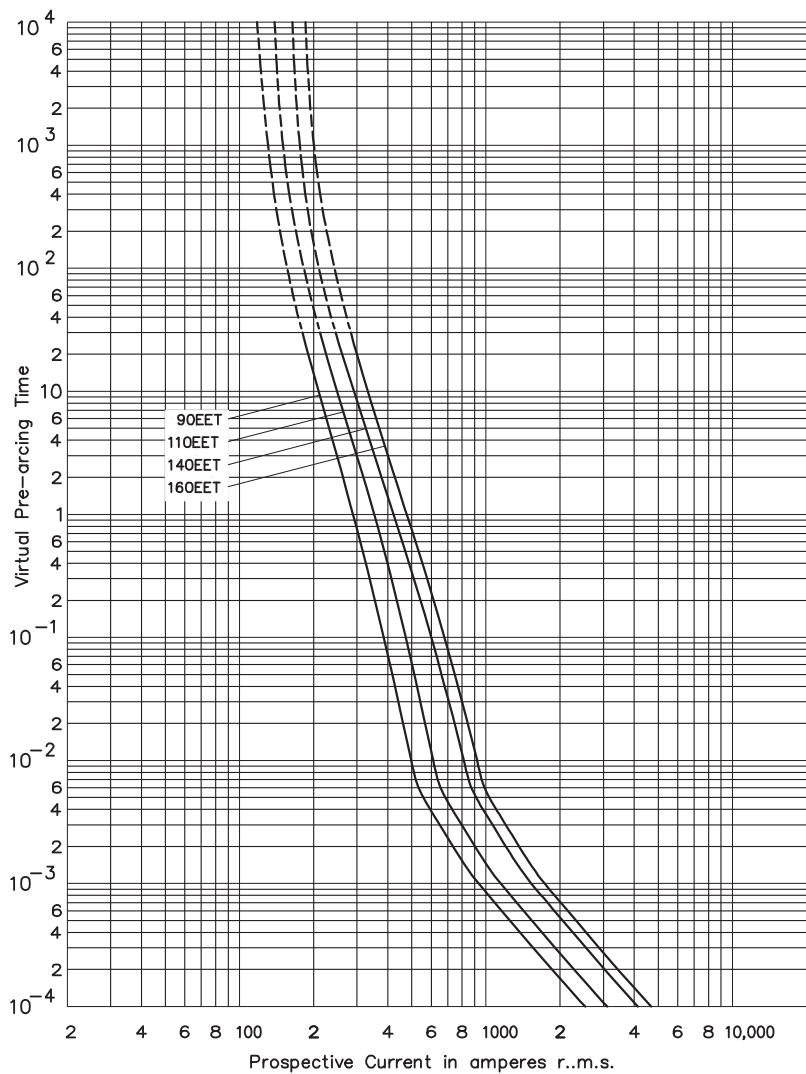


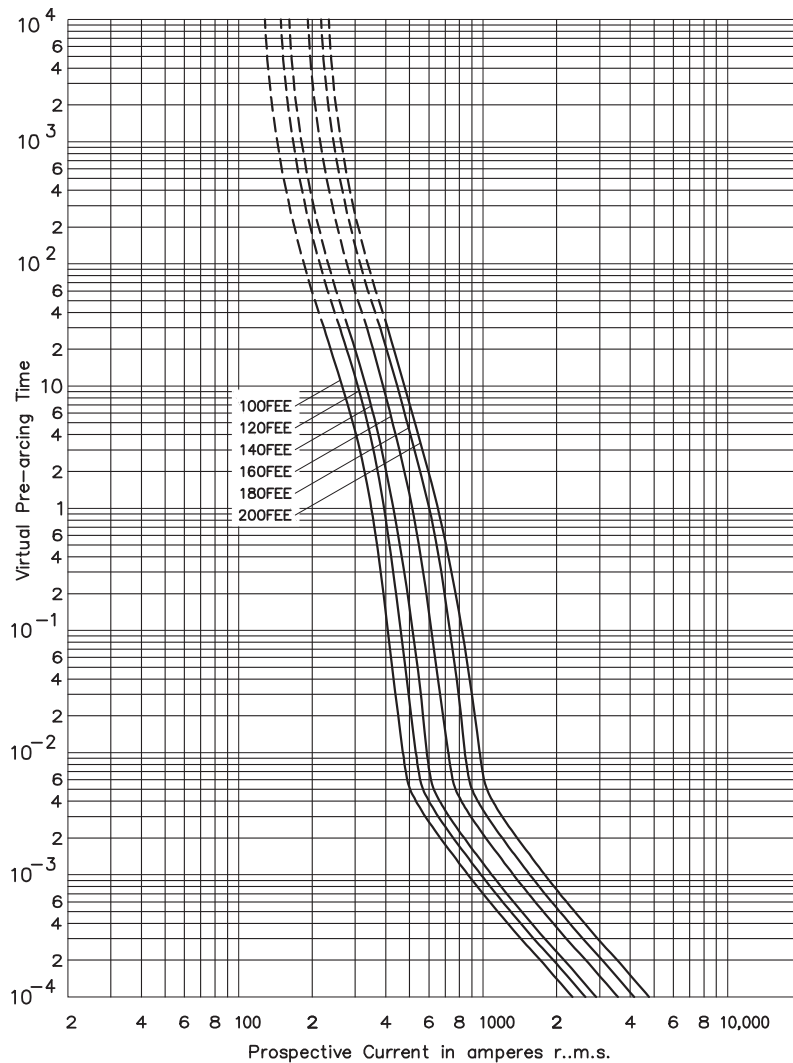
Data sheets: 720024, 5785312 (CT, ET), 5785314 (FE), 5785313 (EET), 5785292 (FEE)

British standard BS88 fuse links

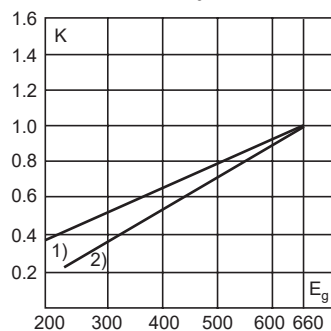
CT, ET, FE, EET, FEE - 690 V a.c. / 500 V d.c. (IEC), 700 V a.c. / 500 V d.c. (UL), 6 A to 200 A

Time-current curve - EET, 90 A to 160 A



**CT, ET, FE, EET, FEE - 690 V a.c./500 V d.c. (IEC), 700 V a.c./500 V d.c. (UL), 6 A to 200 A****Time-current curve - FEE, 100 A to 200 A****Total clearing  $I^2t$** 

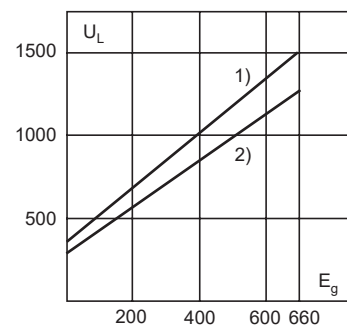
The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing  $I^2t$  is found by multiplying by correction factor,  $K$ , given as a function of applied working voltage,  $E_g$ , (RMS).



1) CT, ET, FE, FEE

**Arc voltage**

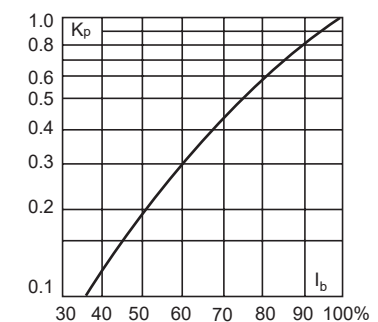
This curve gives the peak arc voltage,  $U_L$ , which may appear across the fuse during its operation as a function of the applied working voltage,  $E_g$ , (RMS) at a power factor of 15 percent.



1) CT, ET, FE, FEE

**Watts losses**

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



# British standard BS88 fuse links

**FM, FMM, MT, MMT** - 690 V a.c. / 350-450 V d.c. (IEC), 700 V a.c. / 500 V d.c. (UL), 160 A to 710 A

## Specifications

### Description

BS88 style bolted tags high speed fuse links for the protection of DC common bus, DC drives, power converters / rectifiers and reduced rated voltage starters.

### Technical data

- Rated voltage:
  - FM: 690 V a.c. / 450 V d.c. (IEC); 700 V a.c./500 V d.c. (UL)
  - FMM: 690 V a.c. / 450 V d.c. (IEC)
  - MT and MMT: 690 V a.c. / 350 V d.c. (IEC); 700 V a.c. (UL)
- Rated current: 160 A to 710 A
- Breaking capacity:
  - FM: 200 kA RMS Sym. (IEC/UL), 40 kA at 450 V d.c. (IEC), 50 kA at 500 V d.c. (UL)
  - FMM: 200 kA RMS Sym. (IEC/UL), 40 kA at 450 V d.c. (IEC)
  - MT & MMT: 200 kA RMS Sym. (IEC/UL), 40 kA at 350 V d.c. (IEC)
- Operating Class: aR

### Compatible trip indicator and microswitch

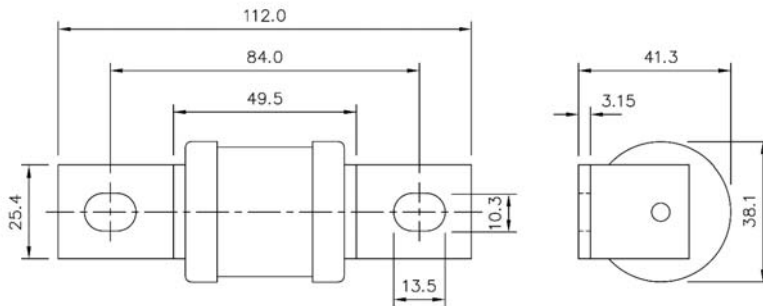
- See details page 391

### Standards / Agency information

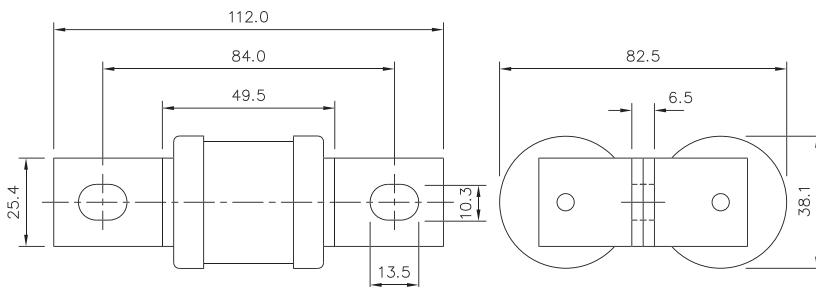
CE, designed and tested to BS88 part 4, IEC 60269 Part 4, UL Recognised. MT and MMT 350 V d.c. (IEC) rating. Consult Eaton for specific UL Recognition status. CCC for FM and FMM.



### Dimensions (mm) - FM and MT (indicator optional)



### Dimensions (mm) - FMM and MMT (indicator optional)



Data sheets: 720024, 5785314 (FM), 5785313 (MT), 5785292 (FMM), 5785311 (MMT)

**FM, FMM, MT, MMT - 690 V a.c. / 350-450 V d.c. (IEC), 700 V a.c. / 500 V d.c. (UL), 160 A to 710 A****Catalogue numbers**

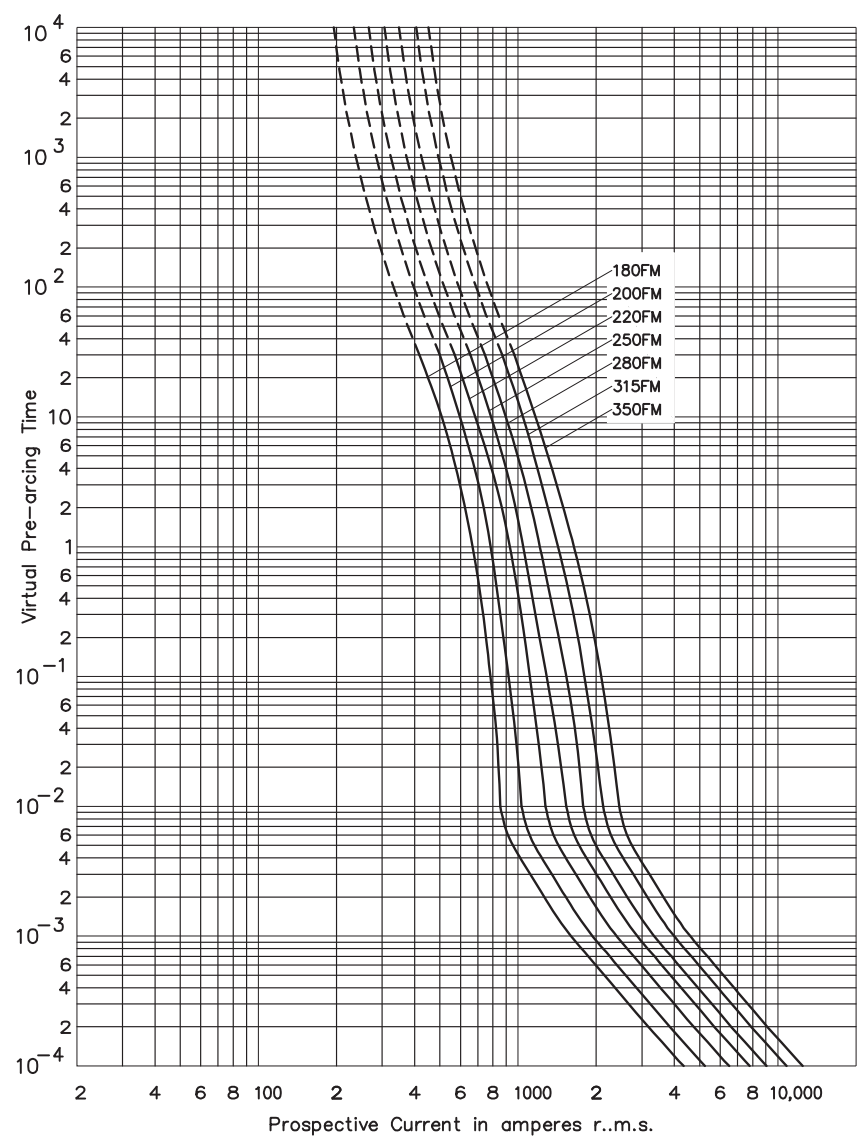
| Fuse link type | Rated voltage                                                 | I <sup>2</sup> t (A <sup>2</sup> Sec) |            |                       |                        | Watts loss (W) | Catalogue numbers |
|----------------|---------------------------------------------------------------|---------------------------------------|------------|-----------------------|------------------------|----------------|-------------------|
|                |                                                               | Rated current (Amps)                  | Pre-arcing | Clearing at 415V a.c. | Clearing at 660 V a.c. |                |                   |
| FM             | 690 V a.c. / 450 V d.c. (IEC)<br>700 V a.c. / 500 V d.c. (UL) | 180                                   | 1400       | 7500                  | 13,500                 | 40             | 180FM             |
|                |                                                               | 200                                   | 2600       | 10,500                | 18,500                 | 40             | 200FM             |
|                |                                                               | 225                                   | 3700       | 14,500                | 26,500                 | 44             | 225FM             |
|                |                                                               | 250                                   | 5200       | 20,500                | 37,500                 | 48             | 250FM             |
|                |                                                               | 280                                   | 7000       | 30,500                | 55,000                 | 48             | 280FM             |
|                |                                                               | 315                                   | 10,000     | 40,000                | 77,000                 | 55             | 315FM             |
|                |                                                               | 350                                   | 15,000     | 60,000                | 105,000                | 55             | 350FM             |
| FMM            | 690 V a.c. / 450 V d.c. (IEC)                                 | 400                                   | 10,000     | 40,000                | 72,500                 | 85             | 400FMM            |
|                |                                                               | 450                                   | 15,000     | 60,000                | 105,000                | 90             | 450FMM            |
|                |                                                               | 500                                   | 20,000     | 82,000                | 150,000                | 100            | 500FMM            |
|                |                                                               | 550                                   | 30,000     | 120,000               | 215,000                | 100            | 550FMM            |
|                |                                                               | 630                                   | 45,000     | 180,000               | 310,000                | 100            | 630FMM            |
|                |                                                               | 700                                   | 60,000     | 245,000               | 420,000                | 120            | 700FMM            |
| MT             | 690 V a.c. / 350 V d.c. (IEC)<br>700 V a.c. (UL)              | 160                                   | 2400       | 15,000                | 25,000                 | 26             | 160MT             |
|                |                                                               | 180                                   | 3800       | 25,000                | 38,000                 | 26             | 180MT             |
|                |                                                               | 200                                   | 6000       | 40,000                | 58,000                 | 27             | 200MT             |
|                |                                                               | 250                                   | 11,500     | 80,000                | 110,000                | 32             | 250MT             |
|                |                                                               | 280                                   | 16,500     | 100,000               | 150,000                | 35             | 280MT             |
|                |                                                               | 315                                   | 19,000     | 125,000               | 180,000                | 42             | 315MT             |
|                |                                                               | 355                                   | 22,000     | 160,000               | 200,000                | 51             | 355MT             |
| MMT            | 690 V a.c. / 350 V d.c. (IEC)<br>700 V a.c. (UL)              | 180                                   | 1650       | 12,000                | 18,000                 | 42             | 180MMT            |
|                |                                                               | 200                                   | 2200       | 16,000                | 23,000                 | 42             | 200MMT            |
|                |                                                               | 225                                   | 3700       | 26,000                | 40,000                 | 42             | 225MMT            |
|                |                                                               | 280                                   | 6600       | 47,000                | 70,000                 | 47             | 280MMT            |
|                |                                                               | 315                                   | 8600       | 62,000                | 91,000                 | 51             | 315MMT            |
|                |                                                               | 355                                   | 13,500     | 97,000                | 140,000                | 54             | 355MMT            |
|                |                                                               | 400                                   | 21,000     | 150,000               | 220,000                | 60             | 400MMT            |
|                |                                                               | 450                                   | 30,000     | 220,000               | 320,000                | 57             | 450MMT            |
|                |                                                               | 500                                   | 42,000     | 300,000               | 450,000                | 64             | 500MMT            |
|                |                                                               | 560                                   | 60,000     | 430,000               | 640,000                | 64             | 560MMT            |
|                |                                                               | 630                                   | 68,500     | 500,000               | 720,000                | 86             | 630MMT            |
|                |                                                               | 710                                   | 78,000     | 600,000               | 850,000                | 105            | 710MMT            |



# British standard BS88 fuse links

**FM, FMM, MT, MMT** - 690 V a.c. / 350-450 V d.c. (IEC), 700 V a.c. / 500 V d.c. (UL), 160 A to 710 A

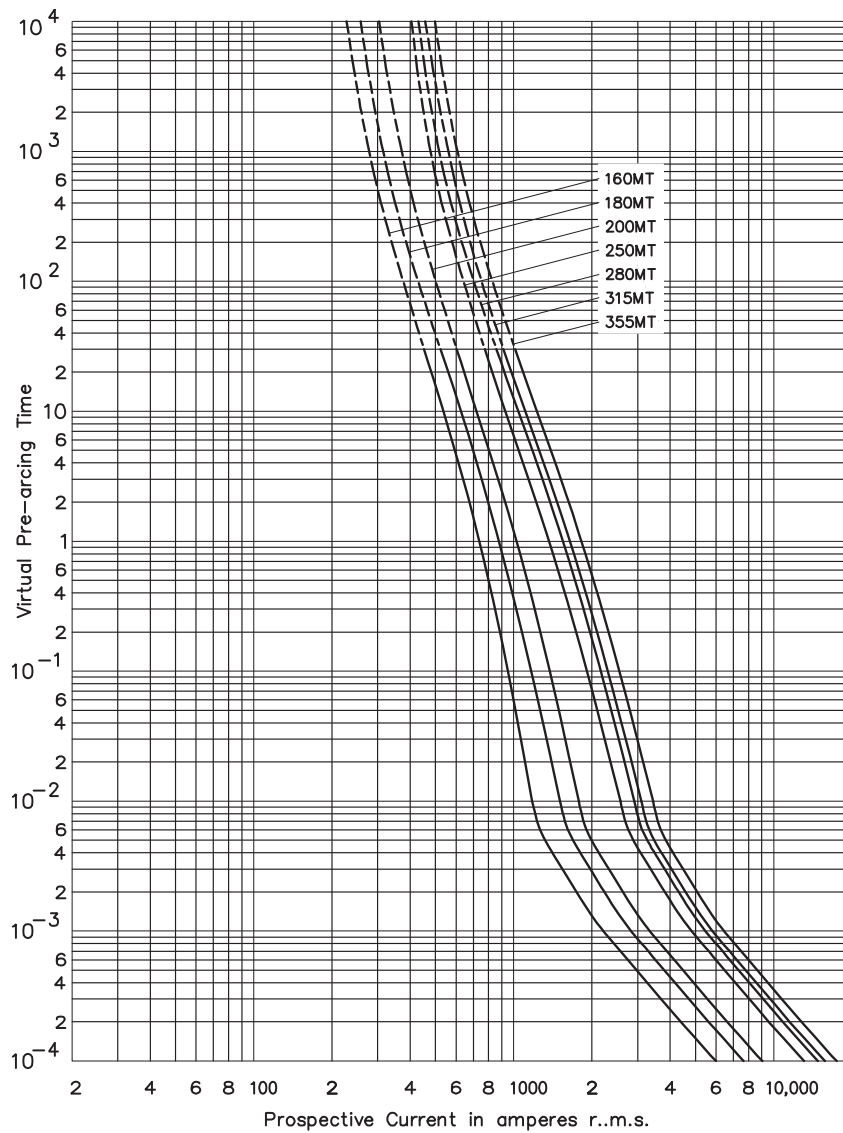
Time-current curve - FM, 180 A to 350 A



Data sheets: 720024, 5785314 (FM), 5785313 (MT), 5785292 (FMM), 5785311 (MMT)

**FM, FMM, MT, MMT** - 690 V a.c. / 350-450 V d.c. (IEC), 700 V a.c. / 500 V d.c. (UL), 160 A to 710 A

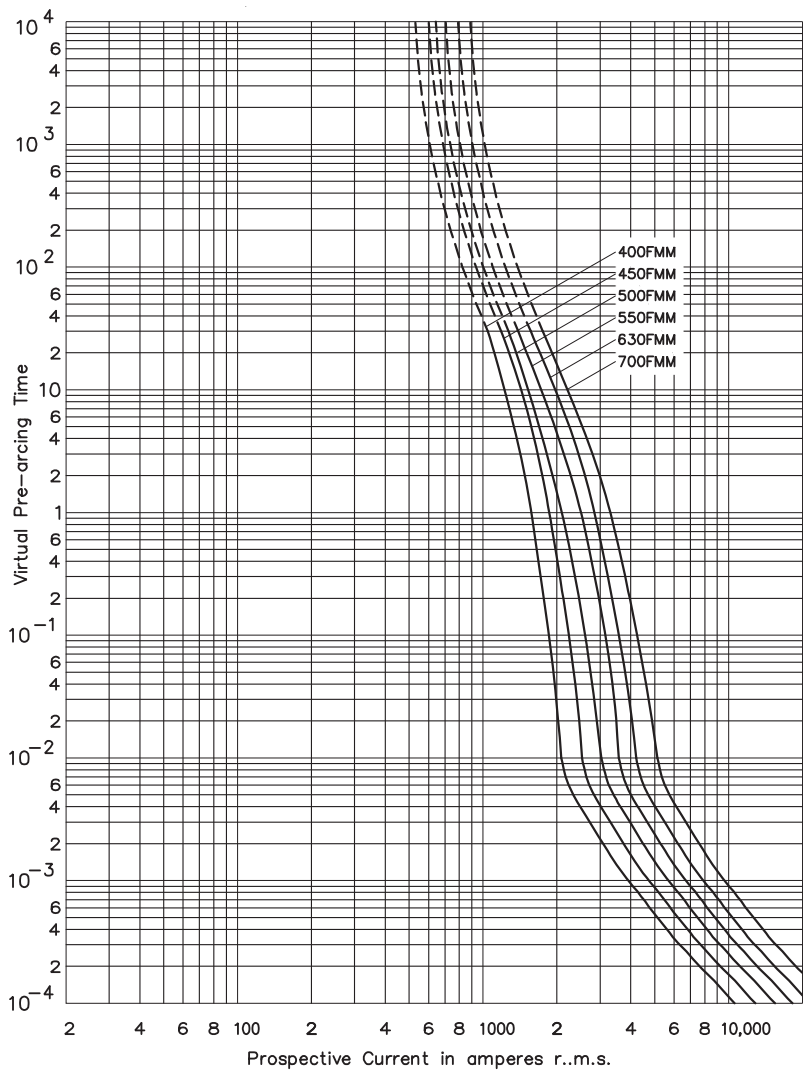
**Time-current curve - MT, 160 A to 355 A**



# British standard BS88 fuse links

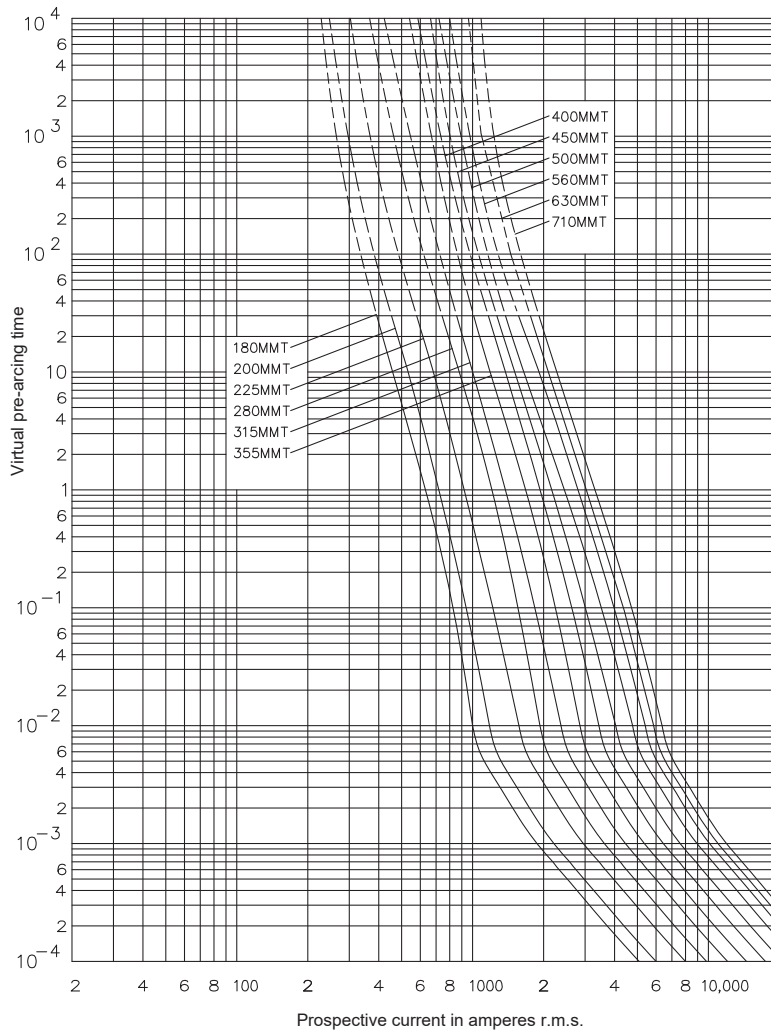
**FM, FMM, MT, MMT** - 690 V a.c. / 350-450 V d.c. (IEC), 700 V a.c. / 500 V d.c. (UL), 160 A to 710 A

Time-current curve - FMM, 400 A to 700 A



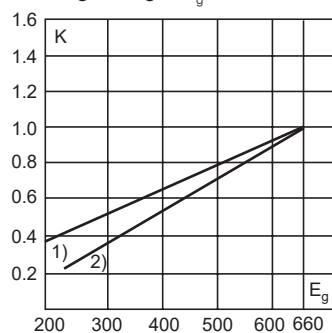
# **FM, FMM, MT, MMT - 690 V a.c. / 350-450 V d.c. (IEC), 700 V a.c. / 500 V d.c. (UL), 160 A to 710 A**

## Time-current curve - MMT, 180 A to 710 A



## Total clearing $I^2t$

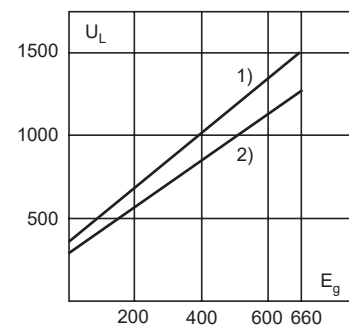
The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing  $I^2t$  is found by multiplying by correction factor,  $K$ , given as a function of applied working voltage,  $E_g$ , (RMS).



1) MT, MMT 2) FM, FMM

## Arc voltage

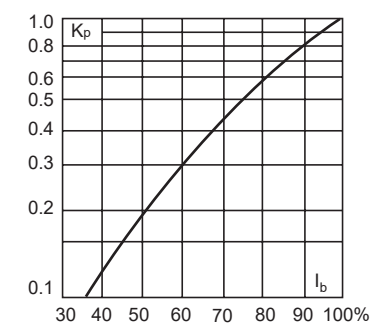
This curve gives the peak arc voltage,  $U_L$ , which may appear across the fuse during its operation as a function of the applied working voltage,  $E_g$ , (RMS) at a power factor of 15 percent.



1) MT, MMT 2) FM, FMM

## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



Data sheets: 720024, 5785314 (FM), 5785313 (MT), 5785292 (FMM), 5785311 (MMT)

## FWA - 10 x 38 mm and 21 x 51 mm, 150 V a.c. / V d.c. (UL), 5 A to 60 A

### Specifications

#### Description

Ferrule style high speed fuse links for the protection of DC common bus, DC drives, power converters / rectifiers and reduced rated voltage starters.

#### Technical data

- Rated voltage: 150 V a.c. / V d.c. (UL)
- Rated current: 5 A to 60 A
- Breaking capacity:
  - 200 kA RMS Sym.
  - 50 kA DC at 150 V d.c.
- Operating class: aR

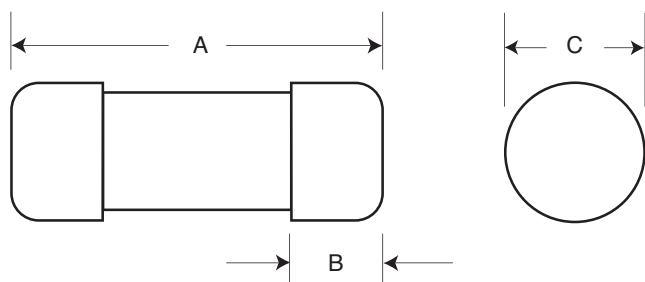
#### Standards / Agency information

CE, UL recognised

#### Catalogue numbers

| Fuse link size                                         | Rated voltage               | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                           | Watts loss<br>(W) | Catalogue<br>numbers |
|--------------------------------------------------------|-----------------------------|-------------------------|---------------------------------------|---------------------------|-------------------|----------------------|
|                                                        |                             |                         | Pre-arcing                            | Clearing<br>at 150 V a.c. |                   |                      |
| 10 x 38 mm<br>( <sup>13</sup> / <sub>32</sub> " x 1½") | 150 V a.c. / V d.c.<br>(UL) | 5                       | 1.6                                   | 8                         | 2                 | FWA-5A10F            |
|                                                        |                             | 10                      | 3.6                                   | 16                        | 2.7               | FWA-10A10F           |
|                                                        |                             | 15                      | 14                                    | 50                        | 3.3               | FWA-15A10F           |
|                                                        |                             | 20                      | 33                                    | 130                       | 3.8               | FWA-20A10F           |
|                                                        |                             | 25                      | 58                                    | 220                       | 4.9               | FWA-25A10F           |
|                                                        |                             | 30                      | 100                                   | 400                       | 4.9               | FWA-30A10F           |
| 21 x 51 mm<br>( <sup>13</sup> / <sub>16</sub> " x 2")  | 150 V a.c. / V d.c.<br>(UL) | 35                      | 75                                    | 800                       | 4.5               | FWA-35A21F           |
|                                                        |                             | 40                      | 100                                   | 1000                      | 5.1               | FWA-40A21F           |
|                                                        |                             | 45                      | 130                                   | 1300                      | 6                 | FWA-45A21F           |
|                                                        |                             | 50                      | 170                                   | 1600                      | 7.3               | FWA-50A21F           |
|                                                        |                             | 55                      | 210                                   | 1900                      | 8.1               | FWA-55A21F           |
|                                                        |                             | 60                      | 250                                   | 2400                      | 8                 | FWA-60A21F           |

#### Dimensions - in (mm)

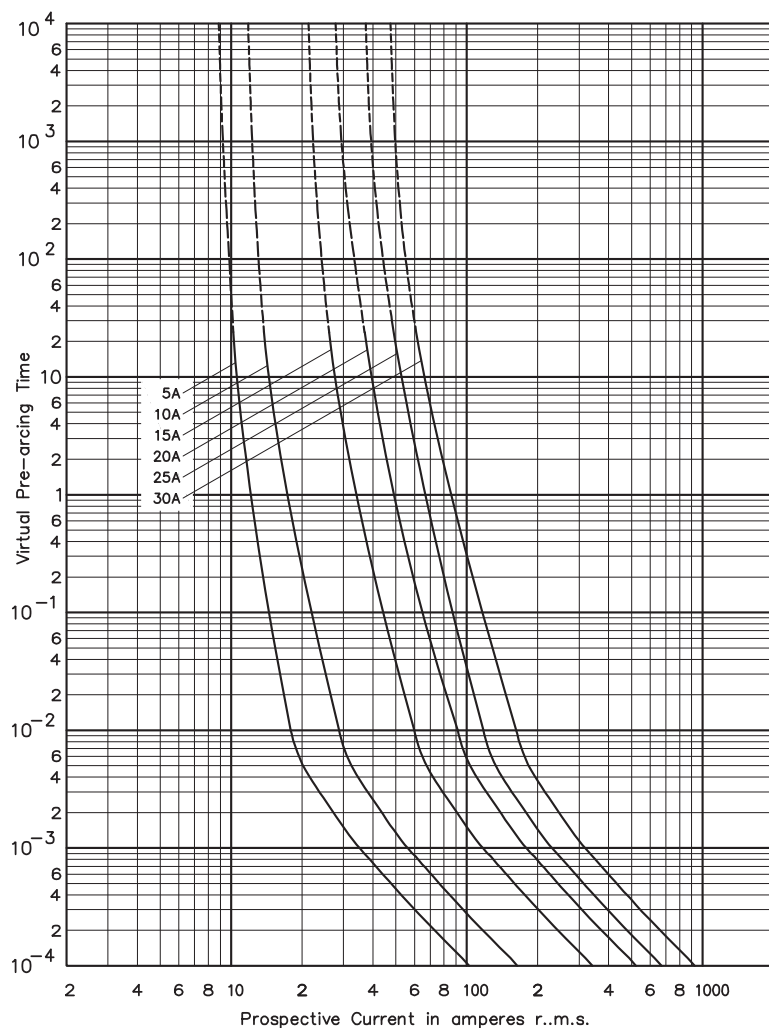


| Amp range | A          | B           | C           |
|-----------|------------|-------------|-------------|
| 5-30      | 1.5 (38.1) | 0.38 (9.5)  | 0.41 (10.3) |
| 35-60     | 2 (50.8)   | 0.63 (15.9) | 0.81 (20.6) |



# FWA - 10 x 38 mm and 21 x 51 mm, 150 V a.c. / V d.c. (UL), 5 A to 60 A

## Time-current curve - 5 A to 30 A

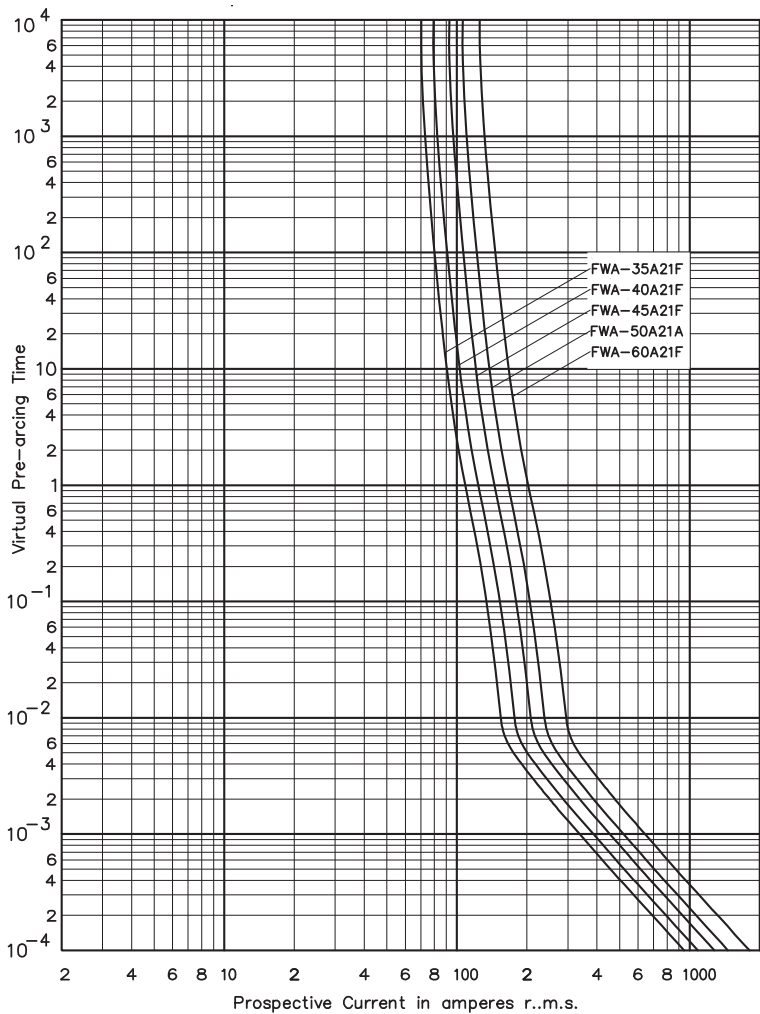


Data sheets: 720003,5785317 (5-30 A), 5785305 (35-60 A)

Ferrule fuse links

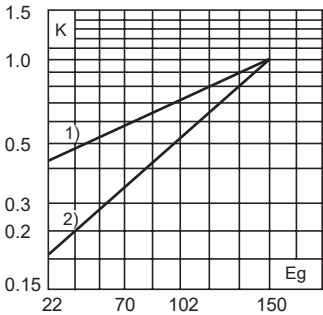
FWA - 10 x 38 mm and 21 x 51 mm, 150 V a.c. / V d.c. (UL), 5 A to 60 A

Time-current curve - 35 A to 60 A



Total clearing I²t

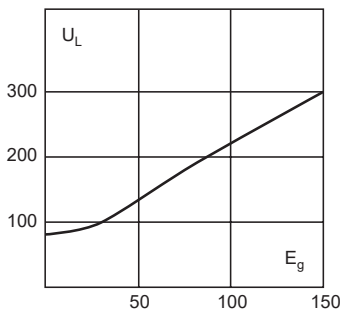
The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



- 1) 5 - 30 A
- 2) 35 - 60 A

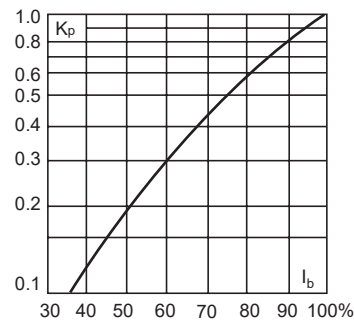
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



## FWX - 14 x 51 mm, 250 V a.c. / V d.c. (UL), 1 A to 50 A

### Specifications

#### Description

Ferrule style high speed fuse links for the protection of DC common bus, DC drives, power converters/rectifiers rated voltage starters.

#### Technical data

- Rated voltage: see details in table below
- Rated current: 1 A to 50 A
- Breaking capacity:
  - 200 kA RMS Sym. (UL, all ratings)
  - 50 kA at 250 V d.c. (UL, 5 A to 30 A only)
- Operating class: aR

#### Compatible modular fuse holder

- CH14 see page 385

#### Standards / Agency information

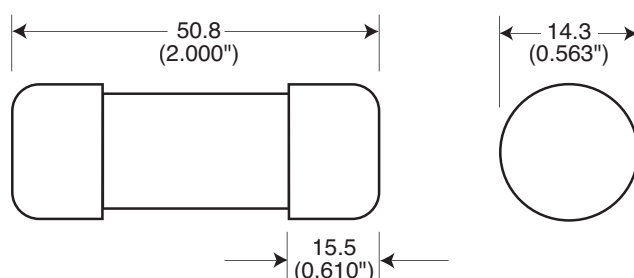
CE, UL recognised 1-50 A & CSA component acceptance: 5 A to 30 A



#### Catalogue numbers

| Fuse link size                        | Rated voltage                   | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                           | Watts loss<br>(W) | Catalogue<br>numbers |
|---------------------------------------|---------------------------------|-------------------------|---------------------------------------|---------------------------|-------------------|----------------------|
|                                       |                                 |                         | Pre-arcing                            | Clearing<br>at 250 V a.c. |                   |                      |
| 14 x 51mm<br>( $\frac{9}{16}$ " x 2") | 250 V a.c. (UL)                 | 1                       | 0.04                                  | 0.12                      | 5.7               | FWX-1A14F            |
|                                       |                                 | 2                       | 0.08                                  | 0.28                      | 8.7               | FWX-2A14F            |
|                                       |                                 | 3                       | 0.11                                  | 0.39                      | 2.8               | FWX-3A14F            |
|                                       |                                 | 4                       | 0.1                                   | 0.35                      | 3                 | FWX-4A14F            |
|                                       | 250 V a.c. /<br>250 V d.c. (UL) | 5                       | 1.6                                   | 13                        | 1.3               | FWX-5A14F            |
|                                       |                                 | 10                      | 3.6                                   | 24                        | 3.4               | FWX-10A14F           |
|                                       |                                 | 15                      | 14                                    | 83                        | 3.8               | FWX-15A14F           |
|                                       |                                 | 20                      | 33                                    | 200                       | 4.6               | FWX-20A14F           |
|                                       |                                 | 25                      | 58                                    | 300                       | 5.3               | FWX-25A14F           |
|                                       |                                 | 30                      | 100                                   | 500                       | 5.9               | FWX-30A14F           |
|                                       |                                 | 50                      | 200                                   | 1800                      | 5.7               | FWX-50A14F           |
|                                       | 250 V a.c. (UL)                 | 50                      | 200                                   | 1800                      | 5.7               | FWX-50A14F           |

#### Dimensions - mm (in)

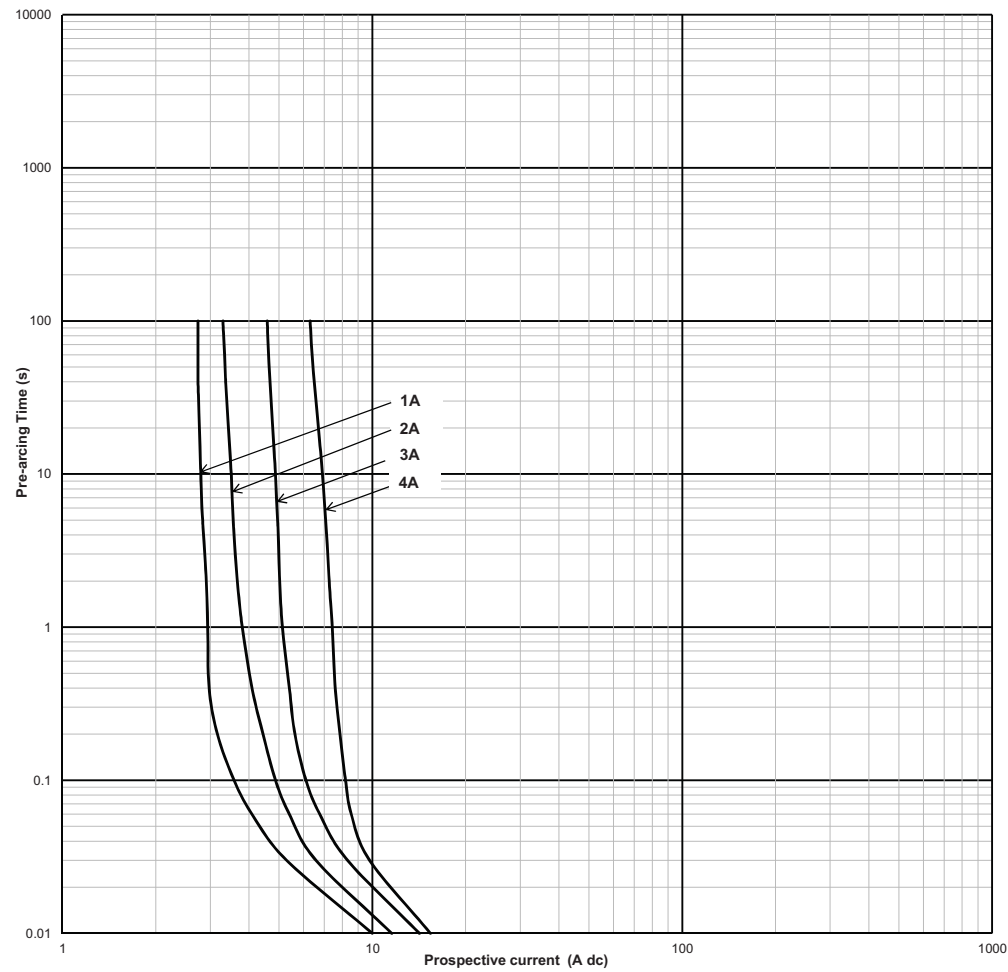




Ferrule fuse links

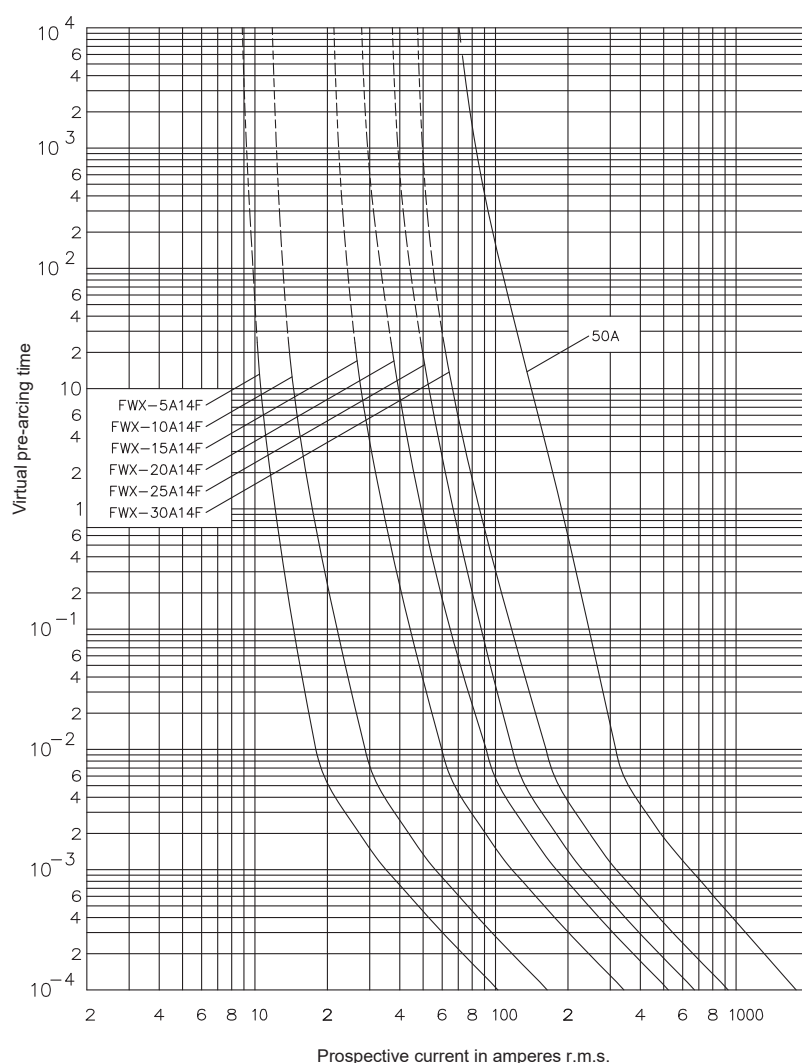
FWX - 14 x 51 mm, 250 V a.c. / V d.c. (UL), 1 A to 50 A

Time-current curve - 1 A to 4 A



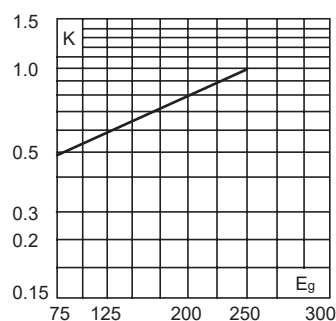
# FWX - 14 x 51 mm, 250 V a.c. / V d.c. (UL), 1 A to 50 A

## Time-current curve - 5 A to 50 A



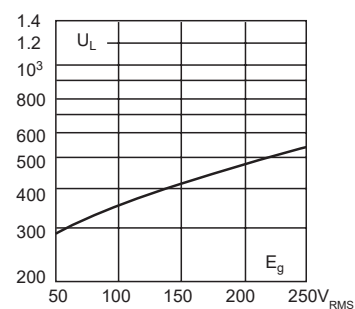
## Total clearing I<sup>2</sup>t

The total clearing I<sup>2</sup>t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I<sup>2</sup>t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



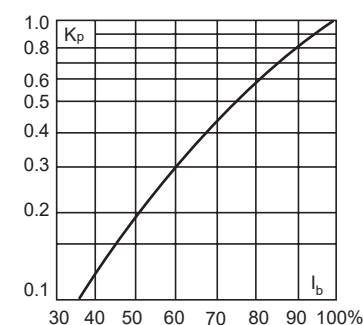
## Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



# Ferrule fuse links

## FWH - 6 x 32 mm, 500 V a.c. (UL), 0.25 A to 30 A

### Specifications

#### Description

Ferrule style high speed fuse links for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

#### Technical data

- Rated voltage:
  - 500 V a.c. (UL)
  - 600 V d.c. (UL, 2 A and 5 A only)
- Rated current: 0.25 A to 30 A
- Breaking capacity:
  - 50 kA (0.25 A to 20 A)
  - 20 kA (25 A to 30 A, tested at PF = 76%)
  - 50 kA at 600 V d.c. (UL 2 A and 5 A only)
- Operating class: aR

#### Standards / Agency information

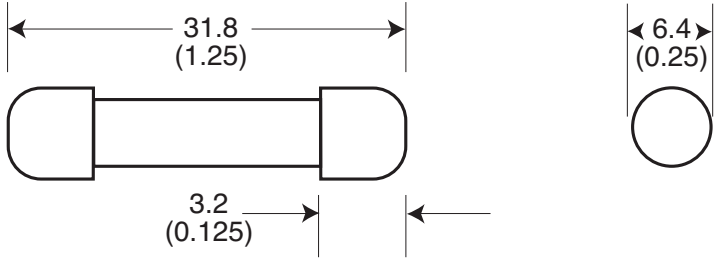
CE, UL recognised 0.25 A to 30 A including 2 A at 1000 V a.c., CSA component Acceptance: 0.25 A to 7 A



#### Catalogue numbers

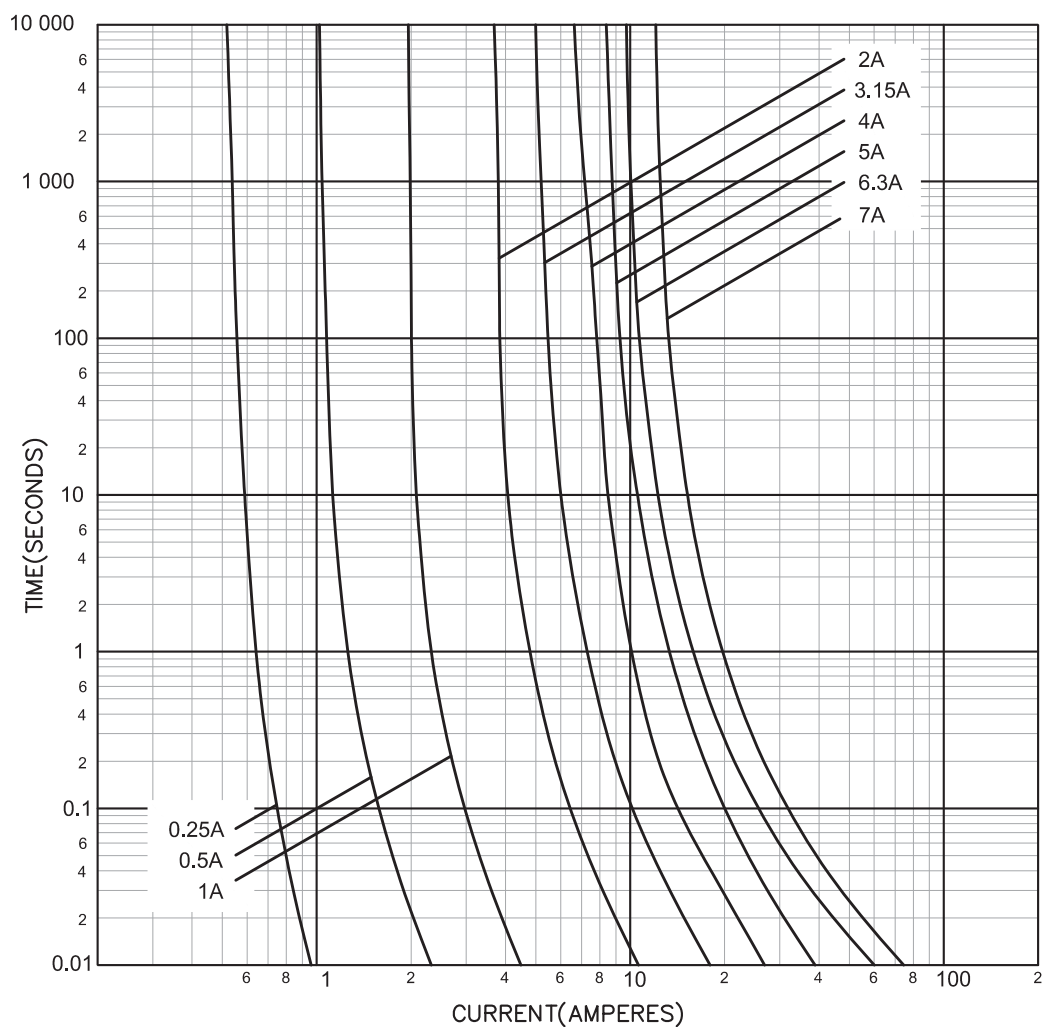
| Fuse link size          | Rated voltage                | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                           | Watts loss<br>(W) | Catalogue<br>numbers |
|-------------------------|------------------------------|-------------------------|---------------------------------------|---------------------------|-------------------|----------------------|
|                         |                              |                         | Pre-arcing                            | Clearing<br>at 500 V a.c. |                   |                      |
| 6 x 32 mm<br>(¼" x 1¼") | 500 V a.c. (UL)              | 0.25                    | 0.01                                  | 0.05                      | 2.7               | FWH--250A6F          |
|                         |                              | 0.5                     | 0.05                                  | 0.25                      | 1.2               | FWH--500A6F          |
|                         |                              | 1                       | 0.4                                   | 2                         | 1.7               | FWH-001A6F           |
|                         | 1000 V a.c. (UL)             | 2                       | 1.3                                   | 3.5                       | 3.2               | FWH-002A6F           |
|                         | 500 V a.c. (UL)              | 3.15                    | 3.1                                   | 7.7                       | 2.9               | FWH-3-15A6F          |
|                         | 500 V a.c. / 600 V d.c. (UL) | 5                       | 15                                    | 40                        | 2.1               | FWH-005A6F           |
|                         |                              | 6.3                     | 36                                    | 90                        | 2.3               | FWH-6-30A6F          |
|                         |                              | 7                       | 50                                    | 125                       | 2.5               | FWH-007A6F           |
|                         |                              | 10                      | 9.9                                   | 139                       | 2.86              | FWH5-010A6F          |
|                         |                              | 12.5                    | 20                                    | 60                        | 3.53              | FWH5-12-5A6F         |
|                         |                              | 15                      | 44                                    | 146                       | 3.08              | FWH5-015A6F          |
|                         |                              | 16                      | 48                                    | 177                       | 4.48              | FWH5-016A6F          |
|                         |                              | 20                      | 75                                    | 259                       | 4.26              | FWH5-020A6F          |
|                         |                              | 25                      | 126                                   | 345                       | -                 | FWH-025A6F           |
|                         |                              | 30                      | 145                                   | 430                       | -                 | FWH-030A6F           |

#### Dimensions mm (in)



**FWH - 6 x 32 mm, 500 V a.c. (UL), 0.25 A to 30 A**

Time-current curve - 0.25 A to 7 A



# Ferrule fuse links

## FWH - 14 x 51 mm, 500 V a.c. / V d.c. (UL), 1 A to 30 A

### Specifications

#### Description

Ferrule style high speed fuse links for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

#### Technical data

- Rated voltage:
  - 500 V a.c. (UL, all ratings)
  - 500 V d.c. (UL, 5 A to 30 A only)
- Rated current: 1 A to 30 A
- Breaking capacity:
  - 200 kA RMS Sym. all ratings
  - 50 kA at 500 V d.c. (5 A to 30 A only)
- Operating class: aR

#### Compatible modular fuse holder

- CH14 see page 385

#### Standards / Agency information

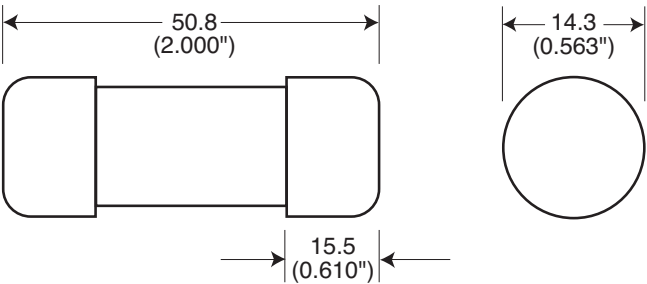
CE, UL Recognised 1 A to 30 A & CSA Component Acceptance: 5 A to 30 A



#### Catalogue numbers

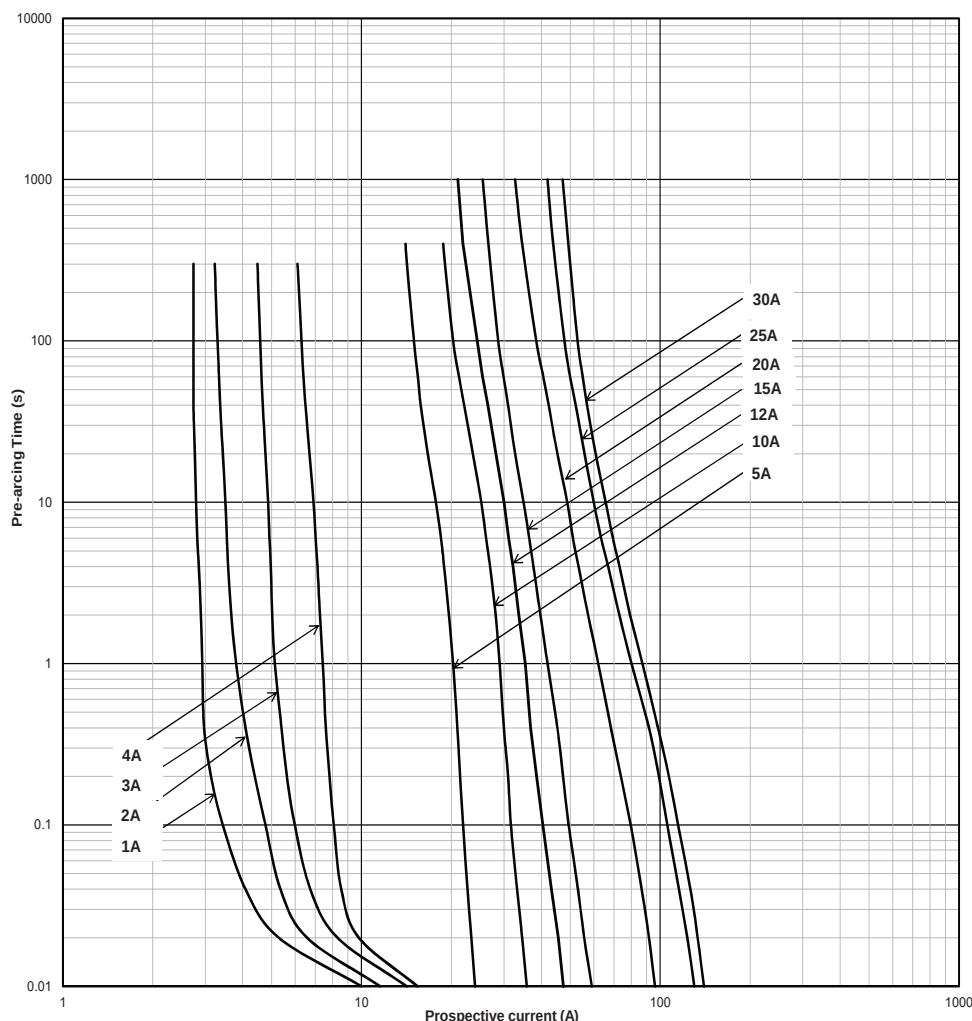
| Fuse link size             | Rated voltage            | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                           | Watts loss<br>(W) | Catalogue<br>numbers |
|----------------------------|--------------------------|-------------------------|---------------------------------------|---------------------------|-------------------|----------------------|
|                            |                          |                         | Pre-arcing                            | Clearing<br>at 500 V a.c. |                   |                      |
| 14 x 51 mm<br>(9/16" x 2") | 500 V a.c.(UL)           | 1                       | 0.04                                  | 0.41                      | 5.7               | FWH-1A14F            |
|                            |                          | 2                       | 0.08                                  | 0.11                      | 8.7               | FWH-2A14F            |
|                            |                          | 3                       | 0.11                                  | 0.26                      | 2.8               | FWH-3A14F            |
|                            |                          | 4                       | 0.1                                   | 0.23                      | 3                 | FWH-4A14F            |
|                            | 500 V a.c. / V d.c. (UL) | 5                       | 2                                     | 7                         | 1.5               | FWH-5A14F            |
|                            |                          | 6                       | 2                                     | 7                         | 1.5               | FWH-6A14F            |
|                            |                          | 10                      | 4                                     | 15                        | 4                 | FWH-10A14F           |
|                            |                          | 12                      | 7                                     | 25                        | 4.3               | FWH-12A14F           |
|                            |                          | 15                      | 10                                    | 40                        | 5.5               | FWH-15A14F           |
|                            |                          | 20                      | 26                                    | 100                       | 6.5               | FWH-20A14F           |
|                            |                          | 25                      | 49                                    | 200                       | 7                 | FWH-25A14F           |
|                            |                          | 30                      | 58                                    | 240                       | 9                 | FWH-30A14F           |

#### Dimensions mm (in)



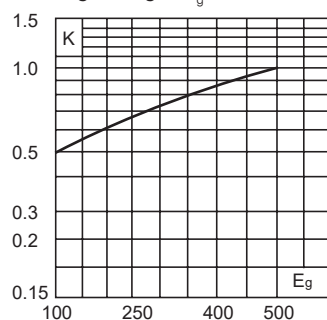
# FWH - 14 x 51 mm, 500 V a.c. / V d.c. (UL), 1 A to 30 A

## Time-current curve - 1 A to 30 A



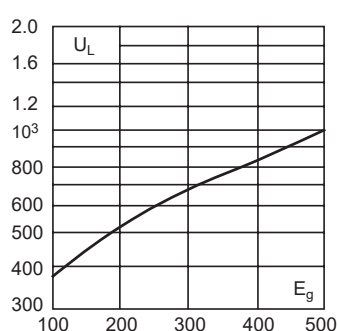
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



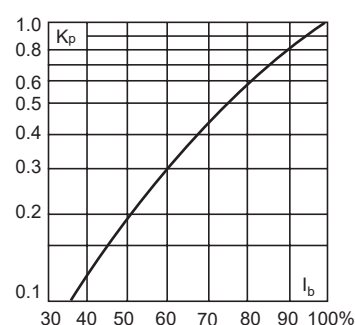
## Arc voltage

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 percent.



## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



# Ferrule fuse links

## FWC - 10 x 38 mm, 600-700 V a.c. / 700 V d.c. (UL), 1 A to 32A

### Specifications

#### Description

Ferrule style high speed fuse links for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

#### Technical data

- Rated voltage:
  - 700 V a.c. / V d.c. (UL, 1 A to 4 A)
  - 600 V a.c. (UL, 6 A to 32 A), 700 V d.c. (UL, 6 A to 25 A)
- Rated current: 1 A to 32 A
- Breaking capacity:
  - 200 kA RMS Sym. at 600 V a.c. (6 A to 32 A)
  - 200 kA RMS Sym. at 700 V a.c. (1 A to 4 A)
  - 10 kA DC at 700 V d.c. (1 A to 25 A)
- Operating class: aR

#### Standards / Agency information

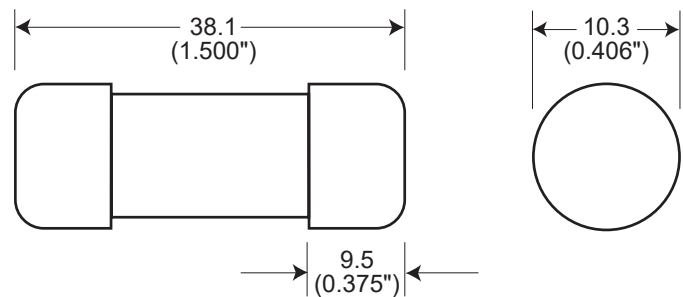
CE, UL Recognised: 6 A to 32 A



#### Catalogue numbers

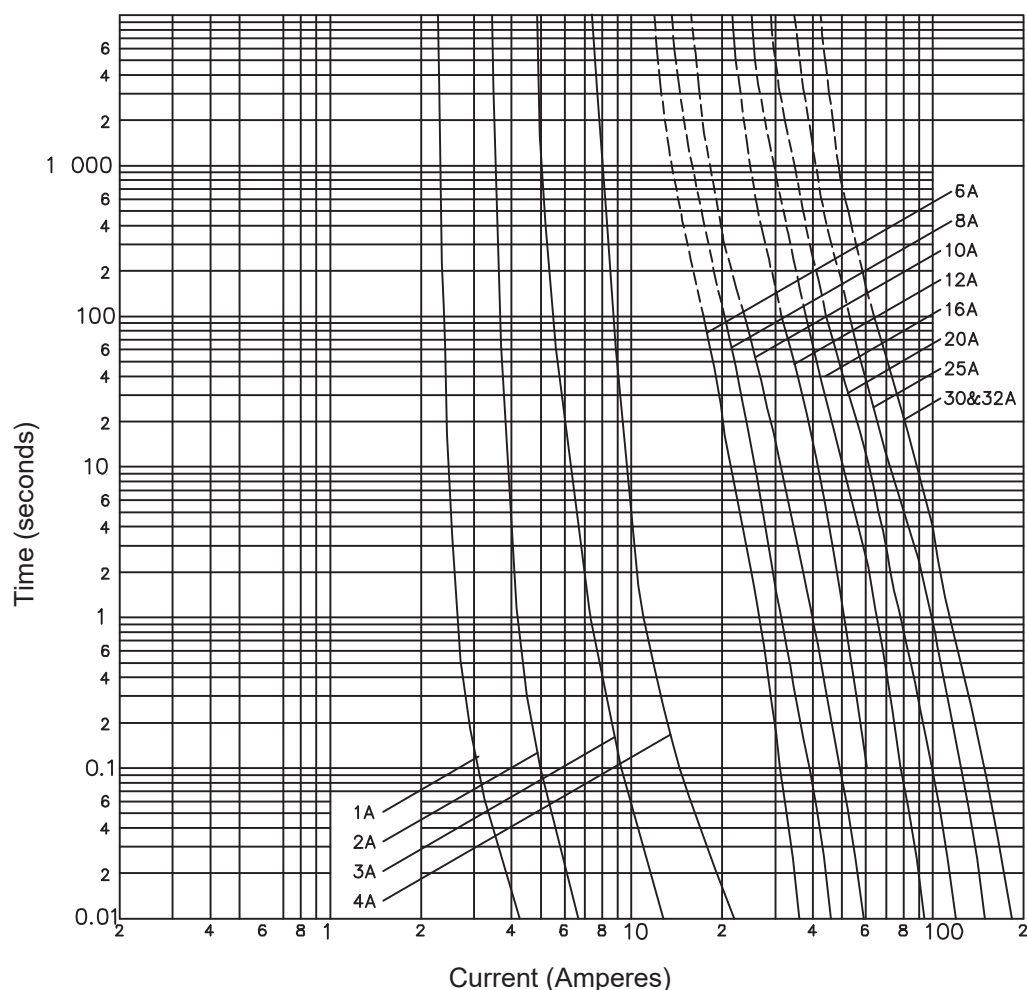
| Fuse link size                  | Rated voltage               | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                           | Watts loss<br>(W) | Catalogue<br>numbers |
|---------------------------------|-----------------------------|-------------------------|---------------------------------------|---------------------------|-------------------|----------------------|
|                                 |                             |                         | Pre-arcing                            | Clearing<br>at 600 V a.c. |                   |                      |
| 10 x 38 mm<br>(13/32" x 1 1/2") | 700 V a.c. / V d.c. (UL)    | 1                       | 0.2                                   | 1.2                       | 0.5               | FWC-1A10F            |
|                                 |                             | 2                       | 0.5                                   | 3                         | 1.2               | FWC-2A10F            |
|                                 |                             | 3                       | 1.6                                   | 11                        | 1.5               | FWC-3A10F            |
|                                 |                             | 4                       | 5.2                                   | 32                        | 1.5               | FWC-4A10F            |
|                                 | 600 V a.c./ 700 V d.c. (UL) | 6                       | 4                                     | 30                        | 1.5               | FWC-6A10F            |
|                                 |                             | 8                       | 6                                     | 50                        | 2                 | FWC-8A10F            |
|                                 |                             | 10                      | 9                                     | 70                        | 2.5               | FWC-10A10F           |
|                                 |                             | 12                      | 15                                    | 120                       | 3                 | FWC-12A10F           |
|                                 |                             | 16                      | 25                                    | 150                       | 3.5               | FWC-16A10F           |
|                                 |                             | 20                      | 34                                    | 260                       | 4.8               | FWC-20A10F           |
|                                 |                             | 25                      | 60                                    | 390                       | 6                 | FWC-25A10F           |
|                                 |                             | 30                      | 95                                    | 600                       | 7.5               | FWC-30A10F           |
|                                 |                             | 32                      | 95                                    | 600                       | 7.5               | FWC-32A10F           |
|                                 | 600 V a.c. (UL)             |                         |                                       |                           |                   |                      |
|                                 |                             |                         |                                       |                           |                   |                      |

#### Dimensions - mm (in)



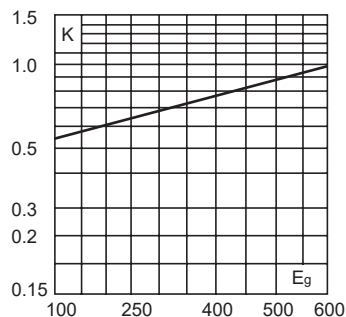
# FWC - 10 x 38 mm, 600-700 V a.c. / 700 V d.c. (UL), 1 A to 32A

Time-current curve - 1 A to 32 A



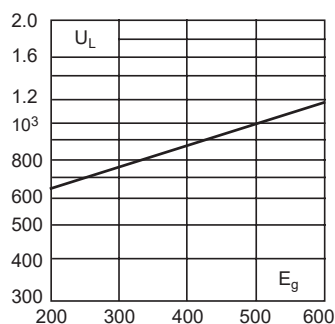
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



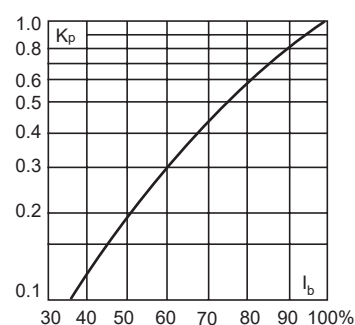
## Arc voltage

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 percent.



## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.





# Ferrule fuse links

## FWP - 10 x 38 mm, gR, 690 V a.c. (IEC), 4 A to 32 A

### Specifications

#### Description

The 10 x 38 mm cylindrical, class gR fuse links are used to protect AC/DC Drives and semi-conductors.

#### Technical data

- Rated voltage: see details in table below
- Rated current: 4 A to 32 A
- Breaking capacity: 200 kA a.c.
- Operating class: gR

#### Compatible fuse holder

CHM see page 383

#### Standards / Agency information

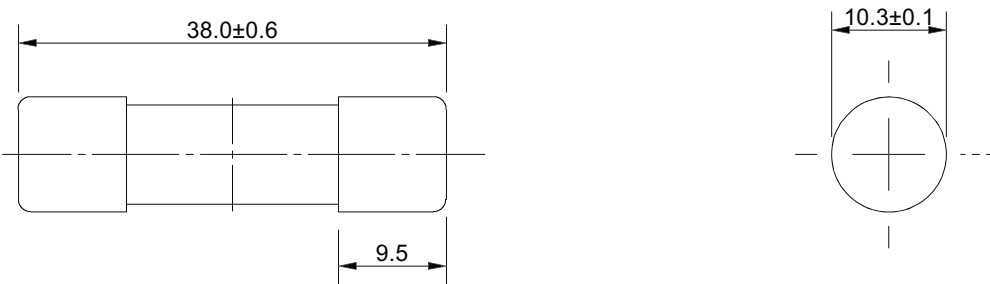
IEC 60269-4, UL 248-13

#### Catalogue numbers

| Fuse link size | Type              | Rated voltage                       | Rated current (Amps) | I <sup>2</sup> t (A² Sec) |                        | Watts loss (W) | Catalogue numbers |
|----------------|-------------------|-------------------------------------|----------------------|---------------------------|------------------------|----------------|-------------------|
|                |                   |                                     |                      | Pre-arcing                | Clearing at 690 V a.c. |                |                   |
| 10 x 38 mm     | Without indicator | 690 V a.c. (IEC)                    | 4                    | 5.6                       | 17                     | 2.05           | FWP-4G10F         |
|                |                   | 500 V d.c.. (UL)                    | 6                    | 16                        | 48                     | 3              | FWP-6G10F         |
|                |                   | 690 V a.c. (IEC)<br>700 V a.c. (UL) | 8                    | 4.3                       | 38                     | 1.68           | FWP-8G10F         |
|                |                   |                                     | 10                   | 6.6                       | 59                     | 2.09           | FWP-10G10F        |
|                |                   |                                     | 12                   | 9.6                       | 84                     | 2.99           | FWP-12G10F        |
|                |                   |                                     | 16                   | 17                        | 150                    | 4.27           | FWP-16G10F        |
|                |                   |                                     | 20                   | 23.5                      | 200                    | 5.35           | FWP-20G10F        |
|                |                   |                                     | 25                   | 60.2                      | 512                    | 5.52           | FWP-25G10F        |
|                |                   |                                     | 32                   | 94                        | 800                    | 7.43           | FWP-32G10F        |

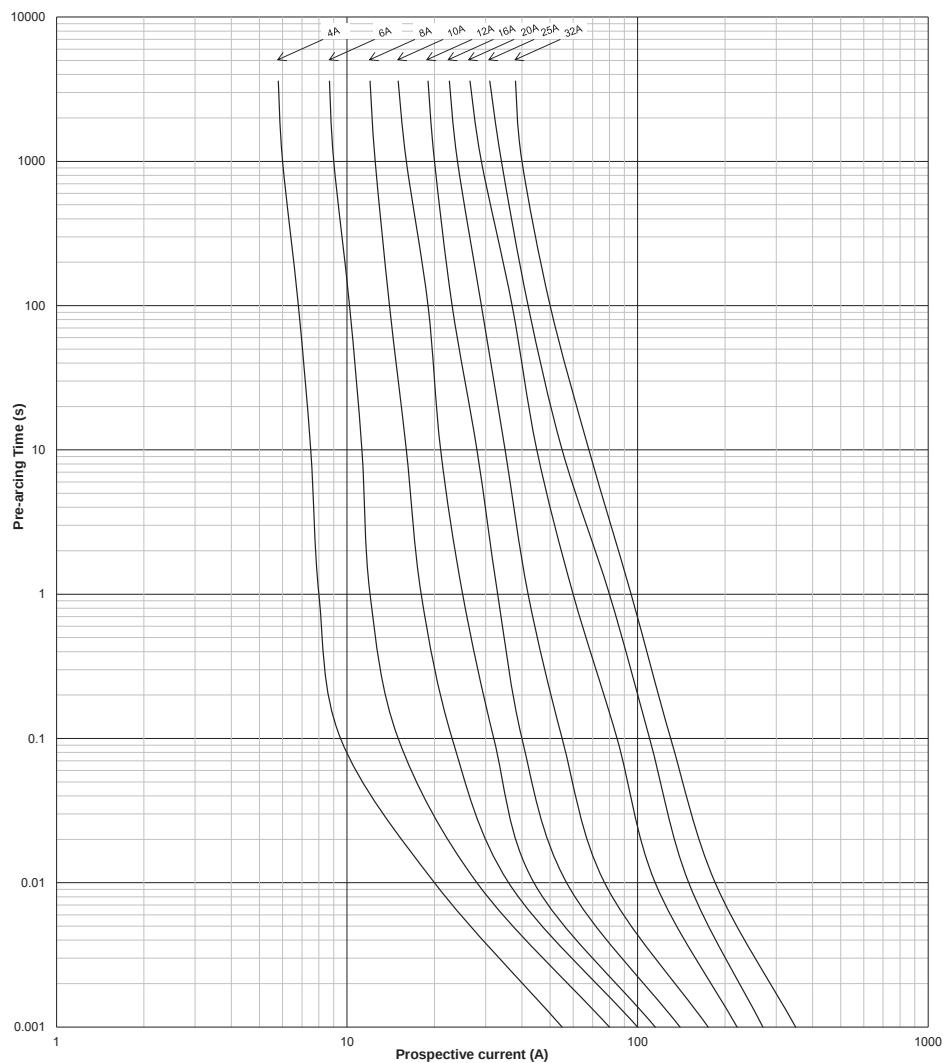


#### Dimensions (mm)

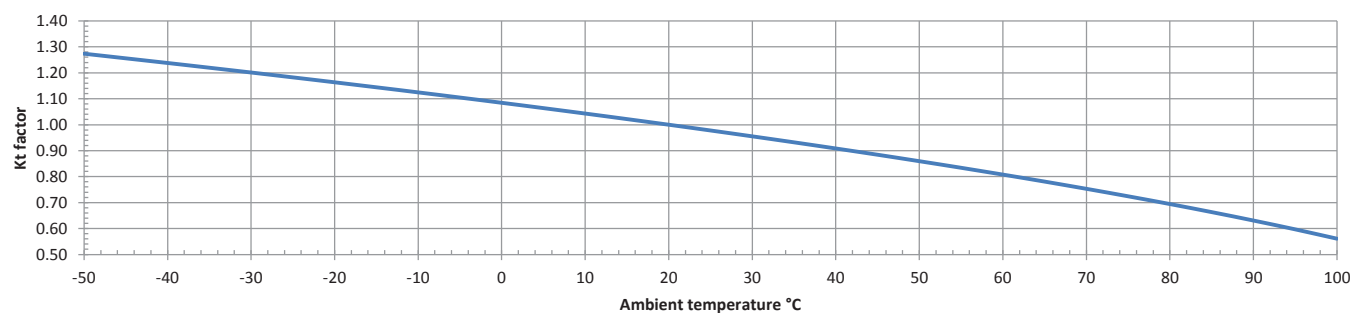


## FWP - 10 x 38 mm, gR, 690 V a.c., 4 A to 32 A

### Time-current curve - 4 A to 32 A



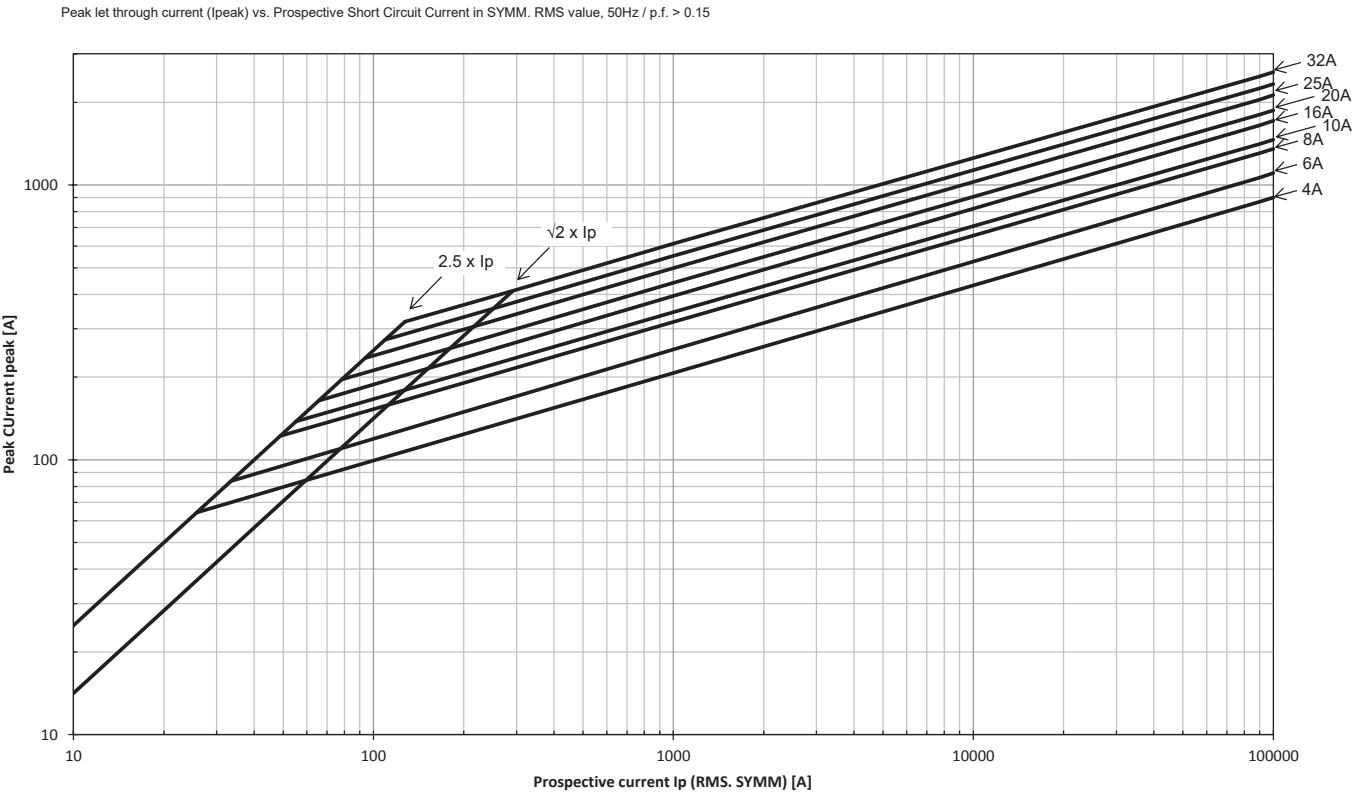
### Ambient temperature



Ferrule fuse links

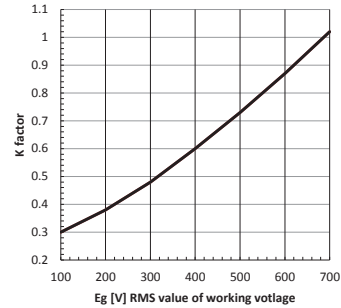
FWP - 10 x 38 mm, gR, 690 V a.c., 4 A to 32 A

Cut-off curve- 2 A to 32 A



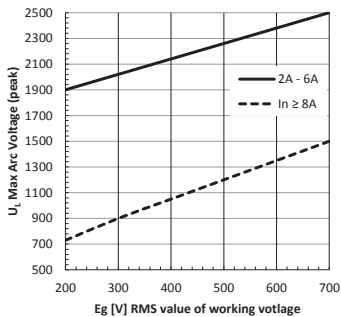
Total clearing  $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



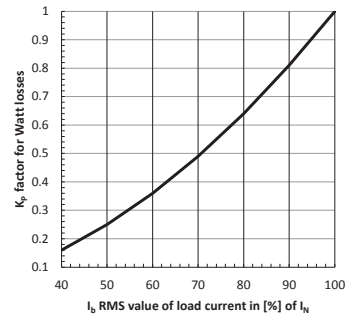
Arc voltage

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 percent.



Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



## FWP - 14 x 51 mm, gR, 690 V a.c. (IEC), 4 A to 50 A

### Specifications

#### Description

The 14 x 51 mm cylindrical, class gR fuse links are used to protect AC/DC Drives and semi-conductors.

#### Technical data

- Rated voltage: 690 V a.c. (IEC)
- Rated current: 4 A to 50 A
- Breaking capacity: 200 kA a.c.
- Operating class: gR

#### Compatible modular fuse holder

- CH14 see page 385

#### Standards / Agency information

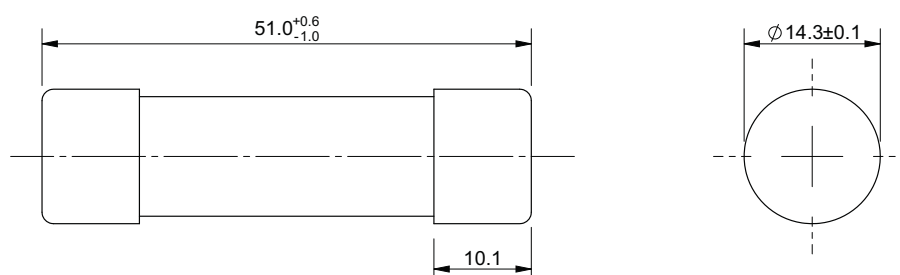
IEC 60269-4, UL 248-13

#### Catalogue numbers



| Fuse link size | Type              | Rated voltage    | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                        | Watts loss (W) | Catalogue numbers |
|----------------|-------------------|------------------|----------------------|---------------------------------------|------------------------|----------------|-------------------|
|                |                   |                  |                      | Pre-arcing                            | Clearing at 690 V a.c. |                |                   |
| 14 x 51 mm     | Without indicator | 690 V a.c. (IEC) | 4                    | 5.6                                   | 17                     | 2.94           | FWP-4G14F         |
|                |                   |                  | 6                    | 16                                    | 48                     | 4.2            | FWP-6G14F         |
|                |                   |                  | 8                    | 3.8                                   | 30                     | 2              | FWP-8G14F         |
|                |                   |                  | 10                   | 5.9                                   | 47                     | 2.52           | FWP-10G14F        |
|                |                   |                  | 12                   | 8.4                                   | 68                     | 3.54           | FWP-12G14F        |
|                |                   |                  | 16                   | 15                                    | 120                    | 4.83           | FWP-16G14F        |
|                |                   |                  | 20                   | 27                                    | 170                    | 5.4            | FWP-20G14F        |
|                |                   |                  | 25                   | 53                                    | 333                    | 6              | FWP-25G14F        |
|                |                   |                  | 32                   | 108                                   | 679                    | 6.93           | FWP-32G14F        |
|                |                   |                  | 40                   | 211                                   | 1331                   | 7.52           | FWP-40G14F        |
|                | With indicator    | 690 V a.c. (IEC) | 50                   | 350                                   | 2200                   | 9.8            | FWP-50G14F        |
|                |                   |                  | 8                    | 3.8                                   | 30                     | 2              | FWP-8G14FI        |
|                |                   |                  | 10                   | 5.9                                   | 47                     | 2.52           | FWP-10G14FI       |
|                |                   |                  | 12                   | 8.4                                   | 68                     | 3.54           | FWP-12G14FI       |
|                |                   |                  | 16                   | 15                                    | 120                    | 4.83           | FWP-16G14FI       |
|                |                   |                  | 20                   | 27                                    | 170                    | 5.4            | FWP-20G14FI       |
|                |                   |                  | 25                   | 53                                    | 333                    | 6              | FWP-25G14FI       |
|                |                   |                  | 32                   | 108                                   | 679                    | 6.93           | FWP-32G14FI       |
|                |                   |                  | 40                   | 211                                   | 1331                   | 7.52           | FWP-40G14FI       |
|                |                   |                  | 50                   | 350                                   | 2200                   | 9.8            | FWP-50G14FI       |

#### Dimensions (mm)

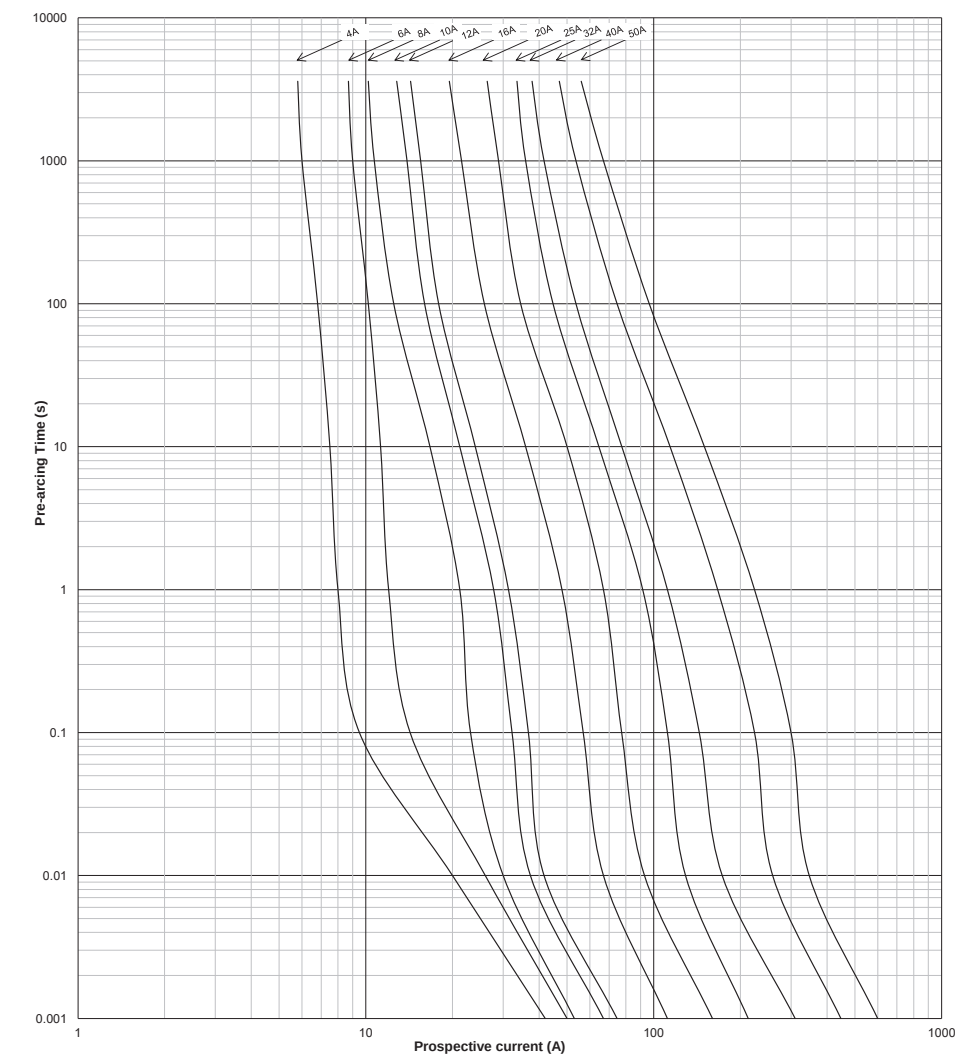


Data sheet: 10468

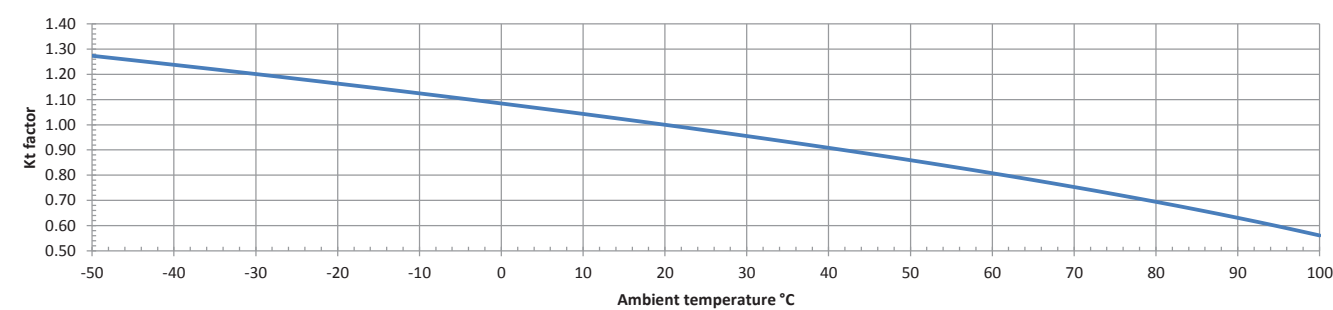
Ferrule fuse links

FWP - 14 x 51 mm, gR, 690 V a.c., 4 A to 50 A

Time-current curve - 4 A to 50 A

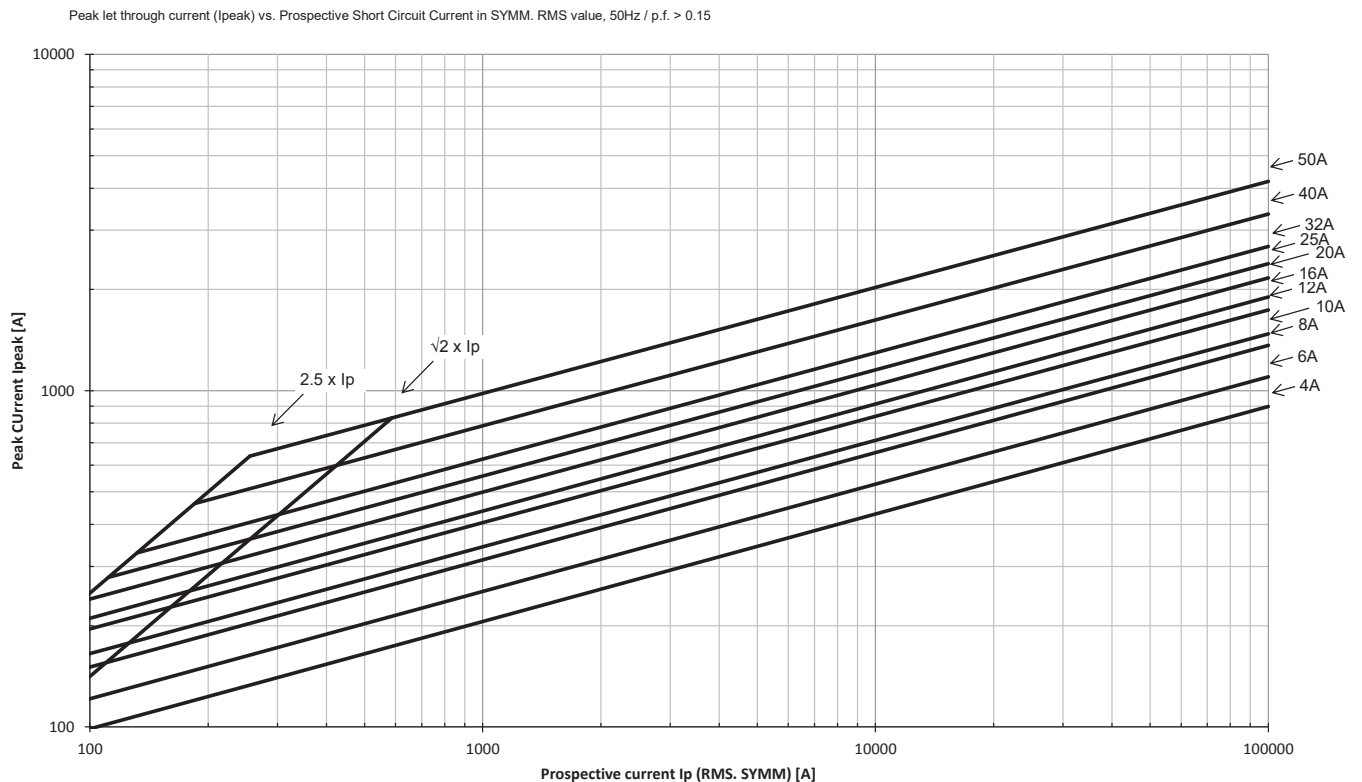


Ambient temperature



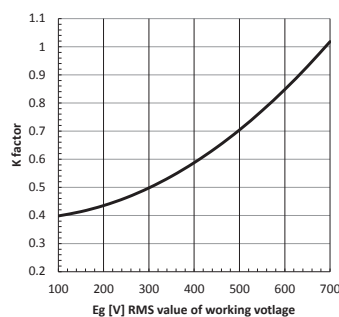
## FWP - 14 x 51 mm, gR, 690 V a.c., 4 A to 50 A

### Cut-off curve - 4 A to 50 A



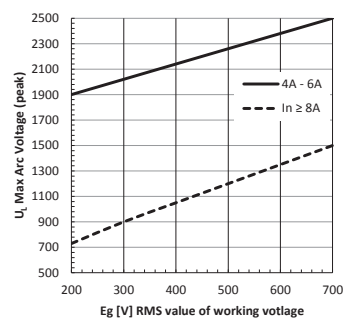
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



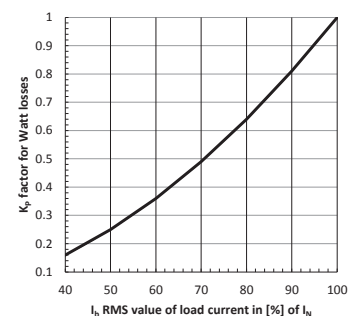
### Arc voltage

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 percent.



### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



# Ferrule fuse links

## FWP - 22 x 58 mm, gR, 690 V a.c. (IEC), 20 A to 100 A

### Specifications

#### Description

The 22 x 58 mm cylindrical, class gR fuse links are used to protect AC/DC Drives and semi-conductors.

#### Technical data

- Rated voltage: 690 V a.c. (IEC)
- Rated current: 20 A to 100 A
- Breaking capacity: 200 kA a.c.
- Operating class: gR

#### Compatible fuse holder

- CH22 see page 387

#### Standards / Agency information

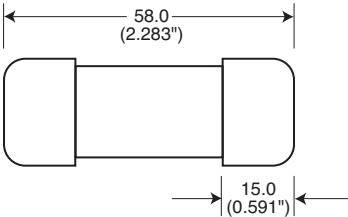
IEC 60269-4, UL 248-13



#### Catalogue numbers

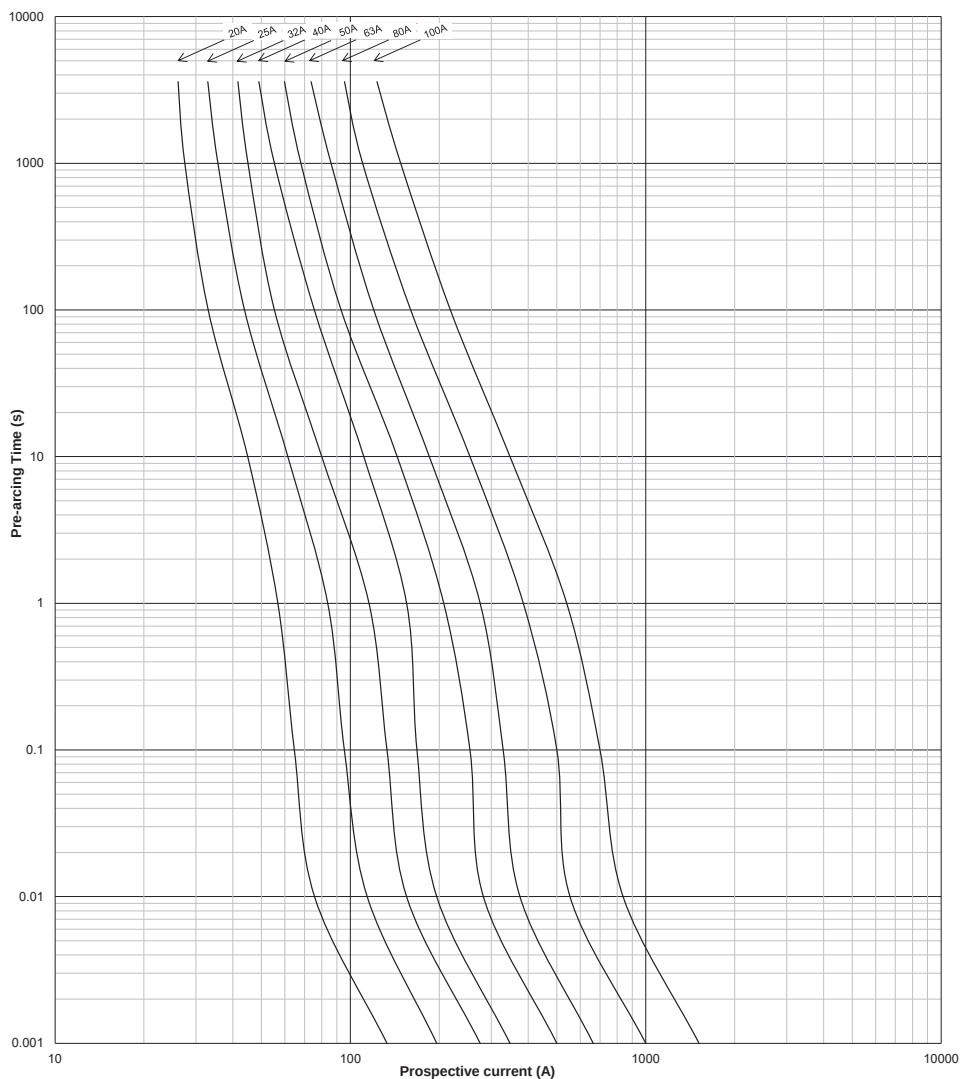
| Fuse link size | Type              | Rated voltage    | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                        | Watts loss (W) | Catalogue numbers |
|----------------|-------------------|------------------|----------------------|---------------------------------------|------------------------|----------------|-------------------|
|                |                   |                  |                      | Pre-arcing                            | Clearing at 690 V a.c. |                |                   |
| 22 x 58 mm     | Without indicator | 690 V a.c. (IEC) | 20                   | 24                                    | 154                    | 6.00           | FWP-20G22F        |
|                |                   |                  | 25                   | 43                                    | 274                    | 6.65           | FWP-25G22F        |
|                |                   |                  | 32                   | 97                                    | 616                    | 9.21           | FWP-32G22F        |
|                |                   |                  | 40                   | 180                                   | 899                    | 8.24           | FWP-40G22F        |
|                |                   |                  | 50                   | 273                                   | 1362                   | 11.85          | FWP-50G22F        |
|                |                   |                  | 63                   | 516                                   | 2575                   | 13.80          | FWP-63G22F        |
|                |                   |                  | 80                   | 1092                                  | 5448                   | 14.00          | FWP-80G22F        |
|                |                   |                  | 100                  | 2065                                  | 10,300                 | 17.70          | FWP-100G22F       |
|                | With indicator    | 690 V a.c. (IEC) | 20                   | 24                                    | 154                    | 6.00           | FWP-20G22FI       |
|                |                   |                  | 25                   | 43                                    | 274                    | 6.65           | FWP-25G22FI       |
|                |                   |                  | 32                   | 97                                    | 616                    | 9.21           | FWP-32G22FI       |
|                |                   |                  | 40                   | 180                                   | 899                    | 8.24           | FWP-40G22FI       |
|                |                   |                  | 50                   | 273                                   | 1362                   | 11.85          | FWP-50G22FI       |
|                |                   |                  | 63                   | 516                                   | 2575                   | 13.80          | FWP-63G22FI       |
|                |                   |                  | 80                   | 1092                                  | 5448                   | 14.00          | FWP-80G22FI       |
|                |                   |                  | 100                  | 2065                                  | 10,300                 | 17.70          | FWP-100G22FI      |

#### Dimensions - mm (in)

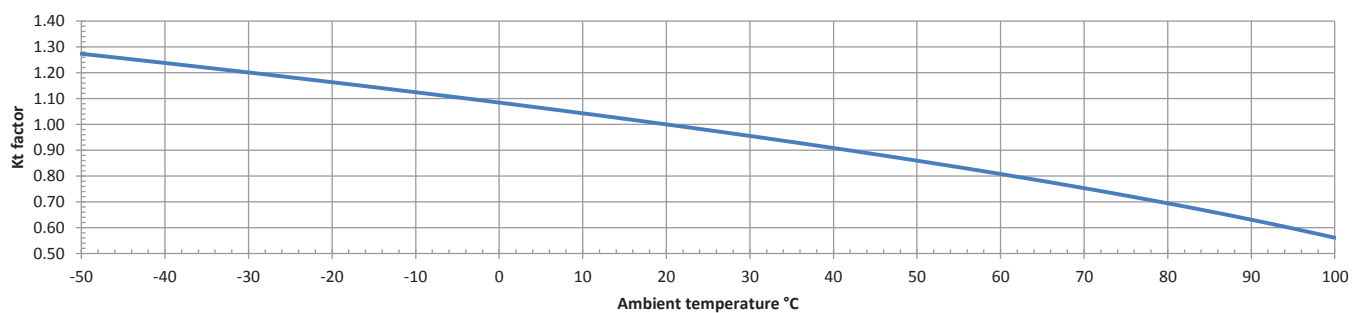


## FWP - 22 x 58 mm, gR, 690 V a.c., 20 A to 100 A

Time-current curve - 20 A to 100 A



Ambient temperature

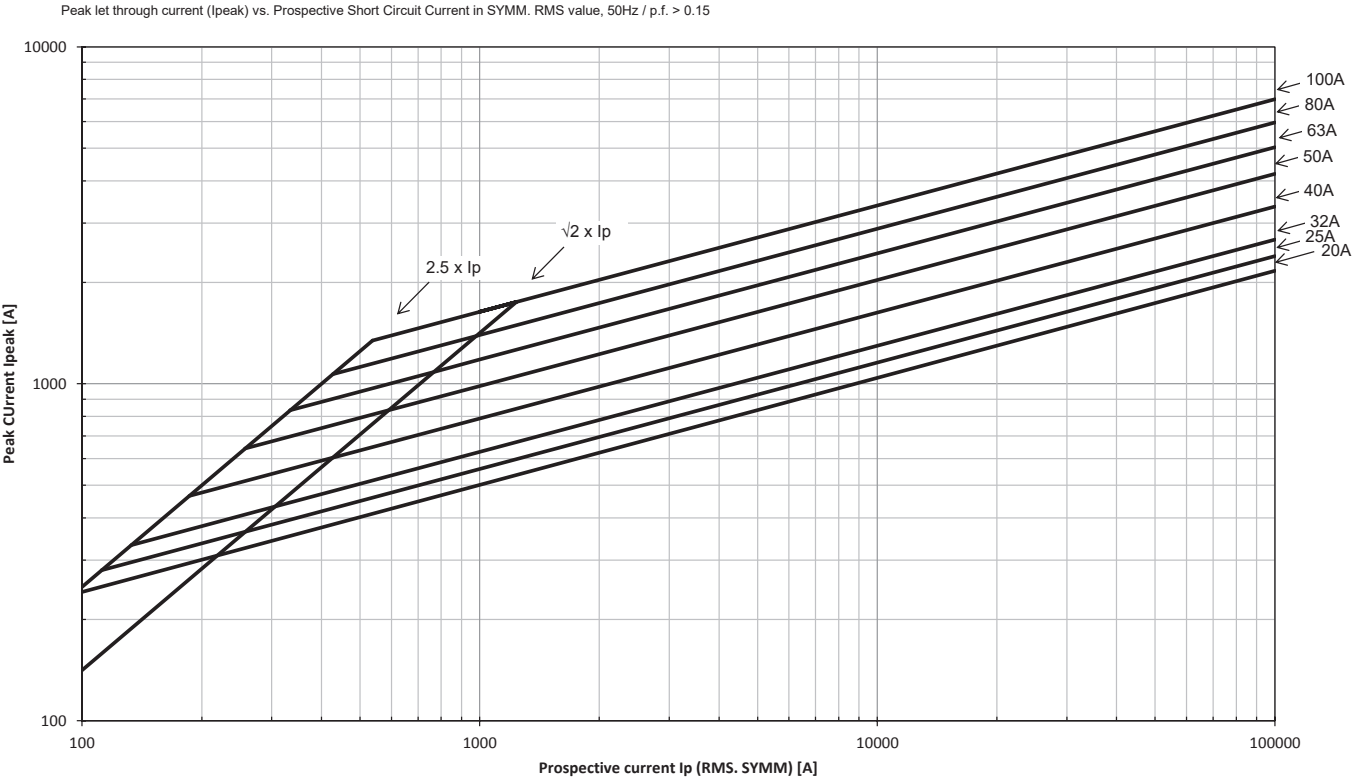




Ferrule fuse links

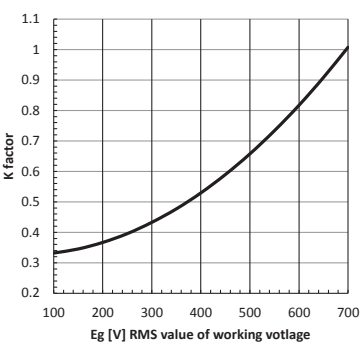
FWP - 22 x 58 mm, gR, 690 V a.c., 20 A to 100 A

Cut-off curve - 20 A to 100 A



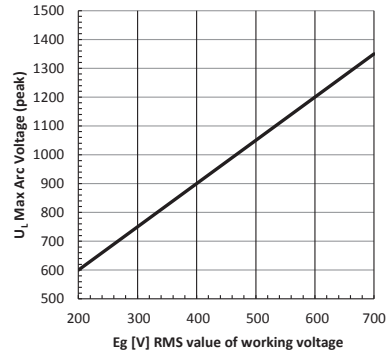
Total clearing  $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



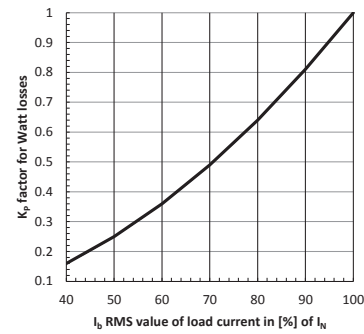
Arc voltage

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 percent.



Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



## FWP - 14 x 51 mm, 690 V a.c. (IEC), 700 V a.c. (UL), Up to 800 V d.c. (UL), 1 A to 50 A

### Specifications

#### Description

Ferrule style high speed fuse links for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters. Available with or without striker.

#### Technical data

- Rated voltage:
  - Without striker: see table
  - With striker: 700 V a.c. / 600 V d.c. (UL)
- Rated current: 1 A to 50 A
- Breaking capacity:
  - 200 kA RMS Sym.
  - 50 kA at 800 V d.c. (5 A to 50 A non striker version)
  - 600 V d.c. for striker version
- Operating class: aR

#### Compatible modular fuse holder

- CH14 see page 385

#### Standards / Agency information

CE, UL recognised & CSA component acceptance for versions without striker only, CCC certified 5 A to 50 A



### Catalogue numbers

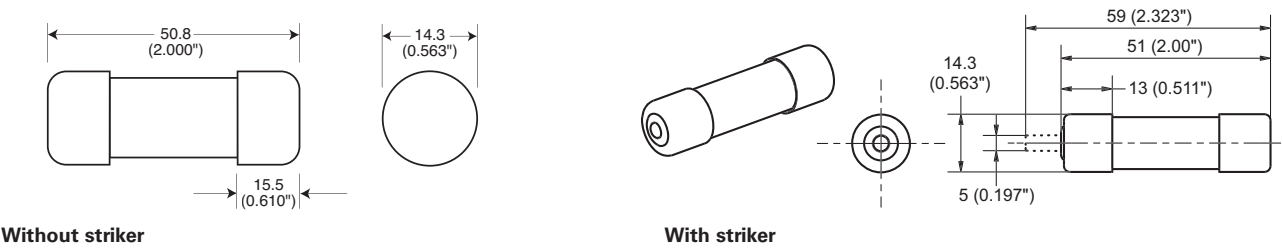
| Fuse link type  | Fuse link size          | Rated voltage                                    | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                        | Watts loss (W) | Catalogue numbers |
|-----------------|-------------------------|--------------------------------------------------|----------------------|---------------------------------------|------------------------|----------------|-------------------|
|                 |                         |                                                  |                      | Pre-arcing                            | Clearing at 700 V a.c. |                |                   |
| Without striker | 14 x 51 mm (9/16" x 2") | 700 V a.c. (UL)                                  | 1                    | 0.04                                  | 0.41                   | 5.7            | FWP-1A14F         |
|                 |                         |                                                  | 2                    | 0.08                                  | 0.11                   | 8.7            | FWP-2A14F         |
|                 |                         |                                                  | 3                    | 0.11                                  | 0.26                   | 2.8            | FWP-3A14F         |
|                 |                         |                                                  | 4                    | 0.1                                   | 0.23                   | 3              | FWP-4A14F         |
|                 |                         | 700 V a.c. / 800 V d.c. (UL)<br>690 V a.c. (IEC) | 5                    | 2                                     | 11                     | 1.5            | FWP-5A14F         |
|                 |                         |                                                  | 6                    | 2                                     | 11                     | 1.5            | FWP-6A14F         |
|                 |                         |                                                  | 10                   | 4                                     | 22                     | 4              | FWP-10A14F        |
|                 |                         |                                                  | 15                   | 10                                    | 70                     | 5.5            | FWP-15A14F        |
|                 |                         |                                                  | 20                   | 26                                    | 180                    | 6.5            | FWP-20A14F        |
|                 |                         |                                                  | 25                   | 49                                    | 320                    | 7              | FWP-25A14F        |
|                 |                         |                                                  | 30                   | 58                                    | 400                    | 9              | FWP-30A14F        |
|                 |                         |                                                  | 32                   | 68                                    | 600                    | 8              | FWP-32A14F        |
|                 |                         |                                                  | 40                   | 84                                    | 750                    | 8              | FWP-40A14F        |
|                 |                         |                                                  | 50                   | 200                                   | 1800                   | 9              | FWP-50A14F        |
| With striker    | 14 x 51 mm (9/16" x 2") | 700 V a.c. / 600 V d.c. (UL)                     | 10                   | 4                                     | 32                     | 2              | FWP-10A14FI       |
|                 |                         |                                                  | 15                   | 7                                     | 63                     | 4              | FWP-15A14FI       |
|                 |                         |                                                  | 20                   | 26                                    | 234                    | 4              | FWP-20A14FI       |
|                 |                         |                                                  | 25                   | 42                                    | 378                    | 4              | FWP-25A14FI       |
|                 |                         |                                                  | 30                   | 52                                    | 468                    | 6              | FWP-30A14FI       |
|                 |                         |                                                  | 32                   | 68                                    | 600                    | 8              | FWP-32A14FI       |
|                 |                         |                                                  | 40                   | 84                                    | 750                    | 8              | FWP-40A14FI       |
|                 |                         |                                                  | 50                   | 200                                   | 1800                   | 9              | FWP-50A14FI       |
|                 |                         |                                                  | 63                   | 390                                   | 2516                   | 10             | FWP-63A14FI       |

Data sheets: 720025, 5781724 fuses without striker; 5785566 fuses with striker, 5785626 (63 A)

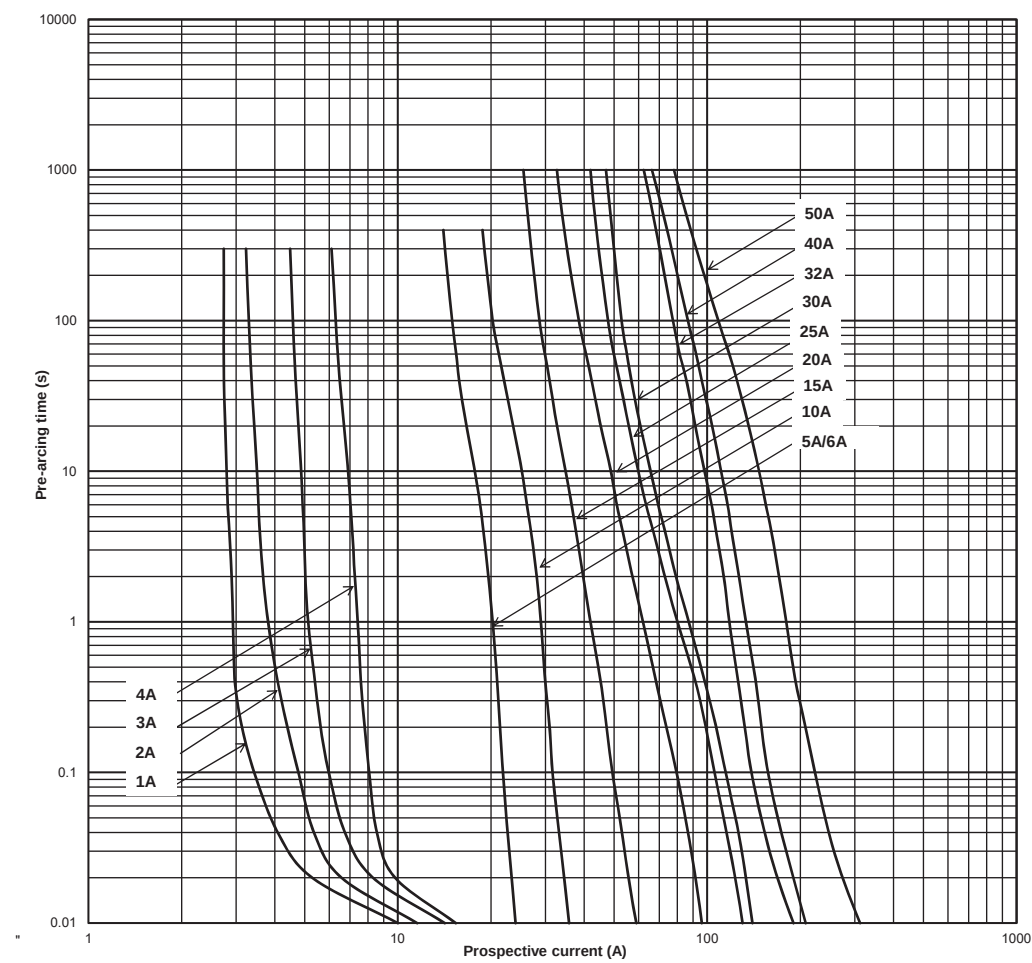
# Ferrule fuse links

**FWP - 14 x 51 mm, 690 V a.c. (IEC), 700 V a.c. (UL), Up to 800 V d.c. (UL), 1 A to 50 A**

## Dimensions - mm (in)



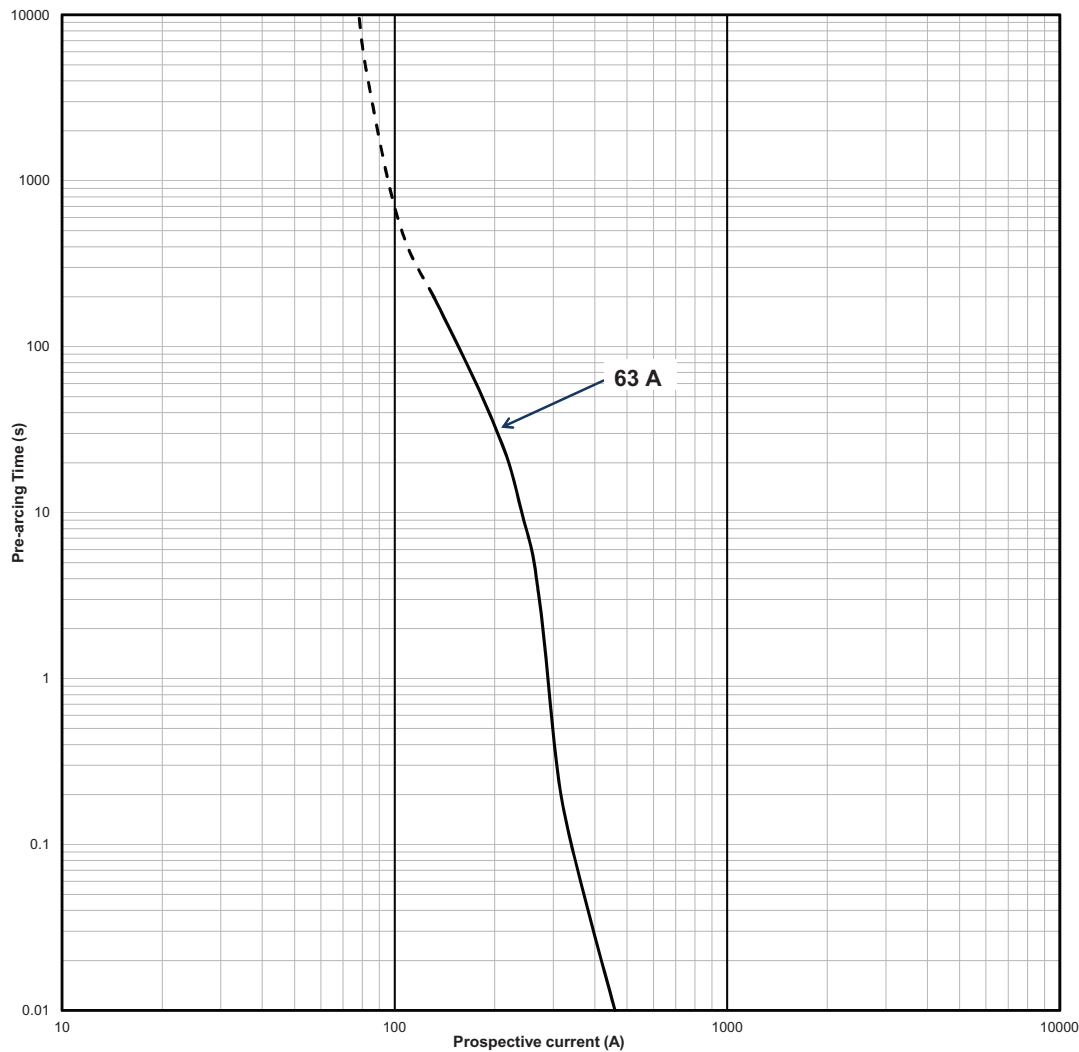
## Time-current curve - 1 A to 50 A



Data sheets: 720025, 5781724 fuses without striker; 5785566 fuses with striker, 5785626 (63 A)

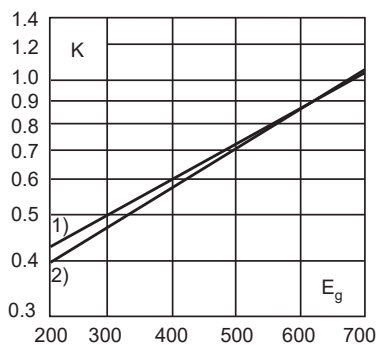
# FWP - 14 x 51 mm, 690 V a.c. (IEC), 700 V a.c. (UL), Up to 800 V d.c. (UL), 1 A to 50 A

## Time-current curve - 63 A



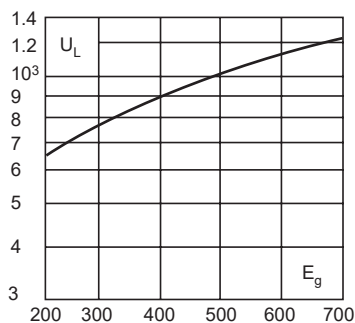
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



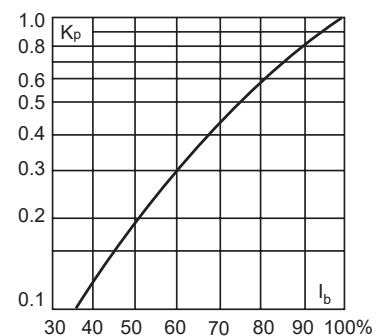
## Arc voltage

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 percent.



## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



Ferrule fuse links

FWP - 22 x 58 mm, 700 V a.c. / V d.c. (UL), 20 A to 100 A

Specifications

Description

Ferrule style high speed fuse links for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters. Available with or without striker.

Technical data

- Rated voltage: 700 V a.c. / V d.c. (UL)
- Rated current: 20 A to 100 A
- Breaking capacity:
  - 200 kA RMS Sym.
  - 50 kA at 700 V d.c., t/c 5 ms
- Operating Class: aR

Compatible modular fuse holder

- CH22 see page 387

Standards / Agency information

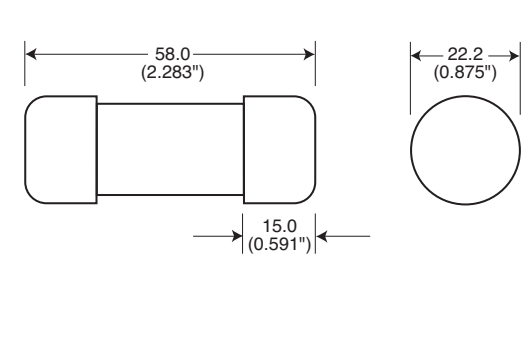
CE, UL Recognised, CSA Component Acceptance for versions without striker only, CCC certified



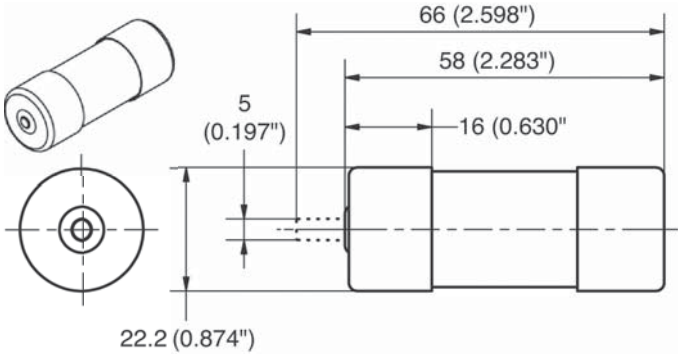
Catalogue numbers

| Fuse link type  | Fuse link size                 | Rated voltage               | Rated current (Amps) | I²t (A² Sec) |                        | Watts loss (W) | Catalogue numbers |
|-----------------|--------------------------------|-----------------------------|----------------------|--------------|------------------------|----------------|-------------------|
|                 |                                |                             |                      | Pre-arcing   | Clearing at 700 V a.c. |                |                   |
| Without striker | 22 x 58 mm<br>(7/8" x 2 9/32") | 700 V a.c./ 700 V d.c. (UL) | 20                   | 23           | 330                    | 5              | FWP-20A22F        |
|                 |                                |                             | 25                   | 37           | 530                    | 6              | FWP-25A22F        |
|                 |                                |                             | 32                   | 55           | 780                    | 8              | FWP-32A22F        |
|                 |                                |                             | 40                   | 68           | 960                    | 12             | FWP-40A22F        |
|                 |                                |                             | 50                   | 155          | 2200                   | 12.5           | FWP-50A22F        |
|                 |                                |                             | 63                   | 280          | 4000                   | 15             | FWP-63A22F        |
|                 |                                |                             | 80                   | 550          | 7800                   | 15             | FWP-80A22F        |
|                 |                                |                             | 100                  | 1100         | 15,600                 | 16.5           | FWP-100A22F       |
| With striker    | 22 x 58 mm<br>(7/8" x 2 9/32") | 700 V a.c./ 700 V d.c. (UL) | 20                   | 19           | 260                    | 5              | FWP-20A22FI       |
|                 |                                |                             | 25                   | 34           | 410                    | 6              | FWP-25A22FI       |
|                 |                                |                             | 32                   | 53.5         | 605                    | 8              | FWP-32A22FI       |
|                 |                                |                             | 40                   | 68           | 750                    | 9              | FWP-40A22FI       |
|                 |                                |                             | 50                   | 135          | 1600                   | 9.5            | FWP-50A22FI       |
|                 |                                |                             | 63                   | 280          | 3080                   | 11             | FWP-63A22FI       |
|                 |                                |                             | 80                   | 600          | 6600                   | 13.5           | FWP-80A22FI       |
|                 |                                |                             | 100                  | 1100         | 12,500                 | 16             | FWP-100A22FI      |

Dimensions - mm (in), without striker

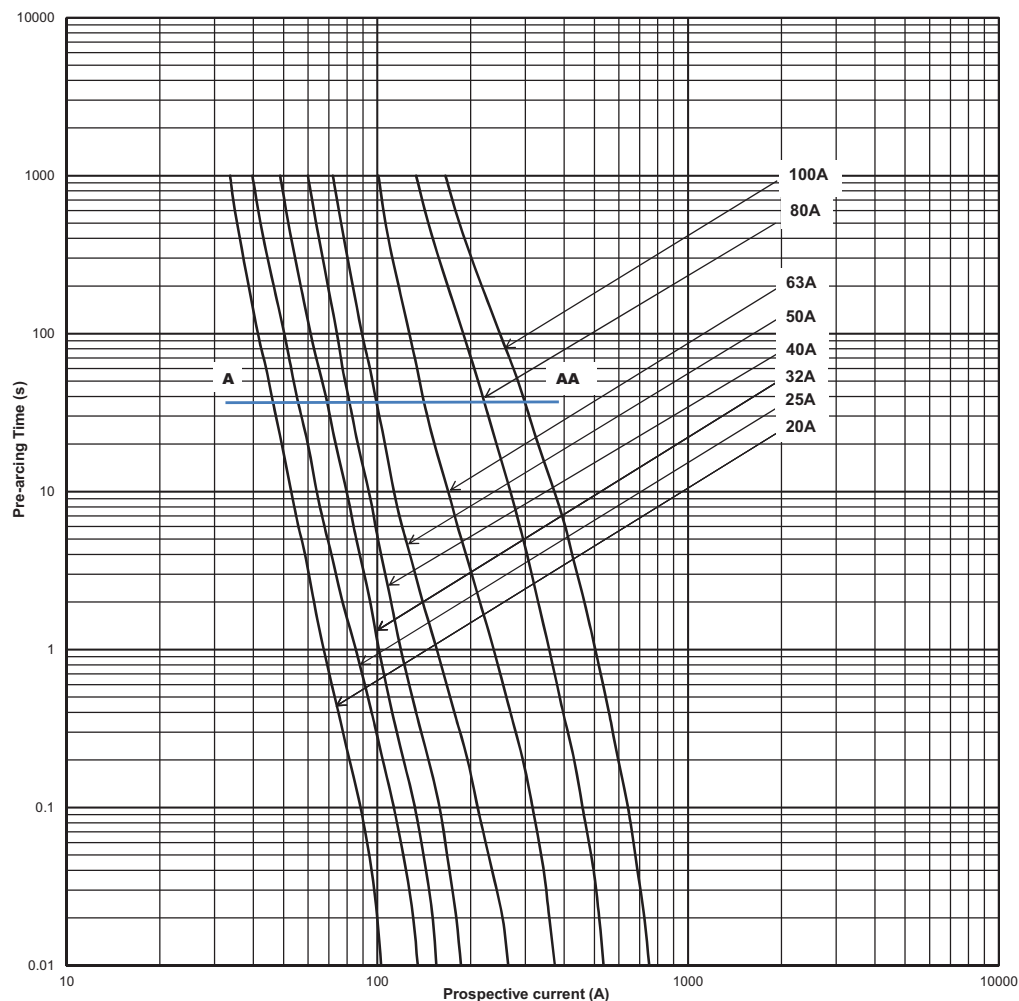


Dimensions - mm (in), with striker



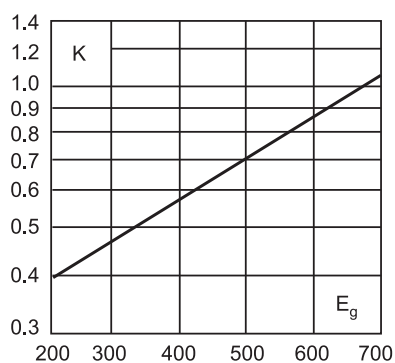
# FWP - 22 x 58 mm, 700 V a.c. / V d.c. (UL), 20 A to 100 A

Time-current curve - 20 A to 100 A



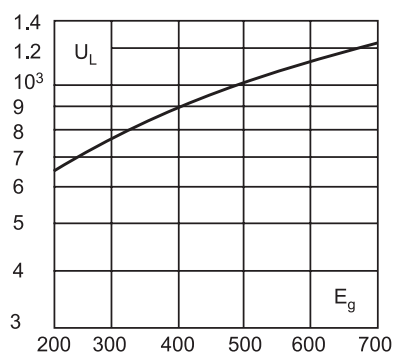
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



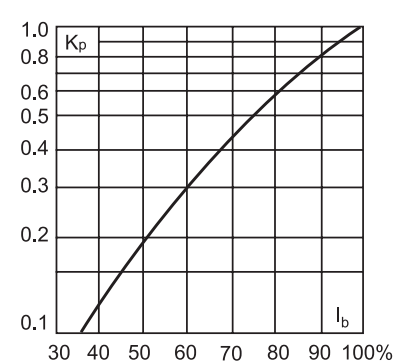
## Arc voltage

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 percent.



## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



# Ferrule fuse links

## FWK - 20 x 127 mm and 25 x 146 mm, 750 V d.c. (IEC), 5 A to 60 A

### Specifications

#### Description

Ferrule style high speed fuse links for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

#### Technical Data

- Rated voltage: 750 V d.c. (IEC)
- Rated current:
  - 5 A to 30 A (20 x 127 mm)
  - 35 A to 60 A (25 x 146 mm)
- Breaking capacity: 50 kA at 750 V d.c., L/R 10-15ms
- Operating class: gG

#### Standards / Agency information:

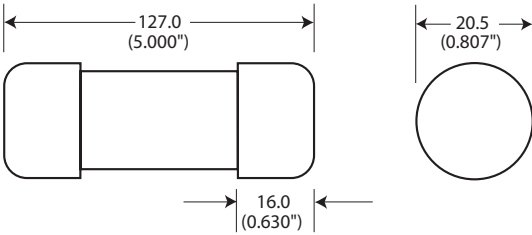
CE



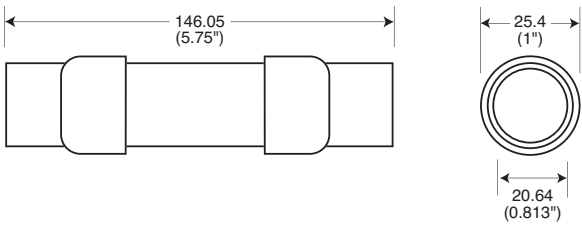
#### Catalogue numbers

| Fuse link size               | Rated voltage    | Rated current (Amps) | I²t (A² Sec) |                        | Watts loss (W) | Catalogue numbers |
|------------------------------|------------------|----------------------|--------------|------------------------|----------------|-------------------|
|                              |                  |                      | Pre-arcing   | Clearing at 750 V d.c. |                |                   |
| 20 x 127 mm<br>(13/16" x 5") | 750 V d.c. (IEC) | 5                    | 8.5          | 16                     | 6.7            | FWK-5A20F         |
|                              |                  | 8                    | 50           | 100                    | 8.8            | FWK-8A20F         |
|                              |                  | 10                   | 95           | 200                    | 8.5            | FWK-10A20F        |
|                              |                  | 15                   | 100          | 240                    | 5              | FWK-15A20F        |
|                              |                  | 20                   | 125          | 315                    | 7.8            | FWK-20A20F        |
|                              |                  | 25                   | 400          | 1100                   | 6.5            | FWK-25A20F        |
|                              |                  | 30                   | 800          | 2600                   | 6.5            | FWK-30A20F        |
| 25 x 146 mm<br>(1" x 5 3/4") | 750 V d.c. (IEC) | 35                   | 1300         | 4600                   | 6              | FWK-35A25F        |
|                              |                  | 40                   | 1600         | 5300                   | 6.8            | FWK-40A25F        |
|                              |                  | 50                   | 3100         | 12,000                 | 7.3            | FWK-50A25F        |
|                              |                  | 60                   | 5900         | 24,000                 | 7.7            | FWK-60A25F        |

#### Dimensions - mm (in), 20 x 127 mm, 5 A to 30 A

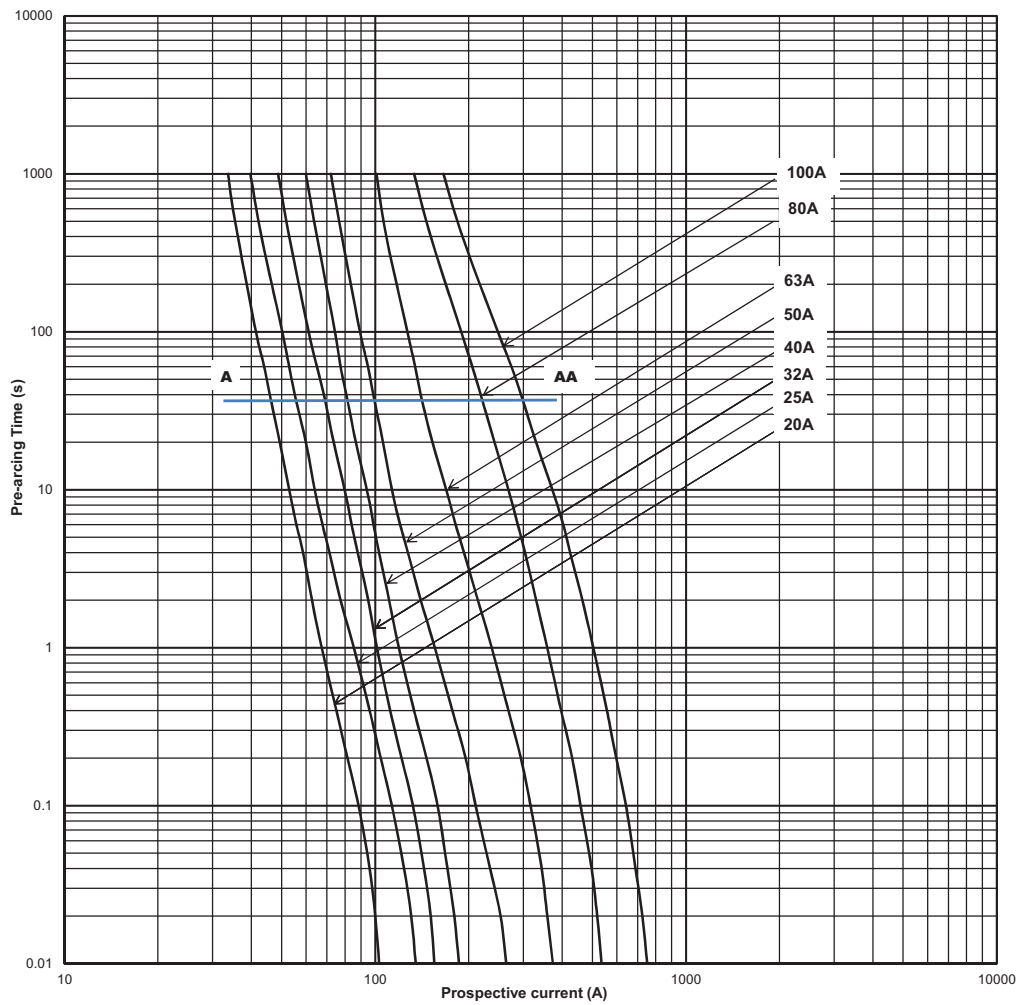


#### Dimensions - mm (in), 25 x 146 mm, 35 A to 60 A



**FWK - 20 x 127 mm and 25 x 146 mm, 750 V d.c. (IEC), 5 A to 60 A**

Time-current curve - 20 A to 100 A





# Ferrule fuse links

## FWJ - 14 x 67 mm, 1000 V a.c. / 800 V d.c. (UL), 20 A to 30 A

### Specifications

#### Description

Ferrule style high speed fuse links for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

#### Technical data

- Rated voltage: 1000 V a.c. / 800 V d.c.
- Rated current: 20 A to 30 A
- Breaking capacity:
  - 25kA RMS Sym
  - 50 kA at 800 V d.c.
- Operating class: aR

#### Standards / Agency information

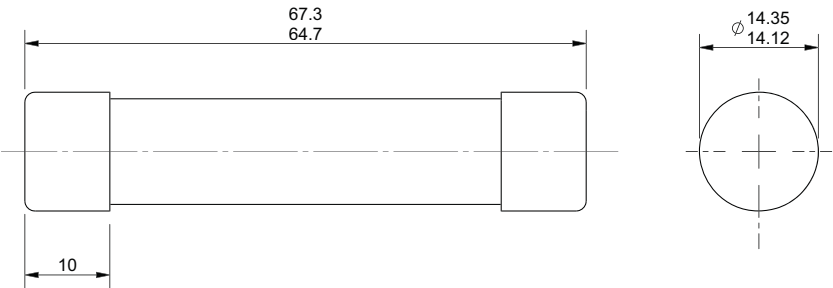
CE, UL Recognised



### Catalogue numbers

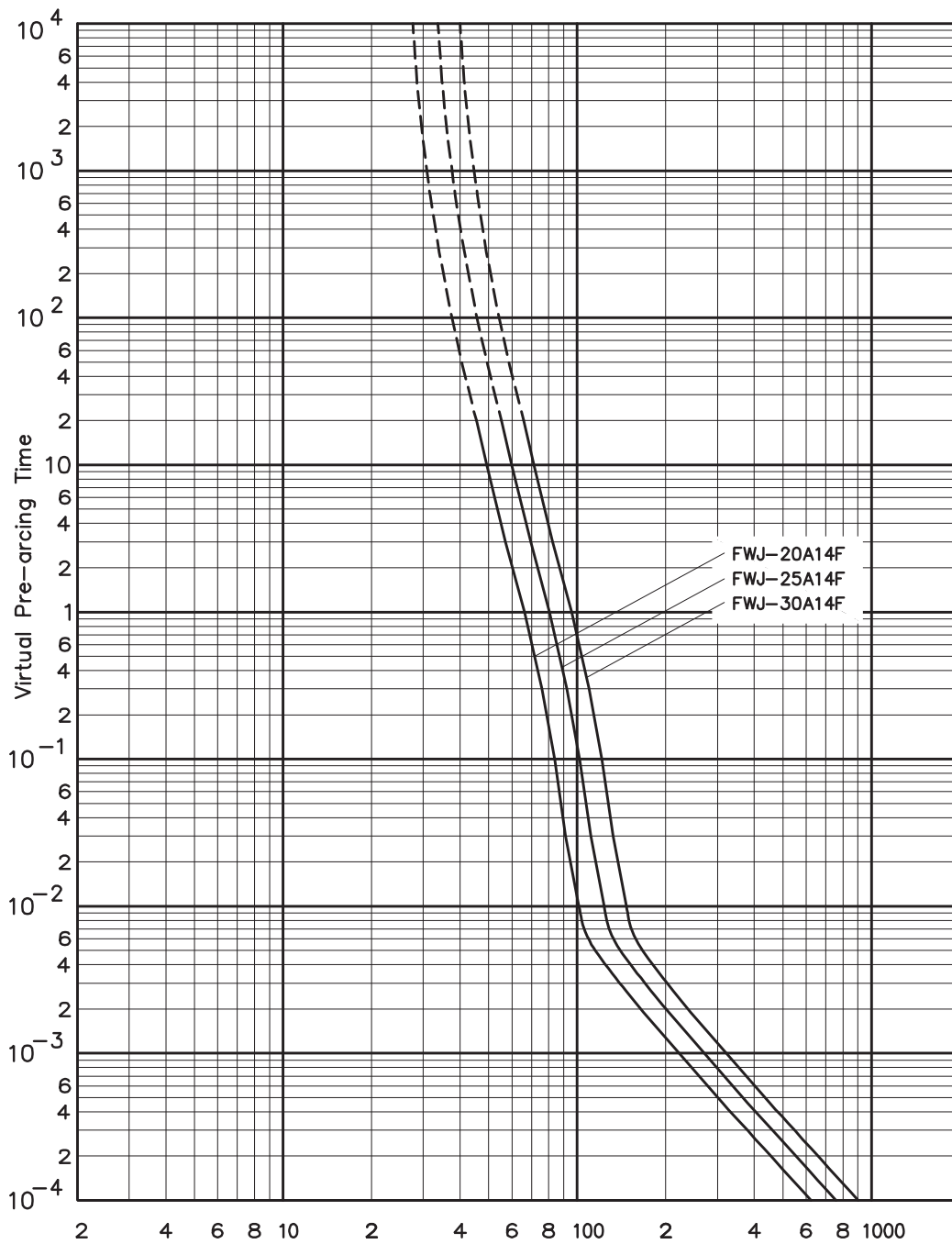
| Fuse link size                                                                     | Rated voltage                | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                            | Watts loss<br>(W) | Catalogue<br>numbers |
|------------------------------------------------------------------------------------|------------------------------|-------------------------|---------------------------------------|----------------------------|-------------------|----------------------|
|                                                                                    |                              |                         | Pre-arcing                            | Clearing<br>at 1000 V a.c. |                   |                      |
| 14 x 67 mm<br>( <sup>9</sup> / <sub>16</sub> " x 2 <sup>5</sup> / <sub>8</sub> " ) | 1000 V a.c./ 800 V d.c. (UL) | 20                      | 25                                    | 220                        | 9                 | FWJ-20A14F           |
|                                                                                    |                              | 25                      | 33                                    | 350                        | 11                | FWJ-25A14F           |
|                                                                                    |                              | 30                      | 52                                    | 450                        | 14                | FWJ-30A14F           |

### Dimensions (mm)



**FWJ - 14 x 67 mm, 1000 V a.c. / 800 V d.c. (UL), 20 A to 30 A**

Time-current curve - 20 A to 30 A



# Ferrule fuse links

## FWL - 20 x 127 mm, 1200 V a.c. / 1000 V d.c. (IEC), 20 A to 30 A

### Specifications

#### Description

Ferrule style high speed fuse links for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters. Available with indicator.

#### Technical data

- Rated voltage: 1200 V a.c. / 1000 V d.c. (IEC)
- Rated current: 20 A, 25 A and 30 A
- Breaking capacity:
  - 50 kA RMS Sym
  - 50 kA at 1000 V d.c.
- Operating Class: gR

#### Standards / Agency information

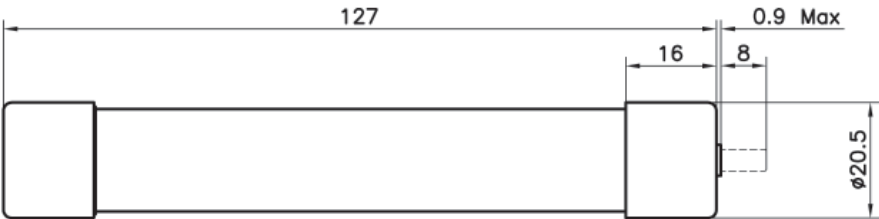
CE



#### Catalogue numbers

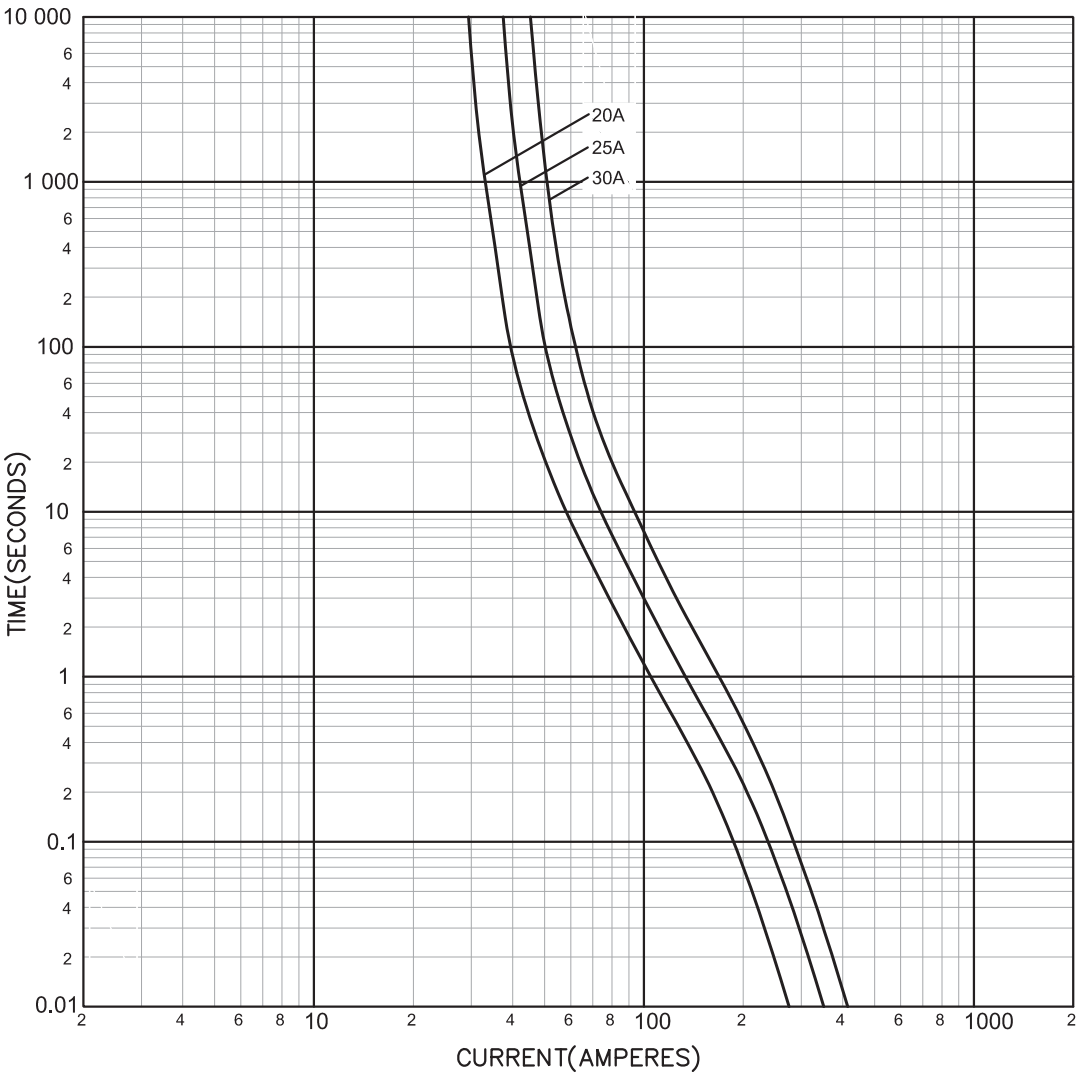
| Fuse link size               | Rated voltage                     | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                         | Watts loss (W) | Catalogue numbers |                |
|------------------------------|-----------------------------------|----------------------|---------------------------------------|-------------------------|----------------|-------------------|----------------|
|                              |                                   |                      | Pre-arcing                            | Clearing at 1000 V a.c. |                | Without indicator | With indicator |
| 20 x 127 mm<br>(13/16" x 5") | 1200 V a.c./ 1000 V d.c.<br>(IEC) | 20                   | 675                                   | 1550                    | 5.9            | FWL-20A20F        | FWL-20A20FI    |
|                              |                                   | 25                   | 1200                                  | 2760                    | 6.5            | FWL-25A20F        | FWL-25A20FI    |
|                              |                                   | 30                   | 1850                                  | 4300                    | 7.5            | FWL-30A20F        | FWL-30A20FI    |

#### Dimensions (mm)



**FWL - 20 x 127 mm, 1200 V a.c. / 1000 V d.c. (IEC), 20 A to 30 A**

Time-current curve - 20 A to 30 A



# Ferrule fuse links

## FWS - 20 x 127 mm, 1400 - 2000 V a.c. / 1000 V d.c. (IEC), 2 A to 15 A

### Specifications

#### Description

Ferrule style high speed fuse links for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters. Available with indicator.

#### Technical Data

- Rated voltage:
  - 2000 V a.c. / 1000 V d.c. (IEC, 2 A to 8 A)
  - 1400 V a.c. / 1000 V d.c. (IEC, 10 A to 15 A)
- Rated current: 2 A to 15 A
- Breaking capacity:
  - 50 kA RMS Sym.
  - 50 kA at 1000 V d.c. (2 A to 10 A only)
- Operating class: gR

#### Standards/Agency Information

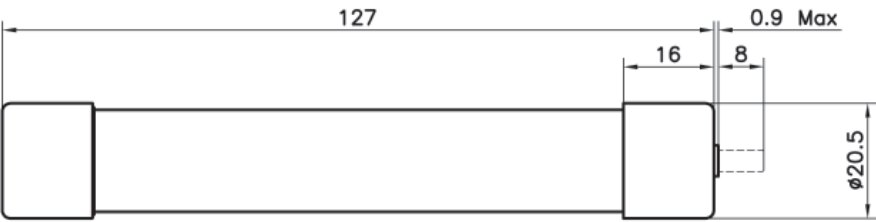
CE



#### Catalogue numbers

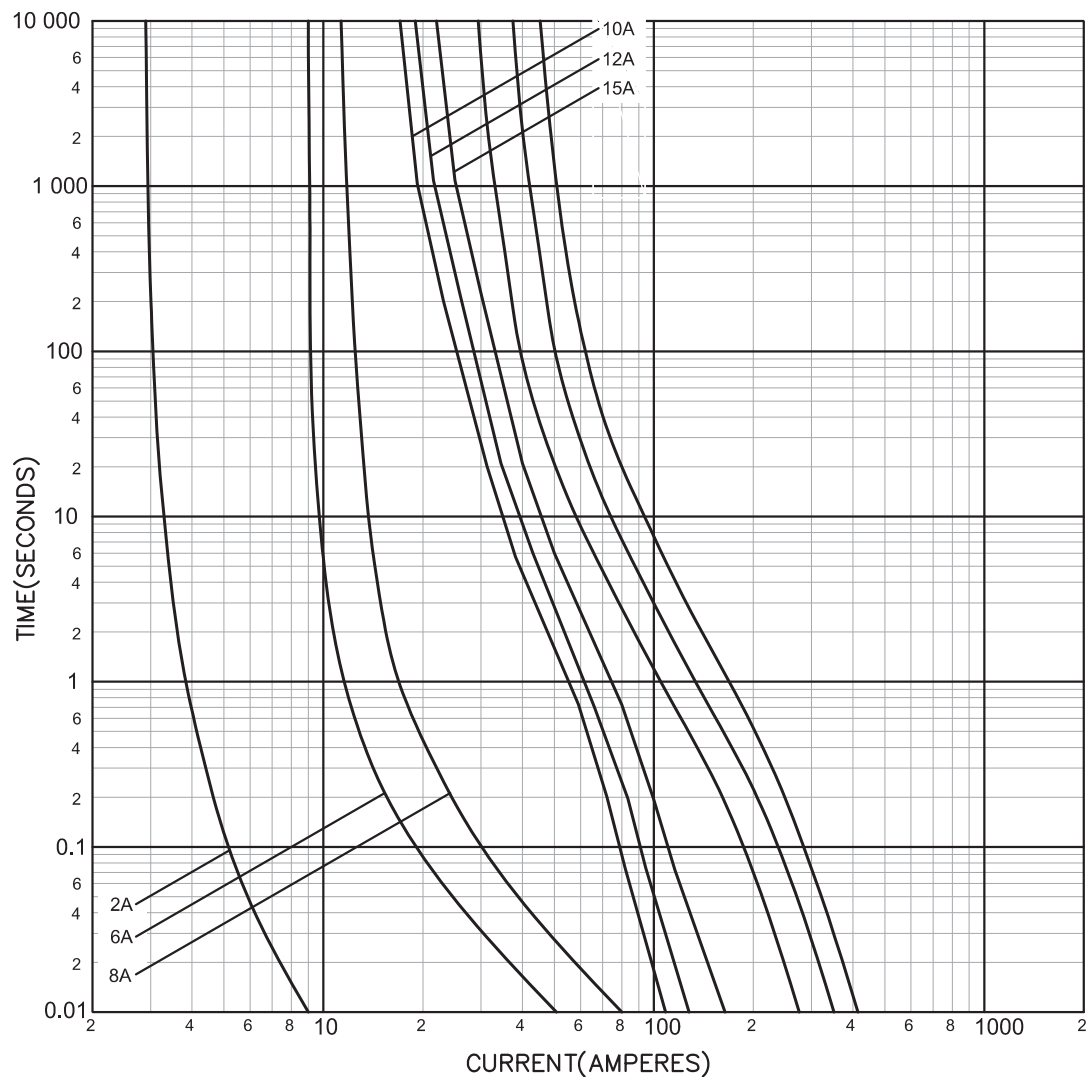
| Fuse link size               | Rated voltage                 | Rated current (Amps) | I²t (A² Sec) |                         | Watts loss (W) | Catalogue numbers |                |
|------------------------------|-------------------------------|----------------------|--------------|-------------------------|----------------|-------------------|----------------|
|                              |                               |                      | Pre-arcing   | Clearing at 1000 V a.c. |                | Without indicator | With indicator |
| 20 x 127 mm<br>(13/16" x 5") | 2000 V a.c./2000 V d.c.(IEC)  | 2                    | 0.8          | 2.4                     | 4.4            | FWS-2A20F         | FWS-2A20FI     |
|                              |                               | 6                    | 27           | 81                      | 6.7            | FWS-6A20F         | FWS-6A20FI     |
|                              |                               | 8                    | 64           | 192                     | 7.6            | FWS-8A20F         | FWS-8A20FI     |
|                              | 1400 V a.c./ 1000 V d.c.(IEC) | 10                   | 118          | 277                     | 3              | FWS-10A20F        | FWS-10A20FI    |
|                              |                               | 12                   | 170          | 380                     | 3.4            | FWS-12A20F        | FWS-12A20FI    |
|                              |                               | 15                   | 209          | 500                     | 5              | FWS-15A20F        | FWS-15A20FI    |

#### Dimensions (mm)



**FWS** - 20 x 127 mm, 1400 - 2000 V a.c. / 1000 V d.c. (IEC), 2 A to 15 A

Time-current curve - 2 A to 15 A



**170M - Sizes 000 and 00, DIN 43653, 690 V a.c. (IEC), 700 V a.c. / V d.c. (UL), 10 A to 400 A**

**Specifications**

**Description**

Square body DIN 43653 bolted tags high speed fuse links, for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

**Technical data**

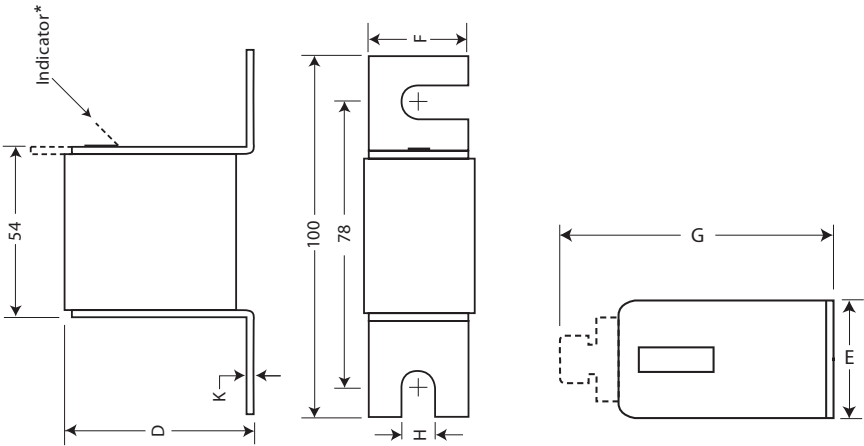
- Rated voltage:
  - 690 V a.c. (IEC)
  - 700 V a.c. (UL, size 000; size 00 100 A to 400 A)
  - 700 V d.c. (UL, size 000)
- Rated current: 10 A to 400 A
- Breaking capacity:
  - 200 kA RMS Sym
  - 50 kA at 700 V d.c. (size 000 only)
- Operating class
  - gR - size 000 (10 A to 63 A), size 00 (25 A to 80 A)
  - aR - size 000 (>63 A), size 00 (>80 A)



**Standards/Agency Information**

CE, Designed and tested to IEC 60269 part 4. UL Recognised/CSA Component Acceptance on Size 000. CCC approved

**Dimensions (mm)**



\* Indication for Size 00 fuses is a red pin.

The dotted line illustrates the Type T indicator fuse link.

| Type -U/80, -/80, -TN/80 |    |    |    |    |    |   |
|--------------------------|----|----|----|----|----|---|
| Size                     | D  | E  | F  | G  | H  | K |
| 000                      | 40 | 21 | 20 | 51 | 8  | 2 |
| 00                       | 51 | 30 | 28 | 67 | 10 | 2 |

# 170M - Sizes 000 and 00, DIN 43653, 690 V a.c. (IEC), 700 V a.c. / V d.c. (UL), 10 A to 400 A

## Catalogue numbers

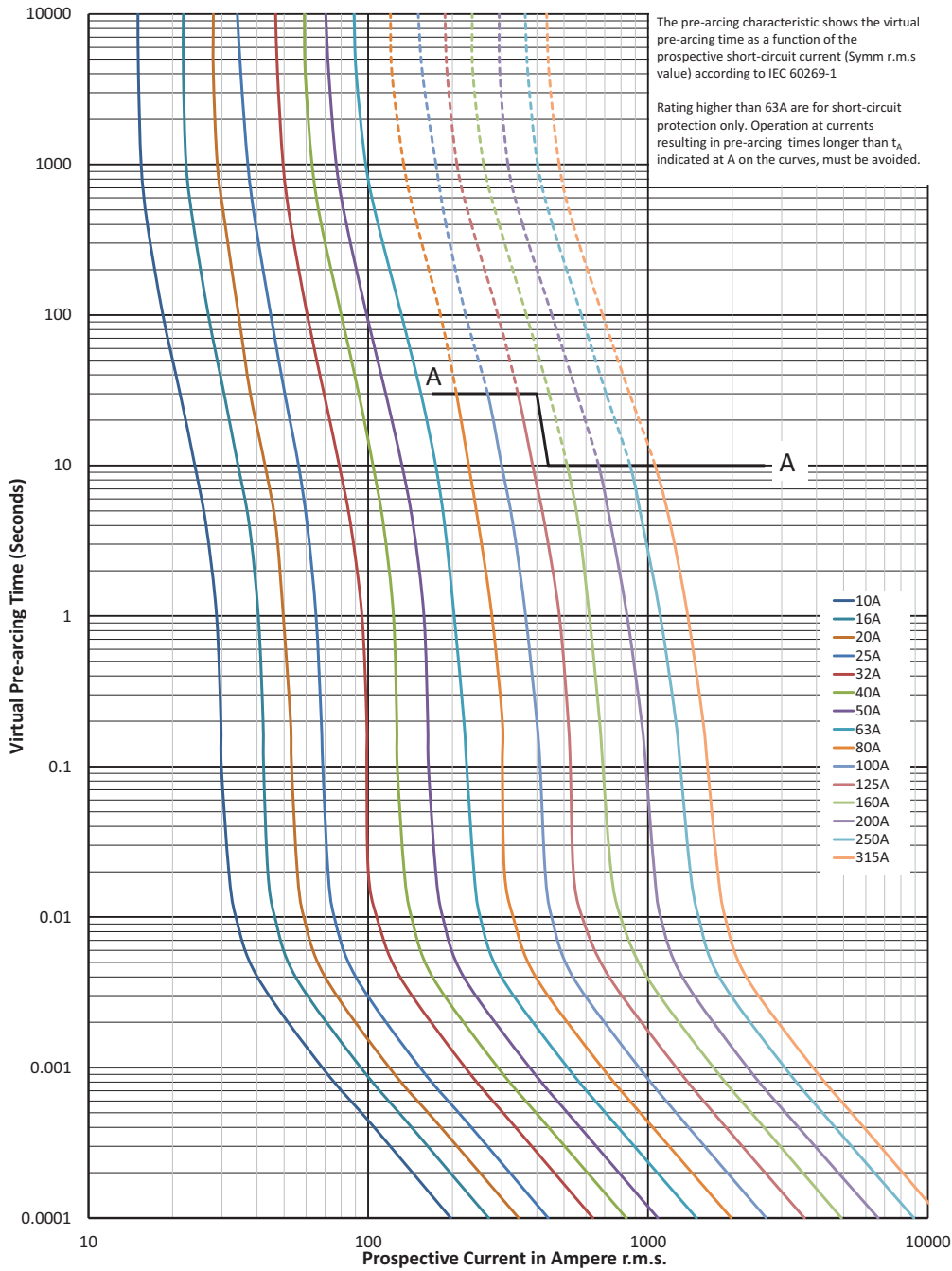
| Fuse link<br>body size | Rated<br>voltage               | Rated current<br>(Amps) | Pt (A² Sec) |                           |                   | Operating<br>class | Catalogue numbers          |                          |                                      |
|------------------------|--------------------------------|-------------------------|-------------|---------------------------|-------------------|--------------------|----------------------------|--------------------------|--------------------------------------|
|                        |                                |                         | Pre-Arcing  | Clearing<br>at 660 V a.c. | Watts loss<br>(W) |                    | -U/80<br>Without indicator | -/80<br>Visual indicator | -TN/80 Type T<br>indicator for micro |
| 000                    | 690 V a.c.<br>(IEC)            | 10                      | 3.8         | 25.5                      | 3                 | gR                 | 170M1308                   | 170M1358                 | 170M1408                             |
|                        |                                | 16                      | 7.2         | 48                        | 5.5               |                    | 170M1309                   | 170M1359                 | 170M1409                             |
|                        |                                | 20                      | 11.5        | 78                        | 7                 |                    | 170M1310                   | 170M1360                 | 170M1410                             |
|                        |                                | 25                      | 19          | 130                       | 9                 |                    | 170M1311                   | 170M1361                 | 170M1411                             |
|                        |                                | 32                      | 40          | 270                       | 10                |                    | 170M1312                   | 170M1362                 | 170M1412                             |
|                        |                                | 40                      | 69          | 460                       | 12                |                    | 170M1313                   | 170M1363                 | 170M1413                             |
|                        | 700 V a.c. /<br>V d.c.<br>(UL) | 50                      | 115         | 770                       | 15                | aR                 | 170M1314                   | 170M1364                 | 170M1414                             |
|                        |                                | 63                      | 215         | 1450                      | 16                |                    | 170M1315                   | 170M1365                 | 170M1415                             |
|                        |                                | 80                      | 380         | 2550                      | 19                |                    | 170M1316                   | 170M1366                 | 170M1416                             |
|                        |                                | 100                     | 695         | 4650                      | 24                |                    | 170M1317                   | 170M1367                 | 170M1417                             |
|                        |                                | 125                     | 1250        | 8500                      | 28                |                    | 170M1318                   | 170M1368                 | 170M1418                             |
|                        |                                | 160                     | 2350        | 16,000                    | 32                |                    | 170M1319                   | 170M1369                 | 170M1419                             |
|                        |                                | 200                     | 4200        | 28,000                    | 37                |                    | 170M1320                   | 170M1370                 | 170M1420                             |
|                        |                                | 250                     | 7750        | 51,500                    | 42                |                    | 170M1321                   | 170M1371                 | 170M1421                             |
|                        |                                | 315                     | 12,000      | 80,500                    | 53                |                    | 170M1322                   | 170M1372                 | 170M1422                             |
| 00                     | 690 V a.c.<br>(IEC)            | 25                      | 19          | 130                       | 6                 | gR                 |                            | 170M2608                 | 170M2658                             |
|                        |                                | 32                      | 28.5        | 195                       | 7                 |                    |                            | 170M2609                 | 170M2659                             |
|                        |                                | 40                      | 50          | 360                       | 9                 |                    |                            | 170M2610                 | 170M2660                             |
|                        |                                | 50                      | 95          | 640                       | 10                |                    |                            | 170M2611                 | 170M2661                             |
|                        |                                | 63                      | 170         | 1200                      | 12                |                    |                            | 170M2612                 | 170M2662                             |
|                        |                                | 80                      | 310         | 2100                      | 15                |                    |                            | 170M2613                 | 170M2663                             |
| 00                     | 690 V a.c.<br>(IEC)            | 100                     | 620         | 4150                      | 20                | aR                 |                            | 170M2614                 | 170M2664                             |
|                        |                                | 125                     | 1000        | 6950                      | 25                |                    |                            | 170M2615                 | 170M2665                             |
|                        |                                | 160                     | 1900        | 13,000                    | 30                |                    |                            | 170M2616                 | 170M2666                             |
|                        |                                | 200                     | 3400        | 23,000                    | 35                |                    |                            | 170M2617                 | 170M2667                             |
|                        | 700 V a.c.<br>(UL)             | 250                     | 6250        | 42,000                    | 45                |                    |                            | 170M2618                 | 170M2668                             |
|                        |                                | 315                     | 10,000      | 68,500                    | 55                |                    |                            | 170M2619                 | 170M2669                             |
|                        |                                | 350                     | 13,500      | 91,500                    | 60                |                    |                            | 170M2620                 | 170M2670                             |
|                        |                                | 400                     | 18,000      | 125,000                   | 70                |                    |                            | 170M2621                 | 170M2671                             |



Square body fuse links

170M - Sizes 000 and 00, DIN 43653, 690 V a.c. (IEC), 700 V a.c. / V d.c. (UL), 10 A to 400 A

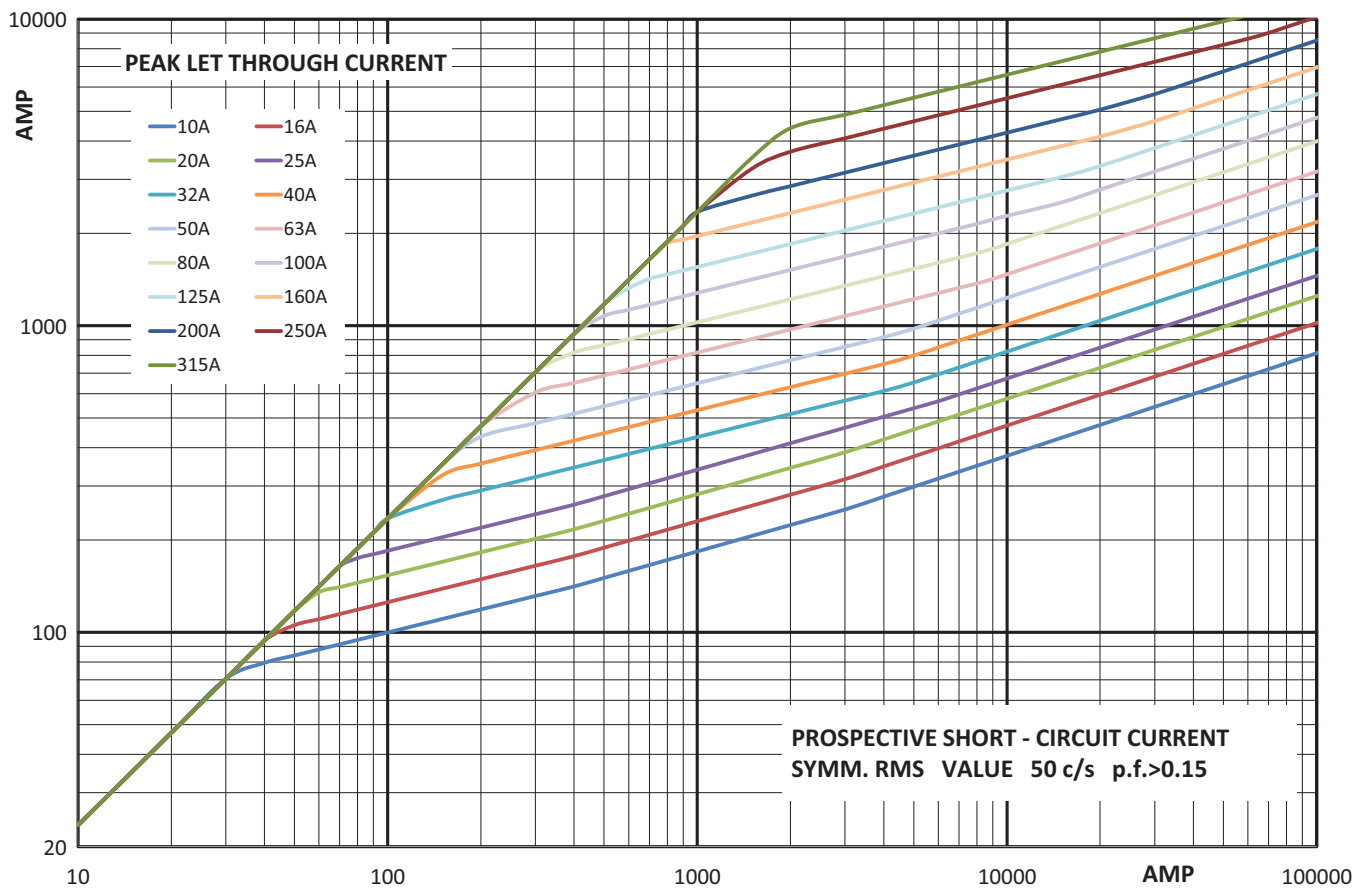
Time-current curve - Size 000 - 10 A to 315 A



$K_b = 1 \quad N = 1.6$

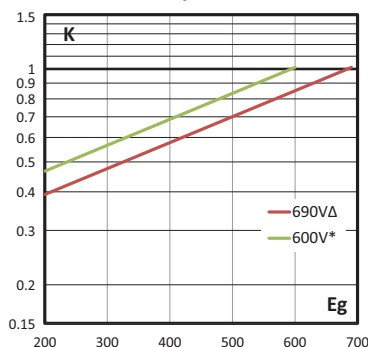
## 170M - Sizes 000 and 00, DIN 43653, 690 V a.c. (IEC), 700 V a.c. / V d.c. (UL), 10 A to 400 A

### Cut-off curve - Size 000 - 10 A to 315 A



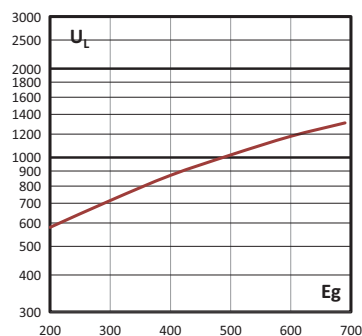
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



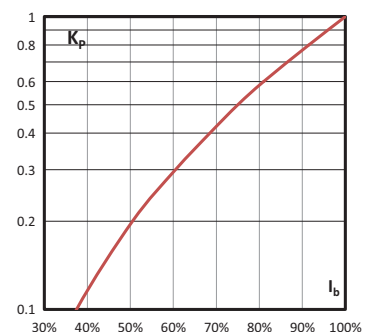
### Arc voltage

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 percent.



### Watts losses

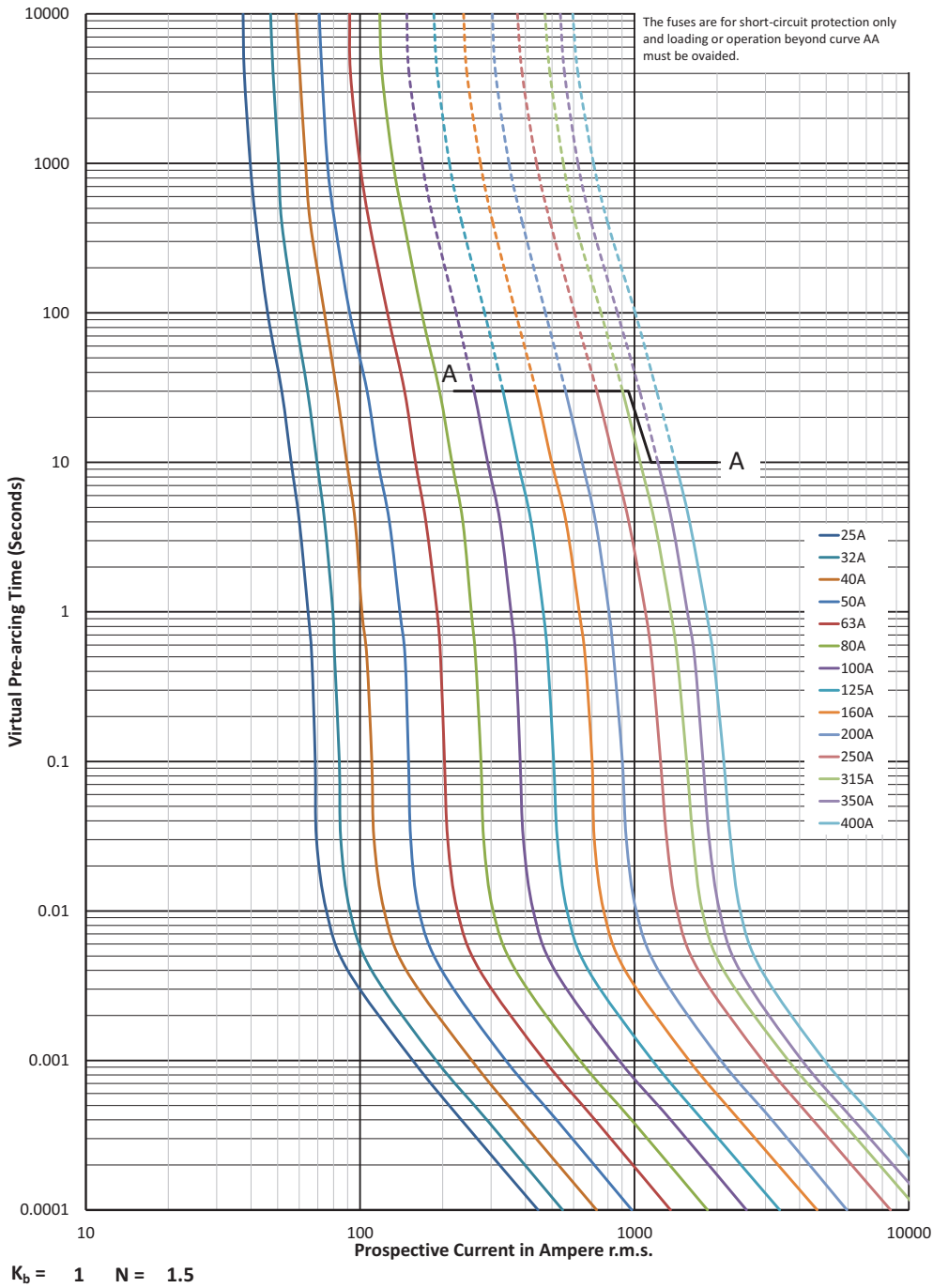
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor,  $K_p$ , is given as a function of the RMS load current,  $I_b$ , in percent of the rated current.



# Square body fuse links

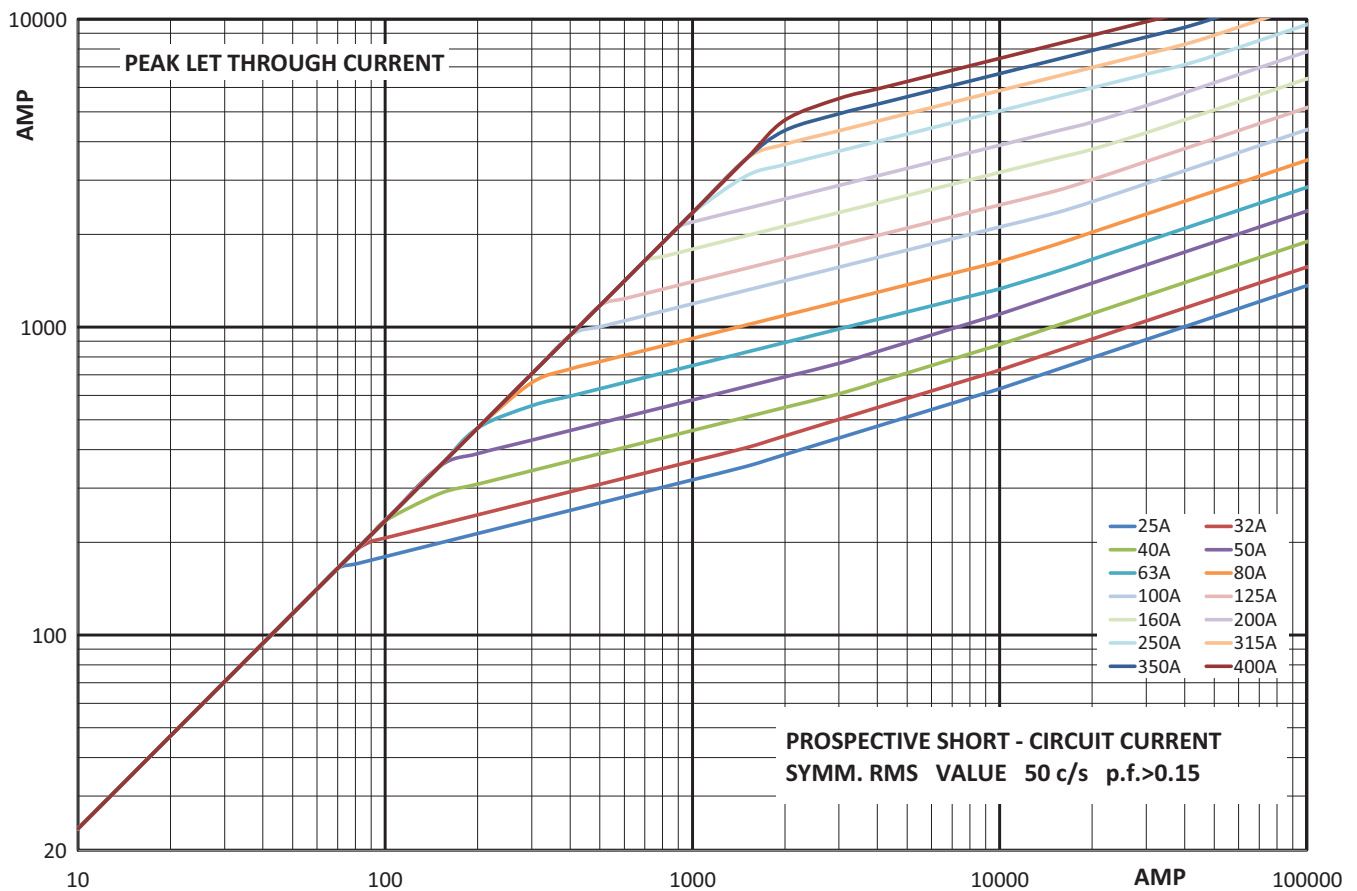
**170M** - Sizes 000 and 00, DIN 43653, 690 V a.c. (IEC), 700 V a.c. / V d.c. (UL), 10 A to 400 A

Time-current curve - Size 00, 25 A to 400 A



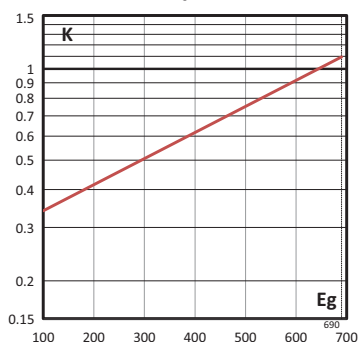
## 170M - Sizes 000 and 00, DIN 43653, 690 V a.c. (IEC), 700 V a.c. / V d.c. (UL), 10 A to 400 A

Cut-off curve- Size 00 , 25 A to 400 A



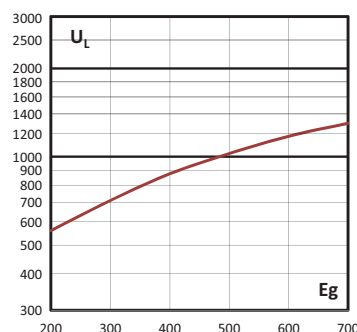
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



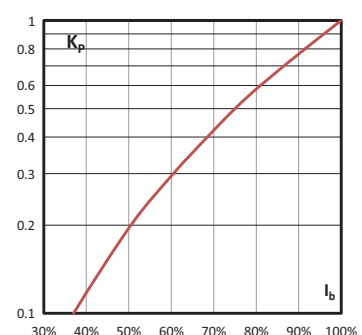
### Arc voltage

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 percent.



### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



# Square body fuse links

## 170M - Sizes 1\* to 3, DIN 43653, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

### Specifications

#### Description

Square body DIN 43653 bolted tags high speed fuse links, for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

#### Technical data

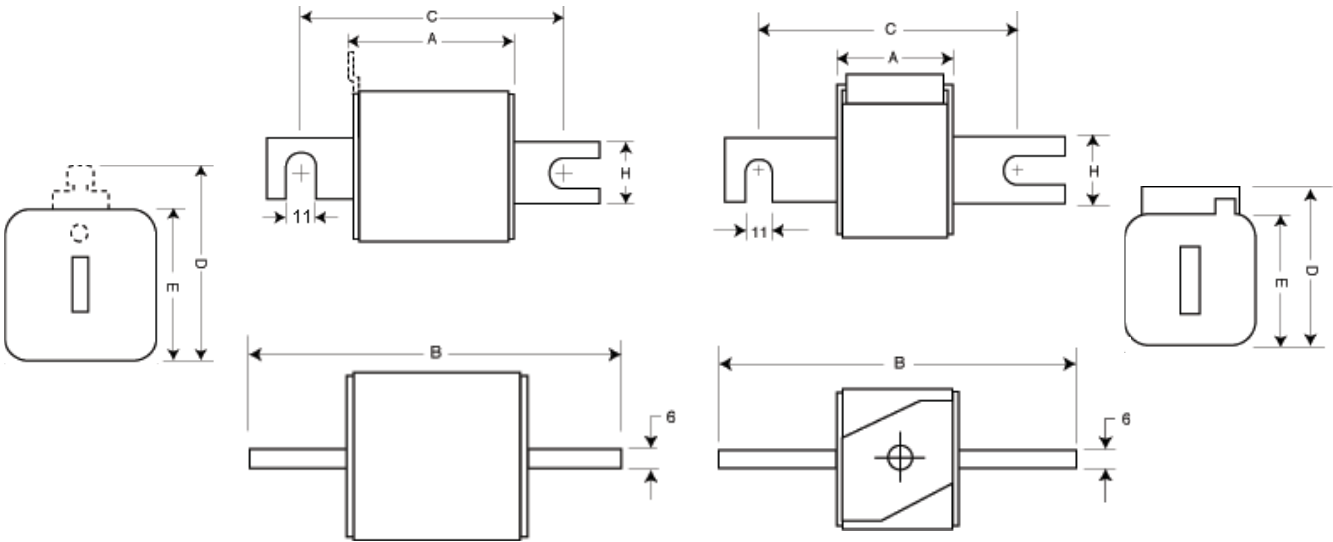
- Rated voltage:
  - 690 V a.c. (IEC)
  - 700 V a.c. (UL)
- Rated current: 40 A to 2000 A
- Breaking capacity: 200 kA RMS Sym
- Operating class: aR



#### Standards / Agency information

CE, Designed and tested to IEC60269 Part 4. Consult Eaton for UL Recognition/CSA Component Acceptance status. CCC except where noted.

#### Dimensions (mm)



| Type -/80, -TN/80, -/110, -TN/110 |    |     |                |    |                |                |    |    |
|-----------------------------------|----|-----|----------------|----|----------------|----------------|----|----|
| Size                              | A  | B   | B <sup>1</sup> | C  | C <sup>1</sup> | D <sup>2</sup> | E  | H  |
| 1*                                | 50 | 104 | 134            | 78 | 108            | 58             | 45 | 22 |
| 1                                 | 50 | 108 | 138            | 78 | 108            | 66             | 53 | 25 |
| 2                                 | 50 | 108 | 138            | 78 | 108            | 75             | 61 | 25 |
| 3                                 | 51 | 109 | 139            | 78 | 108            | 90             | 76 | 30 |

<sup>1</sup> Valid for fuse links type -/110, -TN/110.  
<sup>2</sup> Valid for Fuse type -TN/80 and -TN/110.

1mm = 0.0394"

| Type -KN/80, -KN/110 |    |     |                |    |                |    |    |    |
|----------------------|----|-----|----------------|----|----------------|----|----|----|
| Size                 | A  | B   | B <sup>3</sup> | C  | C <sup>3</sup> | D  | E  | H  |
| 1*                   | 50 | 104 | 134            | 78 | 108            | 59 | 45 | 22 |
| 1                    | 50 | 108 | 138            | 78 | 108            | 69 | 53 | 25 |
| 2                    | 50 | 108 | 138            | 78 | 108            | 77 | 61 | 25 |
| 3                    | 51 | 109 | 139            | 78 | 108            | 92 | 76 | 30 |

<sup>3</sup> Valid for fuse links type -KN/110.  
1mm = 0.0394"

**170M - Sizes 1\* to 3, DIN 43653, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A****Catalogue numbers**

|                     |                                     | I <sup>2</sup> t (A <sup>2</sup> Sec) |                                     |                        |                | Catalogue numbers     |                                   |                                   |                        |                                    |                                    |                       |          |
|---------------------|-------------------------------------|---------------------------------------|-------------------------------------|------------------------|----------------|-----------------------|-----------------------------------|-----------------------------------|------------------------|------------------------------------|------------------------------------|-----------------------|----------|
| Fuse link body size | Rated voltage                       | Rated current (Amps)                  | Pre-arcing                          | Clearing at 660 V a.c. | Watts loss (W) | -/80 Visual indicator | -TN/80 Type T indicator for micro | -KN/80 Type K indicator for micro | -/110 Visual indicator | -TN/110 Type T indicator for micro | -KN/110 Type K indicator for micro |                       |          |
| 1*                  | 690 V a.c. (IEC)<br>700 V a.c. (UL) | 40                                    | 40                                  | 270                    | 9              | 170M3008              | 170M3058                          | 170M3108                          | 170M3158               | 170M3208                           | 170M3258                           |                       |          |
|                     |                                     | 50                                    | 77                                  | 515                    | 11             | 170M3009              | 170M3059                          | 170M3109                          | 170M3159               | 170M3209                           | 170M3259                           |                       |          |
|                     |                                     | 63                                    | 115                                 | 770                    | 14             | 170M3010              | 170M3060                          | 170M3110                          | 170M3160               | 170M3210                           | 170M3260                           |                       |          |
|                     |                                     | 80                                    | 185                                 | 1250                   | 18             | 170M3011              | 170M3061                          | 170M3111                          | 170M3161               | 170M3211                           | 170M3261                           |                       |          |
|                     |                                     | 100                                   | 360                                 | 2450                   | 21             | 170M3012              | 170M3062                          | 170M3112                          | 170M3162               | 170M3212                           | 170M3262                           |                       |          |
|                     |                                     | 125                                   | 550                                 | 3700                   | 26             | 170M3013              | 170M3063                          | 170M3113                          | 170M3163               | 170M3213                           | 170M3263                           |                       |          |
|                     |                                     | 160                                   | 1100                                | 7500                   | 30             | 170M3014              | 170M3064                          | 170M3114                          | 170M3164               | 170M3214                           | 170M3264                           |                       |          |
|                     |                                     | 200                                   | 2200                                | 15,000                 | 35             | 170M3015              | 170M3065                          | 170M3115                          | 170M3165               | 170M3215                           | 170M3265                           |                       |          |
|                     |                                     | 250                                   | 4200                                | 28,500                 | 40             | 170M3016              | 170M3066                          | 170M3116                          | 170M3166               | 170M3216                           | 170M3266                           |                       |          |
|                     |                                     | 315                                   | 7000                                | 46,500                 | 50             | 170M3017              | 170M3067                          | 170M3117                          | 170M3167               | 170M3217                           | 170M3267                           |                       |          |
|                     |                                     | 350                                   | 10,000                              | 68,500                 | 55             | 170M3018              | 170M3068                          | 170M3118                          | 170M3168               | 170M3218                           | 170M3268                           |                       |          |
|                     |                                     | 400                                   | 15,000                              | 105,000                | 60             | 170M3019              | 170M3069                          | 170M3119                          | 170M3169               | 170M3219                           | 170M3269                           |                       |          |
|                     |                                     | 450                                   | 21,000                              | 140,000                | 65             | 170M3020              | 170M3070                          | 170M3120                          | 170M3170               | 170M3220                           | 170M3270                           |                       |          |
|                     |                                     | 500                                   | 27,000                              | 180,000                | 70             | 170M3021              | 170M3071                          | 170M3121                          | 170M3171               | 170M3221                           | 170M3271                           |                       |          |
|                     |                                     | 550                                   | 34,000                              | 230,000                | 75             | 170M3022              | 170M3072                          | 170M3122                          | 170M3172               | 170M3222                           | 170M3272                           |                       |          |
|                     |                                     | 630                                   | 48,500                              | 325,000                | 80             | 170M3023              | 170M3073                          | 170M3123                          | 170M3173               | 170M3223                           | 170M3273                           |                       |          |
|                     |                                     | 1                                     | 690 V a.c. (IEC)<br>700 V a.c. (UL) | 200                    | 1650           | 11,500                | 45                                | 170M4008                          | 170M4058               | 170M4108                           | 170M4158                           | 170M4208              | 170M4258 |
|                     |                                     |                                       |                                     | 250                    | 3100           | 21,000                | 55                                | 170M4009                          | 170M4059               | 170M4109                           | 170M4159                           | 170M4209              | 170M4259 |
| 315                 | 6200                                |                                       |                                     | 42,000                 | 58             | 170M4010              | 170M4060                          | 170M4110                          | 170M4160               | 170M4210                           | 170M4260                           |                       |          |
| 350                 | 8500                                |                                       |                                     | 59,000                 | 60             | 170M4011              | 170M4061                          | 170M4111                          | 170M4161               | 170M4211                           | 170M4261                           |                       |          |
| 400                 | 13,500                              |                                       |                                     | 91,500                 | 65             | 170M4012              | 170M4062                          | 170M4112                          | 170M4162               | 170M4212                           | 170M4262                           |                       |          |
| 450                 | 17,000                              |                                       |                                     | 120,000                | 70             | 170M4013              | 170M4063                          | 170M4113                          | 170M4163               | 170M4213                           | 170M4263                           |                       |          |
| 500                 | 25,000                              |                                       |                                     | 170,000                | 72             | 170M4014              | 170M4064                          | 170M4114                          | 170M4164               | 170M4214                           | 170M4264                           |                       |          |
| 550                 | 34,000                              |                                       |                                     | 230,000                | 75             | 170M4015              | 170M4065                          | 170M4115                          | 170M4165               | 170M4215                           | 170M4265                           |                       |          |
| 630                 | 52,000                              |                                       |                                     | 350,000                | 80             | 170M4016              | 170M4066                          | 170M4116                          | 170M4166               | 170M4216                           | 170M4266                           |                       |          |
| 700                 | 69,500                              |                                       |                                     | 465,000                | 85             | 170M4017              | 170M4067                          | 170M4117                          | 170M4167               | 170M4217                           | 170M4267                           |                       |          |
| 800                 | 105,000                             |                                       |                                     | 725,000                | 95             | 170M4018              | 170M4068                          | 170M4118                          | 170M4168               | 170M4218                           | 170M4268                           |                       |          |
| 550 V a.c. IEC      | 900                                 |                                       |                                     | 155,000                | 850,000        | 100                   | 170M4019 <sup>1</sup>             | 170M4069 <sup>1</sup>             | 170M4119 <sup>1</sup>  | 170M4169 <sup>1</sup>              | 170M4219 <sup>1</sup>              | 170M4269 <sup>1</sup> |          |
| 2                   | 690 V a.c. (IEC)<br>700 V a.c. (UL) |                                       |                                     | 400                    | 11,000         | 74,000                | 65                                | 170M5008                          | 170M5058               | 170M5108                           | 170M5158                           | 170M5208              | 170M5258 |
|                     |                                     |                                       |                                     | 450                    | 15,500         | 105,000               | 70                                | 170M5009                          | 170M5059               | 170M5109                           | 170M5159                           | 170M5209              | 170M5259 |
|                     |                                     | 500                                   | 21,500                              | 145,000                | 75             | 170M5010              | 170M5060                          | 170M5110                          | 170M5160               | 170M5210                           | 170M5260                           |                       |          |
|                     |                                     | 550                                   | 28,000                              | 190,000                | 80             | 170M5011              | 170M5061                          | 170M5111                          | 170M5161               | 170M5211                           | 170M5261                           |                       |          |
|                     |                                     | 630                                   | 41,000                              | 275,000                | 90             | 170M5012              | 170M5062                          | 170M5112                          | 170M5162               | 170M5212                           | 170M5262                           |                       |          |
|                     |                                     | 700                                   | 60,500                              | 405,000                | 95             | 170M5013              | 170M5063                          | 170M5113                          | 170M5163               | 170M5213                           | 170M5263                           |                       |          |
|                     |                                     | 800                                   | 86,000                              | 575,000                | 105            | 170M5014              | 170M5064                          | 170M5114                          | 170M5164               | 170M5214                           | 170M5264                           |                       |          |
|                     |                                     | 900                                   | 125,000                             | 840,000                | 110            | 170M5015              | 170M5065                          | 170M5115                          | 170M5165               | 170M5215                           | 170M5265                           |                       |          |
|                     |                                     | 1000                                  | 180,000                             | 1,250,000              | 115            | 170M5016              | 170M5066                          | 170M5116                          | 170M5166               | 170M5216                           | 170M5266                           |                       |          |
|                     |                                     | 600 V a.c. (IEC) / 700 V a.c. UL      | 1100                                | 245,000                | 1,600,000      | 120                   | 170M5017                          | 170M5067                          | 170M5117               | 170M5167                           | 170M5217                           | 170M5267              |          |
|                     |                                     | 1250                                  | 365,000                             | 2,400,000              | 130            | 170M5018              | 170M5068                          | 170M5118                          | 170M5168               | 170M5218                           | 170M5268                           |                       |          |
| 3                   | 690 V a.c. (IEC)<br>700 V a.c. (UL) | 500                                   | 14,000                              | 95,000                 | 95             | 170M6008              | 170M6058                          | 170M6108                          | 170M6158               | 170M6208                           | 170M6258                           |                       |          |
|                     |                                     | 550                                   | 19,500                              | 135,000                | 100            | 170M6009              | 170M6059                          | 170M6109                          | 170M6159               | 170M6209                           | 170M6259                           |                       |          |
|                     |                                     | 630                                   | 31,000                              | 210,000                | 105            | 170M6010              | 170M6060                          | 170M6110                          | 170M6160               | 170M6210                           | 170M6260                           |                       |          |
|                     |                                     | 700                                   | 44,500                              | 300,000                | 110            | 170M6011              | 170M6061                          | 170M6111                          | 170M6161               | 170M6211                           | 170M6261                           |                       |          |
|                     |                                     | 800                                   | 69,500                              | 465,000                | 115            | 170M6012              | 170M6062                          | 170M6112                          | 170M6162               | 170M6212                           | 170M6262                           |                       |          |
|                     |                                     | 900                                   | 100,000                             | 670,000                | 120            | 170M6013              | 170M6063                          | 170M6113                          | 170M6163               | 170M6213                           | 170M6263                           |                       |          |
|                     |                                     | 1000                                  | 140,000                             | 945,000                | 125            | 170M6014              | 170M6064                          | 170M6114                          | 170M6164               | 170M6214                           | 170M6264                           |                       |          |
|                     |                                     | 1100                                  | 190,000                             | 1,300,000              | 130            | 170M6015              | 170M6065                          | 170M6115                          | 170M6165               | 170M6215                           | 170M6265                           |                       |          |
|                     |                                     | 1250                                  | 290,000                             | 1,950,000              | 140            | 170M6016              | 170M6066                          | 170M6116                          | 170M6166               | 170M6216                           | 170M6266                           |                       |          |
|                     |                                     | 1400                                  | 370,000                             | 2,450,000              | 155            | 170M6017              | 170M6067                          | 170M6117                          | 170M6167               | 170M6217                           | 170M6267                           |                       |          |
|                     |                                     | 1500                                  | 460,000                             | 3,100,000              | 160            | 170M6018              | 170M6068                          | 170M6118                          | 170M6168               | 170M6218                           | 170M6268                           |                       |          |
|                     |                                     | 1600                                  | 580,000                             | 3,900,000              | 160            | 170M6019              | 170M6069                          | 170M6119                          | 170M6169               | 170M6219                           | 170M6269                           |                       |          |
|                     |                                     | 600 V a.c. IEC / 550 V a.c. UL        | 1800                                | 880,000                | 5,250,000      | 165                   | 170M6020 <sup>2</sup>             | 170M6070 <sup>2</sup>             | 170M6120               | 170M6170 <sup>2</sup>              | 170M6220 <sup>2</sup>              | 170M6270              |          |
|                     |                                     | 550 V a.c. IEC/UL                     | 2000                                | 1,150,000              | 6,350,000      | 175                   | 170M6021                          | 170M6071                          | 170M6121               | 170M6171                           | 170M6221                           | 170M6271              |          |

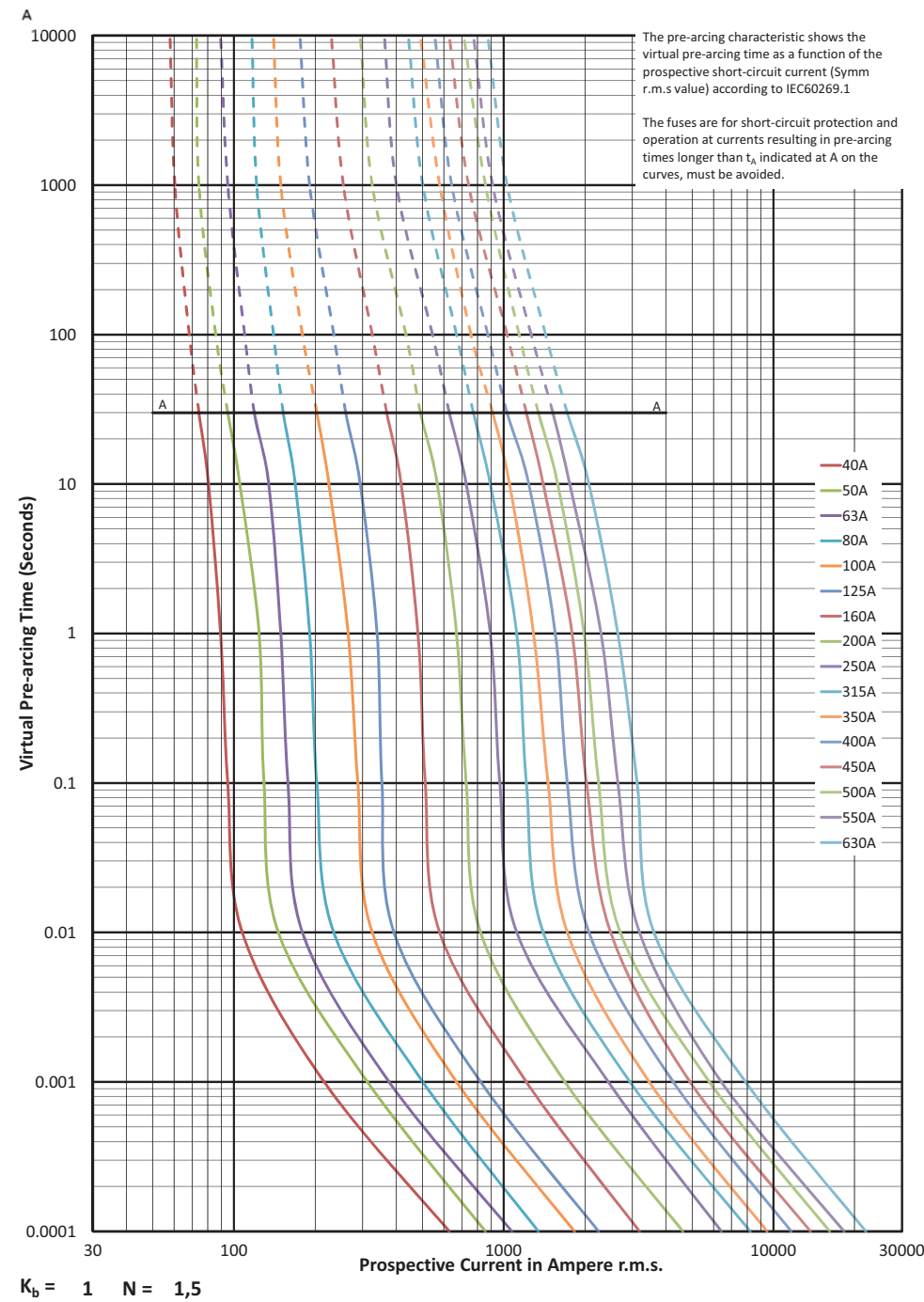
Data sheets: 170K6314 (Size 1\*), 170K6316 (Size 1), 170K6318 (Size 2), 170K6320 (Size 3)

<sup>1</sup> Not UL Approved IEC<sup>2</sup> Rated at 750 V d.c. 12XIn 130 kA when two fuses connected in series

# Square body fuse links

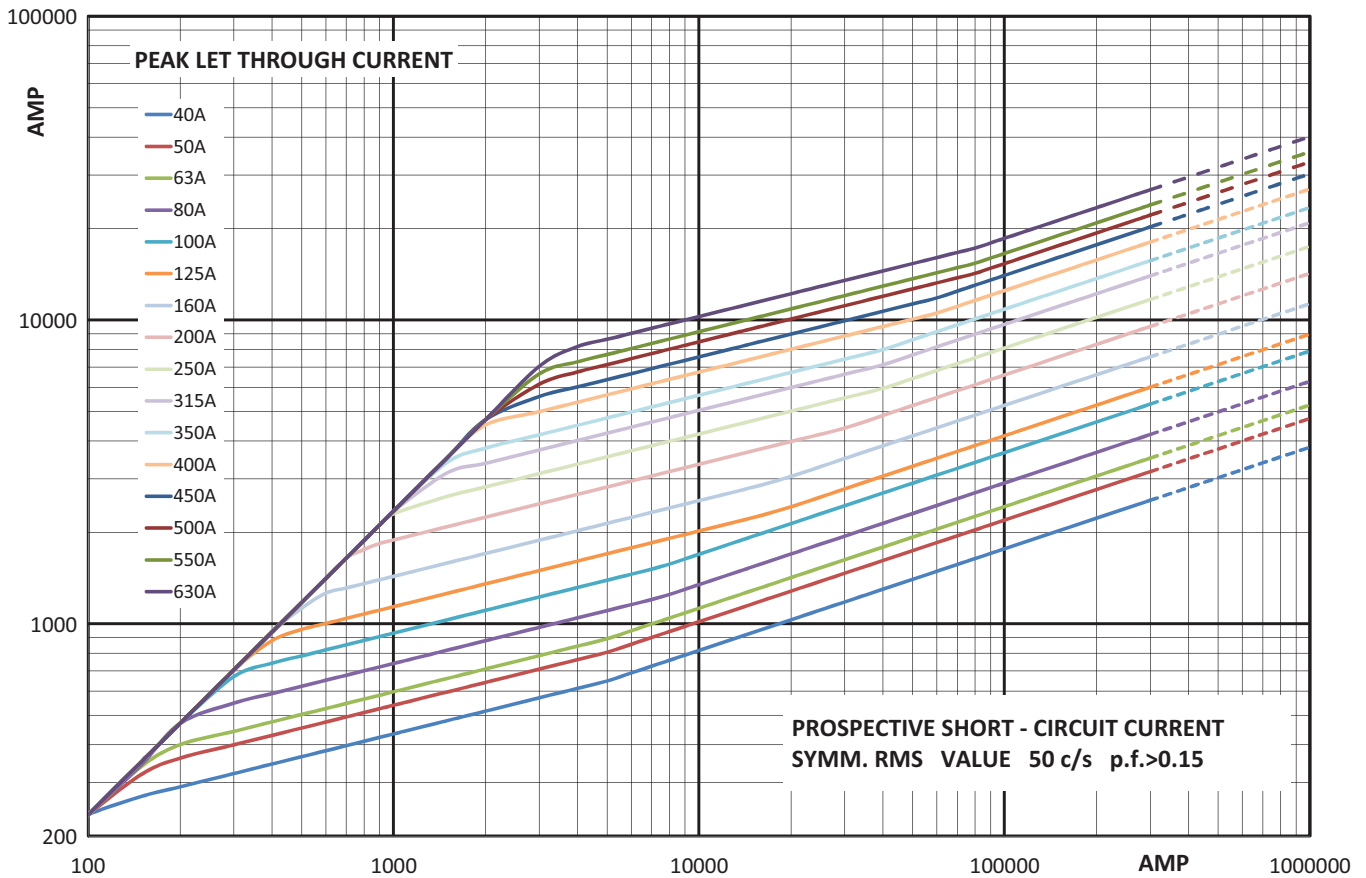
**170M** - Sizes 1\* to 3, DIN 43653, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

Time-current curve - Size 1\*, 40 A to 630 A



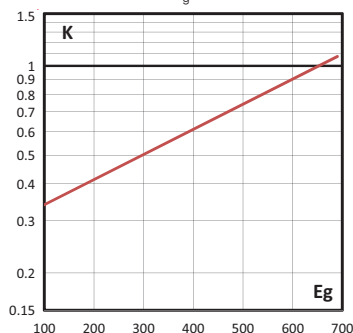
# 170M - Sizes 1\* to 3, DIN 43653, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

## Cut-off curve - Size 1\*, 40 A to 630 A



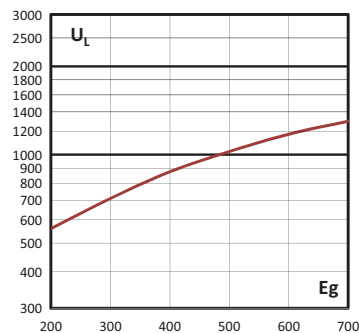
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



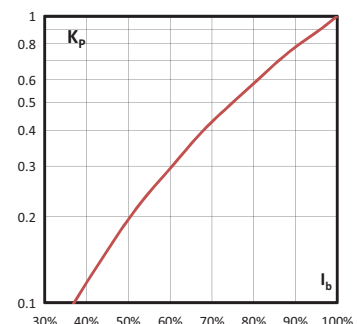
## Arc voltage

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 percent.



## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.

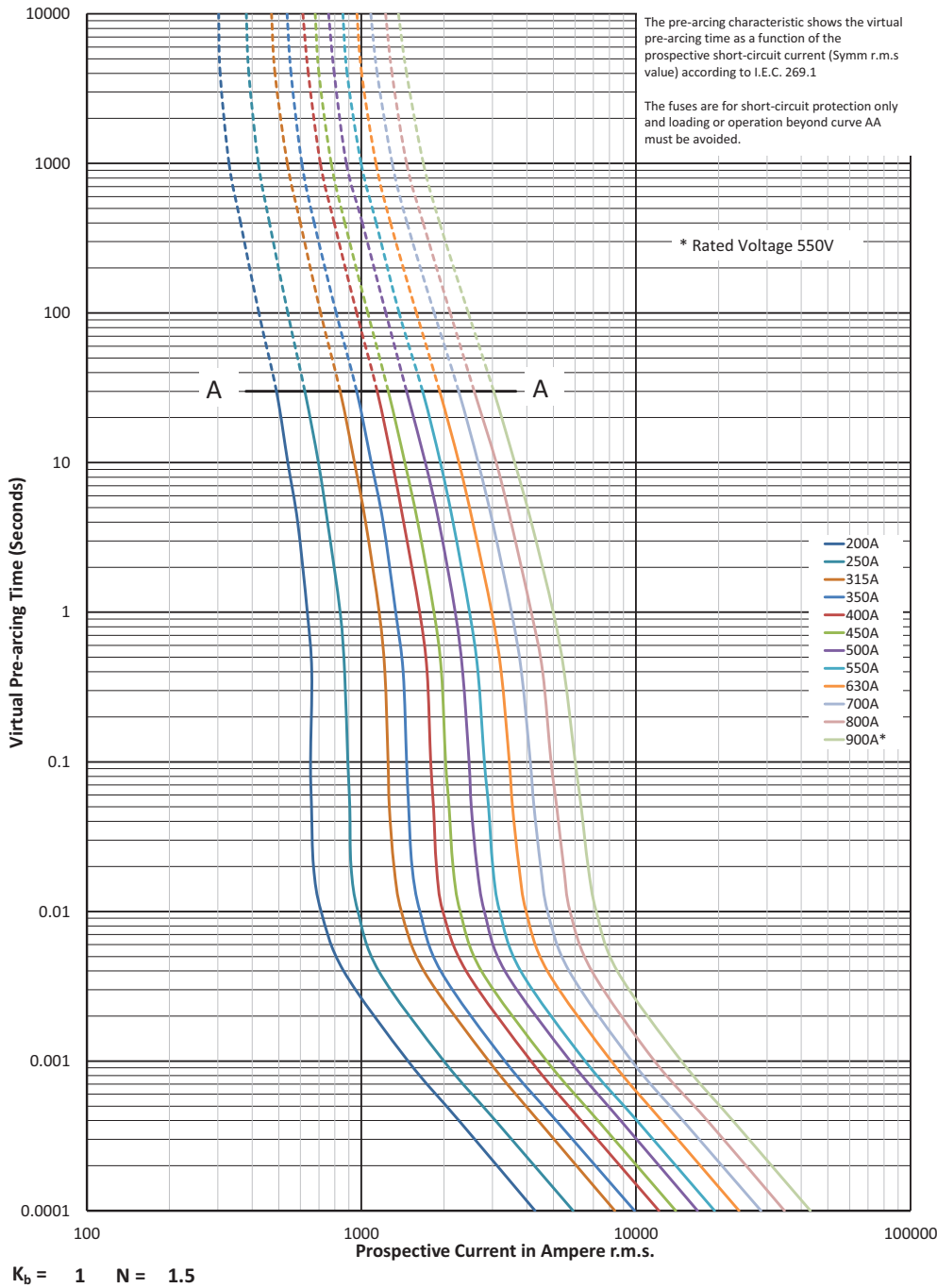




# Square body fuse links

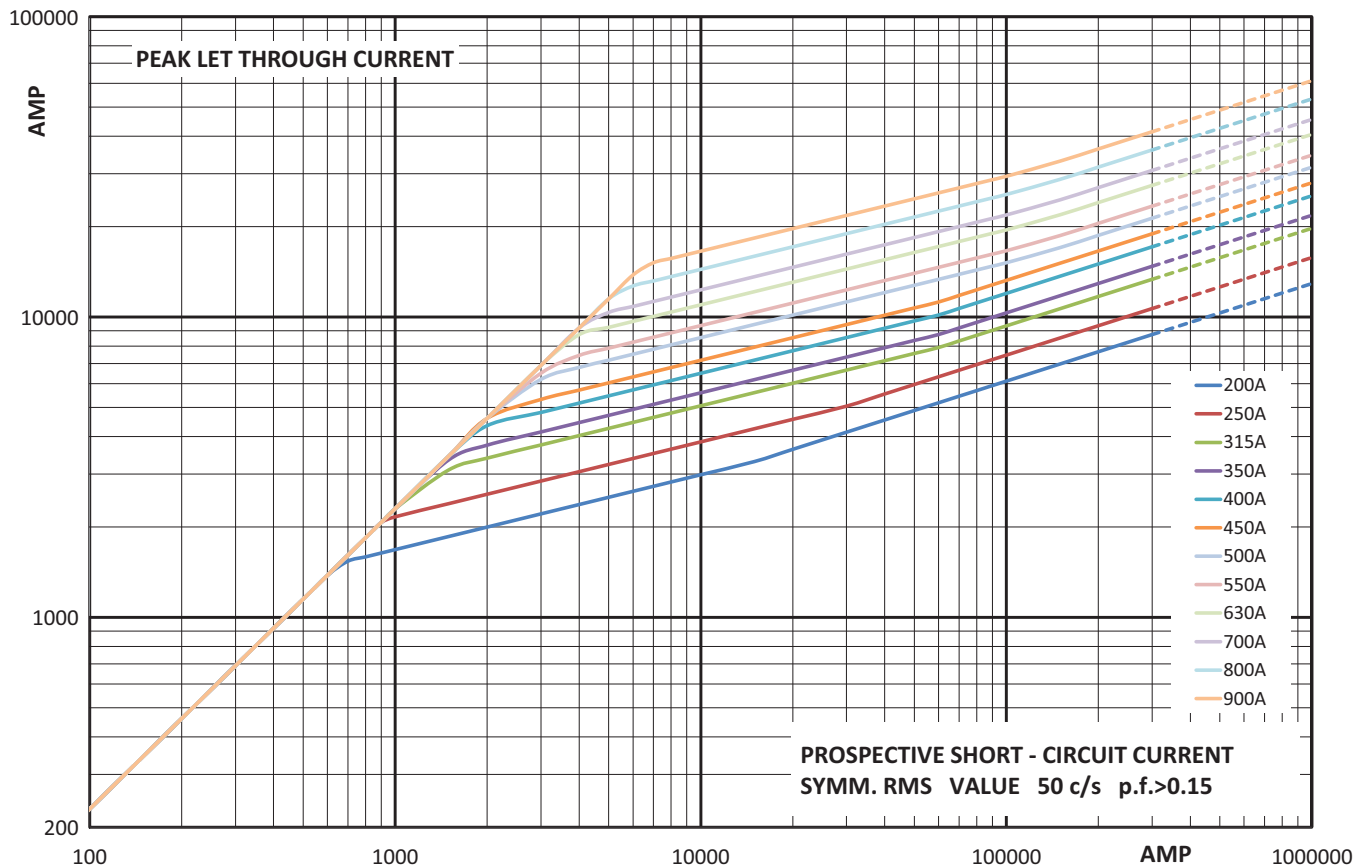
**170M** - Sizes 1\* to 3, DIN 43653, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

Time-current curve - Size 1, 200 A to 900 A



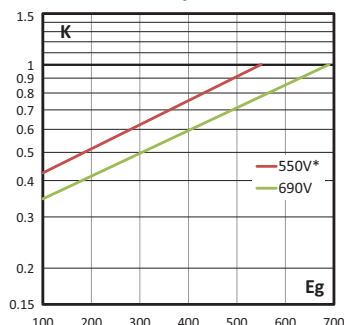
# 170M - Sizes 1\* to 3, DIN 43653, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

## Cut-off curve - Size 1, 200 A to 900 A



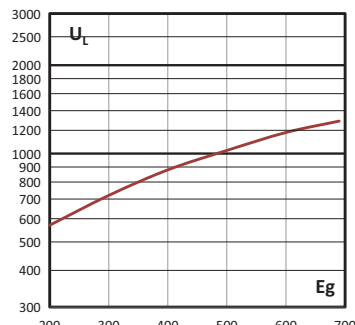
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



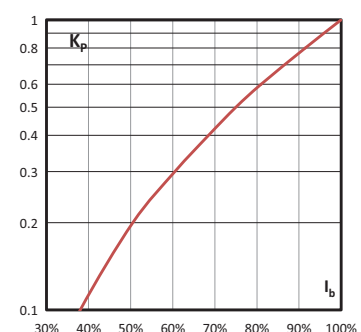
## Arc voltage

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 percent.



## Watts losses

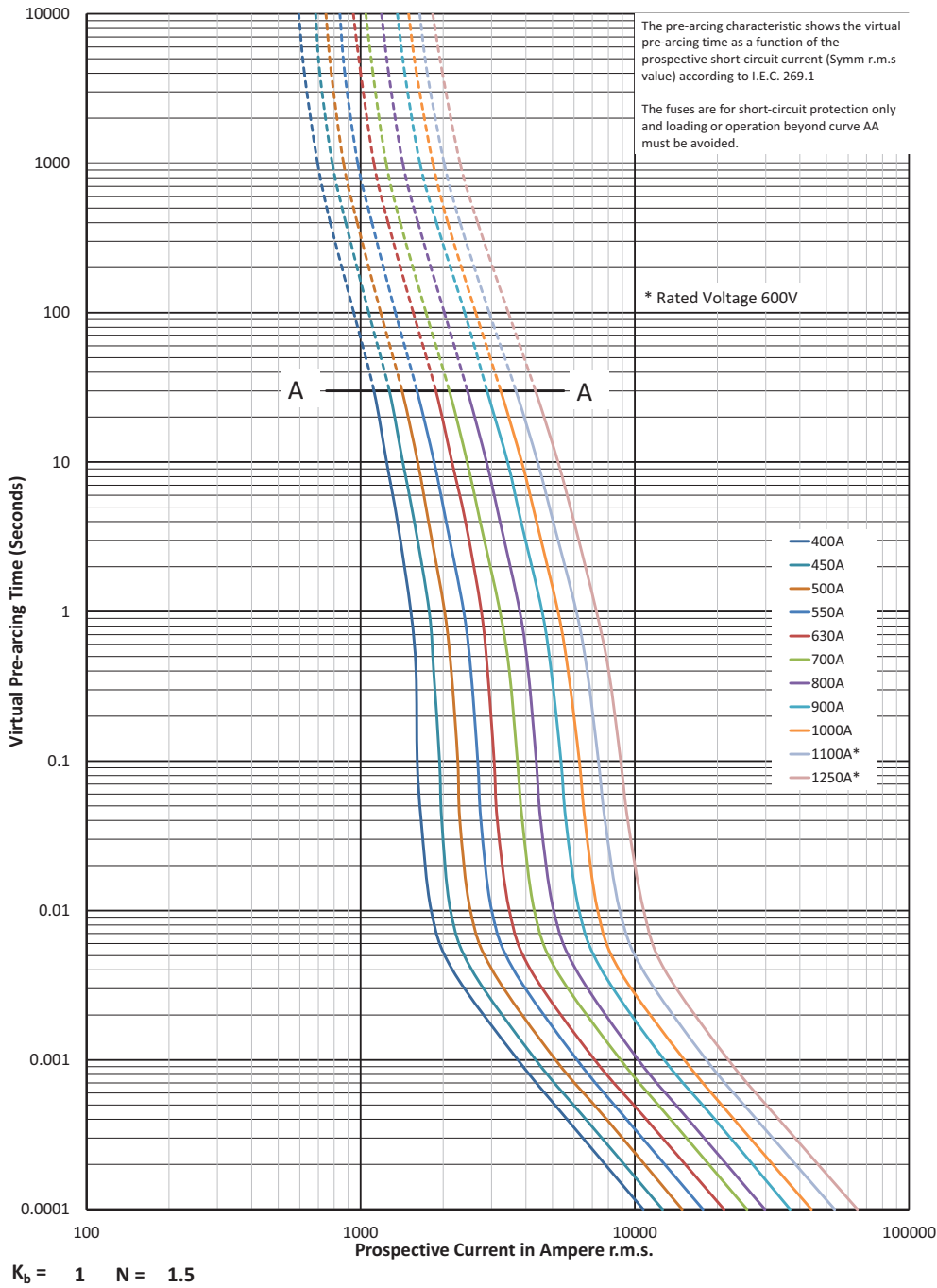
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor,  $K_p$ , is given as a function of the RMS load current,  $I_b$ , in percent of the rated current.



Square body fuse links

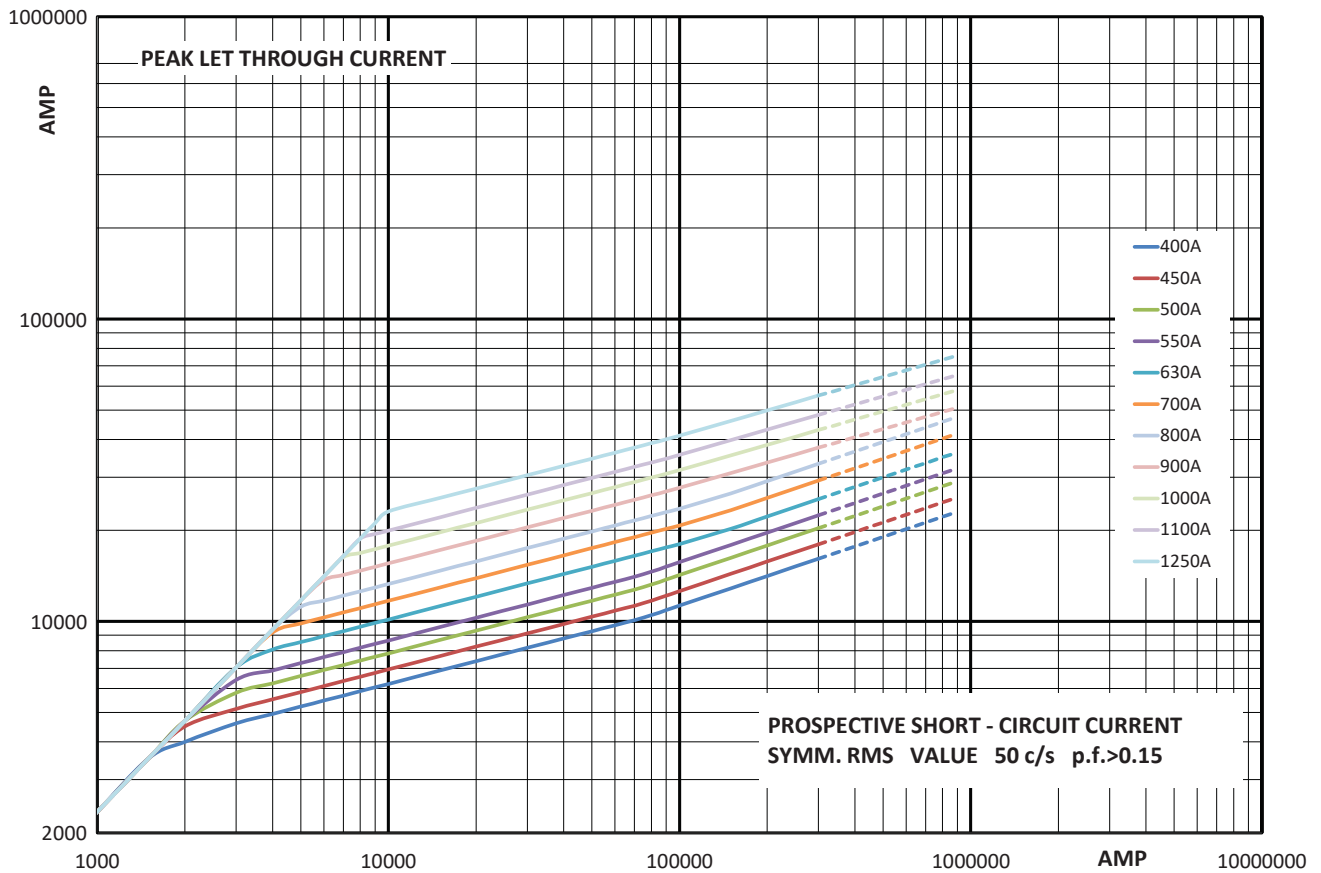
170M - Sizes 1\* to 3, DIN 43653, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

Time-current curve - Size 2, 400 A to 1250 A



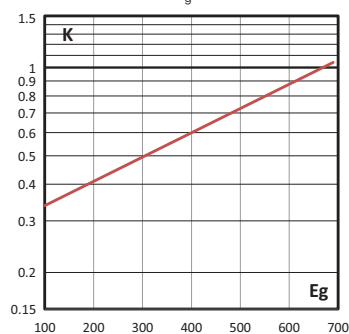
# 170M - Sizes 1\* to 3, DIN 43653, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

## Cut-off curve - Size 2, 400 A to 1250 A



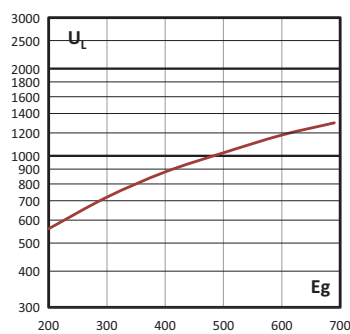
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



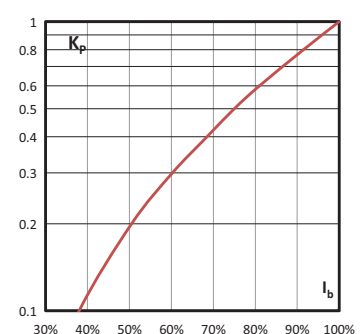
## Arc voltage

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 percent.



## Watts losses

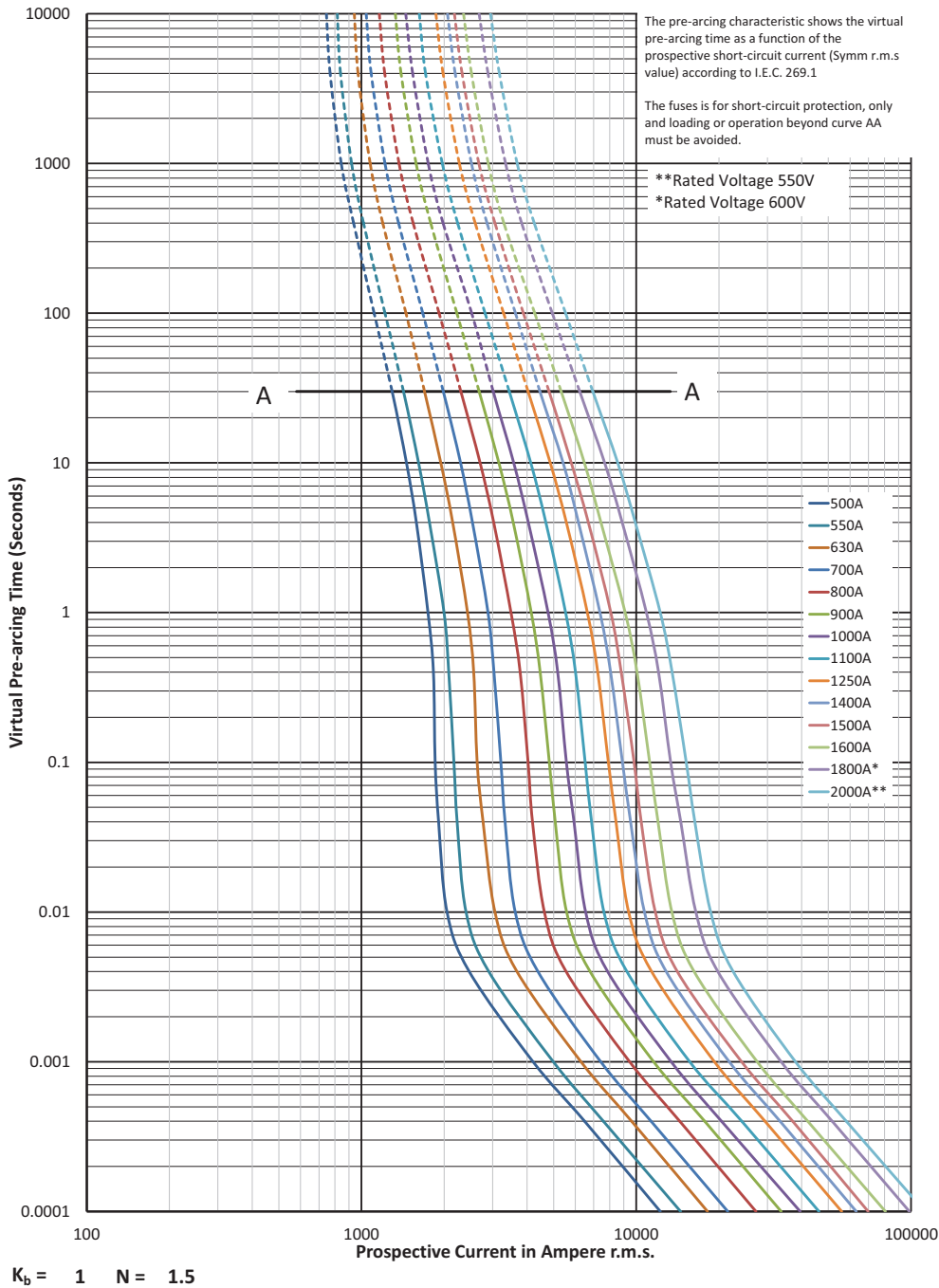
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor,  $K_p$ , is given as a function of the RMS load current,  $I_b$ , in percent of the rated current.



# Square body fuse links

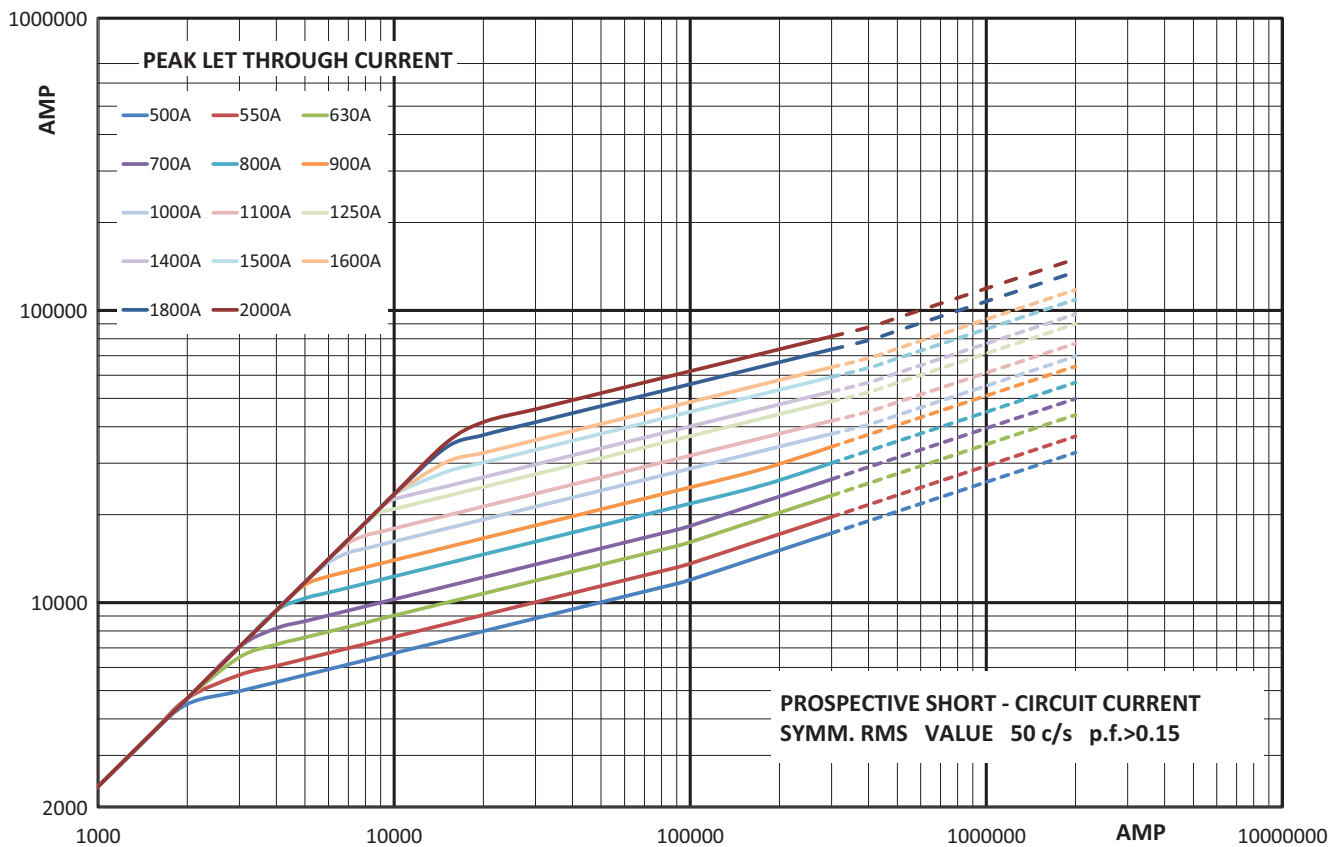
**170M** - Sizes 1\* to 3, DIN 43653, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

Time-current curve -Size 3, 500 A to 2000 A



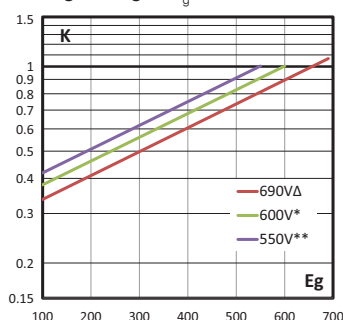
# 170M - Sizes 1\* to 3, DIN 43653, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

## Cut-off curve - Size 3, 500 A to 2000 A



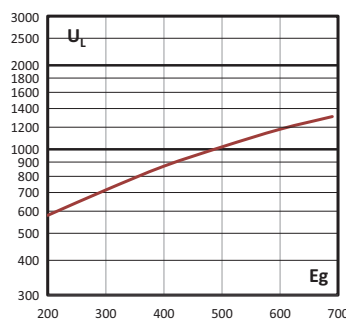
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



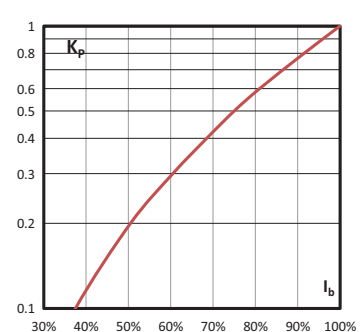
## Arc voltage

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 percent.



## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



# Square body fuse links

## 170M - Size 00, DIN 43653, 1000 V a.c. (IEC and UL), 20 A to 315A

### Specifications

#### Description

Square body DIN 43653 bolted tags high speed fuse links, for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

#### Technical data

- Rated voltage:
  - 1000 V a.c. (IEC and UL 20 A to 250 A)
  - 900 V a.c. (IEC, 315 A)
- Rated current: 20 A to 315 A
- Breaking capacity: 125 kA RMS Sym
- Operating class: aR

#### Standards / Agency information

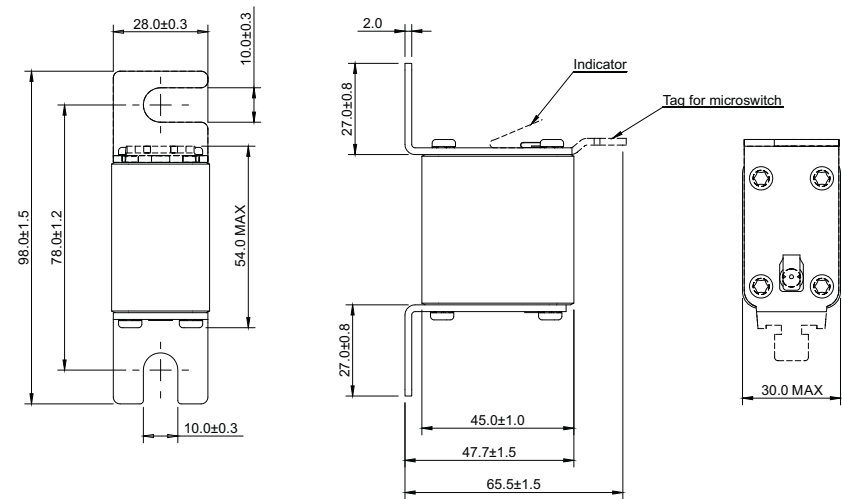
CE, Designed and tested to IEC60269 Part 4, UL Recognised/CSA component acceptance status (20-250 A)



#### Catalogue numbers

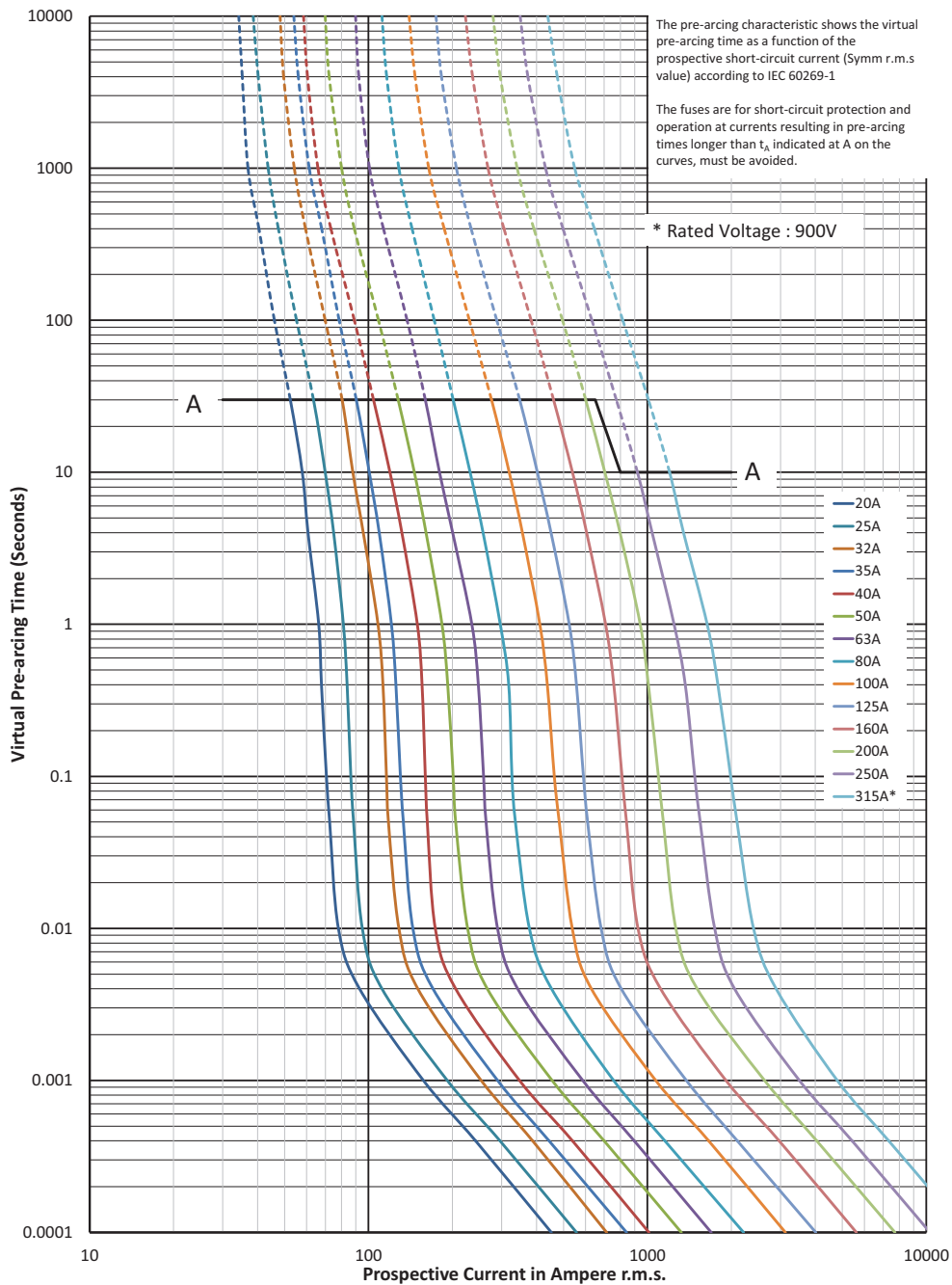
| Fuse link body size | Rated voltage        | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                           |                | Catalogue numbers      |                                    |
|---------------------|----------------------|----------------------|---------------------------------------|---------------------------|----------------|------------------------|------------------------------------|
|                     |                      |                      | Pre-arcing                            | Clearing at rated voltage | Watts loss (W) | 00/80 Visual indicator | 00TN/80 Type T indicator for micro |
| 00                  | 1000 V a.c. (IEC/UL) | 20                   | 20                                    | 140                       | 5              | 170M4802               | 170M4822                           |
|                     |                      | 25                   | 30                                    | 210                       | 7              | 170M4803               | 170M4823                           |
|                     |                      | 32                   | 55                                    | 390                       | 9              | 170M4804               | 170M4824                           |
|                     |                      | 35                   | 69                                    | 500                       | 10             | 170M4805               | 170M4825                           |
|                     |                      | 40                   | 100                                   | 690                       | 11             | 170M4806               | 170M4826                           |
|                     |                      | 50                   | 170                                   | 1200                      | 13             | 170M4807               | 170M4827                           |
|                     |                      | 63                   | 280                                   | 2000                      | 18             | 170M4808               | 170M4828                           |
|                     |                      | 80                   | 500                                   | 3500                      | 22             | 170M4809               | 170M4829                           |
|                     |                      | 100                  | 950                                   | 6850                      | 25             | 170M4810               | 170M4830                           |
|                     |                      | 125                  | 1500                                  | 11,500                    | 33             | 170M4811               | 170M4831                           |
|                     |                      | 160                  | 3000                                  | 22,000                    | 37             | 170M4812               | 170M4832                           |
|                     |                      | 200                  | 5600                                  | 40,500                    | 40             | 170M4813               | 170M4833                           |
|                     |                      | 250                  | 10,000                                | 74,000                    | 48             | 170M4814               | 170M4834                           |
|                     |                      | 315                  | 18,000                                | 115,000                   | 58             | 170M4815               | 170M4835                           |
|                     | 900 V a.c. (IEC)     | 315                  |                                       |                           |                |                        |                                    |

#### Dimensions (mm)



# 170M - Size 00, DIN 43653, 1000 V a.c. (IEC and UL), 20 A to 315A

## Time-current curve - 20 A to 315 A



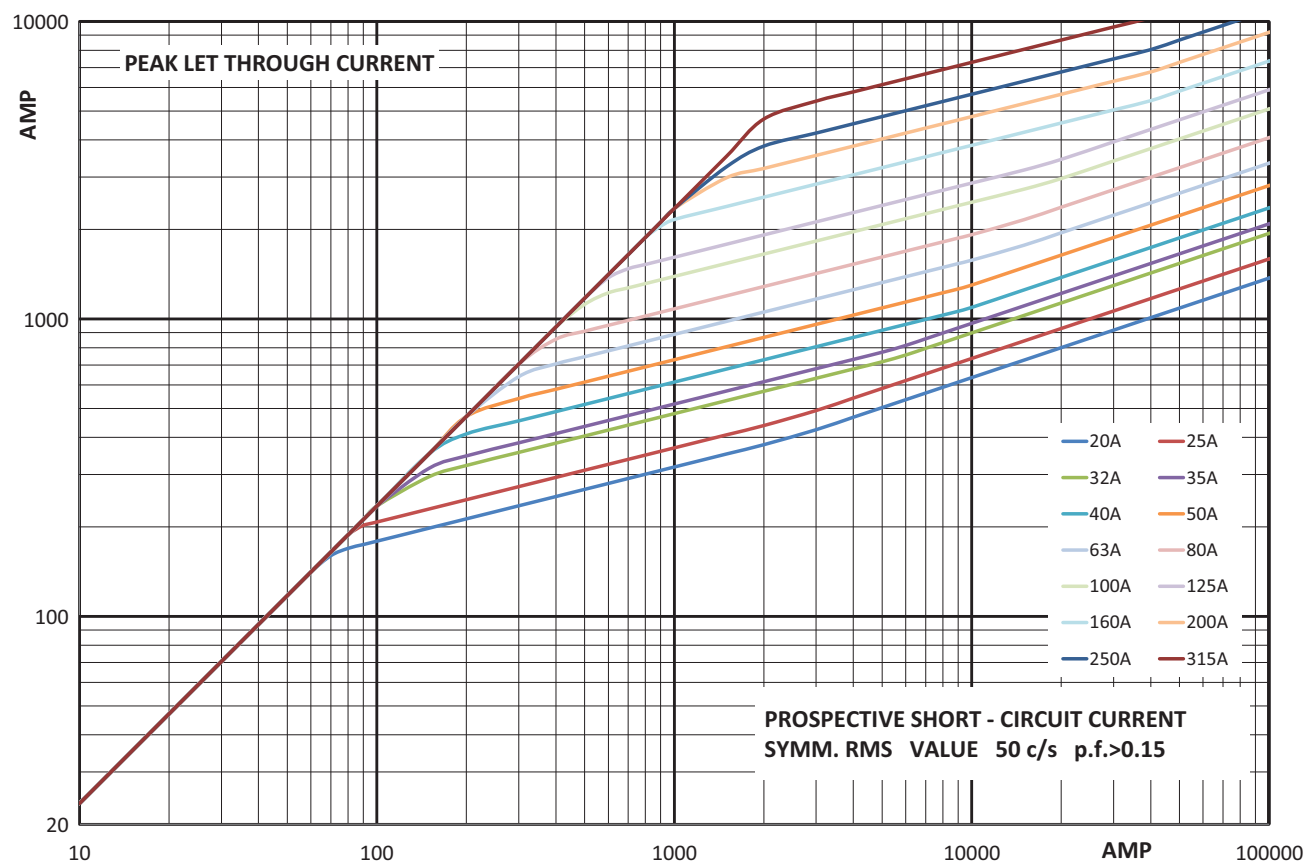
$K_b = 1$   $N = 1.6$



Square body fuse links

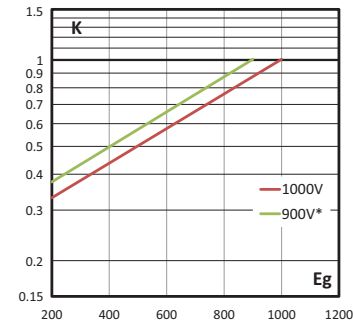
170M - Size 00, DIN 43653, 1000 V a.c. (IEC and UL), 20 A to 315A

Cut-off curve - 20 A to 315 A



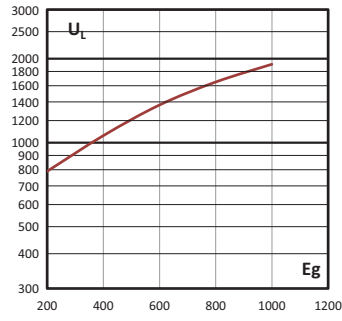
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



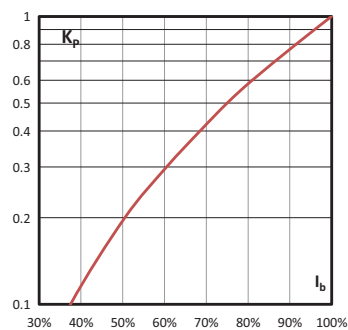
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



## 170M - Sizes 1\* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

### Specifications

#### Description

Square body DIN 43653 bolted tags high speed fuse links, for the protection of DC common bus, DC drives, power converters / rectifiers and reduced rated voltage starters.

#### Technical data

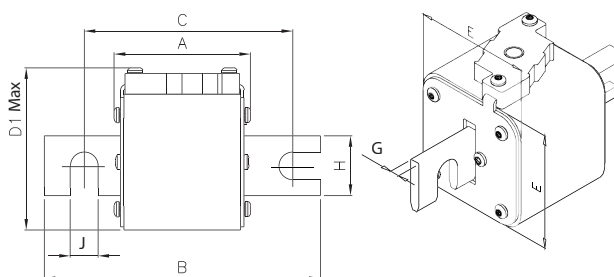
- Rated voltage:
  - 1000 V a.c. (IEC, 50 A to 1250 A), 900 V a.c. (IEC, 1400 A)
  - 1000 V a.c. (UL size 2, size 3, 315 A to 1100 A only)
- Rated current: 50 A to 1400 A
- Breaking Capacity:
  - 125kA RMS Sym. AC
  - Size 1: 50 kA for 750 V d.c.
- Operating Class: aR

#### Standards/Agency Information

CE, Designed and tested to IEC60269 Part 4, UL Recognised (only sizes 2 and 3), CCC only size 3 (315 A to 1100 A)

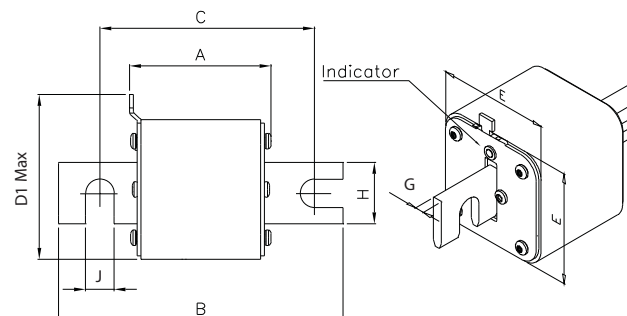


#### Dimensions (mm) -KN/110



| Size     | A  | B   | C   | D1 (max) | E  | G | H  | J  |
|----------|----|-----|-----|----------|----|---|----|----|
| 1*KN/110 | 80 | 138 | 108 | 61       | 43 | 6 | 22 | 11 |
| 1KN/110  | 80 | 138 | 108 | 69       | 51 | 6 | 25 | 11 |
| 2KN/110  | 80 | 138 | 108 | 77       | 59 | 6 | 25 | 11 |
| 3KN/110  | 81 | 139 | 108 | 92       | 74 | 6 | 30 | 11 |

#### Dimensions (mm) -TN/110



| Size     | A  | B   | C   | D1 (max) | E  | G | H  | J  |
|----------|----|-----|-----|----------|----|---|----|----|
| 1*TN/110 | 80 | 138 | 108 | 61       | 43 | 6 | 22 | 11 |
| 1TN/110  | 80 | 138 | 108 | 69       | 51 | 6 | 25 | 11 |
| 2TN/110  | 80 | 138 | 108 | 75       | 59 | 6 | 25 | 11 |
| 3TN/110  | 81 | 139 | 108 | 90       | 74 | 6 | 30 | 11 |

# Square body fuse links

## 170M - Sizes 1\* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

### Catalogue numbers

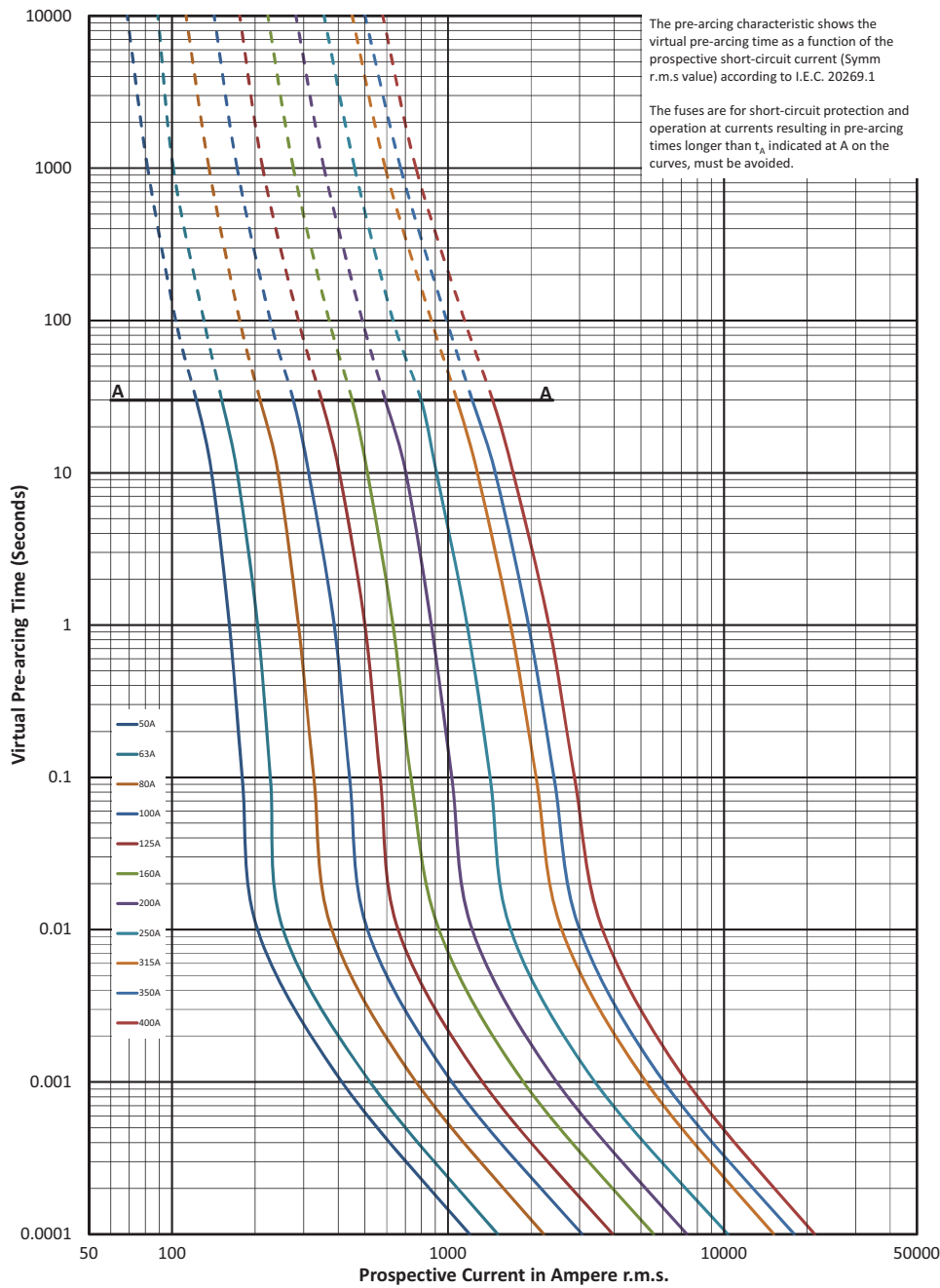
| Fuse link<br>body size | Rated voltage                 | I <sup>2</sup> t (A <sup>2</sup> Sec) |            |                              |                   | Catalogue numbers                        |                                          |
|------------------------|-------------------------------|---------------------------------------|------------|------------------------------|-------------------|------------------------------------------|------------------------------------------|
|                        |                               | Rated current<br>(Amps)               | Pre-arcing | Clearing<br>at rated voltage | Watts loss<br>(W) | -KN/110 Type K<br>indicator for<br>micro | -TN/110 Type T<br>indicator for<br>micro |
| 1*                     | 1000 V a.c. (IEC)             | 50                                    | 135        | 815                          | 20                | 170M3965                                 | 170M3981                                 |
|                        |                               | 63                                    | 215        | 1300                         | 25                | 170M3966                                 | 170M3982                                 |
|                        |                               | 80                                    | 460        | 2750                         | 30                | 170M3967                                 | 170M3983                                 |
|                        |                               | 100                                   | 860        | 5100                         | 35                | 170M3968                                 | 170M3984                                 |
|                        |                               | 125                                   | 1450       | 8600                         | 40                | 170M3969                                 | 170M3985                                 |
|                        |                               | 160                                   | 2850       | 17,500                       | 45                | 170M3970                                 | 170M3986                                 |
|                        |                               | 200                                   | 4950       | 29,500                       | 50                | 170M3971                                 | 170M3987                                 |
|                        |                               | 250                                   | 9550       | 57,000                       | 55                | 170M3972                                 | 170M3988                                 |
|                        |                               | 315                                   | 21,500     | 130,000                      | 65                | 170M3973                                 | 170M3989                                 |
|                        |                               | 350                                   | 29,000     | 175,000                      | 70                | 170M3974                                 | 170M3990                                 |
|                        |                               | 400                                   | 42,000     | 250,000                      | 75                | 170M3975                                 | 170M3991                                 |
| 1                      | 1000 V a.c. (IEC)             | 160                                   | 2200       | 13,500                       | 40                | 170M4965                                 | 170M4980                                 |
|                        |                               | 200                                   | 4150       | 24,500                       | 45                | 170M4966                                 | 170M4981                                 |
|                        |                               | 250                                   | 7750       | 46,000                       | 52                | 170M4967                                 | 170M4982                                 |
|                        |                               | 315                                   | 16,500     | 98,500                       | 60                | 170M4968                                 | 170M4983                                 |
|                        |                               | 350                                   | 21,500     | 130,000                      | 65                | 170M4969                                 | 170M4984                                 |
|                        | 1000 V a.c. / 750 V d.c. (UL) | 400                                   | 31,000     | 185,000                      | 70                | 170M4970                                 | 170M4985                                 |
|                        |                               | 450                                   | 44,500     | 265,000                      | 80                | 170M4971                                 | 170M4986                                 |
|                        |                               | 500                                   | 63,000     | 375,000                      | 85                | 170M4972                                 | 170M4987                                 |
|                        |                               | 550                                   | 84,500     | 500,000                      | 90                | 170M4973                                 | 170M4988                                 |
|                        |                               | 630                                   | 125,000    | 755,000                      | 98                | 170M4974                                 | 170M4989                                 |
| 2                      | 1000 V a.c. (IEC and UL)      | 250                                   | 6750       | 40,000                       | 65                | 170M5966                                 | 170M5981                                 |
|                        |                               | 315                                   | 13,500     | 81,500                       | 75                | 170M5967                                 | 170M5982                                 |
|                        |                               | 350                                   | 16,500     | 99,000                       | 80                | 170M5968                                 | 170M5983                                 |
|                        |                               | 400                                   | 26,000     | 155,000                      | 85                | 170M5969                                 | 170M5984                                 |
|                        |                               | 450                                   | 35,500     | 210,000                      | 90                | 170M5970                                 | 170M5985                                 |
|                        |                               | 500                                   | 49,500     | 295,000                      | 95                | 170M5971                                 | 170M5986                                 |
|                        |                               | 550                                   | 66,000     | 390,000                      | 100               | 170M5972                                 | 170M5987                                 |
|                        |                               | 630                                   | 93,500     | 555,000                      | 110               | 170M5973                                 | 170M5988                                 |
|                        |                               | 700                                   | 130,000    | 770,000                      | 115               | 170M5974                                 | 170M5989                                 |
|                        |                               | 800                                   | 195,000    | 1,200,000                    | 125               | 170M5975                                 | 170M5990                                 |
| 3                      | 1000 V a.c. (IEC and UL)      | 315                                   | 9200       | 54,500                       | 90                | 170M8614                                 | 170M8629 <sup>1</sup>                    |
|                        |                               | 350                                   | 13,000     | 77,500                       | 95                | 170M8615                                 | 170M8630 <sup>1</sup>                    |
|                        |                               | 400                                   | 19,000     | 115,000                      | 105               | 170M8616                                 | 170M8631 <sup>1</sup>                    |
|                        |                               | 450                                   | 27,000     | 160,000                      | 107               | 170M8617                                 | 170M8632 <sup>1</sup>                    |
|                        |                               | 500                                   | 37,500     | 225,000                      | 110               | 170M8618                                 | 170M8633 <sup>1</sup>                    |
|                        |                               | 550                                   | 52,000     | 310,000                      | 115               | 170M8619                                 | 170M8634 <sup>1</sup>                    |
|                        |                               | 630                                   | 82,500     | 490,000                      | 120               | 170M8620                                 | 170M8635 <sup>1</sup>                    |
|                        |                               | 700                                   | 115,000    | 700,000                      | 125               | 170M8621                                 | 170M8636 <sup>1</sup>                    |
|                        |                               | 800                                   | 170,000    | 1,050,000                    | 135               | 170M8622                                 | 170M8637 <sup>1</sup>                    |
|                        |                               | 900                                   | 250,000    | 1,500,000                    | 145               | 170M8623                                 | 170M8638 <sup>1</sup>                    |
|                        |                               | 1000                                  | 340,000    | 2,050,000                    | 150               | 170M8624                                 | 170M8639 <sup>1</sup>                    |
|                        |                               | 1100                                  | 460,000    | 2,750,000                    | 155               | 170M8625                                 | 170M8640 <sup>1</sup>                    |
|                        | 1000 V a.c. (IEC)             | 1250                                  | 575,000    | 3,400,000                    | 175               | 170M8626                                 | 170M8641                                 |
|                        | 900 V a.c. (IEC)              | 1400                                  | 795,000    | 4,200,000                    | 185               | 170M8627                                 | 170M8642                                 |

<sup>1</sup> Rated at 900 V d.c. 8XIn 90 kA

Data sheets: 170K8564 (Size 1\*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

# 170M - Sizes 1\* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

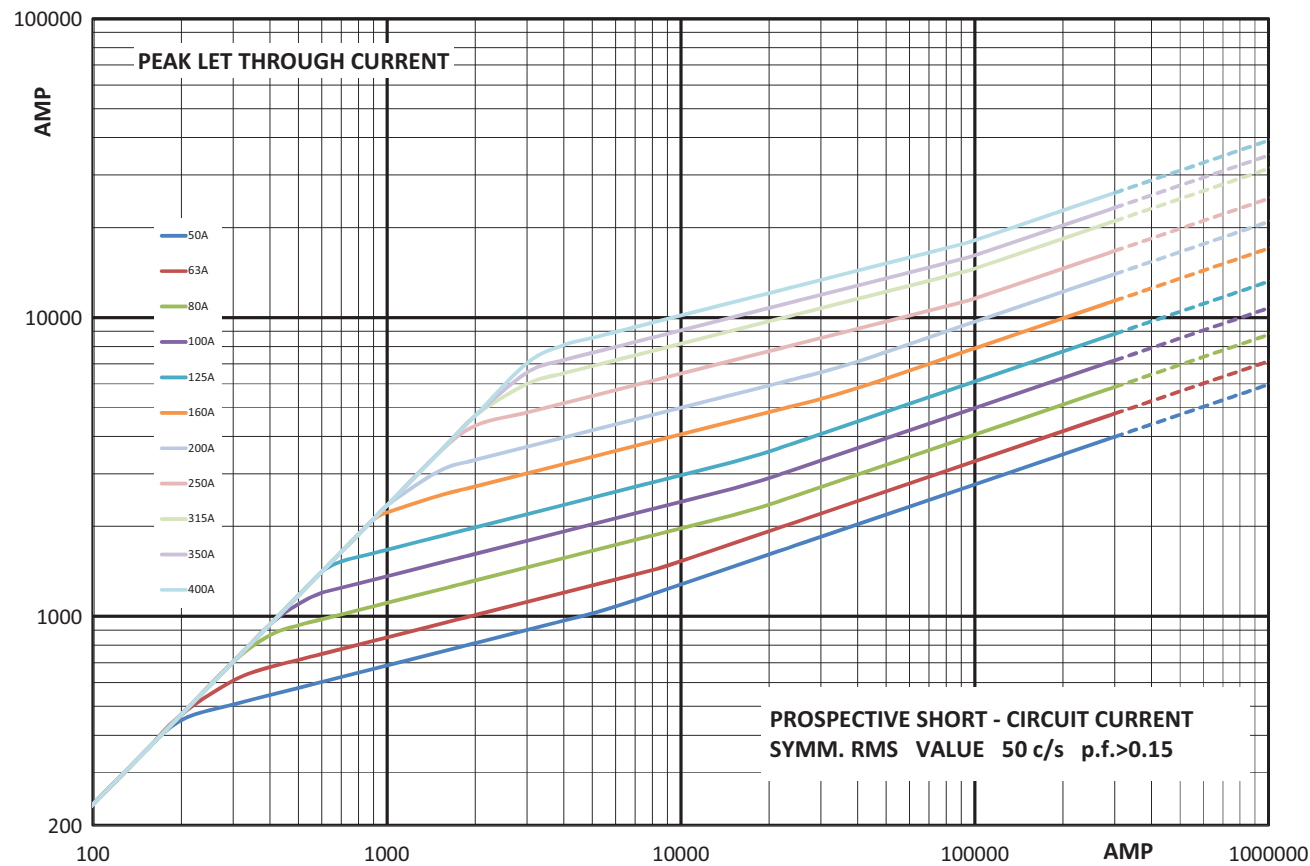
## Time-current curve - Size 1\* - 50 A to 400 A



# Square body fuse links

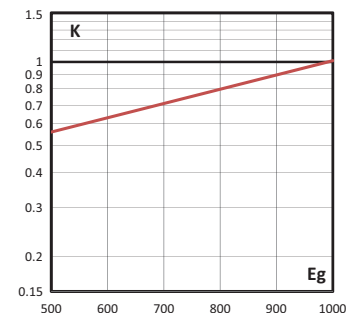
## 170M - Sizes 1\* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

### Cut-off curve - Size 1\*, 50 A to 400 A



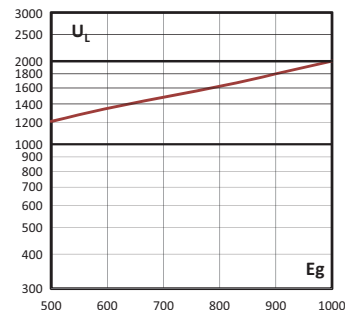
### Total clearing I²t

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



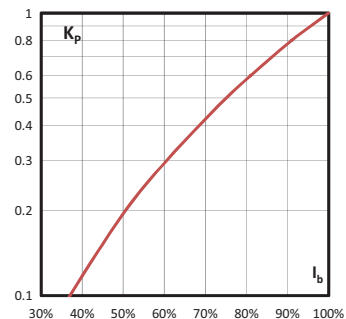
### Arc voltage

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 percent.



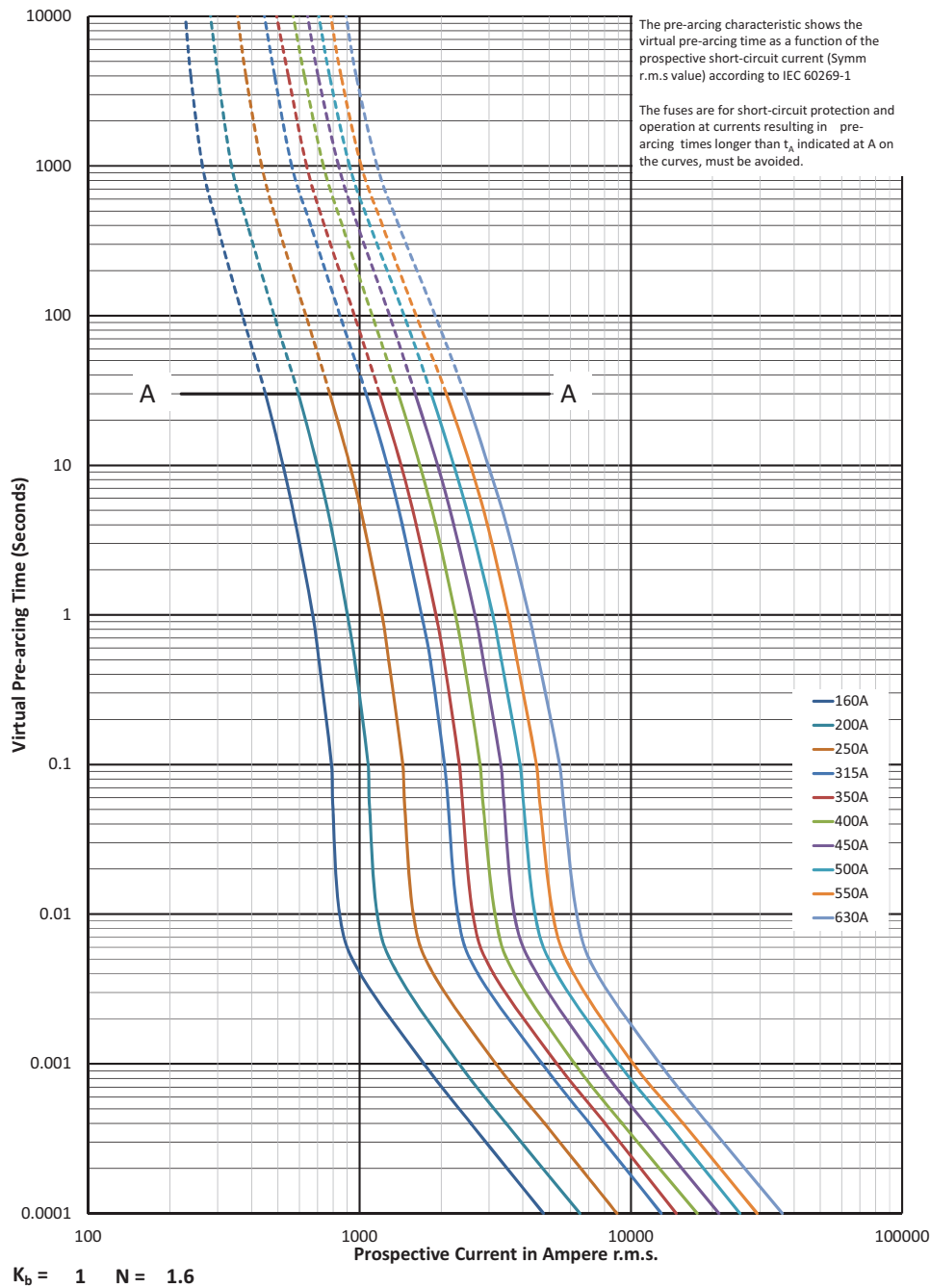
### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



# 170M - Sizes 1\* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

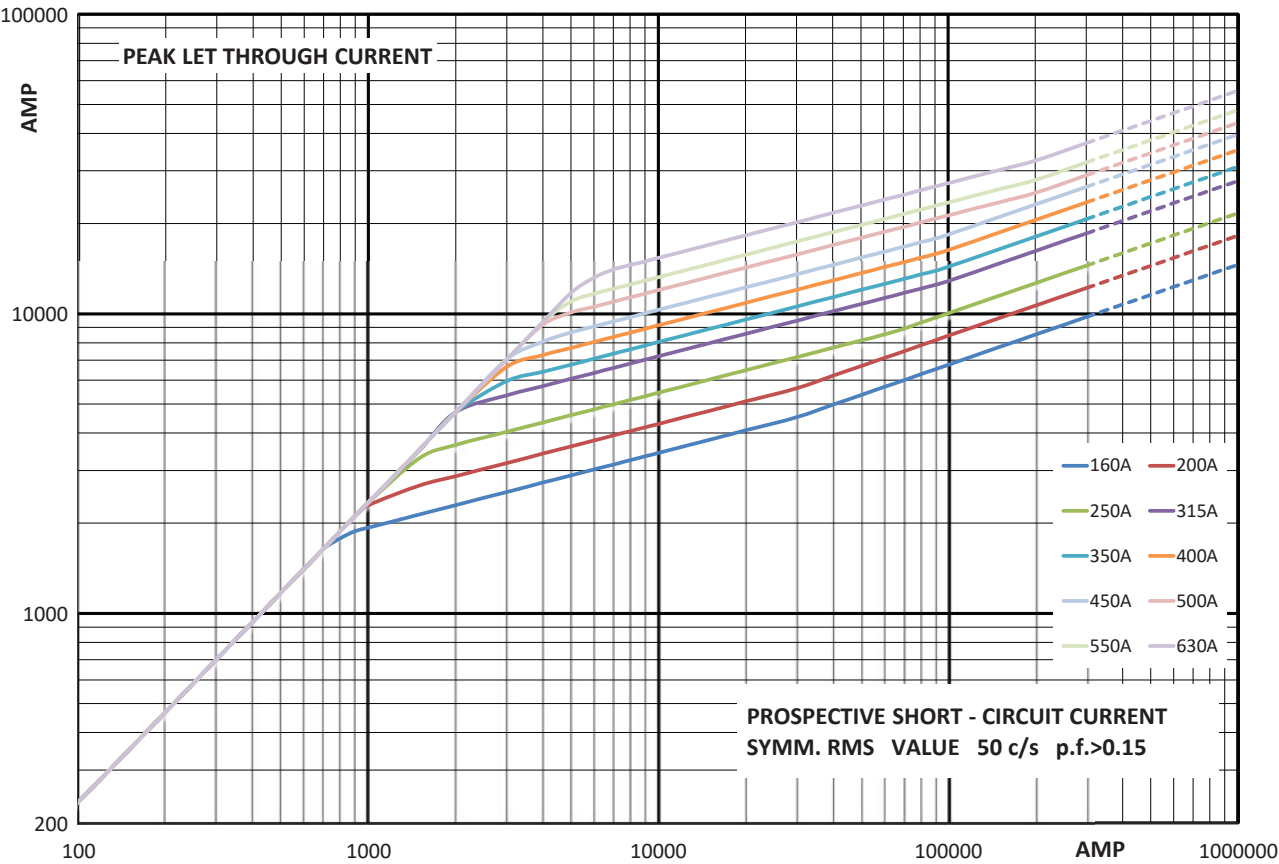
## Time-current curve - Size 1, 160 A to 630 A



Square body fuse links

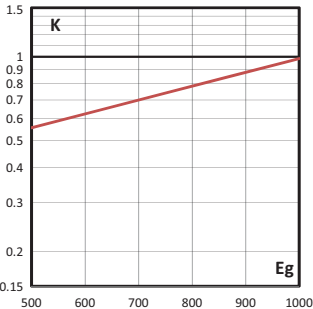
170M - Sizes 1\* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Cut-off curve - Size 1, 160 A to 630 A



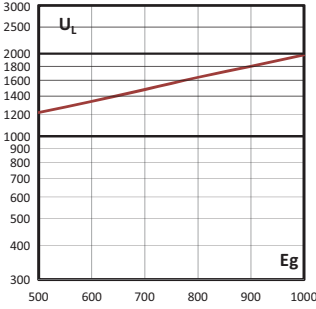
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



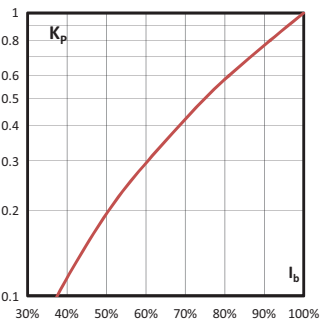
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



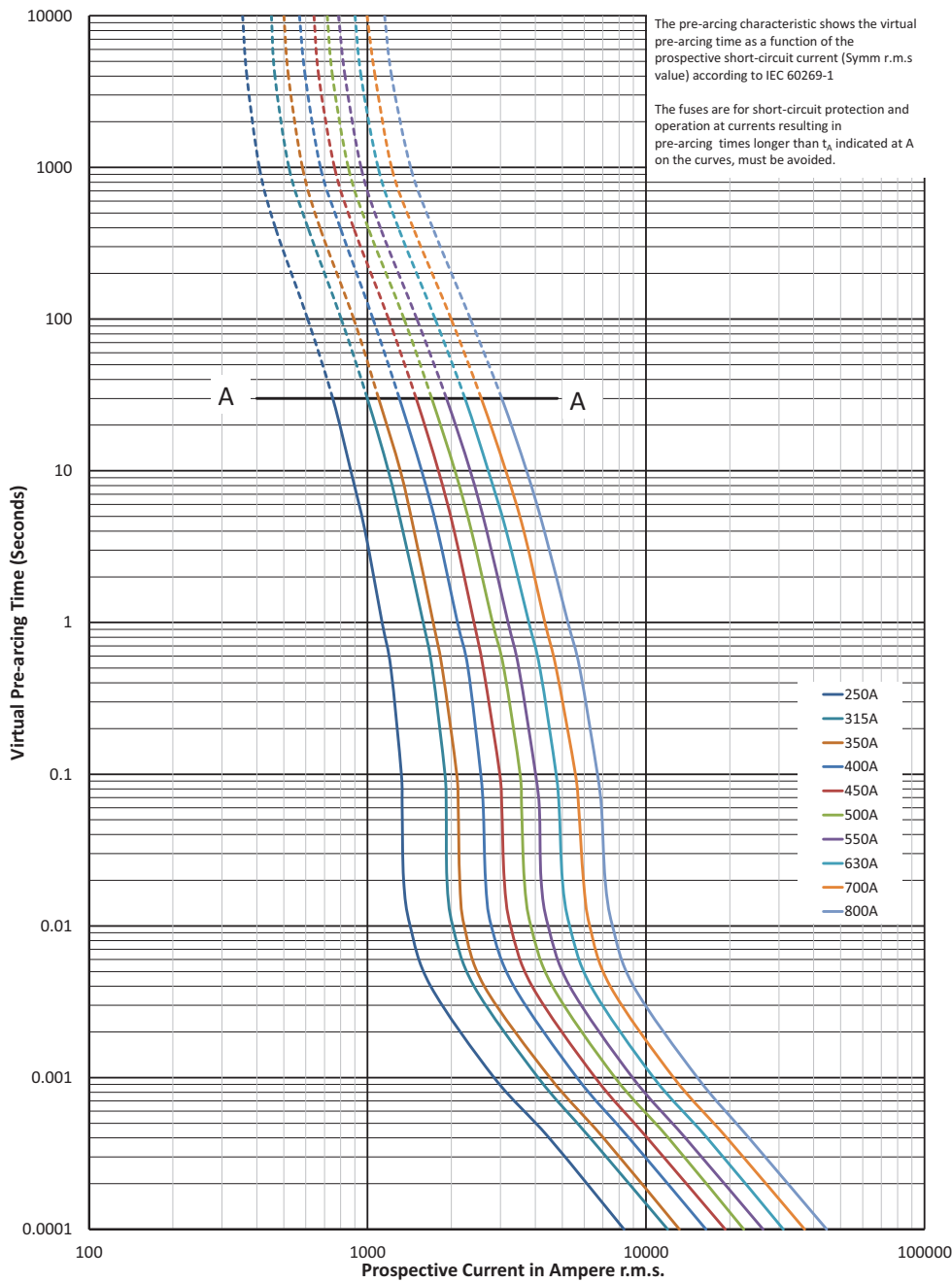
Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



# **170M** - Sizes 1\* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

## Time-current curve - Size 2, 250 A to 800 A

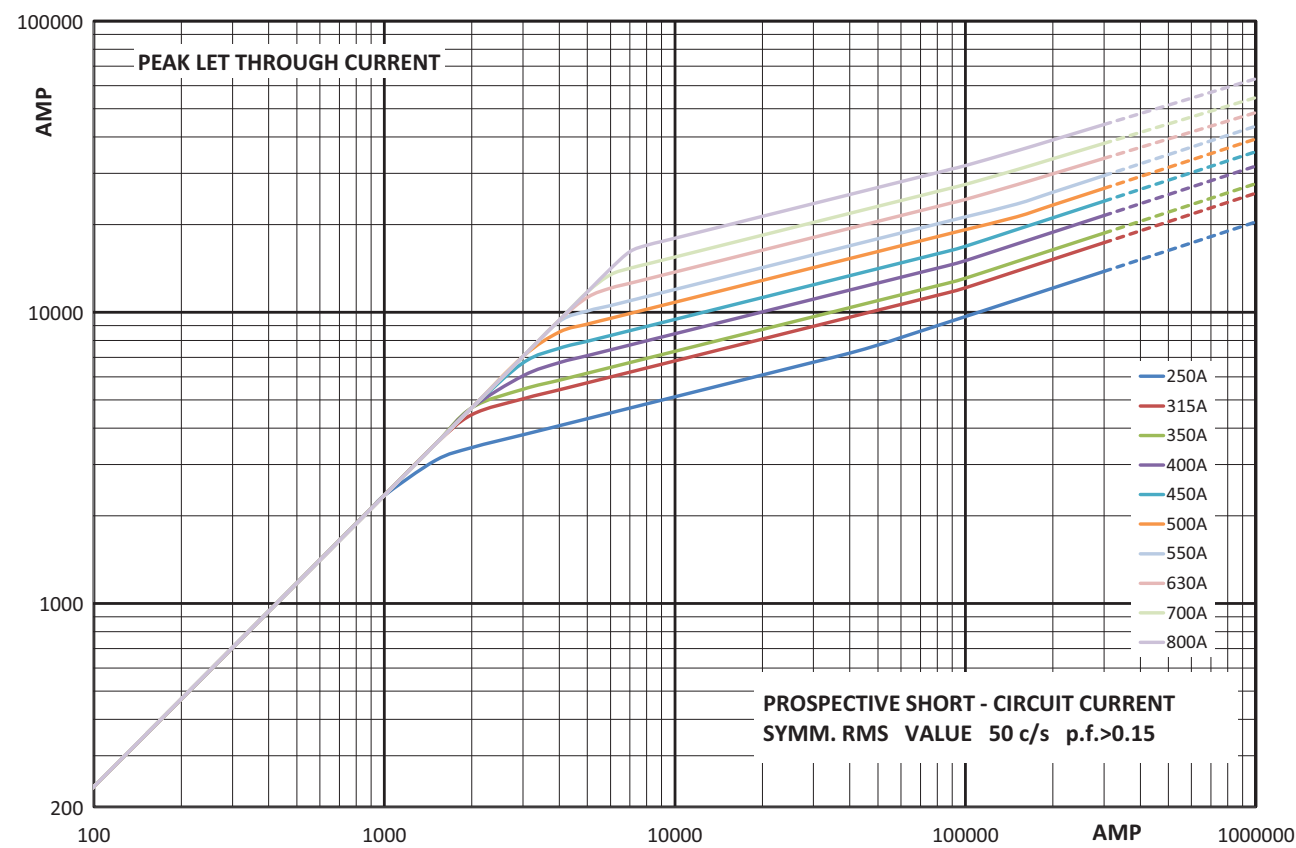




Square body fuse links

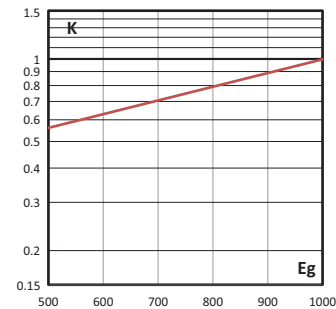
170M - Sizes 1\* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Cut-off curve - Size 2, 250 A to 800 A



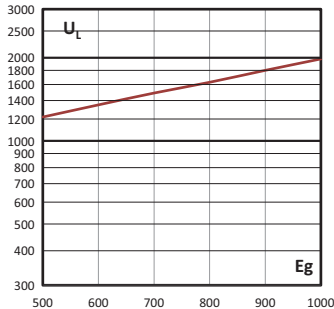
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



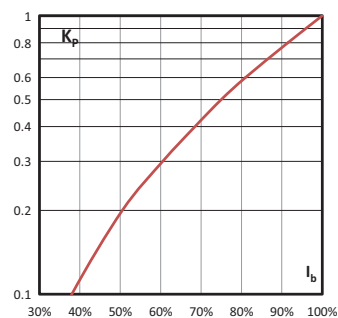
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



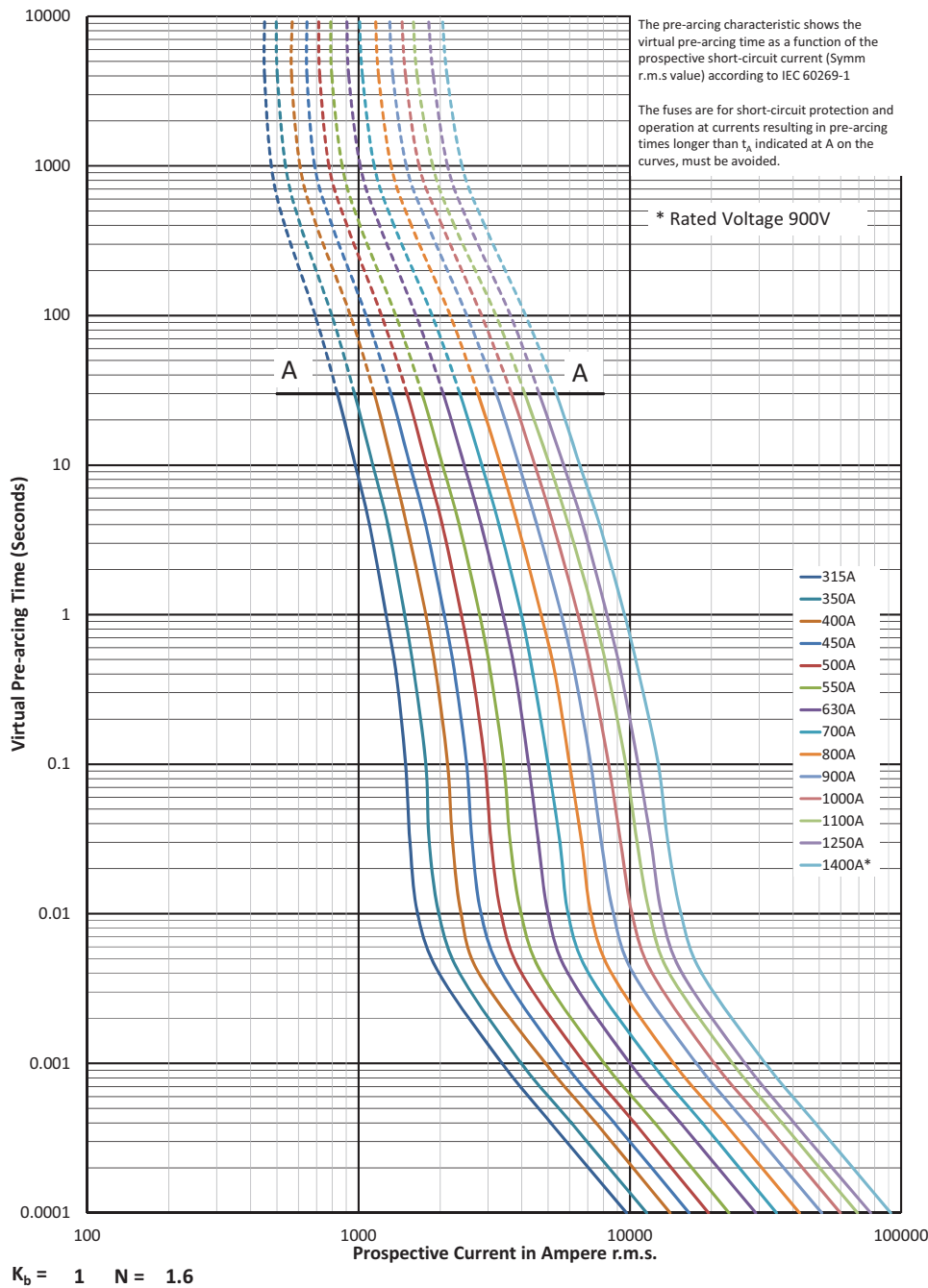
Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



# 170M - Sizes 1\* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

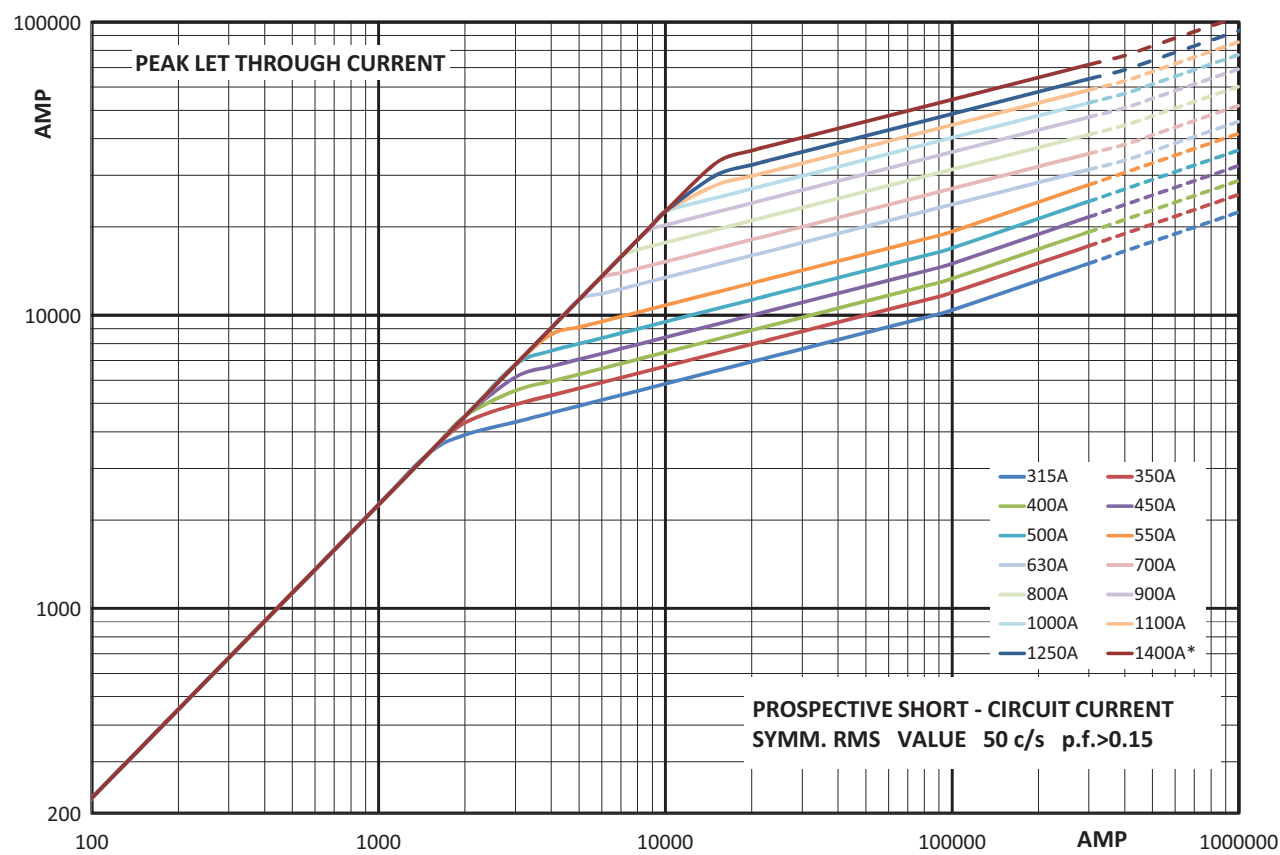
## Time-current curve - Size 3, 315 A to 1400 A



Square body fuse links

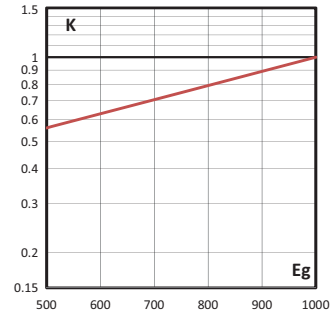
170M - Sizes 1\* to 3, DIN 43653, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Cut-off curve - Size 3, 315 A to 1400 A



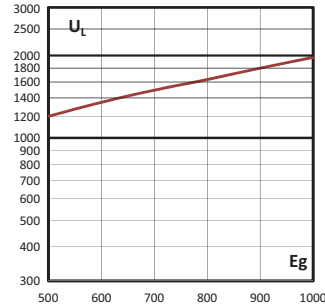
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



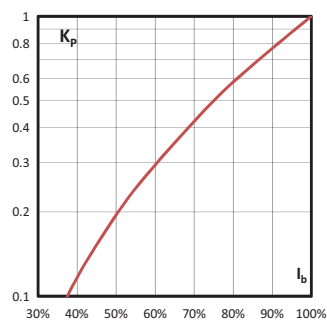
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



## 170M - Sizes 1\* to 3, DIN 43653, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

### Specifications

#### Description

Square body DIN 43653 bolted tags high speed fuse links, for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

#### Technical data

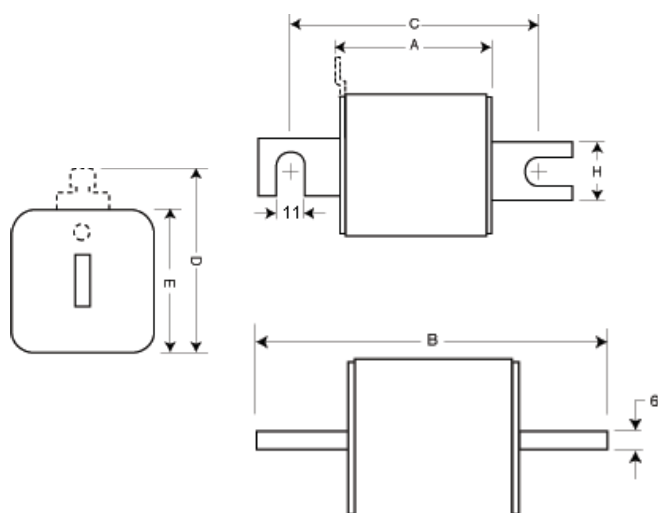
- Rated voltage: see table opposite page
- Rated current: 50 A to 1400 A
- Breaking capacity: 100 kA RMS Sym.
- Operating class: aR

#### Standards / Agency information

CE, Designed and tested to IEC60269 Part 4. Consult Eaton for UL Recognition/CSA Component Acceptance status.



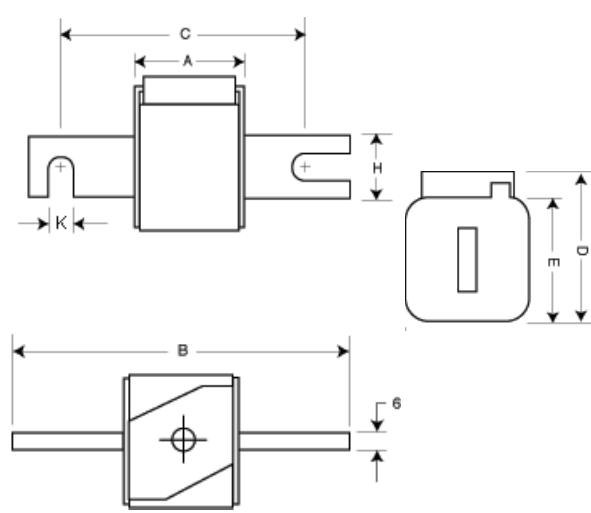
#### Dimensions (mm) -110 and TN/110



| Size | A  | B   | C   | D' | E  | H  | K  |
|------|----|-----|-----|----|----|----|----|
| 1*   | 80 | 138 | 108 | 58 | 45 | 20 | 11 |
| 1    | 80 | 138 | 108 | 66 | 53 | 25 | 11 |
| 2    | 80 | 138 | 108 | 75 | 61 | 25 | 11 |
| 3    | 81 | 139 | 108 | 90 | 76 | 30 | 11 |

<sup>1</sup> Clip on Microswitch valid for fuse links -TN//110.  
1mm = 0.0394"

#### Dimensions (mm) - KN/110



| Size | A  | B   | C   | D  | E  | H  | K  |
|------|----|-----|-----|----|----|----|----|
| 1*   | 80 | 138 | 108 | 60 | 45 | 20 | 11 |
| 1    | 80 | 138 | 108 | 69 | 53 | 25 | 11 |
| 2    | 80 | 138 | 108 | 77 | 61 | 25 | 11 |
| 3    | 81 | 139 | 108 | 92 | 76 | 30 | 11 |

1mm = 0.0394"

# Square body fuse links

## 170M - Sizes 1\* to 3, DIN 43653, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

### Catalogue numbers

|                        |                                       | I <sup>2</sup> t (A <sup>2</sup> Sec) |                                       |                         |                         |                | Catalogue numbers      |                                    |                                    |                       |                       |
|------------------------|---------------------------------------|---------------------------------------|---------------------------------------|-------------------------|-------------------------|----------------|------------------------|------------------------------------|------------------------------------|-----------------------|-----------------------|
| Fuse link body size    | Rated voltage                         | Rated current (Amps)                  | Pre-arcing                            | Clearing at 1000 V a.c. | Clearing at 1250 V a.c. | Watts loss (W) | -/110 Visual indicator | -TN/110 Type T indicator for micro | -KN/110 Type K indicator for micro |                       |                       |
| 1*                     | 1250 V a.c. (IEC)<br>1300 V a.c. (UL) | 50                                    | 135                                   | 815                     | 1100                    | 15             | 170M3138               | 170M3188                           | 170M3238                           |                       |                       |
|                        |                                       | 63                                    | 215                                   | 1300                    | 1750                    | 20             | 170M3139               | 170M3189                           | 170M3239                           |                       |                       |
|                        |                                       | 80                                    | 420                                   | 2500                    | 3350                    | 25             | 170M3140               | 170M3190                           | 170M3240                           |                       |                       |
|                        |                                       | 100                                   | 750                                   | 4450                    | 5950                    | 30             | 170M3141               | 170M3191                           | 170M3241                           |                       |                       |
|                        |                                       | 125                                   | 1450                                  | 9000                    | 11,500                  | 35             | 170M3142               | 170M3192                           | 170M3242                           |                       |                       |
|                        |                                       | 160                                   | 2600                                  | 16,000                  | 21,000                  | 40             | 170M3143               | 170M3193                           | 170M3243                           |                       |                       |
|                        |                                       | 200                                   | 5150                                  | 31,000                  | 41,000                  | 45             | 170M3144               | 170M3194                           | 170M3244                           |                       |                       |
|                        |                                       | 250                                   | 9200                                  | 54,500                  | 73,000                  | 55             | 170M3145               | 170M3195                           | 170M3245                           |                       |                       |
|                        |                                       | 315                                   | 18,500                                | 115,000                 | 150,000                 | 60             | 170M3146               | 170M3196                           | 170M3246                           |                       |                       |
|                        |                                       | 350                                   | 27,000                                | 165,000                 | 220,000                 | 65             | 170M3147               | 170M3197                           | 170M3247                           |                       |                       |
|                        |                                       | 400                                   | 53,000                                | 265,000                 | 335,000                 | 70             | 170M3148               | 170M3198                           | 170M3248                           |                       |                       |
| 1                      | 1250 V a.c. (IEC)<br>1300 V a.c. (UL) | 160                                   | 1900                                  | 11,500                  | 15,500                  | 45             | 170M4138 <sup>2</sup>  | 170M4188 <sup>2</sup>              | 170M4238 <sup>2</sup>              |                       |                       |
|                        |                                       | 200                                   | 3800                                  | 22,500                  | 30,000                  | 50             | 170M4139 <sup>2</sup>  | 170M4189 <sup>2</sup>              | 170M4239 <sup>2</sup>              |                       |                       |
|                        |                                       | 250                                   | 7750                                  | 46,000                  | 61,500                  | 60             | 170M4140 <sup>2</sup>  | 170M4190 <sup>2</sup>              | 170M4240 <sup>2</sup>              |                       |                       |
|                        |                                       | 315                                   | 15,000                                | 90,000                  | 120,000                 | 65             | 170M4141 <sup>2</sup>  | 170M4191 <sup>2</sup>              | 170M4241 <sup>2</sup>              |                       |                       |
|                        |                                       | 350                                   | 20,000                                | 125,000                 | 165,000                 | 70             | 170M4142 <sup>2</sup>  | 170M4192 <sup>2</sup>              | 170M4242 <sup>2</sup>              |                       |                       |
|                        |                                       | 400                                   | 29,500                                | 175,000                 | 235,000                 | 75             | 170M4143 <sup>2</sup>  | 170M4193 <sup>2</sup>              | 170M4243 <sup>2</sup>              |                       |                       |
|                        |                                       | 450                                   | 42,000                                | 250,000                 | 335,000                 | 80             | 170M4144 <sup>2</sup>  | 170M4194 <sup>2</sup>              | 170M4244 <sup>2</sup>              |                       |                       |
|                        |                                       | 800 V d.c. (UL)<br>85 kA IR           | 500                                   | 69,500                  | 340,000                 | 435,000        | 85                     | 170M4145                           | 170M4195                           | 170M4245              |                       |
|                        |                                       | 550                                   | 95,000                                | 465,000                 | 590,000                 | 95             | 170M4146               | 170M4196                           | 170M4246                           |                       |                       |
|                        |                                       | 1100 V a.c. (IEC)                     | 630                                   | 130,000                 | 660,000                 | N/A            | 100                    | 170M4147 <sup>1</sup>              | 170M4197 <sup>1</sup>              | 170M4247 <sup>1</sup> |                       |
|                        |                                       | 2                                     | 1250 V a.c. (IEC)<br>1300 V a.c. (UL) | 250                     | 6500                    | 38,500         | 51,500                 | 65                                 | 170M5138                           | 170M5188              | 170M5238              |
| 280                    | 9350                                  |                                       |                                       | 55,500                  | 74,500                  | 70             | 170M5139               | 170M5189                           | 170M5239                           |                       |                       |
| 315                    | 13,000                                |                                       |                                       | 77,500                  | 105,000                 | 75             | 170M5140               | 170M5190                           | 170M5240                           |                       |                       |
| 350                    | 16,500                                |                                       |                                       | 97,500                  | 135,000                 | 80             | 170M5141               | 170M5191                           | 170M5241                           |                       |                       |
| 400                    | 23,000                                |                                       |                                       | 140,000                 | 180,000                 | 85             | 170M5142               | 170M5192                           | 170M5242                           |                       |                       |
| 450                    | 34,000                                |                                       |                                       | 205,000                 | 270,000                 | 90             | 170M5143               | 170M5193                           | 170M5243                           |                       |                       |
| 500                    | 48,000                                |                                       |                                       | 285,000                 | 380,000                 | 95             | 170M5144               | 170M5194                           | 170M5244                           |                       |                       |
| 550                    | 62,000                                |                                       |                                       | 370,000                 | 495,000                 | 100            | 170M5145               | 170M5195                           | 170M5245                           |                       |                       |
| 630                    | 115,000                               |                                       |                                       | 575,000                 | 730,000                 | 120            | 170M5146 <sup>2</sup>  | 170M5196 <sup>2</sup>              | 170M5246                           |                       |                       |
| 700                    | 160,000                               |                                       |                                       | 795,000                 | 1,050,000               | 125            | 170M5147 <sup>2</sup>  | 170M5197 <sup>2</sup>              | 170M5247                           |                       |                       |
| 800                    | 245,000                               |                                       |                                       | 1,200,000               | 1,550,000               | 130            | 170M5148 <sup>2</sup>  | 170M5198 <sup>2</sup>              | 170M5248                           |                       |                       |
| 1100 V a.c. (IEC & UL) | 900                                   |                                       |                                       | 360,000                 | 1,750,000               | N/A            | 135                    | 170M5149 <sup>4</sup>              | 170M5199 <sup>4</sup>              | 170M5249 <sup>4</sup> |                       |
| 1000                   | 480,000                               |                                       |                                       | 2,350,000               | N/A                     | 145            | 170M5150 <sup>4</sup>  | 170M5200 <sup>4</sup>              | 170M5250 <sup>4</sup>              |                       |                       |
| 3                      | 1300 V a.c. (UL)                      |                                       |                                       | 315                     | 9500                    | 58,000         | 77,500                 | 85                                 | 170M6138 <sup>2</sup>              | 170M6188 <sup>2</sup> | 170M6238 <sup>2</sup> |
|                        |                                       |                                       |                                       | 350                     | 13,500                  | 81,500         | 110,000                | 90                                 | 170M6139 <sup>2</sup>              | 170M6189 <sup>2</sup> | 170M6239 <sup>2</sup> |
|                        |                                       | 400                                   | 19,500                                | 120,000                 | 160,000                 | 95             | 170M6140 <sup>2</sup>  | 170M6190 <sup>2</sup>              | 170M6240 <sup>2</sup>              |                       |                       |
|                        |                                       | 450                                   | 31,000                                | 185,000                 | 245,000                 | 100            | 170M6141 <sup>2</sup>  | 170M6191 <sup>2</sup>              | 170M6241 <sup>2</sup>              |                       |                       |
|                        |                                       | 500                                   | 39,000                                | 235,000                 | 310,000                 | 105            | 170M6142 <sup>2</sup>  | 170M6192 <sup>2</sup>              | 170M6242 <sup>2</sup>              |                       |                       |
|                        |                                       | 550                                   | 55,000                                | 325,000                 | 435,000                 | 110            | 170M6143 <sup>2</sup>  | 170M6193 <sup>2</sup>              | 170M6243 <sup>2</sup>              |                       |                       |
|                        |                                       | 630                                   | 83,500                                | 495,000                 | 665,000                 | 115            | 170M6144 <sup>2</sup>  | 170M6194 <sup>2</sup>              | 170M6244 <sup>2</sup>              |                       |                       |
|                        |                                       | 700                                   | 115,000                               | 705,000                 | 940,000                 | 120            | 170M6145 <sup>2</sup>  | 170M6195 <sup>2</sup>              | 170M6245 <sup>2</sup>              |                       |                       |
|                        |                                       | 800                                   | 205,000                               | 995,000                 | 1,300,000               | 125            | 170M6146 <sup>3</sup>  | 170M6196 <sup>3</sup>              | 170M6246 <sup>1</sup>              |                       |                       |
|                        |                                       | 900                                   | 305,000                               | 1,500,000               | 1,900,000               | 130            | 170M6147 <sup>3</sup>  | 170M6197 <sup>3</sup>              | 170M6247 <sup>1</sup>              |                       |                       |
|                        |                                       | 1000                                  | 450,000                               | 2,150,000               | 2,750,000               | 135            | 170M6148 <sup>3</sup>  | 170M6198 <sup>3</sup>              | 170M6248 <sup>1</sup>              |                       |                       |
|                        |                                       | 1100                                  | 575,000                               | 2,800,000               | 3,600,000               | 160            | 170M6149 <sup>3</sup>  | 170M6199 <sup>3</sup>              | 170M6249 <sup>1</sup>              |                       |                       |
|                        |                                       | 1100 V a.c. (IEC)                     | 1250                                  | 810,000                 | 3,950,000               | N/A            | 170                    | 170M6150 <sup>5</sup>              | 170M6200 <sup>1</sup>              | 170M6250 <sup>1</sup> |                       |
|                        |                                       | 1400                                  | 1,250,000                             | 6,000,000               | N/A                     | 175            | 170M6151 <sup>5</sup>  | 170M6201 <sup>1</sup>              | 170M6251 <sup>1</sup>              |                       |                       |

<sup>1</sup> These fuse links are not UL recognised

<sup>2</sup> 900 V d.c. 8XIn 90 kA

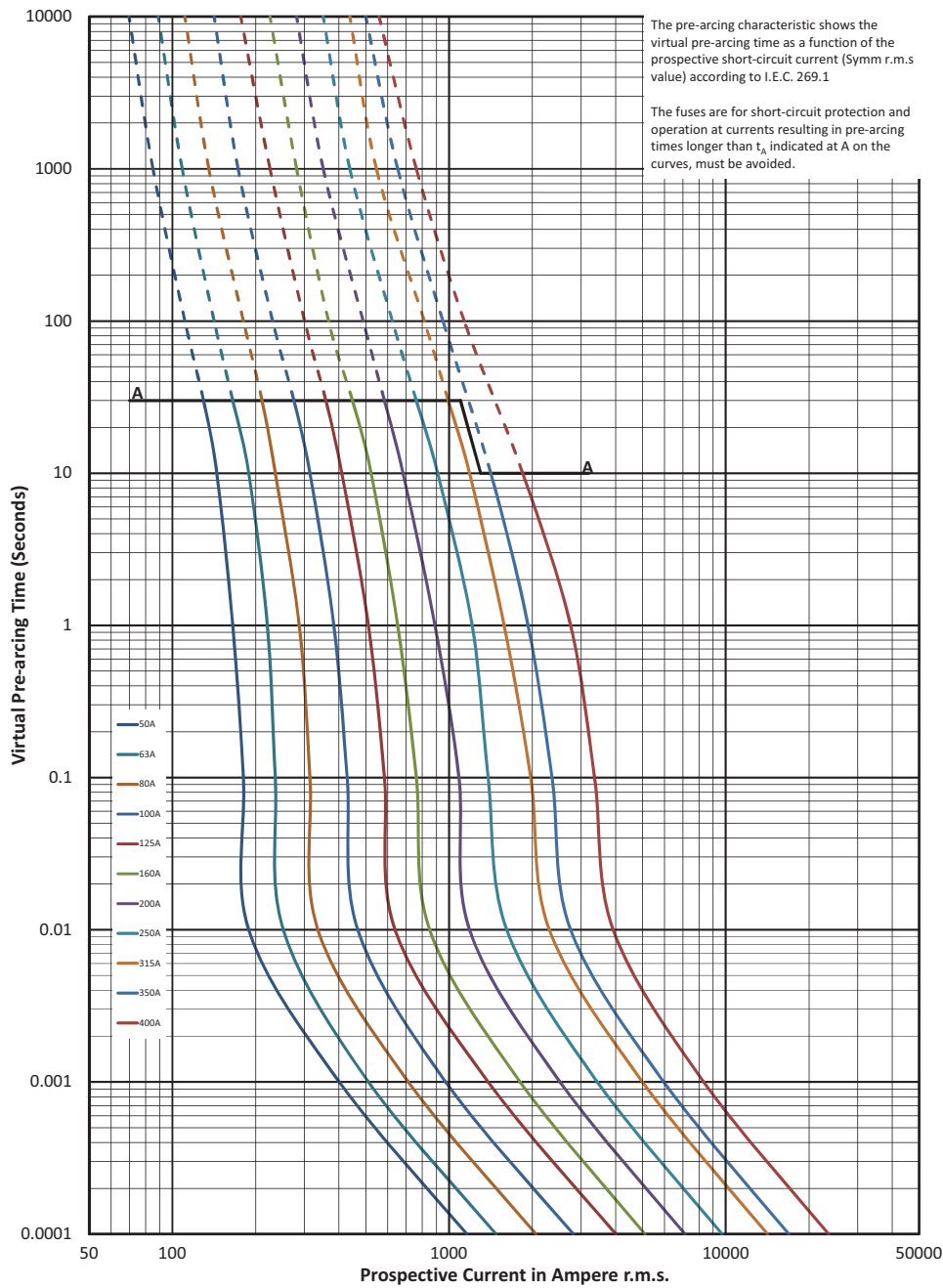
<sup>3</sup> Rated at 1000 V d.c. 10XIn 91 kA

<sup>4</sup> 900 V d.c. 9.5XIn 80 kA

<sup>5</sup> 900 V d.c. 12XIn 90 kA

## 170M - Sizes 1\* to 3, DIN 43653, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

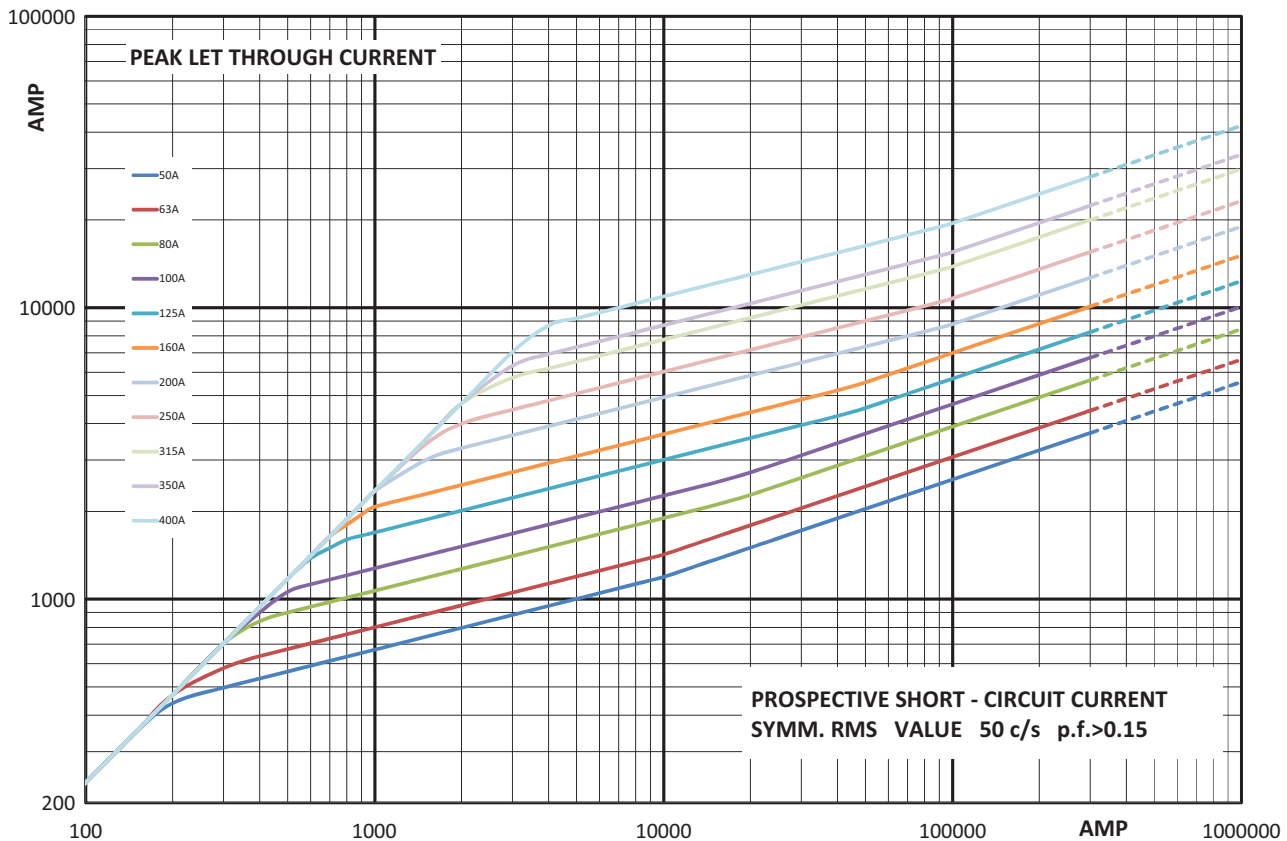
### Time-current curve - Size 1\*, 50 A to 400 A



## Square body fuse links

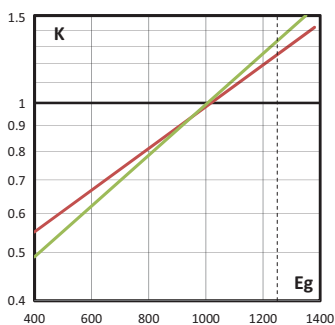
170M - Sizes 1\* to 3, DIN 43653, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

Cut-off curve - Size 1\*, 50 A to 400 A



### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).

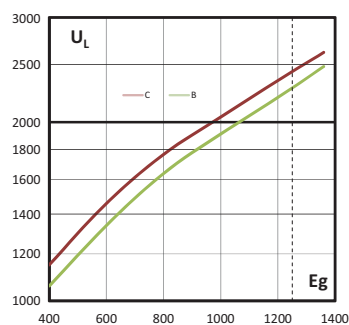


Green curve: fuses  $\leq 350$  A

Red curve: fuses  $\geq 400$  A

### 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 percent.

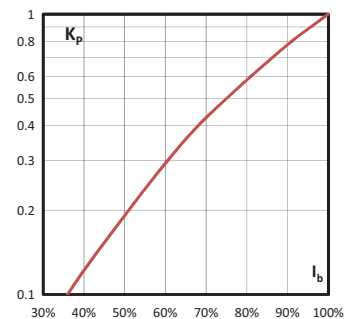


B: fuses  $\leq 350$  A

C: fuses  $\geq 400$  A

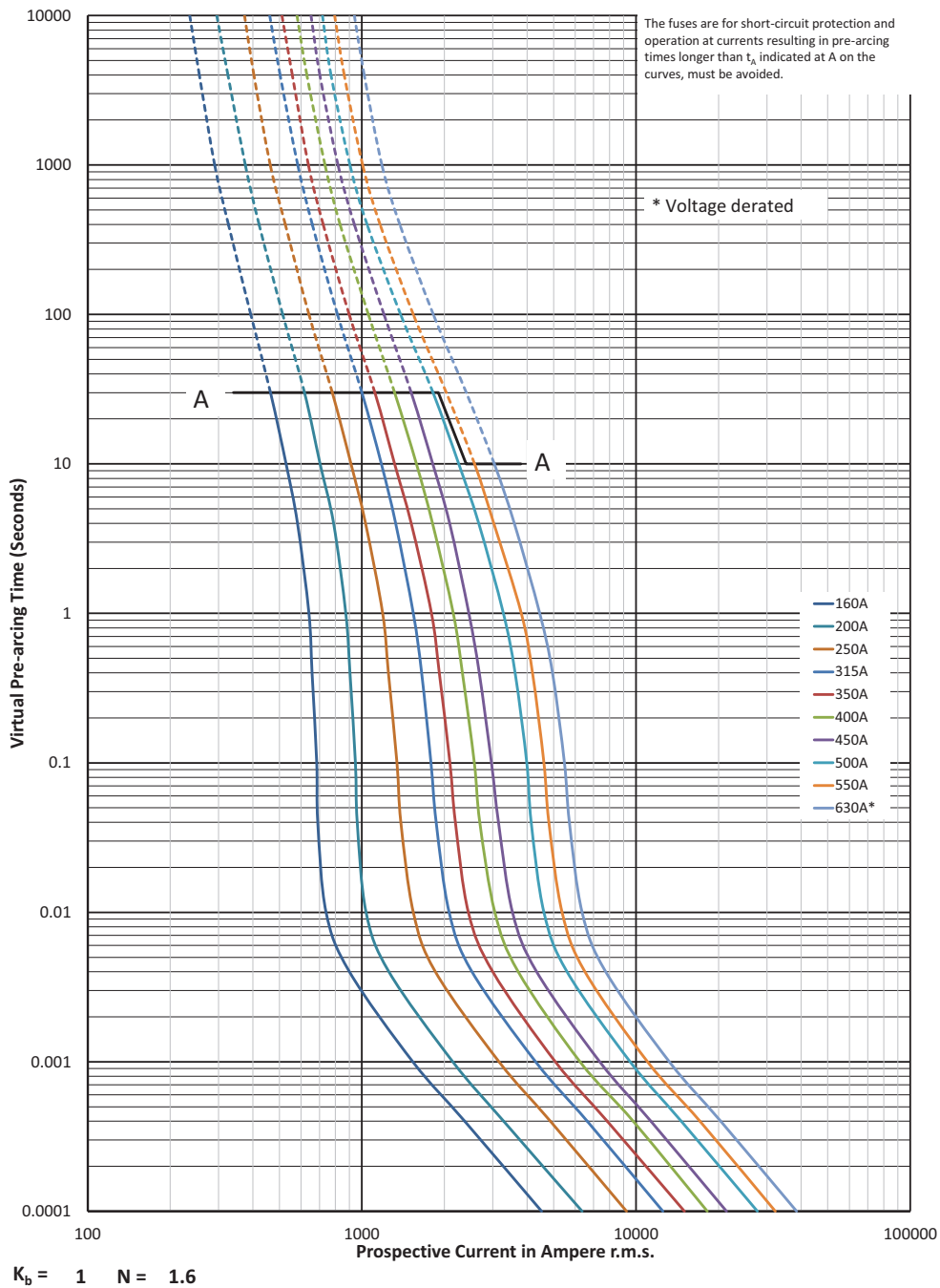
### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



**170M** - Sizes 1\* to 3, DIN 43653, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

Time-current curve - Size 1, 160 A to 630 A

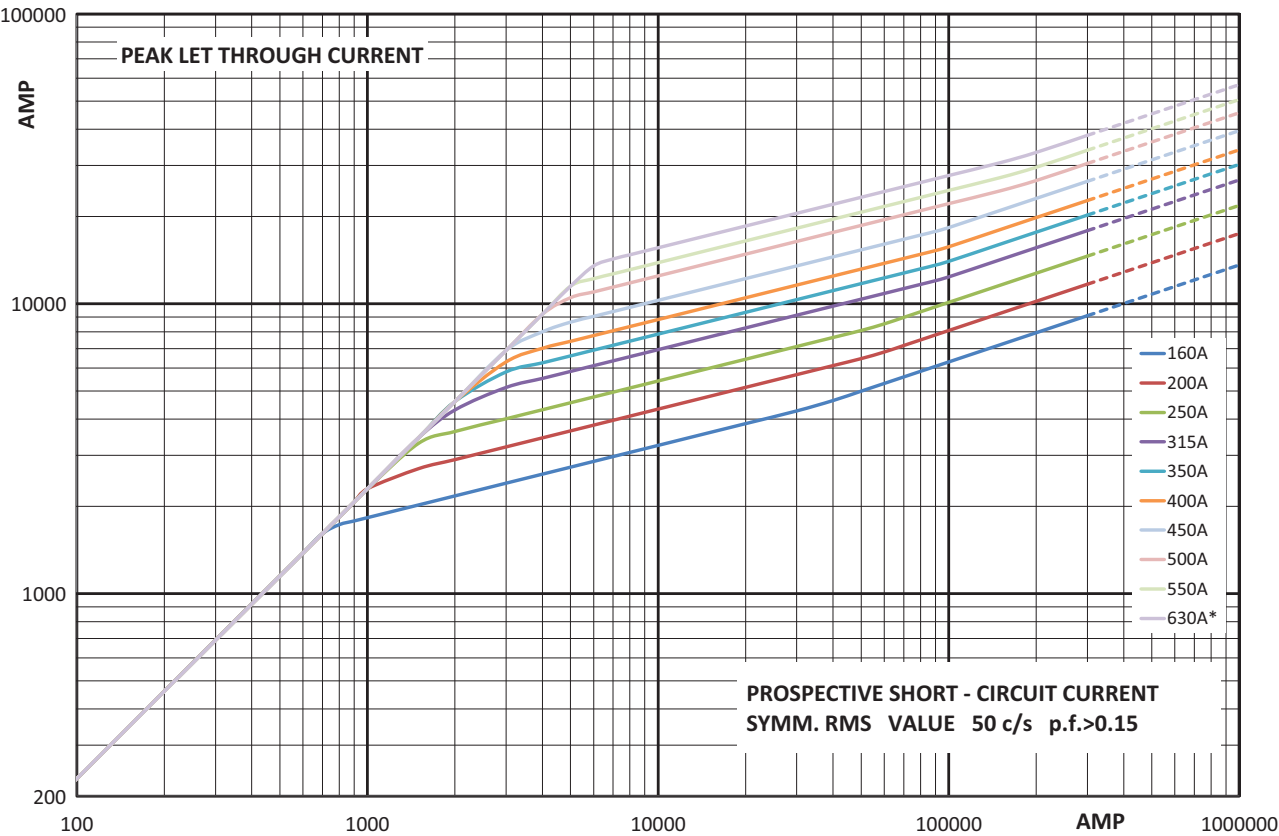




Square body fuse links

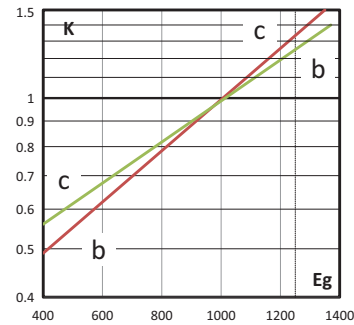
170M - Sizes 1\* to 3, DIN 43653, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

Cut-off curve - Size 1, 160 A to 630 A



Total clearing I²t

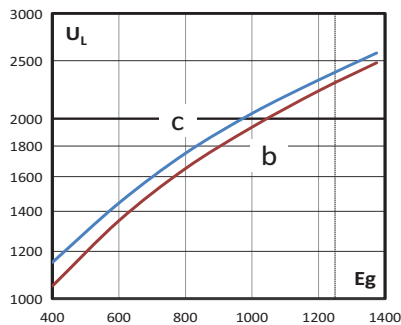
The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



B: fuses ≤ 450 A  
C: fuses ≥ 500 A

Arc voltage

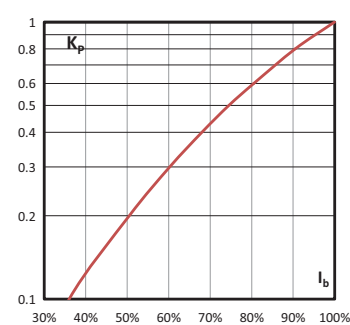
This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



B: fuses ≤ 450 A  
C: fuses ≥ 500 A

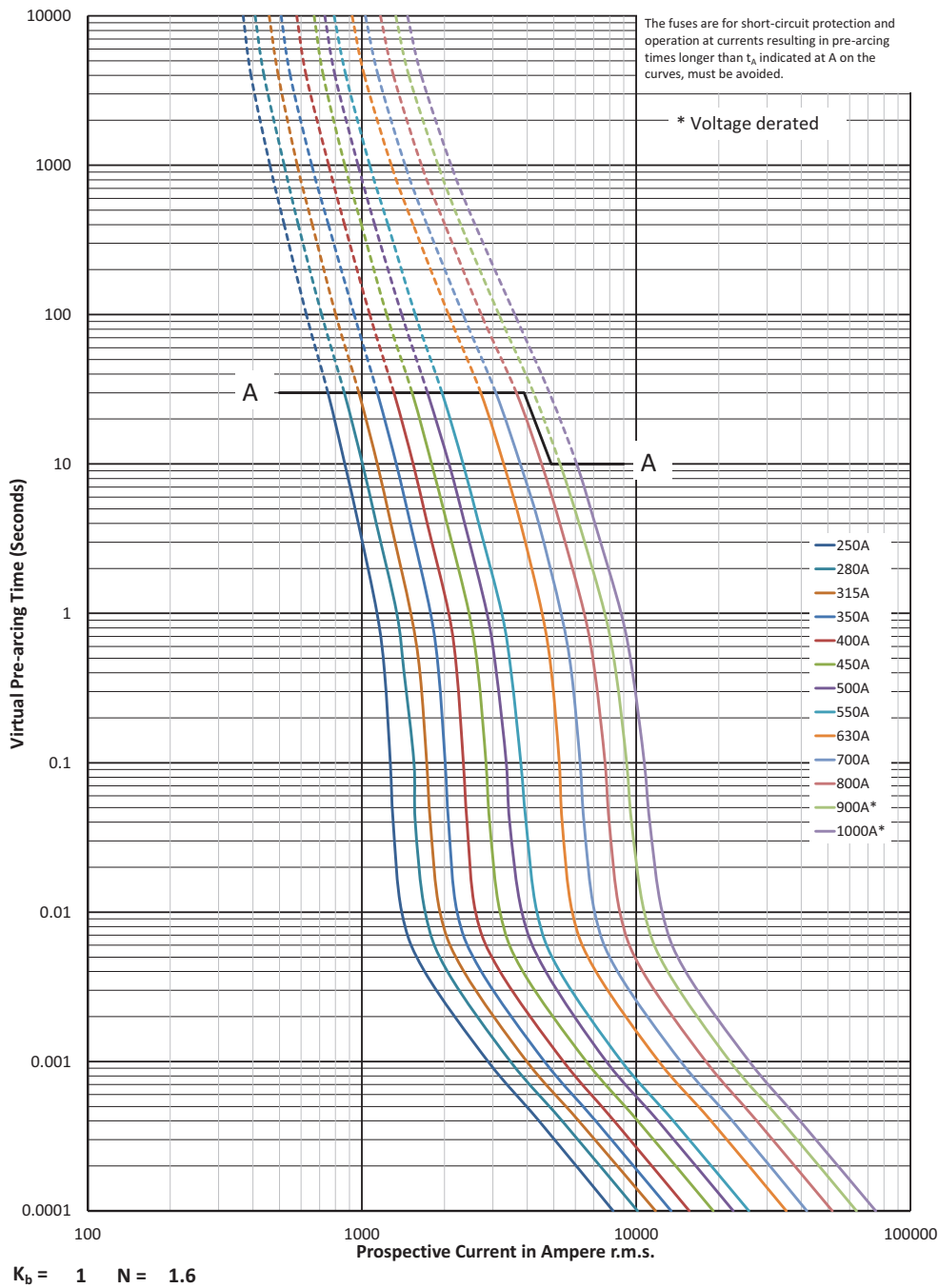
Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



**170M** - Sizes 1\* to 3, DIN 43653, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

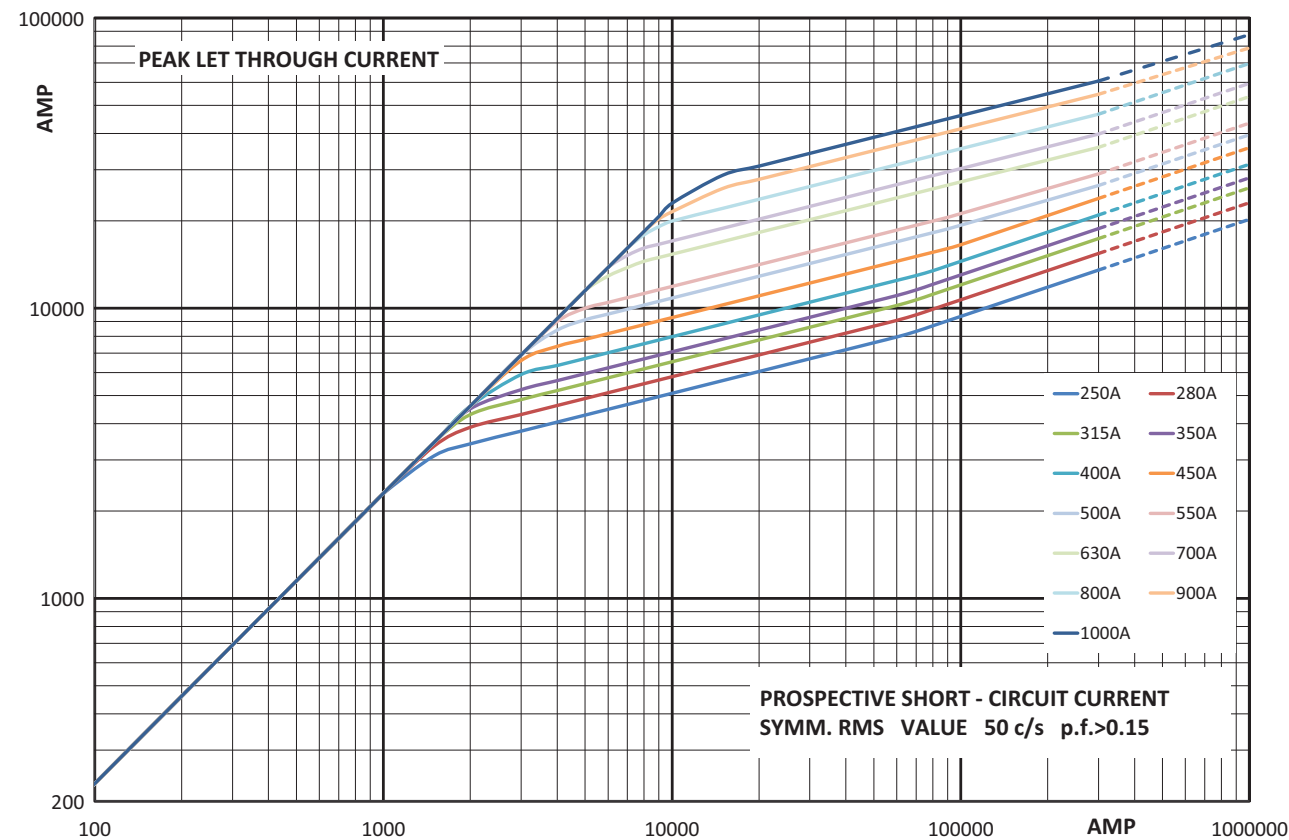
Time-current curve - Size 2, 250 A to 1000 A



# Square body fuse links

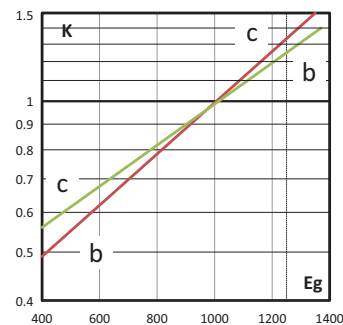
**170M** - Sizes 1\* to 3, DIN 43653, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

Cut-off curve - Size 2, 250 A to 1000 A



### Total clearing I²t

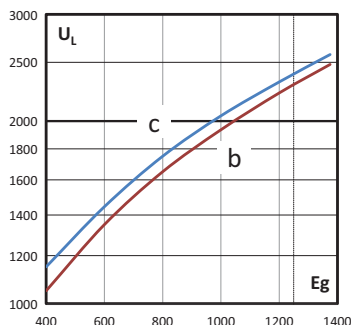
The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



B: fuses ≤ 550 A  
C: fuses ≥ 630 A

### Arc voltage

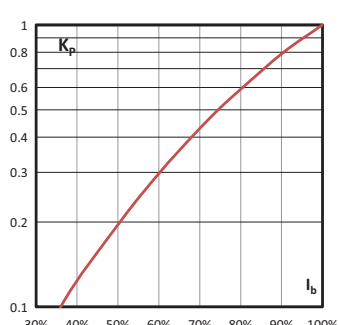
This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



B: fuses ≤ 550 A  
C: fuses ≥ 630 A

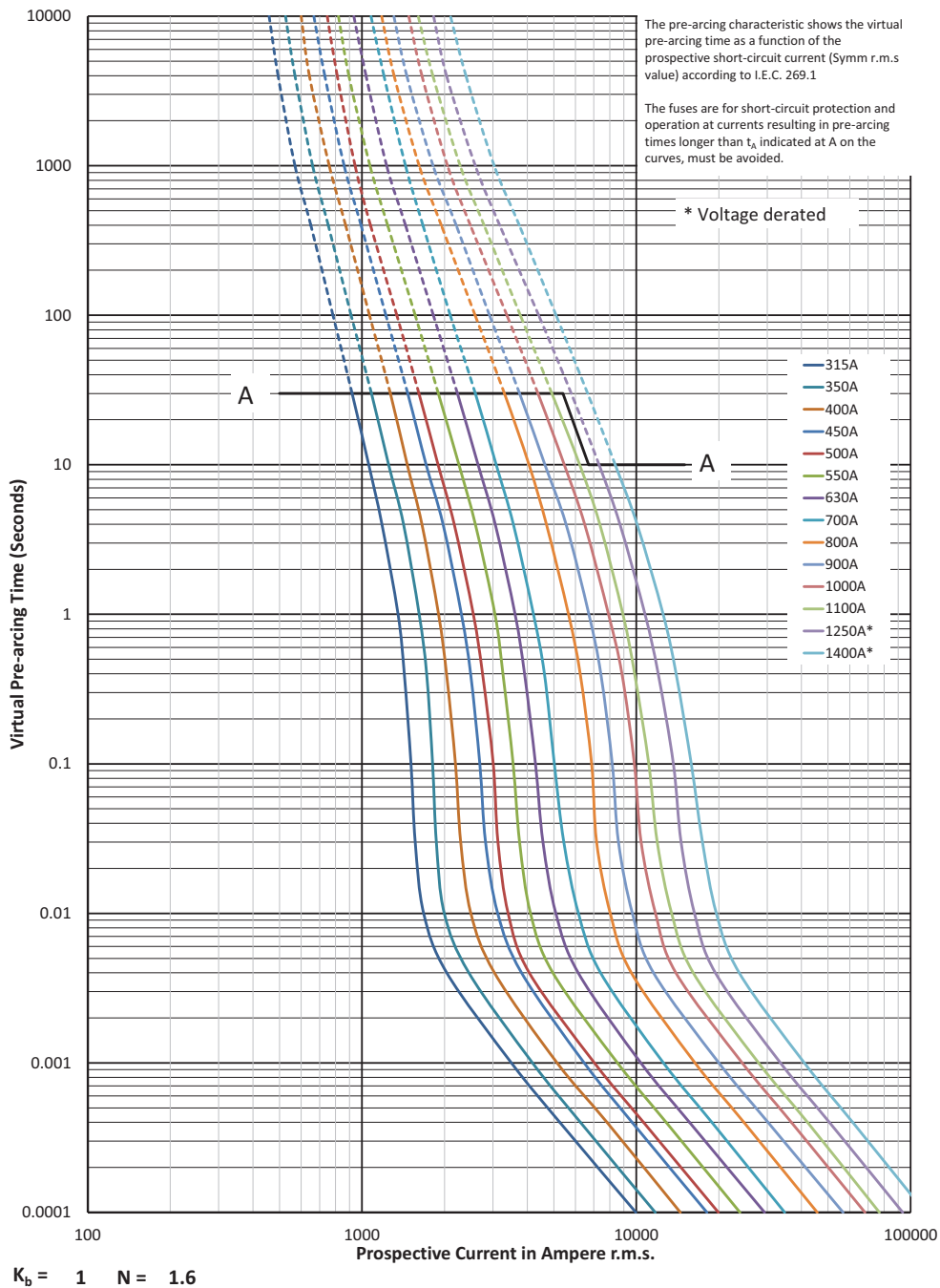
### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



**170M** - Sizes 1\* to 3, DIN 43653, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

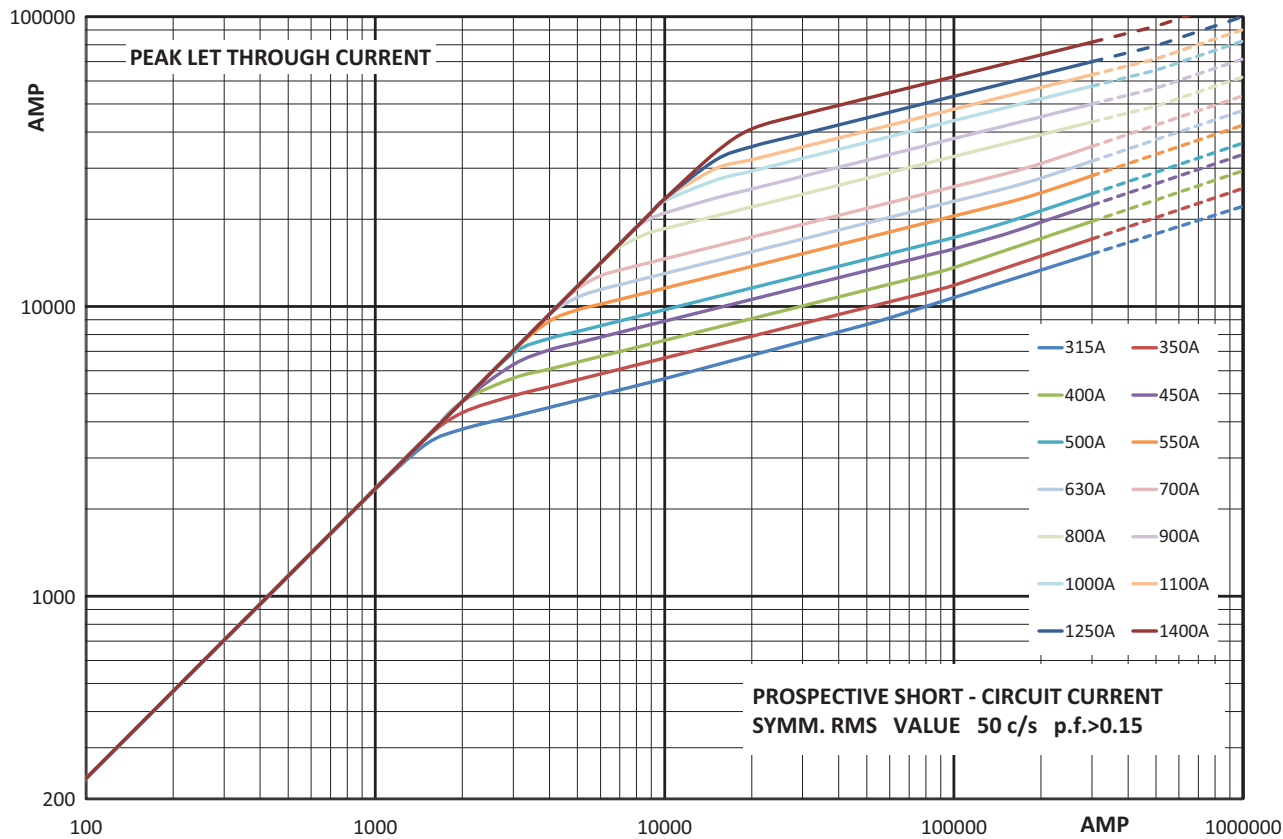
Time-current curve - Size 3, 315 A to 1400 A



# Square body fuse links

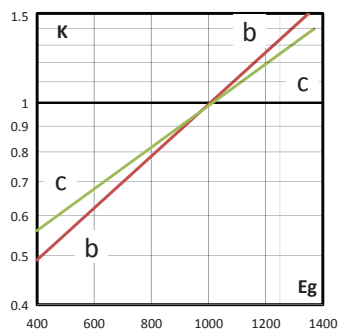
**170M** - Sizes 1\* to 3, DIN 43653, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

Cut-off curve - Size 3, 315 A to 1400 A



## Total clearing I²t

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).

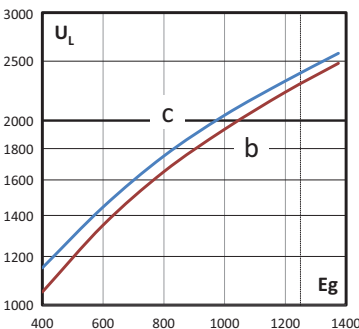


B: fuses  $\leq 550$  A

C: fuses  $\geq 630$  A

## 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 percent.

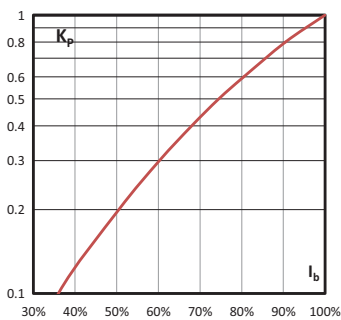


B: fuses  $\leq 700$  A

C: fuses  $\geq 800$  A

## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



## 170M - Sizes 00 to 3, DIN 43620, Full range (gR), 690 V a.c. (IEC), 10 A to 800 A

### Specifications

#### Description

Square body DIN 43620 blade high speed fuse links. Full range protection fuse links provide both overload and short-circuit protection.

#### Technical data

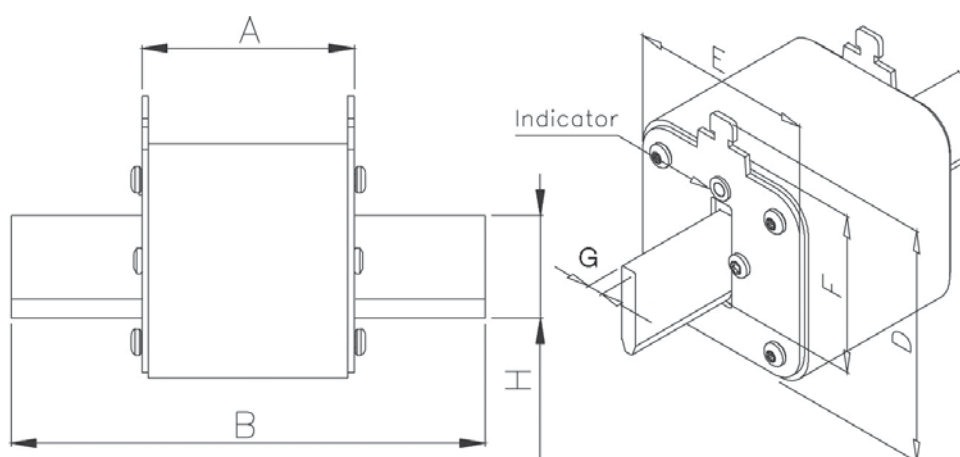
- Rated voltage: 690 V a.c. (IEC)
- Rated current: 10 A to 800 A
- Breaking capacity: 200 kA RMS Sym
- Operating class: gR

#### Standards / Agency information

CE, Designed and tested to IEC 60269 Part 4



#### Dimensions (mm)



| Size | A  | B    | D (max) | E (max) | F  | G | H (min) |
|------|----|------|---------|---------|----|---|---------|
| 00   | 49 | 78.5 | 60      | 30      | 35 | 6 | 15      |
| 1    | 68 | 135  | 66      | 52      | 40 | 6 | 20      |
| 2    | 68 | 150  | 74      | 60      | 48 | 6 | 25      |
| 3    | 68 | 150  | 89      | 75      | 60 | 6 | 32      |

# Square body fuse links

## 170M - Sizes 00 to 3, DIN 43620, Full range (gR), 690 V a.c. (IEC), 10 A to 800 A

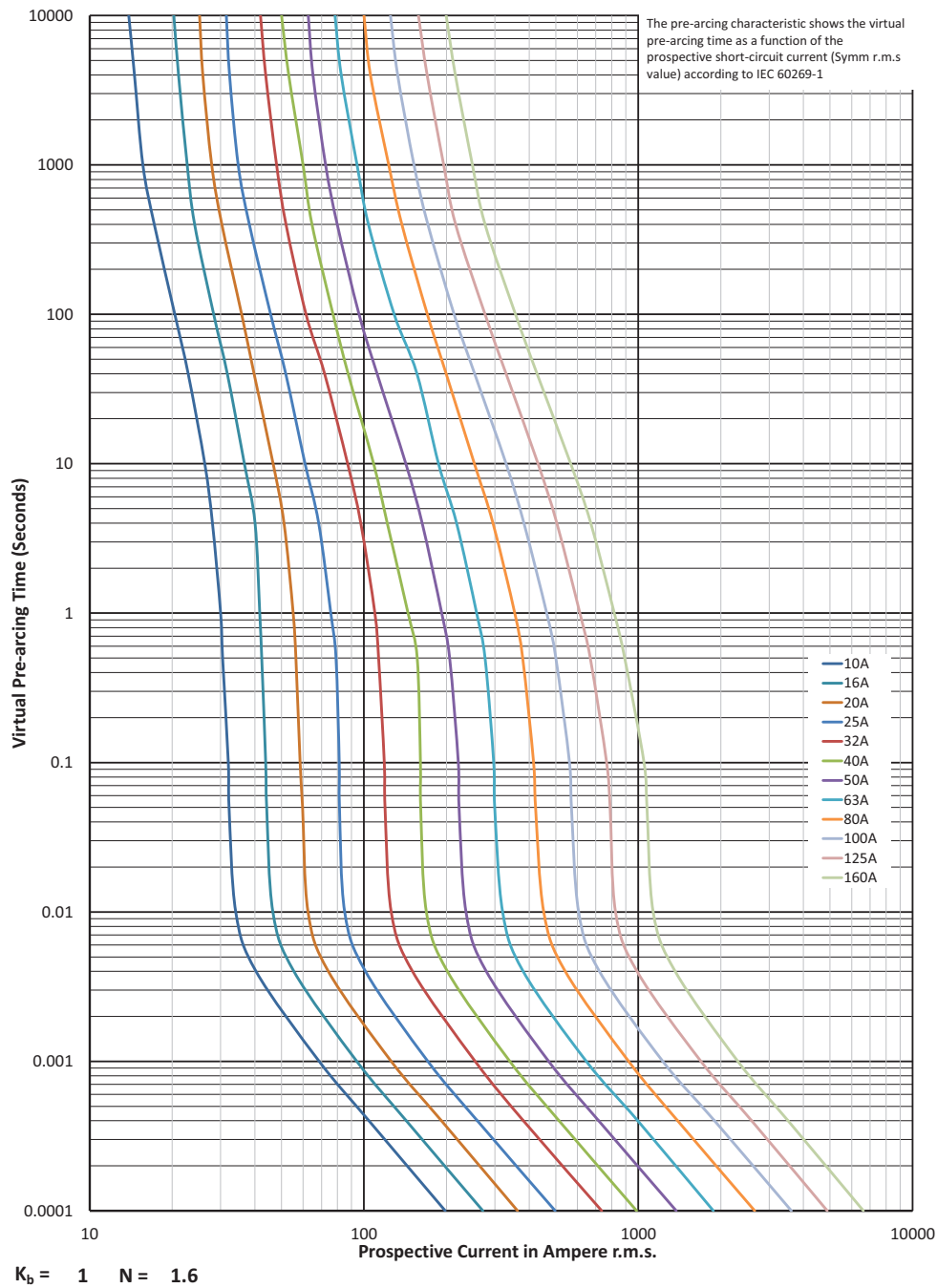
### Catalogue numbers

| Fuse link<br>body size | Rated voltage    | Rated current<br>(Amps) <sup>1</sup> | I <sup>2</sup> t (A <sup>2</sup> Sec) |                           | Watts loss<br>(W) | Catalogue numbers          |
|------------------------|------------------|--------------------------------------|---------------------------------------|---------------------------|-------------------|----------------------------|
|                        |                  |                                      | Pre-arcing                            | Clearing<br>at 690 V a.c. |                   | Type T indicator for micro |
| 00                     | 690 V a.c. (IEC) | 10                                   | 3.8                                   | 20                        | 3.5               | 170M2691                   |
|                        |                  | 16                                   | 7.2                                   | 38                        | 5.5               | 170M2692                   |
|                        |                  | 20                                   | 13                                    | 70                        | 6                 | 170M2693                   |
|                        |                  | 25                                   | 24                                    | 125                       | 8                 | 170M2694                   |
|                        |                  | 32                                   | 53                                    | 275                       | 9                 | 170M2695                   |
|                        |                  | 40                                   | 95                                    | 490                       | 10                | 170M2696                   |
|                        |                  | 50                                   | 185                                   | 1000                      | 11                | 170M2697                   |
|                        |                  | 63                                   | 345                                   | 1800                      | 14                | 170M2698                   |
|                        |                  | 80                                   | 695                                   | 3600                      | 16                | 170M2699                   |
|                        |                  | 100                                  | 1250                                  | 6650                      | 19                | 170M2700                   |
|                        |                  | 125                                  | 2300                                  | 12,000                    | 23                | 170M2701                   |
|                        |                  | 160                                  | 4350                                  | 22,500                    | 29                | 170M2702                   |
| 1                      | 690 V a.c. (IEC) | 50                                   | 135                                   | 705                       | 12                | 170M4176                   |
|                        |                  | 63                                   | 245                                   | 1300                      | 15                | 170M4177                   |
|                        |                  | 80                                   | 500                                   | 2600                      | 17                | 170M4178                   |
|                        |                  | 100                                  | 950                                   | 4850                      | 20                | 170M4179                   |
|                        |                  | 125                                  | 1850                                  | 9500                      | 23                | 170M4180                   |
|                        |                  | 160                                  | 3450                                  | 18,000                    | 28                | 170M4181                   |
|                        |                  | 200                                  | 6750                                  | 34,500                    | 31                | 170M4182                   |
|                        |                  | 250                                  | 13,500                                | 70,500                    | 35                | 170M4183                   |
|                        |                  | 315                                  | 26,000                                | 135,000                   | 41                | 170M4184                   |
|                        |                  | 350                                  | 34,000                                | 175,000                   | 45                | 170M4185                   |
| 2                      | 690 V a.c. (IEC) | 400                                  | 48,500                                | 250,000                   | 48                | 170M4186                   |
|                        |                  | 200                                  | 5650                                  | 29,000                    | 33                | 170M5881                   |
|                        |                  | 250                                  | 10,000                                | 52,500                    | 40                | 170M5882                   |
|                        |                  | 315                                  | 19,500                                | 105,000                   | 46                | 170M5883                   |
|                        |                  | 350                                  | 26,000                                | 135,000                   | 50                | 170M5884                   |
|                        |                  | 400                                  | 39,500                                | 205,000                   | 53                | 170M5885                   |
|                        |                  | 450                                  | 55,500                                | 290,000                   | 59                | 170M5886                   |
|                        |                  | 500                                  | 73,000                                | 375,000                   | 66                | 170M5887                   |
|                        |                  | 550                                  | 100,000                               | 515,000                   | 70                | 170M5888                   |
| 3                      | 690 V a.c. (IEC) | 630                                  | 150,000                               | 770,000                   | 79                | 170M5889                   |
|                        |                  | 350                                  | 23,000                                | 120,000                   | 55                | 170M6080                   |
|                        |                  | 400                                  | 34,000                                | 175,000                   | 59                | 170M6081                   |
|                        |                  | 450                                  | 48,500                                | 250,000                   | 62                | 170M6082                   |
|                        |                  | 500                                  | 64,000                                | 330,000                   | 67                | 170M6083                   |
|                        |                  | 550                                  | 84,500                                | 435,000                   | 70                | 170M6084                   |
|                        |                  | 630                                  | 125,000                               | 645,000                   | 85                | 170M6085                   |
|                        |                  | 700                                  | 160,000                               | 840,000                   | 93                | 170M6086                   |
|                        |                  | 800                                  | 245,000                               | 1,300,000                 | 99                | 170M6087                   |

<sup>1</sup> The RMS Amp rating of this fuse links range is given with open fuse bases connected to copper conductors according to IEC 60269-1, table 17. When used in enclosed fuse bases/disconnects, derating factors have to be observed. Please contact Eaton for application assistance [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com).

# **170M** - Sizes 00 to 3, DIN 43620, Full range (gR), 690 V a.c. (IEC), 10 A to 800 A

Time-current curve - Size 00, 10 A to 160 A



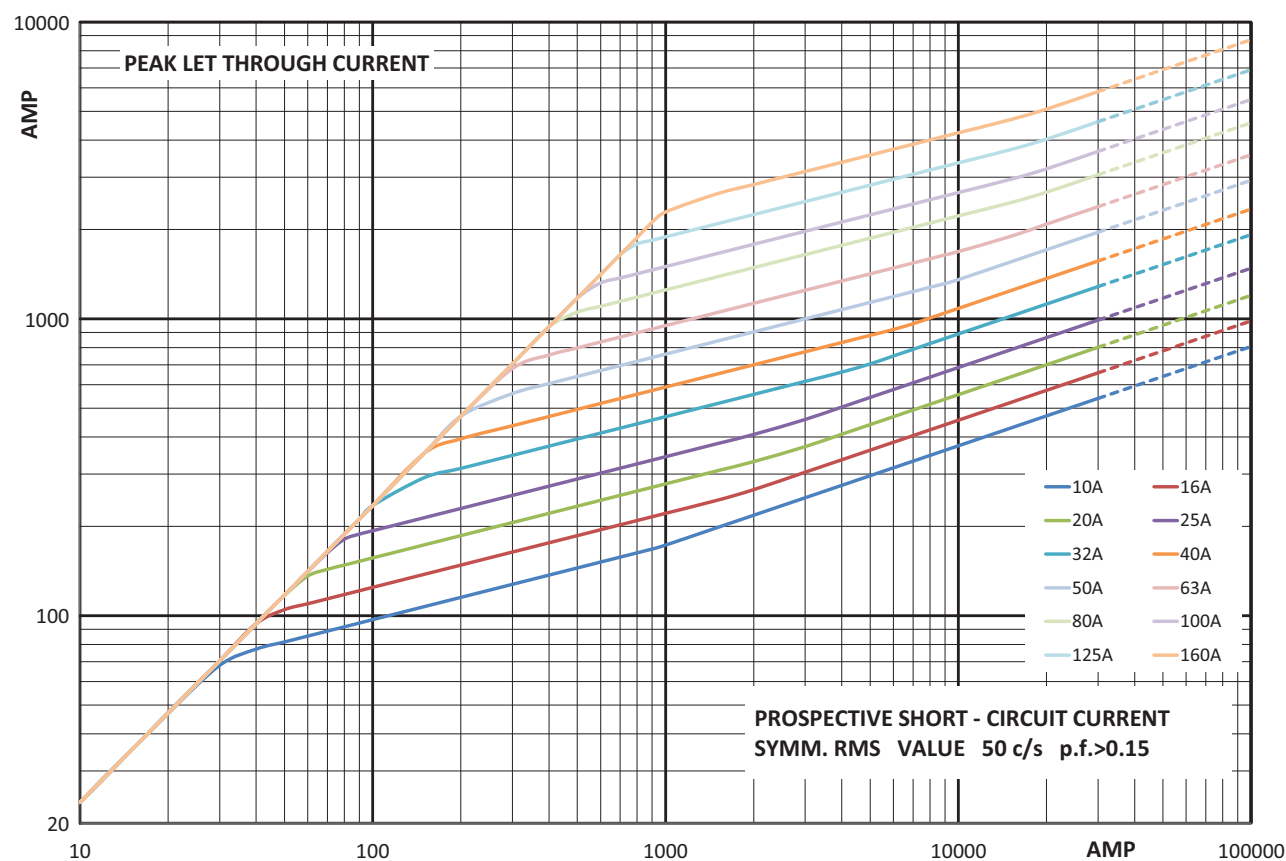
Data sheets: 170K6412 (Size 00), 170K6416 (Size 1), 170K6418 (Size 2), 170K6420 (Size 3)



Square body fuse links

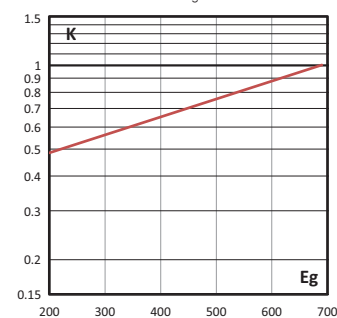
170M - Sizes 00 to 3, DIN 43620, Full range (gR), 690 V a.c. (IEC), 10 A to 800 A

Cut-off curve - Size 00, 10 A to 160 A



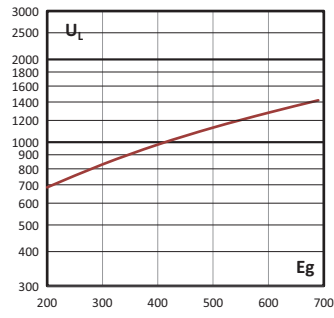
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



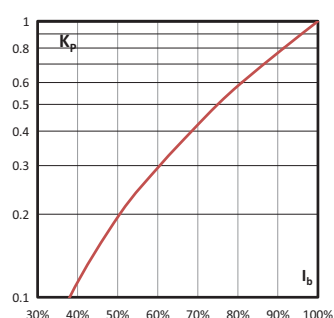
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



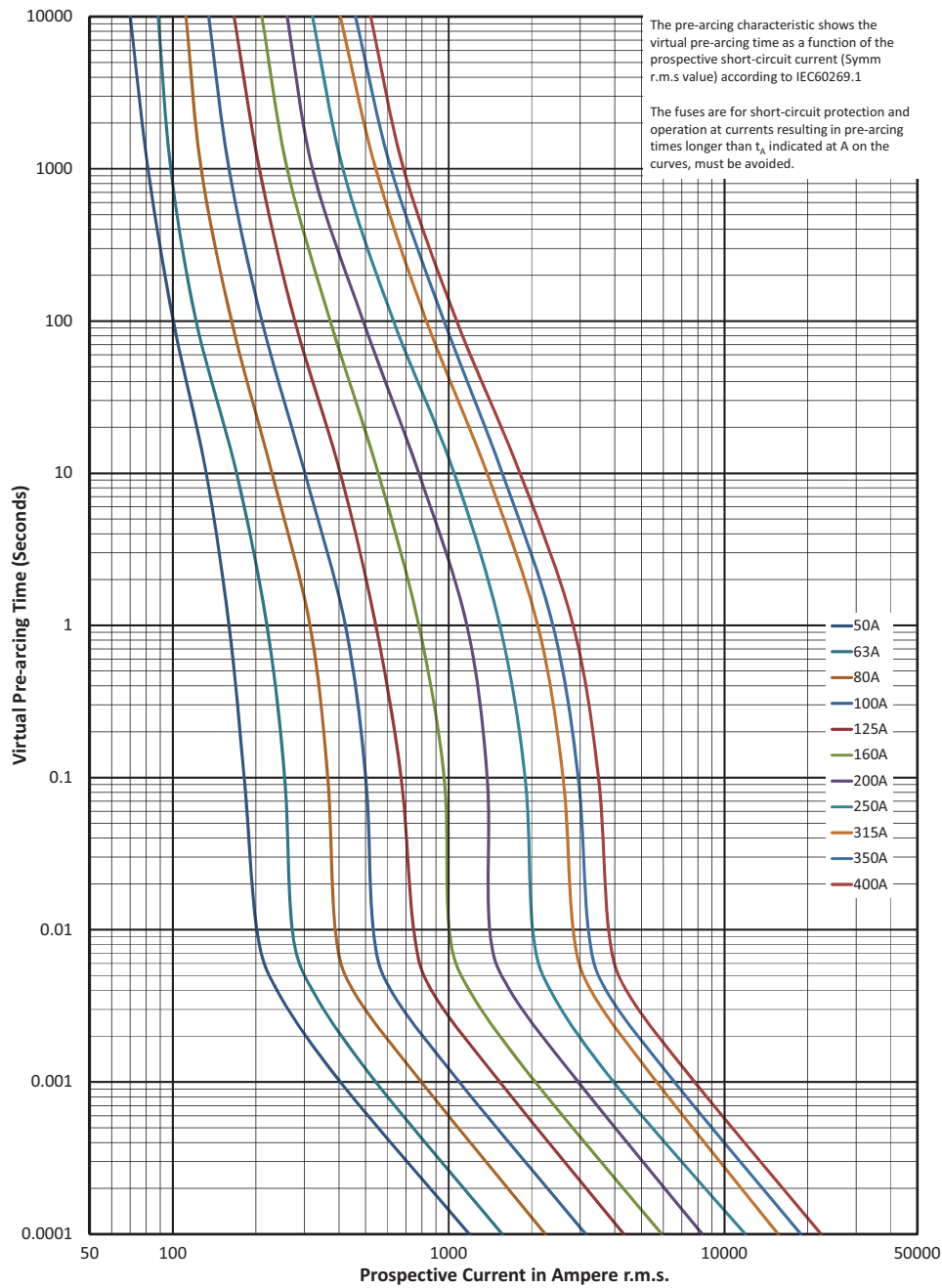
Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



# 170M - Sizes 00 to 3, DIN 43620, Full range (gR), 690 V a.c. (IEC), 10 A to 800 A

## Time-current curve - Size 1, 50 A to 400 A

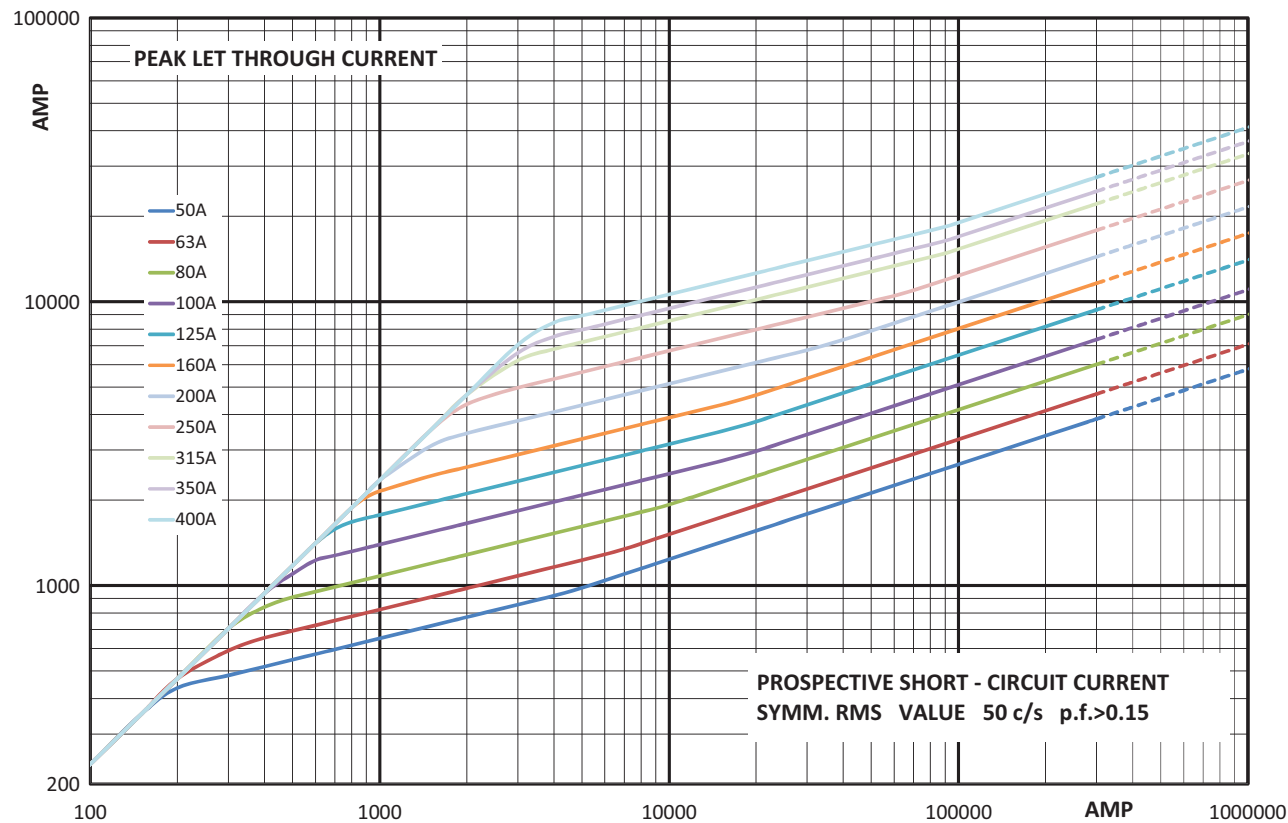


$K_b = 1$   $N = 1,6$

Square body fuse links

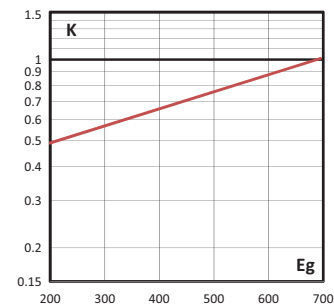
170M - Sizes 00 to 3, DIN 43620, Full range (gR), 690 V a.c. (IEC), 10 A to 800 A

Cut-off curve - Size 1, 50 A to 400 A



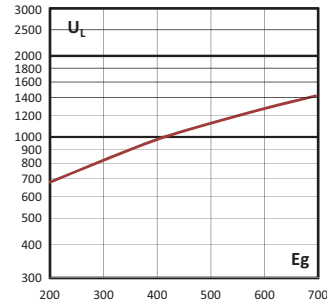
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



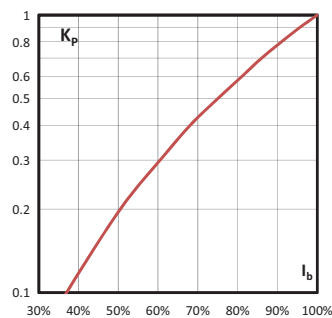
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



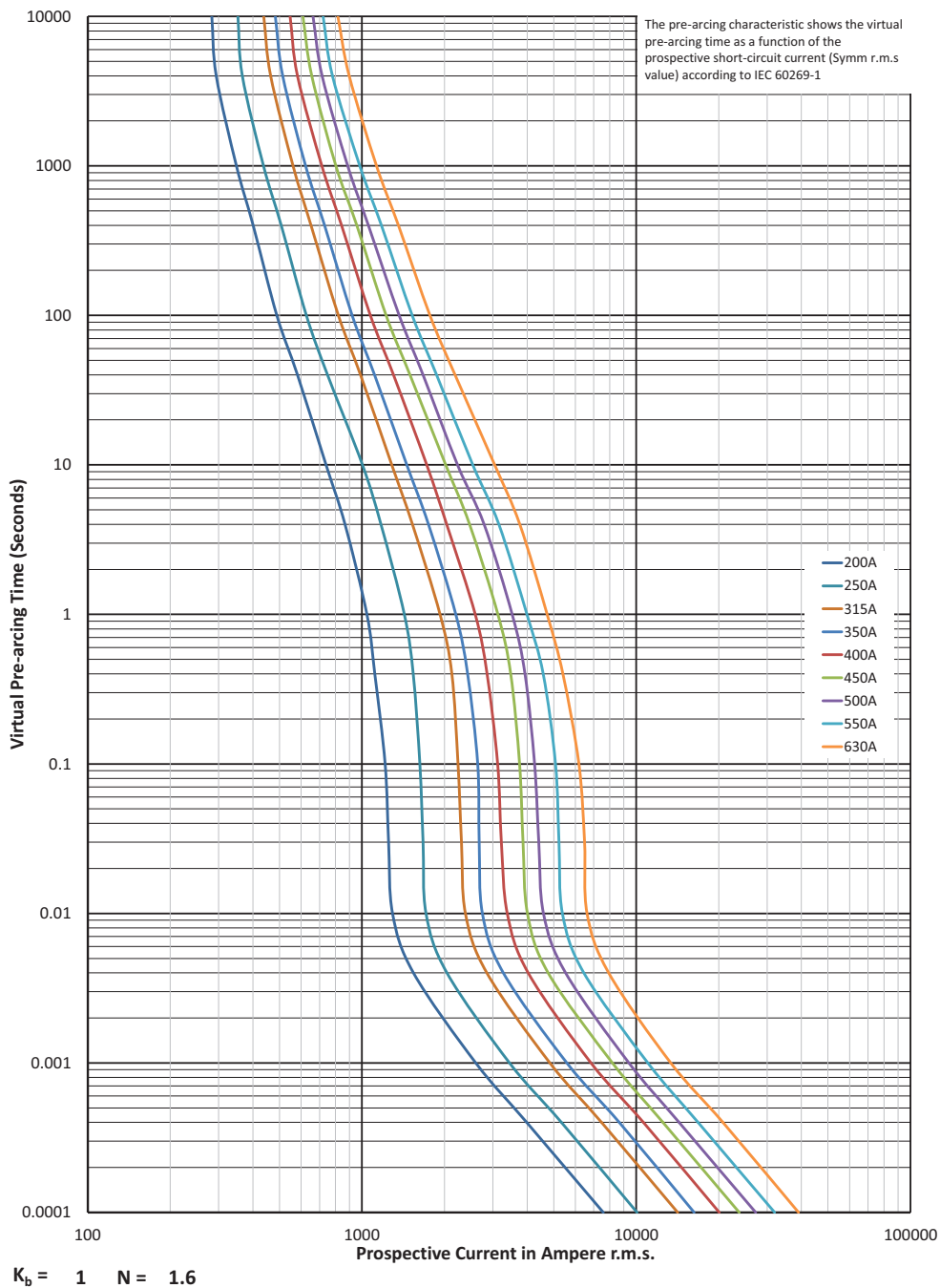
Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



**170M** - Sizes 00 to 3, DIN 43620, Full range (gR), 690 V a.c. (IEC), 10 A to 800 A

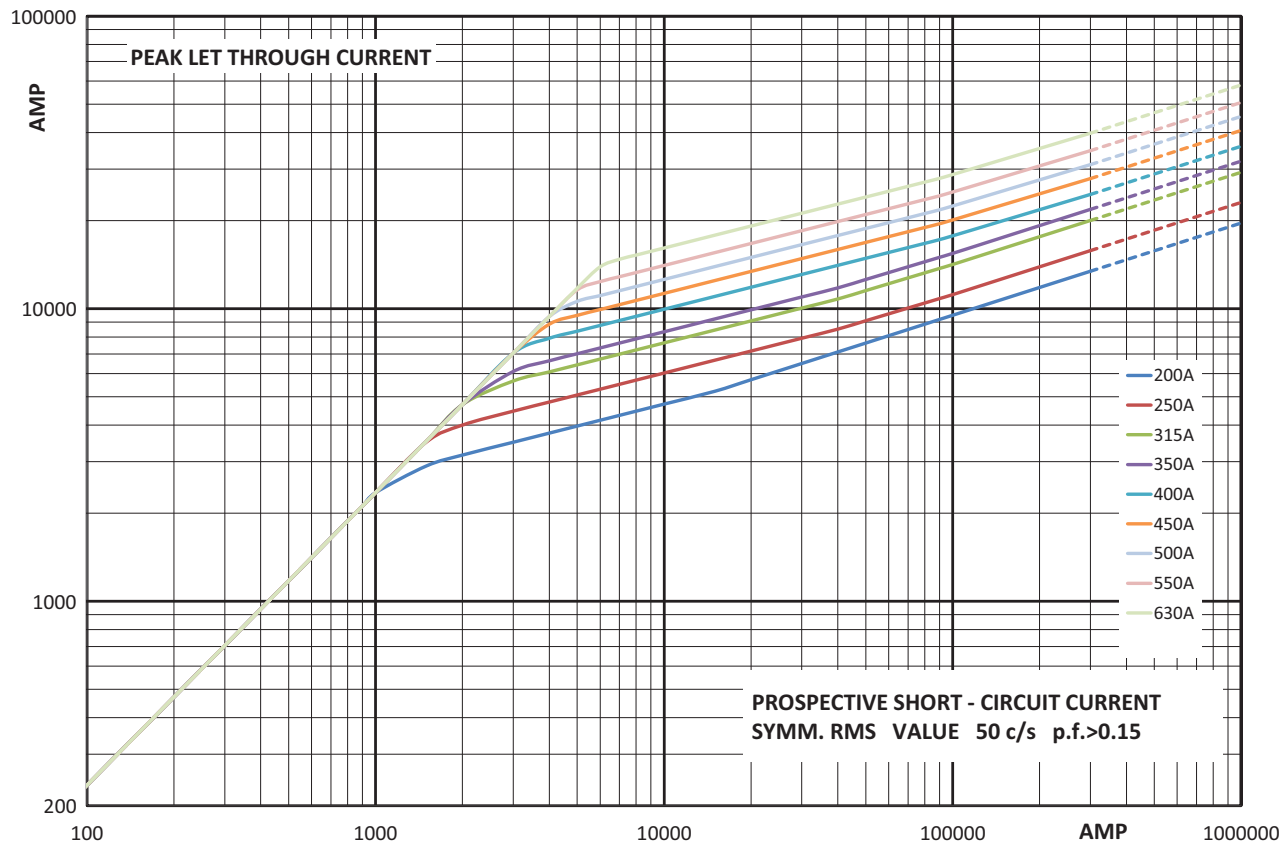
Time-current curve - Size 2, 200 A to 630 A



Square body fuse links

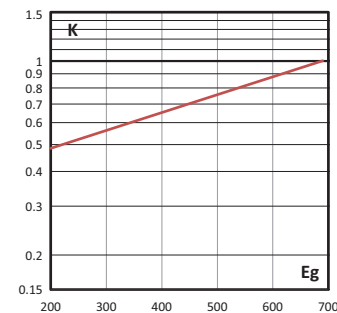
170M - Sizes 00 to 3, DIN 43620, Full range (gR), 690 V a.c. (IEC), 10 A to 800 A

Cut-off curve - Size 2, 200 A to 630 A



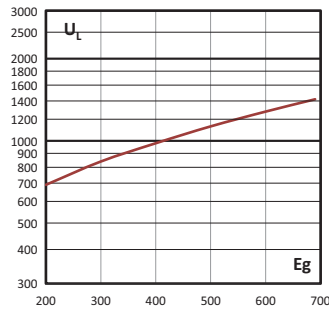
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



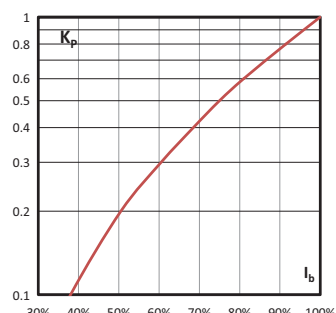
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



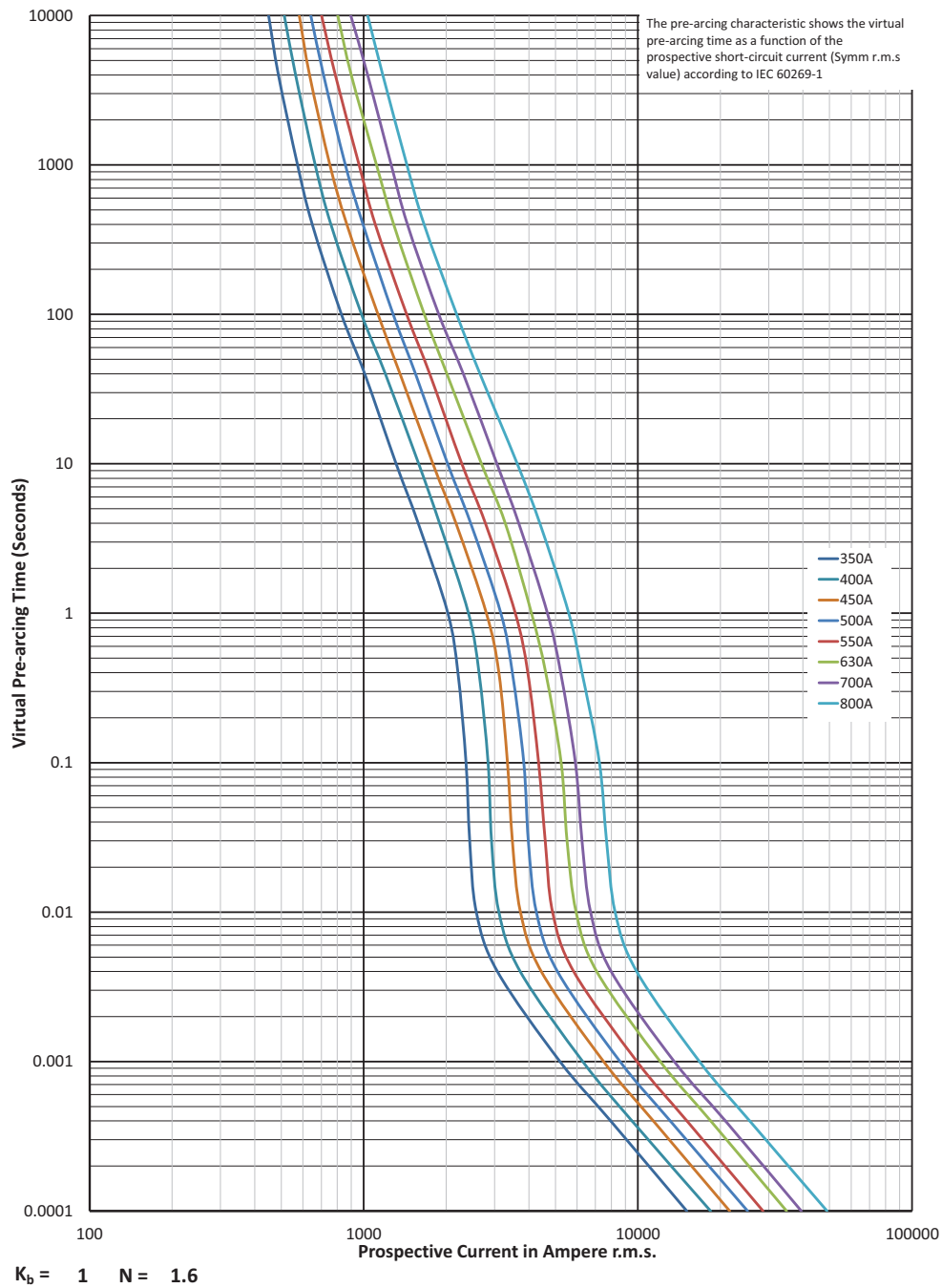
Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



# 170M - Sizes 00 to 3, DIN 43620, Full range (gR), 690 V a.c. (IEC), 10 A to 800 A

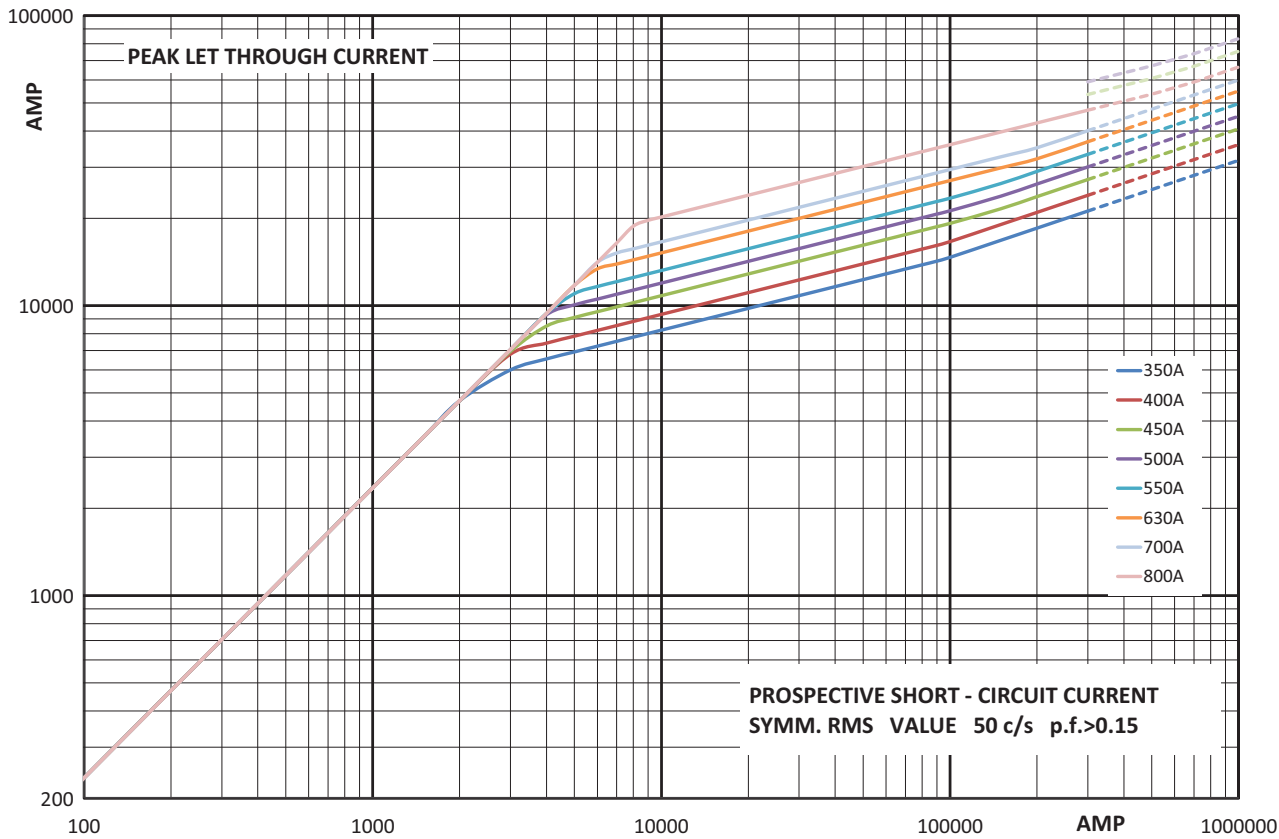
## Time-current curve - Size 3, 350 A to 800 A



# Square body fuse links

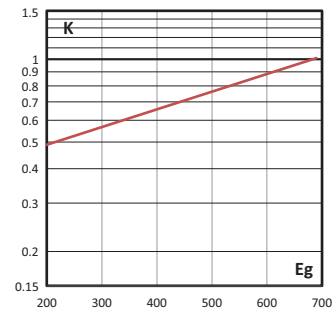
## 170M - Sizes 00 to 3, DIN 43620, Full range (gR), 690 V a.c. (IEC), 10 A to 800 A

### Cut-off curve - Size 3, 350 A to 1000 A



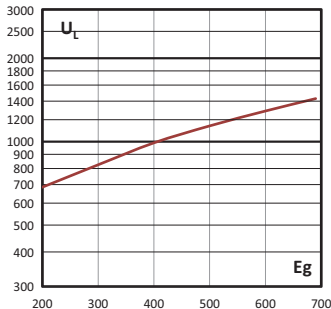
### Total clearing I²t

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



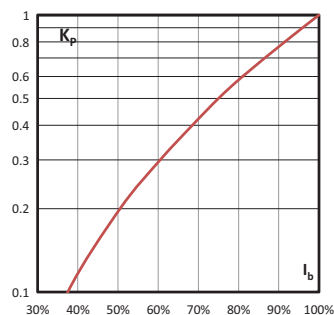
### Arc voltage

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 percent.



### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



## 170M - Sizes 000 to 3, DIN 43620, Dual indicator fuse links, 690 V a.c. (IEC), 700 V a.c. (UL), 10 A to 1600 A

### Specifications

#### Description

Square body DIN 43620 blade high speed fuse links with dual indicator system: one indicator in the fuse body and another one in the metallic end plate. Interchangeable with existing high speed DIN 43620 fuse links for the protection of UPS, soft starters, solid state relays, variable speed drives, rectifiers and inverters.

#### Technical data

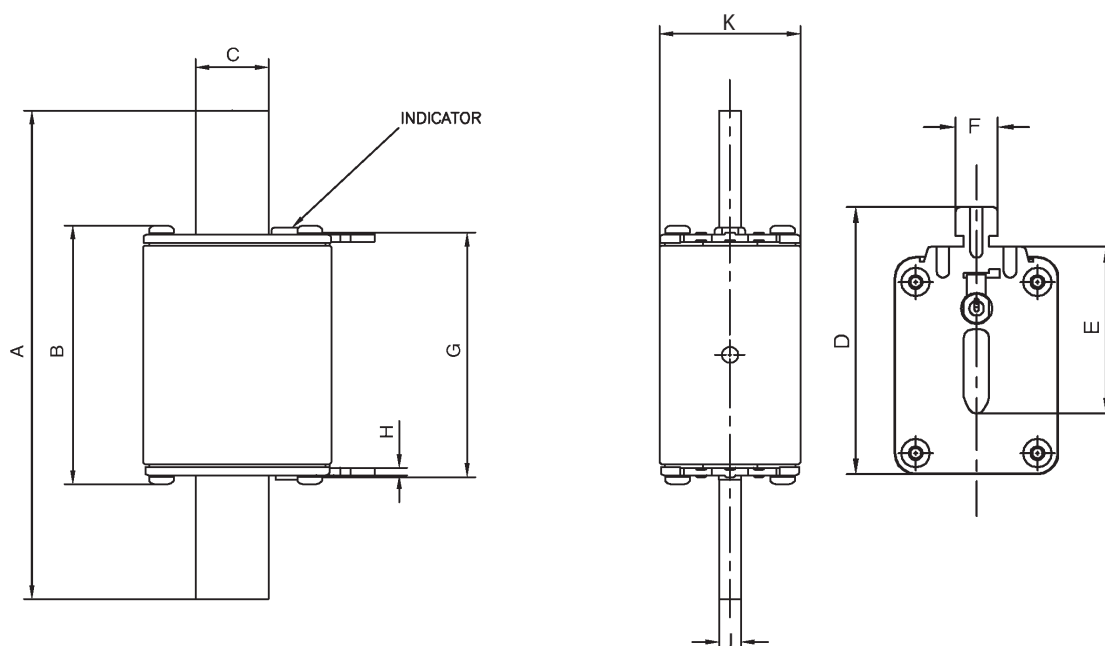
- Rated voltage:
  - 690 V a.c. (IEC)
  - 700 V a.c. (UL)
- Rated current: 10 A to 1600 A
- Breaking capacity: 200 kA RMS Sym
- Operating class: gR (size 000, 10 A to 63A), aR (others)

#### Standards / Agency information

CE, IEC60269 Part 4, UL and CSA Recognised



#### Dimensions (mm)



| Size | A    | B    | C    | D  | E  | F  | G    | H   | J | K    |
|------|------|------|------|----|----|----|------|-----|---|------|
| 000  | 78.5 | 53   | 15   | 52 | 35 | 10 | 49.7 | 1.5 | 6 | 20.5 |
| 00   | 78.5 | 53   | 15   | 59 | 35 | 10 | 49.7 | 2   | 6 | 30   |
| 1    | 135  | 71.4 | 20   | 64 | 40 | 10 | 67.5 | 2   | 6 | 40   |
| 2    | 150  | 71.4 | 25.1 | 72 | 48 | 10 | 67.5 | 2   | 6 | 54   |
| 3    | 150  | 72.4 | 32   | 87 | 60 | 10 | 68.5 | 2.5 | 6 | 71   |

Data sheets: 170K6386 (Size 000 and 00), 170K6388 (Size 1), 170K6390 (Size 2), 170K6392 (Size 3)



## Square body fuse links

**170M** - Sizes 000 to 3, DIN 43620, Dual indicator fuse links, 690 V a.c. (IEC), 700 V a.c. (UL), 10 A to 1600 A  
Catalogue numbers

| Fuse link<br>body size | Rated voltage                       | Rated current<br>(Amps) | Max permissible<br>load current | I <sup>2</sup> t (A <sup>2</sup> Sec) |                           | Watts loss<br>(W) <sup>2</sup> | Catalogue numbers      |
|------------------------|-------------------------------------|-------------------------|---------------------------------|---------------------------------------|---------------------------|--------------------------------|------------------------|
|                        |                                     |                         |                                 | Pre-arcing                            | Clearing<br>at 690 V a.c. |                                | Dual indicator         |
| 000                    | 690 V a.c. (IEC)<br>700 V a.c. (UL) | 10                      | 10                              | 4                                     | 27                        | 2.5                            | 170M1558D              |
|                        |                                     | 16                      | 16                              | 7                                     | 51                        | 4                              | 170M1559D              |
|                        |                                     | 20                      | 20                              | 11.5                                  | 82.5                      | 5                              | 170M1560D              |
|                        |                                     | 25                      | 25                              | 19                                    | 140                       | 6                              | 170M1561D              |
|                        |                                     | 32                      | 32                              | 40                                    | 285                       | 7                              | 170M1562D              |
|                        |                                     | 40                      | 40                              | 65                                    | 490                       | 8.5                            | 170M1563D              |
|                        |                                     | 50                      | 50                              | 115                                   | 815                       | 9.5                            | 170M1564D              |
|                        |                                     | 63                      | 63                              | 215                                   | 1550                      | 11.5                           | 170M1565D              |
|                        |                                     | 80                      | 80                              | 380                                   | 2700                      | 15                             | 170M1566D              |
|                        |                                     | 100                     | 100                             | 695                                   | 4950                      | 16.5                           | 170M1567D              |
|                        |                                     | 125                     | 125                             | 1180                                  | 8250                      | 21.5                           | 170M1568D              |
|                        |                                     | 160                     | 160                             | 2300                                  | 16,500                    | 25                             | 170M1569D              |
|                        |                                     | 200                     | 200                             | 4350                                  | 31,000                    | 29.5                           | 170M1570D              |
|                        |                                     | 250                     | 250                             | 7900                                  | 56,000                    | 35.5                           | 170M1571D              |
| 00                     | 690 V a.c. (IEC) / 700 V a.c. (UL)  | 315                     | 315                             | 12,000                                | 84,500                    | 45                             | 170M1572D              |
| 1                      | 690 V a.c. (IEC)<br>700 V a.c. (UL) | 40                      | 25                              | 40                                    | 285                       | 4                              | 170M3808D              |
|                        |                                     | 50                      | 30                              | 78                                    | 550                       | 4.5                            | 170M3809D              |
|                        |                                     | 63                      | 38                              | 120                                   | 850                       | 6.5                            | 170M3810D              |
|                        |                                     | 80                      | 50                              | 185                                   | 1350                      | 8.5                            | 170M3811D              |
|                        |                                     | 100                     | 60                              | 360                                   | 2600                      | 10                             | 170M3812D              |
|                        |                                     | 125                     | 75                              | 550                                   | 3900                      | 11                             | 170M3813D              |
|                        |                                     | 160                     | 95                              | 1150                                  | 8250                      | 12                             | 170M3814D              |
|                        |                                     | 200                     | 120                             | 2300                                  | 16,500                    | 12.5                           | 170M3815D              |
|                        |                                     | 250                     | 150                             | 4350                                  | 31,000                    | 16                             | 170M3816D              |
|                        |                                     | 315                     | 190                             | 7300                                  | 52,000                    | 20                             | 170M3817D              |
|                        |                                     | 350                     | 210                             | 10,000                                | 73,000                    | 21.5                           | 170M3818D              |
|                        |                                     | 400                     | 240                             | 16,000                                | 115,000                   | 23                             | 170M3819D              |
|                        |                                     | 450                     | 270                             | 21,500                                | 155,000                   | 26.5                           | 170M4863D              |
|                        |                                     | 500                     | 300                             | 27,000                                | 190,000                   | 28.5                           | 170M4864D              |
|                        |                                     | 550                     | 330                             | 33,500                                | 240,000                   | 33                             | 170M4865D              |
|                        |                                     | 630                     | 380                             | 48,500                                | 345,000                   | 37.5                           | 170M4866D              |
|                        |                                     | 700                     | 420                             | 69,500                                | 495,000                   | 39                             | 170M4867D <sup>1</sup> |
| 2                      | 690 V a.c. (IEC)<br>700 V a.c. (UL) | 400                     | 240                             | 11,000                                | 79,000                    | 29                             | 170M5808D              |
|                        |                                     | 450                     | 270                             | 16,000                                | 115,000                   | 32                             | 170M5809D              |
|                        |                                     | 500                     | 300                             | 21,500                                | 155,000                   | 34                             | 170M5810D              |
|                        |                                     | 550                     | 330                             | 29,000                                | 215,000                   | 36                             | 170M5811D              |
|                        |                                     | 630                     | 380                             | 41,000                                | 295,000                   | 42                             | 170M5812D              |
|                        |                                     | 700                     | 420                             | 60,500                                | 430,000                   | 43                             | 170M5813D              |
|                        |                                     | 800                     | 480                             | 86,000                                | 610,000                   | 48                             | 170M5814D              |
|                        |                                     | 900                     | 540                             | 125,000                               | 895,000                   | 52                             | 170M5820D              |
|                        |                                     | 1000                    | 600                             | 180,000                               | 1,300,000                 | 53                             | 170M5816D              |
|                        |                                     | 1100                    | 660                             | 245,000                               | 1,750,000                 | 56                             | 170M5817D              |
| 3                      | 690 V a.c. (IEC)<br>700 V a.c. (UL) | 500                     | 300                             | 14,000                                | 99,500                    | 43                             | 170M6808D              |
|                        |                                     | 550                     | 330                             | 19,500                                | 140,000                   | 44                             | 170M6809D              |
|                        |                                     | 630                     | 380                             | 31,000                                | 220,000                   | 45                             | 170M6810D              |
|                        |                                     | 700                     | 420                             | 45,000                                | 320,000                   | 46                             | 170M6811D              |
|                        |                                     | 800                     | 480                             | 69,500                                | 490,000                   | 48                             | 170M6812D              |
|                        |                                     | 900                     | 540                             | 100,000                               | 720,000                   | 50                             | 170M6813D              |
|                        |                                     | 1000                    | 600                             | 140,000                               | 985,000                   | 56                             | 170M6814D              |
|                        |                                     | 1100                    | 660                             | 190,000                               | 1,400,000                 | 57                             | 170M6892D              |
|                        |                                     | 1250                    | 750                             | 300,000                               | 2,150,000                 | 61                             | 170M8554D              |
|                        |                                     | 1400                    | 840                             | 380,000                               | 2,700,000                 | 70                             | 170M8555D              |
|                        |                                     | 1500                    | 900                             | 470,000                               | 3,350,000                 | 72                             | 170M8556D              |
|                        |                                     | 1600                    | 960                             | 585,000                               | 4,150,000                 | 74                             | 170M8557D              |

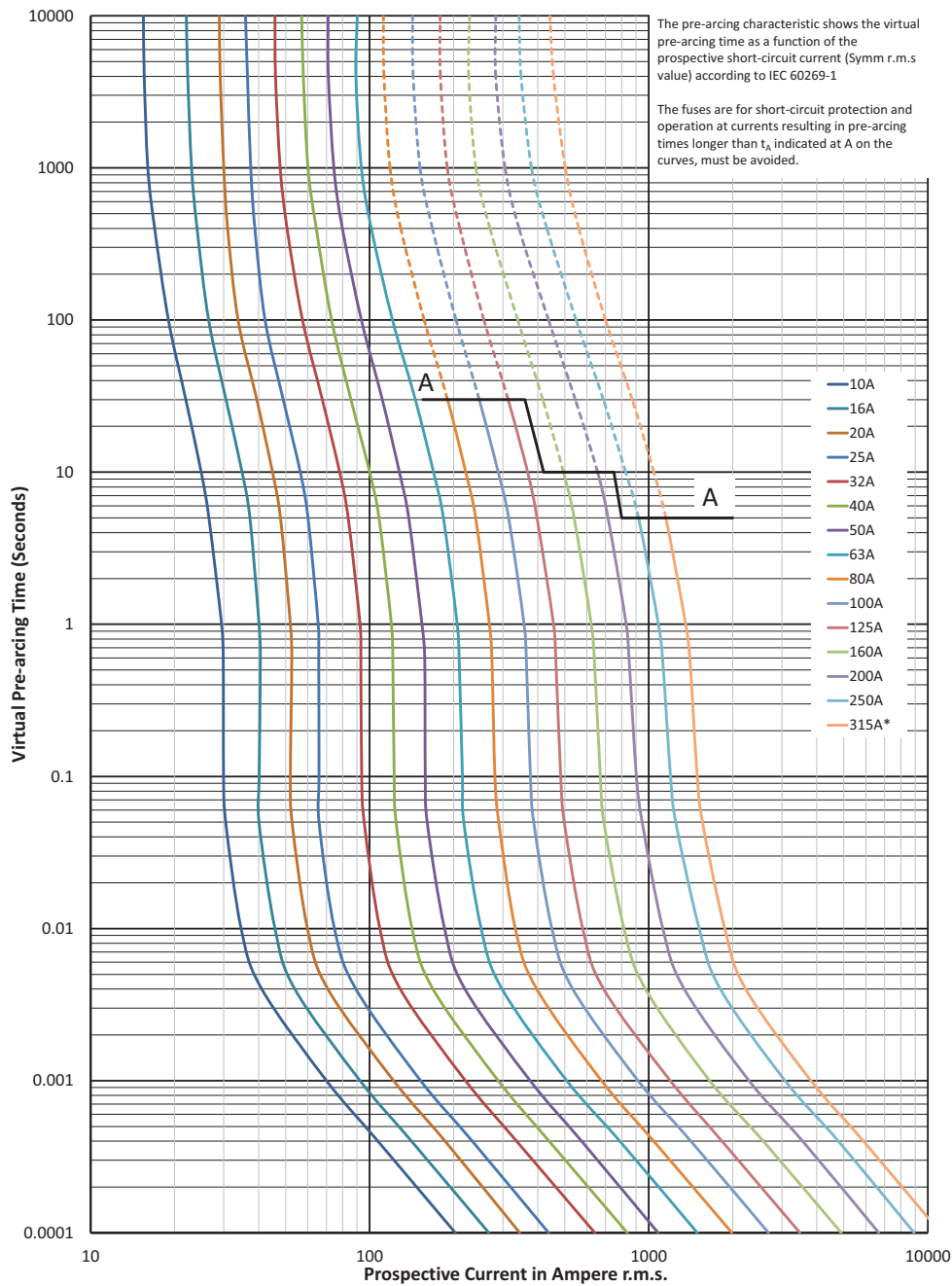
<sup>1</sup> 170M4867D is not UL recognised.

<sup>2</sup> Given at maximum load Rated current, please refer to data sheets for further details.

Data sheets: 170K6386 (Size 000 and 00), 170K6388 (Size 1), 170K6390 (Size 2), 170K6392 (Size 3)

## 170M - Sizes 000 to 3, DIN 43620, Dual indicator fuse links, 690 V a.c. (IEC), 700 V a.c. (UL), 10 A to 1600 A

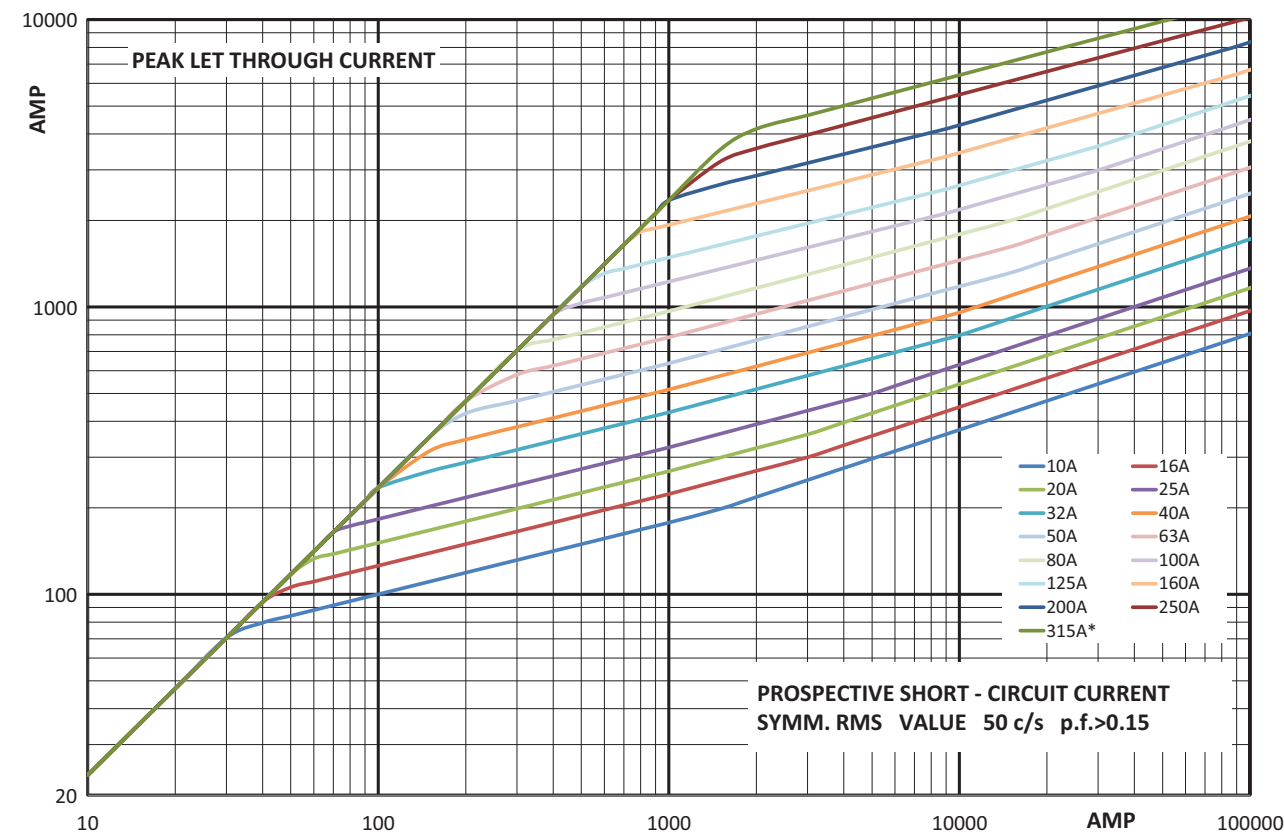
### Time-current curve - Sizes 000 and 00, 10 A to 315 A



# Square body fuse links

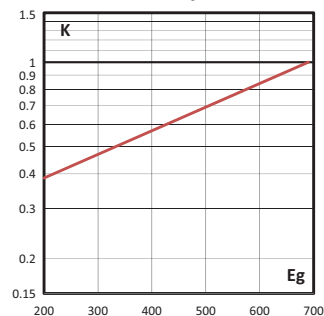
**170M** - Sizes 000 to 3, DIN 43620, Dual indicator fuse links, 690 V a.c. (IEC), 700 V a.c. (UL), 10 A to 1600 A

Cut-off curve - Sizes 000 and 00, 10 A to 315 A



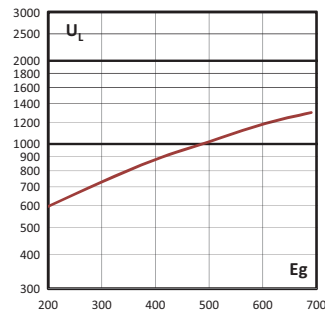
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



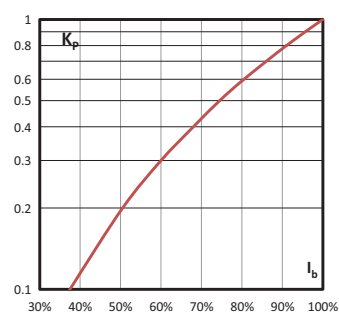
## Arc voltage

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 percent.



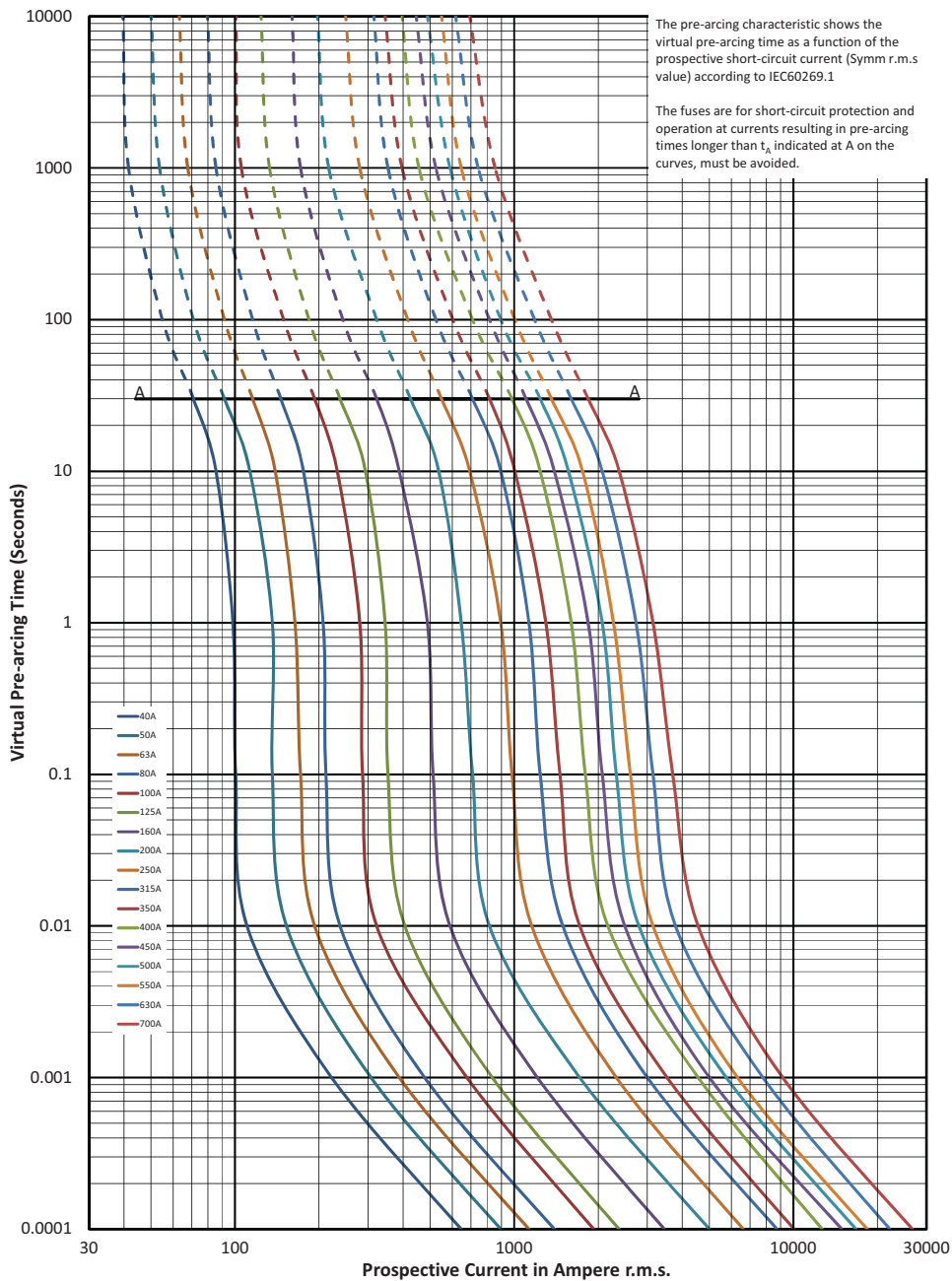
## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



## 170M - Sizes 000 to 3, DIN 43620, Dual indicator fuse links, 690 V a.c. (IEC), 700 V a.c. (UL), 10 A to 1600 A

### Time-current curve - Size 1, 40 A to 700 A

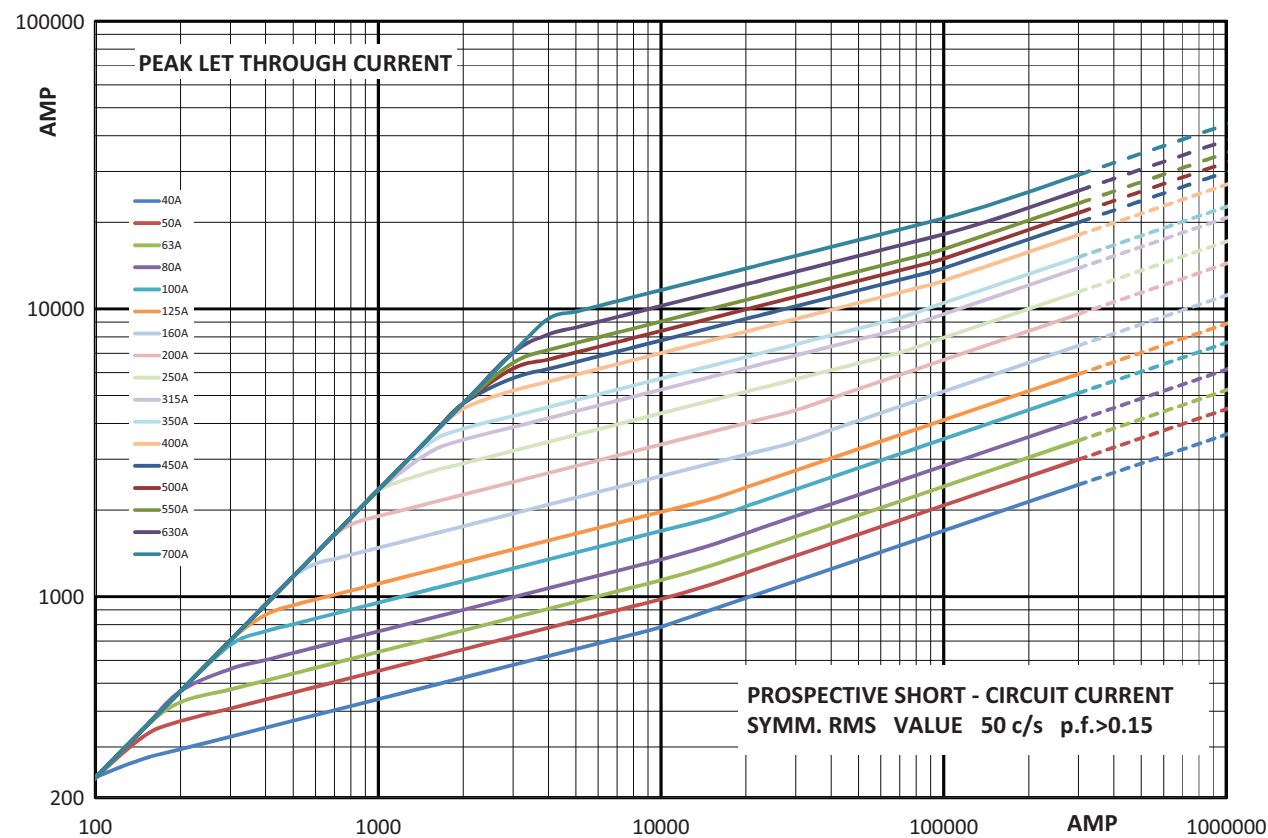


$K_b = 0,6$   $N = 1,6$

# Square body fuse links

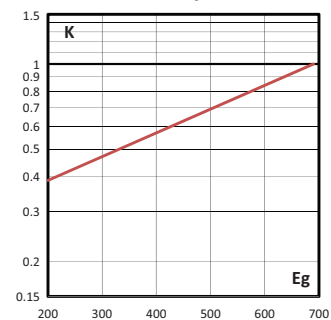
**170M** - Sizes 000 to 3, DIN 43620, Dual indicator fuse links, 690 V a.c. (IEC), 700 V a.c. (UL), 10 A to 1600 A

Cut-off curve - Size 1, 40 A to 700 A



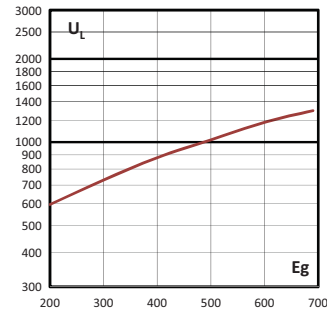
## Total clearing I²t

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



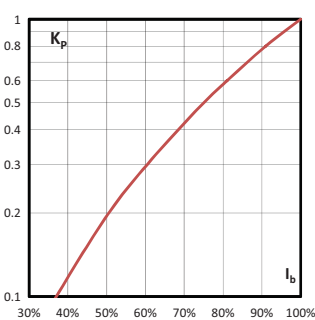
## Arc voltage

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 percent.



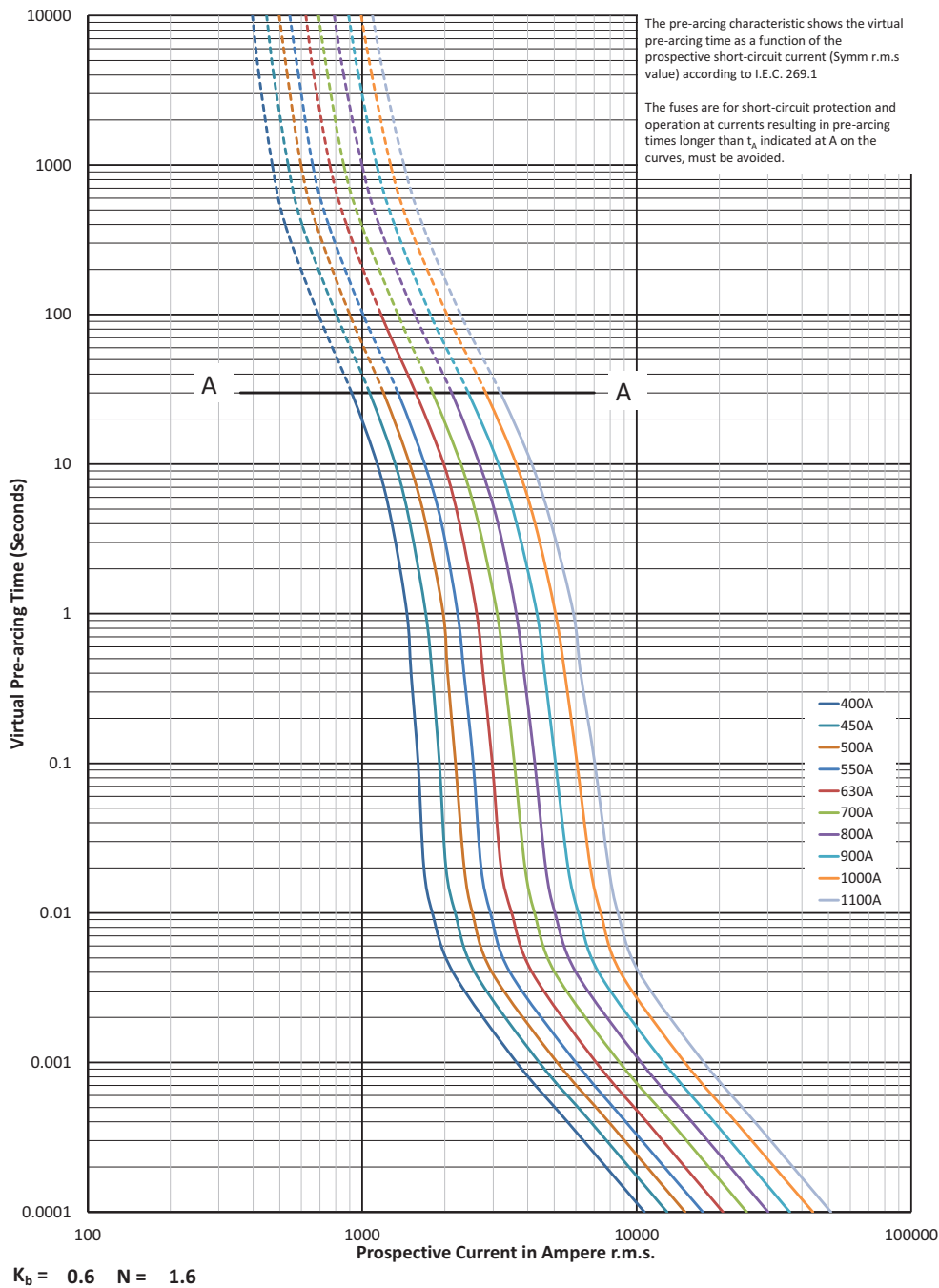
## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



## 170M - Sizes 000 to 3, DIN 43620, Dual indicator fuse links, 690 V a.c. (IEC), 700 V a.c. (UL), 10 A to 1600 A

### Time-current curve - Size 2, 400 A to 1100 A

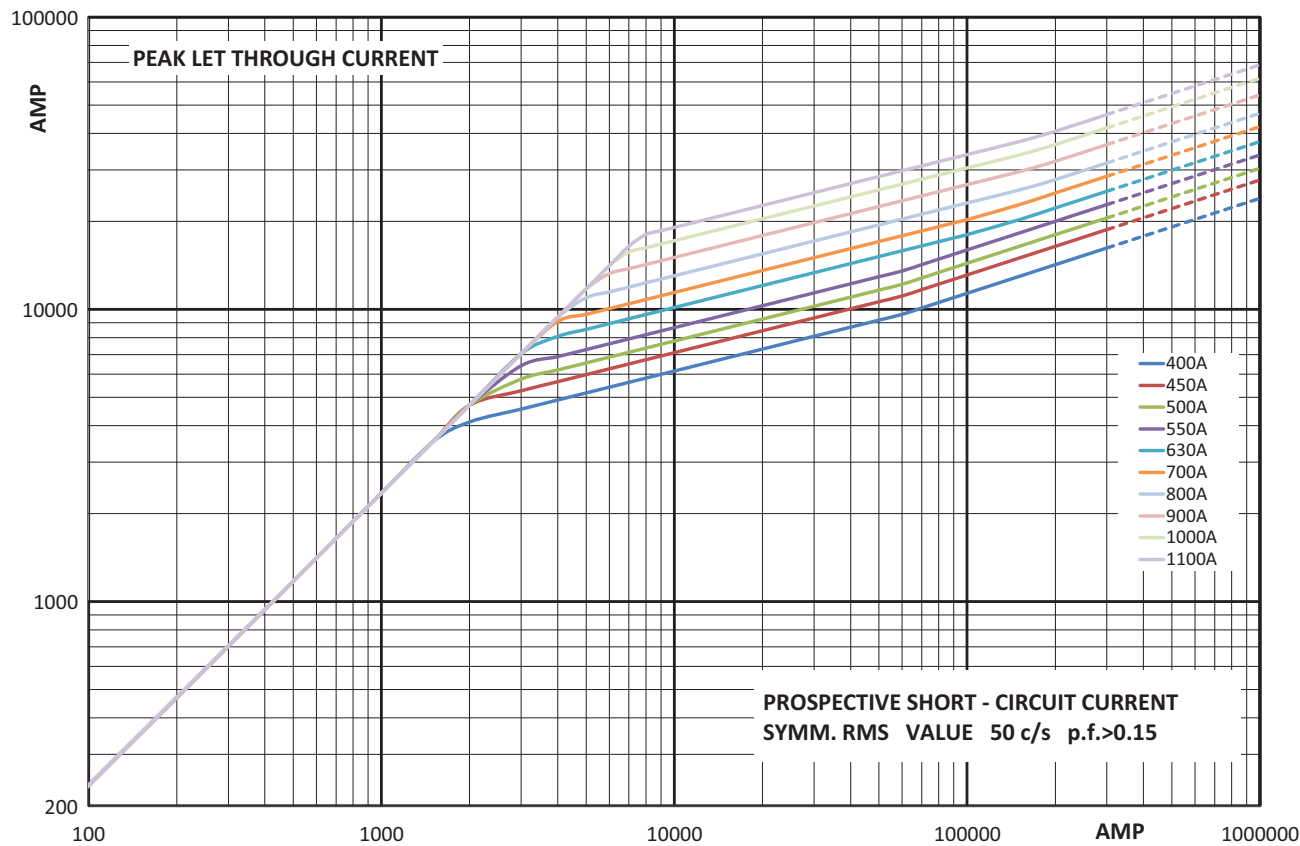


Data sheets: 170K6386 (Size 000 and 00), 170K6388 (Size 1), 170K6390 (Size 2), 170K6392 (Size 3)

# Square body fuse links

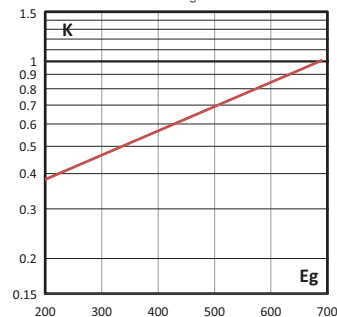
**170M** - Sizes 000 to 3, DIN 43620, Dual indicator fuse links, 690 V a.c. (IEC), 700 V a.c. (UL), 10 A to 1600 A

Cut-off curve - Size 2, 400 A to 1100 A



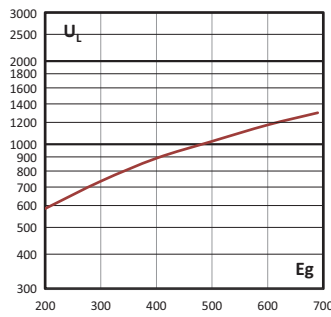
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



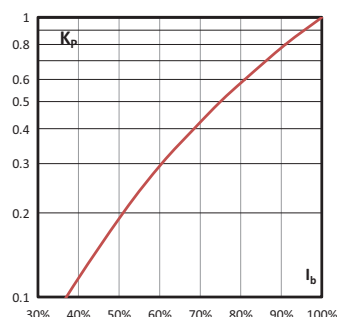
## Arc voltage

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 percent.



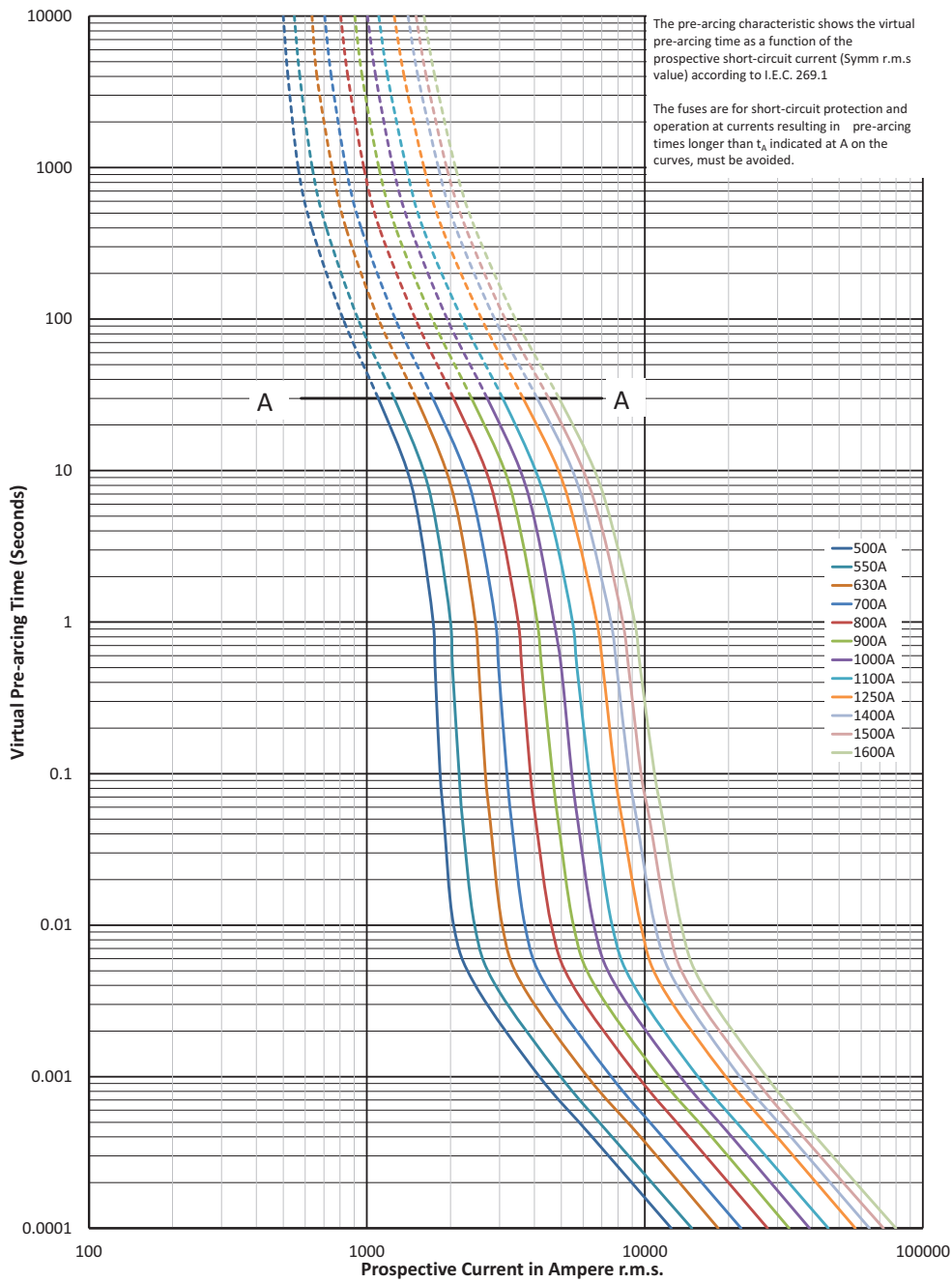
## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



## 170M - Sizes 000 to 3, DIN 43620, Dual indicator fuse links, 690 V a.c. (IEC), 700 V a.c. (UL), 10 A to 1600 A

### Time-current curve - Size 3, 500 A to 1600 A



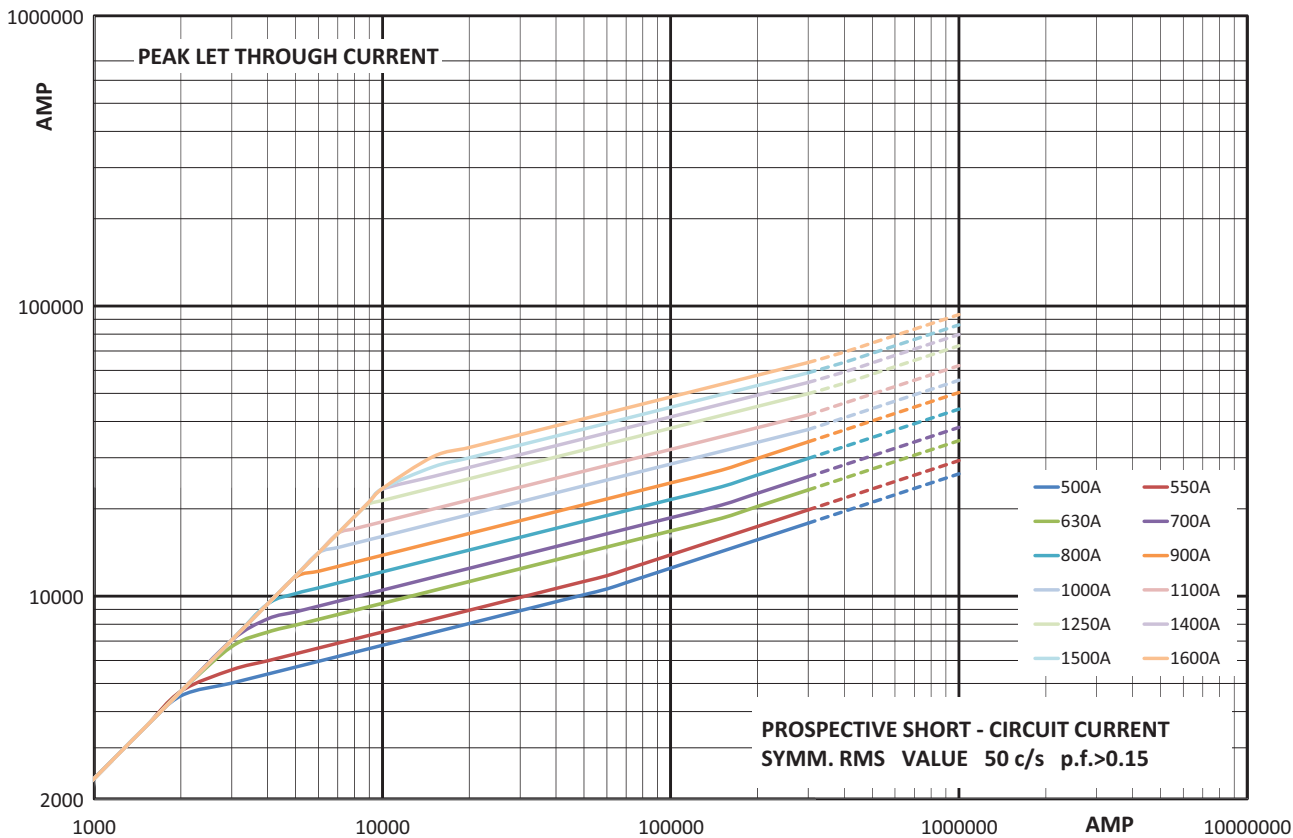
$K_b = 0.6$   $N = 1.6$



# Square body fuse links

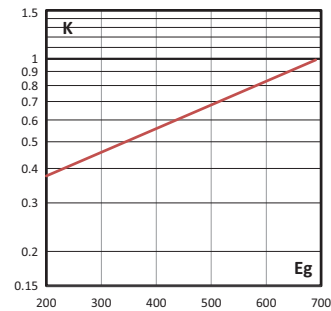
**170M** - Sizes 000 to 3, DIN 43620, Dual indicator fuse links, 690 V a.c. (IEC), 700 V a.c. (UL), 10 A to 1600 A

Cut-off curve - Size 3, 500 A to 1600 A



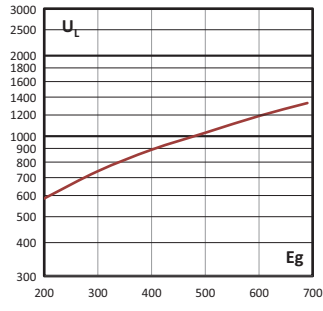
## Total clearing I²t

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



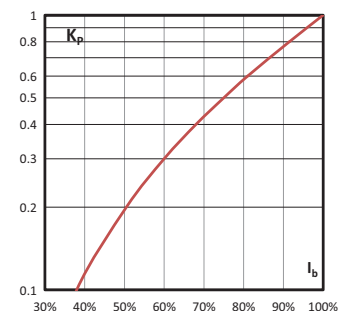
## Arc voltage

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 percent.



## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



## 170M - Size 00, DIN 43620, 1000 V a.c. (IEC and UL), 20 A to 225 A

### Specifications

#### Description

Square body DIN 43620 blade style high speed fuse links for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

#### Technical data

- Rated voltage:
  - 1000 V a.c. (IEC and UL)
  - 900 V a.c. (200 A and 225A)
- Rated current: 20 A to 225 A
- Breaking capacity: 125kA RMS Sym
- Operating class: aR

#### Standards / Agency information

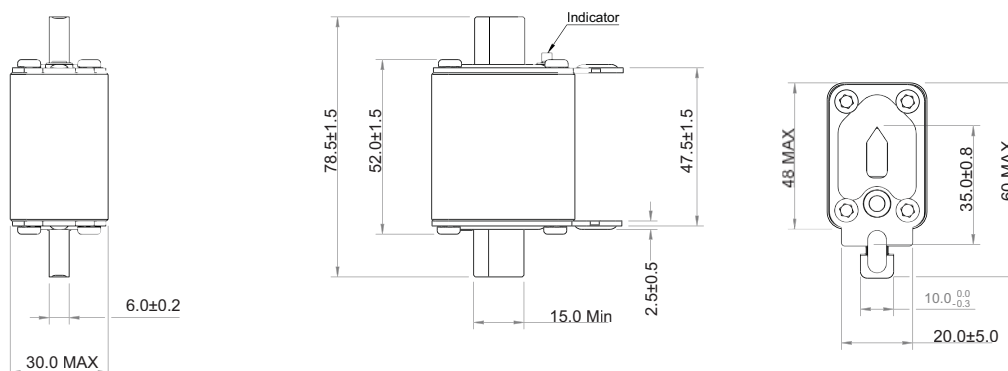
CE, Designed and tested to IEC60269 Part 4, UL Recognised/CSA Component Acceptance status (20 A to 160 A)



#### Catalogue numbers

| Fuse link<br>body size | Rated voltage           | Rated current<br>Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                            | Watts loss<br>(W) | Catalogue numbers          |
|------------------------|-------------------------|------------------------|---------------------------------------|----------------------------|-------------------|----------------------------|
|                        |                         |                        | Pre-arcing                            | Clearing<br>at 1000 V a.c. |                   | Type T indicator for micro |
| 00                     | 1000 V a.c.<br>(IEC/UL) | 20                     | 15                                    | 110                        | 8.5               | 170M2673                   |
|                        |                         | 25                     | 28.5                                  | 210                        | 9.5               | 170M2674                   |
|                        |                         | 32                     | 53                                    | 390                        | 11                | 170M2675                   |
|                        |                         | 35                     | 69                                    | 500                        | 12                | 170M2676                   |
|                        |                         | 40                     | 105                                   | 760                        | 13                | 170M2677                   |
|                        |                         | 50                     | 215                                   | 1550                       | 14                | 170M2678                   |
|                        |                         | 63                     | 380                                   | 2750                       | 16                | 170M2679                   |
|                        |                         | 80                     | 815                                   | 5900                       | 18                | 170M2680                   |
|                        |                         | 100                    | 1550                                  | 11,500                     | 21                | 170M2681                   |
|                        |                         | 125                    | 3000                                  | 22,000                     | 23                | 170M2682                   |
|                        |                         | 160                    | 6250                                  | 45,000                     | 26                | 170M2683                   |
| 00                     | 900 V a.c. (IEC)        | 200                    | 12,000                                | 86,500                     | 31                | 170M2684                   |
|                        |                         | 225                    | 18,000                                | 115,000                    | 33                | 170M2685                   |

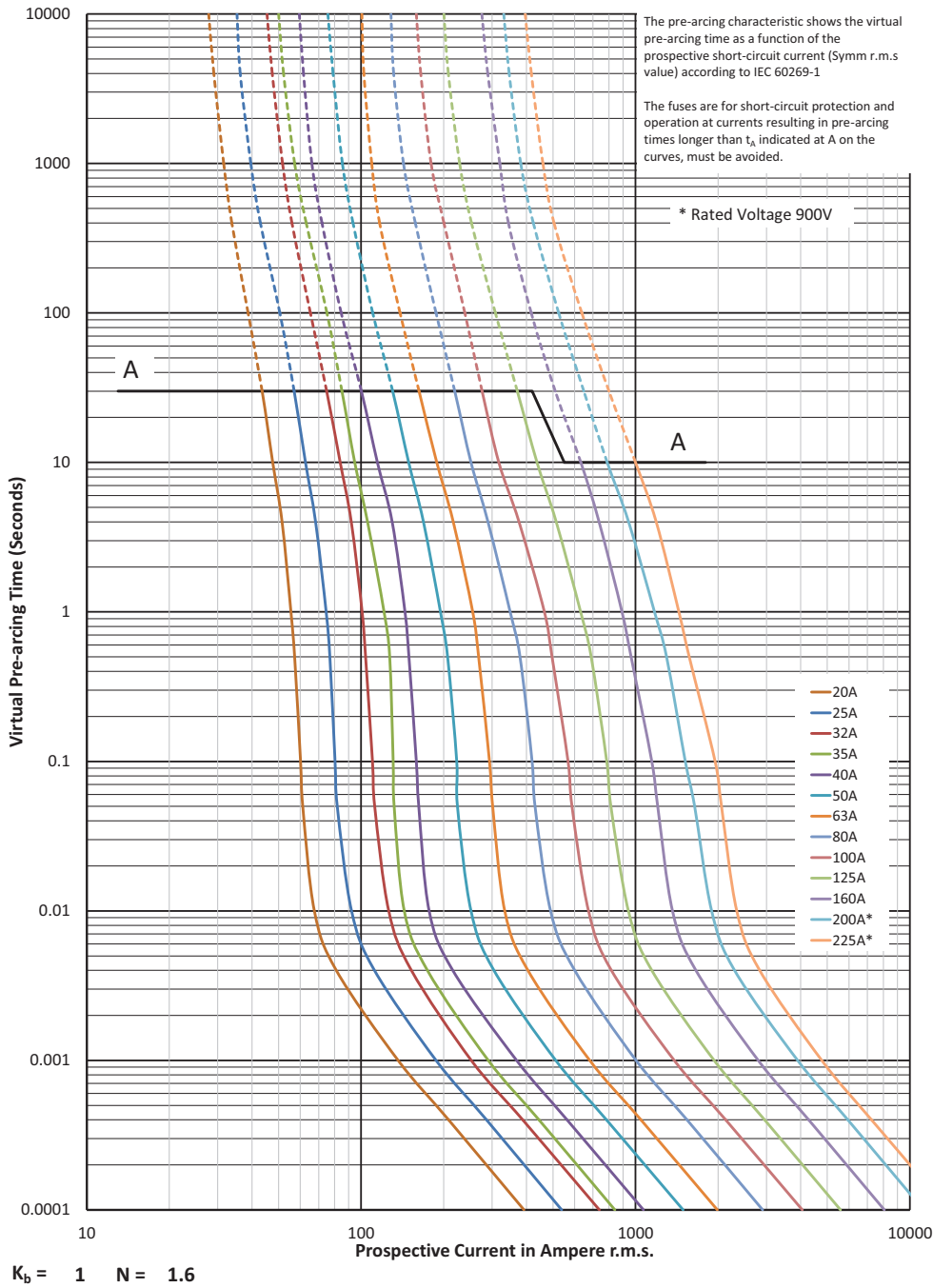
#### Dimensions (mm)



Square body fuse links

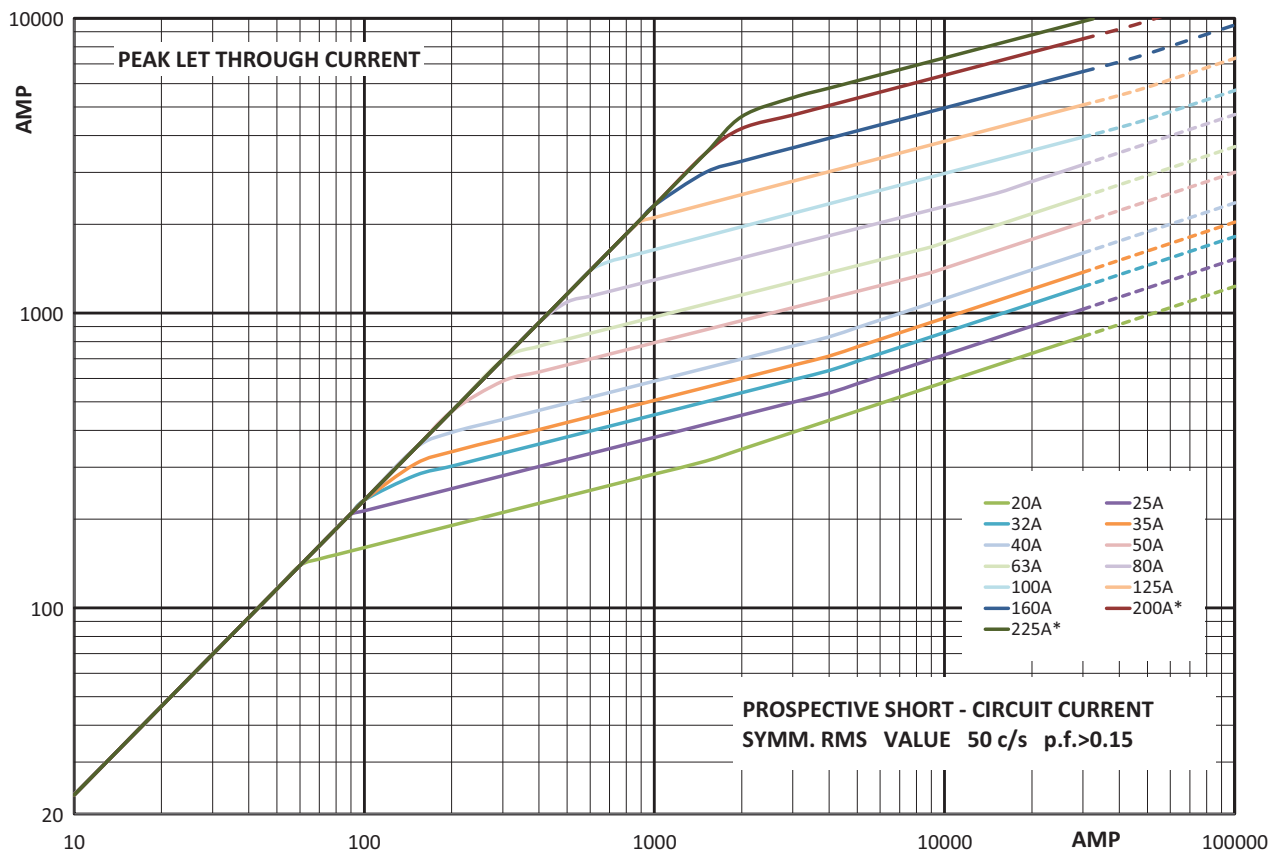
170M - Size 00, DIN 43620, 1000 V a.c. (IEC and UL), 20 A to 225 A

Time-current curve - Size 00, 20 A to 225 A



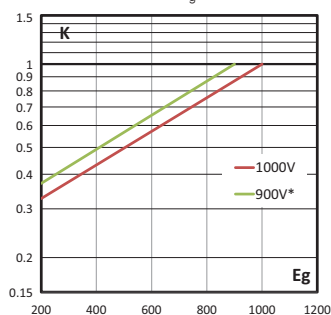
## 170M - Size 00, DIN 43620, 1000 V a.c. (IEC and UL), 20 A to 225 A

### Cut-off curve - Size 00, 20 A to 225 A



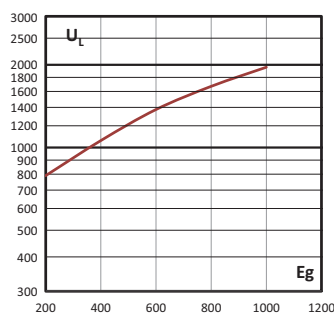
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



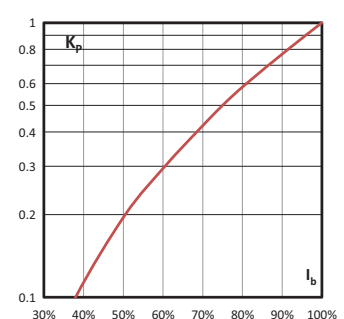
### Arc voltage

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 percent.



### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.





# 170M - Sizes 1\* to 3, French style, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 1600 A

## Catalogue numbers

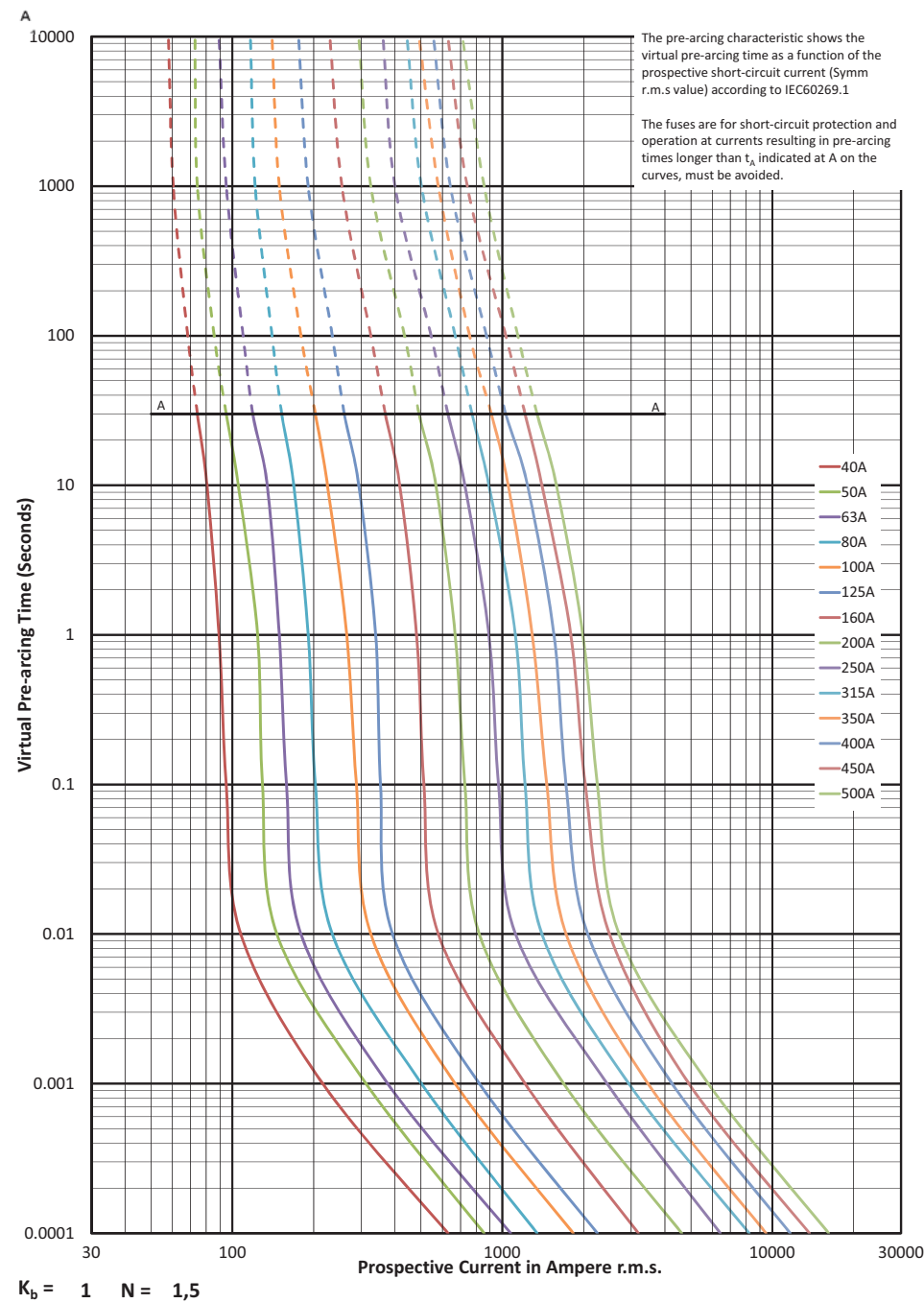
| Fuse link<br>body size | Rated voltage                      | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                           | Watts loss<br>(W) | Catalogue numbers                  |                                      |
|------------------------|------------------------------------|-------------------------|---------------------------------------|---------------------------|-------------------|------------------------------------|--------------------------------------|
|                        |                                    |                         | Pre-arcing                            | Clearing<br>at 660 V a.c. |                   | -E/- Type T<br>indicator for micro | -EKN/- Type K<br>indicator for micro |
| 1*                     | 690 V a.c. (IEC)<br>700 V a.c.(UL) | 40                      | 40                                    | 270                       | 9                 | 170M3308                           | 170M3358                             |
|                        |                                    | 50                      | 77                                    | 515                       | 11                | 170M3309                           | 170M3359                             |
|                        |                                    | 63                      | 115                                   | 770                       | 14                | 170M3310                           | 170M3360                             |
|                        |                                    | 80                      | 185                                   | 1250                      | 18                | 170M3311                           | 170M3361                             |
|                        |                                    | 100                     | 360                                   | 2450                      | 21                | 170M3312                           | 170M3362                             |
|                        |                                    | 125                     | 550                                   | 3700                      | 26                | 170M3313                           | 170M3363                             |
|                        |                                    | 160                     | 1100                                  | 7500                      | 30                | 170M3314                           | 170M3364                             |
|                        |                                    | 200                     | 2200                                  | 15,000                    | 35                | 170M3315                           | 170M3365                             |
|                        |                                    | 250                     | 4200                                  | 28,500                    | 40                | 170M3316                           | 170M3366                             |
|                        |                                    | 315                     | 7000                                  | 46,500                    | 50                | 170M3317                           | 170M3367                             |
|                        |                                    | 350                     | 10,000                                | 68,500                    | 55                | 170M3318                           | 170M3368                             |
|                        |                                    | 400                     | 15,000                                | 105,000                   | 60                | 170M3319                           | 170M3369                             |
|                        |                                    | 450                     | 21,000                                | 140,000                   | 65                | 170M3320                           | 170M3370                             |
|                        |                                    | 500                     | 27,000                                | 180,000                   | 70                | 170M3321                           | 170M3371                             |
| 1                      | 690 V a.c. (IEC)<br>700 V a.c.(UL) | 200                     | 1650                                  | 11,500                    | 45                | 170M4308                           | 170M4358                             |
|                        |                                    | 250                     | 3100                                  | 21,000                    | 55                | 170M4309                           | 170M4359                             |
|                        |                                    | 315                     | 6200                                  | 42,000                    | 58                | 170M4310                           | 170M4360                             |
|                        |                                    | 350                     | 8500                                  | 59,000                    | 60                | 170M4311                           | 170M4361                             |
|                        |                                    | 400                     | 13,500                                | 91,500                    | 65                | 170M4312                           | 170M4362                             |
|                        |                                    | 450                     | 17,000                                | 120,000                   | 70                | 170M4313                           | 170M4363                             |
|                        |                                    | 500                     | 25,000                                | 170,000                   | 72                | 170M4314                           | 170M4364                             |
|                        |                                    | 550                     | 34,000                                | 230,000                   | 75                | 170M4315                           | 170M4365                             |
|                        |                                    | 630                     | 52,000                                | 350,000                   | 80                | 170M4316                           | 170M4366                             |
|                        |                                    | 700                     | 69,500                                | 465,000                   | 85                | 170M4317                           | 170M4367                             |
|                        |                                    | 800                     | 105,000                               | 725,000                   | 95                | 170M4318                           | 170M4368                             |
| 2                      | 690 V a.c. (IEC)<br>700 V a.c.(UL) | 400                     | 11,000                                | 74,000                    | 65                | 170M5308                           | 170M5358                             |
|                        |                                    | 450                     | 15,500                                | 105,000                   | 70                | 170M5309                           | 170M5359                             |
|                        |                                    | 500                     | 21,500                                | 145,000                   | 75                | 170M5310                           | 170M5360                             |
|                        |                                    | 550                     | 28,000                                | 190,000                   | 80                | 170M5311                           | 170M5361                             |
|                        |                                    | 630                     | 41,000                                | 275,000                   | 90                | 170M5312                           | 170M5362                             |
|                        |                                    | 700                     | 60,500                                | 405,000                   | 95                | 170M5313                           | 170M5363                             |
|                        |                                    | 800                     | 86,000                                | 575,000                   | 105               | 170M5314                           | 170M5364                             |
|                        |                                    | 900                     | 125,000                               | 840,000                   | 110               | 170M5315                           | 170M5365                             |
|                        |                                    | 1000                    | 180,000                               | 1,250,000                 | 115               | 170M5316                           | 170M5366                             |
|                        |                                    | 500                     | 14,000                                | 95,000                    | 95                | 170M6308                           | 170M6358                             |
| 3                      | 690 V a.c. (IEC)<br>700 V a.c.(UL) | 550                     | 19,500                                | 135,000                   | 100               | 170M6309                           | 170M6359                             |
|                        |                                    | 630                     | 31,000                                | 210,000                   | 105               | 170M6310                           | 170M6360                             |
|                        |                                    | 700                     | 44,500                                | 300,000                   | 110               | 170M6311                           | 170M6361                             |
|                        |                                    | 800                     | 69,500                                | 465,000                   | 115               | 170M6312                           | 170M6362                             |
|                        |                                    | 900                     | 100,000                               | 670,000                   | 120               | 170M6313                           | 170M6363                             |
|                        |                                    | 1000                    | 140,000                               | 945,000                   | 125               | 170M6314                           | 170M6364                             |
|                        |                                    | 1100                    | 190,000                               | 1,300,000                 | 130               | 170M6315                           | 170M6365                             |
|                        |                                    | 1250                    | 290,000                               | 1,950,000                 | 140               | 170M6316                           | 170M6366                             |
|                        |                                    | 1400                    | 370,000                               | 2,450,000                 | 155               | 170M6317                           | 170M6367                             |
|                        |                                    | 1500                    | 460,000                               | 3,100,000                 | 160               | 170M6318                           | 170M6368                             |
|                        |                                    | 1600                    | 580,000                               | 3,900,000                 | 160               | 170M6319                           | 170M6369                             |

Data sheets: 170K6314 (Size 1\*), 170K6316 (Size 1), 170K6318 (Size 2), 170K6320 (Size 3)

Square body fuse links

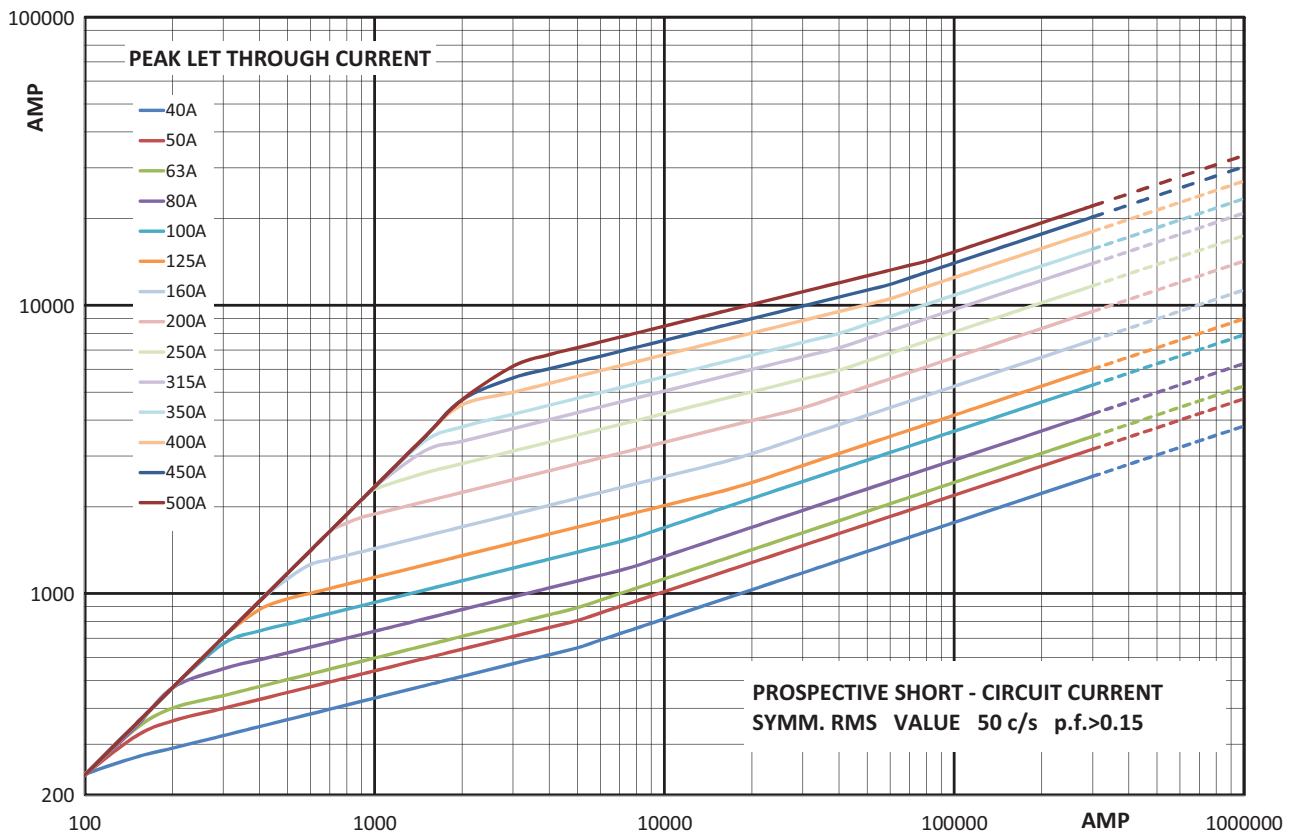
170M - Sizes 1\* to 3, French style, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 1600 A

Time-current curve - Size 1\*, 40 A to 500 A



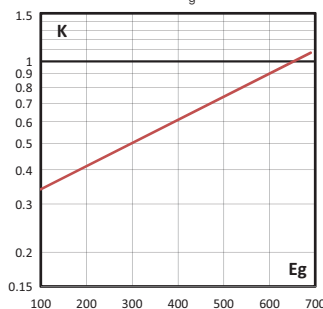
# 170M - Sizes 1\* to 3, French style, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 1600 A

## Cut-off curve - Size 1\*, 40 A to 500 A



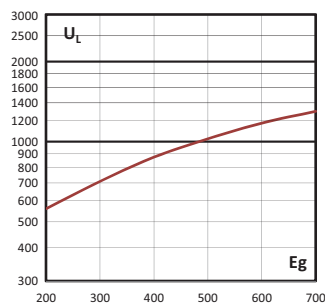
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



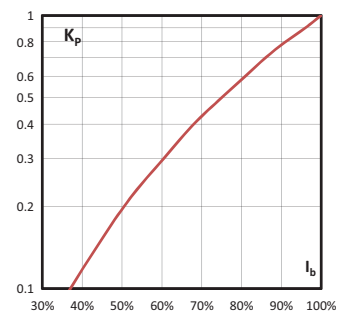
## Arc voltage

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 percent.



## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.

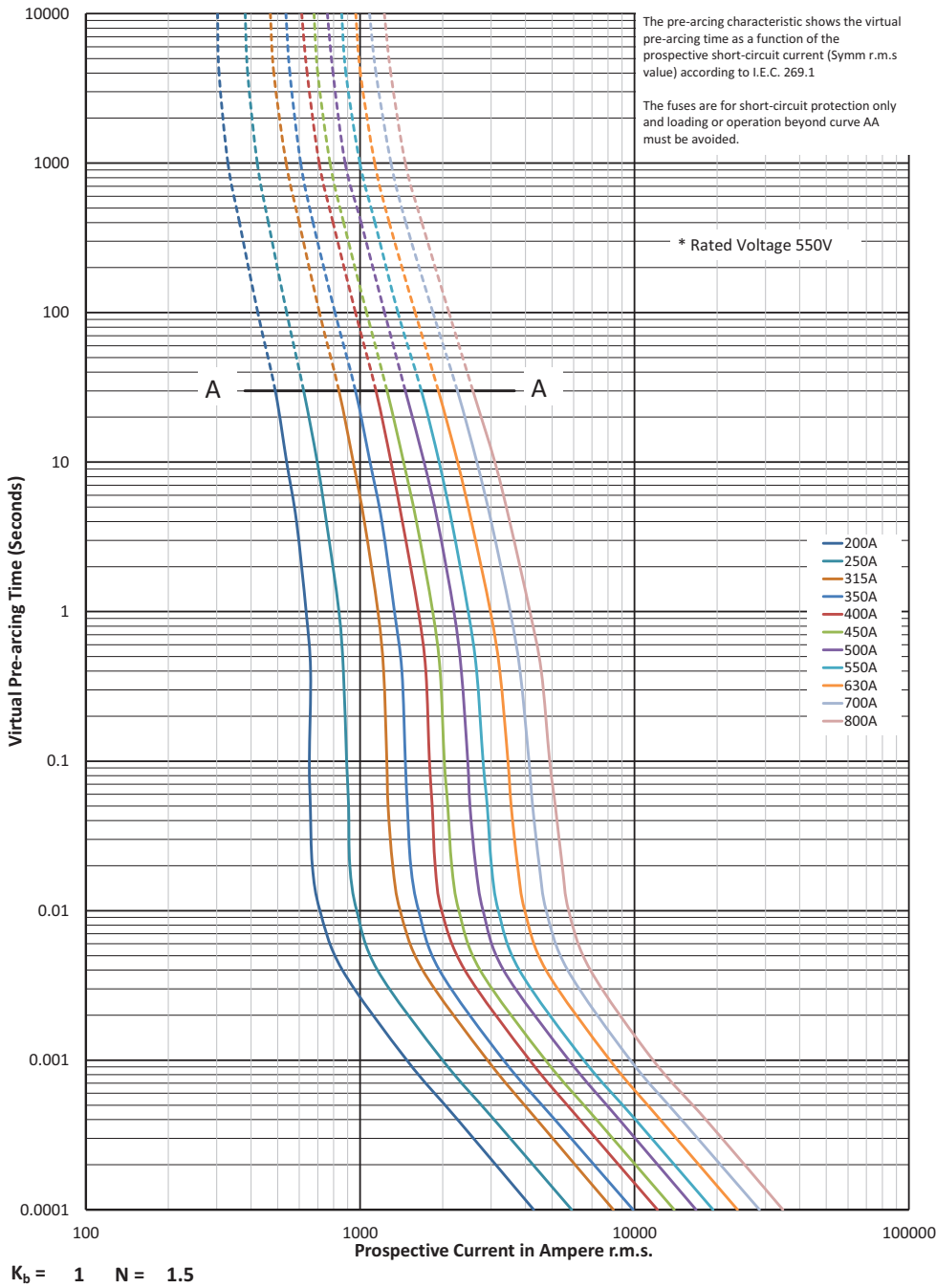




Square body fuse links

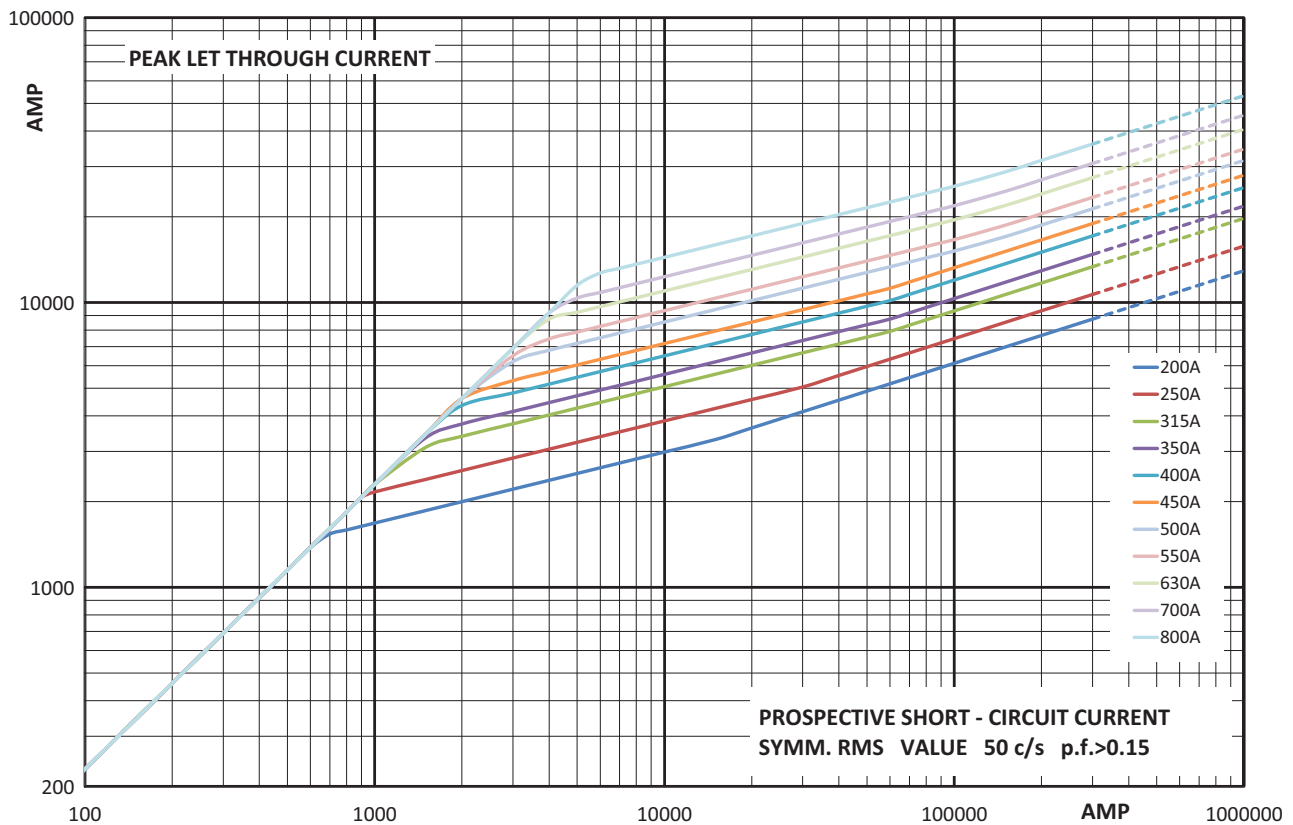
170M - Sizes 1\* to 3, French style, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 1600 A

Time-current curve - Size 1, 200 A to 800 A



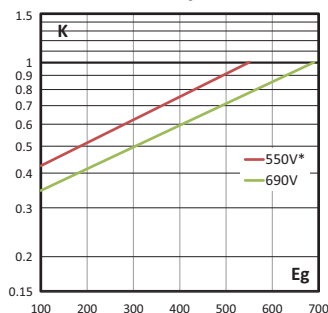
# 170M - Sizes 1\* to 3, French style, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 1600 A

## Cut-off curve - Size 1, 200 A to 800 A



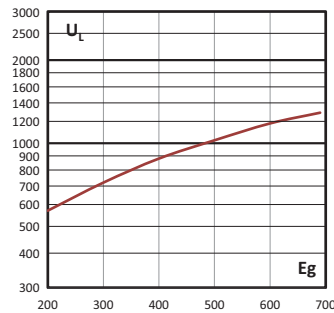
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



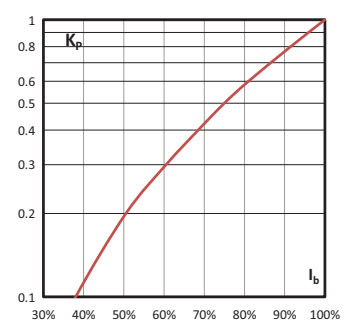
## Arc voltage

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 percent.



## Watts losses

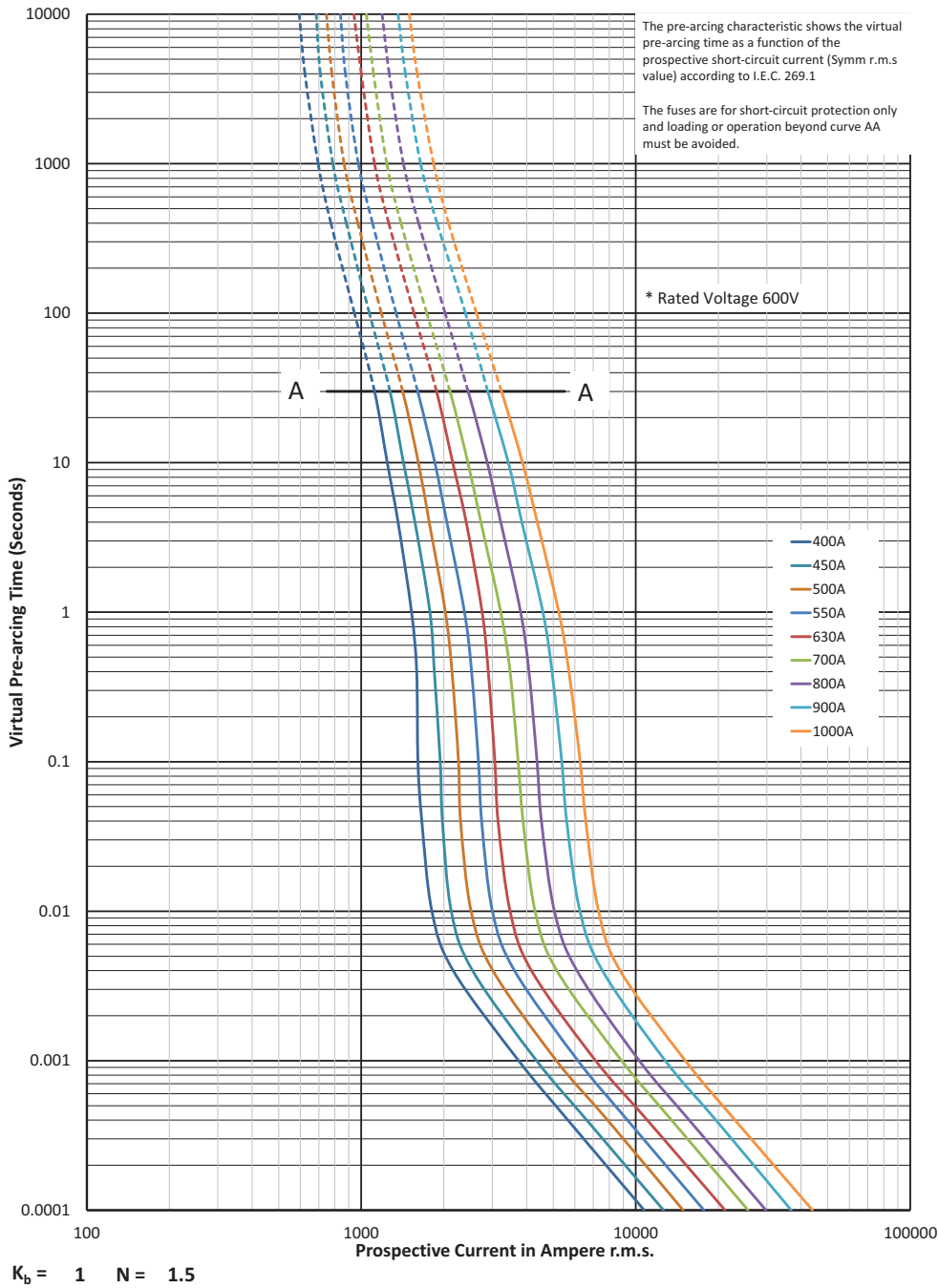
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor,  $K_p$ , is given as a function of the RMS load current,  $I_b$ , in percent of the rated current.



# Square body fuse links

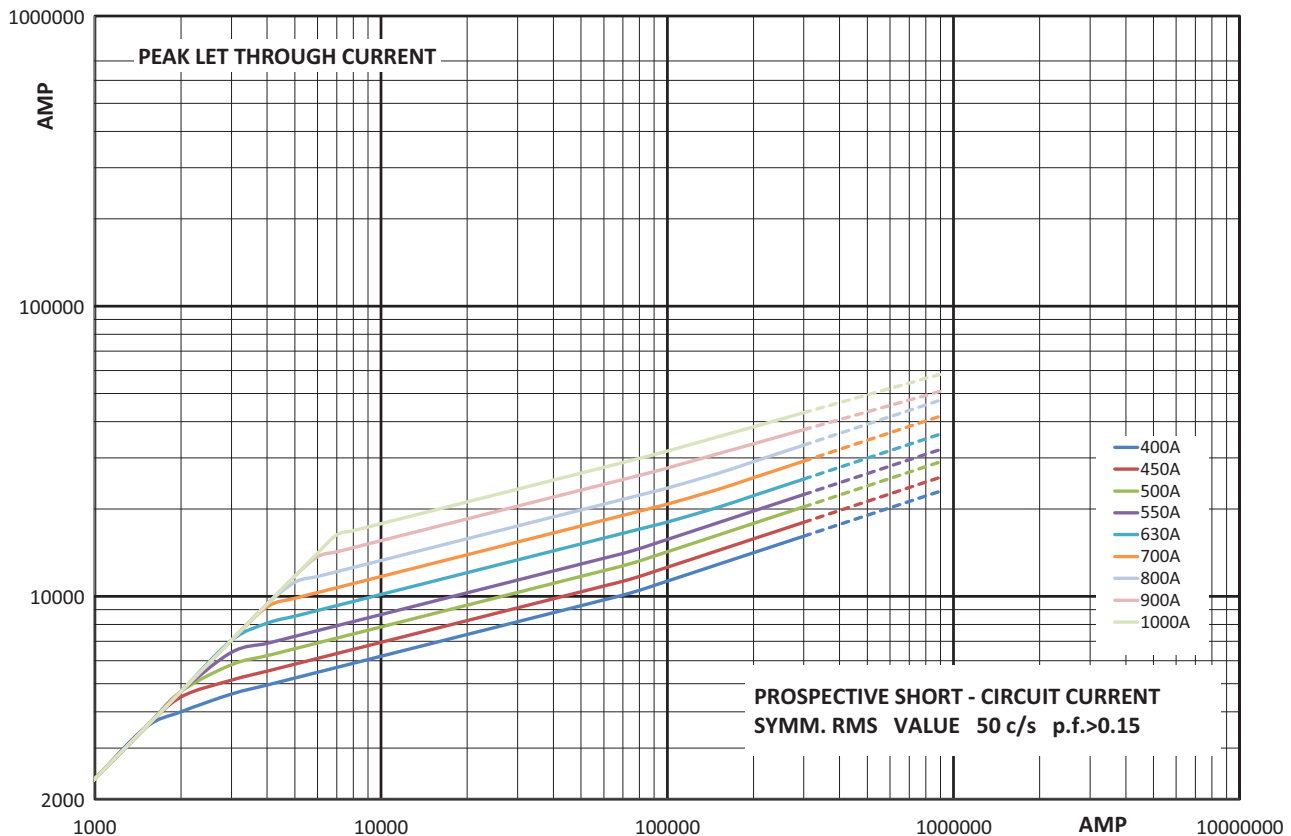
## 170M - Sizes 1\* to 3, French style, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 1600 A

Time-current curve - Size 2, 400 A to 1000 A



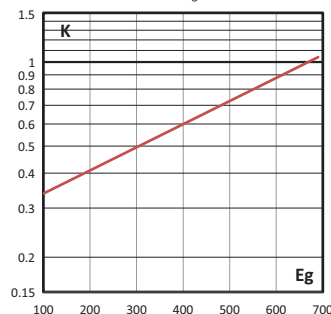
# 170M - Sizes 1\* to 3, French style, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 1600 A

## Cut-off curve - Size 2, 400 A to 1000 A



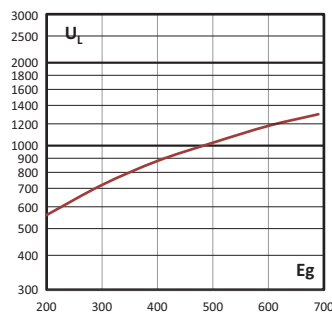
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



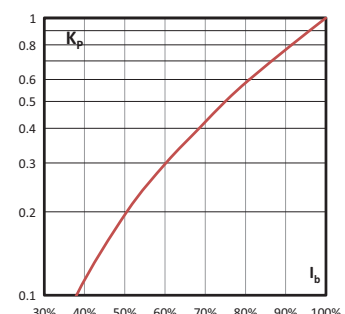
## Arc voltage

This curve gives the peak arc voltage,  $U_t$ , 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 percent.



## Watts losses

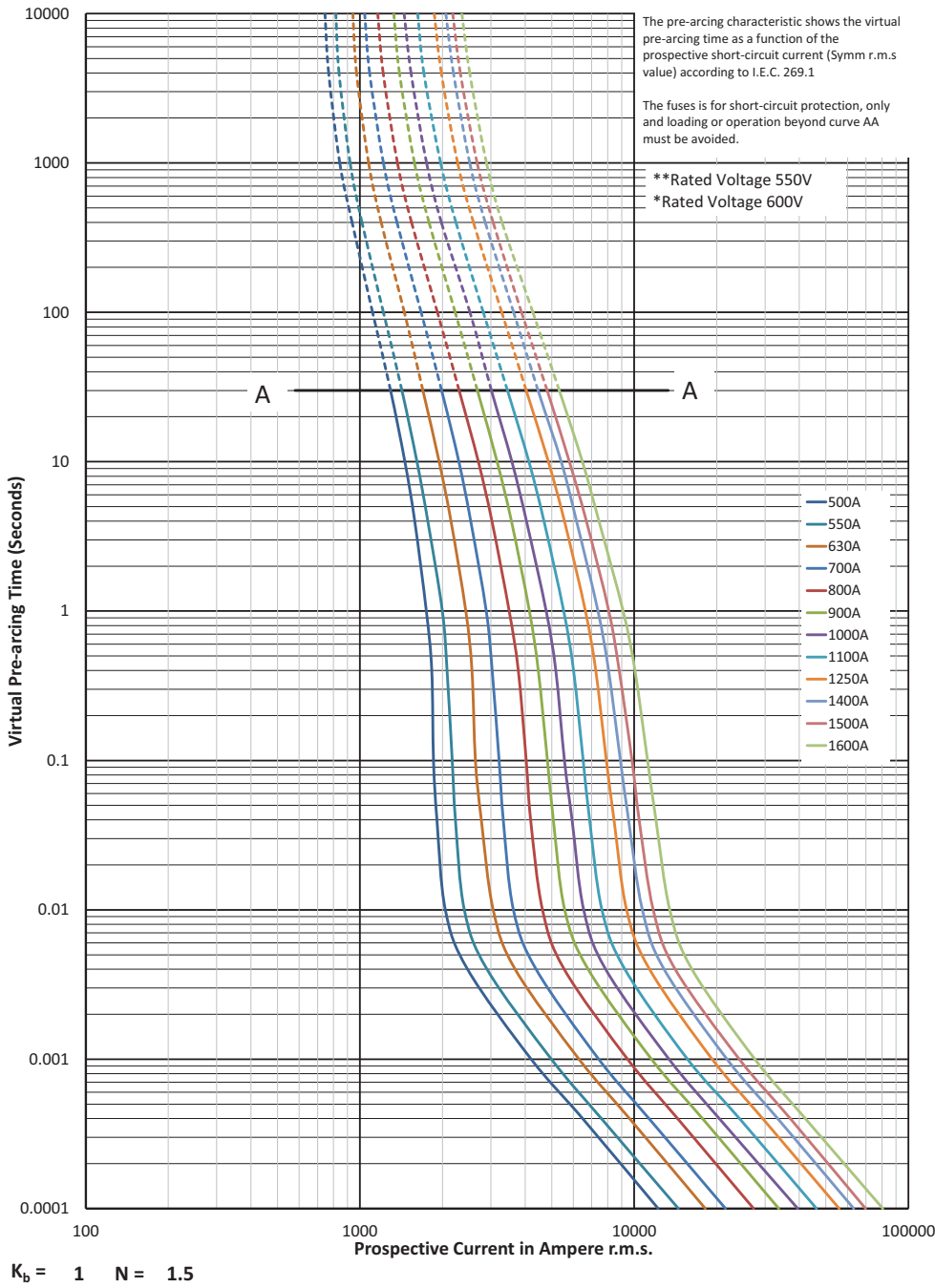
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor,  $K_p$ , is given as a function of the RMS load current,  $I_b$ , in percent of the rated current.



Square body fuse links

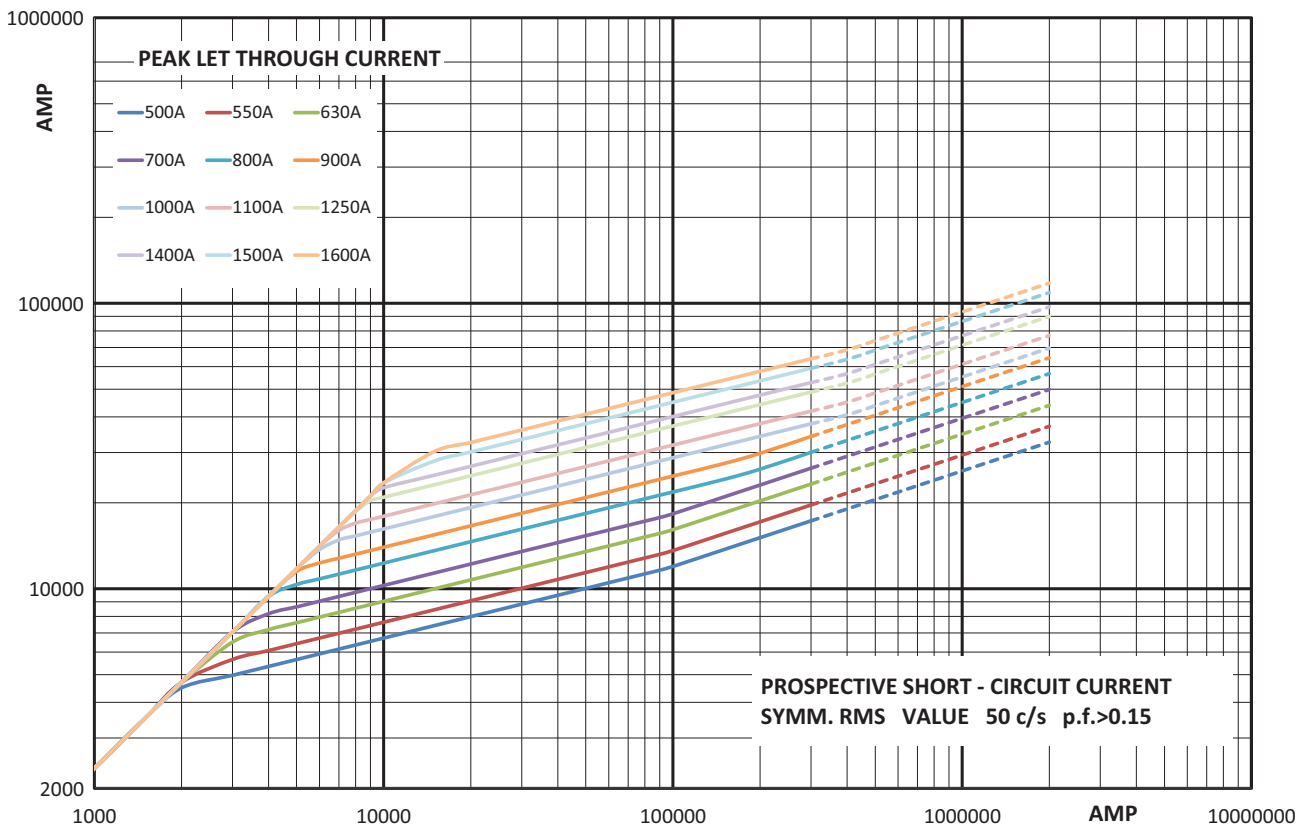
170M - Sizes 1\* to 3, French style, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 1600 A

Time-current curve - Size 3, 500 A to 1600 A



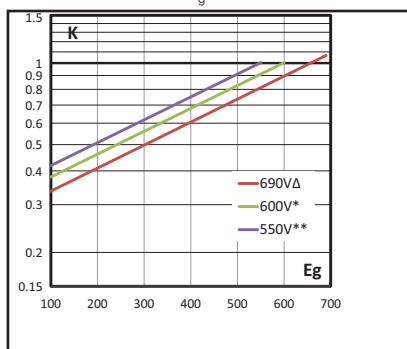
# 170M - Sizes 1\* to 3, French style, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 1600 A

## Cut-off curve - Size 3, 500 A to 1600 A



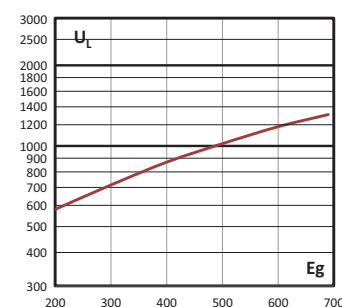
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



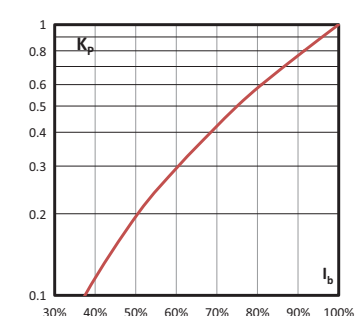
## Arc voltage

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 percent.



## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



# Square body fuse links

**170M** - Sizes 1\* to 3, US style, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

## Specifications

### Description

Square body US style bolted tags high speed fuse links for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

### Technical data

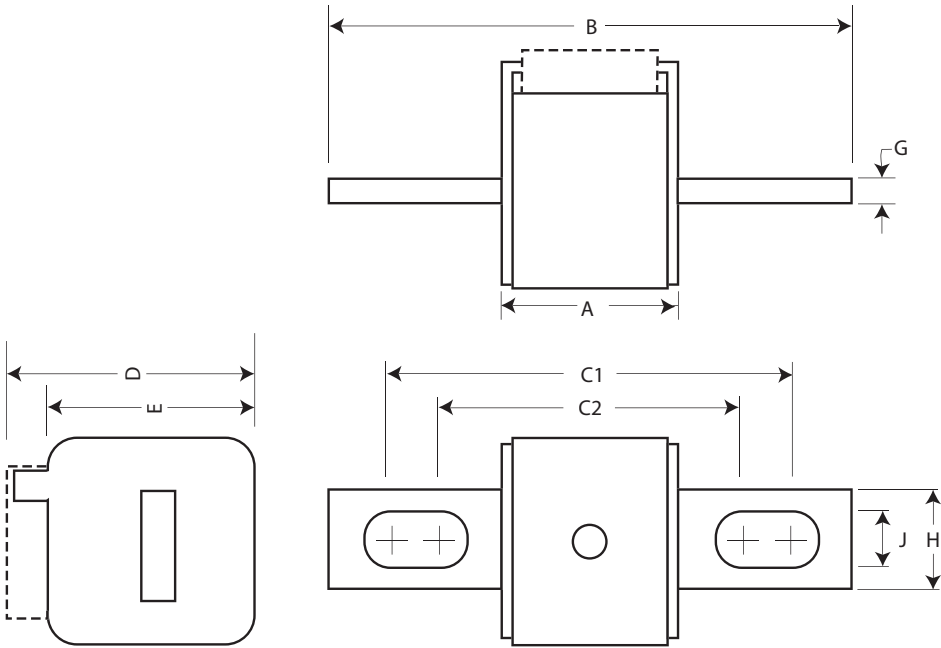
- Rated voltage: see table page 159
- Rated current: 40 A to 2000 A
- Breaking capacity: 200 kA RMS Sym
- Operating class: aR

### Standards / Agency information

CE, Designed and tested to IEC60269 Part 4. Consult Eaton for UL Recognition/CSA Component Acceptance status and CCC approvals



### Dimensions (mm)



| Size | A  | B   | B1  | C1  | C1' | C2 | C2' | D  | E  | G | H  | J  |
|------|----|-----|-----|-----|-----|----|-----|----|----|---|----|----|
| 1*   | 50 | 110 | 148 | 85  | 123 | 72 | 110 | 59 | 45 | 6 | 20 | 10 |
| 1    | 50 | 136 | 157 | 104 | 126 | 78 | 100 | 69 | 53 | 6 | 25 | 14 |
| 2    | 50 | 135 | 159 | 105 | 125 | 78 | 99  | 77 | 61 | 6 | 25 | 14 |
| 3    | 51 | 135 | 155 | 106 | 125 | 77 | 97  | 92 | 76 | 6 | 36 | 16 |

<sup>1</sup> Valid for fuse links type -FU/115 & -FKE/115.  
1mm = 0.0394"

# 170M - Sizes 1\* to 3, US style, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

| Fuse link<br>body size | Rated voltage                       | Rated<br>current<br>(Amps) | I²t (A² Sec) |                           | Watts loss<br>(W) | Catalogue numbers          |                                         |                              |                                           |
|------------------------|-------------------------------------|----------------------------|--------------|---------------------------|-------------------|----------------------------|-----------------------------------------|------------------------------|-------------------------------------------|
|                        |                                     |                            | Pre-arcing   | Clearing<br>at 660 V a.c. |                   | -FU/- without<br>indicator | -FKE/- Type K<br>indicator for<br>micro | -FU/115 without<br>indicator | -FKE/115 Type<br>K indicator for<br>micro |
| 1*                     | 690 V a.c. (IEC)                    | 40                         | 40           | 270                       | 9                 | 170M3608                   | 170M3658                                | 170M3708                     | 170M3758                                  |
|                        |                                     | 50                         | 70           | 515                       | 11                | 170M3609                   | 170M3659                                | 170M3709                     | 170M3759                                  |
|                        |                                     | 63                         | 115          | 770                       | 14                | 170M3610                   | 170M3660                                | 170M3710                     | 170M3760                                  |
|                        |                                     | 80                         | 185          | 1250                      | 18                | 170M3611                   | 170M3661                                | 170M3711                     | 170M3761                                  |
|                        |                                     | 100                        | 360          | 2450                      | 21                | 170M3612                   | 170M3662                                | 170M3712                     | 170M3762                                  |
|                        |                                     | 125                        | 550          | 3700                      | 26                | 170M3613                   | 170M3663                                | 170M3713                     | 170M3763                                  |
|                        |                                     | 160                        | 1100         | 7500                      | 30                | 170M3614                   | 170M3664                                | 170M3714                     | 170M3764                                  |
|                        |                                     | 200                        | 2200         | 15,000                    | 35                | 170M3615                   | 170M3665                                | 170M3715                     | 170M3765                                  |
|                        | 700 V a.c. (UL)                     | 250                        | 4200         | 28,500                    | 40                | 170M3616                   | 170M3666                                | 170M3716                     | 170M3766                                  |
|                        |                                     | 315                        | 7000         | 46,500                    | 50                | 170M3617                   | 170M3667                                | 170M3717                     | 170M3767                                  |
|                        |                                     | 350                        | 10,000       | 68,500                    | 55                | 170M3618                   | 170M3668                                | 170M3718                     | 170M3768                                  |
|                        |                                     | 400                        | 15,000       | 105,000                   | 60                | 170M3619                   | 170M3669                                | 170M3719                     | 170M3769                                  |
|                        |                                     | 450                        | 21,000       | 140,000                   | 65                | 170M3620                   | 170M3670                                | 170M3720                     | 170M3770                                  |
|                        |                                     | 500                        | 27,000       | 180,000                   | 70                | 170M3621                   | 170M3671                                | 170M3721                     | 170M3771                                  |
|                        |                                     | 550                        | 34,000       | 230,000                   | 75                | 170M3622                   | 170M3672                                | 170M3722                     | 170M3772                                  |
|                        |                                     | 630                        | 48,500       | 325,000                   | 80                | 170M3623                   | 170M3673                                | 170M3723                     | 170M3773                                  |
| 1                      | 690 V a.c. (IEC)                    | 200                        | 1650         | 11,500                    | 45                | 170M4608                   | 170M4658                                | 170M4708                     | 170M4758                                  |
|                        |                                     | 250                        | 3100         | 21,000                    | 55                | 170M4609                   | 170M4659                                | 170M4709                     | 170M4759                                  |
|                        |                                     | 315                        | 6200         | 42,000                    | 58                | 170M4610                   | 170M4660                                | 170M4710                     | 170M4760                                  |
|                        |                                     | 350                        | 8500         | 59,000                    | 60                | 170M4611                   | 170M4661                                | 170M4711                     | 170M4761                                  |
|                        |                                     | 400                        | 13,500       | 91,500                    | 65                | 170M4612                   | 170M4662                                | 170M4712                     | 170M4762                                  |
|                        |                                     | 450                        | 17,000       | 120,000                   | 70                | 170M4613                   | 170M4663                                | 170M4713                     | 170M4763                                  |
|                        |                                     | 500                        | 25,000       | 170,000                   | 72                | 170M4614                   | 170M4664                                | 170M4714                     | 170M4764                                  |
|                        |                                     | 550                        | 34,000       | 230,000                   | 75                | 170M4615                   | 170M4665                                | 170M4715                     | 170M4765                                  |
|                        | 700 V a.c. (UL)                     | 630                        | 52,000       | 350,000                   | 80                | 170M4616                   | 170M4666                                | 170M4716                     | 170M4766                                  |
|                        |                                     | 700                        | 69,500       | 465,000                   | 85                | 170M4617                   | 170M4667                                | 170M4717                     | 170M4767                                  |
|                        |                                     | 800                        | 105,000      | 725,000                   | 95                | 170M4618                   | 170M4668                                | 170M4718                     | 170M4768                                  |
|                        | 550 V a.c. (IEC)                    | 900                        | 155,000      | 850,000                   | 100               | 170M4619                   | 170M4669                                | 170M4719                     | 170M4769                                  |
| 2                      | 690 V a.c. (IEC)                    | 400                        | 11,000       | 74,000                    | 65                | 170M5608                   | 170M5658                                | 170M5708                     | 170M5758                                  |
|                        |                                     | 450                        | 15,500       | 105,000                   | 70                | 170M5609                   | 170M5659                                | 170M5709                     | 170M5759                                  |
|                        |                                     | 500                        | 21,500       | 145,000                   | 75                | 170M5610                   | 170M5660                                | 170M5710                     | 170M5760                                  |
|                        |                                     | 550                        | 28,000       | 190,000                   | 80                | 170M5611                   | 170M5661                                | 170M5711                     | 170M5761                                  |
|                        |                                     | 630                        | 41,000       | 275,000                   | 90                | 170M5612                   | 170M5662                                | 170M5712                     | 170M5762                                  |
|                        | 700 V a.c. (UL)                     | 700                        | 60,500       | 405,000                   | 95                | 170M5613                   | 170M5663                                | 170M5713                     | 170M5763                                  |
|                        |                                     | 800                        | 86,000       | 575,000                   | 105               | 170M5614                   | 170M5664                                | 170M5714                     | 170M5764                                  |
|                        |                                     | 900                        | 125,000      | 840,000                   | 110               | 170M5615                   | 170M5665                                | 170M5715                     | 170M5765                                  |
|                        |                                     | 1000                       | 180,000      | 1,250,000                 | 115               | 170M5616                   | 170M5666                                | 170M5716                     | 170M5766                                  |
|                        | 600 V a.c. (IEC)<br>700 V a.c. (UL) | 1100                       | 245,000      | 1,600,000                 | 120               | 170M5617                   | 170M5667                                | 170M5717                     | 170M5767                                  |
|                        |                                     | 1250                       | 365,000      | 2,400,000                 | 130               | 170M5618                   | 170M5668                                | 170M5718                     | 170M5768                                  |
| 3                      | 690 V a.c. (IEC)                    | 500                        | 14,000       | 95,000                    | 95                | 170M6608                   | 170M6658                                | 170M6708                     | 170M6758                                  |
|                        |                                     | 550                        | 19,500       | 135,000                   | 100               | 170M6609                   | 170M6659                                | 170M6709                     | 170M6759                                  |
|                        |                                     | 630                        | 31,000       | 210,000                   | 105               | 170M6610                   | 170M6660                                | 170M6710                     | 170M6760                                  |
|                        |                                     | 700                        | 44,500       | 300,000                   | 110               | 170M6611                   | 170M6661                                | 170M6711                     | 170M6761                                  |
|                        |                                     | 800                        | 69,500       | 465,000                   | 115               | 170M6612                   | 170M6662                                | 170M6712                     | 170M6762                                  |
|                        |                                     | 900                        | 100,000      | 670,000                   | 120               | 170M6613                   | 170M6663                                | 170M6713                     | 170M6763                                  |
|                        | 700 V a.c. (UL)                     | 1000                       | 140,000      | 945,000                   | 125               | 170M6614                   | 170M6664                                | 170M6714                     | 170M6764                                  |
|                        |                                     | 1100                       | 190,000      | 1,300,000                 | 130               | 170M6615                   | 170M6665                                | 170M6715                     | 170M6765                                  |
|                        |                                     | 1250                       | 290,000      | 1,950,000                 | 140               | 170M6616                   | 170M6666                                | 170M6716                     | 170M6766                                  |
|                        |                                     | 1400                       | 370,000      | 2,450,000                 | 155               | 170M6617                   | 170M6667                                | 170M6717                     | 170M6767                                  |
|                        |                                     | 1500                       | 460,000      | 3,100,000                 | 160               | 170M6618                   | 170M6668                                | 170M6718                     | 170M6768                                  |
|                        |                                     | 1600                       | 580,000      | 3,900,000                 | 160               | 170M6619                   | 170M6669                                | 170M6719                     | 170M6769                                  |
|                        | 600 V a.c. (IEC)<br>550 V a.c. (UL) | 1800                       | 880,000      | 5,250,000                 | 165               | 170M6620 <sup>3</sup>      | 170M6670 <sup>1</sup>                   | 170M6720 <sup>3</sup>        | 170M6770                                  |
|                        | 550 V a.c. (IEC)<br>500 V a.c. (UL) | 2000                       | 1,150,000    | 6,350,000                 | 175               | 170M6621                   | 170M6671 <sup>2</sup>                   | 170M6721                     | 170M6771                                  |

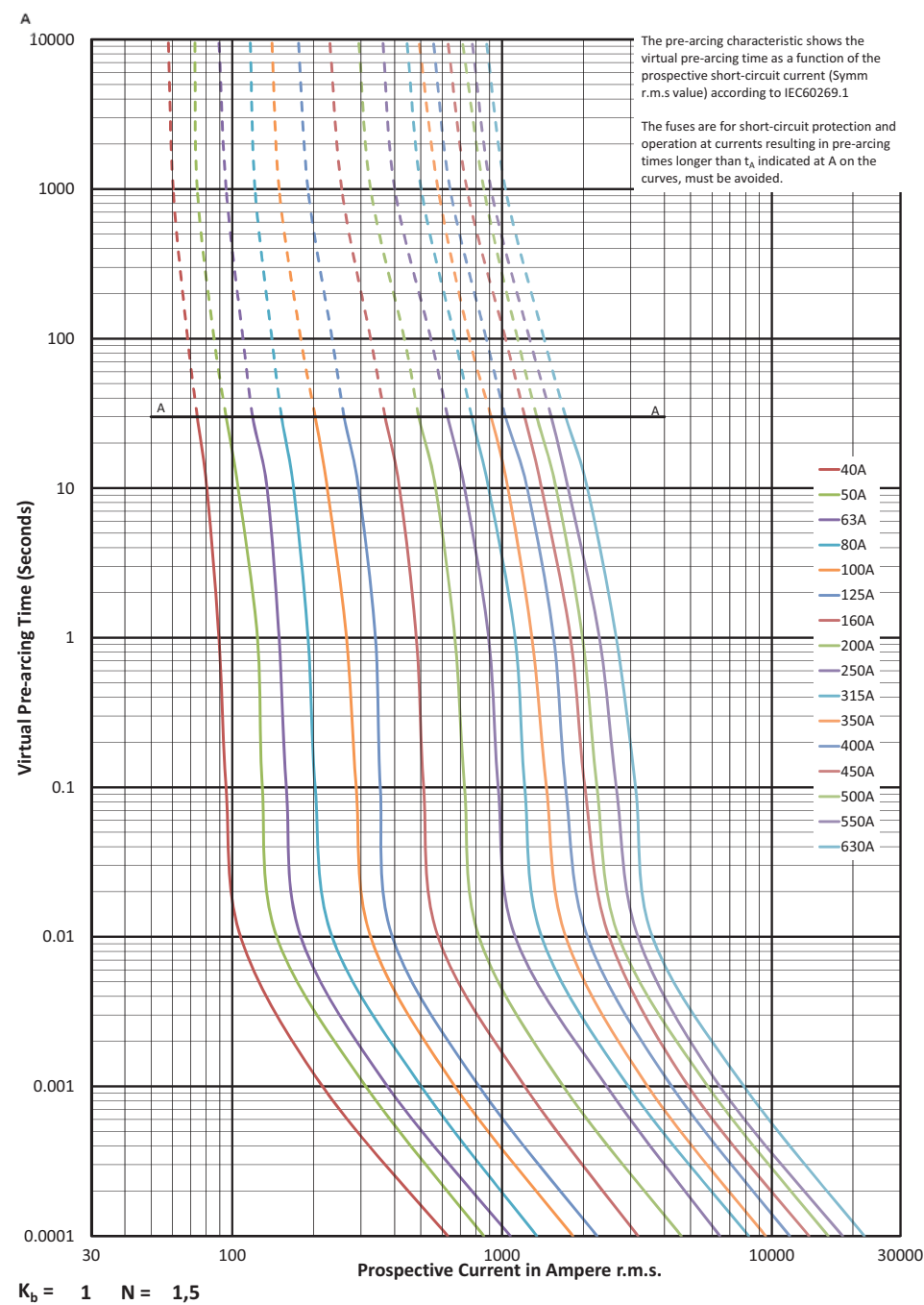
<sup>1</sup> 170M6670 600 V a.c. (UL)/550 V a.c. (IEC)    <sup>2</sup> 170M6671 550 V a.c. (IEC and UL)    <sup>3</sup> Rated at 750 V d.c. 12XIn 130 kA when two fuses are connected in series



# Square body fuse links

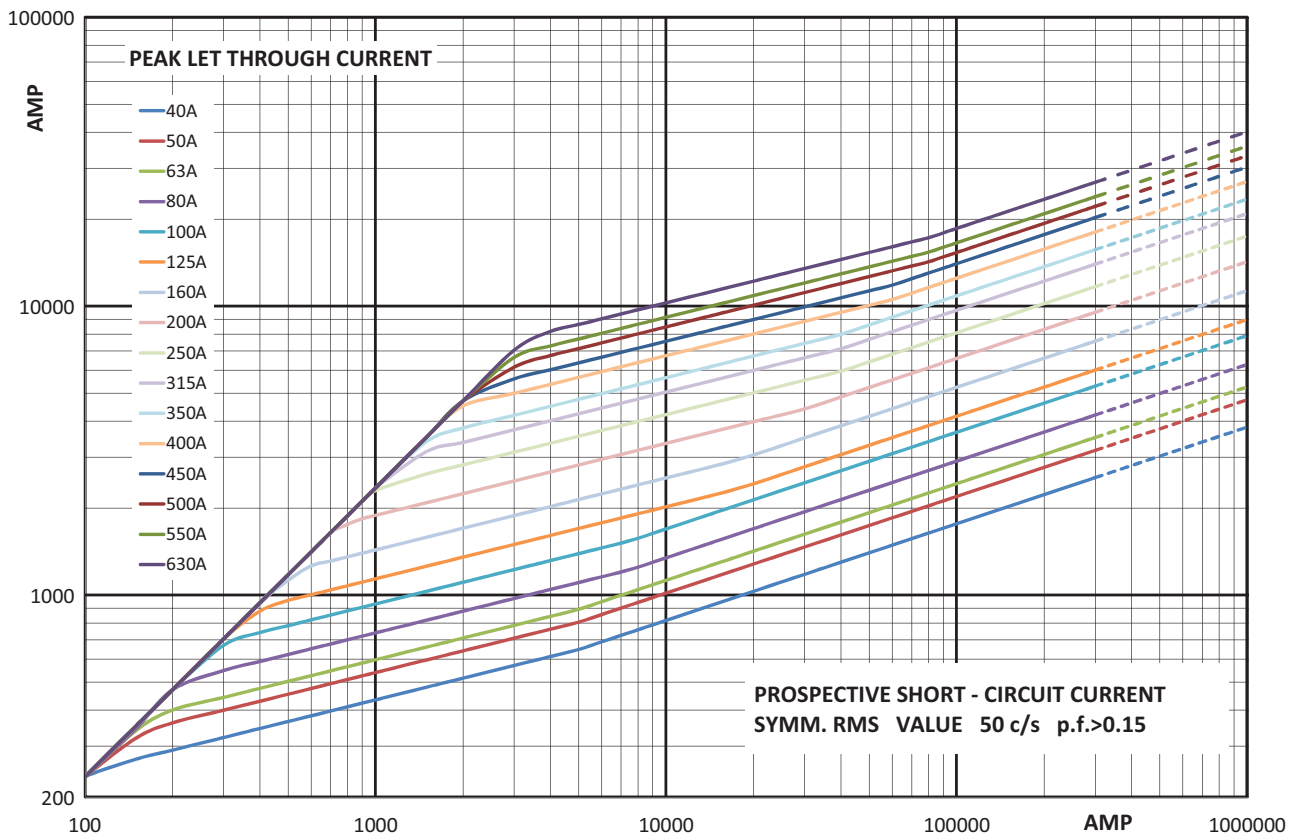
## 170M - Sizes 1\* to 3, US style, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

Time-current curve - Size 1\*, 40 A to 630 A



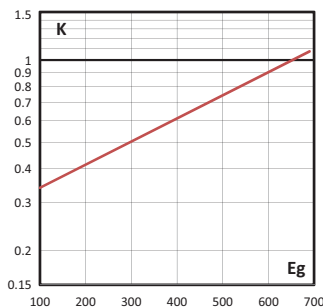
# 170M - Sizes 1\* to 3, US style, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

## Cut-off curve - Size 1\*, 40 A to 630 A



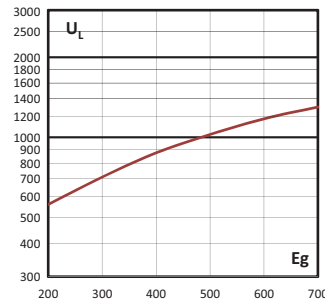
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



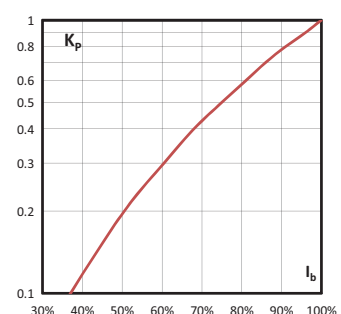
## Arc voltage

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 percent.



## Watts losses

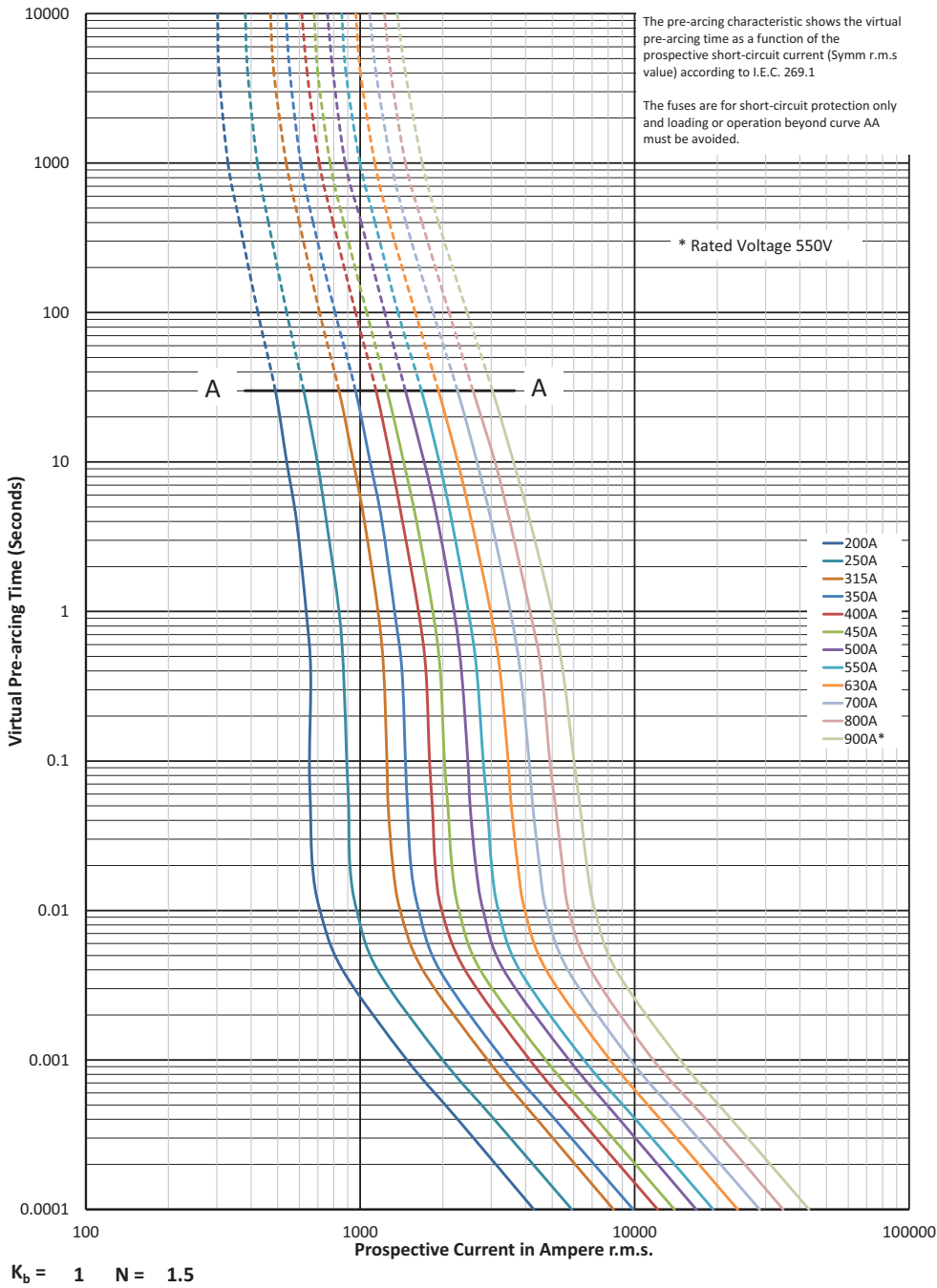
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor,  $K_p$ , is given as a function of the RMS load current,  $I_b$ , in percent of the rated current.



Square body fuse links

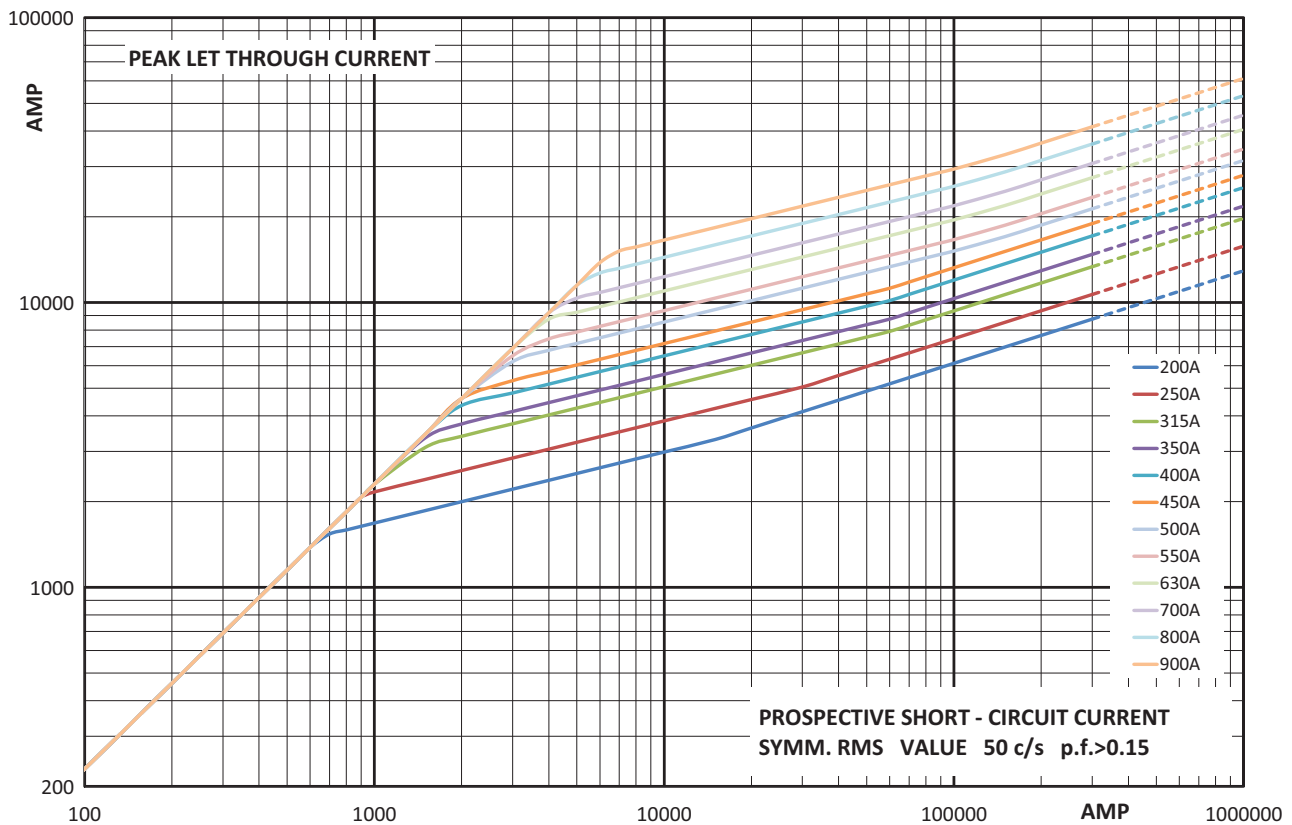
170M - Sizes 1\* to 3, US style, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

Time-current curve - Size 1, 200 A to 900 A



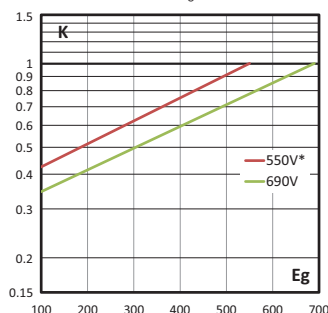
# 170M - Sizes 1\* to 3, US style, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

## Cut-off curve - Size 1, 200 A to 900 A



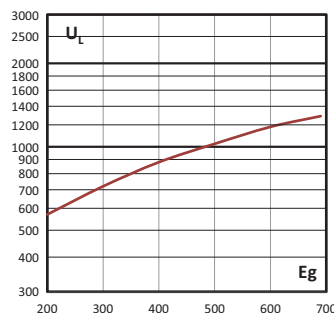
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



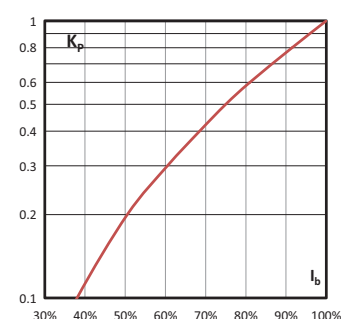
## Arc voltage

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 percent.



## Watts losses

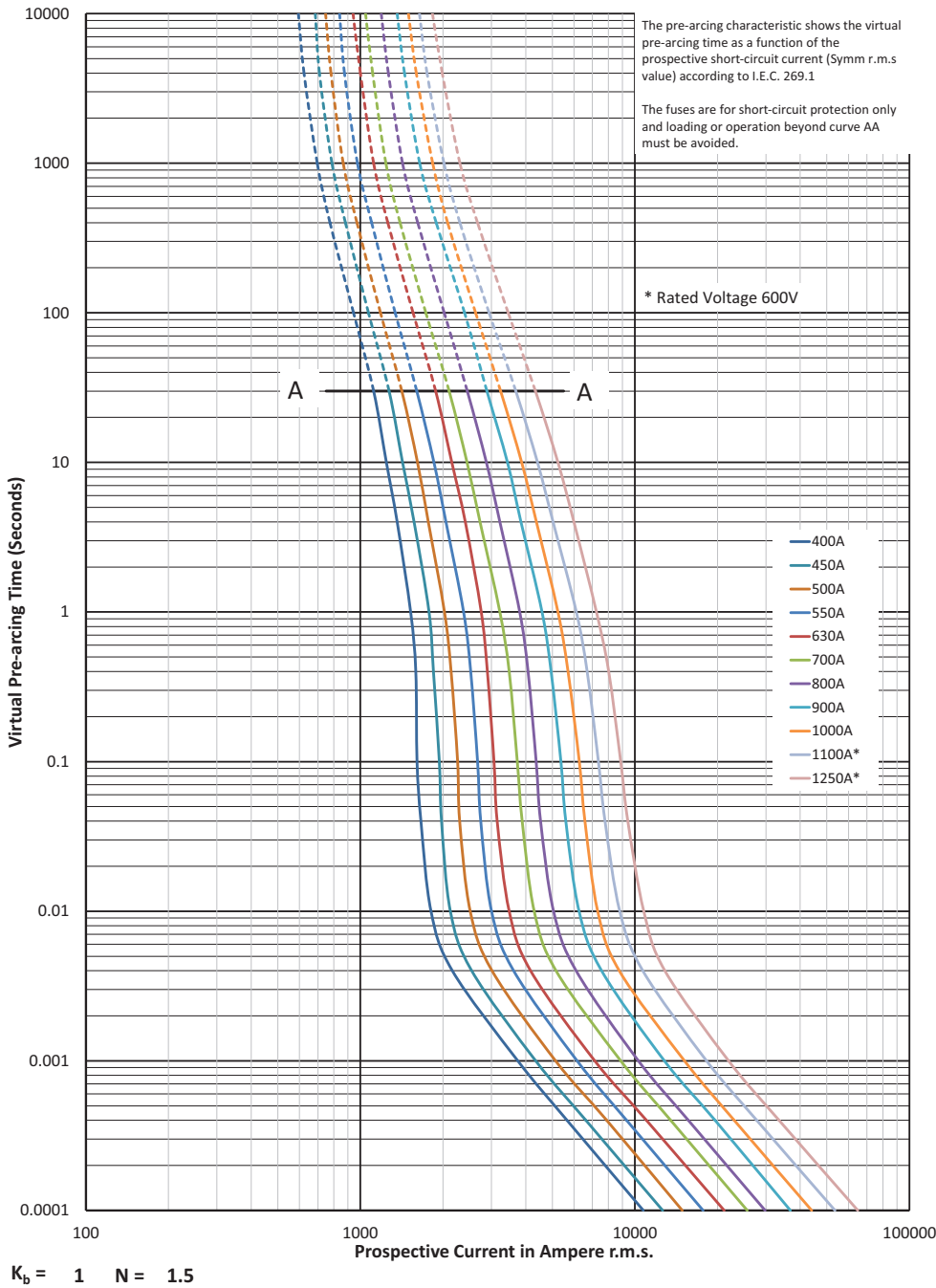
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor,  $K_p$ , is given as a function of the RMS load current,  $I_b$ , in percent of the rated current.



# Square body fuse links

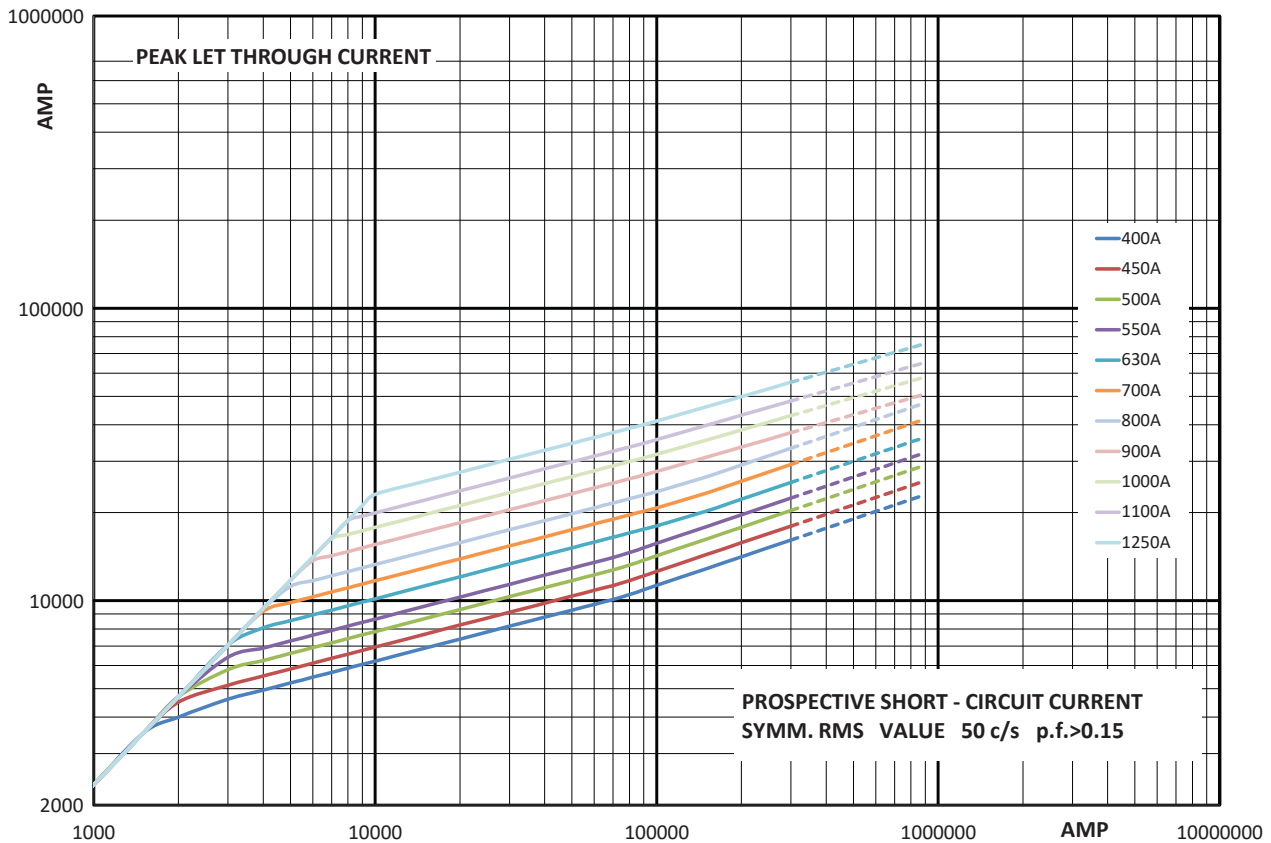
## 170M - Sizes 1\* to 3, US style, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

Time-current curve - Size 2, 400 A to 1250 A



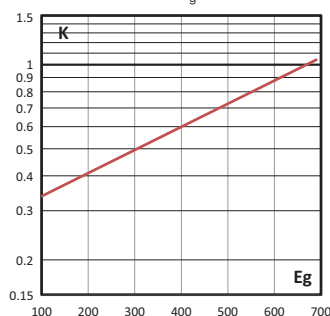
# 170M - Sizes 1\* to 3, US style, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

## Cut-off curve - Size 2, 400 A to 1250 A



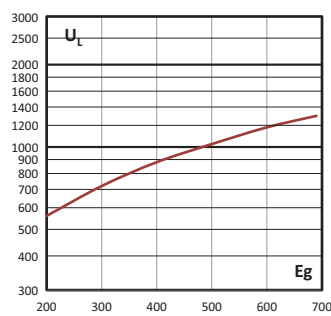
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



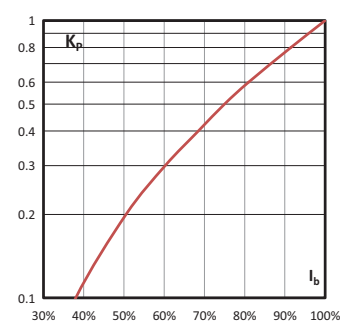
## Arc voltage

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 percent.



## Watts losses

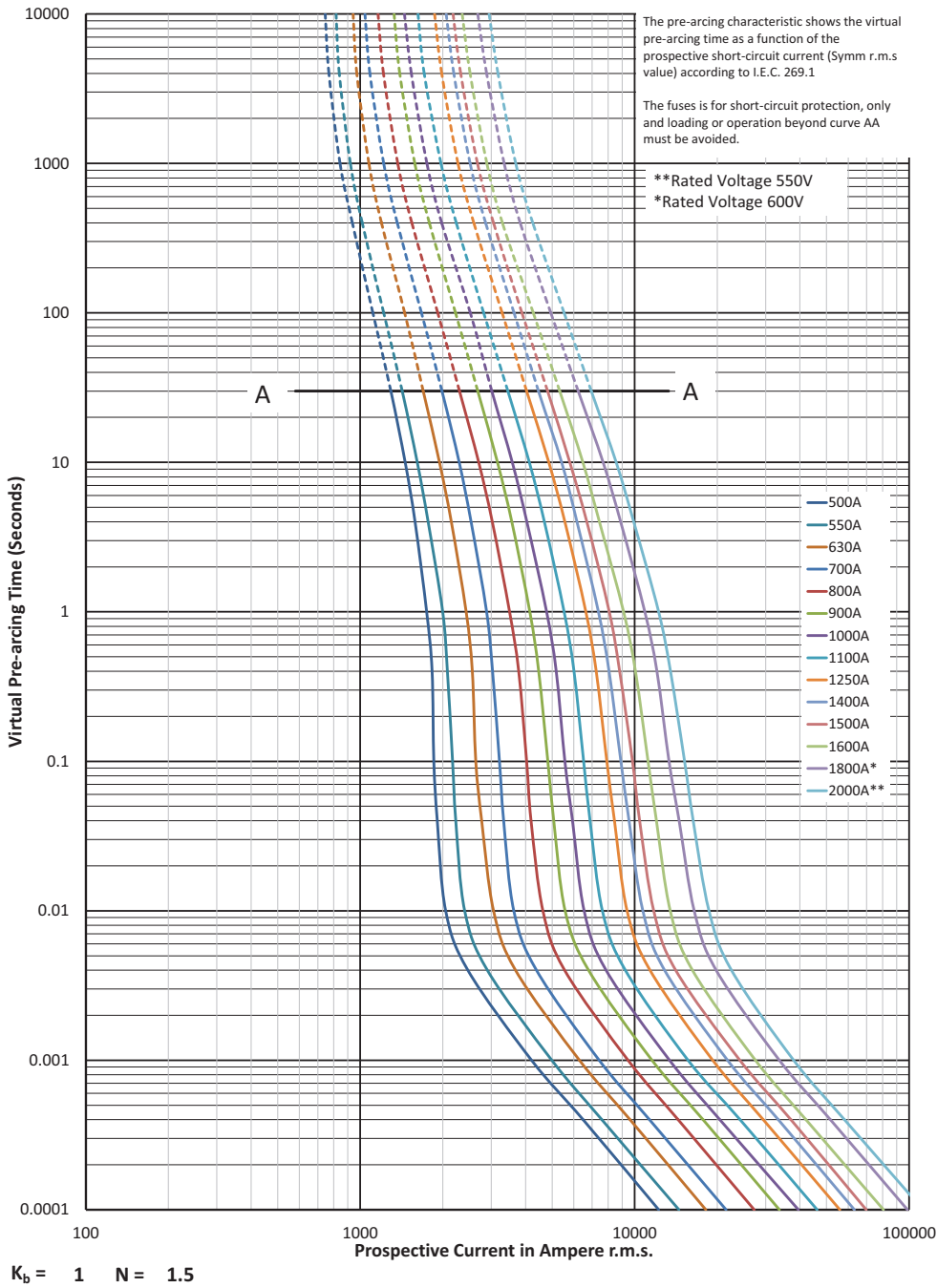
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor,  $K_p$ , is given as a function of the RMS load current,  $I_b$ , in percent of the rated current.



# Square body fuse links

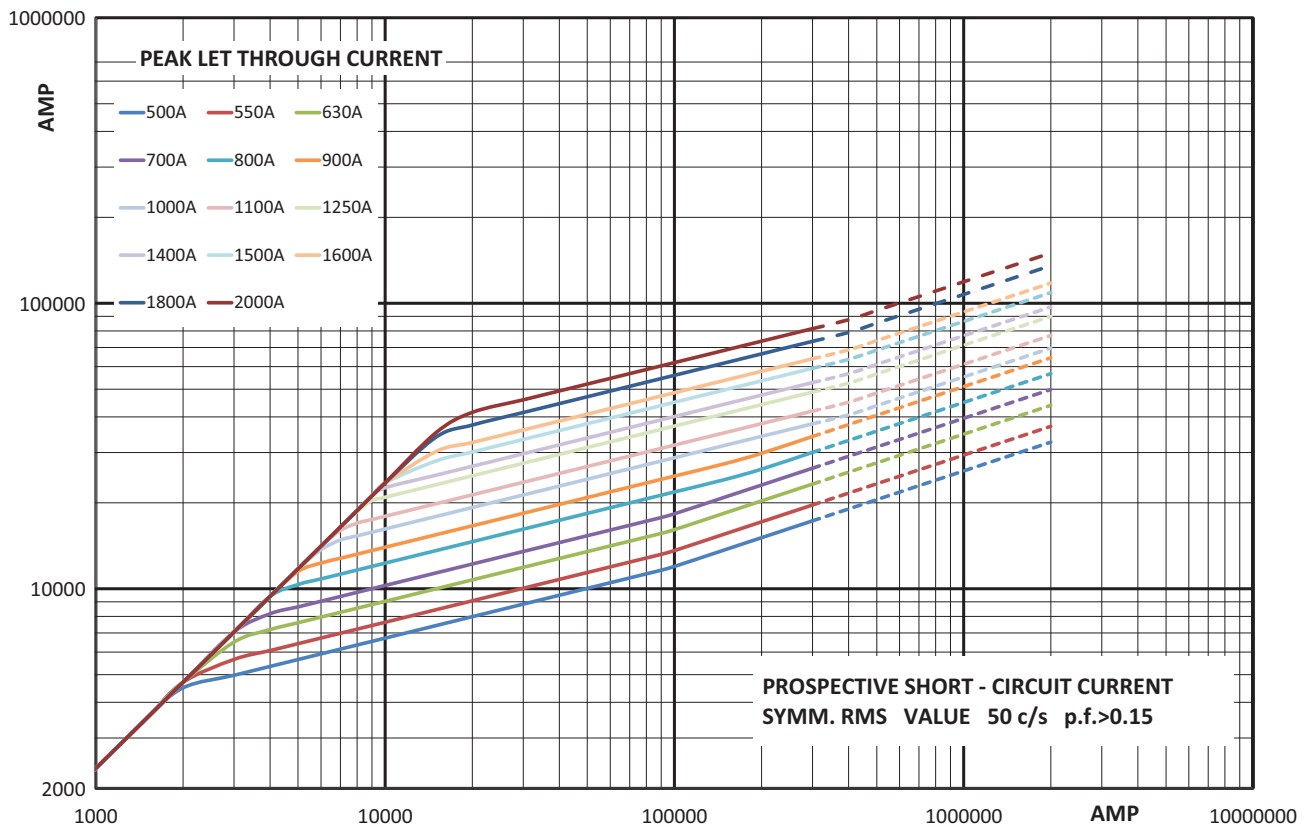
## 170M - Sizes 1\* to 3, US style, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

Time-current curve - Size 3, 500 A to 2000 A



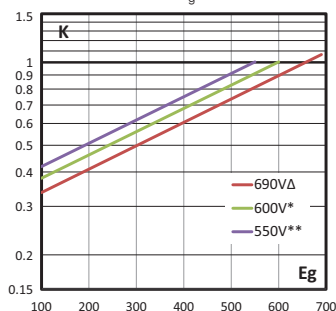
# 170M - Sizes 1\* to 3, US style, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

## Cut-off curve - Size 3, 500 A to 2000 A



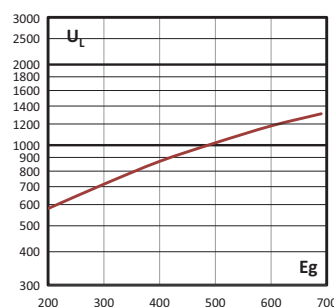
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



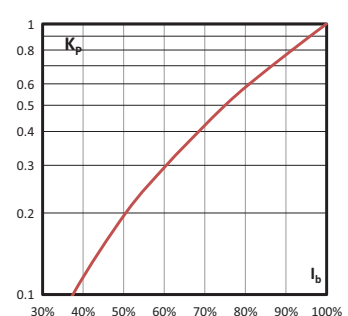
## Arc voltage

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 percent.



## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.





# Square body fuse links

## 170M - Sizes 1\* to 3, US style, 1000 V a.c. (IEC), 50 A to 1400 A

### Specifications

#### Description

Square body US style bolted tags high speed fuse links for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

#### Technical data

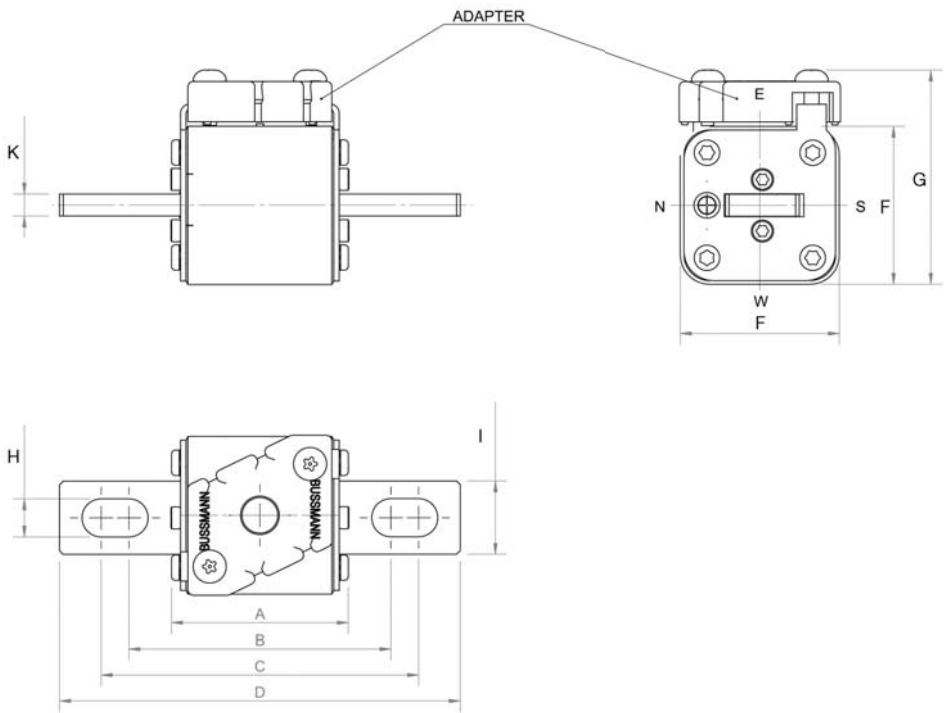
- Rated voltage: 1000 V a.c. (IEC)
- Rated current: 50 A to 1400 A
- Breaking capacity:
  - 125kA RMS Sym. A.C.
  - Size 1 750 V d.c. 50 kA IR
- Operating class: aR

#### Standards / Agency information

CE, Designed and tested to IEC60269 Part 4. UL Recognised/CSA Component Acceptance status for size 2 and 3 (315 A to 1100 A) and CCC approval for size 2 only.



#### Dimensions (mm)



| Size      | A  | B     | C     | D   | F  | G  | H    | I  | K |
|-----------|----|-------|-------|-----|----|----|------|----|---|
| 1*FKE/115 | 74 | 101   | 130   | 156 | 43 | 60 | 10.4 | 20 | 6 |
| 1FKE/115  | 76 | 102   | 128   | 160 | 51 | 68 | 14.3 | 25 | 6 |
| 2FKE/115  | 76 | 101.1 | 127.5 | 160 | 59 | 76 | 14.4 | 25 | 6 |
| 3FKE/115  | 76 | 101.1 | 127.5 | 158 | 74 | 91 | 16   | 36 | 6 |

1mm = 0.0394"

Data sheets: 170K8564 (Size 1\*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

# 170M - Sizes 1\* to 3, US style, 1000 V a.c. (IEC), 50 A to 1400 A

## Catalogue numbers

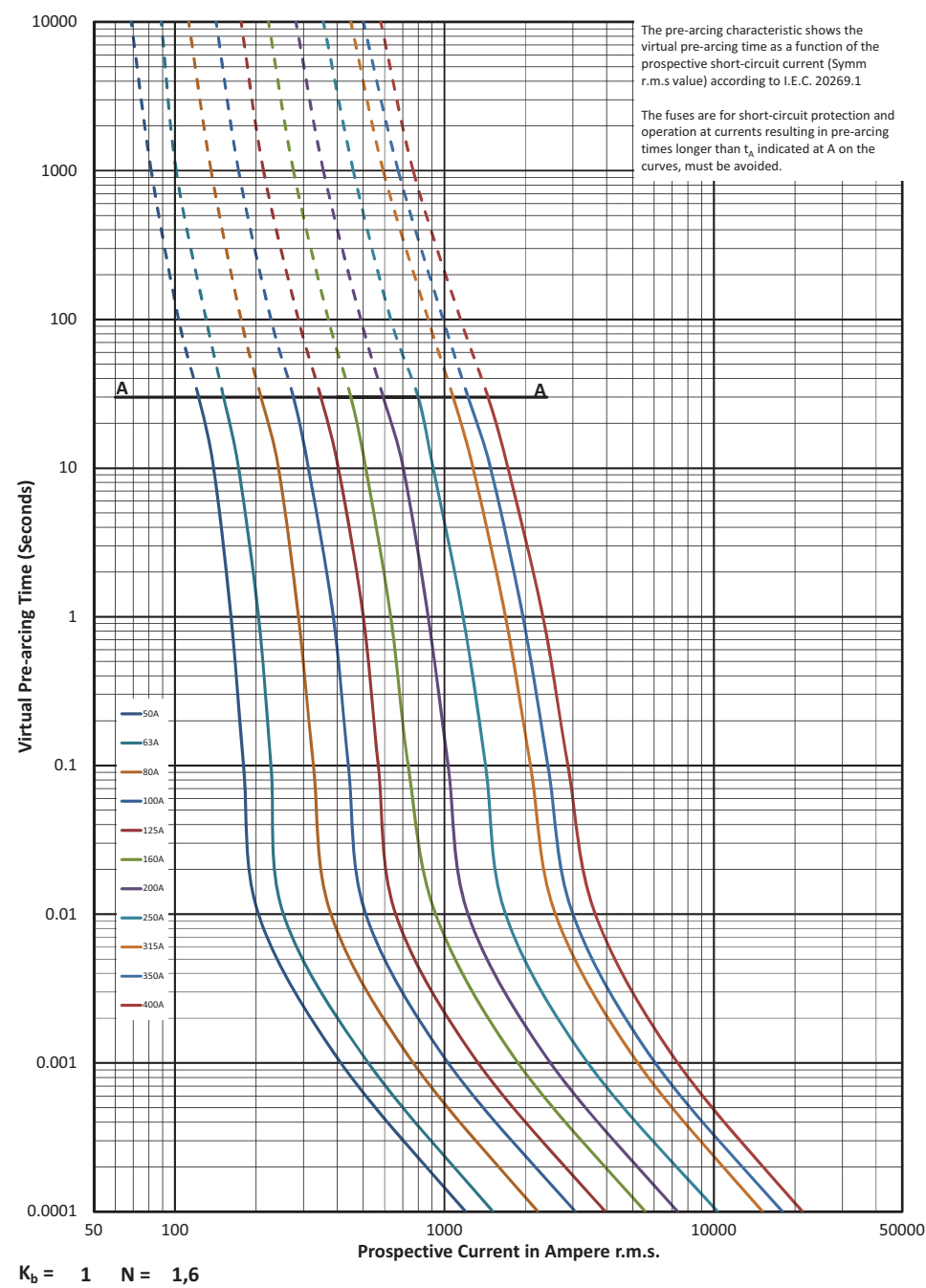
| Fuse link<br>body size | Rated voltage                                      | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                            | Watts loss<br>(W) | Catalogue numbers<br>-FKE/115 Type K<br>indicator for micro |
|------------------------|----------------------------------------------------|-------------------------|---------------------------------------|----------------------------|-------------------|-------------------------------------------------------------|
|                        |                                                    |                         | Pre-arcing                            | Clearing<br>at 1000 V a.c. |                   |                                                             |
| 1*                     | 1000 V a.c. (IEC)                                  | 50                      | 135                                   | 815                        | 20                | 170M3531                                                    |
|                        |                                                    | 63                      | 215                                   | 1300                       | 25                | 170M3532                                                    |
|                        |                                                    | 80                      | 460                                   | 2750                       | 30                | 170M3533                                                    |
|                        |                                                    | 100                     | 860                                   | 5100                       | 35                | 170M3534                                                    |
|                        |                                                    | 125                     | 1450                                  | 8600                       | 40                | 170M3535                                                    |
|                        |                                                    | 160                     | 2850                                  | 17,500                     | 45                | 170M3536                                                    |
|                        |                                                    | 200                     | 4950                                  | 29,500                     | 50                | 170M3537                                                    |
|                        |                                                    | 250                     | 9550                                  | 57,000                     | 55                | 170M3538                                                    |
|                        |                                                    | 315                     | 21,500                                | 130,000                    | 65                | 170M3539                                                    |
|                        |                                                    | 350                     | 29,000                                | 175,000                    | 70                | 170M3540                                                    |
|                        |                                                    | 400                     | 42,000                                | 250,000                    | 75                | 170M3541                                                    |
| 1                      | 1000 V a.c. (IEC)<br>1000 V a.c. / 750 V d.c. (UL) | 160                     | 2200                                  | 13,500                     | 40                | 170M4531                                                    |
|                        |                                                    | 200                     | 4150                                  | 24,500                     | 50                | 170M4532                                                    |
|                        |                                                    | 250                     | 7750                                  | 46,000                     | 55                | 170M4533                                                    |
|                        |                                                    | 315                     | 16,500                                | 98,500                     | 65                | 170M4534                                                    |
|                        |                                                    | 350                     | 21,500                                | 130,000                    | 70                | 170M4535                                                    |
|                        |                                                    | 400                     | 31,000                                | 185,000                    | 75                | 170M4536                                                    |
|                        |                                                    | 450                     | 44,500                                | 265,000                    | 80                | 170M4537                                                    |
|                        |                                                    | 500                     | 63,000                                | 375,000                    | 85                | 170M4538                                                    |
|                        |                                                    | 550                     | 84,500                                | 500,000                    | 90                | 170M4539                                                    |
| 2                      | 1000 V a.c.<br>(IEC/UL)                            | 630                     | 125,000                               | 755,000                    | 98                | 170M4540                                                    |
|                        |                                                    | 250                     | 6750                                  | 40,000                     | 65                | 170M5531                                                    |
|                        |                                                    | 315                     | 13,500                                | 81,500                     | 75                | 170M5532                                                    |
|                        |                                                    | 350                     | 16,500                                | 99,000                     | 80                | 170M5533                                                    |
|                        |                                                    | 400                     | 26,000                                | 155,000                    | 85                | 170M5534                                                    |
|                        |                                                    | 450                     | 35,500                                | 210,000                    | 90                | 170M5535                                                    |
|                        |                                                    | 500                     | 49,500                                | 295,000                    | 95                | 170M5536                                                    |
|                        |                                                    | 550                     | 66,000                                | 390,000                    | 100               | 170M5337                                                    |
|                        |                                                    | 630                     | 93,500                                | 555,000                    | 110               | 170M5538                                                    |
| 3                      | 1000 V a.c.<br>(IEC/UL)                            | 700                     | 130,000                               | 770,000                    | 115               | 170M5539                                                    |
|                        |                                                    | 800                     | 195,000                               | 1,200,000                  | 125               | 170M5540                                                    |
|                        |                                                    | 315                     | 9200                                  | 54,500                     | 90                | 170M8531                                                    |
|                        |                                                    | 350                     | 13,000                                | 77,500                     | 95                | 170M8532                                                    |
|                        |                                                    | 400                     | 19,000                                | 115,000                    | 105               | 170M8533                                                    |
|                        |                                                    | 450                     | 27,000                                | 160,000                    | 107               | 170M8534                                                    |
|                        |                                                    | 500                     | 37,500                                | 225,000                    | 110               | 170M8535                                                    |
|                        |                                                    | 550                     | 52,000                                | 310,000                    | 115               | 170M8536                                                    |
|                        |                                                    | 630                     | 82,500                                | 490,000                    | 120               | 170M8537                                                    |
|                        |                                                    | 700                     | 115,000                               | 700,000                    | 125               | 170M8538                                                    |
|                        |                                                    | 800                     | 170,000                               | 1,050,000                  | 135               | 170M8539                                                    |
|                        |                                                    | 900                     | 250,000                               | 1,500,000                  | 145               | 170M8540                                                    |
|                        |                                                    | 1000                    | 340,000                               | 2,050,000                  | 150               | 170M8541                                                    |
|                        |                                                    | 1100                    | 460,000                               | 2,750,000                  | 155               | 170M8542                                                    |
|                        | 1000 V a.c. (IEC)                                  | 1250                    | 575,000                               | 3,400,000                  | 175               | 170M8543                                                    |
|                        | 900 V a.c. (IEC)                                   | 1400                    | 795,000                               | 4,200,000                  | 185               | 170M8544                                                    |

Data sheets: 170K8564 (Size 1\*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

# Square body fuse links

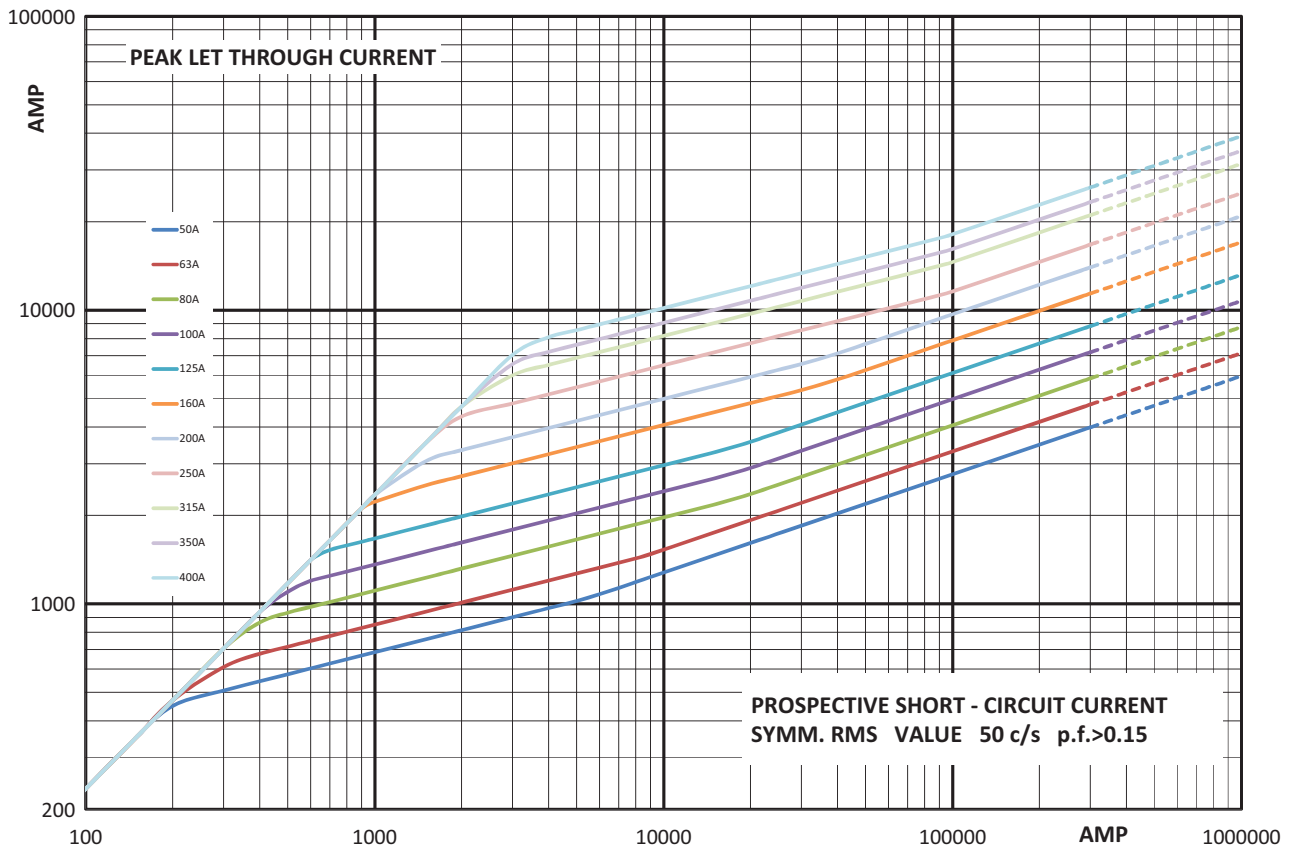
## 170M - Sizes 1\* to 3, US style, 1000 V a.c. (IEC), 50 A to 1400 A

Time-current curve - Size 1\*, 50 A to 400 A



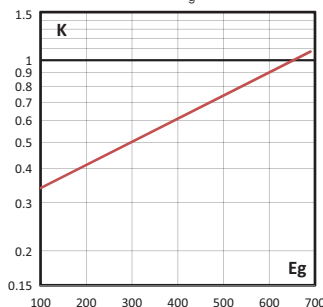
## 170M - Sizes 1\* to 3, US style, 1000 V a.c. (IEC), 50 A to 1400 A

### Cut-off curve - Size 1\*, 50 A to 400 A



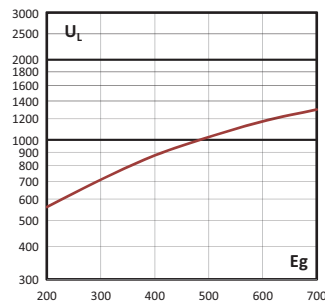
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



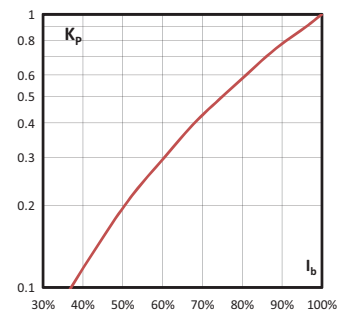
### Arc voltage

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 percent.



### Watts losses

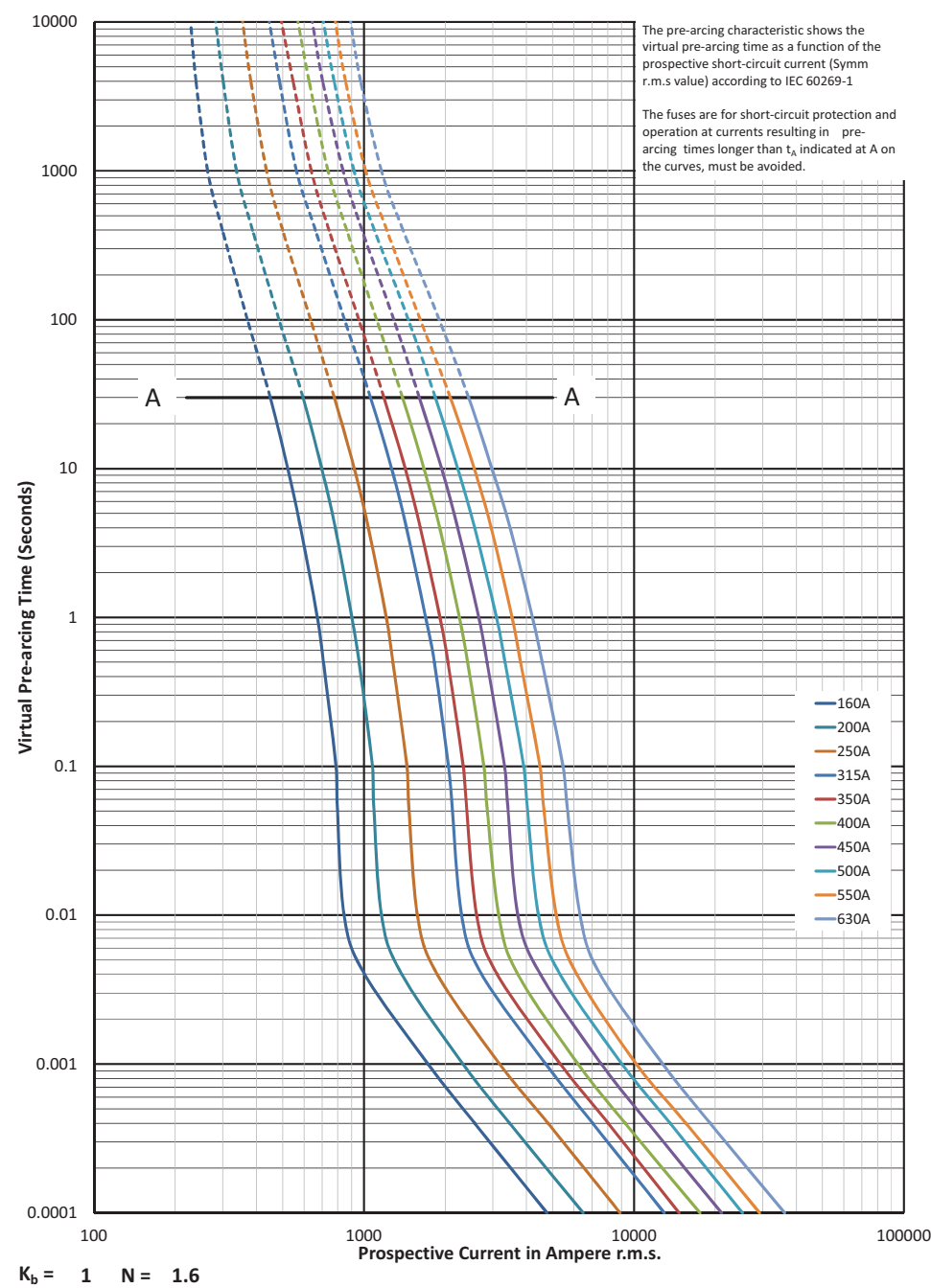
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor,  $K_p$ , is given as a function of the RMS load current,  $I_b$ , in percent of the rated current.



# Square body fuse links

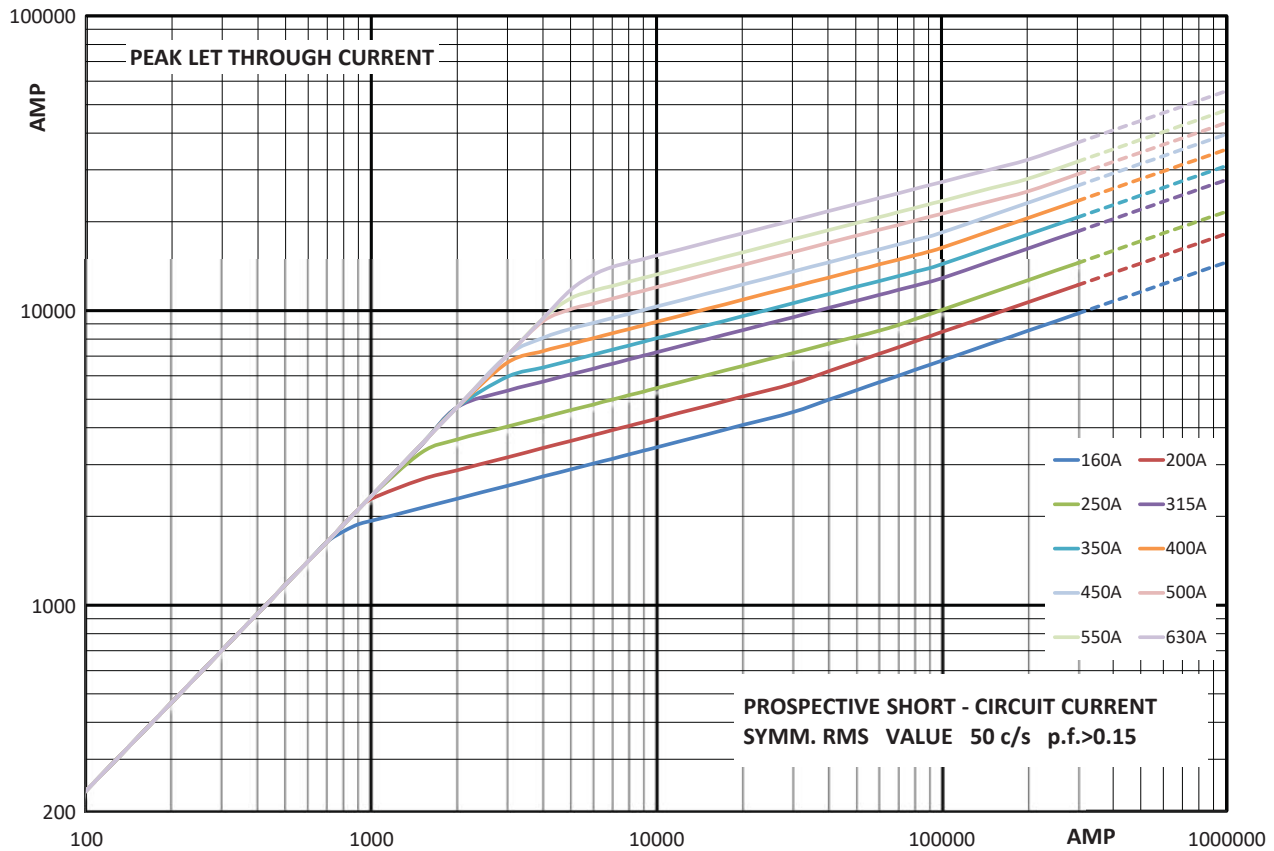
## 170M - Sizes 1\* to 3, US style, 1000 V a.c. (IEC), 50 A to 1400 A

Time-current curve - Size 1, 160 A to 630 A



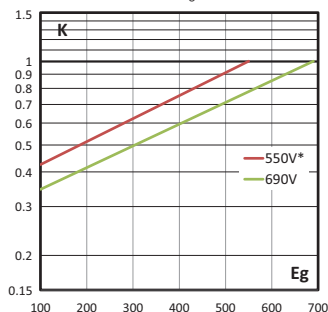
## 170M - Sizes 1\* to 3, US style, 1000 V a.c. (IEC), 50 A to 1400 A

### Cut-off curve - Size 1, 160 A to 630 A



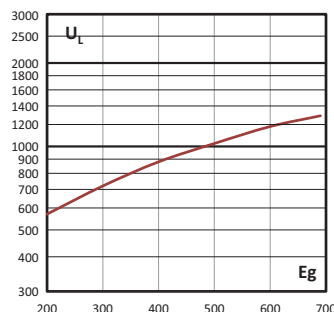
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



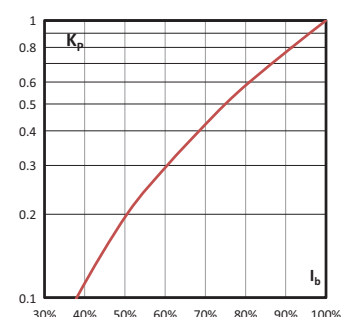
### Arc voltage

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 percent.



### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.

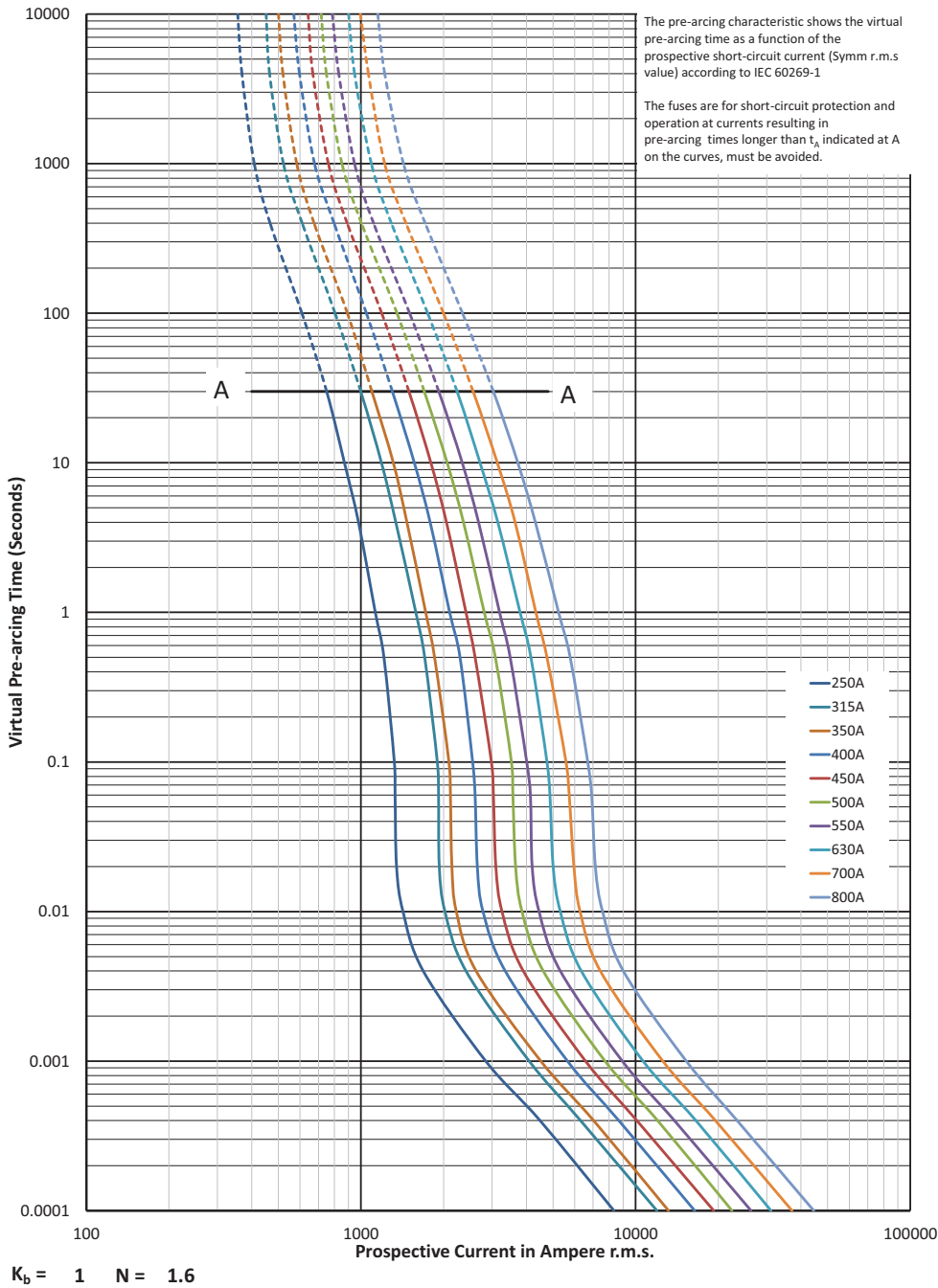


Data sheets: 170K8564 (Size 1\*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

# Square body fuse links

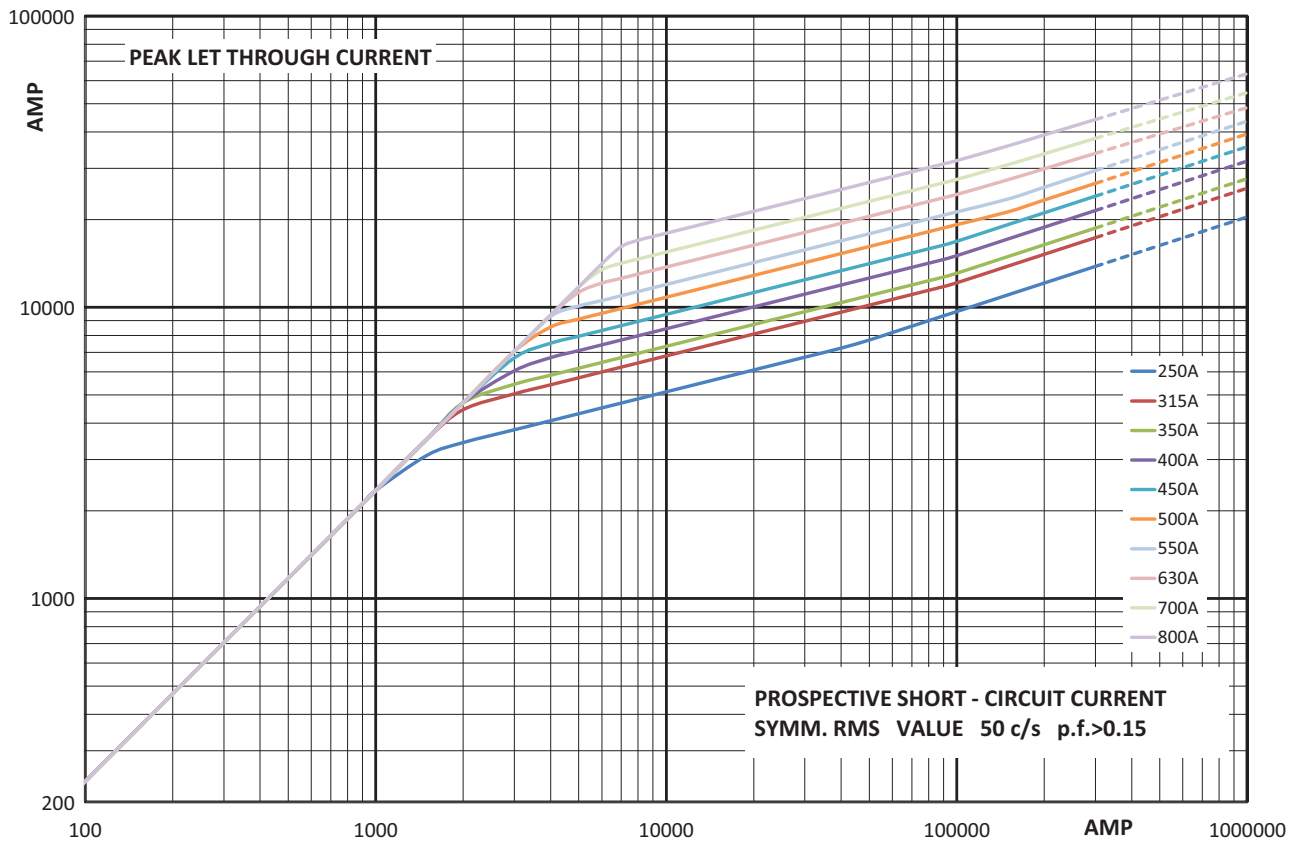
## 170M - Sizes 1\* to 3, US style, 1000 V a.c. (IEC), 50 A to 1400 A

Time-current curve - Size 2, 250 A to 800 A



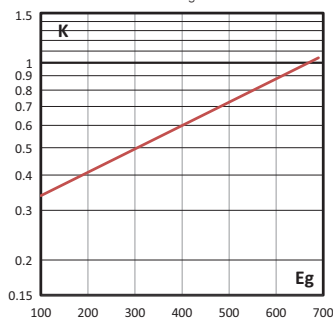
## 170M - Sizes 1\* to 3, US style, 1000 V a.c. (IEC), 50 A to 1400 A

### Cut-off curve - Size 2, 250 A to 800 A



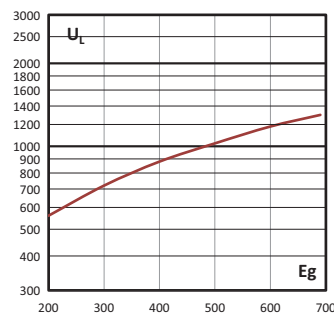
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



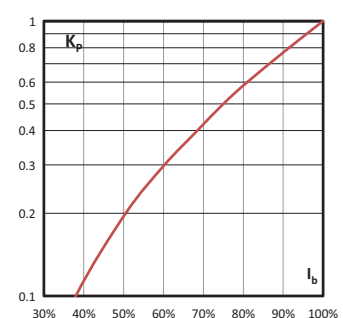
### Arc voltage

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 percent.



### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.

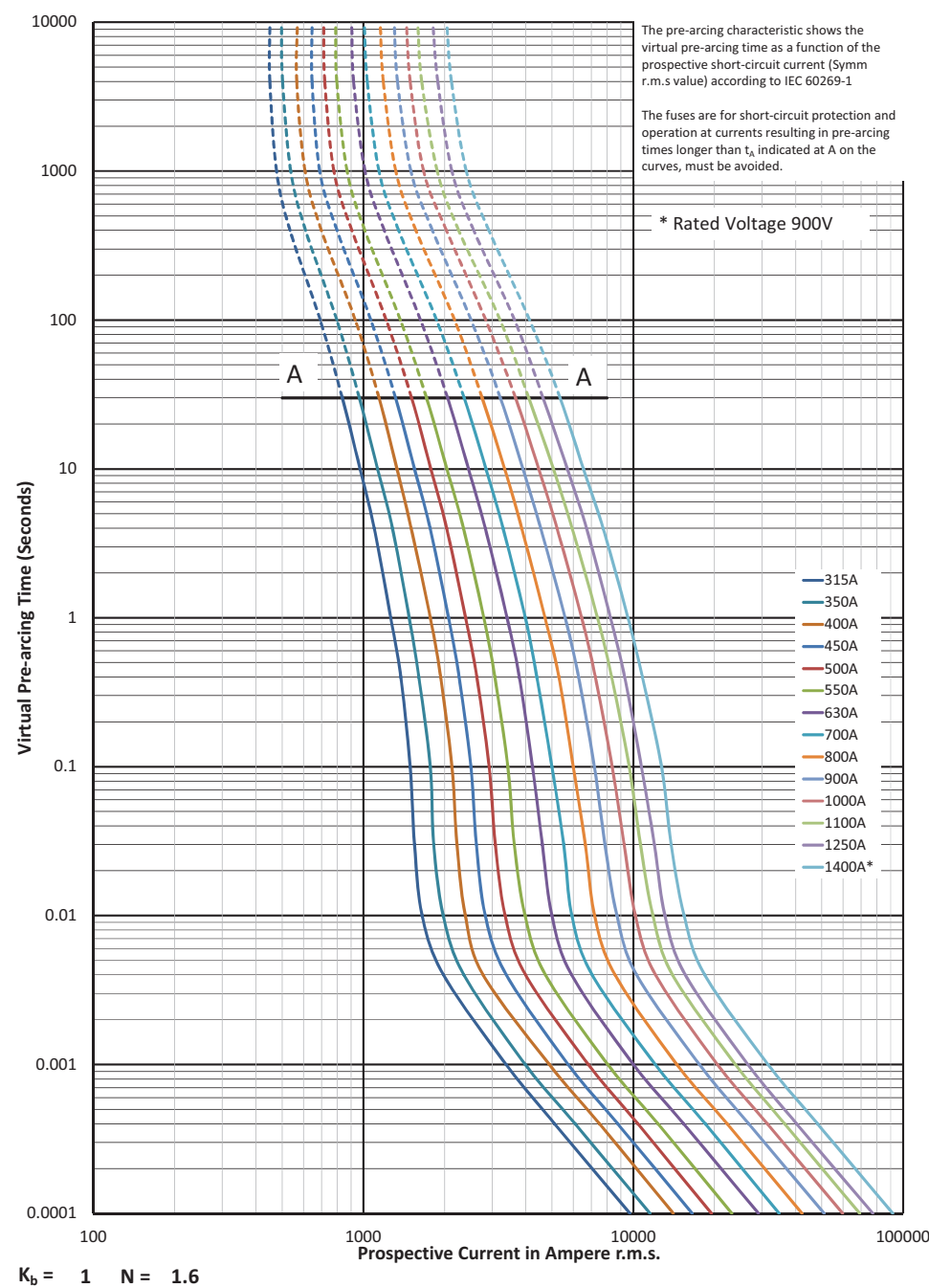




Square body fuse links

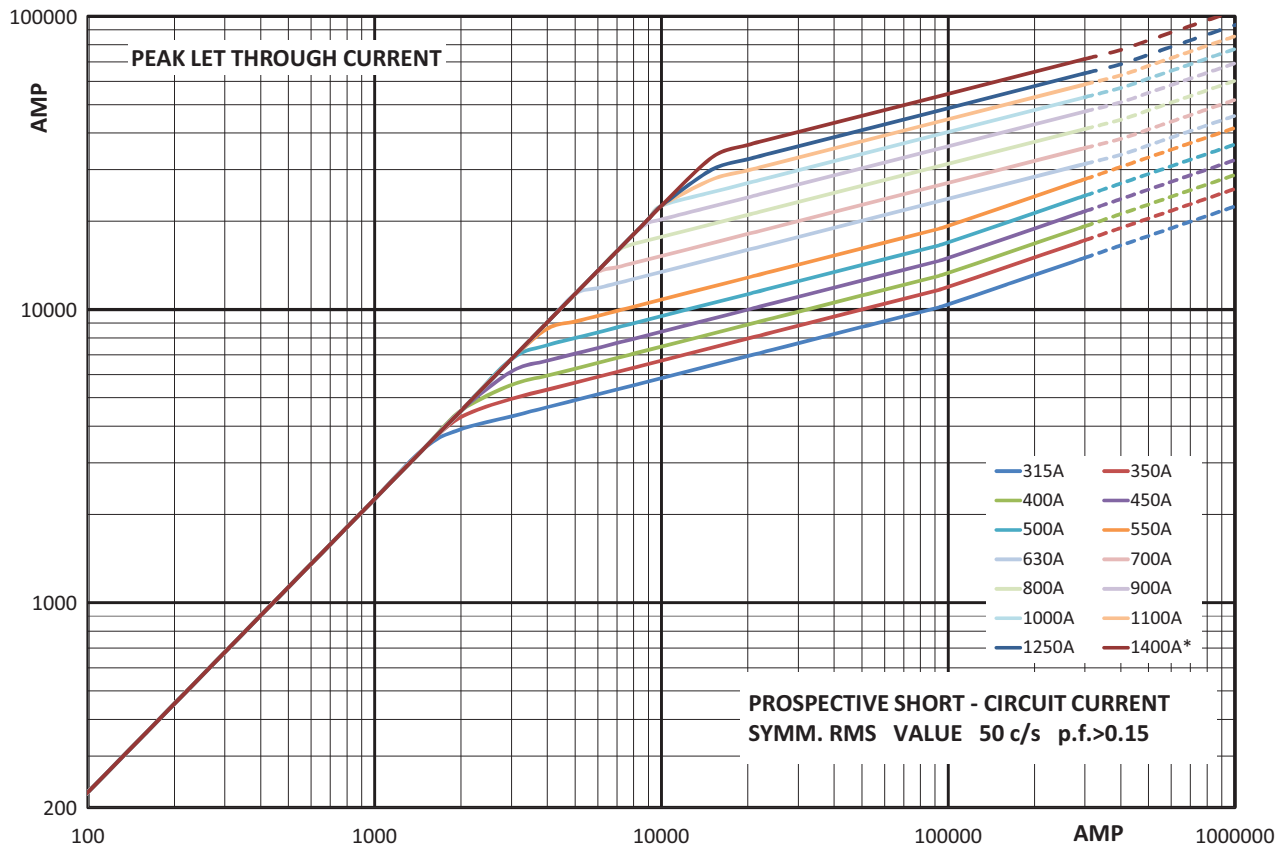
170M - Sizes 1\* to 3, US style, 1000 V a.c. (IEC), 50 A to 1400 A

Time-current curve - Size 3, 315 A to 1400 A



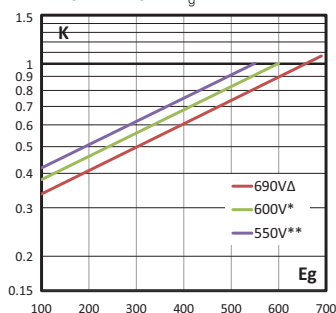
## 170M - Sizes 1\* to 3, US style, 1000 V a.c. (IEC), 50 A to 1400 A

### Cut-off curve - Size 3, 315 A to 1400 A



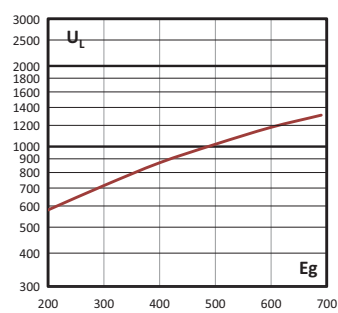
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



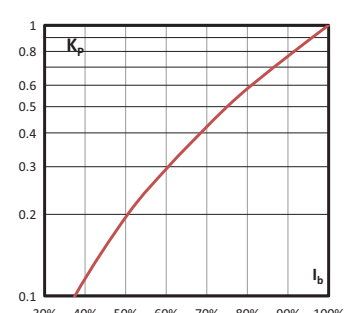
### Arc voltage

This curve gives the peak arc voltage,  $U_t$ , 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 percent.



### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



# Square body fuse links

**170M** - Sizes 1\* to 3, US style, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

## Specifications

### Description

Square body US style bolted tags high speed fuse links for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

### Technical data

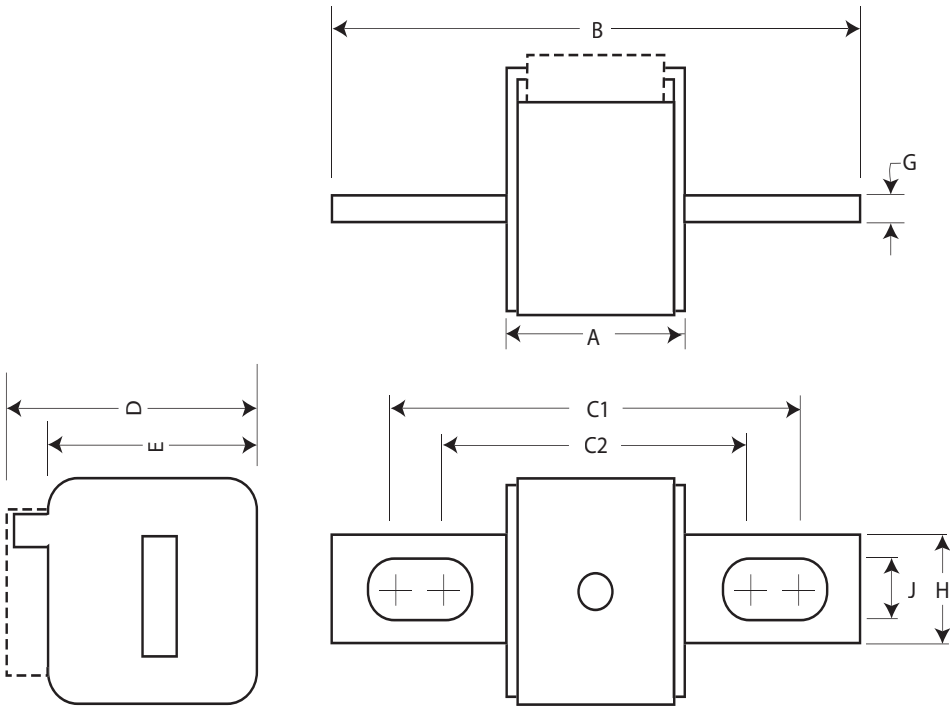
- Rated voltage: 1250 V a.c. (IEC), 1300 V a.c. (UL)
- Rated current: 50 A to 1400 A
- Breaking capacity:
  - 100 kA RMS Sym.A.C.
  - Size 1\* 90 kA D.C.
- -Operating class: aR

### Standards / Agency information

CE, Designed and tested to IEC 60269 part 4. Consult Eaton for UL Recognition/CSA Component Acceptance status and CCC approvals



### Dimensions (mm)



| Size | A  | B   | C1  | C2  | D  | E  | G | H  | J  |
|------|----|-----|-----|-----|----|----|---|----|----|
| 1*   | 74 | 156 | 130 | 101 | 59 | 45 | 6 | 20 | 10 |
| 1    | 76 | 160 | 127 | 102 | 69 | 53 | 6 | 25 | 14 |
| 2    | 76 | 160 | 127 | 102 | 77 | 61 | 6 | 25 | 14 |
| 3    | 76 | 159 | 128 | 101 | 92 | 76 | 6 | 36 | 16 |

Data sheets: 170K6630 (Size 1\*), 170K6632 (Size 1), 170K6634 (Size 2), 170K6636 (Size 3)

# 170M - Sizes 1\* to 3, US style, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

## Catalogue numbers

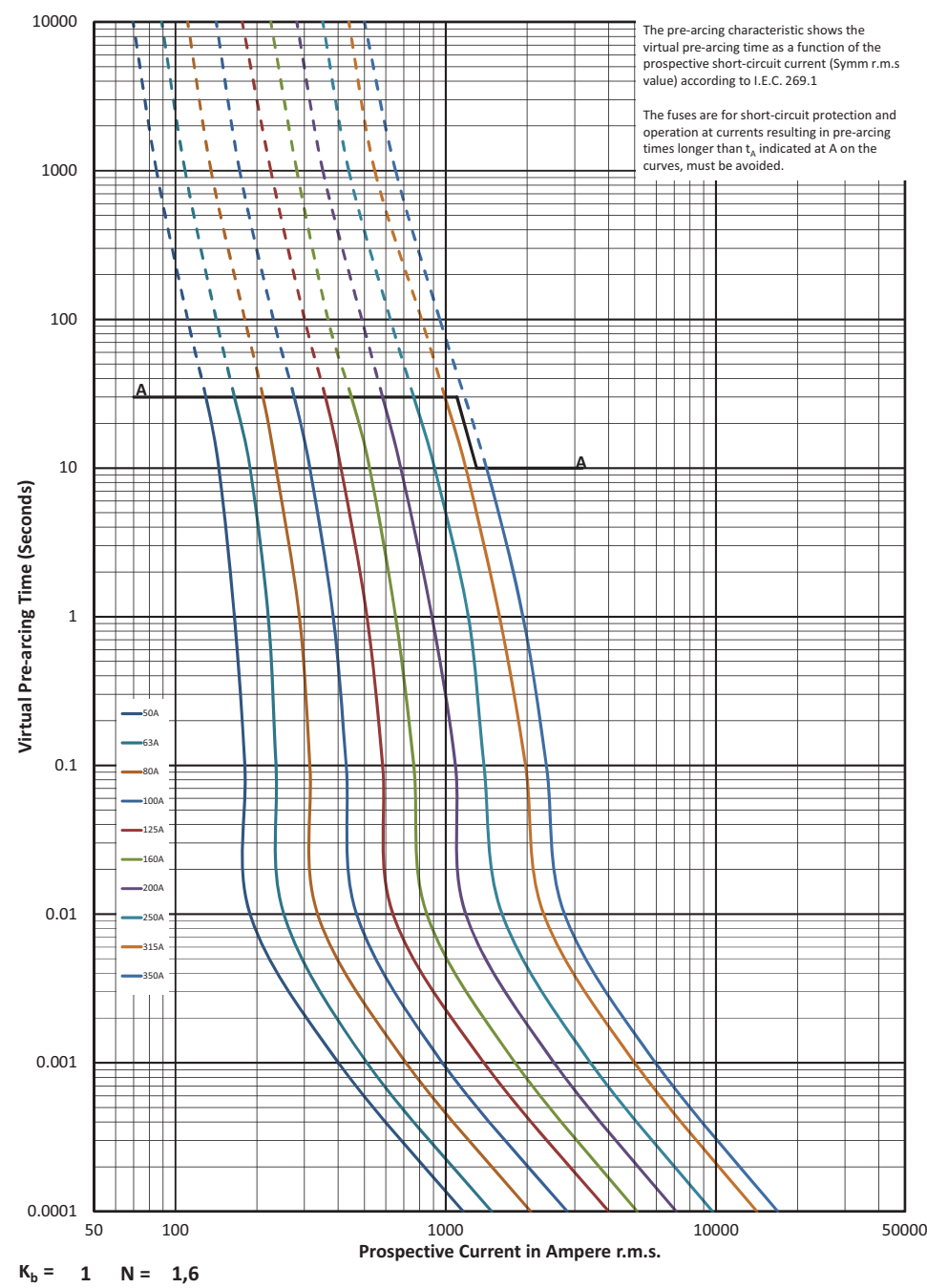
| Fuse link<br>body size | Rated voltage                         | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                            |                            | Watts loss<br>(W) | Catalogue numbers            |                                        |
|------------------------|---------------------------------------|-------------------------|---------------------------------------|----------------------------|----------------------------|-------------------|------------------------------|----------------------------------------|
|                        |                                       |                         | Pre-arcing                            | Clearing<br>at 1000 V a.c. | Clearing<br>at 1250 V a.c. |                   | -FU/115 without<br>indicator | -FKE/115 Type K<br>indicator for micro |
| 1*                     | 1250 V a.c. (IEC)                     | 50                      | 135                                   | 815                        | 1100                       | 15                | 170M3688 <sup>1</sup>        | 170M3738 <sup>1</sup>                  |
|                        |                                       | 63                      | 215                                   | 1300                       | 1750                       | 20                | 170M3689 <sup>1</sup>        | 170M3739 <sup>1</sup>                  |
|                        |                                       | 80                      | 420                                   | 2500                       | 3350                       | 25                | 170M3690 <sup>1</sup>        | 170M3740 <sup>1</sup>                  |
|                        |                                       | 100                     | 750                                   | 4450                       | 5950                       | 30                | 170M3691 <sup>1</sup>        | 170M3741 <sup>1</sup>                  |
|                        |                                       | 125                     | 1450                                  | 9000                       | 11,500                     | 35                | 170M3692 <sup>1</sup>        | 170M3742 <sup>1</sup>                  |
|                        | 1300 V a.c. (UL)                      | 160                     | 2600                                  | 16,000                     | 21,000                     | 40                | 170M3693 <sup>1</sup>        | 170M3743 <sup>1</sup>                  |
|                        |                                       | 200                     | 5150                                  | 31,000                     | 41,000                     | 45                | 170M3694 <sup>1</sup>        | 170M3744 <sup>1</sup>                  |
|                        |                                       | 250                     | 9200                                  | 54,500                     | 73,000                     | 55                | 170M3695 <sup>1</sup>        | 170M3745 <sup>1</sup>                  |
|                        |                                       | 315                     | 18,500                                | 115,000                    | 150,000                    | 60                | 170M3696 <sup>1</sup>        | 170M3746 <sup>1</sup>                  |
|                        |                                       | 350                     | 27,000                                | 165,000                    | 220,000                    | 65                | 170M3697 <sup>1</sup>        | 170M3747 <sup>1</sup>                  |
| 1                      | 1250 V a.c. (IEC)                     | 160                     | 1900                                  | 11,500                     | 15,500                     | 45                | 170M4688                     | 170M4738                               |
|                        |                                       | 200                     | 3800                                  | 22,500                     | 30,000                     | 50                | 170M4689                     | 170M4739                               |
|                        |                                       | 250                     | 7750                                  | 46,000                     | 61,500                     | 60                | 170M4690                     | 170M4740                               |
|                        |                                       | 315                     | 15,000                                | 90,000                     | 120,000                    | 65                | 170M4691                     | 170M4741                               |
|                        | 1300 V a.c. (UL)                      | 350                     | 20,000                                | 125,000                    | 165,000                    | 70                | 170M4692                     | 170M4742                               |
|                        |                                       | 400                     | 29,500                                | 175,000                    | 235,000                    | 75                | 170M4693                     | 170M4743                               |
|                        | 1100 V a.c. IEC                       | 450                     | 42,000                                | 250,000                    | 335,000                    | 80                | 170M4694                     | 170M4744                               |
|                        |                                       | 500                     | 69,500                                | 340,000                    | N/A                        | 85                | 170M4695                     | 170M4745                               |
|                        |                                       | 550                     | 95,000                                | 465,000                    | N/A                        | 95                | 170M4696                     | 170M4746                               |
|                        | 1000 V a.c. IEC                       | 630                     | 130,000                               | 660,000                    | N/A                        | 100               | 170M4697                     | 170M4747                               |
|                        |                                       | 250                     | 6500                                  | 38,500                     | 51,500                     | 65                | 170M5688                     | 170M5738                               |
| 2                      | 1250 V a.c. (IEC)                     | 280                     | 9350                                  | 55,500                     | 74,500                     | 70                | 170M5689                     | 170M5739                               |
|                        |                                       | 315                     | 13,000                                | 77,500                     | 105,000                    | 75                | 170M5690                     | 170M5740                               |
|                        |                                       | 350                     | 16,500                                | 97,500                     | 135,000                    | 80                | 170M5691                     | 170M5741                               |
|                        |                                       | 400                     | 23,000                                | 140,000                    | 180,000                    | 85                | 170M5692                     | 170M5742                               |
|                        | 1300 V a.c. (UL)                      | 450                     | 34,000                                | 205,000                    | 270,000                    | 90                | 170M5693                     | 170M5743                               |
|                        |                                       | 500                     | 48,000                                | 285,000                    | 380,000                    | 95                | 170M5694                     | 170M5744                               |
|                        |                                       | 550                     | 62,000                                | 370,000                    | 495,000                    | 100               | 170M5695                     | 170M5745                               |
|                        |                                       | 630                     | 115,000                               | 575,000                    | 730,000                    | 120               | 170M5696                     | 170M5746                               |
|                        | 1100 V a.c. IEC                       | 700                     | 160,000                               | 795,000                    | N/A                        | 125               | 170M5697                     | 170M5747                               |
|                        |                                       | 800                     | 245,000                               | 1,200,000                  | N/A                        | 130               | 170M5698                     | 170M5748                               |
|                        | 1000 V a.c. IEC                       | 900                     | 360,000                               | 1,750,000                  | N/A                        | 135               | 170M5699                     | 170M5749                               |
|                        |                                       | 1000                    | 480,000                               | 2,350,000                  | N/A                        | 145               | 170M5700                     | 170M5750                               |
| 3                      | 1250 V a.c.(IEC)<br>1300 V a.c. (UL)  | 315                     | 9500                                  | 58,000                     | 77,500                     | 85                | 170M6688                     | 170M6738                               |
|                        |                                       | 350                     | 13,500                                | 81,500                     | 110,000                    | 90                | 170M6689                     | 170M6739                               |
|                        |                                       | 400                     | 19,500                                | 120,000                    | 160,000                    | 95                | 170M6690                     | 170M6740                               |
|                        |                                       | 450                     | 31,000                                | 185,000                    | 245,000                    | 100               | 170M6691                     | 170M6741                               |
|                        |                                       | 500                     | 39,000                                | 235,000                    | 310,000                    | 105               | 170M6692                     | 170M6742                               |
|                        |                                       | 550                     | 55,000                                | 325,000                    | 435,000                    | 110               | 170M6693                     | 170M6743                               |
|                        |                                       | 630                     | 83,500                                | 495,000                    | 665,000                    | 115               | 170M6694                     | 170M6744                               |
|                        |                                       | 700                     | 115,000                               | 705,000                    | 940,000                    | 120               | 170M6695                     | 170M6745                               |
|                        | 1250 V a.c. (IEC)                     | 800                     | 205,000                               | 995,000                    | 1,300,000                  | 125               | 170M6696                     | 170M6746                               |
|                        |                                       | 900                     | 305,000                               | 1,500,000                  | 1,900,000                  | 130               | 170M6697                     | 170M6747                               |
|                        | 1100 V a.c. (IEC)<br>1000 V a.c. (UL) | 1000                    | 450,000                               | 2,150,000                  | N/A                        | 135               | 170M6698                     | 170M6748                               |
|                        |                                       | 1100                    | 575,000                               | 2,800,000                  | N/A                        | 160               | 170M6699                     | 170M6749                               |
|                        | 1000 V a.c.<br>IEC & UL               | 1250                    | 810,000                               | 3,950,000                  | N/A                        | 170               | 170M6700                     | 170M6750                               |
|                        |                                       | 1400                    | 1,250,000                             | 6,000,000                  | N/A                        | 175               | 170M6701                     | 170M6751                               |

<sup>1</sup> Rated at 900 V d.c. 8XIn 90 kA

Square body fuse links

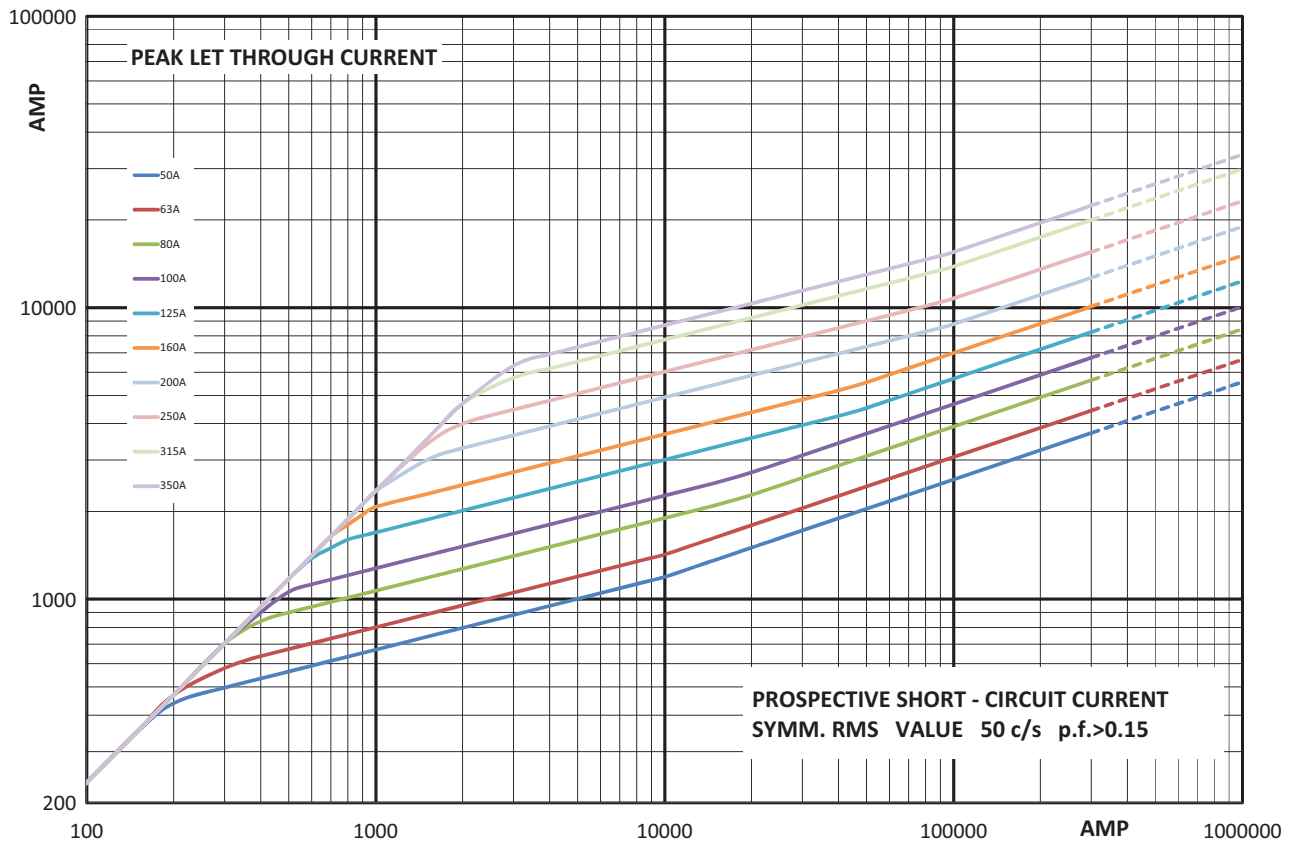
170M - Sizes 1\* to 3, US style, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

Time-current curve - Size 1\*, 50 A to 350 A



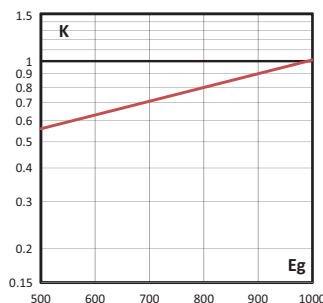
# 170M - Sizes 1\* to 3, US style, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

## Cut-off curve - Size 1\*, 50 A to 350 A



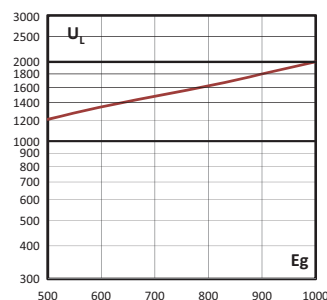
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



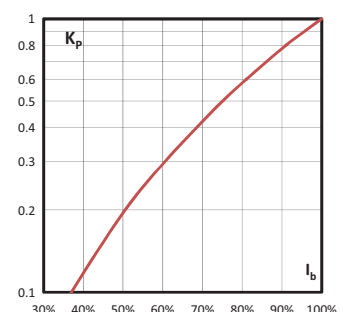
## Arc voltage

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 percent.



## Watts losses

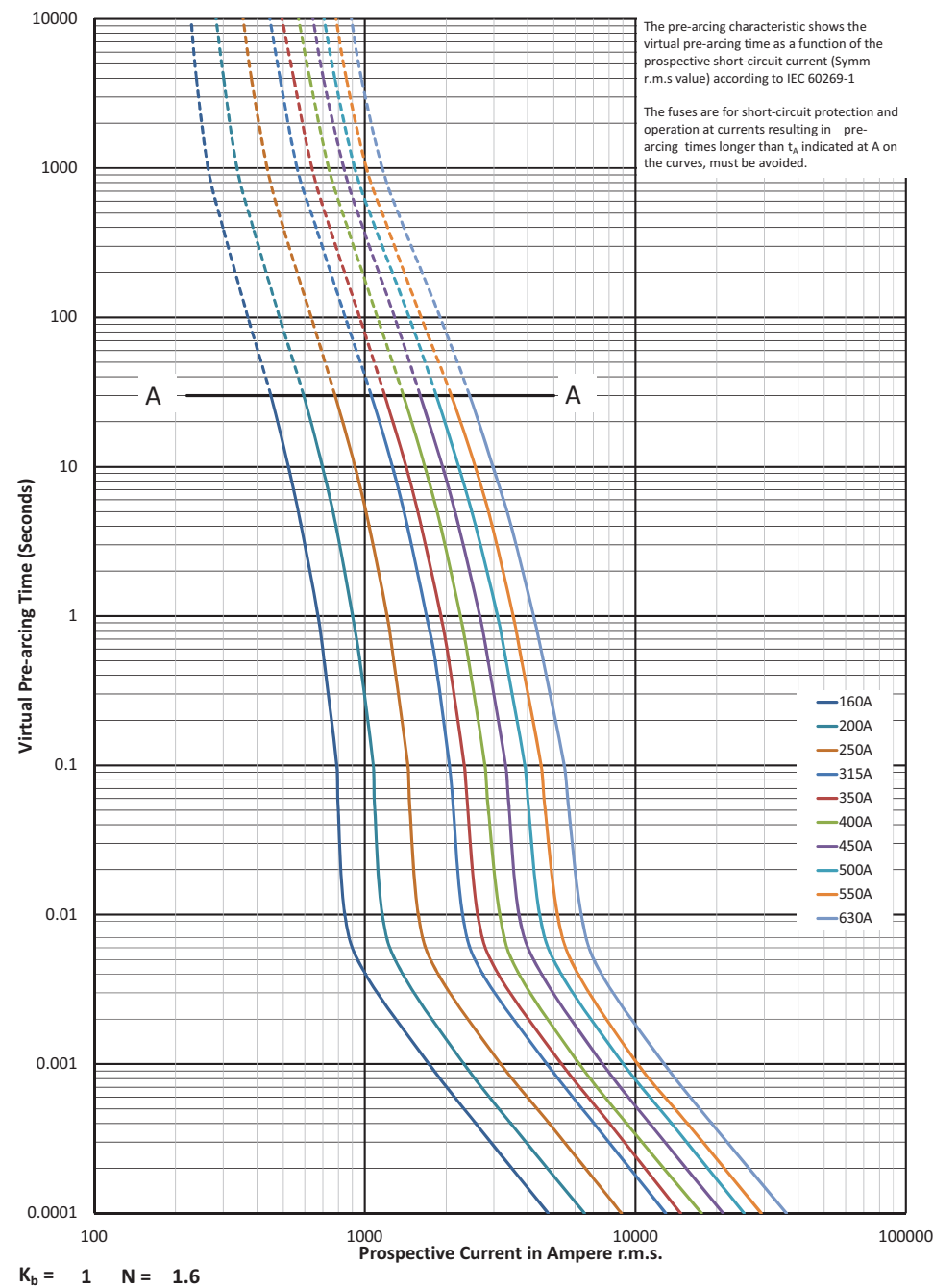
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor,  $K_p$ , is given as a function of the RMS load current,  $I_b$ , in percent of the rated current.



Square body fuse links

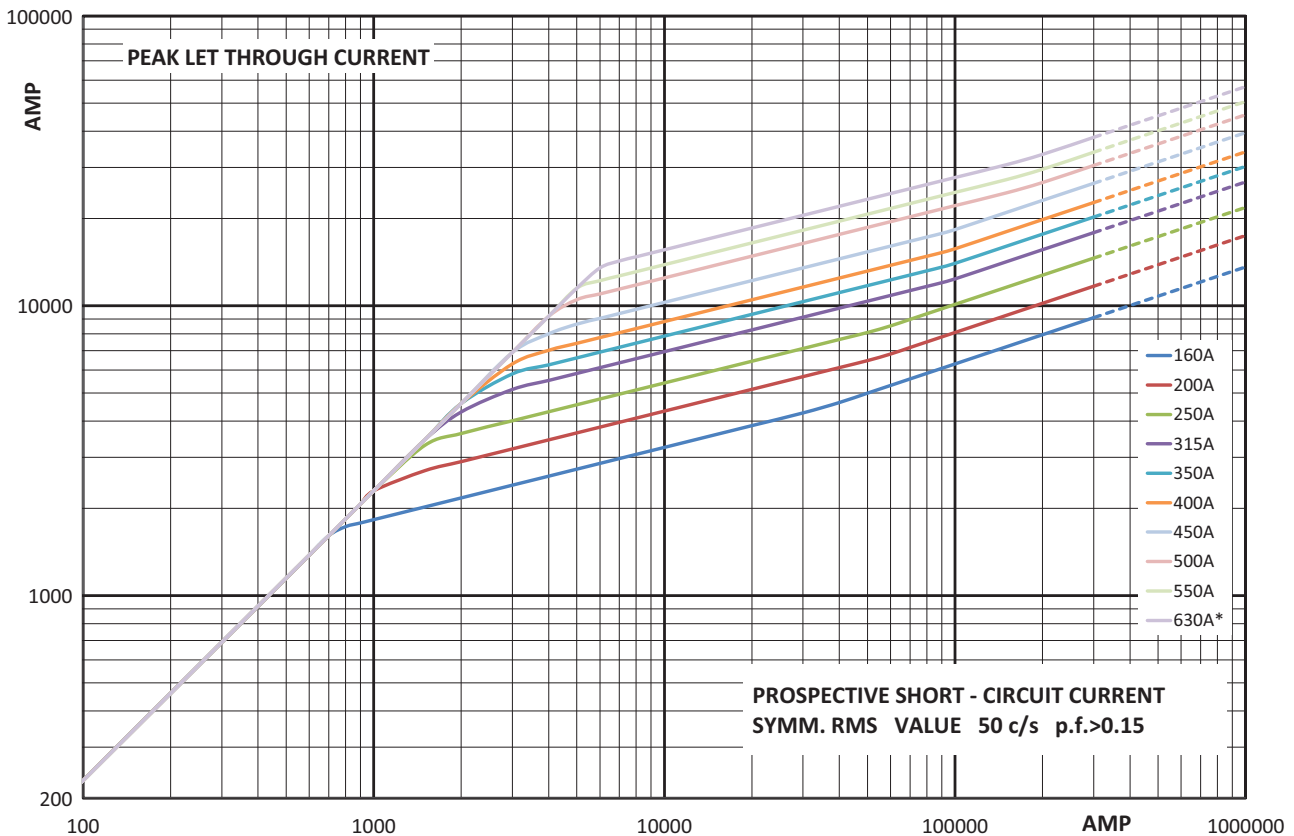
170M - Sizes 1\* to 3, US style, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

Time-current curve - Size 1, 160 A to 630 A



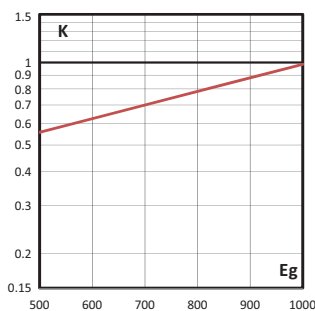
## 170M - Sizes 1\* to 3, US style, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

### Cut-off curve - Size 1, 160 A to 630 A



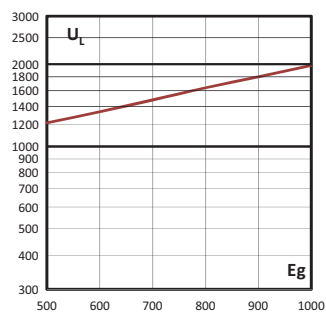
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



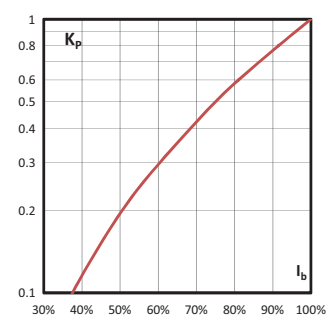
### Arc voltage

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 percent.



### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.

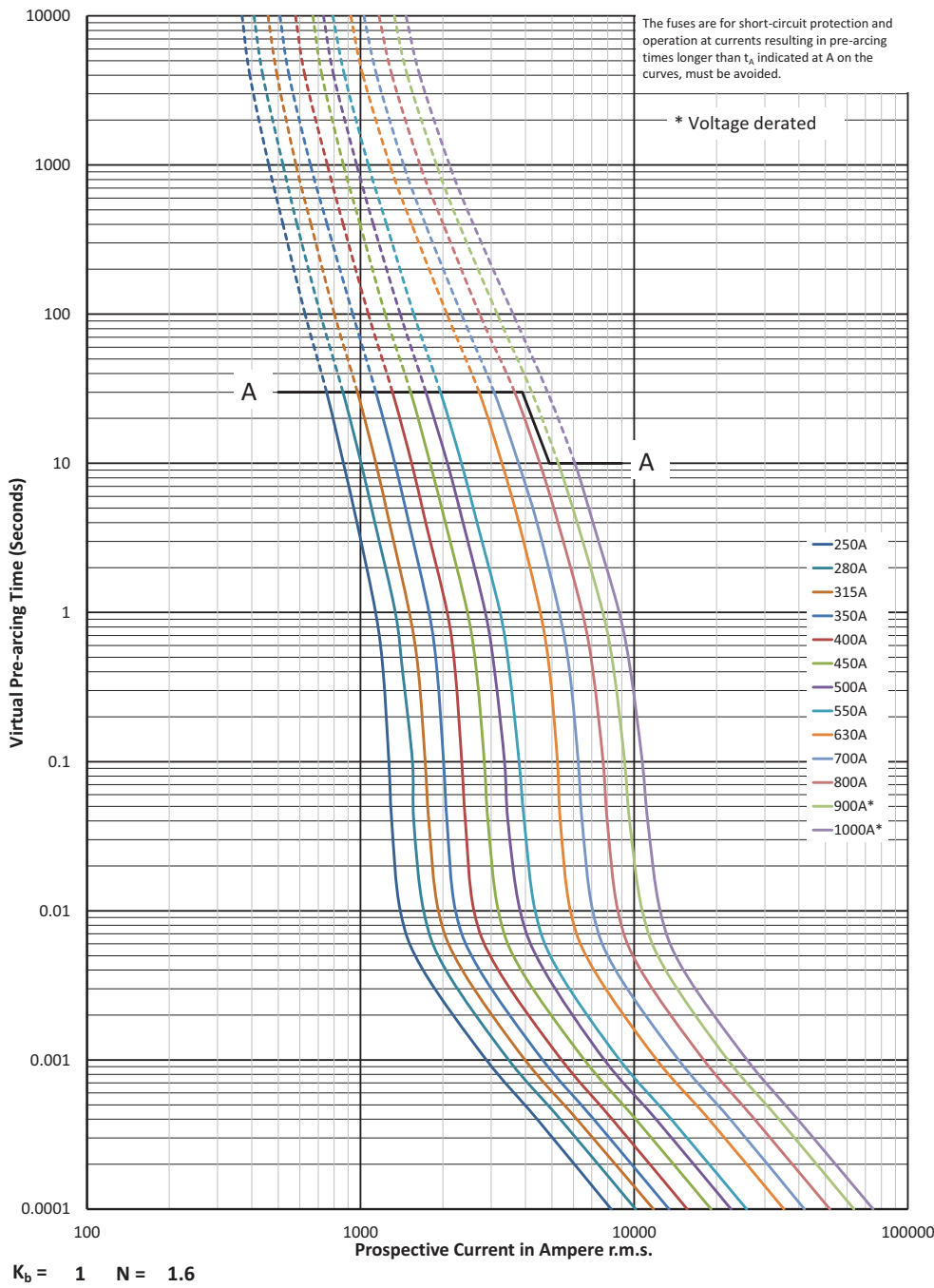




Square body fuse links

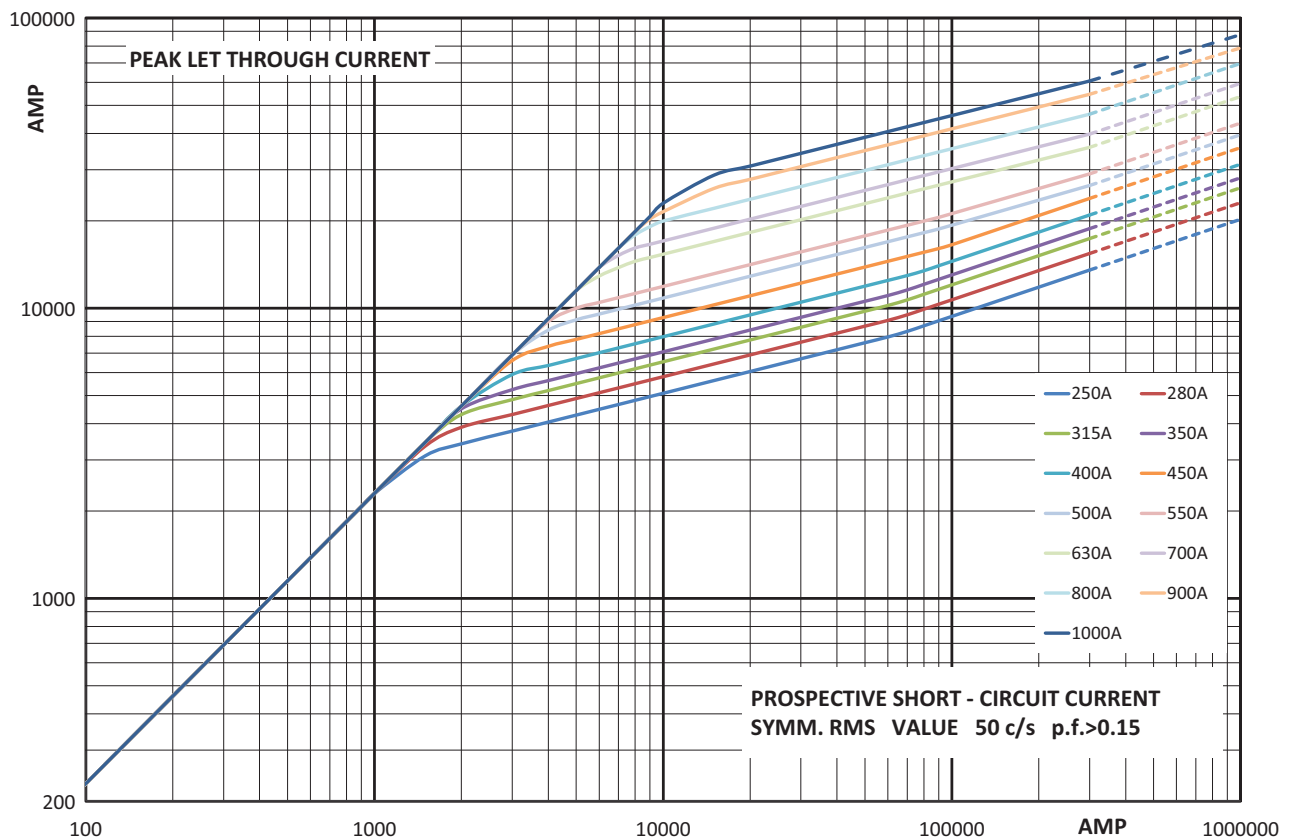
170M - Sizes 1\* to 3, US style, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

Time-current curve - Size 2, 250 A to 1000 A



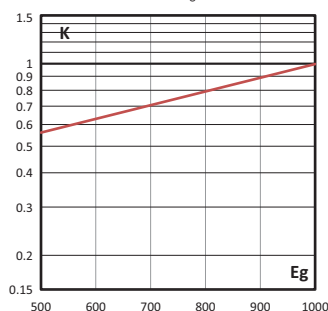
# 170M - Sizes 1\* to 3, US style, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

## Cut-off curve - Size 2, 250 A to 1000 A



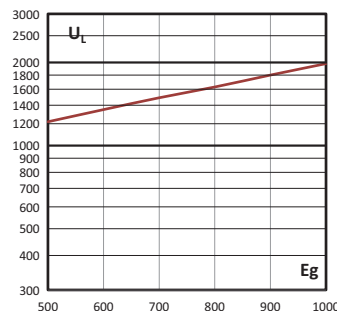
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



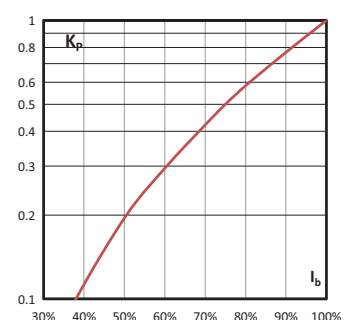
## Arc voltage

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 percent.



## Watts losses

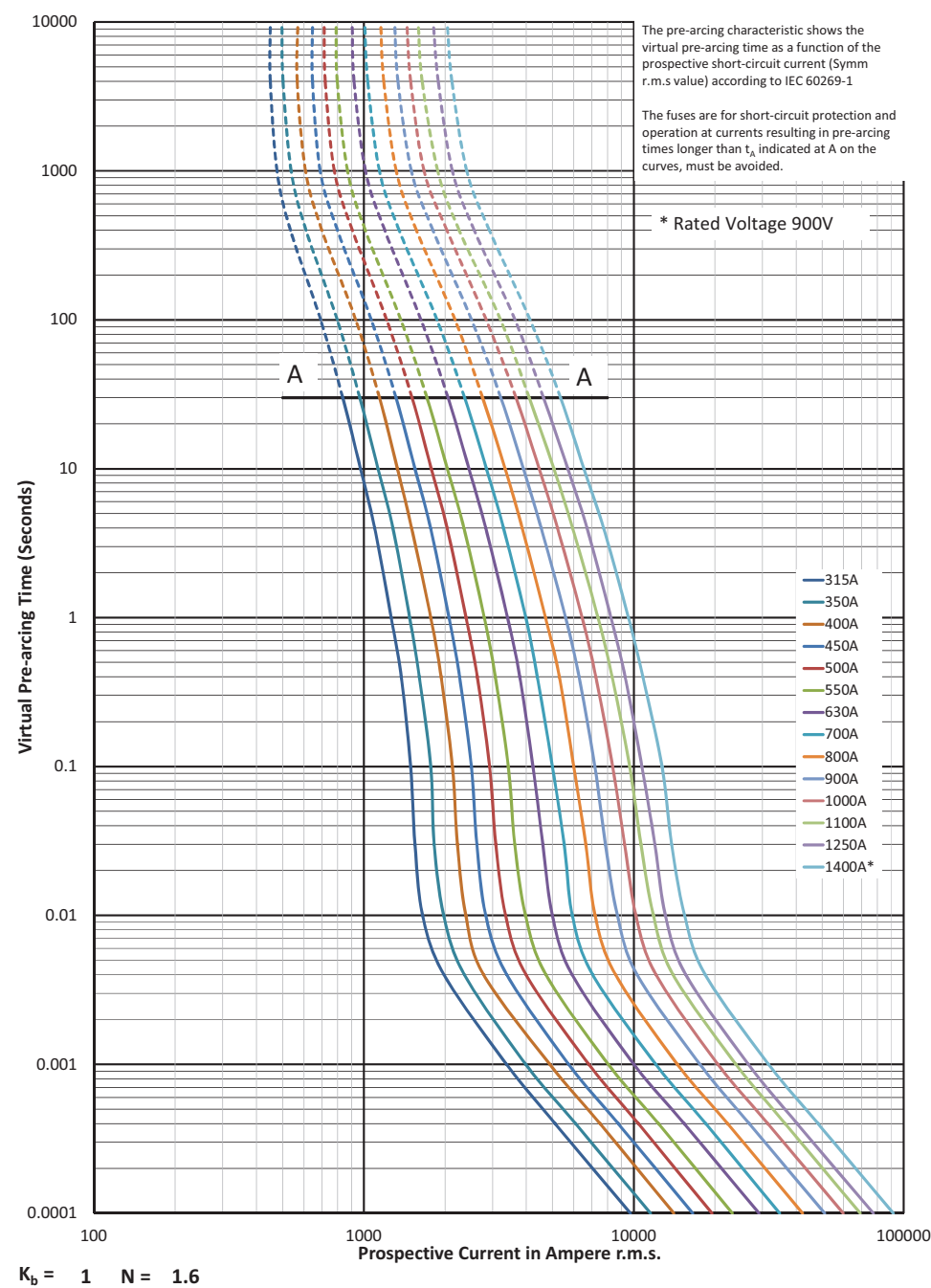
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor,  $K_p$ , is given as a function of the RMS load current,  $I_b$ , in percent of the rated current.



Square body fuse links

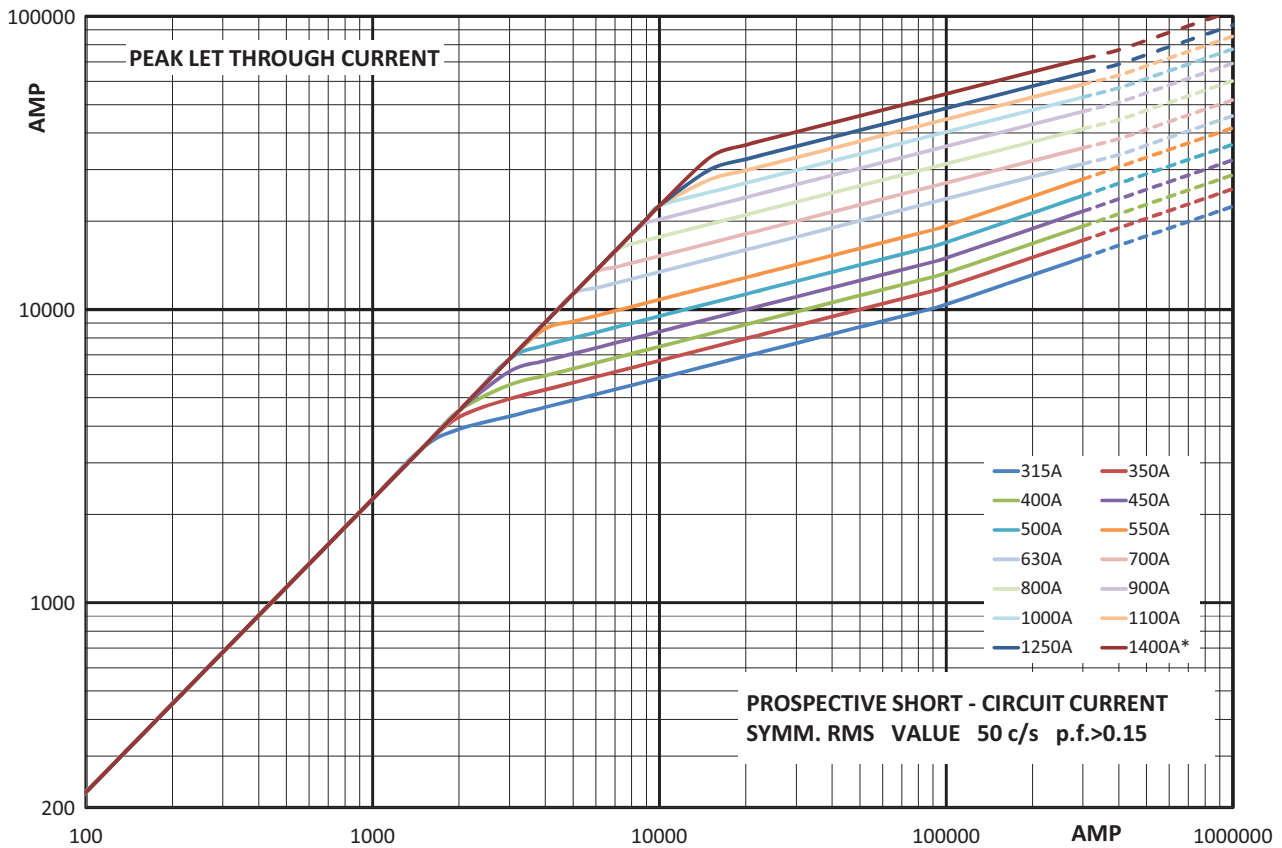
170M - Sizes 1\* to 3, US style, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

Time-current curve - Size 3, 315 A to 1400 A



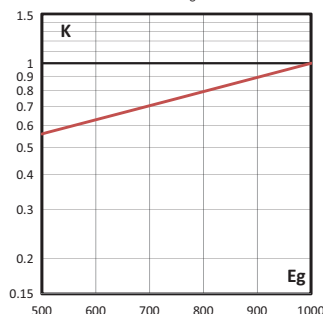
# 170M - Sizes 1\* to 3, US style, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

## Cut-off curve - Size 3, 315 A to 1400 A



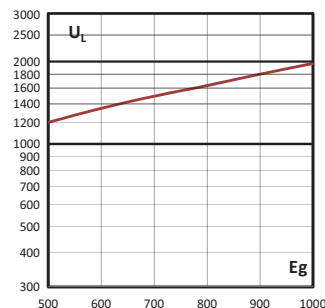
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



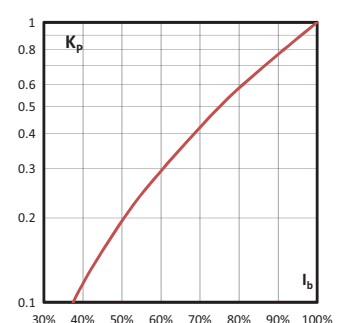
## Arc voltage

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 percent.



## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



# Square body fuse links

## 170M - Size 00, Flush end contact, 690 V a.c., 25 A to 400 A

### Specifications

#### Description

Square body flush end contact high speed fuse links, for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

#### Technical data

- Rated voltage: 690 V a.c. (IEC)
- Rated current: 25 A to 400 A
- Breaking capacity: 200 kA RMS Sym
- Operating class:
  - gR (25 A to 80 A)
  - aR (100 A to 400 A)

#### Standards / Agency information

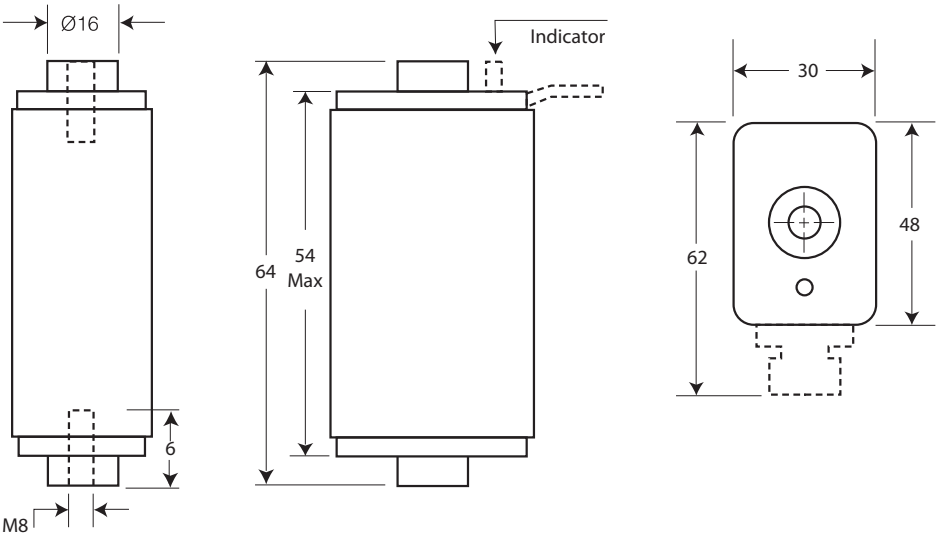
CE, Designed and tested to IEC 60269 Part 4



#### Catalogue numbers

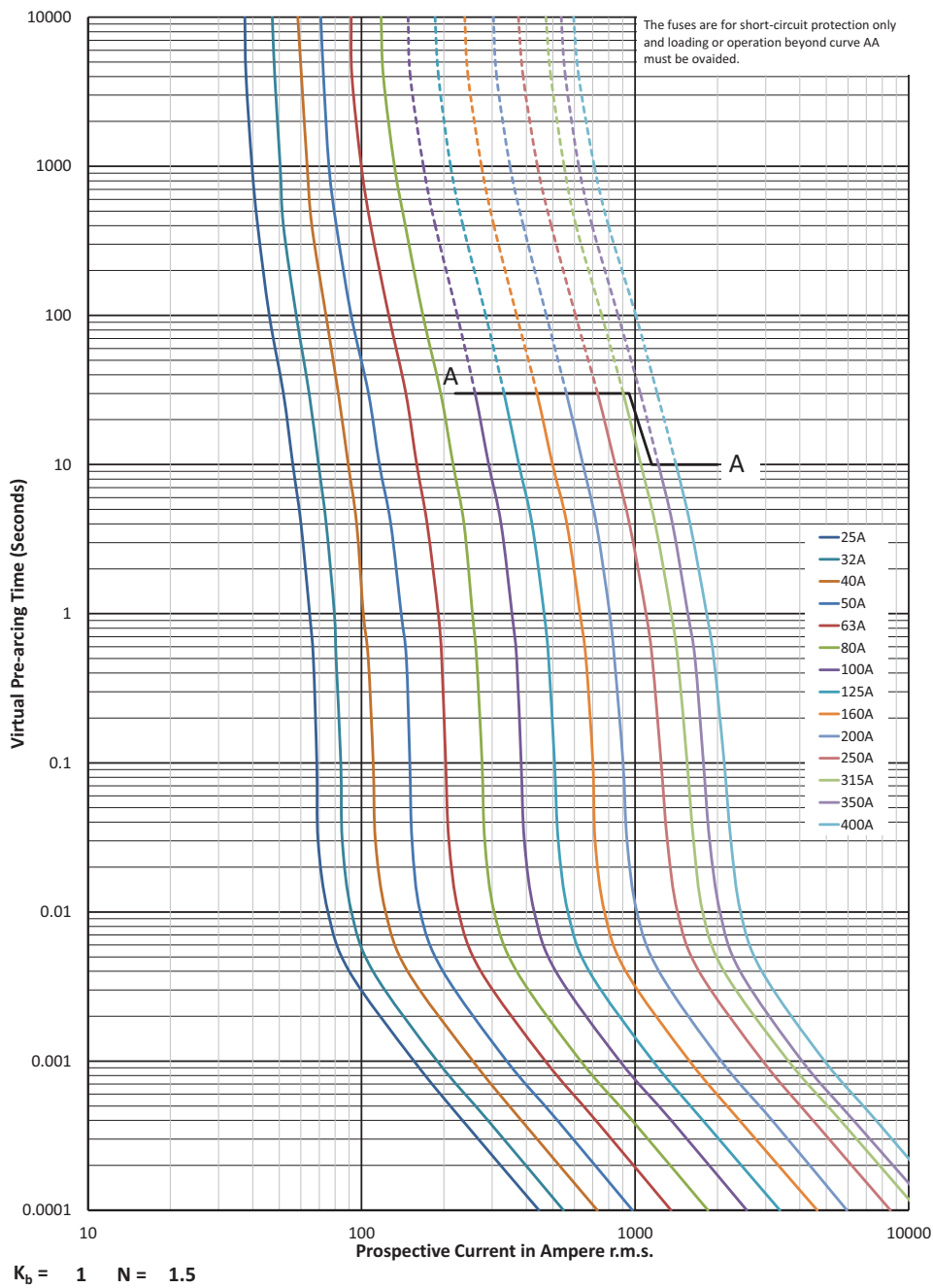
| Fuse link<br>body size | Rated voltage    | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                           | Watts loss<br>(W) | Catalogue numbers          |                                        |
|------------------------|------------------|-------------------------|---------------------------------------|---------------------------|-------------------|----------------------------|----------------------------------------|
|                        |                  |                         | Pre-arcing                            | Clearing<br>at 660 V a.c. |                   | 00B/60 visual<br>indicator | 00BTN/60 Type T<br>indicator for micro |
| 00                     | 690 V a.c. (IEC) | 25                      | 19                                    | 130                       | 6                 | 170M2708                   | 170M2758                               |
|                        |                  | 32                      | 28.5                                  | 195                       | 7                 | 170M2709                   | 170M2759                               |
|                        |                  | 40                      | 50                                    | 360                       | 9                 | 170M2710                   | 170M2760                               |
|                        |                  | 50                      | 95                                    | 640                       | 10                | 170M2711                   | 170M2761                               |
|                        |                  | 63                      | 170                                   | 1200                      | 12                | 170M2712                   | 170M2762                               |
|                        |                  | 80                      | 310                                   | 2100                      | 15                | 170M2713                   | 170M2763                               |
|                        |                  | 100                     | 620                                   | 4150                      | 20                | 170M2714                   | 170M2764                               |
|                        |                  | 125                     | 1000                                  | 6950                      | 25                | 170M2715                   | 170M2765                               |
|                        |                  | 160                     | 1900                                  | 13,000                    | 30                | 170M2716                   | 170M2766                               |
|                        |                  | 200                     | 3400                                  | 23,000                    | 35                | 170M2717                   | 170M2767                               |
|                        |                  | 250                     | 6250                                  | 42,000                    | 45                | 170M2718                   | 170M2768                               |
|                        |                  | 315                     | 10,000                                | 68,500                    | 55                | 170M2719                   | 170M2769                               |
|                        |                  | 350                     | 13,500                                | 91,500                    | 60                | 170M2720                   | 170M2770                               |
|                        |                  | 400                     | 18,000                                | 125,000                   | 70                | 170M2721                   | 170M2771                               |

#### Dimensions (mm)



# 170M - Size 00, Flush end contact, 690 V a.c., 25 A to 400 A

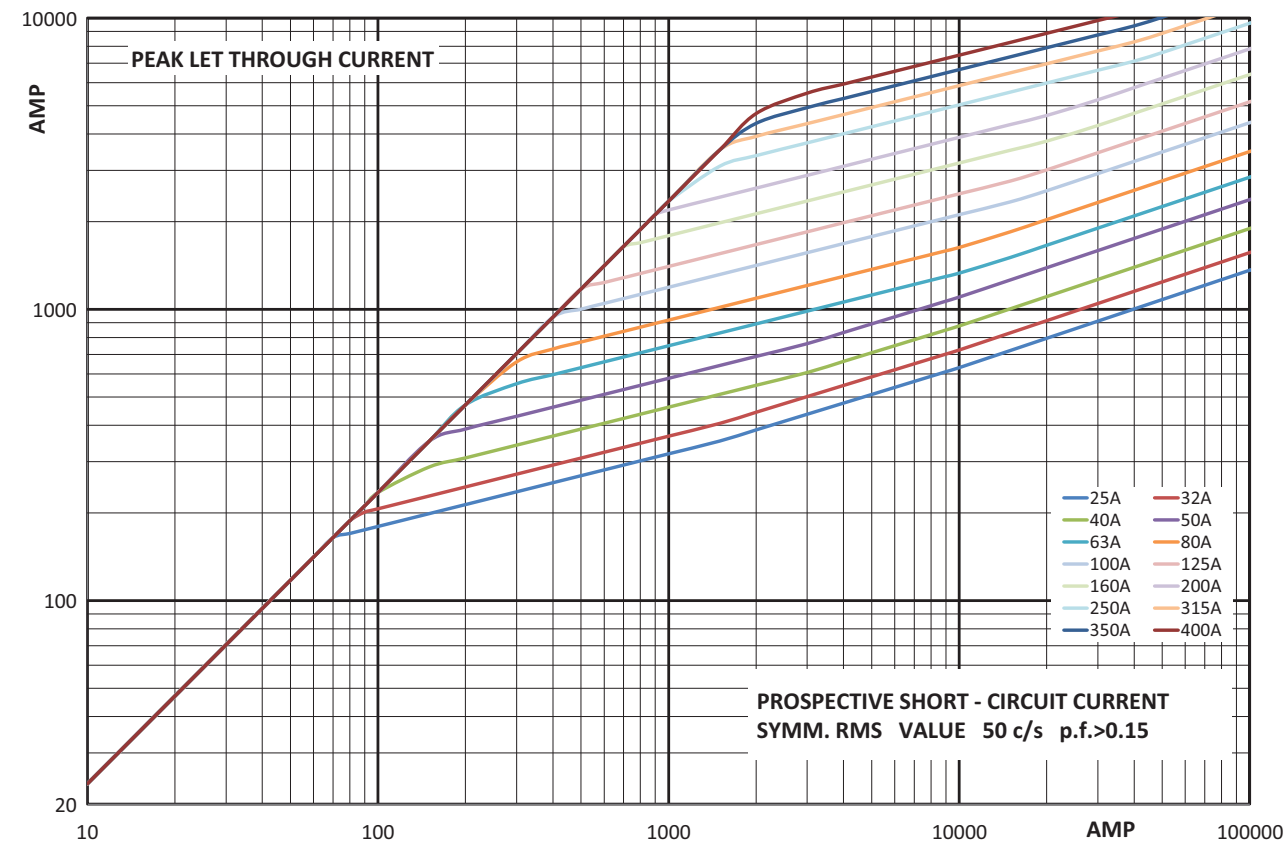
## Time-current curve - Size 00, 25 A to 400 A



Square body fuse links

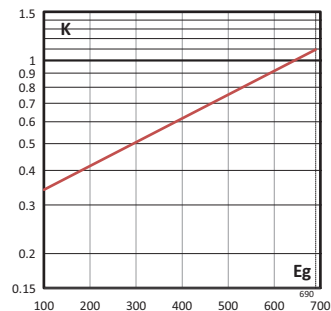
170M - Size 00, Flush end contact, 690 V a.c., 25 A to 400 A

Cut-off curve - Size 00, 25 A to 400 A



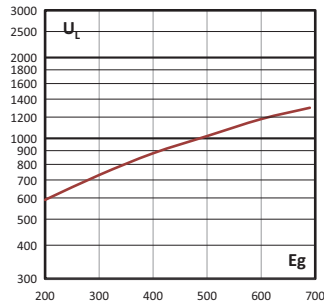
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



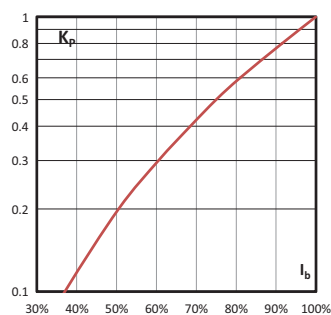
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



## 170M - Sizes 1\* to 3, Flush end contact, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

### Specifications

#### Description

Square body flush end contact high speed fuse links, for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

#### Technical data

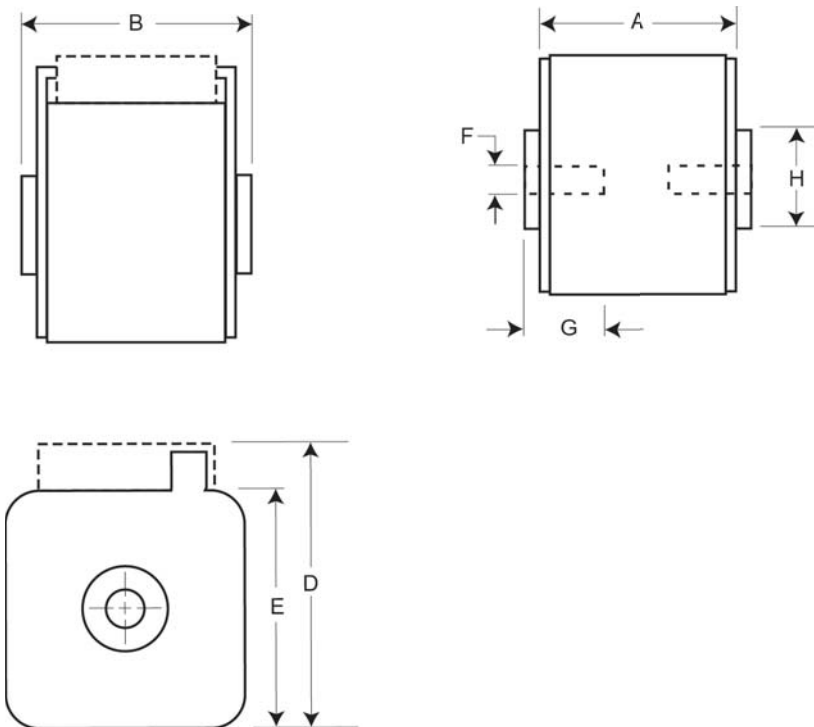
- Rated voltage: see table page 192
- Rated current: 40 A to 2000 A
- Breaking capacity: 200 kA RMS Sym
- Operating class: aR

#### Standards / Agency information

CE, Designed and tested to IEC 60269 Part 4. Consult Eaton for UL Recognition, CSA Component Acceptance Status and CCC approvals



#### Dimensions (mm)



| Size | A  | B                                           | D <sup>3</sup> | E  | F   | F' (in)          | G min | H   |
|------|----|---------------------------------------------|----------------|----|-----|------------------|-------|-----|
| 1*   | 50 | 51                                          | 59             | 45 | M8  | 5/16" -18 UNC-2B | 5     | N17 |
| 1    | 50 | 51                                          | 69             | 53 | M8  | 5/16" -18 UNC-2B | 8     | N20 |
| 2    | 50 | 51 (400 - 1000 A)<br>65 (1100 and 1250 (A)) | 77             | 61 | M10 | 3/8" -16 UNC-2B  | 10    | N24 |
| 3    | 51 | 53 (500 - 1500 A)<br>65 (1600 - 2000 A)     | 92             | 76 | M12 | 1/2" -13 UNC-2B  | 10    | N30 |

<sup>1</sup> Valid for fuse links type -G- & -GKN/.

<sup>3</sup> Valid for fuse links type -BKN/ and -GKN/.

Data sheets: 170K6314 (Size 1\*), 170K6316 (Size 1), 170K6318 (Size 2), 170K6320 (Size 3)



## Square body fuse links

### 170M - Sizes 1\* to 3, Flush end contact, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

| Fuse link body size | Rated voltage                                                                                                                                        | I <sup>2</sup> t (A <sup>2</sup> Sec) |            |                        |                | Catalogue numbers     |                                   |                       |                                   |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------|------------------------|----------------|-----------------------|-----------------------------------|-----------------------|-----------------------------------|
|                     |                                                                                                                                                      | Rated current (Amps)                  | Pre-arcing | Clearing at 660 V a.c. | Watts loss (W) | -B/- visual indicator | -BKN/- Type K indicator for micro | -G/- visual indicator | -GKN/- Type K indicator for micro |
| 1*                  | 690 V a.c. (IEC)<br>700 V a.c. (UL)                                                                                                                  | 40                                    | 40         | 270                    | 9              | 170M3408              | 170M3458                          | 170M3508              | 170M3558                          |
|                     |                                                                                                                                                      | 50                                    | 77         | 515                    | 11             | 170M3409              | 170M3459                          | 170M3509              | 170M3559                          |
|                     |                                                                                                                                                      | 63                                    | 115        | 770                    | 14             | 170M3410              | 170M3460                          | 170M3510              | 170M3560                          |
|                     |                                                                                                                                                      | 80                                    | 185        | 1250                   | 18             | 170M3411              | 170M3461                          | 170M3511              | 170M3561                          |
|                     |                                                                                                                                                      | 100                                   | 360        | 2450                   | 21             | 170M3412              | 170M3462                          | 170M3512              | 170M3562                          |
|                     |                                                                                                                                                      | 125                                   | 550        | 3700                   | 26             | 170M3413              | 170M3463                          | 170M3513              | 170M3563                          |
|                     |                                                                                                                                                      | 160                                   | 1100       | 7500                   | 30             | 170M3414              | 170M3464                          | 170M3514              | 170M3564                          |
|                     |                                                                                                                                                      | 200                                   | 2200       | 15,000                 | 35             | 170M3415              | 170M3465                          | 170M3515              | 170M3565                          |
|                     |                                                                                                                                                      | 250                                   | 4200       | 28,500                 | 40             | 170M3416              | 170M3466                          | 170M3516              | 170M3566                          |
|                     |                                                                                                                                                      | 315                                   | 7000       | 46,500                 | 50             | 170M3417              | 170M3467                          | 170M3517              | 170M3567                          |
|                     |                                                                                                                                                      | 350                                   | 10,000     | 68,500                 | 55             | 170M3418              | 170M3468                          | 170M3518              | 170M3568                          |
|                     |                                                                                                                                                      | 400                                   | 15,000     | 105,000                | 60             | 170M3419              | 170M3469                          | 170M3519              | 170M3569                          |
|                     |                                                                                                                                                      | 450                                   | 21,000     | 140,000                | 65             | 170M3420              | 170M3470                          | 170M3520              | 170M3570                          |
|                     |                                                                                                                                                      | 500                                   | 27,000     | 180,000                | 70             | 170M3421              | 170M3471                          | 170M3521              | 170M3571                          |
|                     |                                                                                                                                                      | 550                                   | 34,000     | 230,000                | 75             | 170M3422              | 170M3472                          | 170M3522              | 170M3572                          |
| 1                   | 690 V a.c. (IEC)<br>700 V a.c. (UL)<br><br>550 V a.c. (IEC)                                                                                          | 630                                   | 48,500     | 325,000                | 80             | 170M3423              | 170M3473                          | 170M3523              | 170M3573                          |
|                     |                                                                                                                                                      | 200                                   | 1650       | 11,500                 | 45             | 170M4408              | 170M4458                          | 170M4508              | 170M4558                          |
|                     |                                                                                                                                                      | 250                                   | 3100       | 21,000                 | 55             | 170M4409              | 170M4459                          | 170M4509              | 170M4559                          |
|                     |                                                                                                                                                      | 315                                   | 6200       | 42,000                 | 58             | 170M4410              | 170M4460                          | 170M4510              | 170M4560                          |
|                     |                                                                                                                                                      | 350                                   | 8500       | 59,000                 | 60             | 170M4411              | 170M4461                          | 170M4511              | 170M4561                          |
|                     |                                                                                                                                                      | 400                                   | 13,500     | 91,500                 | 65             | 170M4412              | 170M4462                          | 170M4512              | 170M4562                          |
|                     |                                                                                                                                                      | 450                                   | 17,000     | 120,000                | 70             | 170M4413              | 170M4463                          | 170M4513              | 170M4563                          |
|                     |                                                                                                                                                      | 500                                   | 25,000     | 170,000                | 72             | 170M4414              | 170M4464                          | 170M4514              | 170M4564                          |
|                     |                                                                                                                                                      | 550                                   | 34,000     | 230,000                | 75             | 170M4415              | 170M4465                          | 170M4515              | 170M4565                          |
|                     |                                                                                                                                                      | 630                                   | 52,000     | 350,000                | 80             | 170M4416              | 170M4466                          | 170M4516              | 170M4566                          |
|                     |                                                                                                                                                      | 700                                   | 69,500     | 465,000                | 85             | 170M4417              | 170M4467                          | 170M4517              | 170M4567                          |
|                     |                                                                                                                                                      | 800                                   | 105,000    | 725,000                | 95             | 170M4418              | 170M4468                          | 170M4518              | 170M4568                          |
|                     |                                                                                                                                                      | 900                                   | 155,000    | 850,000                | 100            | 170M4419              | 170M4469                          | 170M4519              | 170M4569                          |
|                     |                                                                                                                                                      | 400                                   | 11,000     | 74,000                 | 65             | 170M5408              | 170M5458                          | 170M5508              | 170M5558                          |
|                     |                                                                                                                                                      | 450                                   | 15,500     | 105,000                | 70             | 170M5409              | 170M5459                          | 170M5509              | 170M5559                          |
| 2                   | 690 V a.c. (IEC)<br>700 V a.c. (UL)<br><br>600 V a.c. (IEC)<br>700 V a.c. (UL)                                                                       | 500                                   | 21,500     | 145,000                | 75             | 170M5410              | 170M5460                          | 170M5510              | 170M5560                          |
|                     |                                                                                                                                                      | 550                                   | 28,000     | 190,000                | 80             | 170M5411              | 170M5461                          | 170M5511              | 170M5561                          |
|                     |                                                                                                                                                      | 630                                   | 41,000     | 275,000                | 90             | 170M5412              | 170M5462                          | 170M5512              | 170M5562                          |
|                     |                                                                                                                                                      | 700                                   | 60,500     | 405,000                | 95             | 170M5413              | 170M5463                          | 170M5513              | 170M5563                          |
|                     |                                                                                                                                                      | 800                                   | 86,000     | 575,000                | 105            | 170M5414              | 170M5464                          | 170M5514              | 170M5564                          |
|                     |                                                                                                                                                      | 900                                   | 125,000    | 840,000                | 110            | 170M5415              | 170M5465                          | 170M5515              | 170M5565                          |
|                     |                                                                                                                                                      | 1000                                  | 180,000    | 1,250,000              | 115            | 170M5416              | 170M5466                          | 170M5516              | 170M5566                          |
|                     |                                                                                                                                                      | 1100                                  | 245,000    | 1,600,000              | 120            | 170M5417              | 170M5467                          | 170M5517              | 170M5567                          |
|                     |                                                                                                                                                      | 1250                                  | 365,000    | 2,400,000              | 130            | 170M5418              | 170M5468                          | 170M5518              | 170M5568                          |
|                     |                                                                                                                                                      | 500                                   | 14,000     | 95,000                 | 95             | 170M6408              | 170M6458                          | 170M6508              | 170M6558                          |
|                     |                                                                                                                                                      | 550                                   | 19,500     | 135,000                | 100            | 170M6409              | 170M6459                          | 170M6509              | 170M6559                          |
|                     |                                                                                                                                                      | 630                                   | 31,000     | 210,000                | 105            | 170M6410              | 170M6460                          | 170M6510              | 170M6560                          |
|                     |                                                                                                                                                      | 700                                   | 44,500     | 300,000                | 110            | 170M6411              | 170M6461                          | 170M6511              | 170M6561                          |
|                     |                                                                                                                                                      | 800                                   | 69,500     | 465,000                | 115            | 170M6412              | 170M6462                          | 170M6512              | 170M6562                          |
|                     |                                                                                                                                                      | 900                                   | 100,000    | 670,000                | 120            | 170M6413              | 170M6463                          | 170M6513              | 170M6563                          |
| 3                   | 700 V a.c. (UL)<br><br>690 V a.c. (IEC)<br>700 V a.c. (UL)<br><br>600 V a.c. (IEC) /<br>500 V a.c. (UL)<br><br>550 V a.c. (IEC) /<br>500 V a.c. (UL) | 1000                                  | 140,000    | 945,000                | 125            | 170M6414              | 170M6464                          | 170M6514              | 170M6564                          |
|                     |                                                                                                                                                      | 1100                                  | 190,000    | 1,300,000              | 130            | 170M6415              | 170M6465 <sup>1</sup>             | 170M6515              | 170M6565                          |
|                     |                                                                                                                                                      | 1250                                  | 290,000    | 1,950,000              | 140            | 170M6416              | 170M6466                          | 170M6516              | 170M6566                          |
|                     |                                                                                                                                                      | 1400                                  | 370,000    | 2,450,000              | 155            | 170M6417              | 170M6467 <sup>1</sup>             | 170M6517              | 170M6567                          |
|                     |                                                                                                                                                      | 1500                                  | 460,000    | 3,100,000              | 160            | 170M6418              | 170M6468                          | 170M6518              | 170M6568                          |
|                     |                                                                                                                                                      | 1600                                  | 580,000    | 3,900,000              | 160            | 170M6419              | 170M6469                          | 170M6519              | 170M6569                          |
|                     |                                                                                                                                                      | 1800                                  | 880,000    | 5,250,000              | 165            | 170M6420 <sup>2</sup> | 170M6470                          | 170M6520 <sup>2</sup> | 170M6570                          |
|                     |                                                                                                                                                      | 2000                                  | 1,150,000  | 6,350,000              | 175            | 170M6421              | 170M6471                          | 170M6521              | 170M6571                          |

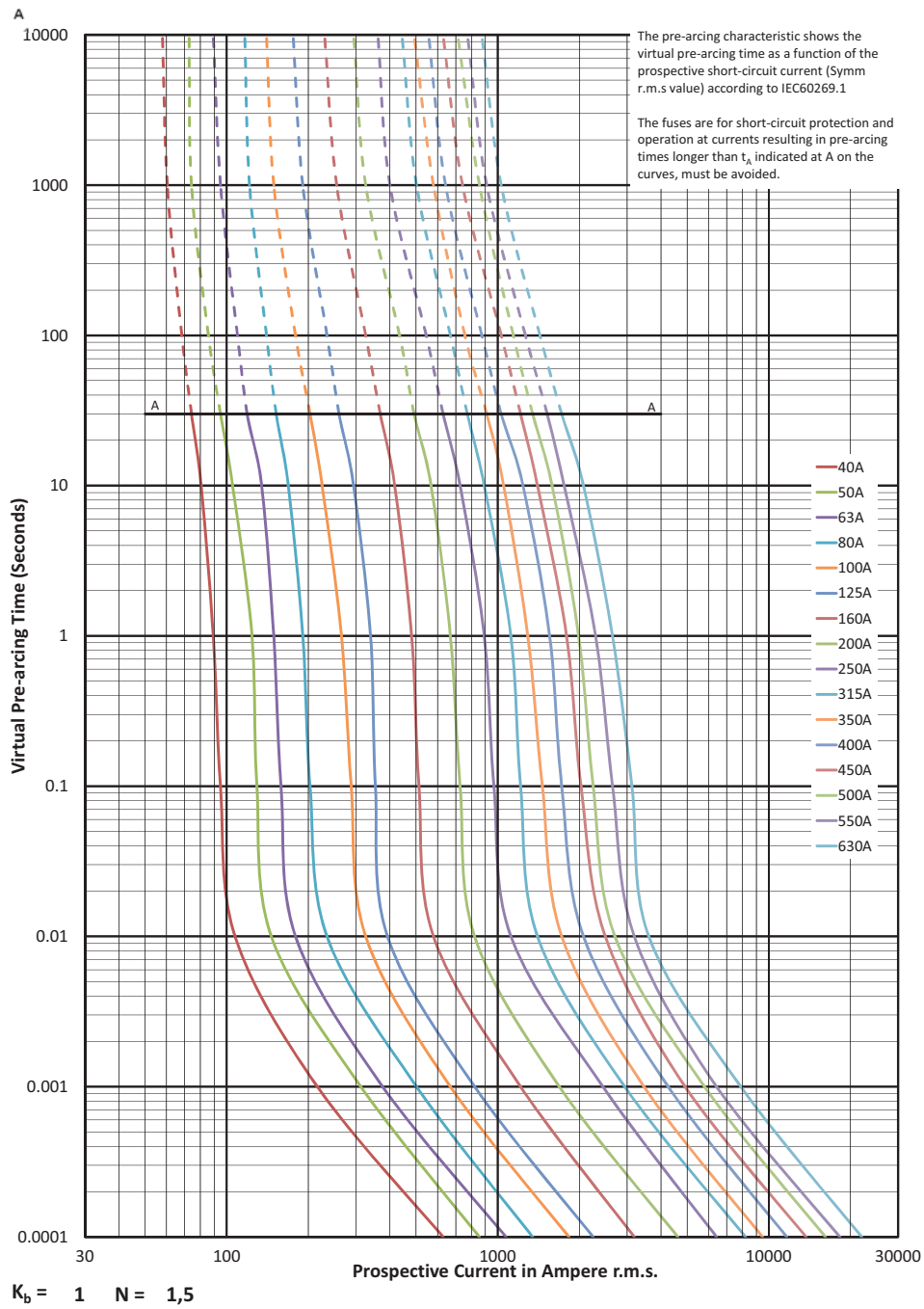
<sup>1</sup> 170M6465 and 170M6467 rated at 800 V d.c. UL 85kA 3ms TC when two fuses are connected in series

<sup>2</sup> 170M6420 and 170M6520 rated at 750 V d.c. 12XIn 130 kA when two fuses are connected in series

Data sheets: 170K6314 (Size 1\*), 170K6316 (Size 1), 170K6318 (Size 2), 170K6320 (Size 3)

**170M** - Sizes 1\* to 3, Flush end contact, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

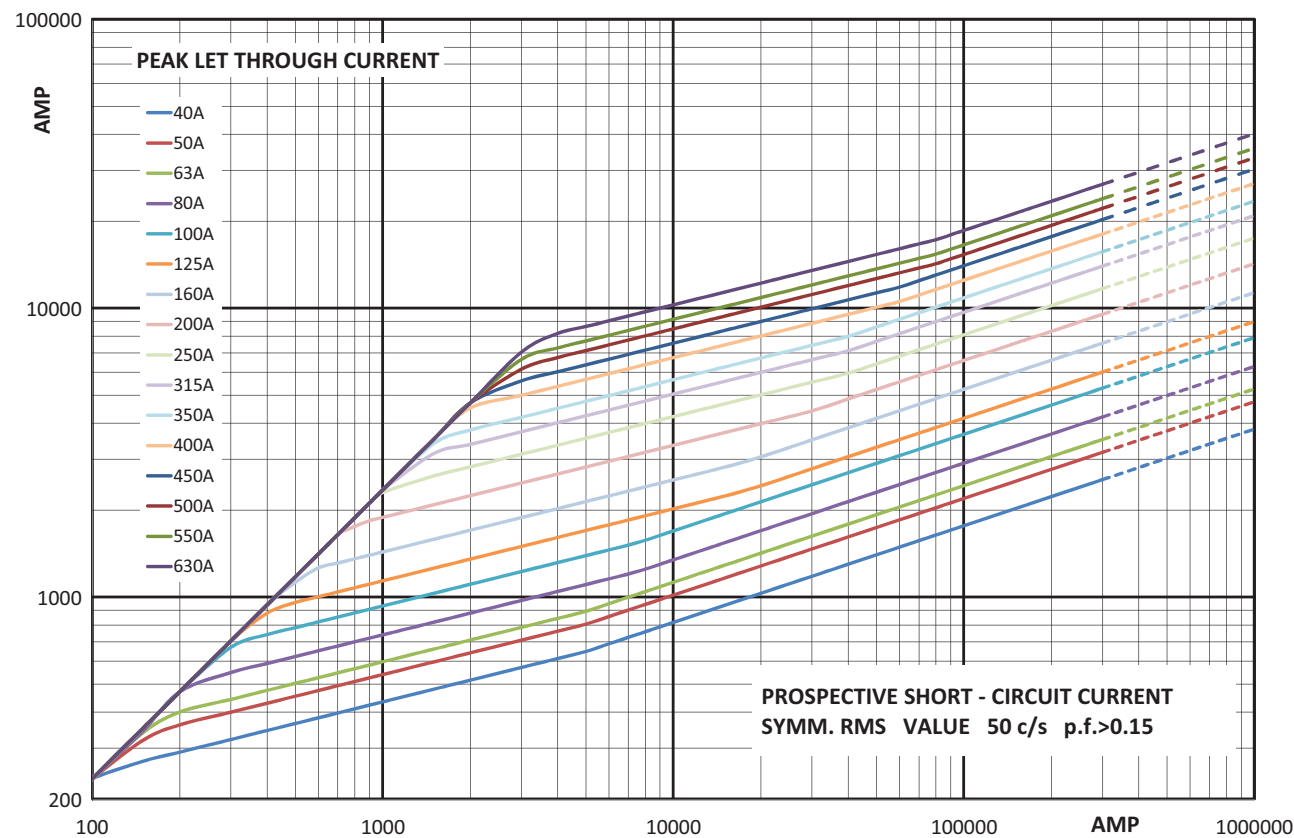
Time-current curve - Size 1\*, 40 A to 630 A



Square body fuse links

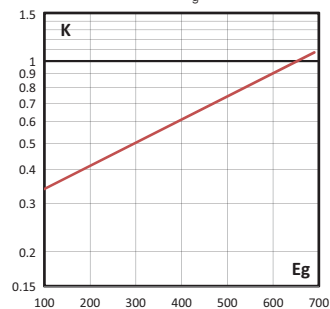
170M - Sizes 1\* to 3, Flush end contact, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

Cut-off curve - Size 1\*, 40 A to 630 A



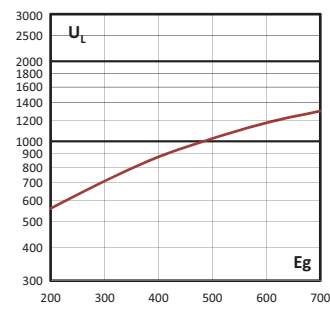
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



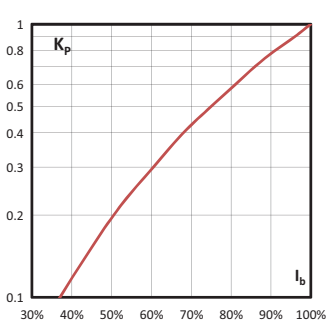
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



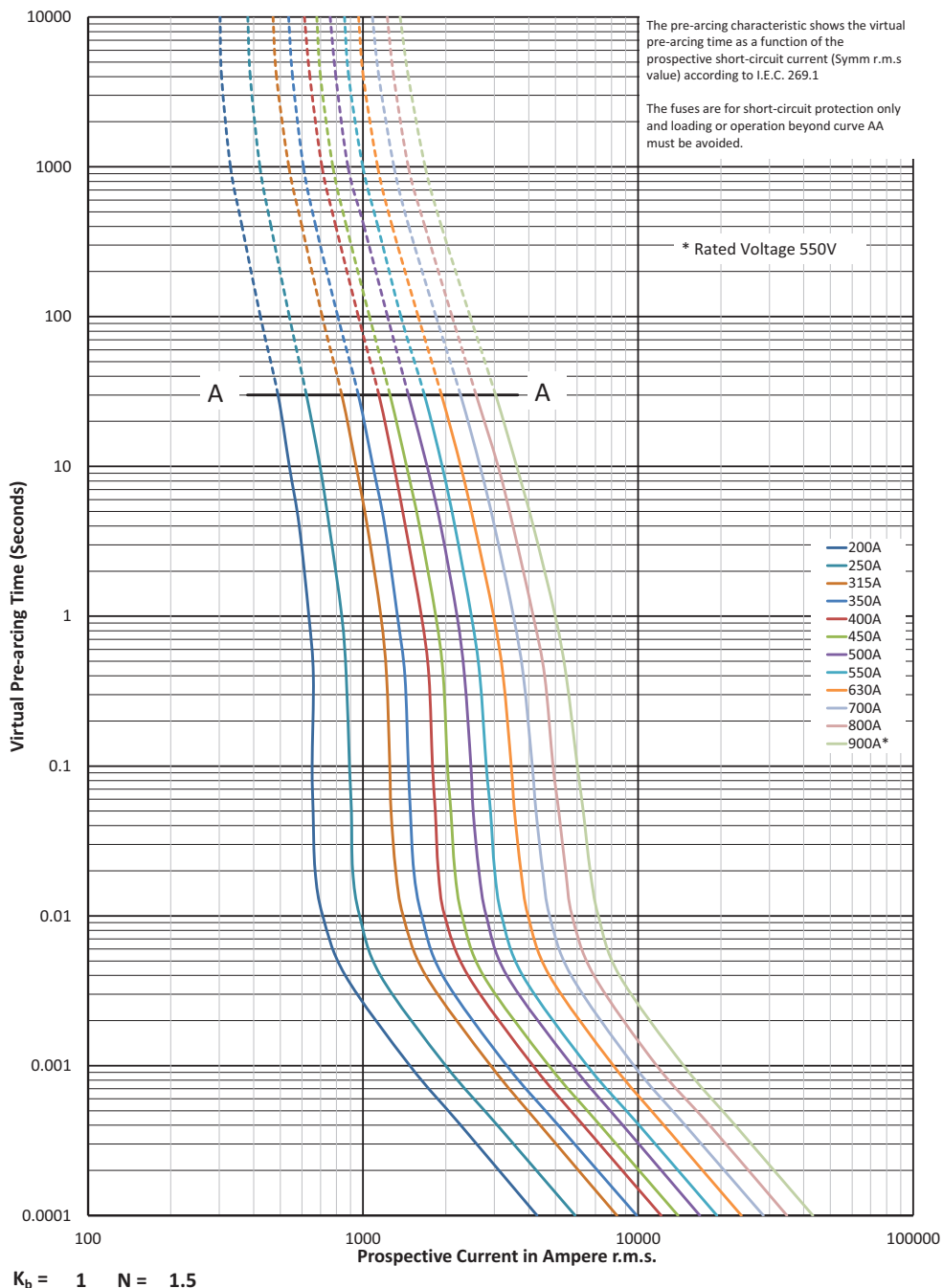
Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



# 170M - Sizes 1\* to 3, Flush end contact, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

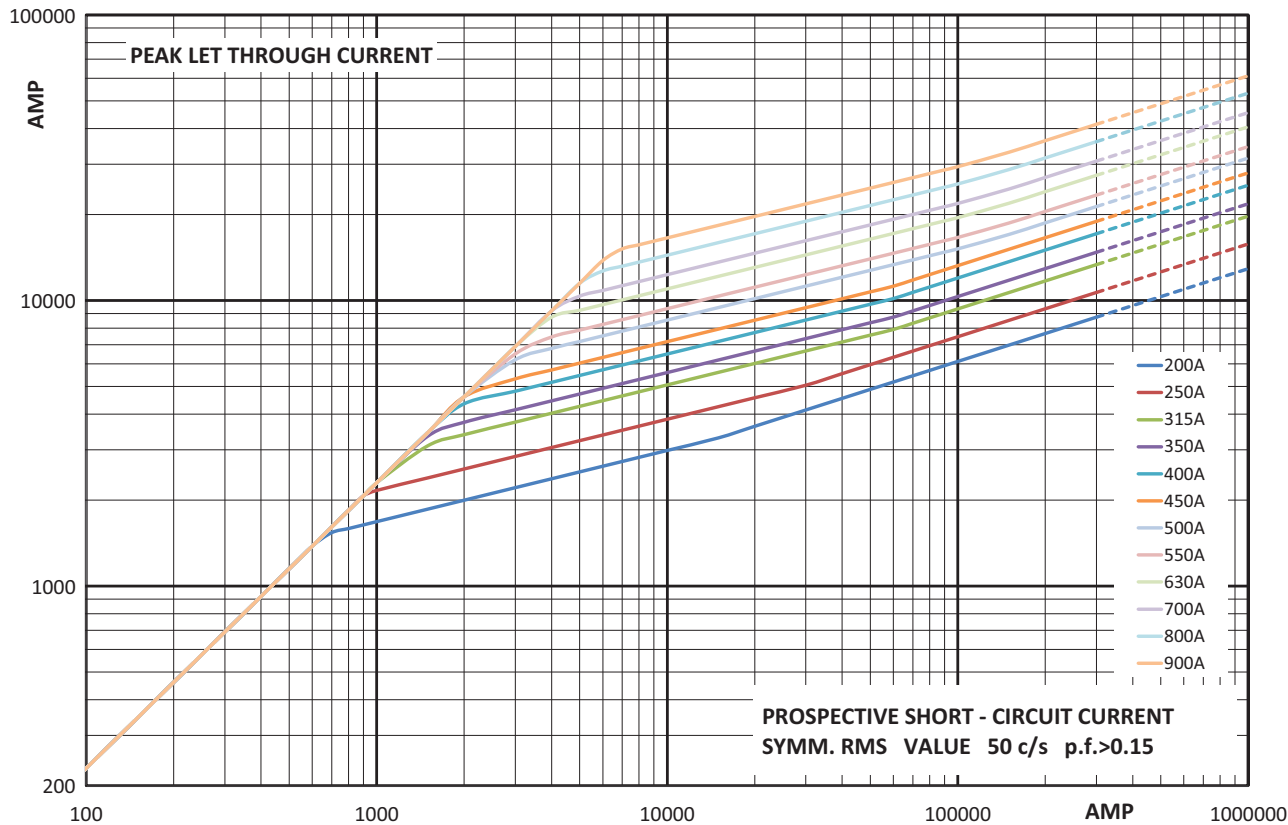
## Time-current curve - Size 1, 200 A to 900 A



Square body fuse links

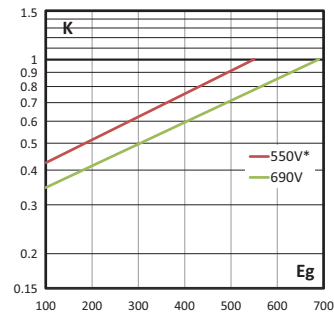
170M - Sizes 1\* to 3, Flush end contact, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

Cut-off curve - Size 1, 200 A to 900 A



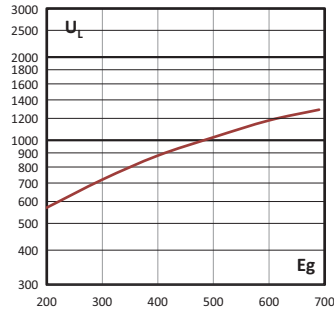
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



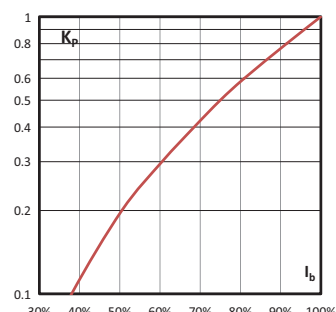
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



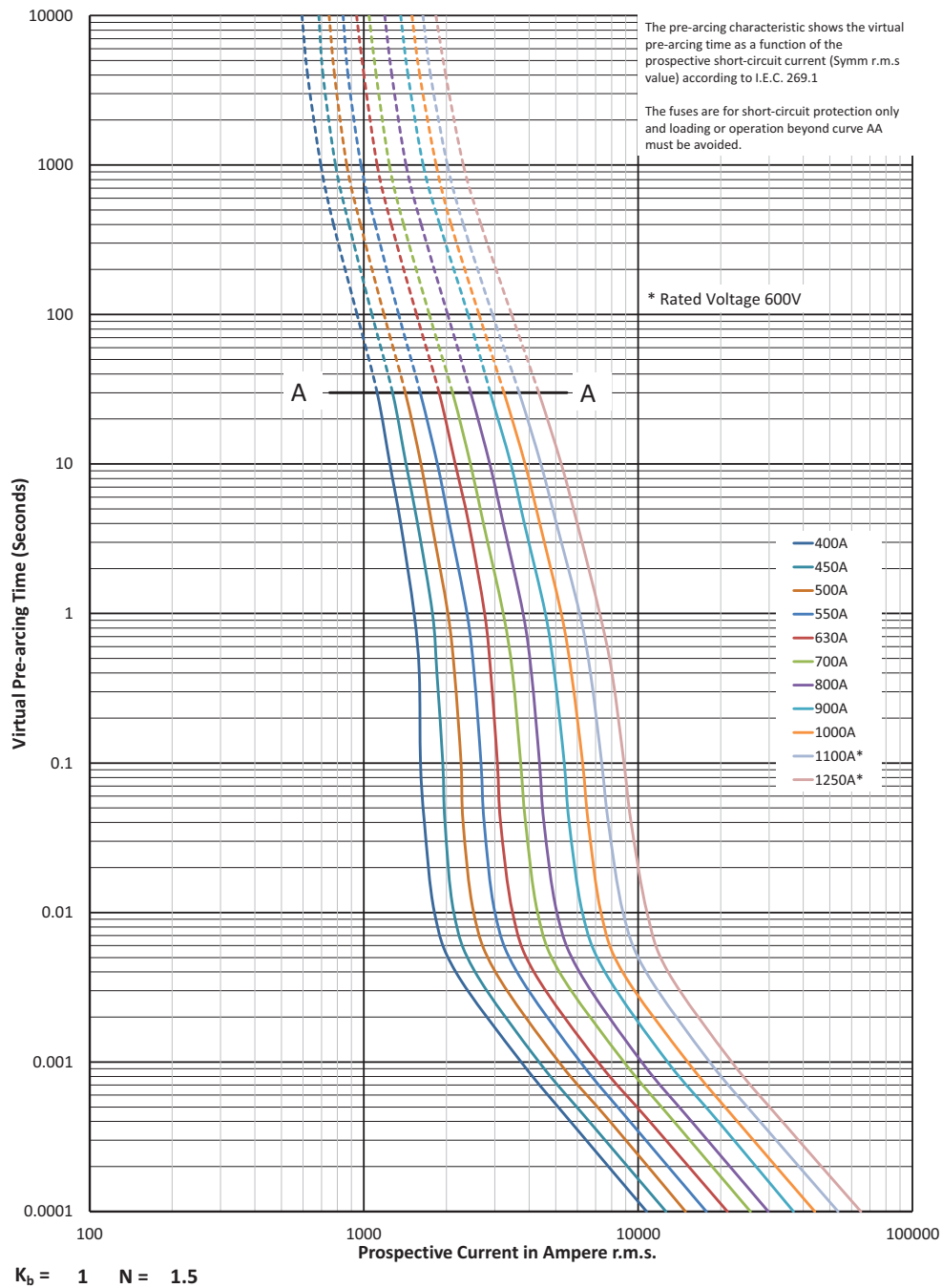
Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



# 170M - Sizes 1\* to 3, Flush end contact, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

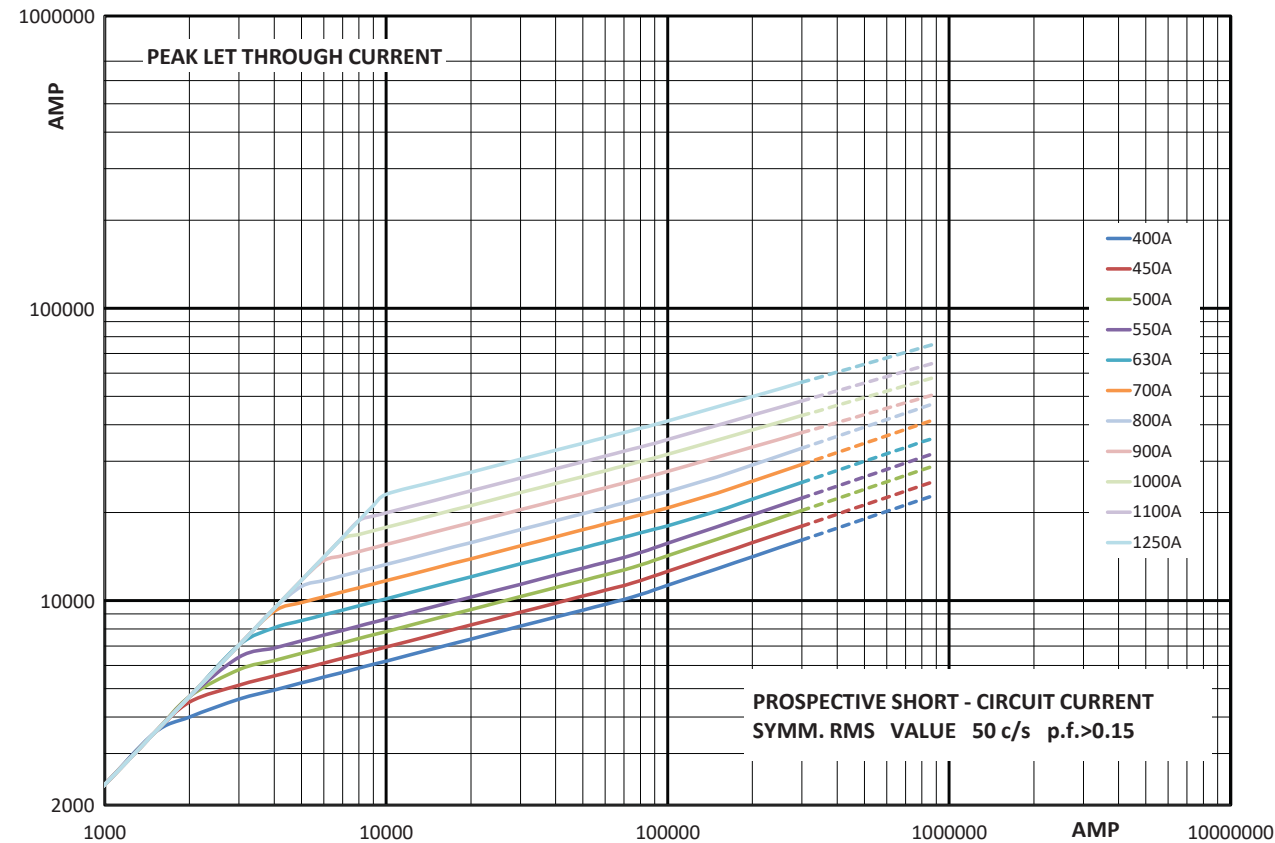
## Time-current curve - Size 2, 400 A to 1250 A



# Square body fuse links

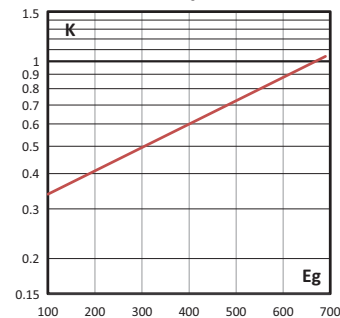
**170M** - Sizes 1\* to 3, Flush end contact, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

Cut-off curve - Size 2, 400 A to 1250 A



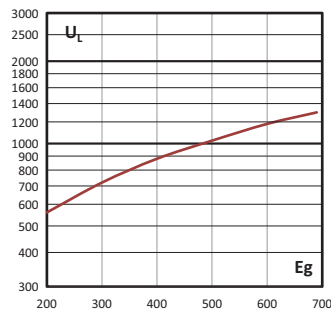
## Total clearing I²t

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



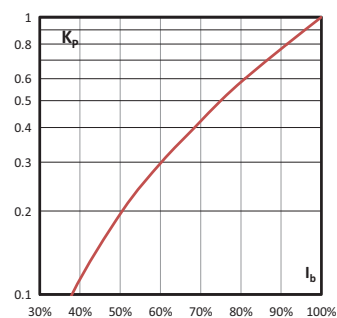
## Arc voltage

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 percent.



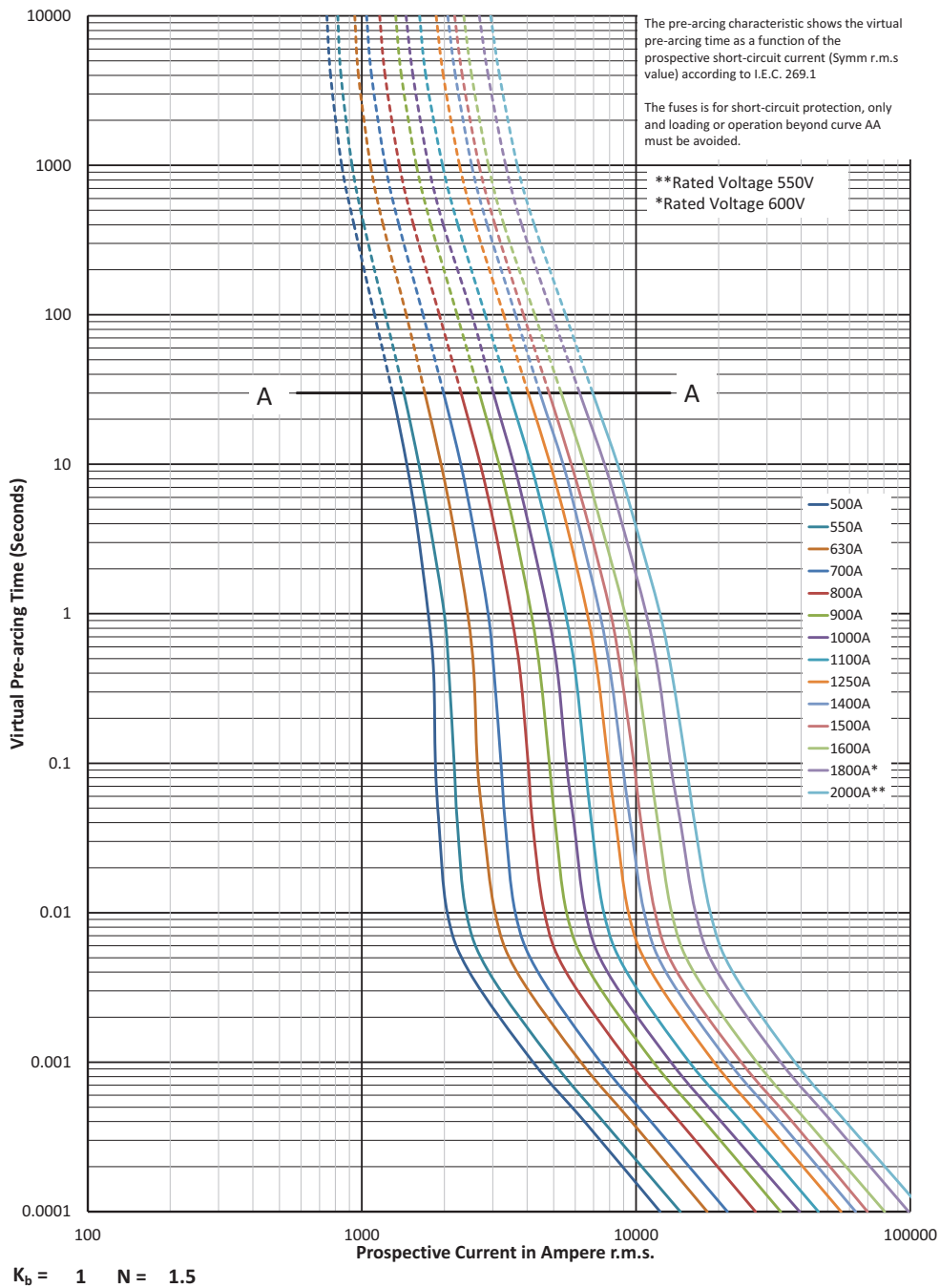
## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



# 170M - Sizes 1\* to 3, Flush end contact, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

## Time-current curve - Size 3, 500 A to 2000 A

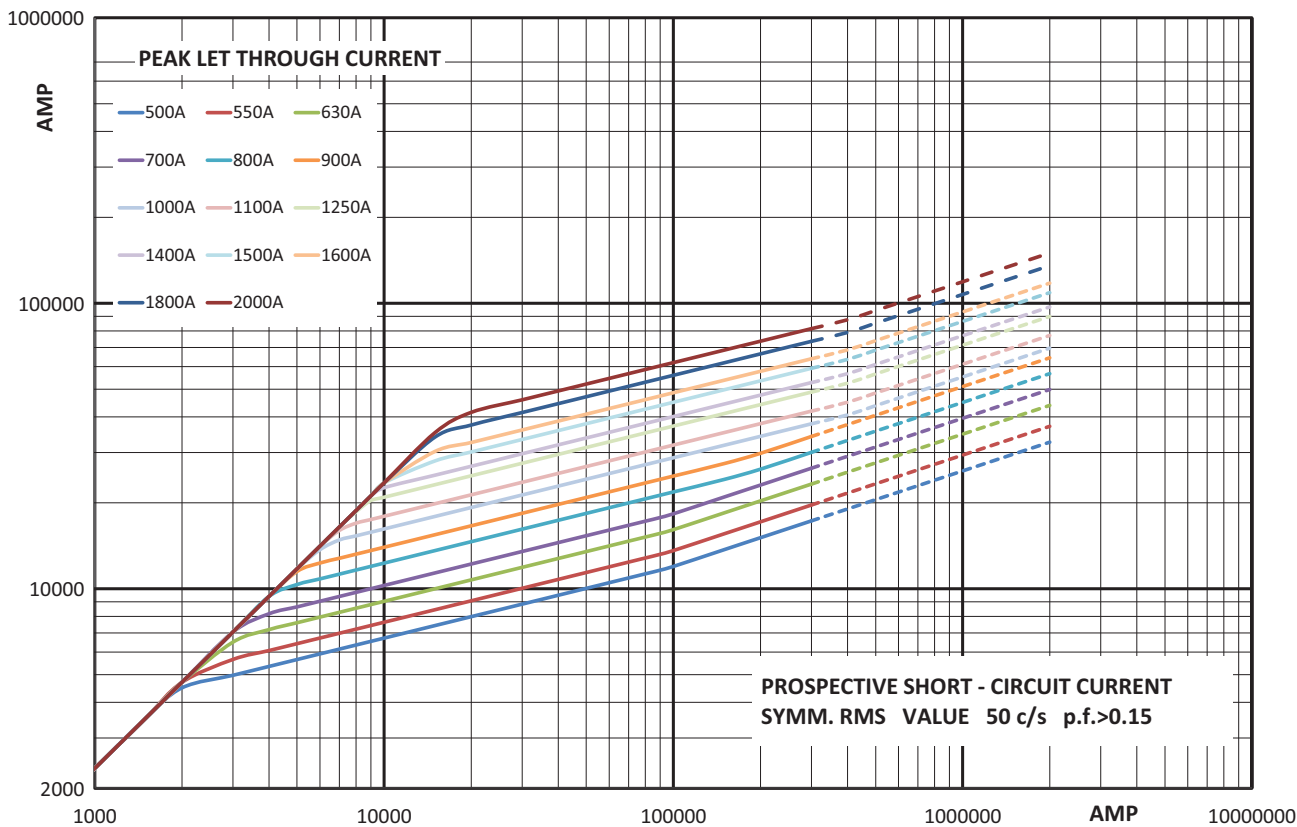




Square body fuse links

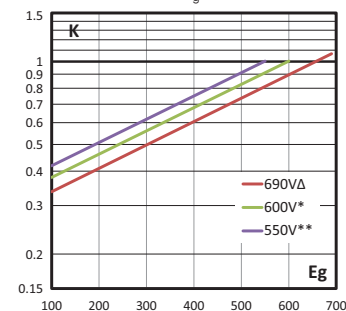
170M - Sizes 1\* to 3, Flush end contact, 690 V a.c. (IEC), 700 V a.c. (UL), 40 A to 2000 A

Cut-off curve - Size 3, 500 A to 2000 A



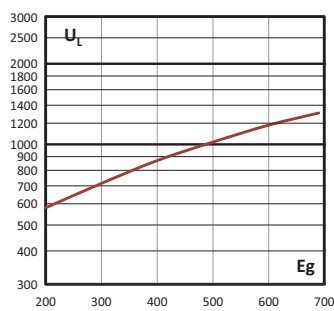
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



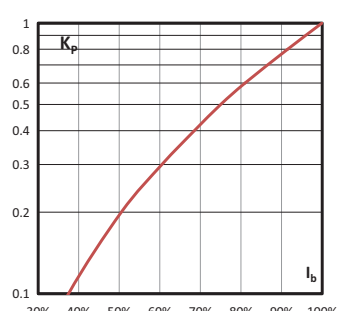
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



## 170M - sizes 1\* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

### Specifications

#### Description

Square body flush end contact high speed fuse links, for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

#### Technical data

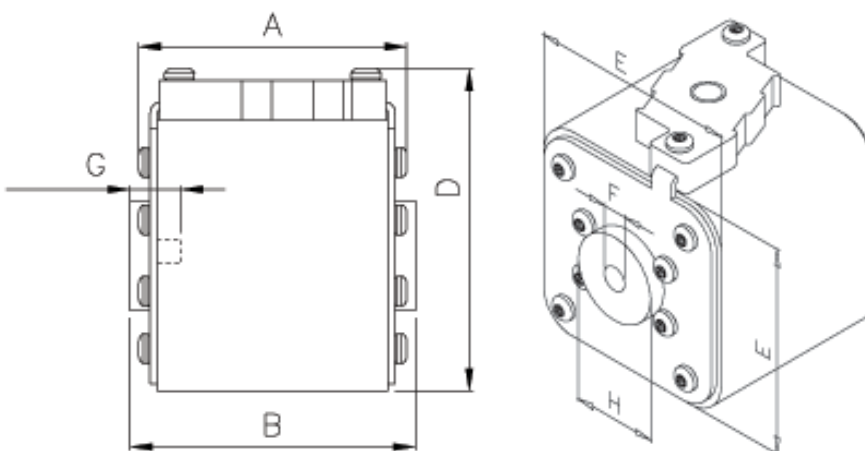
- Rated voltage:
  - 1000 V a.c. (IEC, 50 A to 1250 A)
  - 1000 V a.c. (UL, 250 A to 1100 A)
  - 900 V a.c. (IEC, 1400 A)
- Rated current: 50 A to 1400 A
- Breaking capacity:
  - 125kA RMS Sym. AC
  - Size 1 DC 750 V d.c. 50 kA IR
- Operating class: aR

#### Standards / Agency information

CE, Designed and tested to IEC 60269 Part 4, UL Recognised for size 2 and 3 (only up to 1100 A)



#### Dimensions (mm)



| Size | Type            | A    | B    | D (max) | E  | F   | F' (in)         | G (min) | H    |
|------|-----------------|------|------|---------|----|-----|-----------------|---------|------|
| 1*   | BKN/75 + GKN/75 | 72.5 | 74   | 61      | 43 | M8  | 5/16" 18 UNC-2B | 5       | 17.5 |
| 1    | BKN/75 + GKN/75 | 73.2 | 74   | 69      | 52 | M8  | 5/16" 18 UNC-2B | 8       | 20   |
| 2    | BKN/75 + GKN/75 | 73.2 | 74.4 | 77      | 59 | M10 | 3/8" 16 UNC-2B  | 10      | 24.5 |
| 3    | BKN/75 + GKN/75 | 73.3 | 75.4 | 92      | 74 | M12 | 1/2" 13 UNC-2B  | 10      | 30   |
| 3    | BKN/90 + GKN/90 | 80.3 | 91.4 | 92      | 74 | M12 | 1/2" 13 UNC-2B  | 10      | 30   |

<sup>1</sup> Valid for fuses type -GKN/-.

# Square body fuse links

## 170M - sizes 1\* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

### Catalogue numbers

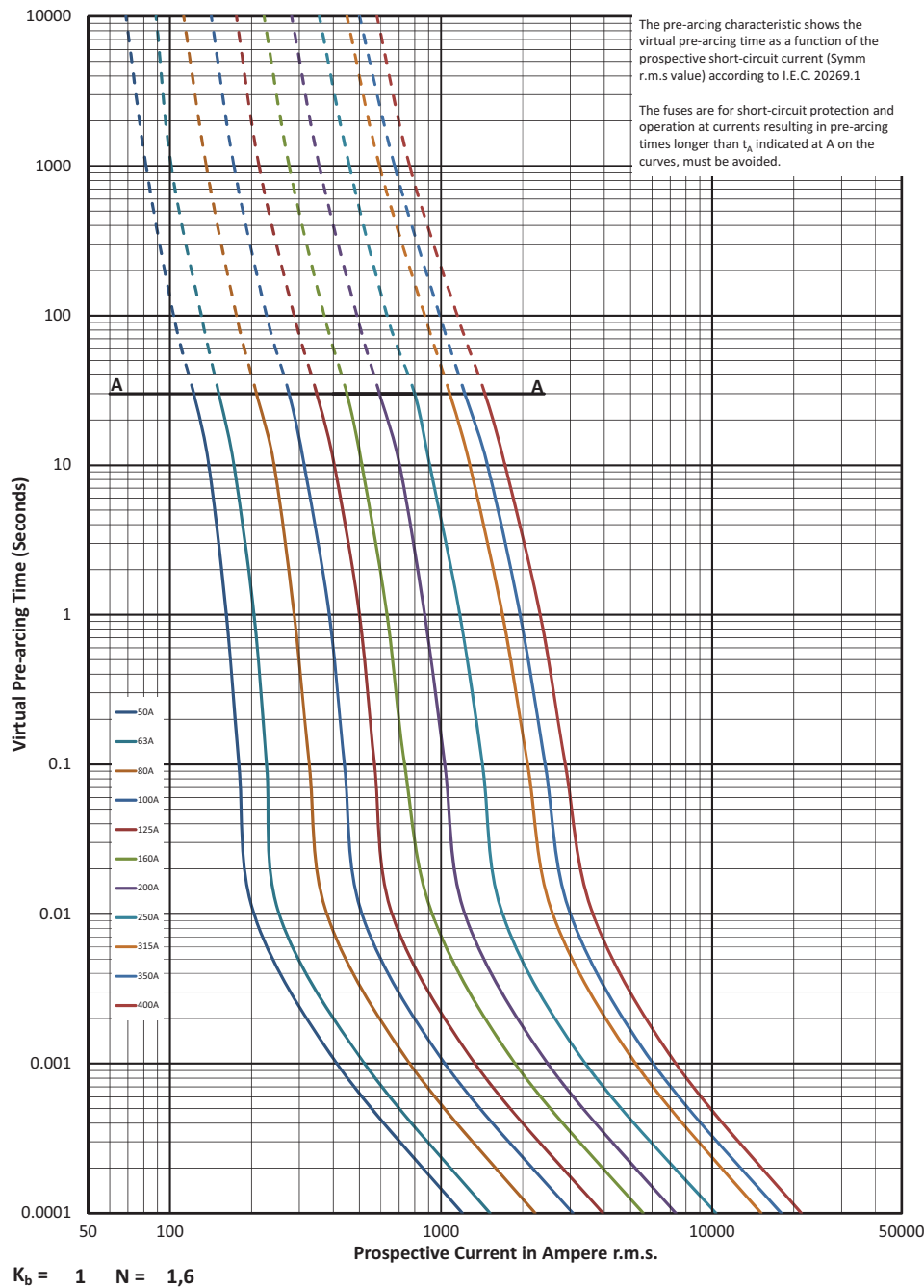
| Fuse link<br>body size | Rated voltage                                      | I <sup>2</sup> t (A <sup>2</sup> Sec) |            |                                 | Watts loss<br>(W) | Catalogue numbers                       |                                         |
|------------------------|----------------------------------------------------|---------------------------------------|------------|---------------------------------|-------------------|-----------------------------------------|-----------------------------------------|
|                        |                                                    | Rated current<br>(Amps)               | Pre-arcing | Clearing<br>at rated<br>voltage |                   | -BKN/- Type K<br>indicator for<br>micro | -GKN/- Type K<br>indicator for<br>micro |
| 1*                     | 1000 V a.c. (IEC)                                  | 50                                    | 135        | 815                             | 20                | 170M3951                                | 170M3921                                |
|                        |                                                    | 63                                    | 215        | 1300                            | 25                | 170M3952                                | 170M3922                                |
|                        |                                                    | 80                                    | 460        | 2750                            | 30                | 170M3953                                | 170M3923                                |
|                        |                                                    | 100                                   | 860        | 5100                            | 35                | 170M3954                                | 170M3924                                |
|                        |                                                    | 125                                   | 1450       | 8600                            | 40                | 170M3955                                | 170M3925                                |
|                        |                                                    | 160                                   | 2850       | 17,500                          | 45                | 170M3956                                | 170M3926                                |
|                        |                                                    | 200                                   | 4950       | 29,500                          | 50                | 170M3957                                | 170M3927                                |
|                        |                                                    | 250                                   | 9550       | 57,000                          | 55                | 170M3958                                | 170M3928                                |
|                        |                                                    | 315                                   | 21,500     | 130,000                         | 65                | 170M3959                                | 170M3929                                |
|                        |                                                    | 350                                   | 29,000     | 175,000                         | 70                | 170M3960                                | 170M3930                                |
|                        |                                                    | 400                                   | 42,000     | 250,000                         | 75                | 170M3961                                | 170M3931                                |
| 1                      | 1000 V a.c. (IEC)<br>1000 V a.c. / 750 V d.c. (UL) | 160                                   | 2200       | 13,500                          | 40                | 170M4951                                | 170M4921                                |
|                        |                                                    | 200                                   | 4150       | 24,500                          | 45                | 170M4952                                | 170M4922                                |
|                        |                                                    | 250                                   | 7750       | 46,000                          | 52                | 170M4953                                | 170M4923                                |
|                        |                                                    | 315                                   | 16,500     | 98,500                          | 60                | 170M4954                                | 170M4924                                |
|                        |                                                    | 350                                   | 21,500     | 130,000                         | 65                | 170M4955                                | 170M4925                                |
|                        |                                                    | 400                                   | 31,000     | 185,000                         | 70                | 170M4956                                | 170M4926                                |
|                        |                                                    | 450                                   | 44,500     | 265,000                         | 80                | 170M4957                                | 170M4927                                |
|                        |                                                    | 500                                   | 63,000     | 375,000                         | 85                | 170M4958                                | 170M4928                                |
|                        |                                                    | 550                                   | 84,500     | 500,000                         | 90                | 170M4959                                | 170M4929                                |
|                        |                                                    | 630                                   | 125,000    | 755,000                         | 98                | 170M4960                                | 170M4930                                |
| 2                      | 1000 V a.c. (IEC/UL)                               | 250                                   | 6750       | 40,000                          | 65                | 170M5952                                | 170M5922                                |
|                        |                                                    | 315                                   | 13,500     | 81,500                          | 75                | 170M5953                                | 170M5923                                |
|                        |                                                    | 350                                   | 16,500     | 99,000                          | 80                | 170M5954                                | 170M5924                                |
|                        |                                                    | 400                                   | 26,000     | 155,000                         | 85                | 170M5955                                | 170M5925                                |
|                        |                                                    | 450                                   | 35,500     | 210,000                         | 90                | 170M5956                                | 170M5926                                |
|                        |                                                    | 500                                   | 49,500     | 295,000                         | 95                | 170M5957                                | 170M5927                                |
|                        |                                                    | 550                                   | 66,000     | 390,000                         | 100               | 170M5958                                | 170M5928                                |
|                        |                                                    | 630                                   | 93,500     | 555,000                         | 110               | 170M5959                                | 170M5929                                |
|                        |                                                    | 700                                   | 130,000    | 770,000                         | 115               | 170M5960                                | 170M5930                                |
|                        |                                                    | 800                                   | 195,000    | 1,200,000                       | 125               | 170M5961                                | 170M5931                                |
| 3                      | 1000 V a.c. (IEC/UL)                               | 315                                   | 9200       | 54,500                          | 90                | 170M8600                                | 170M8500                                |
|                        |                                                    | 350                                   | 13,000     | 77,500                          | 95                | 170M8601                                | 170M8501                                |
|                        |                                                    | 400                                   | 19,000     | 115,000                         | 105               | 170M8602                                | 170M8502                                |
|                        |                                                    | 450                                   | 27,000     | 160,000                         | 107               | 170M8603                                | 170M8503                                |
|                        |                                                    | 500                                   | 37,500     | 225,000                         | 110               | 170M8604                                | 170M8504                                |
|                        |                                                    | 550                                   | 52,000     | 310,000                         | 115               | 170M8605                                | 170M8505                                |
|                        |                                                    | 630                                   | 82,500     | 490,000                         | 120               | 170M8606                                | 170M8506                                |
|                        |                                                    | 700                                   | 115,000    | 700,000                         | 125               | 170M8607                                | 170M8507                                |
|                        |                                                    | 800                                   | 170,000    | 1,050,000                       | 135               | 170M8608                                | 170M8508                                |
|                        |                                                    | 900                                   | 250,000    | 1,500,000                       | 145               | 170M8609                                | 170M8509                                |
|                        |                                                    | 1000                                  | 340,000    | 2,050,000                       | 150               | 170M8610                                | 170M8510                                |
|                        |                                                    | 1100                                  | 460,000    | 2,750,000                       | 155               | 170M8611                                | 170M8511                                |
|                        | 1000 V a.c. (IEC)                                  | 1250                                  | 575,000    | 3,400,000                       | 175               | 170M8612 <sup>1</sup>                   | 170M8512 <sup>1</sup>                   |
|                        | 900 V a.c. (IEC)                                   | 1400                                  | 795,000    | 4,200,000                       | 185               | 170M8613 <sup>1</sup>                   | 170M8513 <sup>1</sup>                   |

<sup>1</sup> Overall length is 90 mm, for all other fuse links the overall length is 75 mm.

Data sheets: 170K8564 (Size 1\*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

# 170M - sizes 1\* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

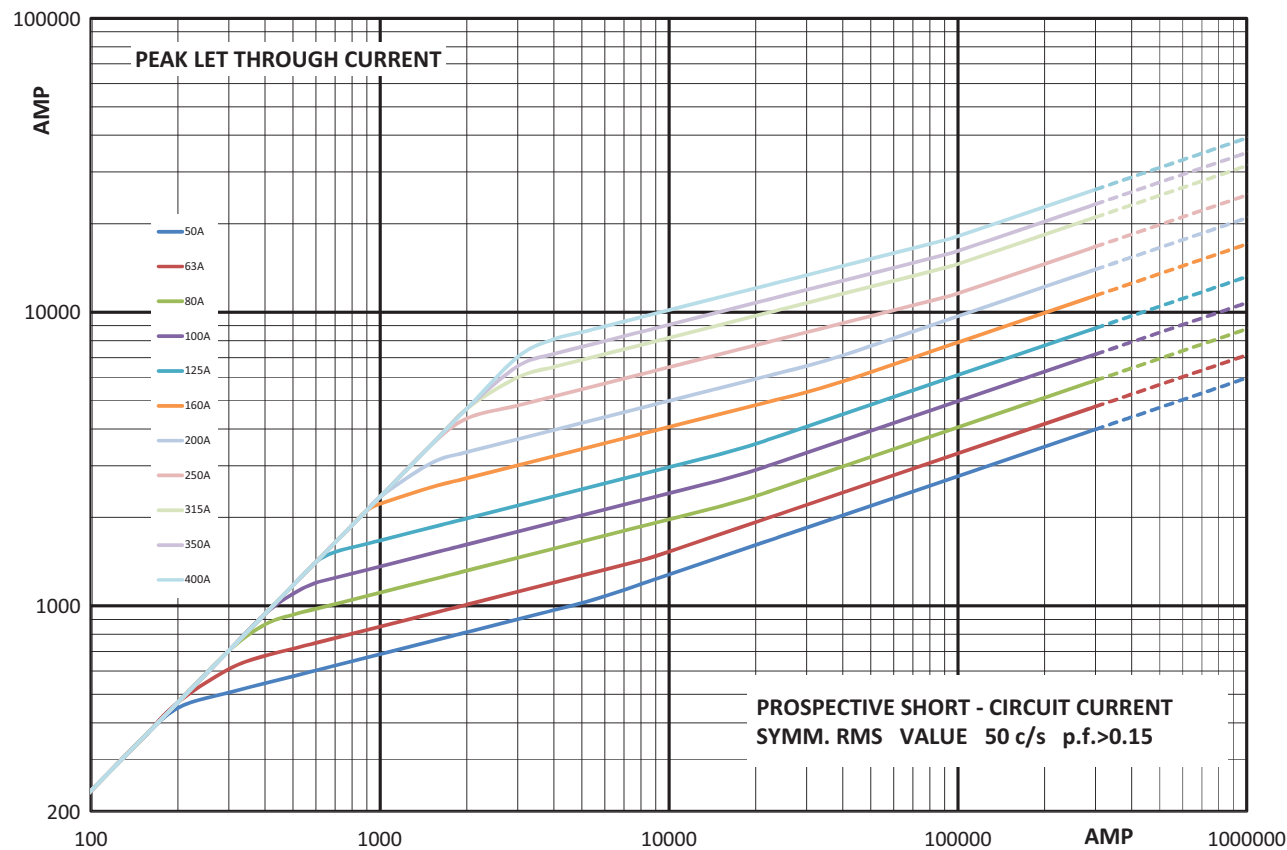
## Time-current curve - Size 1\*, 50 A to 400 A



Square body fuse links

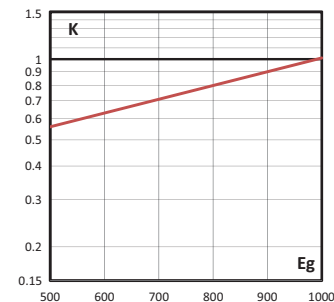
170M - sizes 1\* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Cut-off curve - Size 1\*, 50 A to 400 A



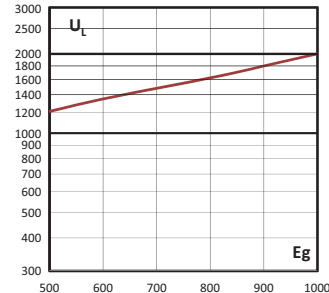
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



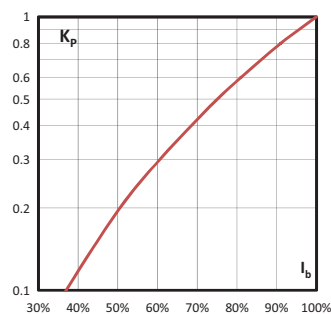
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



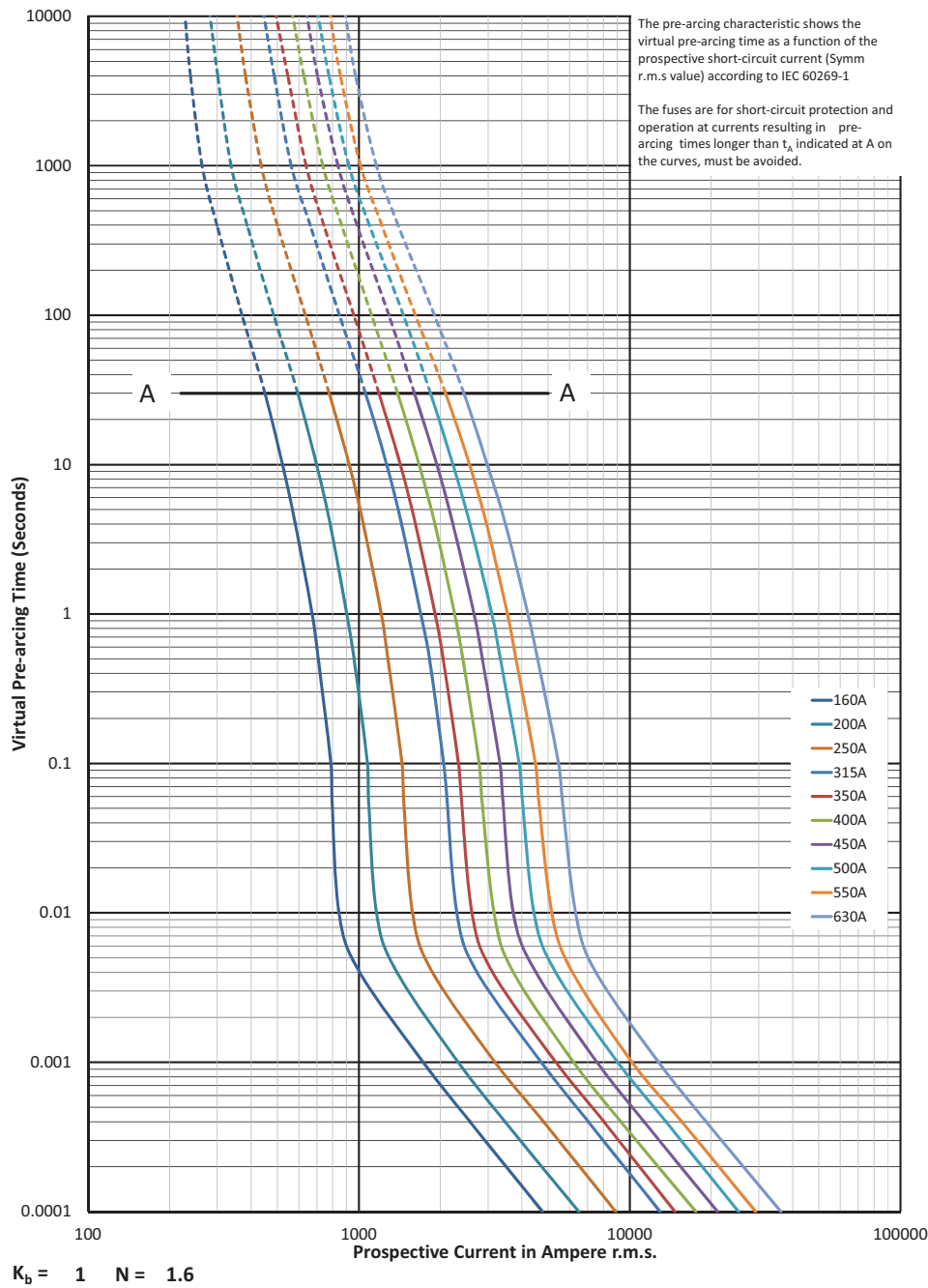
Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



# 170M - Sizes 1\* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

## Time-current curve - Size 1, 160 A to 630 A

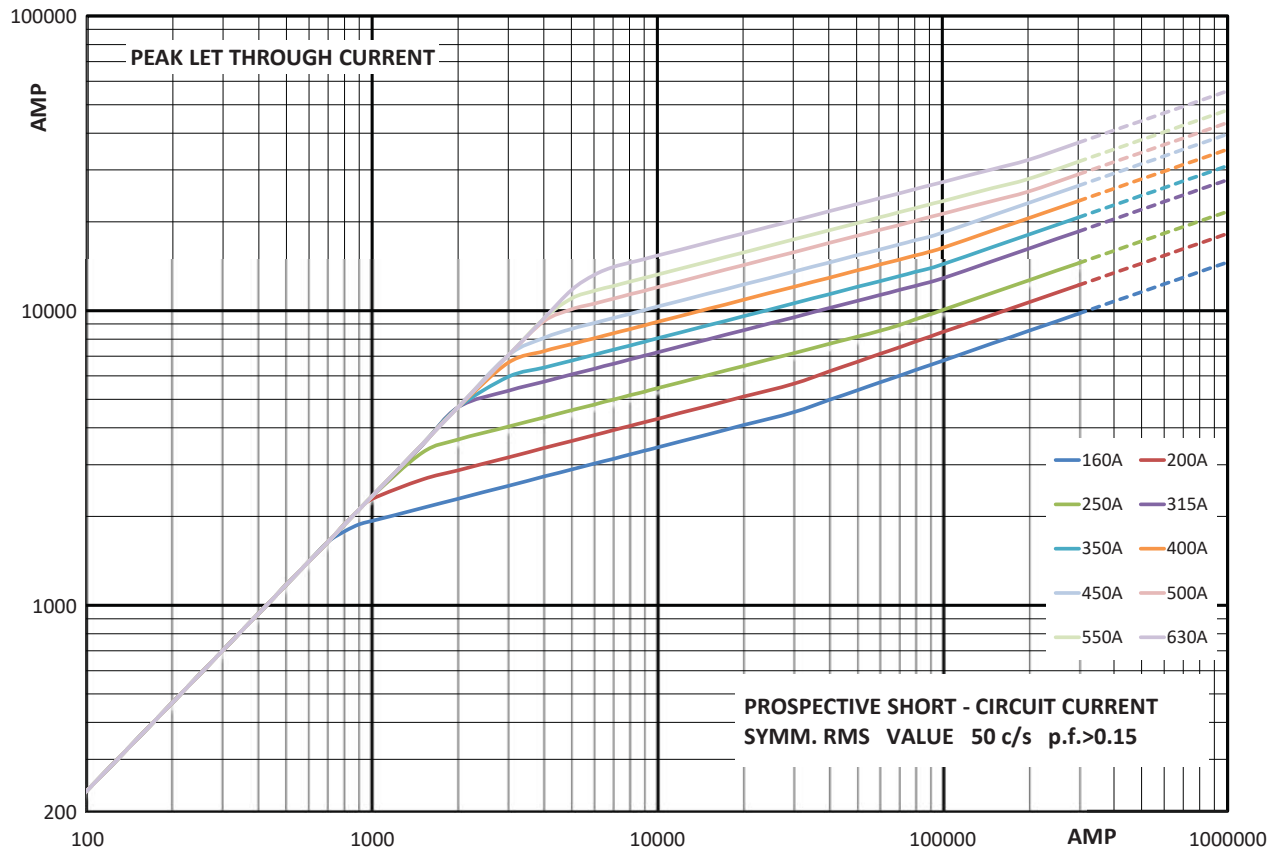


Data sheets: 170K8564 (Size 1\*), 170K8566 (Size 1), 170K8568 (Size 2), 170K8570 (Size 3)

Square body fuse links

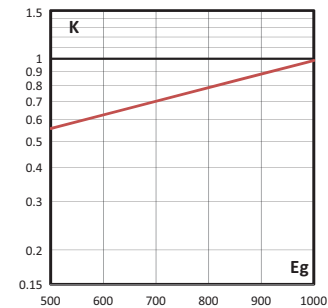
170M - Sizes 1\* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Cut-off curve - Size 1, 160 A to 630 A



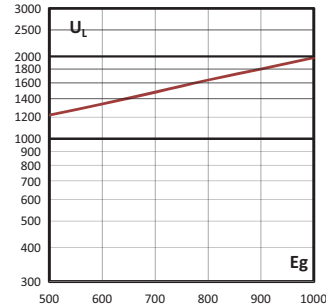
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



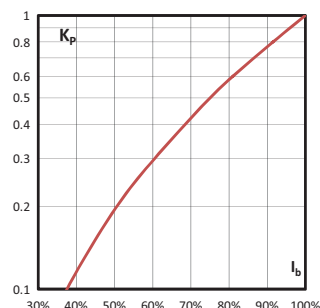
Arc voltage

This curve gives the peak arc voltage, U<sub>t</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



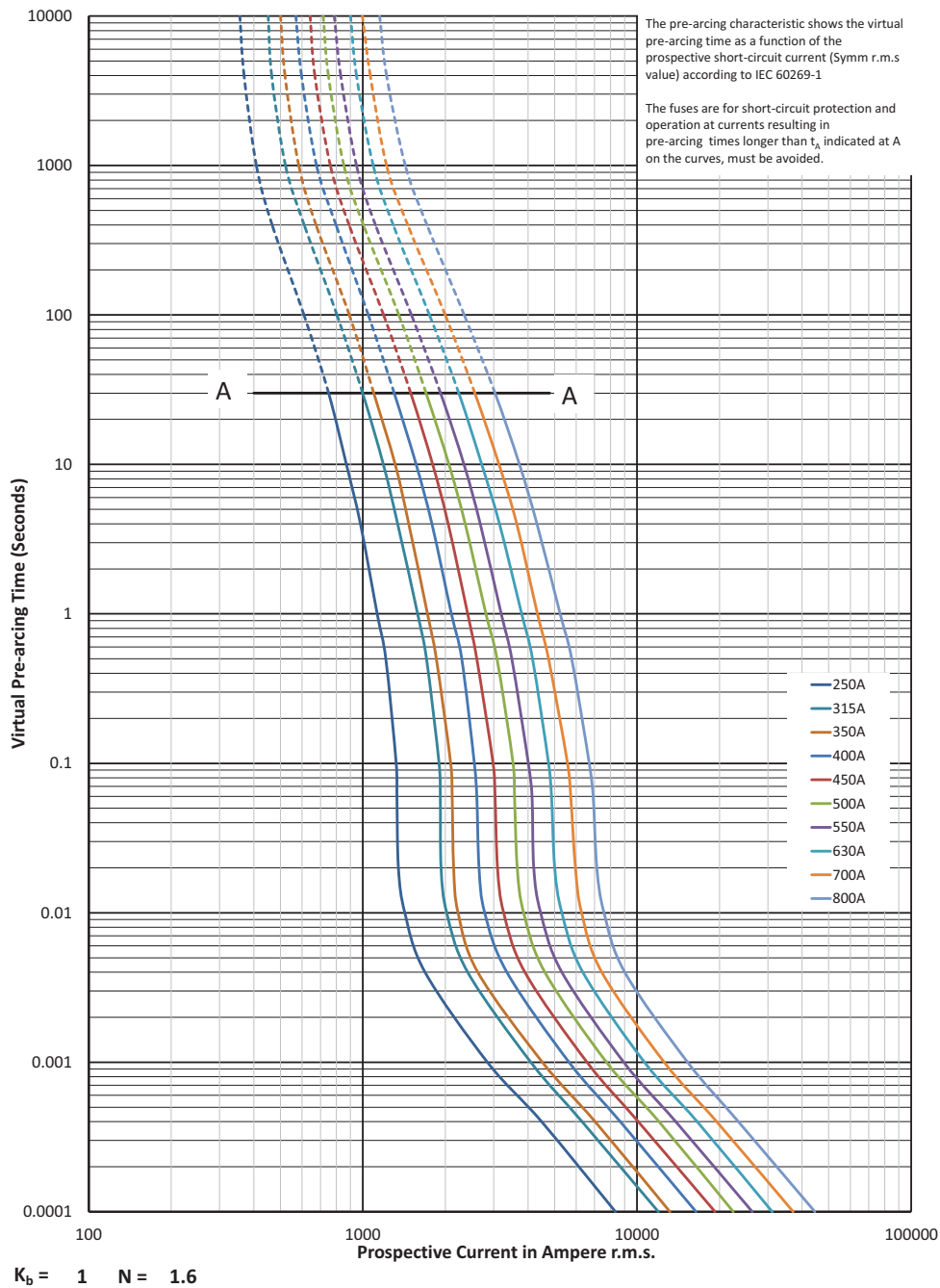
Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



# 170M - Sizes 1\* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

## Time-current curve - Size 2, 250 A to 800 A

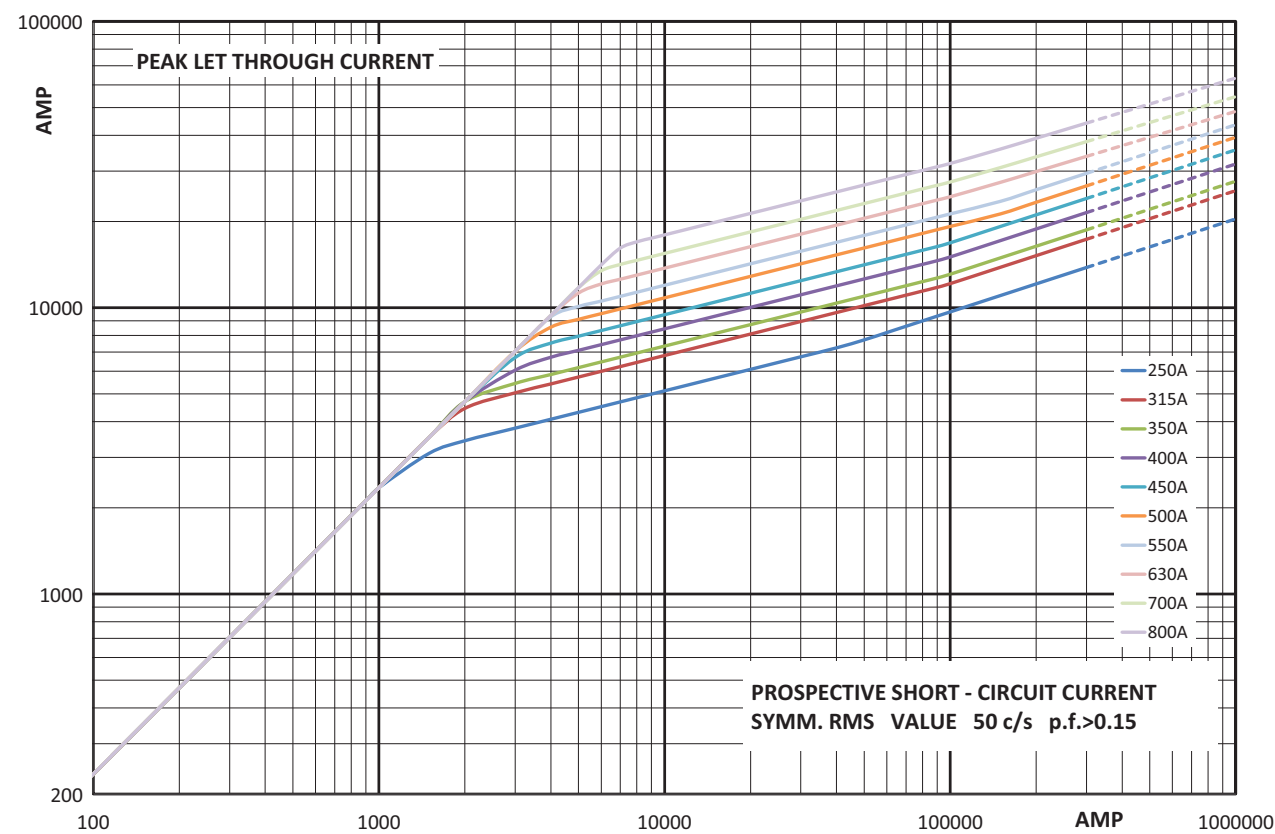




Square body fuse links

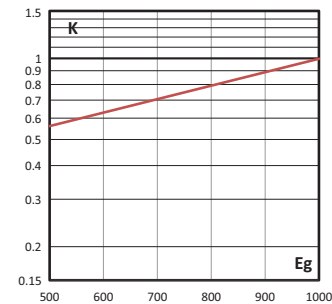
170M - Sizes 1\* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Cut-off curve - Size 2, 250 A to 800 A



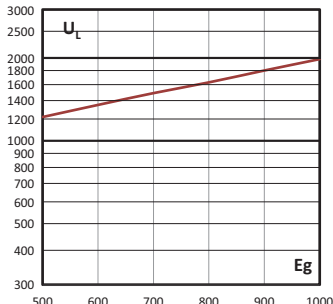
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



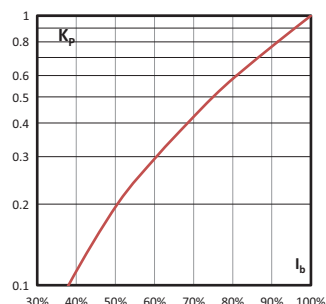
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



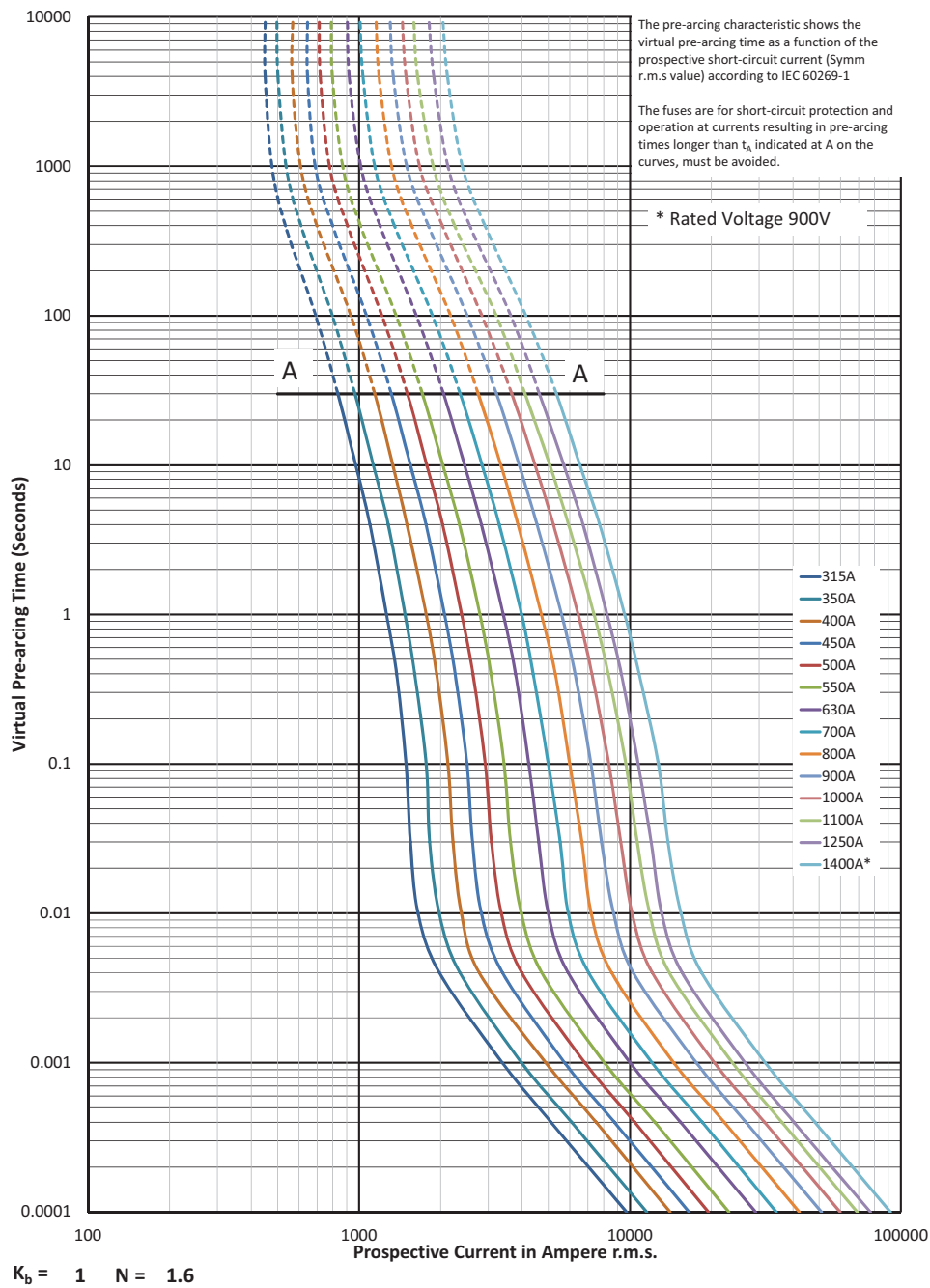
Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



# 170M - Sizes 1\* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

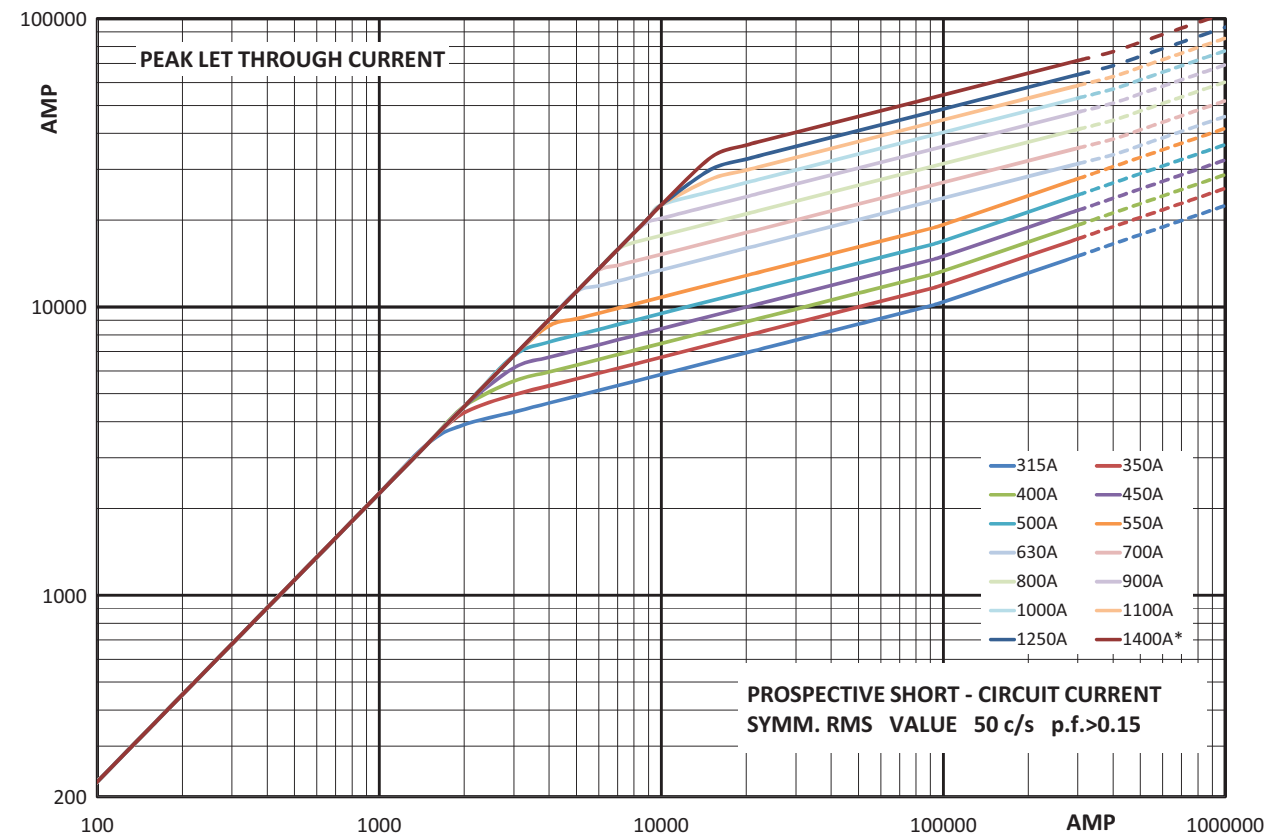
## Time-current curve - Size 3, 315 A to 1400 A



# Square body fuse links

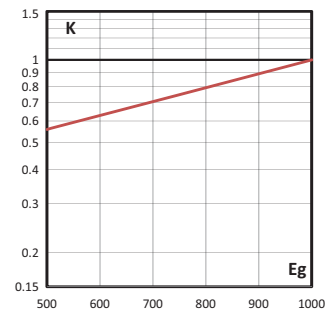
## 170M - Sizes 1\* to 3, Flush end contact, 1000 V a.c. (IEC and UL), 50 A to 1400 A

Cut-off curve - Size 3, 315 A to 1400 A



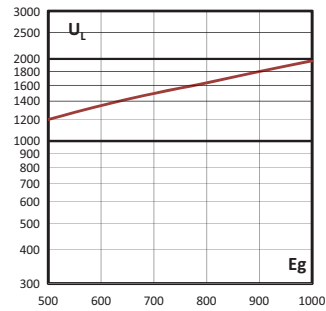
### Total clearing I²t

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



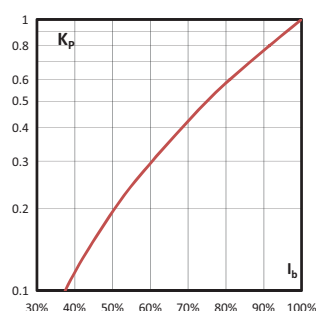
### Arc voltage

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 percent.



### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



## 170M - Sizes 1\* to 3, Flush end contact, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

### Specifications

#### Description

Square body flush end contact high speed fuse links, for the protection of DC common bus, DC drives, power converters/rectifiers and reduced rated voltage starters.

#### Technical data

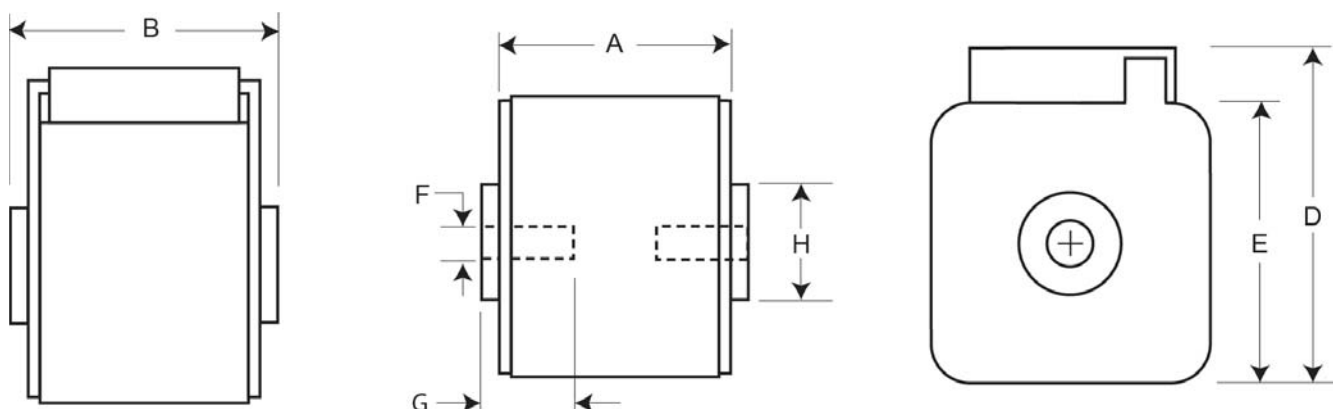
- Rated voltage:
  - 1250 V a.c. (IEC)
  - 1300 V a.c. (UL)
- Rated current: 50 A to 1400 A
- Breaking capacity: 100 kA RMS Sym
- Operating class: aR

#### Standards / Agency information

CE, Designed and tested to IEC 60269 Part 4. Consult Eaton for UL Recognition/CSA Component Acceptance Status



#### Dimensions (mm)



| Size | Type         | A  | B  | D  | E  | F   | F <sup>1</sup> (in) | Min G | H   |
|------|--------------|----|----|----|----|-----|---------------------|-------|-----|
| 1*   | BKN + GKN/75 | 74 | 75 | 59 | 45 | M8  | 5/16" -18 UNC-2B    | 5     | Ø17 |
| 1*   | BKN/80       | 80 | 81 | 59 | 45 | M8  |                     | 5     | Ø17 |
| 1    | BKN + GKN/75 | 74 | 75 | 69 | 53 | M8  | 5/16" -18 UNC-2B    | 8     | Ø20 |
| 1    | BKN/80       | 80 | 81 | 69 | 53 | M8  |                     | 8     | Ø20 |
| 2    | BKN + GKN/75 | 74 | 75 | 77 | 61 | M10 | 3/8" -16 UNC-2B     | 10    | Ø24 |
| 2    | BKN/80       | 80 | 81 | 77 | 61 | M10 |                     | 10    | Ø24 |
| 2    | BKN + GKN/90 | 80 | 91 | 77 | 61 | M10 | 3/8" -16 UNC-2B     | 10    | Ø24 |
| 3    | BKN + GKN/75 | 74 | 76 | 92 | 76 | M12 | 1/2" -13 UNC-2B     | 10    | Ø30 |
| 3    | BKN/80       | 81 | 83 | 92 | 76 | M12 |                     | 10    | Ø30 |
| 3    | BKN + GKN/90 | 81 | 91 | 92 | 76 | M12 | 1/2" -13 UNC-2B     | 10    | Ø30 |

<sup>1</sup> Valid for fuses type -GKN/-.

## Square body fuse links

### 170M - Sizes 1\* to 3, Flush end contact, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

| Fuse link body size | Rated voltage                         | I <sup>2</sup> t (A <sup>2</sup> Sec) |            |                         |                         |                | Catalogue numbers                  |                                    |                                    |                                    |                                    |
|---------------------|---------------------------------------|---------------------------------------|------------|-------------------------|-------------------------|----------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
|                     |                                       | Rated current (Amps)                  | Pre-arcing | Clearing at 1000 V a.c. | Clearing at 1250 V a.c. | Watts loss (W) | -BKN/75 Type K indicator for micro | -BKN/80 Type K indicator for micro | -BKN/90 Type K Indicator for micro | -GKN/75 Type K Indicator for micro | -GKN/90 Type K Indicator for micro |
| 1*                  | 1250 V a.c. (IEC)<br>1300 V a.c. (UL) | 50                                    | 135        | 815                     | 1100                    | 15             | 170M3388 <sup>6</sup>              | 170M3438                           |                                    | 170M3488 <sup>6</sup>              |                                    |
|                     |                                       | 63                                    | 215        | 1300                    | 1750                    | 20             | 170M3389 <sup>6</sup>              | 170M3439                           |                                    | 170M3489 <sup>6</sup>              |                                    |
|                     |                                       | 80                                    | 420        | 2500                    | 3350                    | 25             | 170M3390 <sup>6</sup>              | 170M3440                           |                                    | 170M3490 <sup>6</sup>              |                                    |
|                     |                                       | 100                                   | 750        | 4450                    | 5950                    | 30             | 170M3391 <sup>6</sup>              | 170M3441                           |                                    | 170M3491 <sup>6</sup>              |                                    |
|                     |                                       | 125                                   | 1450       | 9000                    | 11,500                  | 35             | 170M3392 <sup>6</sup>              | 170M3442                           |                                    | 170M3492 <sup>6</sup>              |                                    |
|                     |                                       | 160                                   | 2600       | 16,000                  | 21,000                  | 40             | 170M3393 <sup>6</sup>              | 170M3443                           |                                    | 170M3493 <sup>6</sup>              |                                    |
|                     |                                       | 200                                   | 5150       | 31,000                  | 41,000                  | 45             | 170M3394 <sup>6</sup>              | 170M3444                           |                                    | 170M3494 <sup>6</sup>              |                                    |
|                     |                                       | 250                                   | 9200       | 54,500                  | 73,000                  | 55             | 170M3395 <sup>6</sup>              | 170M3445                           |                                    | 170M3495 <sup>6</sup>              |                                    |
|                     |                                       | 315                                   | 18,500     | 115,000                 | 150,000                 | 60             | 170M3396 <sup>6</sup>              | 170M3446                           |                                    | 170M3496 <sup>6</sup>              |                                    |
|                     |                                       | 350                                   | 27,000     | 165,000                 | 220,000                 | 65             | 170M3397 <sup>6</sup>              | 170M3447                           |                                    | 170M3497 <sup>6</sup>              |                                    |
|                     |                                       | 400                                   | 53,000     | 265,000                 | 335,000                 | 70             |                                    | 170M3448                           |                                    |                                    |                                    |
| 1                   | 1250 V a.c. (IEC)<br>1300 V a.c. (UL) | 160                                   | 1900       | 11,500                  | 15,500                  | 45             | 170M4388 <sup>6</sup>              | 170M4438 <sup>6</sup>              |                                    | 170M4488 <sup>6</sup>              |                                    |
|                     |                                       | 200                                   | 3800       | 22,500                  | 30,000                  | 50             | 170M4389 <sup>6</sup>              | 170M4439 <sup>6</sup>              |                                    | 170M4489 <sup>6</sup>              |                                    |
|                     |                                       | 250                                   | 7750       | 46,000                  | 61,500                  | 60             | 170M4390 <sup>6</sup>              | 170M4440 <sup>6</sup>              |                                    | 170M4490 <sup>6</sup>              |                                    |
|                     |                                       | 315                                   | 15,000     | 90,000                  | 120,000                 | 65             | 170M4391 <sup>6</sup>              | 170M4441 <sup>6</sup>              |                                    | 170M4491 <sup>6</sup>              |                                    |
|                     |                                       | 350                                   | 20,000     | 125,000                 | 165,000                 | 70             | 170M4392 <sup>6</sup>              | 170M4442 <sup>6</sup>              |                                    | 170M4492 <sup>6</sup>              |                                    |
|                     |                                       | 400                                   | 29,500     | 175,000                 | 235,000                 | 75             | 170M4393 <sup>6</sup>              | 170M4443 <sup>6</sup>              |                                    | 170M4493 <sup>6</sup>              |                                    |
|                     |                                       | 450                                   | 42,000     | 250,000                 | 335,000                 | 80             | 170M4394 <sup>6</sup>              | 170M4444 <sup>6</sup>              |                                    | 170M4494 <sup>6</sup>              |                                    |
|                     |                                       | 500                                   | 69,500     | 340,000                 | 435,000                 | 85             | 170M4395 <sup>4</sup>              | 170M4445                           |                                    | 170M4495 <sup>4</sup>              |                                    |
|                     |                                       | 550                                   | 95,000     | 465,000                 | 590,000                 | 95             | 170M4396 <sup>5</sup>              | 170M4446                           |                                    | 170M4496 <sup>5</sup>              |                                    |
|                     |                                       | 630                                   | 130,000    | 660,000                 | N/A                     | 110            | 170M4397 <sup>5</sup>              | 170M4447 <sup>4</sup>              |                                    | 170M4497 <sup>5</sup>              |                                    |
| 2                   | 1250 V a.c. (IEC)<br>1300 V a.c. (UL) | 250                                   | 6500       | 38,500                  | 51,500                  | 65             | 170M5388                           | 170M5438                           |                                    | 170M5588                           |                                    |
|                     |                                       | 280                                   | 9350       | 55,500                  | 74,500                  | 70             | 170M5389                           | 170M5439                           |                                    | 170M5589                           |                                    |
|                     |                                       | 315                                   | 13,000     | 77,500                  | 105,000                 | 75             | 170M5390                           | 170M5440                           |                                    | 170M5590                           |                                    |
|                     |                                       | 350                                   | 16,500     | 97,500                  | 135,000                 | 80             | 170M5391                           | 170M5441                           |                                    | 170M5591                           |                                    |
|                     |                                       | 400                                   | 23,000     | 140,000                 | 180,000                 | 85             | 170M5392                           | 170M5442                           |                                    | 170M5592                           |                                    |
|                     |                                       | 450                                   | 34,000     | 205,000                 | 270,000                 | 90             | 170M5393                           | 170M5443                           |                                    | 170M5593                           |                                    |
|                     |                                       | 500                                   | 48,000     | 285,000                 | 380,000                 | 95             | 170M5394                           | 170M5444                           | 170M5494                           | 170M5594                           | 170M5644                           |
|                     |                                       | 550                                   | 62,000     | 370,000                 | 495,000                 | 100            | 170M5395                           | 170M5445                           | 170M5495                           | 170M5595                           | 170M5645                           |
|                     |                                       | 630                                   | 115,000    | 575,000                 | 730,000                 | 120            | 170M5396 <sup>4</sup>              | 170M5446                           | 170M5496                           | 170M5596 <sup>4</sup>              | 170M5646                           |
|                     |                                       | 700                                   | 160,000    | 795,000                 | 1,050,000               | 125            | 170M5397 <sup>5</sup>              | 170M5447 <sup>7</sup>              | 170M5497                           | 170M5597 <sup>5</sup>              | 170M5647                           |
|                     |                                       | 800                                   | 245,000    | 1,200,000               | 1,550,000               | 130            | 170M5398 <sup>6</sup>              | 170M5448 <sup>8</sup>              | 170M5498                           | 170M5598 <sup>5</sup>              | 170M5648                           |
|                     |                                       | 900                                   | 360,000    | 1,750,000               | N/A                     | 135            |                                    |                                    | 170M5499 <sup>9</sup>              |                                    | 170M5649 <sup>9</sup>              |
|                     |                                       | 1000                                  | 480,000    | 2,350,000               | N/A                     | 145            |                                    |                                    | 170M5500 <sup>9</sup>              |                                    | 170M5650 <sup>9</sup>              |
| 3                   | 1250 V a.c. (IEC)<br>1300 V a.c. (UL) | 315                                   | 9500       | 58,000                  | 77,500                  | 85             | 170M6338 <sup>6</sup>              | 170M6538 <sup>6</sup>              |                                    | 170M6588                           |                                    |
|                     |                                       | 350                                   | 13,500     | 81,500                  | 110,000                 | 90             | 170M6339 <sup>6</sup>              | 170M6539 <sup>6</sup>              |                                    | 170M6589                           |                                    |
|                     |                                       | 400                                   | 19,500     | 120,000                 | 160,000                 | 95             | 170M6340 <sup>6</sup>              | 170M6540 <sup>6</sup>              |                                    | 170M6590                           |                                    |
|                     |                                       | 450                                   | 31,000     | 185,000                 | 245,000                 | 100            | 170M6341 <sup>6</sup>              | 170M6541 <sup>6</sup>              |                                    | 170M6591                           |                                    |
|                     |                                       | 500                                   | 39,000     | 235,000                 | 310,000                 | 105            | 170M6342 <sup>6</sup>              | 170M6542 <sup>6</sup>              |                                    | 170M6592                           |                                    |
|                     |                                       | 550                                   | 55,000     | 325,000                 | 435,000                 | 110            | 170M6343 <sup>6</sup>              | 170M6543 <sup>6</sup>              |                                    | 170M6593                           |                                    |
|                     |                                       | 630                                   | 83,500     | 495,000                 | 665,000                 | 115            | 170M6344 <sup>6</sup>              | 170M6544 <sup>6</sup>              | 170M6494 <sup>6</sup>              | 170M6594                           | 170M6644                           |
|                     |                                       | 700                                   | 115,000    | 705,000                 | 940,000                 | 120            | 170M6345                           | 170M6545 <sup>6</sup>              | 170M6495 <sup>6</sup>              | 170M6595                           | 170M6645 <sup>6</sup>              |
|                     |                                       | 800                                   | 205,000    | 995,000                 | 1,300,000               | 125            | 170M6346 <sup>4</sup>              | 170M6546 <sup>6</sup>              | 170M6496 <sup>12</sup>             | 170M6596 <sup>4</sup>              | 170M6646 <sup>12</sup>             |
|                     |                                       | 900                                   | 305,000    | 1,500,000               | 1,900,000               | 130            | 170M6347 <sup>5</sup>              | 170M6547 <sup>10</sup>             | 170M6497 <sup>12</sup>             | 170M6597 <sup>5</sup>              | 170M6647 <sup>12</sup>             |
|                     |                                       | 1000                                  | 450,000    | 2,150,000               | 2,750,000               | 135            | 170M6348 <sup>6</sup>              | 170M6548 <sup>10</sup>             | 170M6498 <sup>12</sup>             | 170M6598 <sup>5</sup>              | 170M6648 <sup>12</sup>             |
|                     |                                       | 1100                                  | 575,000    | 2,800,000               | 3,600,000               | 160            | 170M6349 <sup>5</sup>              | 170M6549 <sup>11</sup>             | 170M6499 <sup>12</sup>             | 170M6599 <sup>5</sup>              | 170M6649 <sup>12</sup>             |
|                     |                                       | 1250                                  | 810,000    | 3,950,000               | N/A                     | 170            |                                    |                                    | 170M6500 <sup>13</sup>             |                                    | 170M6650 <sup>4</sup>              |
|                     |                                       | 1400                                  | 1,250,000  | 6,000,000               | N/A                     | 175            |                                    |                                    | 170M6501 <sup>13</sup>             |                                    | 170M6651 <sup>4</sup>              |

<sup>1</sup> Rated voltage 1100 V a.c. (IEC), 1000 V a.c. (UL).

<sup>2</sup> Rated voltage 1000 V a.c. (IEC and UL).

<sup>3</sup> Rated voltage 1100 V a.c. (IEC and UL).

<sup>4</sup> Rated voltage (IEC) 1100 V a.c.

<sup>5</sup> Rated voltage (IEC) 1000 V a.c.

<sup>6</sup> Rated voltage 900 V d.c. 8XIn 90 kA

<sup>7</sup> Rated voltage 1100 V a.c. (IEC), 1000 V a.c. (UL). and 1000 V d.c. 8XIn 70 kA

<sup>8</sup> Rated voltage 1000 V a.c. (IEC and UL). and 1000 V d.c. 8XIn 70 kA

<sup>9</sup> Rated voltage 1100 V a.c. (IEC and UL). and 900 V d.c. 9.5XIn 80 kA

<sup>10</sup> Rated voltage 1100 V a.c. (IEC), 1000 V a.c. (UL). and 900 V d.c. 8XIn 90 kA

<sup>11</sup> Rated voltage 1000 V a.c. (IEC and UL). and 900 V d.c. 8XIn 90 kA

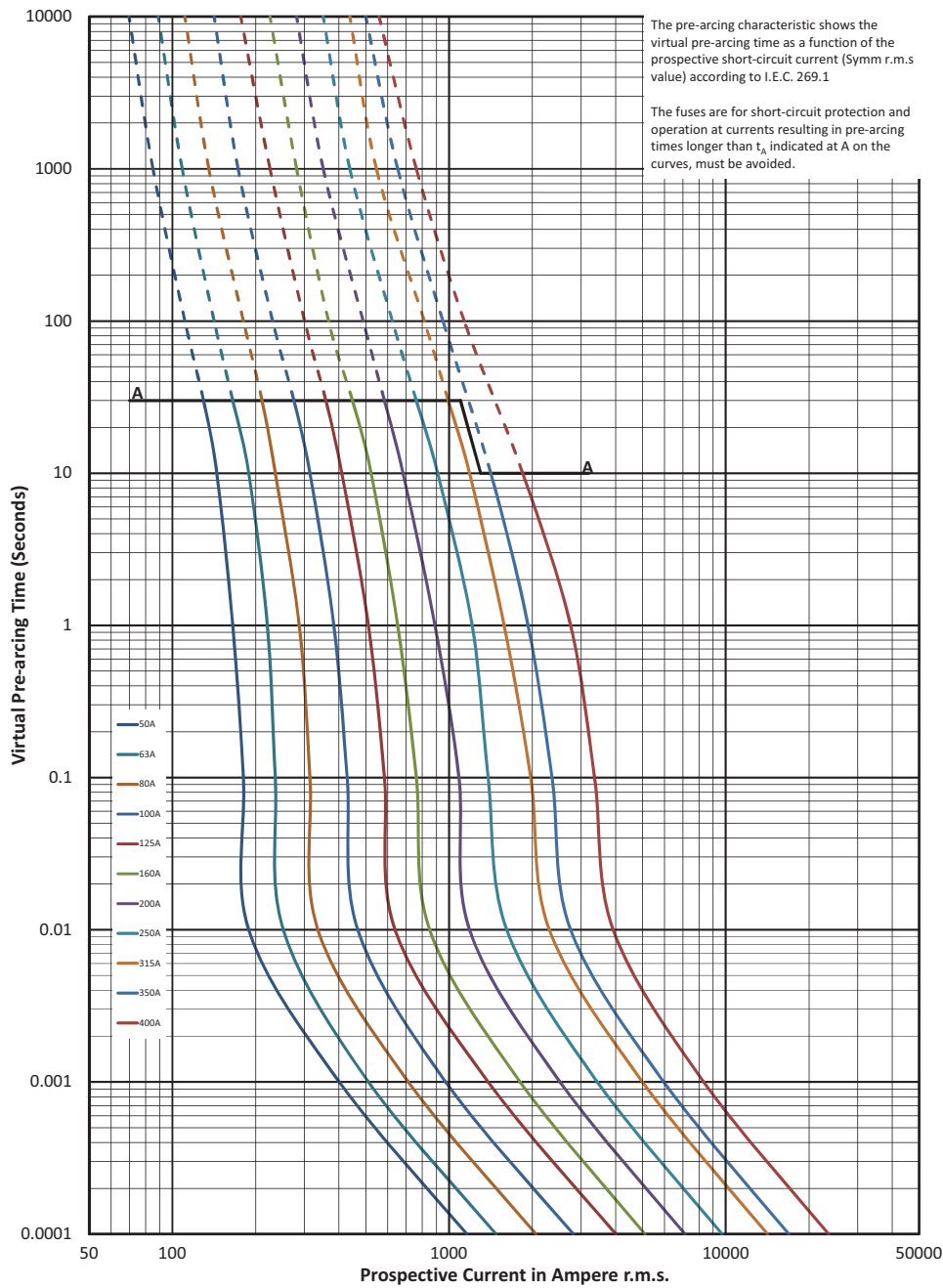
<sup>12</sup> Rated voltage 1000 V d.c. 10XIn 91 kA

<sup>13</sup> Rated voltage 1100 V a.c. (IEC and UL). and 900 V d.c. 12XIn 90 kA

Data sheets: 170K6630 (Size 1\*), 170K6632 (Size 1), 170K6634 (Size 2), 170K6636 (Size 3)

# 170M - Sizes 1\* to 3, Flush end contact, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

## Time-current curve - Size 1\*, 50 A to 400 A

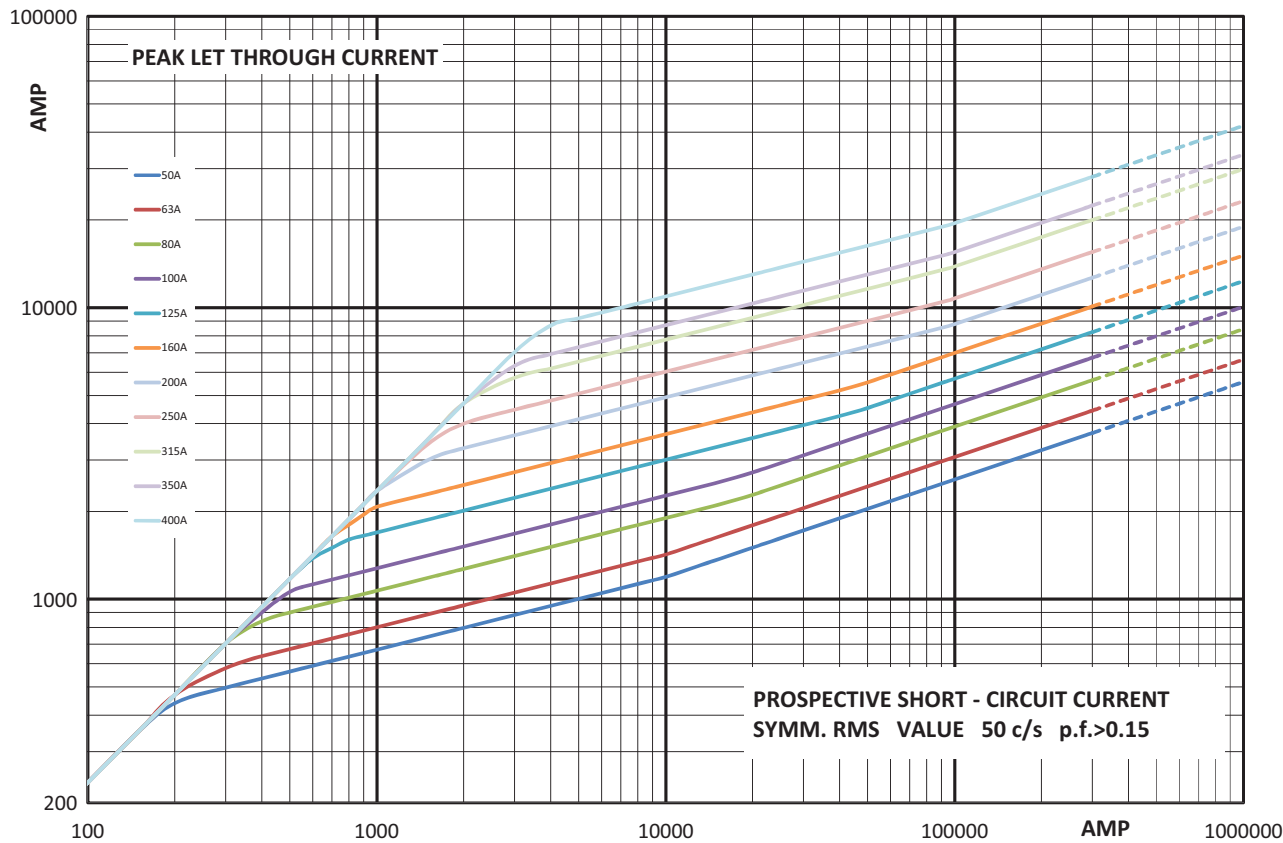


$K_b = 1$   $N = 1,6$

Square body fuse links

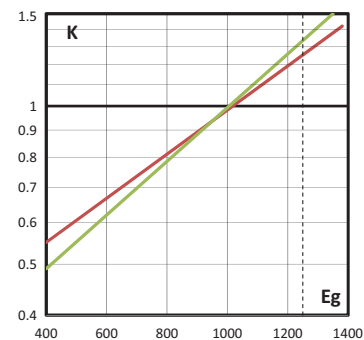
170M - Sizes 1\* to 3, Flush end contact, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

Cut-off curve - Size 1\*, 50 A to 400 A



Total clearing I²t

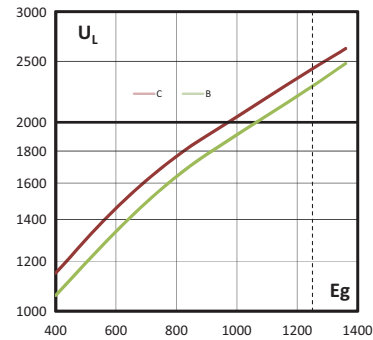
The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



B: fuses ≤ 350 A  
C: fuses ≥ 400 A

Arc voltage

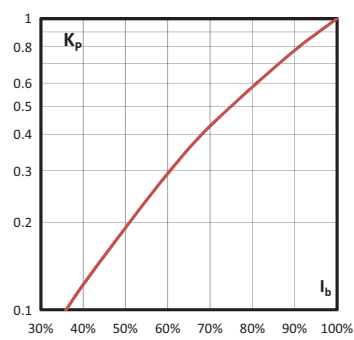
This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



B: fuses ≤ 350 A  
C: fuses ≥ 400 A

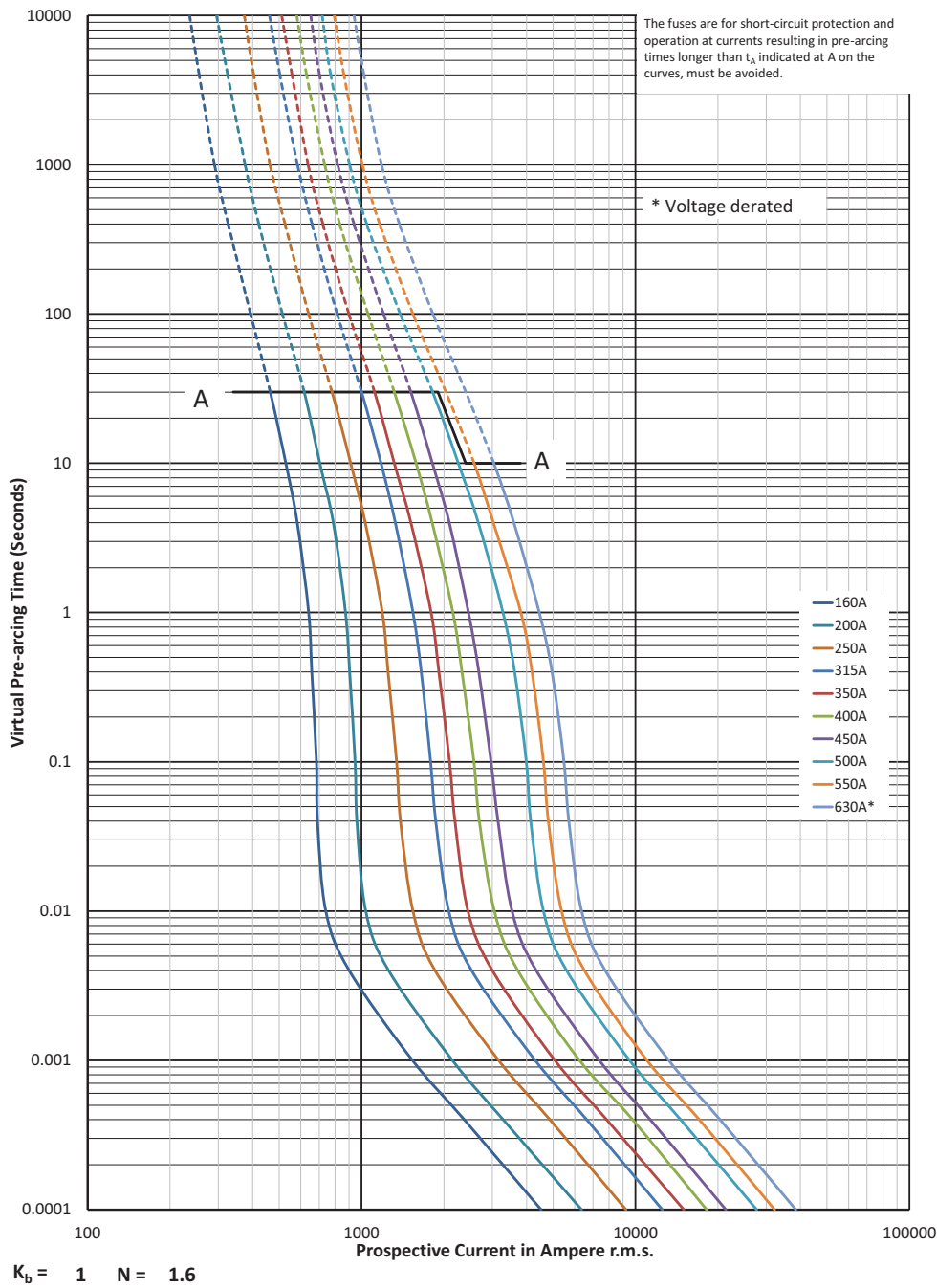
Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



**170M** - Sizes 1\* to 3, Flush end contact, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

Time-current curve - Size 1, 160 A to 630 A

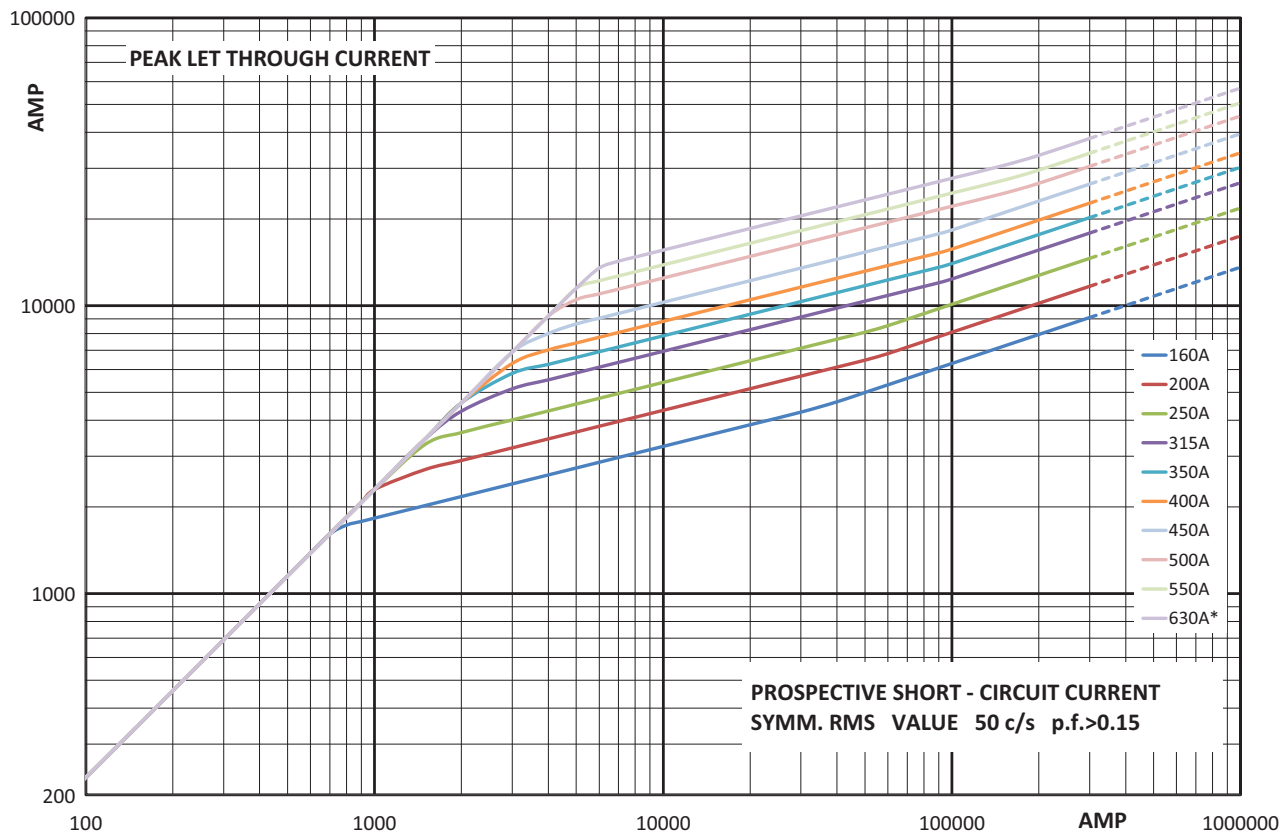




Square body fuse links

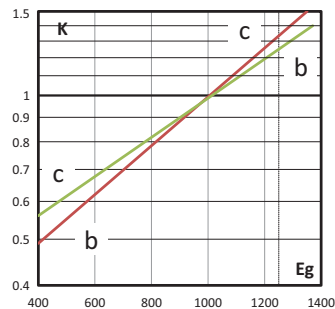
170M - Sizes 1\* to 3, Flush end contact, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

Cut-off curve - Size 1, 160 A to 630 A



Total clearing I²t

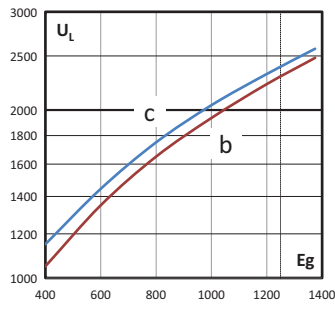
The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



B: fuses ≤ 450 A  
C: fuses ≥ 500 A

Arc voltage

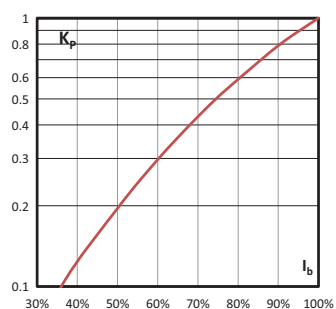
This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



B: fuses ≤ 450 A  
C: fuses ≥ 500 A

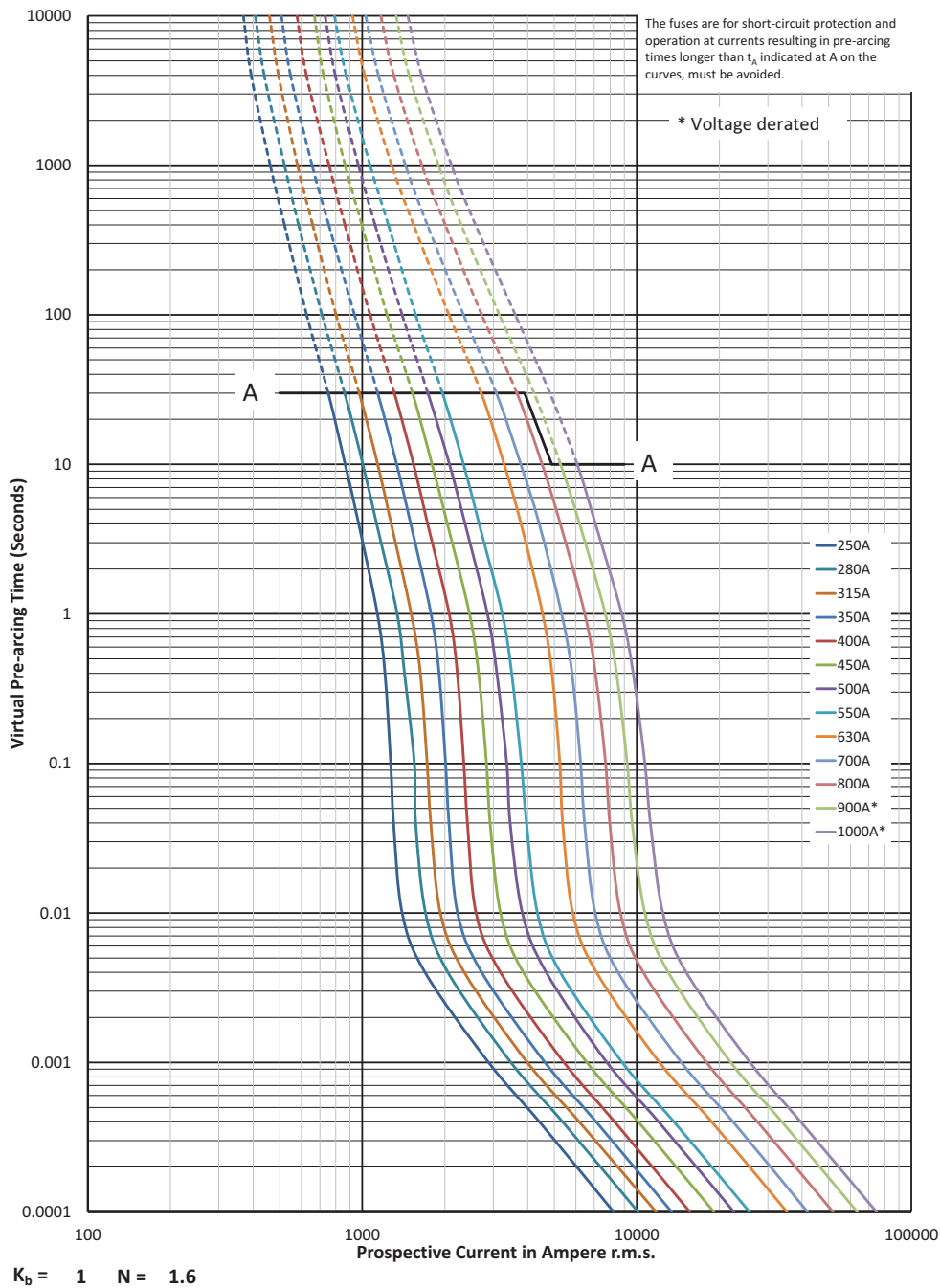
Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



**170M** - Sizes 1\* to 3, Flush end contact, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

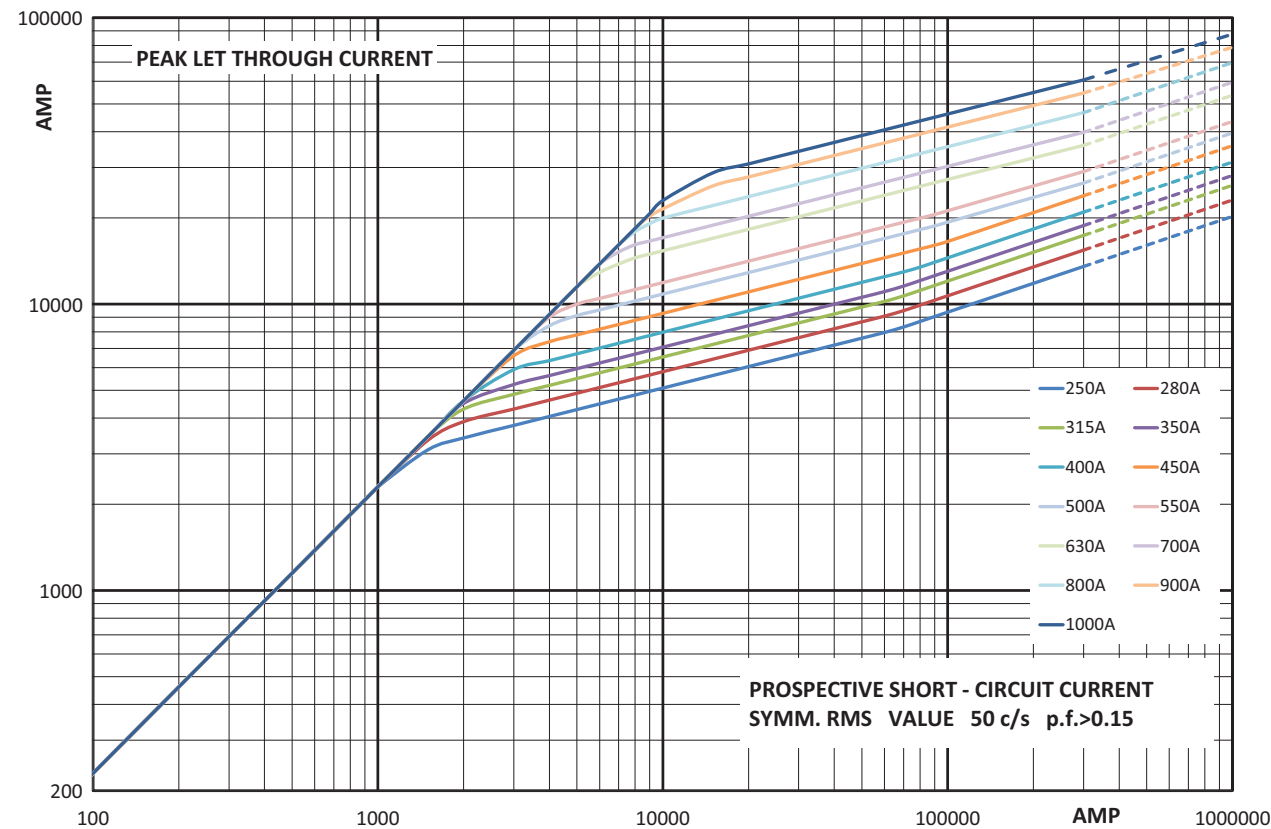
Time-current curve - Size 2, 250 A to 1000 A



Square body fuse links

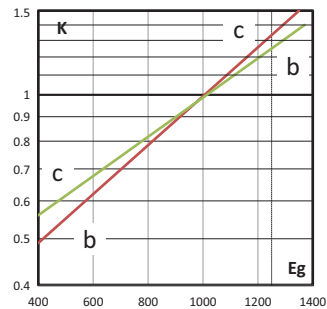
170M - Sizes 1\* to 3, Flush end contact, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

Cut-off curve - Size 2, 250 A to 1000 A



Total clearing I²t

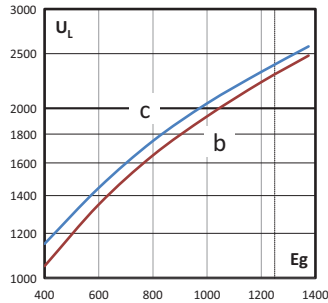
The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



B: fuses ≤ 550 A  
C: fuses ≥ 630 A

Arc voltage

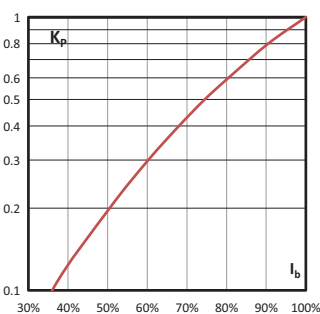
This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



B: fuses ≤ 550 A  
C: fuses ≥ 630 A

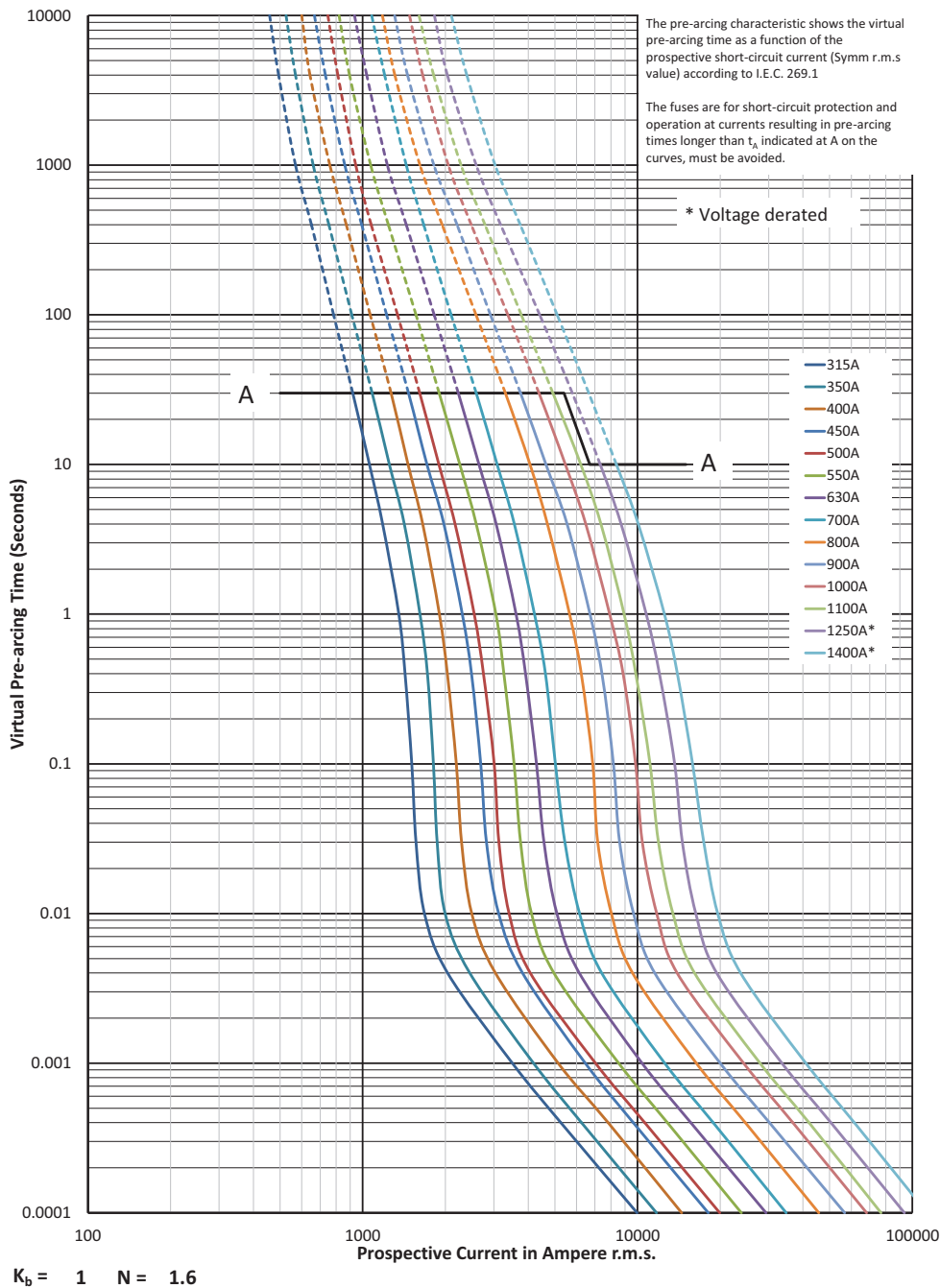
Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



# 170M - Sizes 1\* to 3, Flush end contact, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

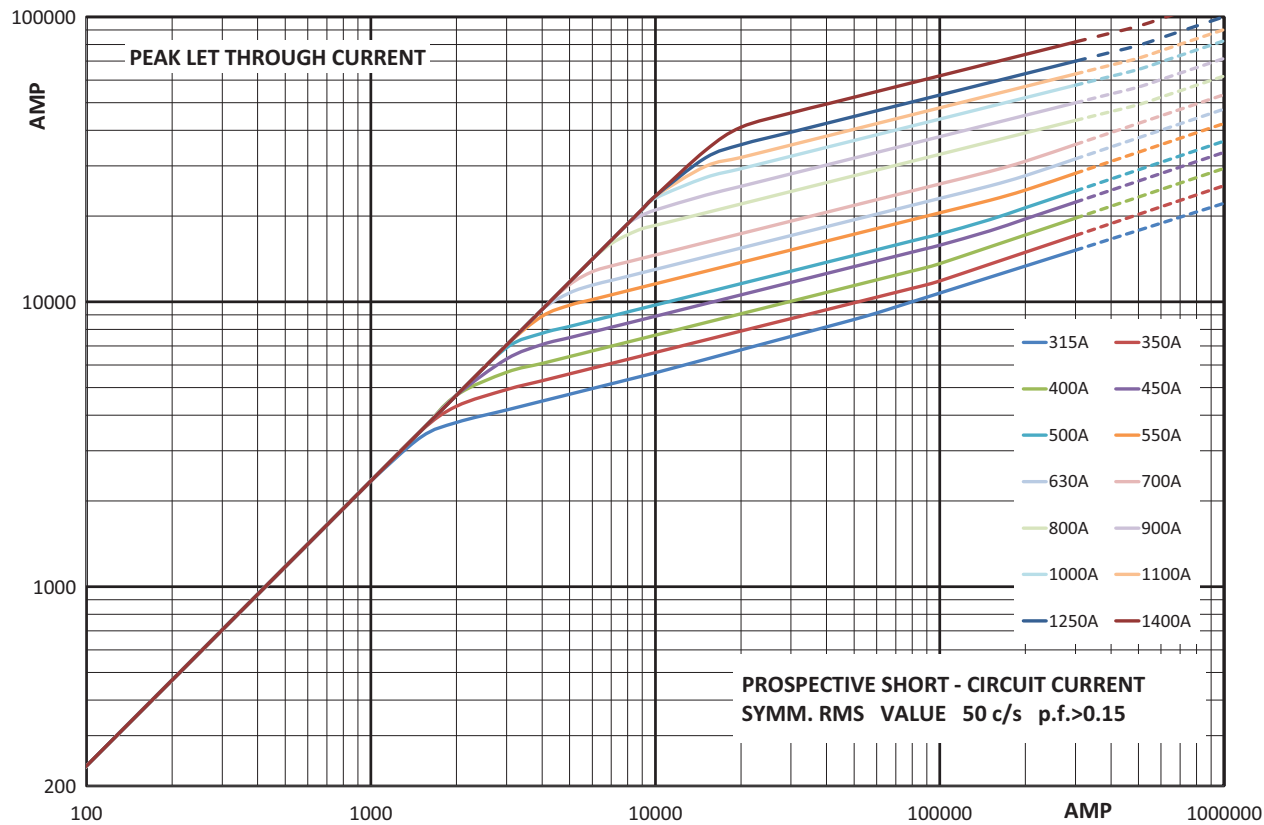
## Time-current curve - Size 3, 315 A to 1400 A



Square body fuse links

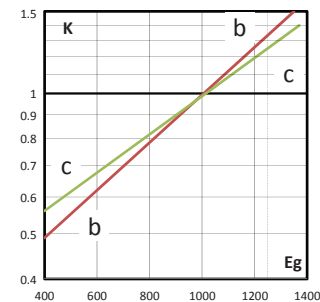
170M - Sizes 1\* to 3, Flush end contact, 1250 V a.c. (IEC), 1300 V a.c. (UL), 50 A to 1400 A

Cut-off curve - Size 3, 315 A to 1400 A



Total clearing I²t

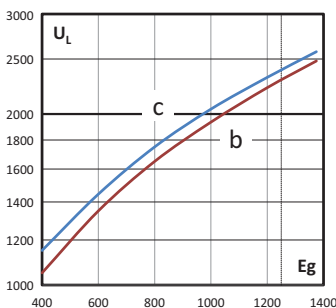
The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



B: fuses ≤ 700 A  
C: fuses ≥ 800 A

Arc voltage

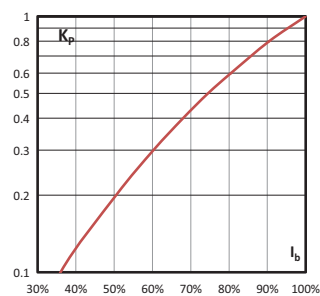
This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



B: fuses ≤ 700 A  
C: fuses ≥ 800 A

Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



## 170M - Size 4, Flush end contact, 690 V a.c. (IEC), 700 V a.c. (UL), 1000 A to 4000 A

### Specifications

#### Description

Square body, flush end contact, high speed fuse links, for the protection of power rectifiers.

#### Technical data

- Rated voltage:
  - 690 V a.c. (IEC) / 700 V a.c. (UL) 1000 A to 3500 A
  - 600 V a.c. (IEC and UL, 4000 A)
- Rated current: 1000 A to 4000 A
- Breaking capacity: 200 kA RMS Sym
- Operating class: aR

#### Standards / Agency information

CE, Designed and tested to IEC 60269 Part 4, UL Recognised

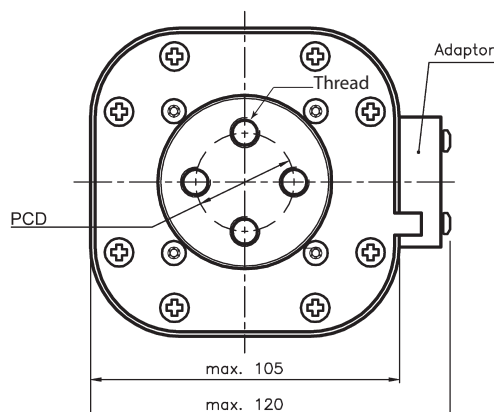
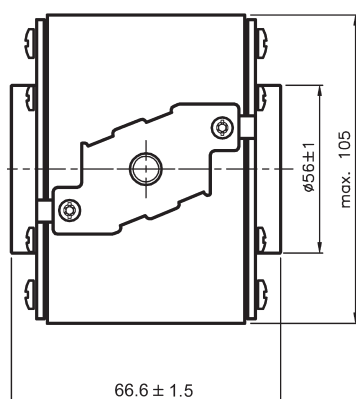


#### Catalogue numbers

| Fuse link<br>body size | Rated voltage                       | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                           |                   | Catalogue numbers         |                             |                           |                             |
|------------------------|-------------------------------------|-------------------------|---------------------------------------|---------------------------|-------------------|---------------------------|-----------------------------|---------------------------|-----------------------------|
|                        |                                     |                         | Pre-arcing                            | Clearing<br>at 660 V a.c. | Watts loss<br>(W) | -B/65 visual<br>indicator | -BKN/65 Type<br>K indicator | -G/65 visual<br>indicator | -GKN/65 Type<br>K indicator |
| 4                      | 690 V a.c. (IEC)<br>700 V a.c. (UL) | 1000                    | 76,000                                | 505,000                   | 175               | 170M7058                  | 170M7078                    | 170M7098                  | 170M7118                    |
|                        |                                     | 1250                    | 145,000                               | 965,000                   | 195               | 170M7059                  | 170M7079                    | 170M7099                  | 170M7119                    |
|                        |                                     | 1400                    | 205,000                               | 1,400,000                 | 205               | 170M7060                  | 170M7080                    | 170M7100                  | 170M7120                    |
|                        |                                     | 1600                    | 305,000                               | 2,050,000                 | 220               | 170M7061                  | 170M7081                    | 170M7101                  | 170M7121                    |
|                        |                                     | 1800                    | 436,600                               | 3,067,000                 | 260               | 170M7340                  | -                           | -                         | -                           |
|                        |                                     | 2000                    | 600,000                               | 3,950,000                 | 245               | 170M7062                  | 170M7082                    | 170M7102                  | 170M7122                    |
|                        |                                     | 2200                    | 805,000                               | 5,350,000                 | 255               | 170M7116                  | 170M7114                    | 170M7171                  | 170M7173                    |
|                        |                                     | 2500                    | 1,200,000                             | 7,800,000                 | 275               | 170M7063                  | 170M7083                    | 170M7103                  | 170M7123                    |
|                        |                                     | 3000                    | 2,000,000                             | 13,500,000                | 305               | 170M7064                  | 170M7084                    | 170M7104                  | 170M7124                    |
|                        |                                     | 3500                    | 3,250,000                             | 22,000,000                | 325               | 170M7065                  | 170M7085                    | 170M7105                  | 170M7125                    |
|                        | 600 V a.c.<br>(IEC & UL)            | 4000                    | 4,700,000                             | 28,000,000 <sup>1</sup>   | 355               | 170M7066                  | 170M7086                    | 170M7106                  | 170M7126                    |
|                        |                                     |                         |                                       |                           |                   |                           |                             |                           |                             |

<sup>1</sup> Clearing at 600 V a.c.

#### Dimensions (mm) -BKN/65 and -GKN/65



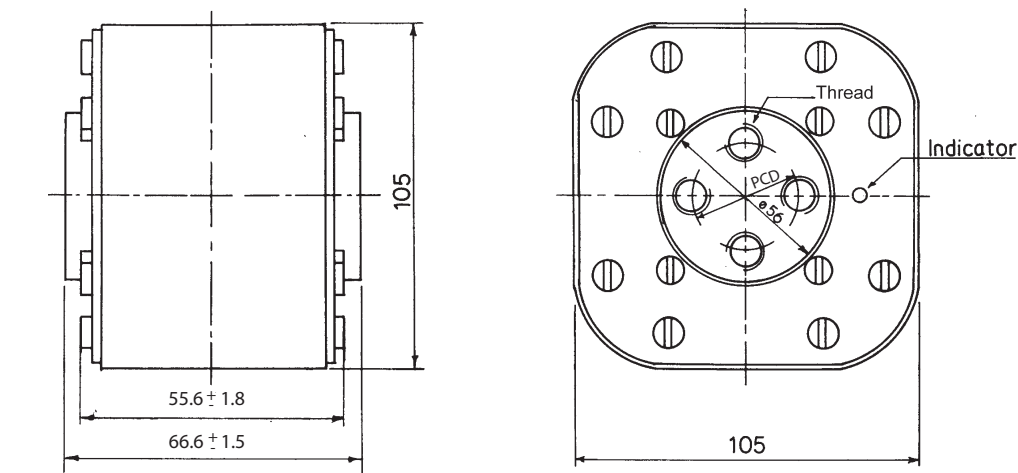
| Type    | PCD    | Thread      |
|---------|--------|-------------|
| -GKN/65 | Ø 38.1 | UNC ½" - 13 |
| -BKN/65 | Ø 33   | M-10        |

Data sheet: 170K6328

Square body fuse links

170M - Size 4, Flush end contact, 690 V a.c. (IEC), 700 V a.c. (UL), 1000 A to 4000 A

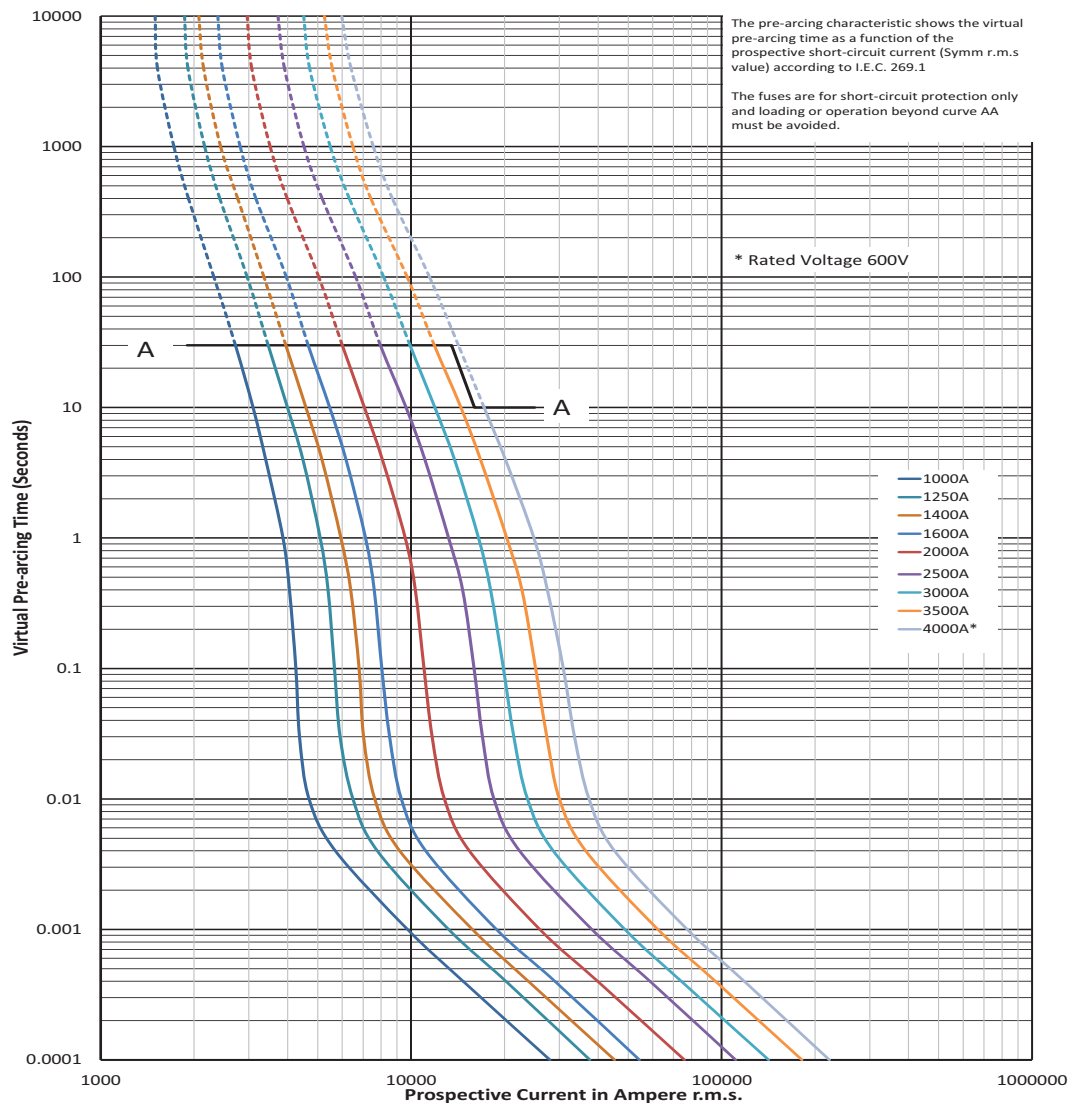
Dimensions (mm) -B/65 and -G/65



Type -B/65, -G/65

|       | PCD    | Thread      |
|-------|--------|-------------|
| -G/65 | Ø 38.1 | UNC ½" - 13 |
| -B/65 | Ø 33   | M-10        |

Time-current curve - 1000 A to 4000 A

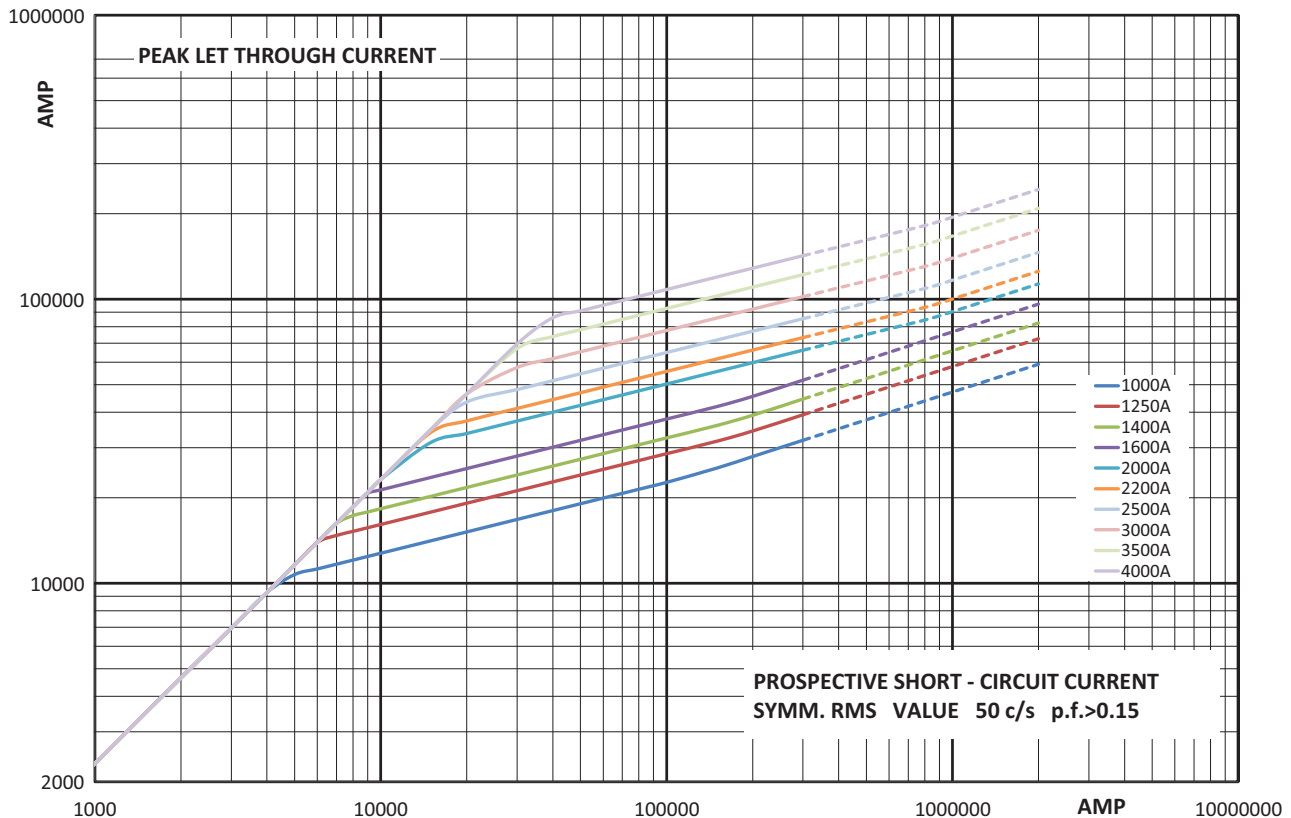


$K_b = 1$   $N = 1.5$

Data sheet: 170K6328

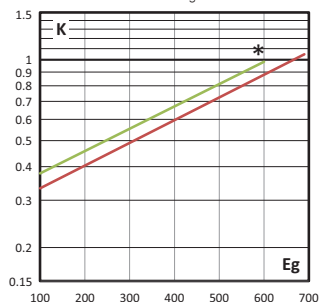
# 170M - Size 4, Flush end contact, 690 V a.c. (IEC), 700 V a.c. (UL), 1000 A to 4000 A

## Cut-off curve - 1000 A to 4000 A



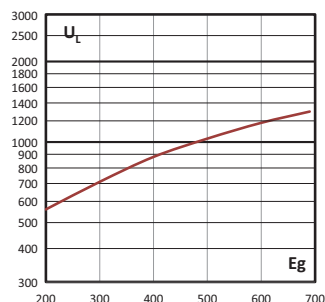
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



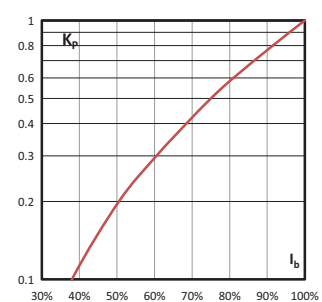
## Arc voltage

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 percent.



## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.





# Square body fuse links

## 170M - Size 4, Flush end contact, 1000 V a.c. (IEC), 1000 A to 3000 A

### Specifications

#### Description

Square body, flush end contact, high speed fuse links, for the protection of power rectifiers.

#### Technical data

- Rated voltage: 1000 V a.c. (IEC)
- Rated current: 1000 A to 3000 A
- Breaking capacity: 200 kA RMS Sym
- Operating class: aR

#### Standards / Agency information

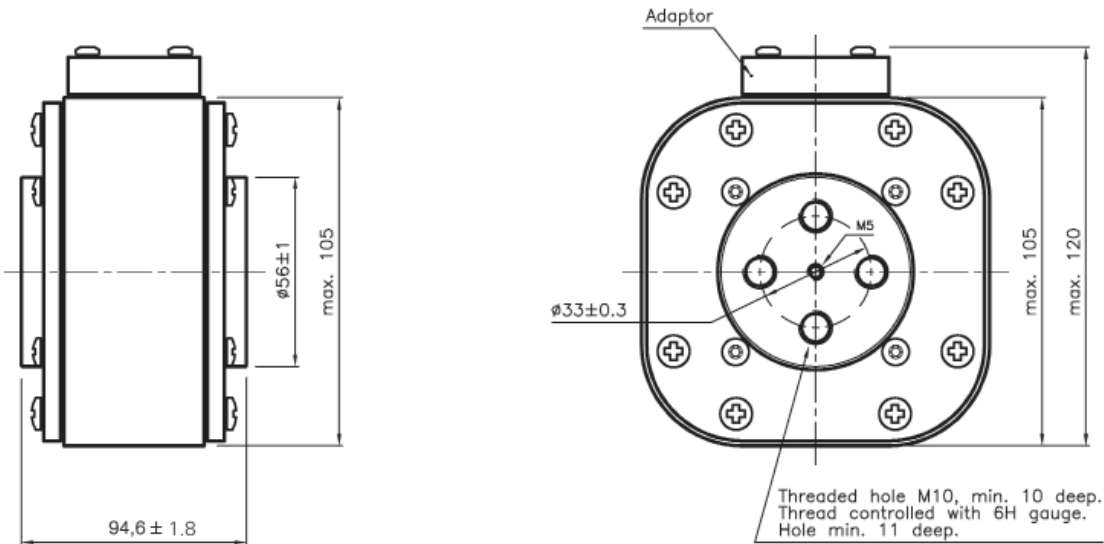
CE, Designed and tested to IEC 60269 Part 4



#### Catalogue numbers

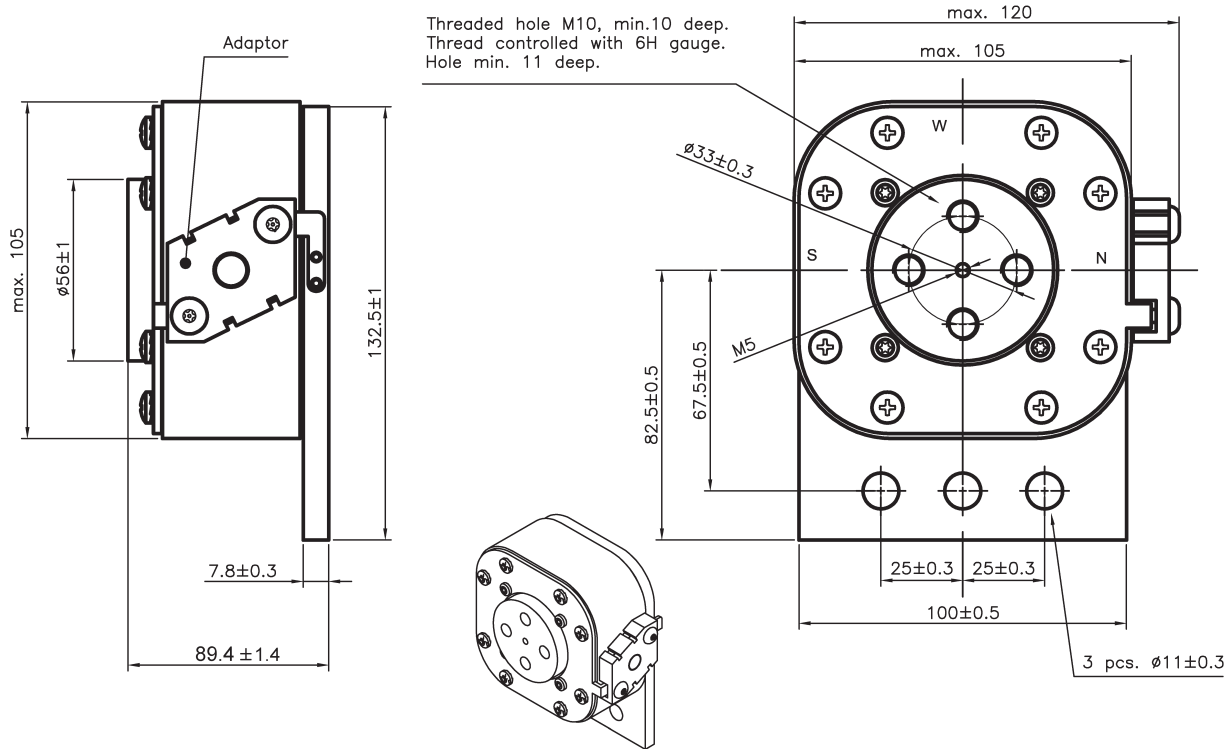
| Fuse link<br>body size | Rated voltage | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                            | Watts loss<br>(W) | Catalogue numbers           |                              |
|------------------------|---------------|-------------------------|---------------------------------------|----------------------------|-------------------|-----------------------------|------------------------------|
|                        |               |                         | Pre-arcing                            | Clearing<br>at 1000 V a.c. |                   | -BKN/95 Type K<br>indicator | -SBKN/90 Type K<br>indicator |
| 4                      | 1000 V a.c.   | 1000                    | 180,000                               | 1,100,000                  | 195               |                             | 170M7542                     |
|                        |               | 1100                    | 250,000                               | 1,500,000                  | 200               |                             | 170M7031                     |
|                        |               | 1500                    | 600,000                               | 3,600,000                  | 250               | 170M7636                    | 170M7548                     |
|                        |               | 1700                    | 850,000                               | 5,000,000                  | 260               | 170M7639                    | 170M7034                     |
|                        |               | 1800                    | 1,000,000                             | 5,950,000                  | 265               | 170M7661                    | 170M7053                     |
|                        |               | 2000                    | 1,450,000                             | 8,600,000                  | 270               | 170M7963                    | 170M7544                     |
|                        |               | 2200                    | 2,000,000                             | 12,000,000                 | 280               | 170M7090                    | 170M7035                     |
|                        |               | 2500                    | 3,000,000                             | 18,000,000                 | 295               | 170M7640                    | 170M7036                     |
|                        |               | 2700                    | 3,700,000                             | 22,000,000                 | 310               | 170M7658                    | 170M7037                     |
|                        |               | 3000                    | 4,700,000                             | 28,000,000                 | 380               | 170M7962                    | 170M7156                     |

#### Dimensions (mm) - 4BKN/95



**170M** - Size 4, Flush end contact, 1000 V a.c. (IEC), 1000 A to 3000 A

### Dimensions (mm) - 4SBKN/90

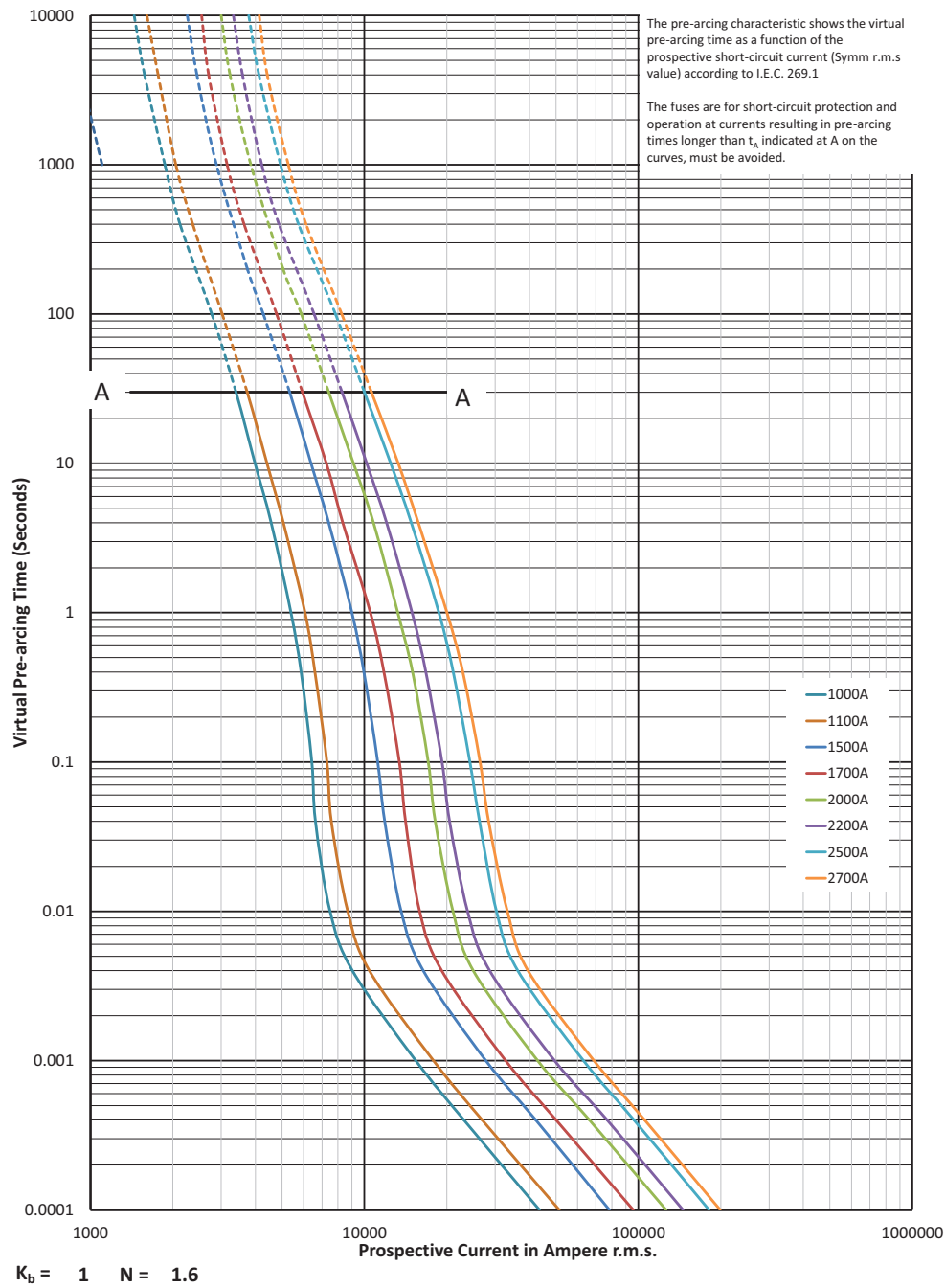


Data sheets: 170K8520 (1000 A to 1700 A, 2000 A to 2700 A, 170K8520-R (1800 and 3000 A)

Square body fuse links

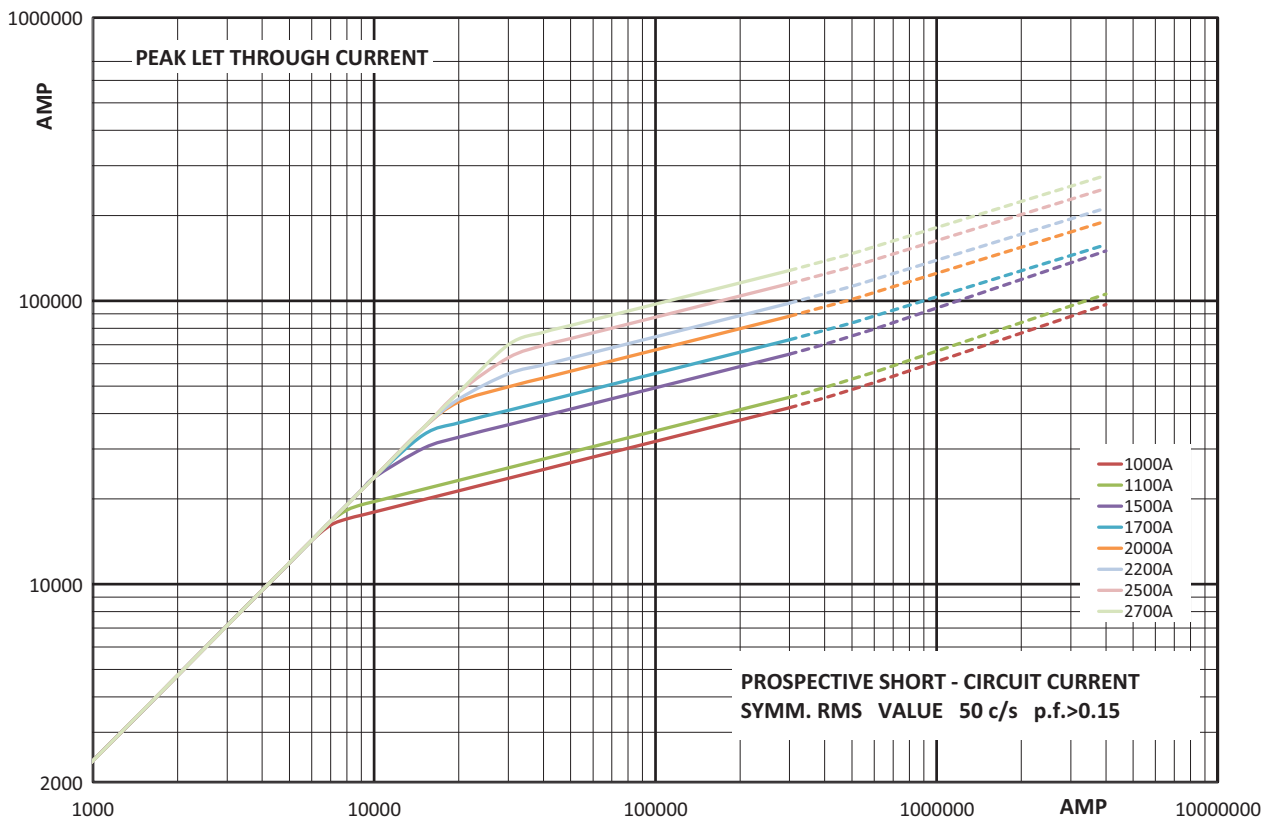
170M - Size 4, Flush end contact, 1000 V a.c. (IEC), 1000 A to 3000 A

Time-current curve - 1000 A to 2700 A



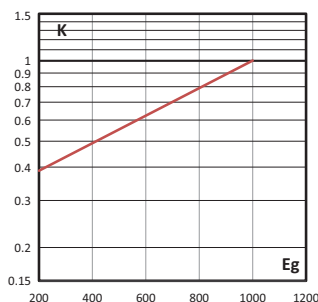
## 170M - Size 4, Flush end contact, 1000 V a.c. (IEC), 1000 A to 3000 A

### Cut-off curve - 1000 A to 2700 A



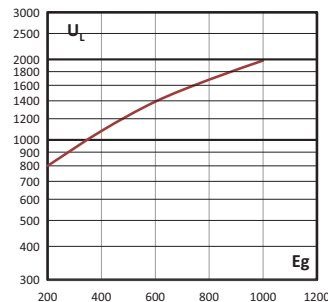
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



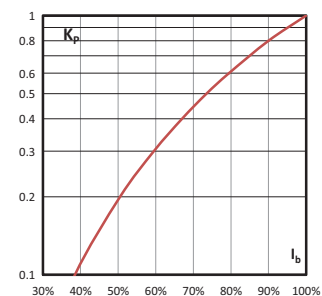
### Arc voltage

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 percent.



### Watts losses

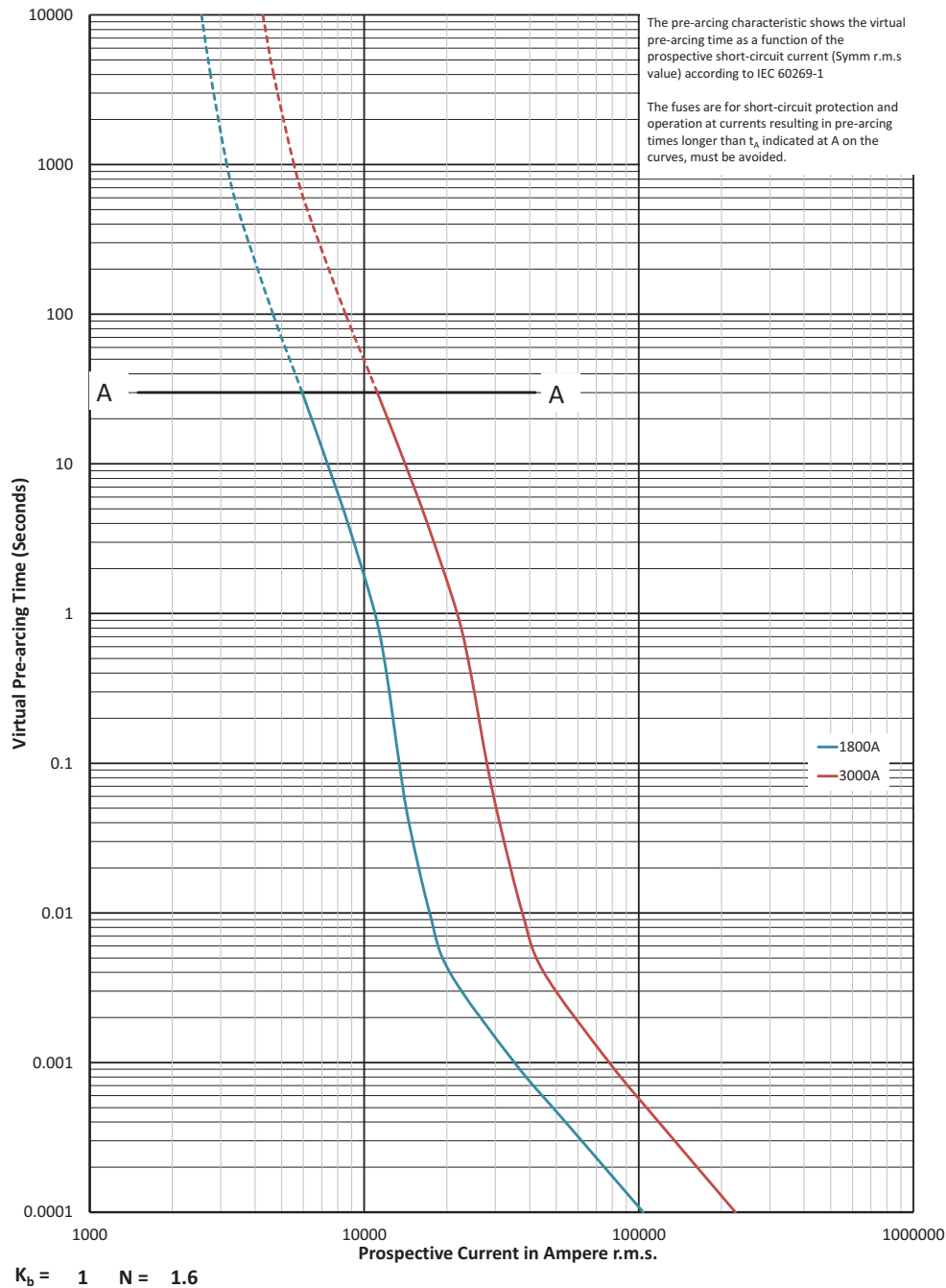
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor,  $K_p$ , is given as a function of the RMS load current,  $I_b$ , in percent of the rated current.



Square body fuse links

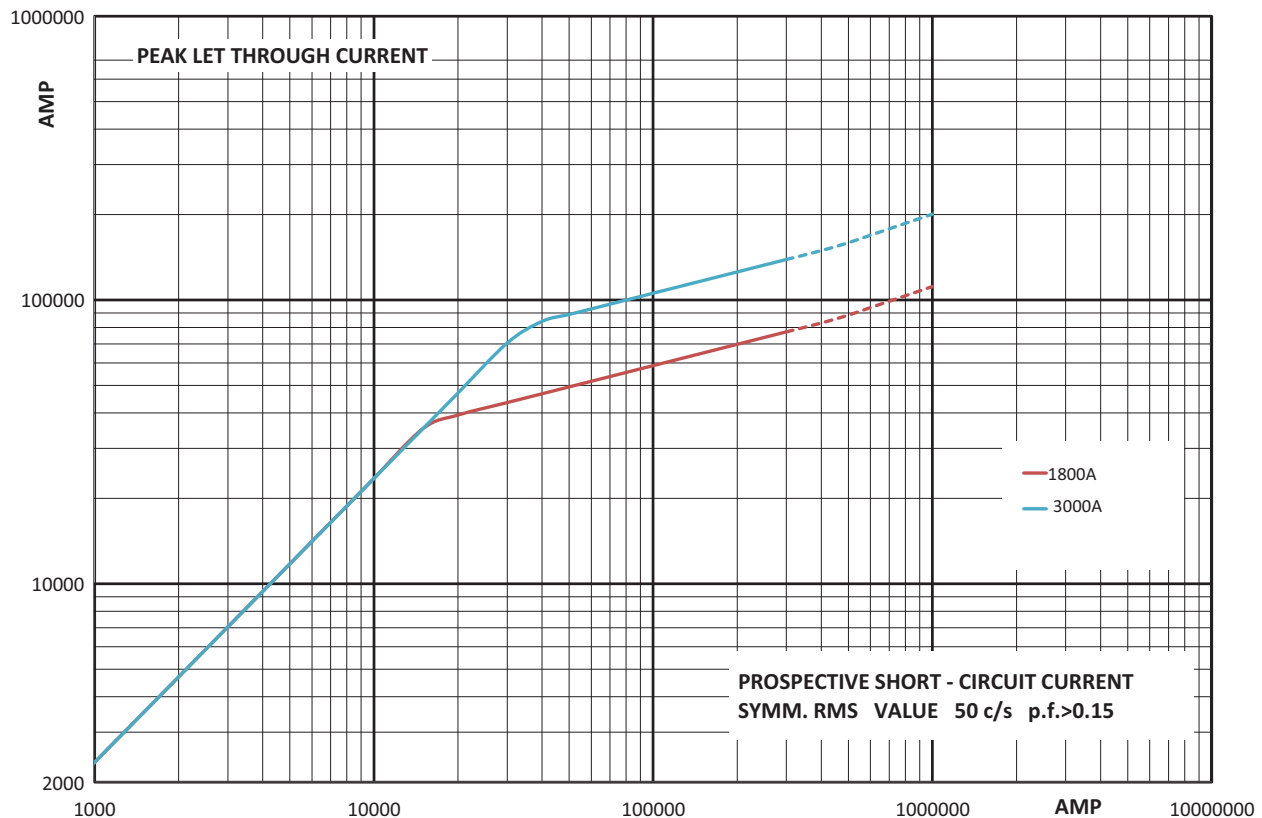
170M - Size 4, Flush end contact, 1000 V a.c. (IEC), 1000 A to 3000 A

Time-current curve - 1800 A and 3000 A



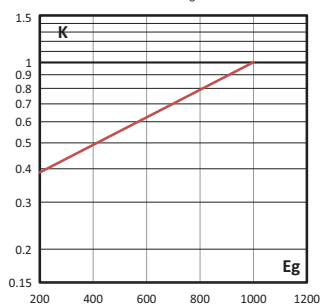
## 170M - Size 4, Flush end contact, 1000 V a.c. (IEC), 1000 A to 3000 A

### Cut-off curve - 1800 A and 3000 A



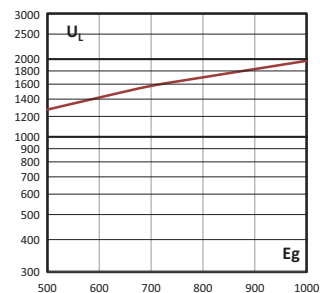
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



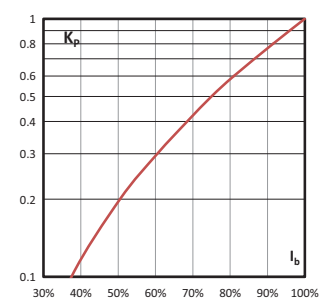
### Arc voltage

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 percent.



### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



# Square body fuse links

## 170M - Size 4, Flush end contact, 1250 V a.c. (IEC), 800 A to 2500 A

### Specifications

#### Description

Square body, flush end contact, high speed fuse links, for the protection of power rectifiers.

#### Technical data

- Rated voltage:
  - 1250 V a.c. (IEC)
  - 1200 V d.c. (UL)
- Rated current: 800 A to 2500 A
- Operating class: aR

#### Standards / Agency information

CE, Designed and tested to IEC 60269 Part 4, UL



### Catalogue numbers

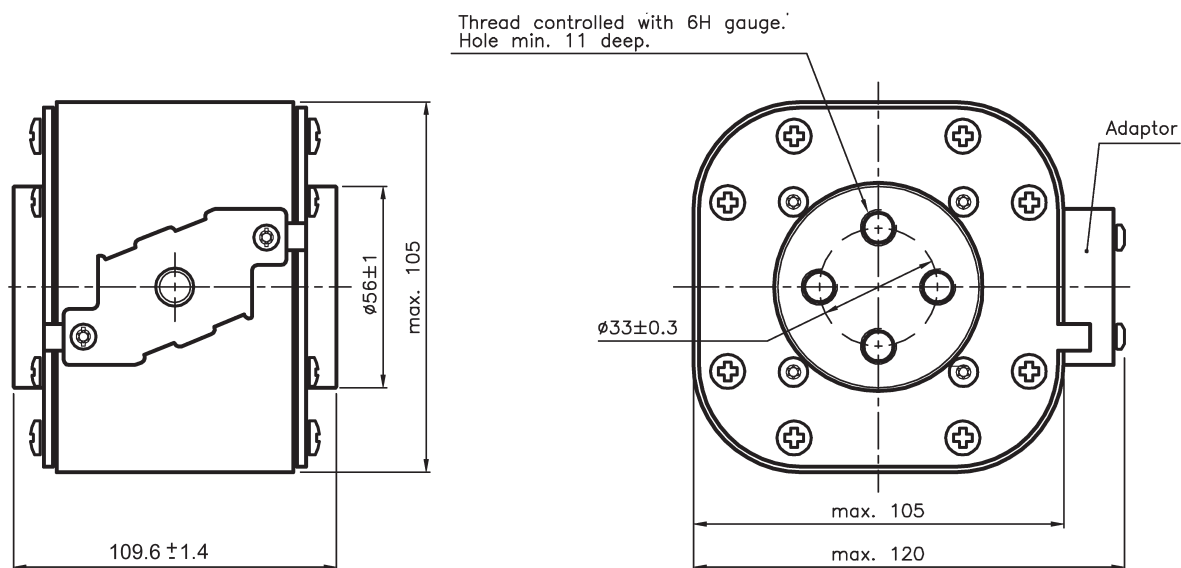
| Fuse link body size | AC            |                   | DC            |                   | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                         | Watts loss (W) | Catalogue numbers         |                            |
|---------------------|---------------|-------------------|---------------|-------------------|----------------------|---------------------------------------|-------------------------|----------------|---------------------------|----------------------------|
|                     | Rated voltage | Breaking capacity | Rated voltage | Breaking capacity |                      | Pre-arcing                            | Clearing at 1250 V a.c. |                | -BKN/110 Type K indicator | -SBKN/105 Type K indicator |
| 4                   | 1250 V a.c.   | 100 kA            | 1000 V d.c.   | 180 kA IR UL      | 800                  | 145,000                               | 905,000                 | 195            | 170M7802                  | -                          |
|                     |               |                   |               |                   | 1000                 | 275,000                               | 1,750,000               | 220            | 170M7803                  | -                          |
|                     |               |                   |               |                   | 1200                 | 495,000                               | 3,100,000               | 240            | 170M7804                  | -                          |
|                     |               |                   |               |                   | 1400                 | 800,000                               | 5,000,000               | 250            | 170M7217 <sup>1</sup>     | 170M7512                   |
|                     |               |                   |               |                   | 1500                 | 1,000,000                             | 6,200,000               | 260            | 170M7597                  | 170M7510                   |
|                     |               |                   |               |                   | 1700                 | 1,400,000                             | 8,700,000               | 275            | 170M7676                  | 170M7511                   |
|                     |               |                   | 1200 V d.c.   | 85 kA IR UL       | 1800                 | 1,700,000                             | 11,000,000              | 280            | 170M7532                  | 170M7976                   |
|                     |               |                   |               |                   | 2000                 | 2,300,000                             | 14,500,000              | 305            | 170M7633                  | 170M7513                   |
|                     |               |                   |               |                   | 2200                 | 3,100,000                             | 19,500,000              | 315            | 170M7592                  | 170M7546                   |
|                     |               |                   |               |                   | 2400                 | 4,000,000                             | 25,000,000              | 330            | 170M7107                  | 170M7516                   |
|                     |               |                   |               |                   | 2500                 | 4,500,000                             | 28,000,000              | 340            | 170M7595 <sup>2</sup>     | 170M7978                   |

<sup>1</sup> 170M7217 rated 850 V d.c./1250 V a.c. (IEC), 1000 V d.c. 180 kA IR (UL), 1200 V d.c. 85 kA IR (UL)

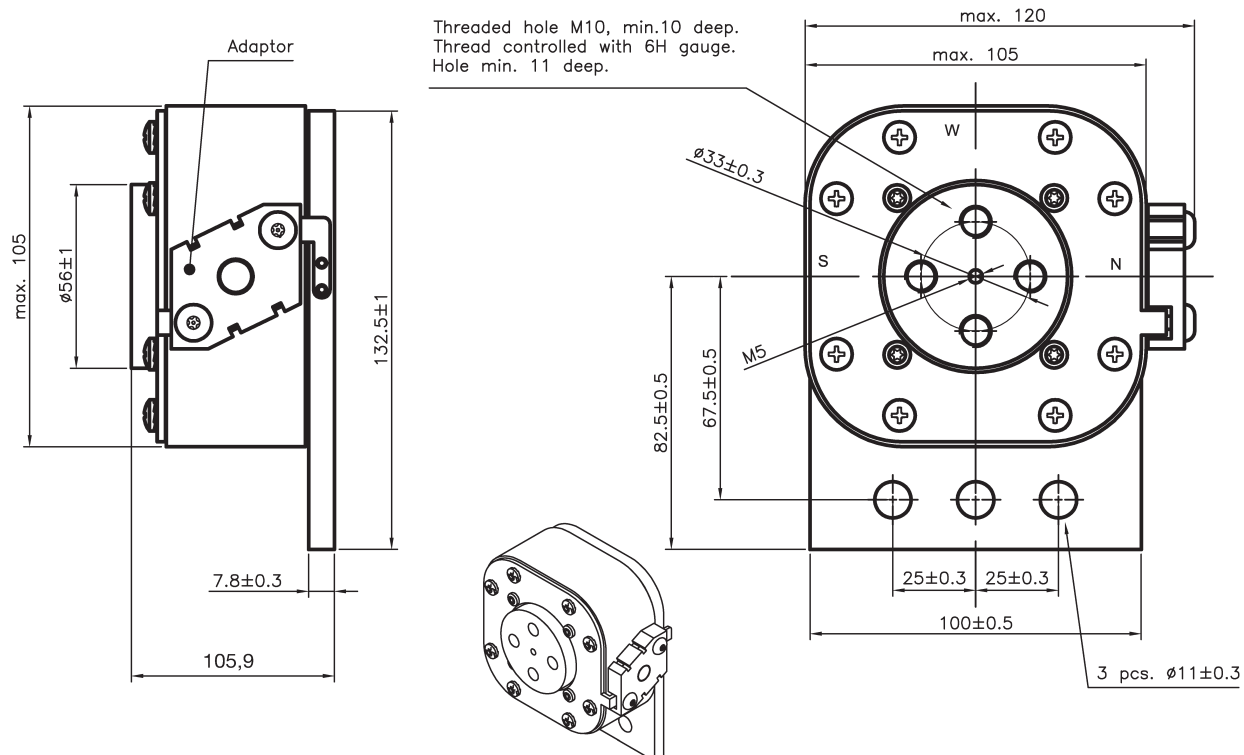
<sup>2</sup> 170M7595 rated at 1200V d.c. 85kA only

# **170M - Size 4, Flush end contact, 1250 V a.c. (IEC), 800 A to 2500 A**

## **Dimensions (mm) - 4BKN/110**



## **Dimensions (mm) - 4SBKN/105**

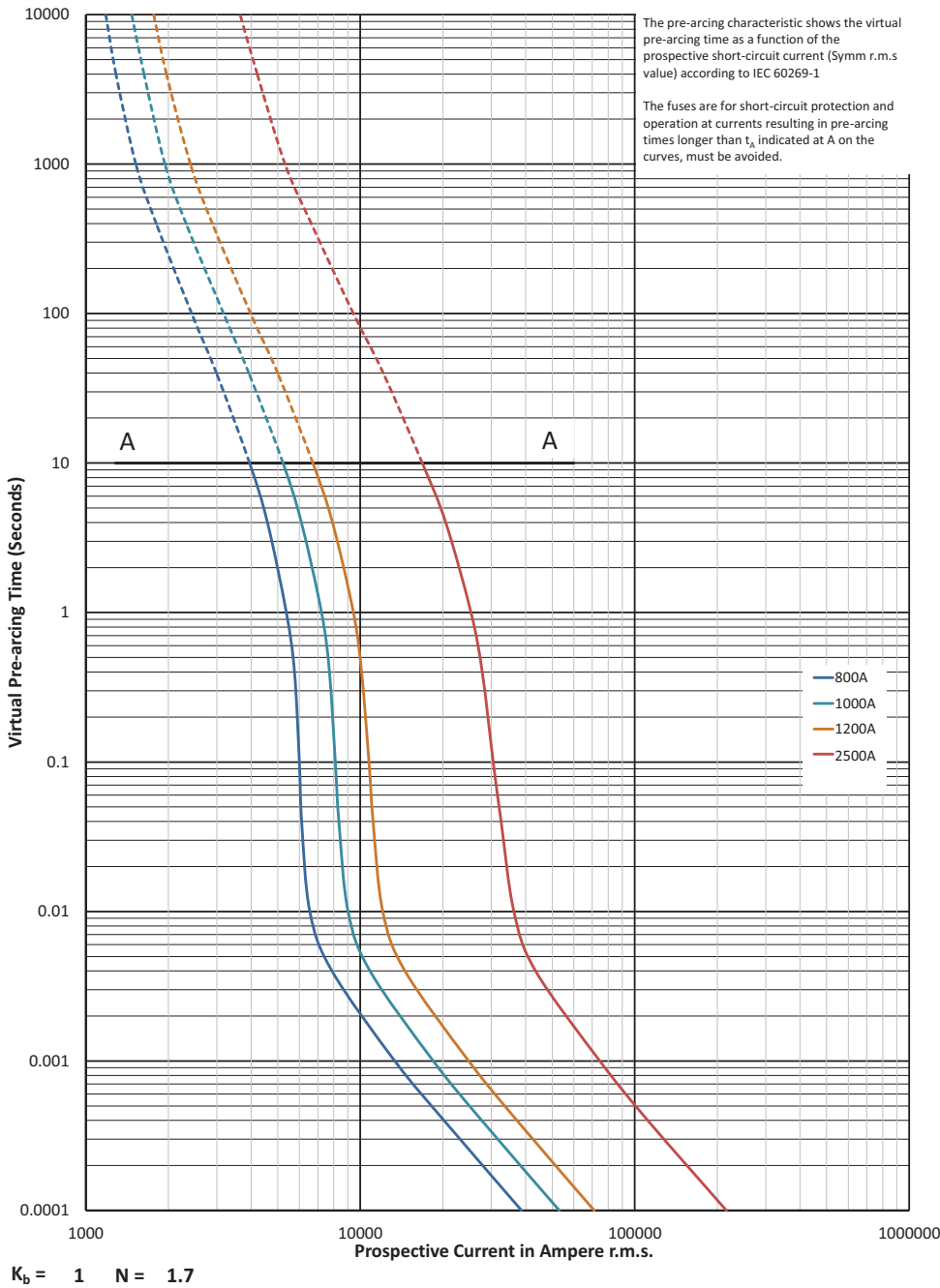




Square body fuse links

170M - Size 4, Flush end contact, 1250 V a.c. (IEC), 800 A to 2500 A

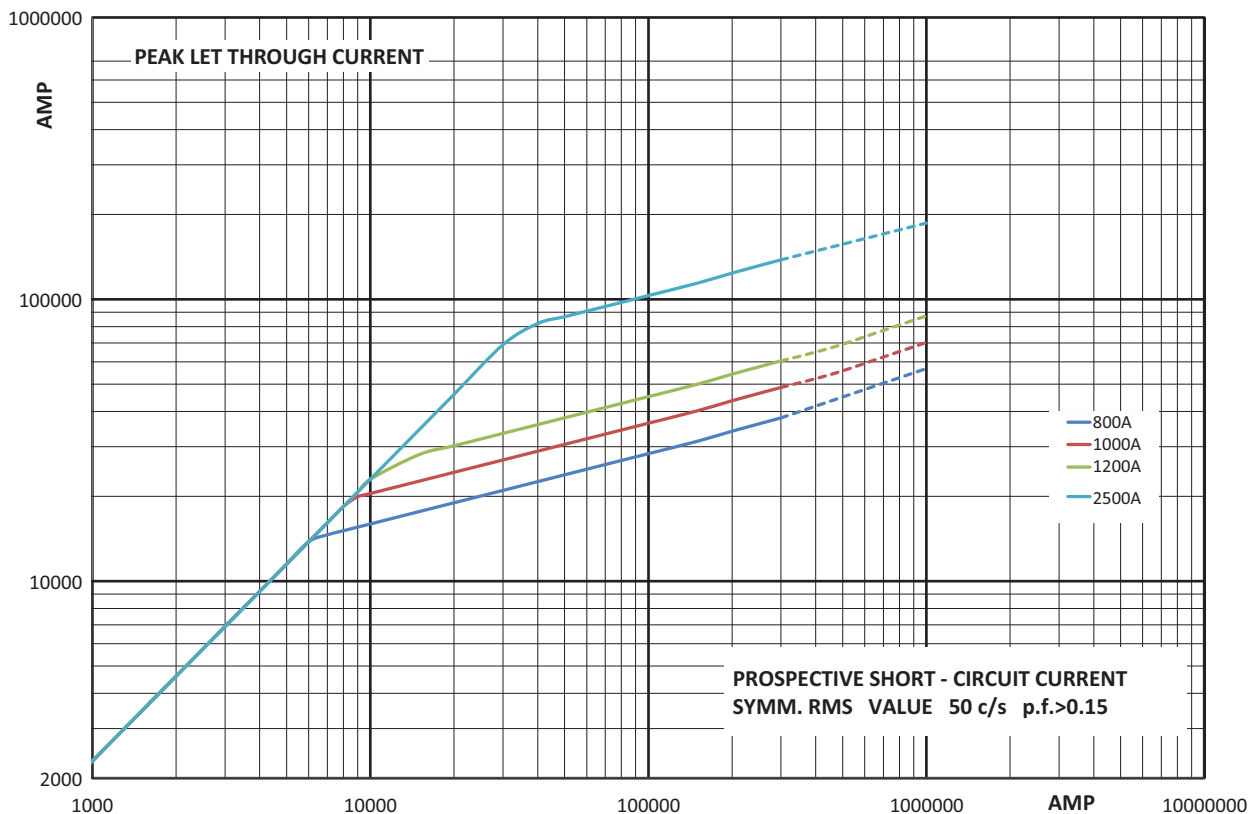
Time-current curve - 800 A to 2500 A



Data sheets: 170K6640 (1400 A to 2400 A), 170K6642 (800 A to 1200A and 2500 A)

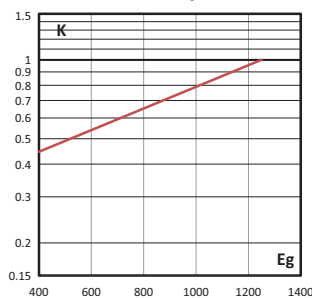
# 170M - Size 4, Flush end contact, 1250 V a.c. (IEC), 800 A to 2500 A

## Cut-off curve - 800 A to 2500 A



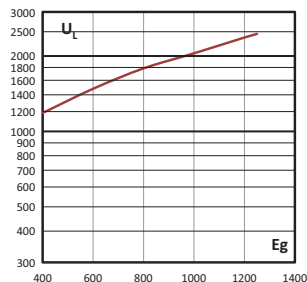
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



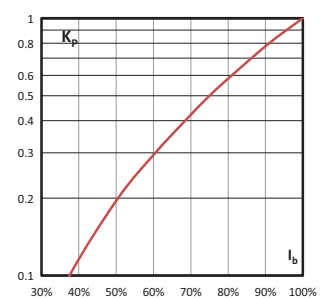
## Arc voltage

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 percent.



## Watts losses

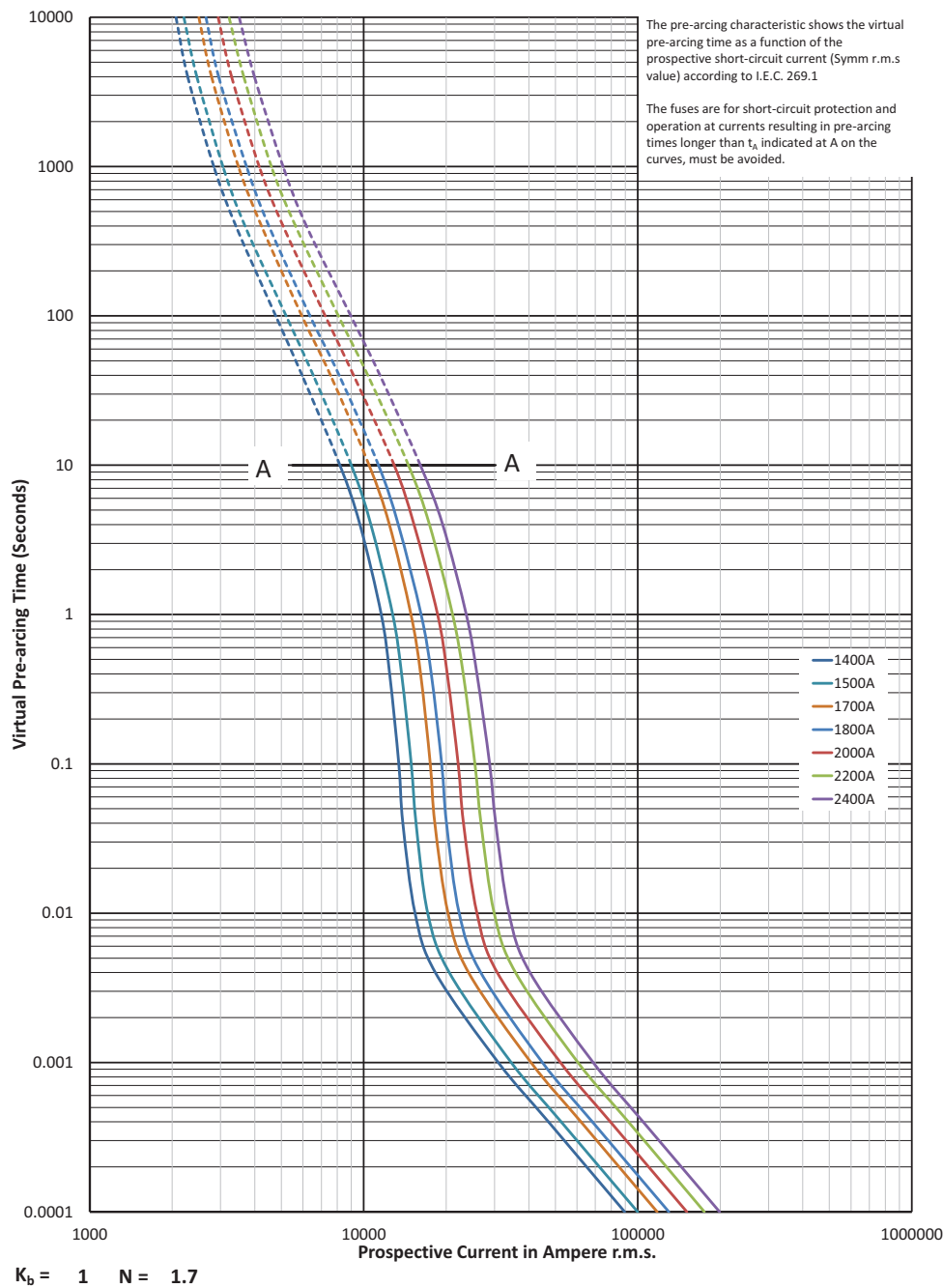
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor,  $K_p$ , is given as a function of the RMS load current,  $I_b$ , in percent of the rated current.



# Square body fuse links

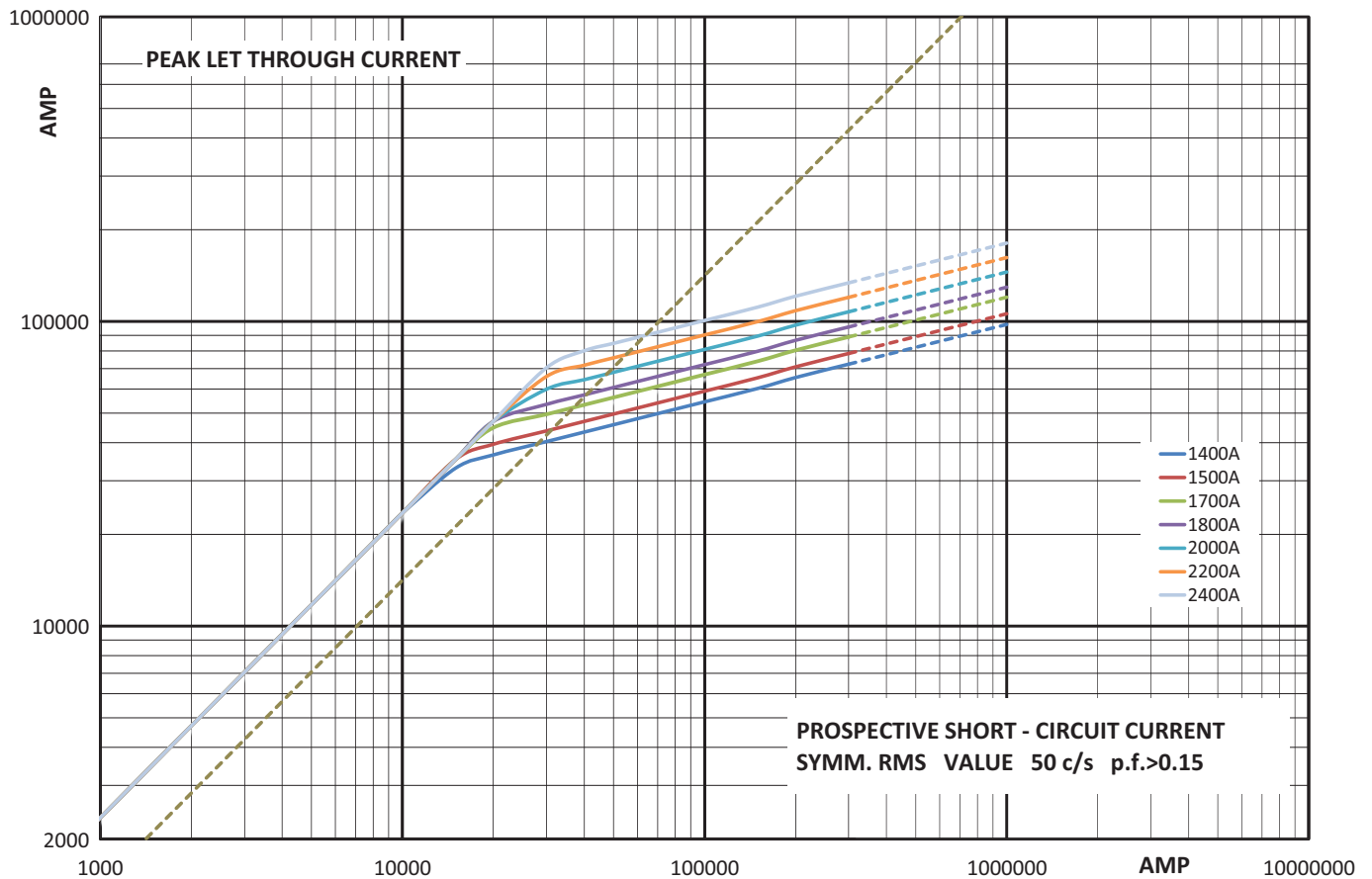
## 170M - Size 4, Flush end contact, 1250 V a.c. (IEC), 800 A to 2500 A

Time-current curve - 1400 A to 2400 A



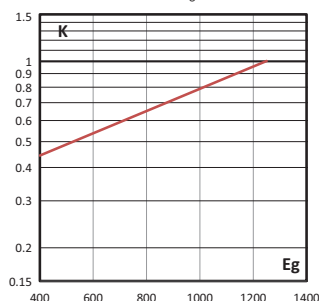
# 170M - Size 4, Flush end contact, 1250 V a.c. (IEC), 800 A to 2500 A

## Cut-off curve - 1400 A to 2400 A



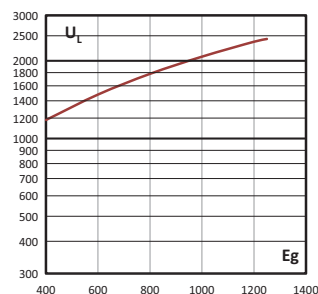
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



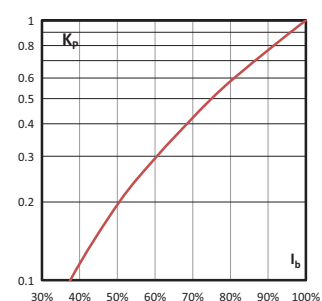
## Arc voltage

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 percent.



## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



# Square body fuse links

## 170M - Size 23, Flush end contact, 660 V a.c. (IEC), 1000 A to 4000 A

### Specifications

#### Description

Square body, flush end contact, high speed fuse links, for the protection of power rectifiers.

#### Technical data

- Rated voltage:
  - 660 V a.c. (IEC, 1000 A to 3000 A)
  - 600 V a.c. (IEC, 3500 A)
  - 550 V a.c. (IEC, 4000 A)
- Rated current: 1000 A to 4000 A
- Breaking capacity: 100 kA RMS Sym
- Operating class: aR

#### Standards / Agency information

CE, Designed and tested to IEC 60269 Part 4



#### Catalogue numbers

| Fuse link<br>body size | Rated<br>voltage    | Rated<br>current<br>(Amps) | I²t (A² Sec) |                           | Watts<br>loss<br>(W) | Catalogue numbers |                                |                                |          |                                |                                |
|------------------------|---------------------|----------------------------|--------------|---------------------------|----------------------|-------------------|--------------------------------|--------------------------------|----------|--------------------------------|--------------------------------|
|                        |                     |                            | Pre-arcing   | Clearing<br>at 660 V a.c. |                      | -BU/55            | -BKE/55<br>Type K<br>indicator | -BKN/55<br>Type K<br>indicator | -GU/55   | -GKE/55<br>Type K<br>Indicator | -GKN/55<br>Type K<br>Indicator |
| 23                     | 660 V a.c.<br>(IEC) | 1000                       | 79,000       | 530,000                   | 170                  | 170M6858          | 170M6898                       | 170M6878                       | 170M6918 | 170M6958                       | 170M6938                       |
|                        |                     | 1100                       | 95,000       | 635,000                   | 185                  | 170M6859          | 170M6899                       | 170M6879                       | 170M6919 | 170M6959                       | 170M6939                       |
|                        |                     | 1250                       | 155,000      | 1,050,000                 | 190                  | 170M6860          | 170M6900                       | 170M6880                       | 170M6920 | 170M6960                       | 170M6940                       |
|                        |                     | 1400                       | 200,000      | 1,350,000                 | 210                  | 170M6861          | 170M6901                       | 170M6881                       | 170M6921 | 170M6961                       | 170M6941                       |
|                        |                     | 1500                       | 240,000      | 1,650,000                 | 215                  | 170M6862          | 170M6902                       | 170M6882                       | 170M6922 | 170M6962                       | 170M6942                       |
|                        |                     | 1600                       | 315,000      | 2,150,000                 | 220                  | 170M6863          | 170M6903                       | 170M6883                       | 170M6923 | 170M6963                       | 170M6943                       |
|                        |                     | 1800                       | 450,000      | 3,050,000                 | 230                  | 170M6864          | 170M6904                       | 170M6884                       | 170M6924 | 170M6964                       | 170M6944                       |
|                        |                     | 2000                       | 625,000      | 4,200,000                 | 240                  | 170M6865          | 170M6905                       | 170M6885                       | 170M6925 | 170M6965                       | 170M6945                       |
|                        |                     | 2200                       | 805,000      | 5,400,000                 | 255                  | 170M6866          | 170M6906                       | 170M6886                       | 170M6926 | 170M6966                       | 170M6946                       |
|                        |                     | 2500                       | 1,250,000    | 8,350,000                 | 265                  | 170M6867          | 170M6907                       | 170M6887                       | 170M6927 | 170M6967                       | 170M6947                       |
|                        |                     | 3000                       | 2,250,000    | 15,500,000                | 285                  | 170M6868          | 170M6908                       | 170M6888                       | 170M6928 | 170M6968                       | 170M6948                       |
|                        | 600 V a.c.<br>(IEC) | 3500                       | 3,450,000    | 21,000,000 <sup>1</sup>   | 315                  | 170M6869          | 170M6909                       | 170M6889                       | 170M6929 | 170M6969                       | 170M6949                       |
|                        | 550 V a.c.<br>(IEC) | 4000                       | 5,000,000    | 27,500,000 <sup>2</sup>   | 340                  | 170M6870          | 170M6910                       | 170M6890                       | 170M6930 | 170M6970                       | 170M6950                       |

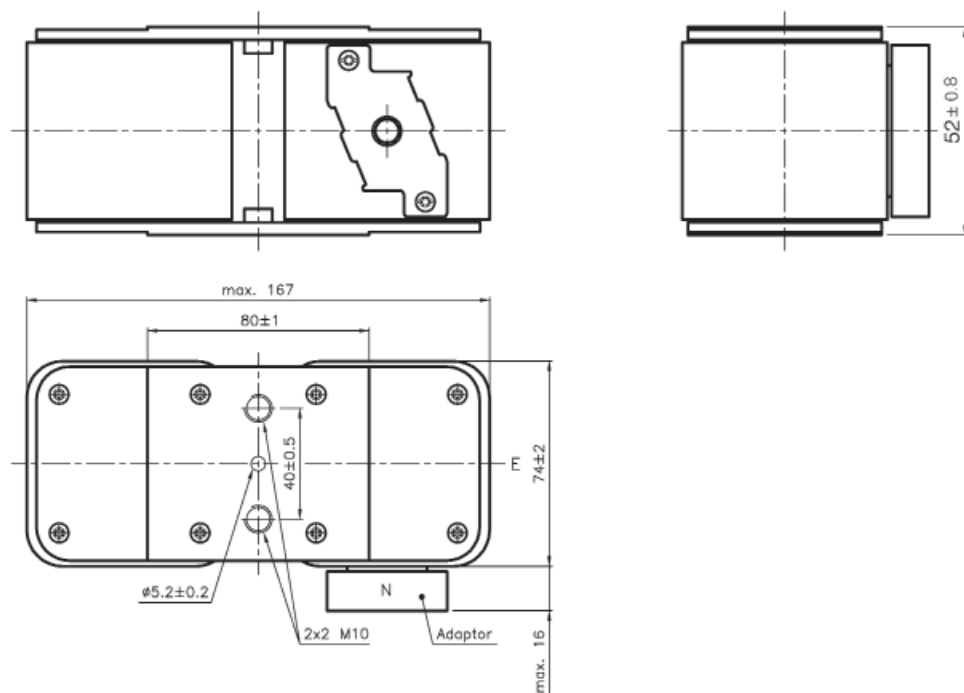
<sup>1</sup> Clearing at 600 V a.c.

<sup>2</sup> Clearing at 550 V a.c.

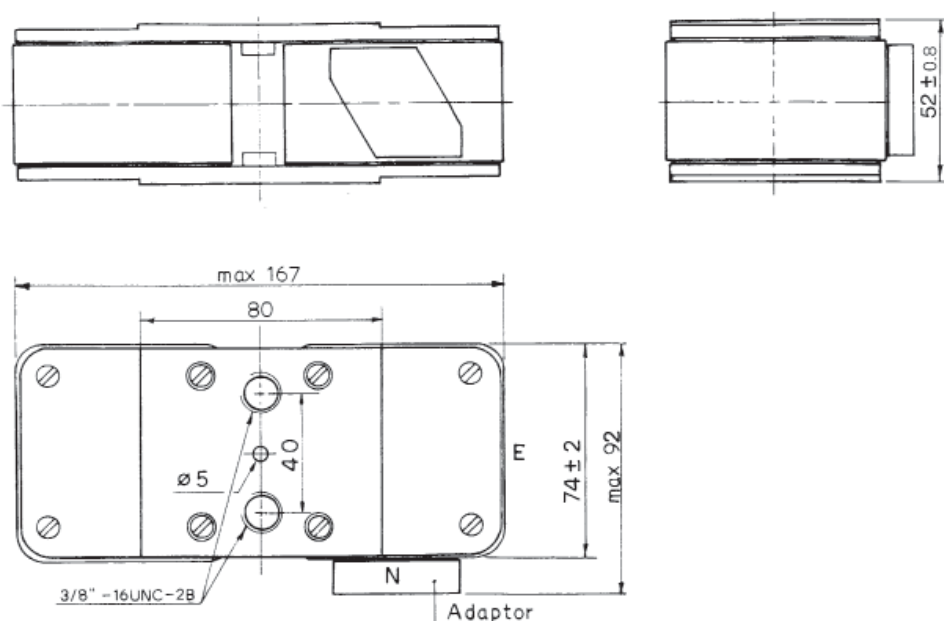
When using these fuse links, please consult Eaton for application assistance at [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com).

**170M** - Size 23, Flush end contact, 660 V a.c. (IEC), 1000 A to 4000 A

### Dimensions (mm) -BU/55, -BKE/55 and -BKN/55



### Dimensions (mm) -GU/55, -GKE/55 and -GKN/55



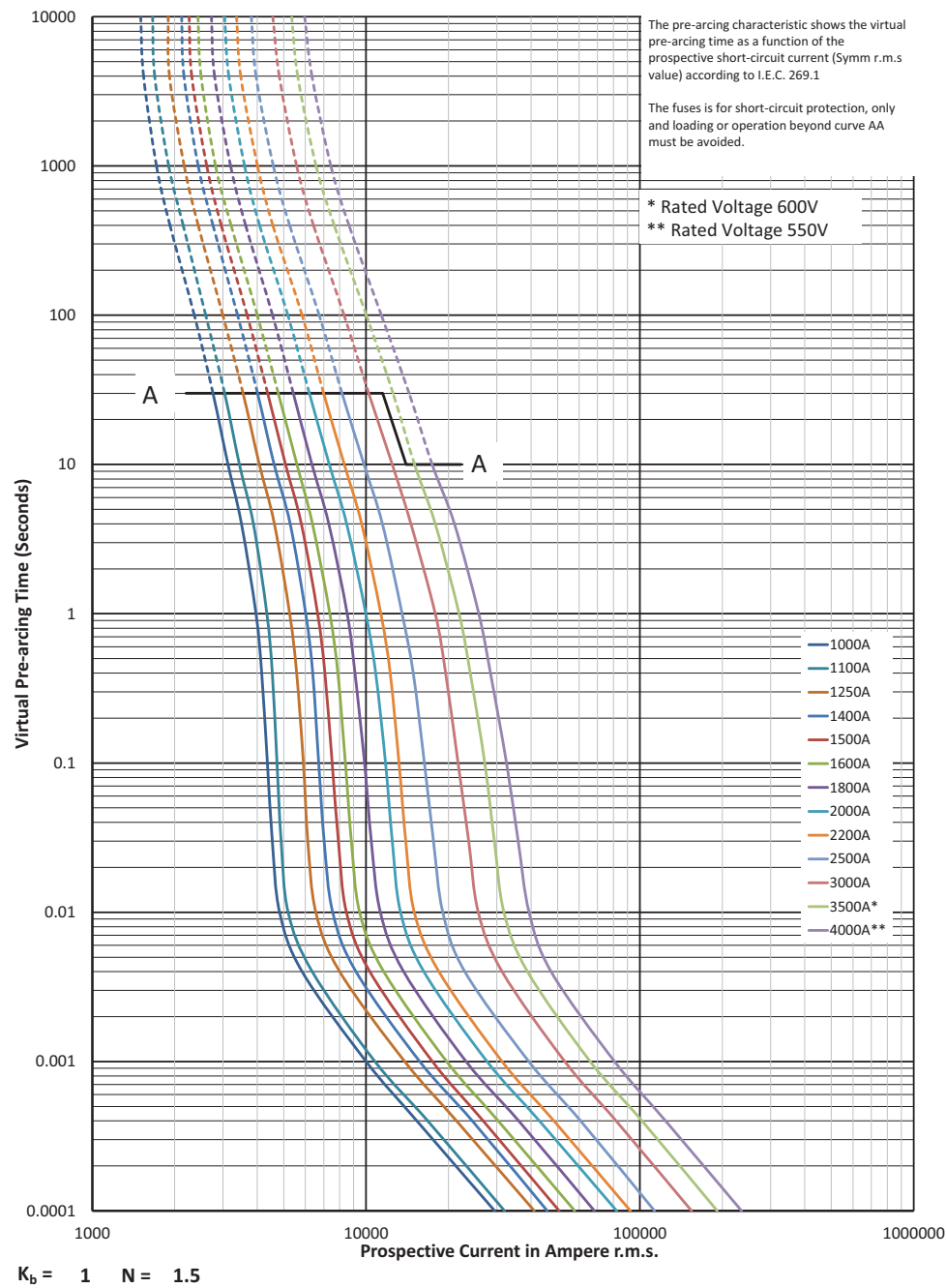
**Type -GU/55, -GKE/55, -GKN/55**

When using these fuse links, please consult Eaton for application assistance at [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com).

Square body fuse links

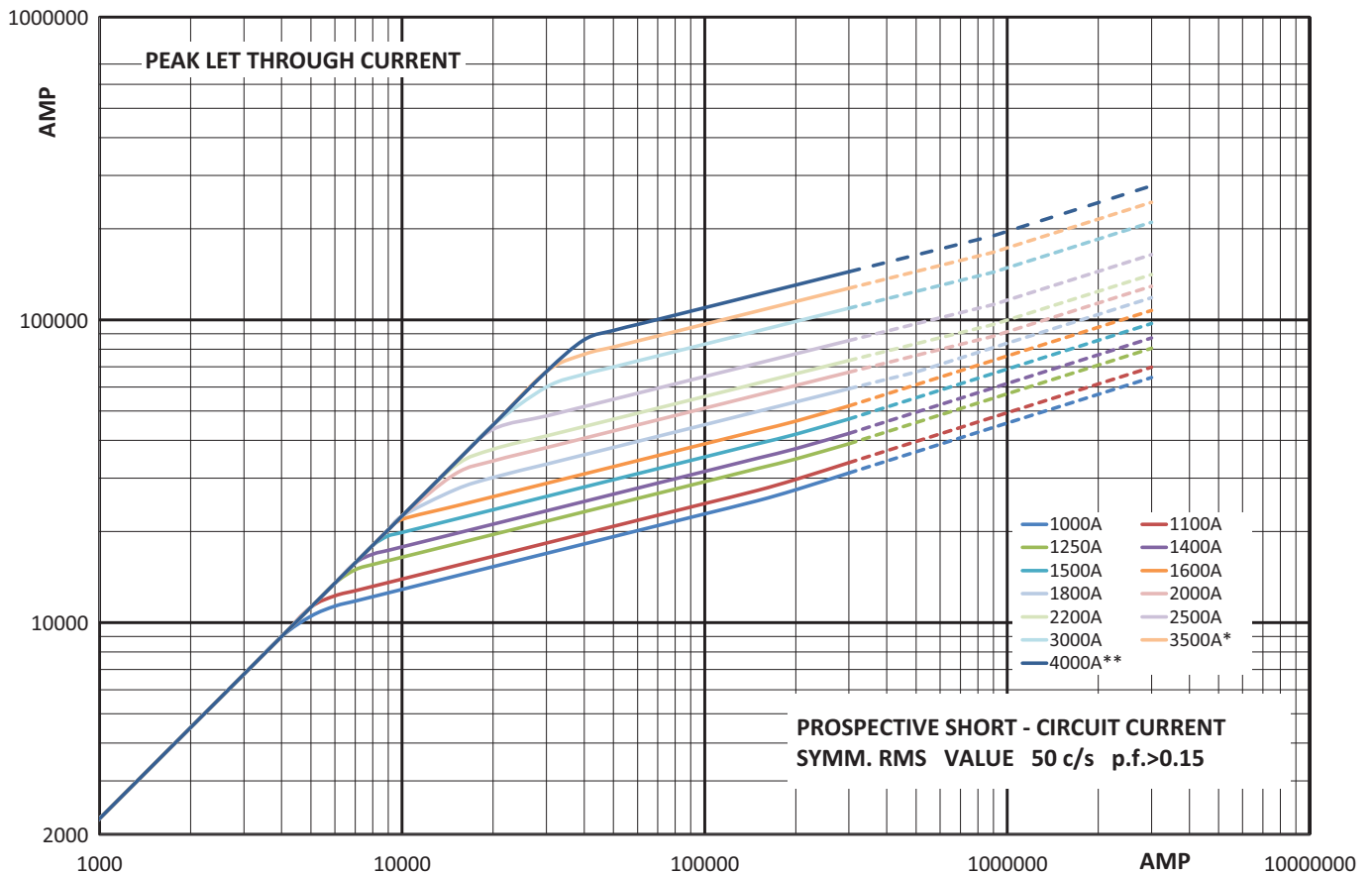
170M - Size 23, Flush end contact, 660 V a.c. (IEC), 1000 A to 4000 A

Time-current curve - 1000 A to 4000 A



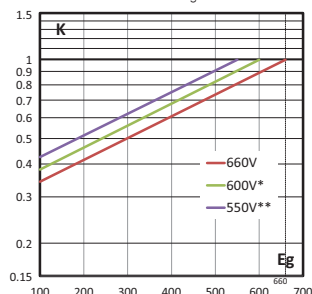
# 170M - Size 23, Flush end contact, 660 V a.c. (IEC), 1000 A to 4000 A

## Cut-off curve - 1000 A to 4000 A



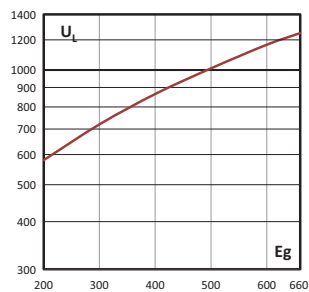
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



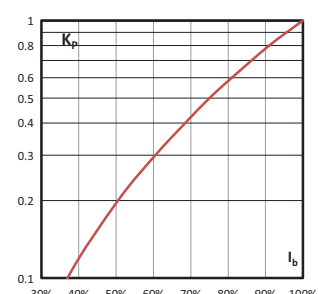
## Arc voltage

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 percent.



## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.





Square body fuse links

170M - Size 23, Flush end contact, 1250 V a.c. (IEC), 630 A to 2800 A

Specifications

Description

Square body, flush end contact, high speed fuse links, for the protection of power rectifiers.

Technical data

- Rated voltage:
  - 1250 V a.c. (IEC 630 A to 2200 A)
  - 1100 V a.c. (IEC 2500 A and 2800 A)
- Rated current: 630 A to 2800 A
- Breaking capacity: 125kA RMS Sym
- Operating class: aR



Standards / Agency information

CE, Designed and tested to IEC 60269 Part 4

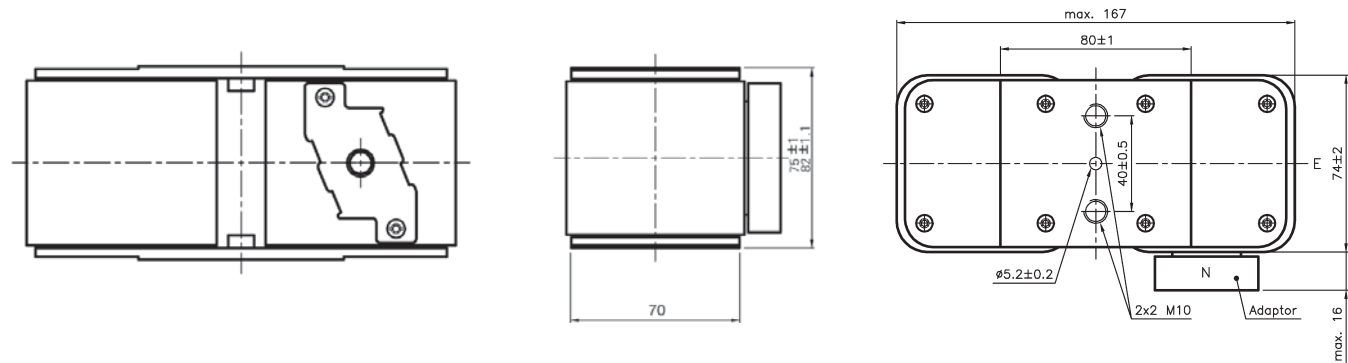
Catalogue numbers

| Fuse link<br>body size | Rated<br>voltage     | Rated<br>current<br>(Amps) | I²t (A² Sec) |                            | Watts<br>loss<br>(W) | Catalogue numbers             |                                |                                |                               |                                |                                |
|------------------------|----------------------|----------------------------|--------------|----------------------------|----------------------|-------------------------------|--------------------------------|--------------------------------|-------------------------------|--------------------------------|--------------------------------|
|                        |                      |                            | Pre-arcing   | Clearing<br>at 1250 V a.c. |                      | -BU/75<br>Visual<br>indicator | -BKE/75<br>Type K<br>indicator | -BKN/75<br>Type K<br>indicator | -BU/80<br>Visual<br>indicator | -BKE/80<br>Type K<br>Indicator | -BKN/80<br>Type K<br>Indicator |
| 23                     | 1250 V a.c.<br>(IEC) | 630                        | 38,000       | 310,000                    | 170                  | 170M6775                      | 170M6795                       | 170M6785                       |                               |                                |                                |
|                        |                      | 700                        | 54,000       | 440,000                    | 180                  | 170M6776                      | 170M6796                       | 170M6786                       |                               |                                |                                |
|                        |                      | 800                        | 78,000       | 640,000                    | 190                  | 170M6777                      | 170M6797                       | 170M6787                       |                               |                                |                                |
|                        |                      | 900                        | 120,000      | 980,000                    | 200                  | 170M6805                      | 170M6807                       | 170M6806                       |                               |                                |                                |
|                        |                      | 1000                       | 155,000      | 1,250,000                  | 210                  | 170M6778                      | 170M6798                       | 170M6788                       |                               |                                |                                |
|                        |                      | 1100                       | 220,000      | 1,750,000                  | 220                  | 170M6779                      | 170M6799                       | 170M6789 <sup>3</sup>          |                               |                                |                                |
|                        |                      | 1250                       | 330,000      | 2,700,000                  | 230                  | 170M6780                      | 170M6800                       | 170M6790                       |                               |                                |                                |
|                        |                      | 1300                       | 460,000      | 3,800,000                  | 240                  | 170M6781                      | 170M6801                       | 170M6791                       |                               |                                |                                |
|                        |                      | 1600                       | 820,000      | 5,200,000                  | 250                  | 170M6782                      | 170M6802                       | 170M6792                       |                               |                                |                                |
|                        |                      | 1800                       | 1,200,000    | 7,600,000                  | 260                  | 170M6783 <sup>2</sup>         | 170M6803 <sup>2</sup>          | 170M6793 <sup>2</sup>          |                               |                                |                                |
|                        |                      | 2000                       | 1,800,000    | 11,000,000                 | 270                  |                               |                                |                                | 170M6784                      | 170M6804                       | 170M6794                       |
|                        |                      | 2100                       | 2,300,000    | 14,500,000                 | 280                  |                               |                                |                                | 170M6815                      | 170M6833                       | 170M6827                       |
|                        | 1100 V a.c.<br>(IEC) | 2500                       | 3,200,000    | 16,000,000 <sup>1</sup>    | 290                  |                               |                                |                                | 170M6816                      | 170M6834                       | 170M6828                       |
|                        |                      | 2800                       | 5,000,000    | 24,000,000 <sup>1</sup>    | 300                  |                               |                                |                                | 170M6817                      | 170M6835                       | 170M6829                       |

<sup>1</sup> Clearing at 1000 V      <sup>2</sup> Rated voltage 900 V d.c. 10XIn 90 kA      <sup>3</sup>1000 V d.c. UL 50 kA IR

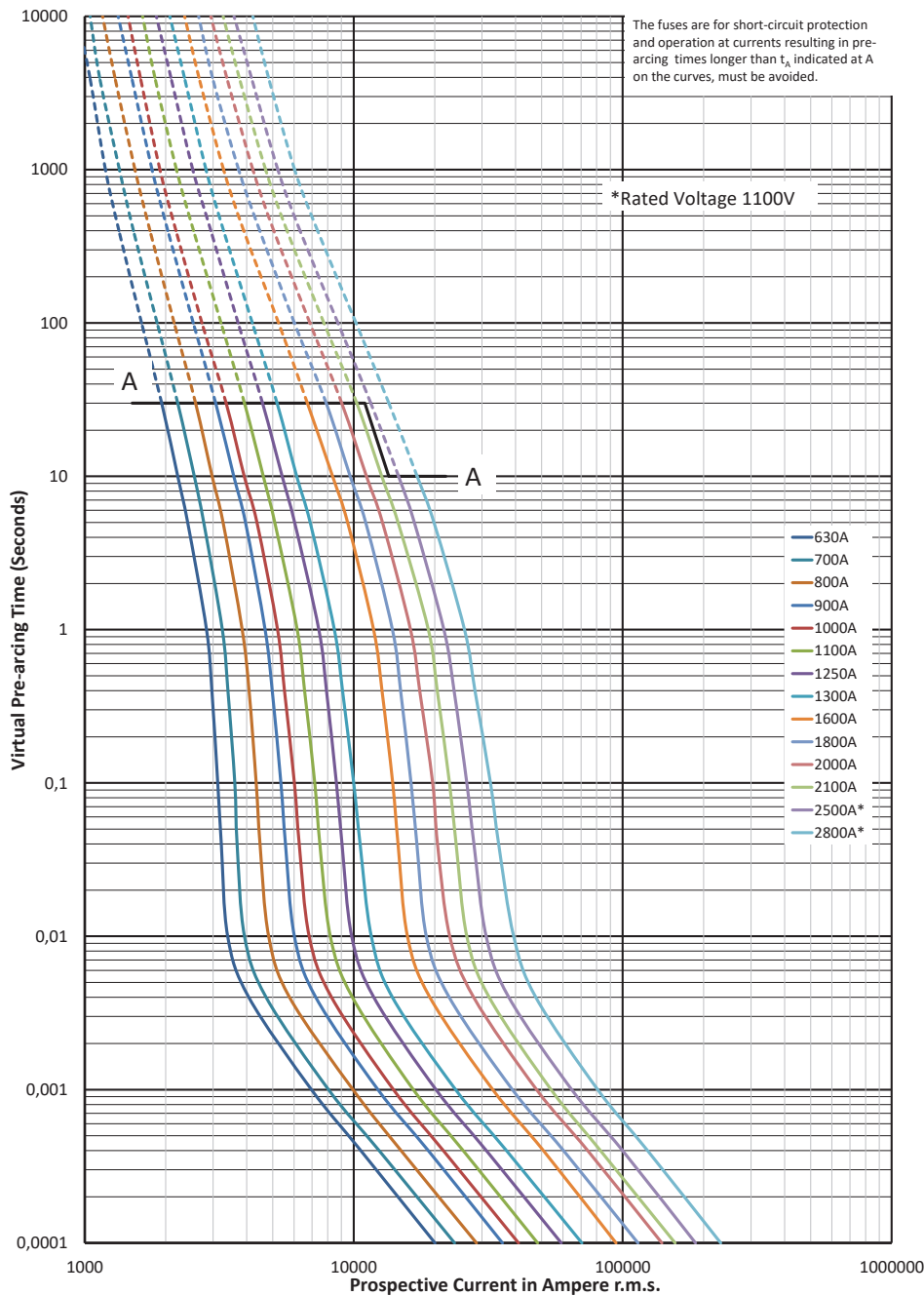
When using these fuse links, please consult Eaton for application assistance at [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com).

Dimensions (mm)



# 170M - Size 23, Flush end contact, 1250 V a.c. (IEC), 630 A to 2800 A

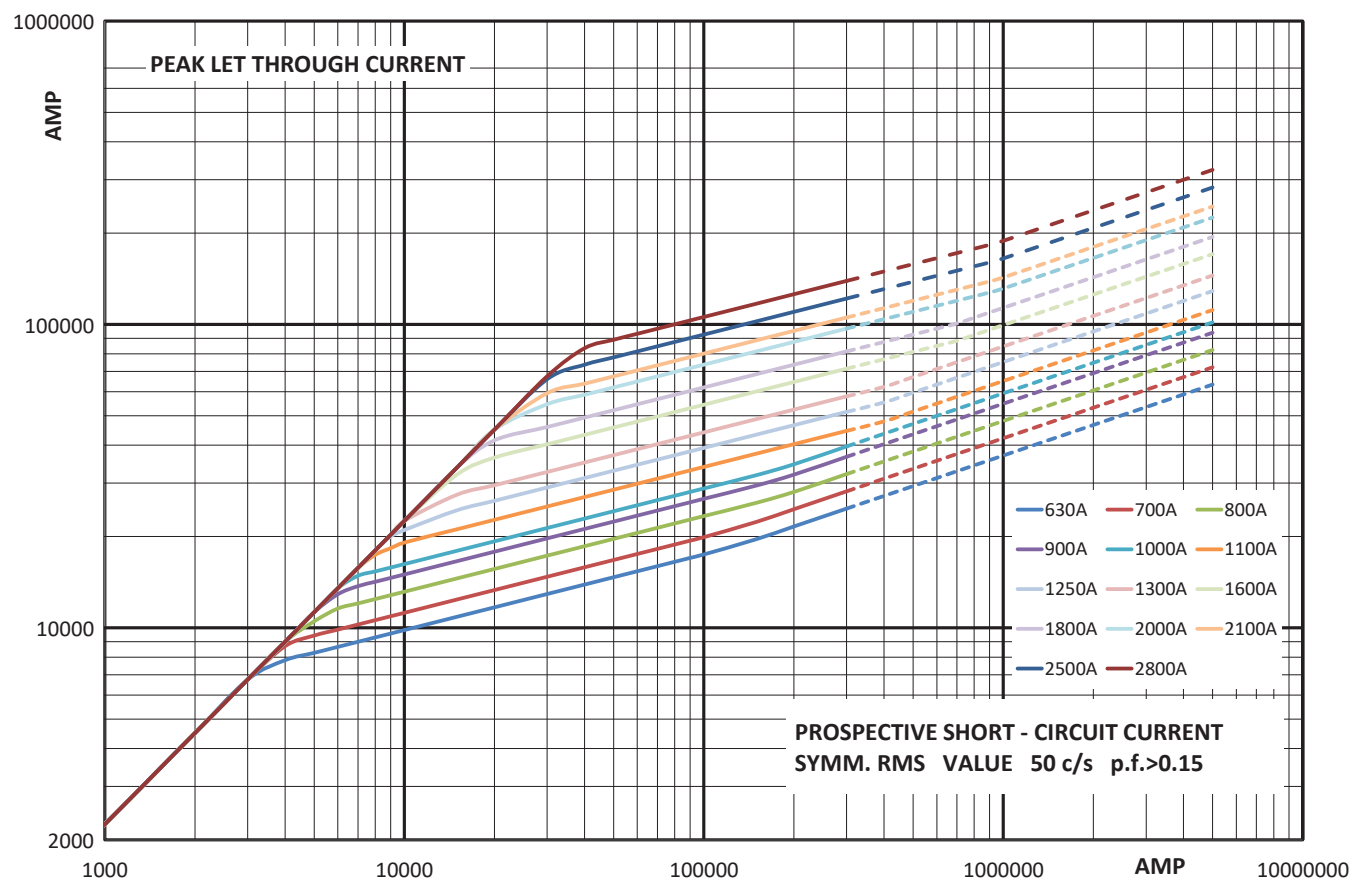
Time-current curve - 630 A to 2800 A



Square body fuse links

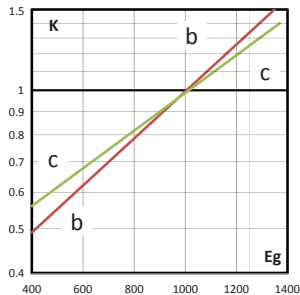
170M - Size 23, Flush end contact, 1250 V a.c. (IEC), 630 A to 2800 A

Cut-off curve - 630 A to 2800 A



Total clearing  $I^2t$

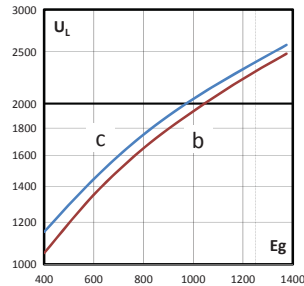
The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing  $I^2t$  is found by multiplying by correction factor,  $K$ , given as a function of applied working voltage,  $E_g$ , (RMS).



B: fuses  $\leq 1400$  A  
C: fuses  $\geq 1600$  A

Arc voltage

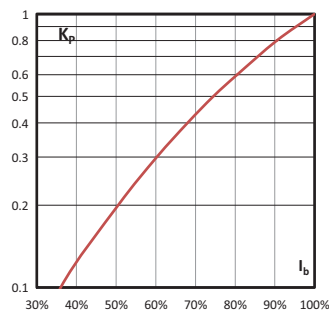
This curve gives the peak arc voltage,  $U_L$ , which may appear across the fuse during its operation as a function of the applied working voltage,  $E_g$ , (RMS) at a power factor of 15 percent.



B: fuses  $\leq 1400$  A  
C: fuses  $\geq 1600$  A

Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



**170M** - Size 24, Flush end contact, 690 V a.c. (IEC), 2000 A to 6500 A

## Specifications

### Description

Square body, flush end contact, high speed fuse links, for the protection of power rectifiers.



## Technical data

- Rated voltage: 690 V a.c. (IEC 2000 A to 6500 A)
- Rated current: 2000 A to 6500 A
- Breaking capacity: 200 kA RMS Sym
- Operating class: aR

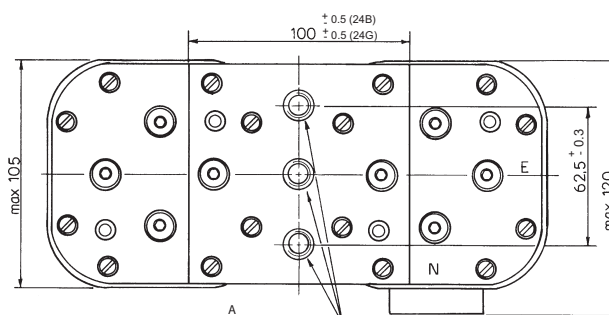
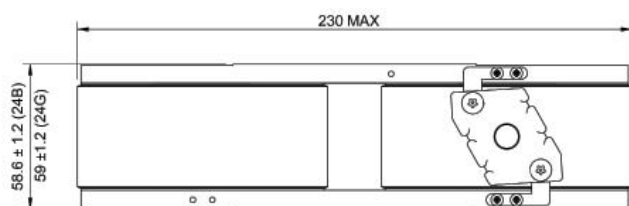
## Standards / Agency information

CE, Designed and tested to IEC 60269 Part 4

## Catalogue numbers

| Fuse link<br>body size | Rated voltage       | Rated<br>current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                           | Watts loss<br>(W) | Catalogue numbers           |                             |                             |                             |
|------------------------|---------------------|----------------------------|---------------------------------------|---------------------------|-------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
|                        |                     |                            | Pre-arcing                            | Clearing<br>at 660 V a.c. |                   | -BU/60 Without<br>indicator | -BKN/60 Type K<br>indicator | -GU/60 Without<br>indicator | -GKN/60 Type K<br>indicator |
| 24                     | 690 V a.c.<br>(IEC) | 2000                       | 340,000                               | 2,300,000                 | 340               | 170M7138                    | 170M7158                    | 170M7198                    | 170M7218                    |
|                        |                     | 2500                       | 650,000                               | 4,350,000                 | 390               | 170M7139                    | 170M7159                    | 170M7199                    | 170M7219                    |
|                        |                     | 3000                       | 1,100,000                             | 7,300,000                 | 430               | 170M7140                    | 170M7160                    | 170M7200                    | 170M7220                    |
|                        |                     | 3500                       | 1,800,000                             | 12,000,000                | 460               | 170M7141                    | 170M7161                    | 170M7201                    | 170M7221                    |
|                        |                     | 4000                       | 2,700,000                             | 18,000,000                | 490               | 170M7142                    | 170M7162                    | 170M7202                    | 170M7222                    |
|                        |                     | 4500                       | 3,800,000                             | 25,500,000                | 520               | 170M7143                    | 170M7163                    | 170M7203                    | 170M7223                    |
|                        |                     | 5000                       | 5,450,000                             | 36,500,000                | 540               | 170M7144                    | 170M7164                    | 170M7204                    | 170M7224                    |
|                        |                     | 5500                       | 7,400,000                             | 49,500,000                | 560               | 170M7145                    | 170M7165                    | 170M7205                    | 170M7225                    |
|                        |                     | 6000                       | 9,600,000                             | 64,000,000                | 580               | 170M7146                    | 170M7166                    | 170M7206                    | 170M7226                    |
|                        |                     | 6500                       | 12,500,000                            | 83,000,000                | 600               | 170M7147                    | 170M7167                    | 170M7207                    | 170M7227                    |

### Dimensions (mm)



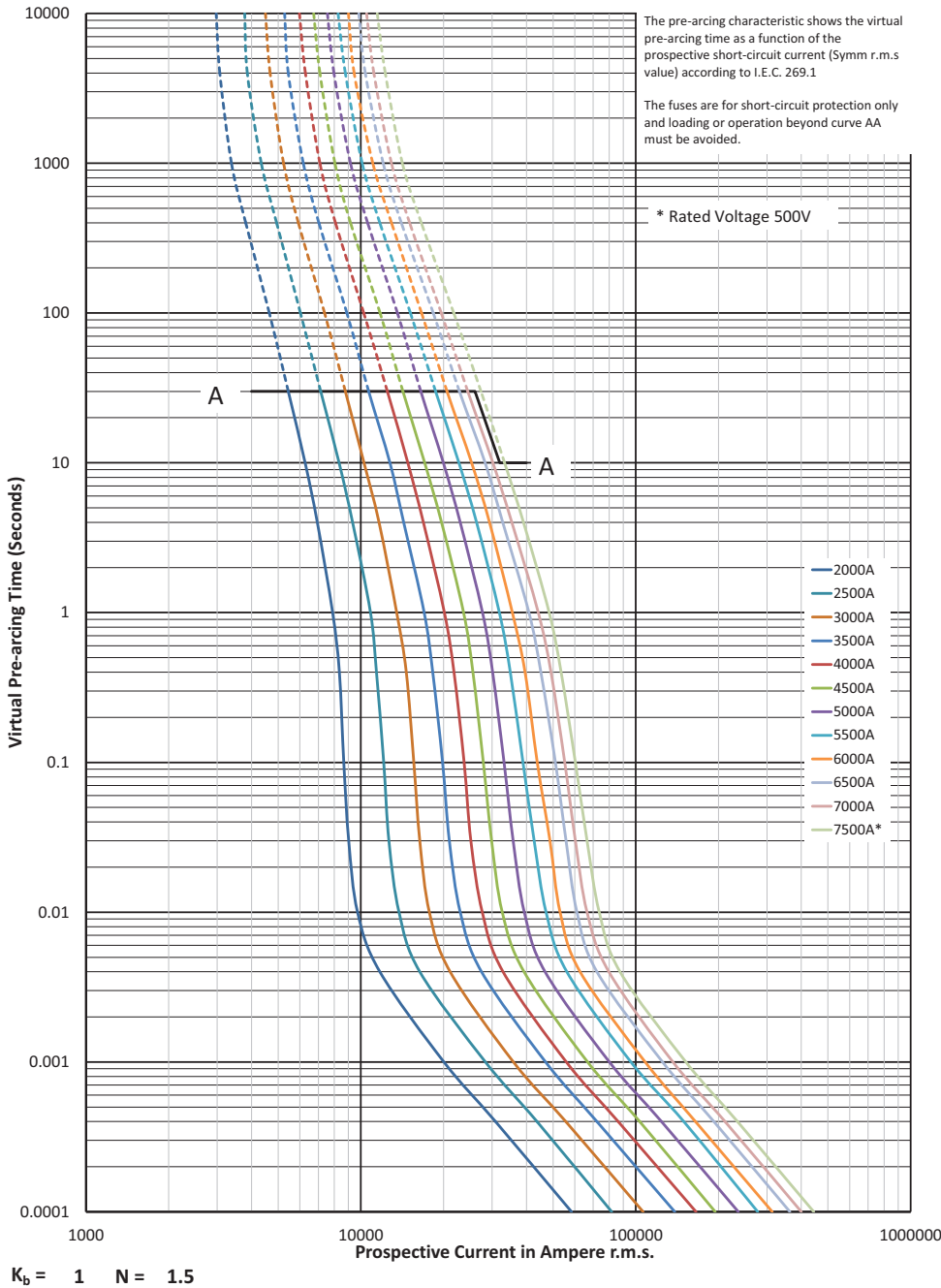
| Size | Type | A                 |
|------|------|-------------------|
| 24   | BKN  | 2x3 M12           |
| 24   | GKN  | 2x3 ½" -13 UNC-2B |

When using these fuse links, please consult Eaton for application assistance at [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com)

Square body fuse links

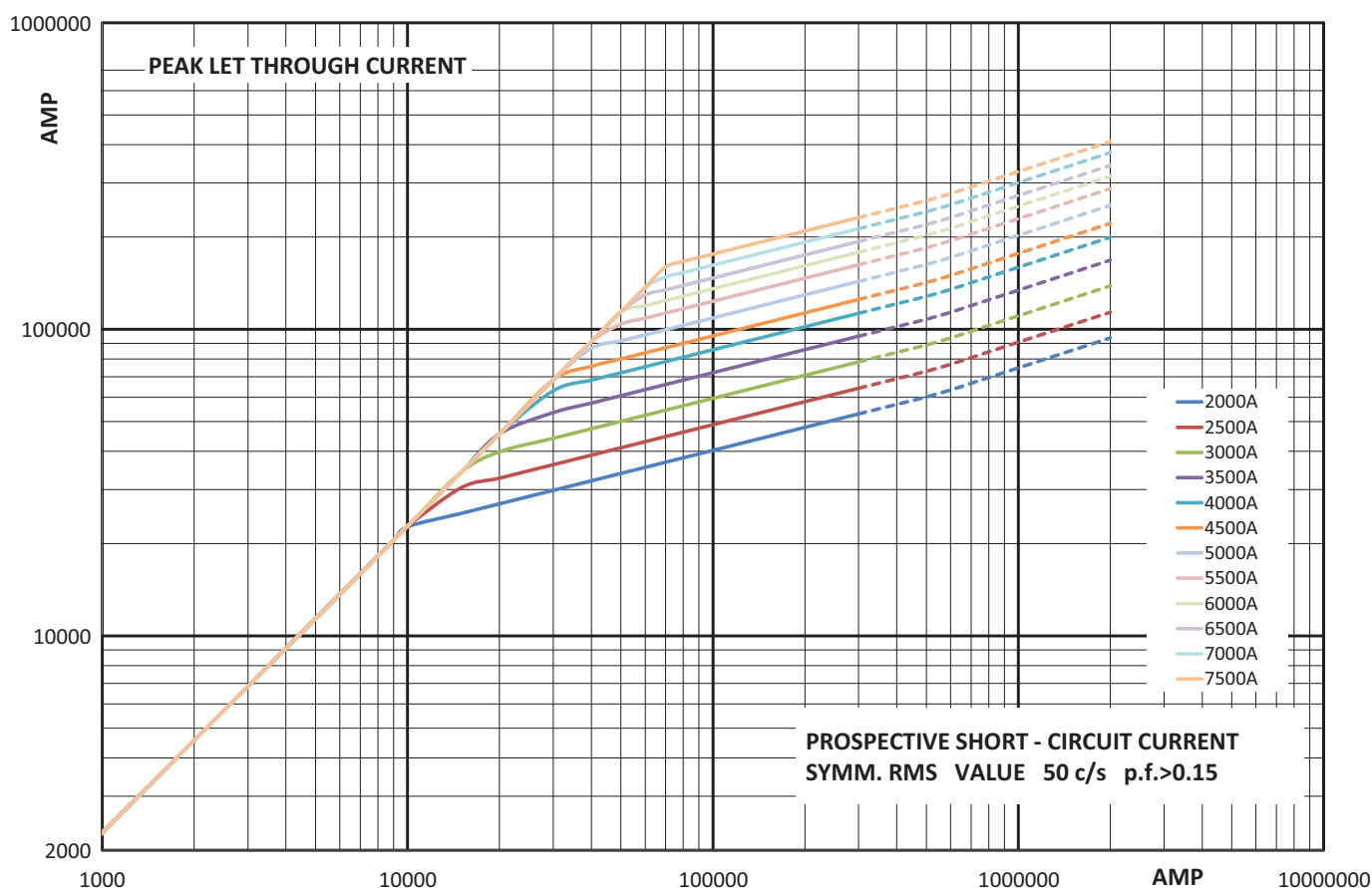
170M - Size 24, Flush end contact, 690 V a.c. (IEC), 2000 A to 6500 A

Time-current curve - 2000 A to 7500 A



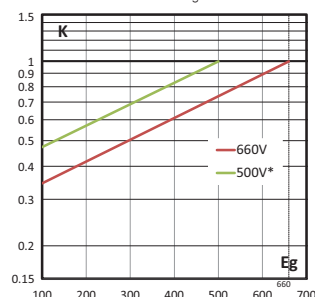
# 170M - Size 24, Flush end contact, 690 V a.c. (IEC), 2000 A to 6500 A

Cut-off curve - 2000 A to 7500 A



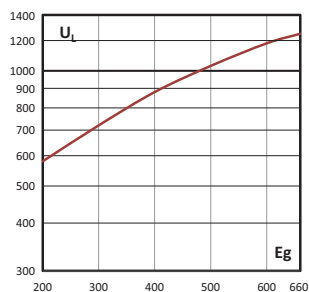
## Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



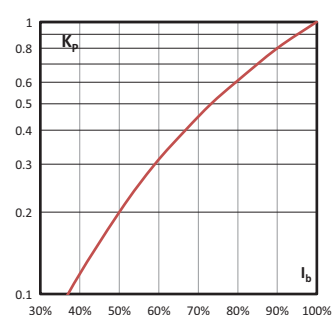
## Arc voltage

This curve gives the peak arc voltage,  $U_a$ , 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 percent.



## Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



Square body fuse links

170M - Size 24, Flush end contact, 1000 V a.c. (IEC), 2000 A to 5000 A

Specifications

Description

Square body, flush end contact, high speed fuse links, for the protection of power rectifiers.

Technical data

- Rated voltage: 1000 V a.c. (IEC)
- Rated current: 2000 A to 5000 A
- Breaking capacity: 166 kA RMS Sym
- Operating class: aR

Standards / Agency information

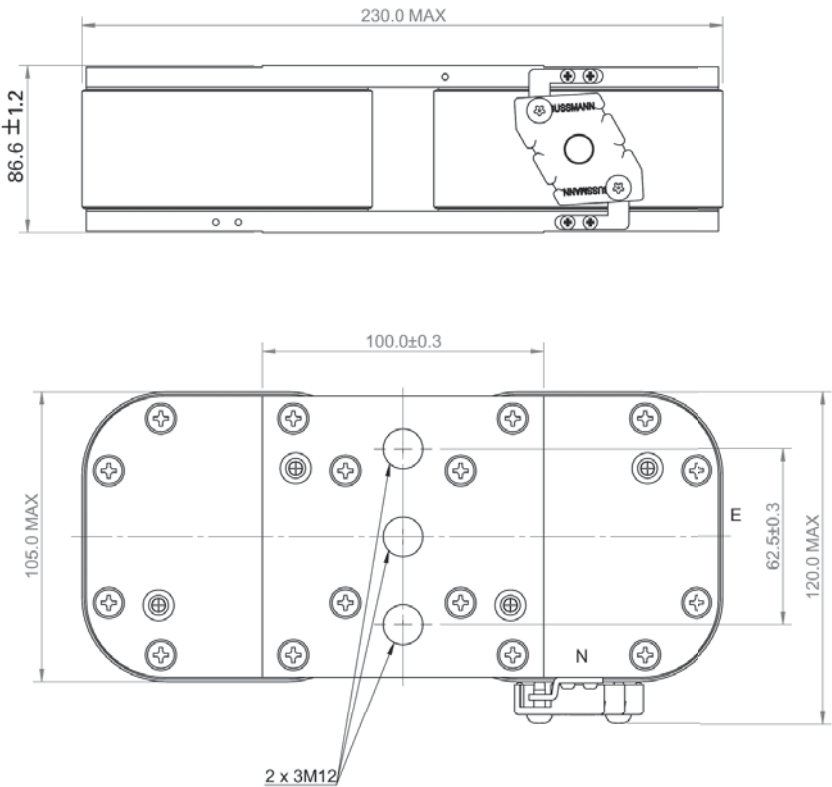
CE, Designed and tested to IEC 60269 Part 4



Catalogue numbers

| Fuse link<br>body size | Rated voltage     | Rated current<br>(Amps) | I <sup>t</sup> (A <sup>2</sup> Sec) |                            | Watts loss<br>(W) | Catalogue numbers        |
|------------------------|-------------------|-------------------------|-------------------------------------|----------------------------|-------------------|--------------------------|
|                        |                   |                         | Pre-arcing                          | Clearing<br>at 1000 V a.c. |                   | -BKN/85 Type K indicator |
| 24                     | 1000 V a.c. (IEC) | 2000                    | 900,000                             | 5,350,000                  | 345               | 170M7608                 |
|                        |                   | 3000                    | 2,950,000                           | 17,500,000                 | 430               | 170M7680                 |
|                        |                   | 3200                    | 3,300,000                           | 20,000,000                 | 440               | 170M7567                 |
|                        |                   | 3500                    | 4,500,000                           | 27,000,000                 | 450               | 170M7568                 |
|                        |                   | 4000                    | 6,800,000                           | 40,000,000                 | 475               | 170M7569                 |
|                        |                   | 4200                    | 8,000,000                           | 47,500,000                 | 485               | 170M7498                 |
|                        |                   | 4500                    | 10,000,000                          | 59,000,000                 | 495               | 170M7488                 |
|                        |                   | 5000                    | 14,000,000                          | 82,500,000                 | 540               | 170M7622                 |

Dimensions (mm)



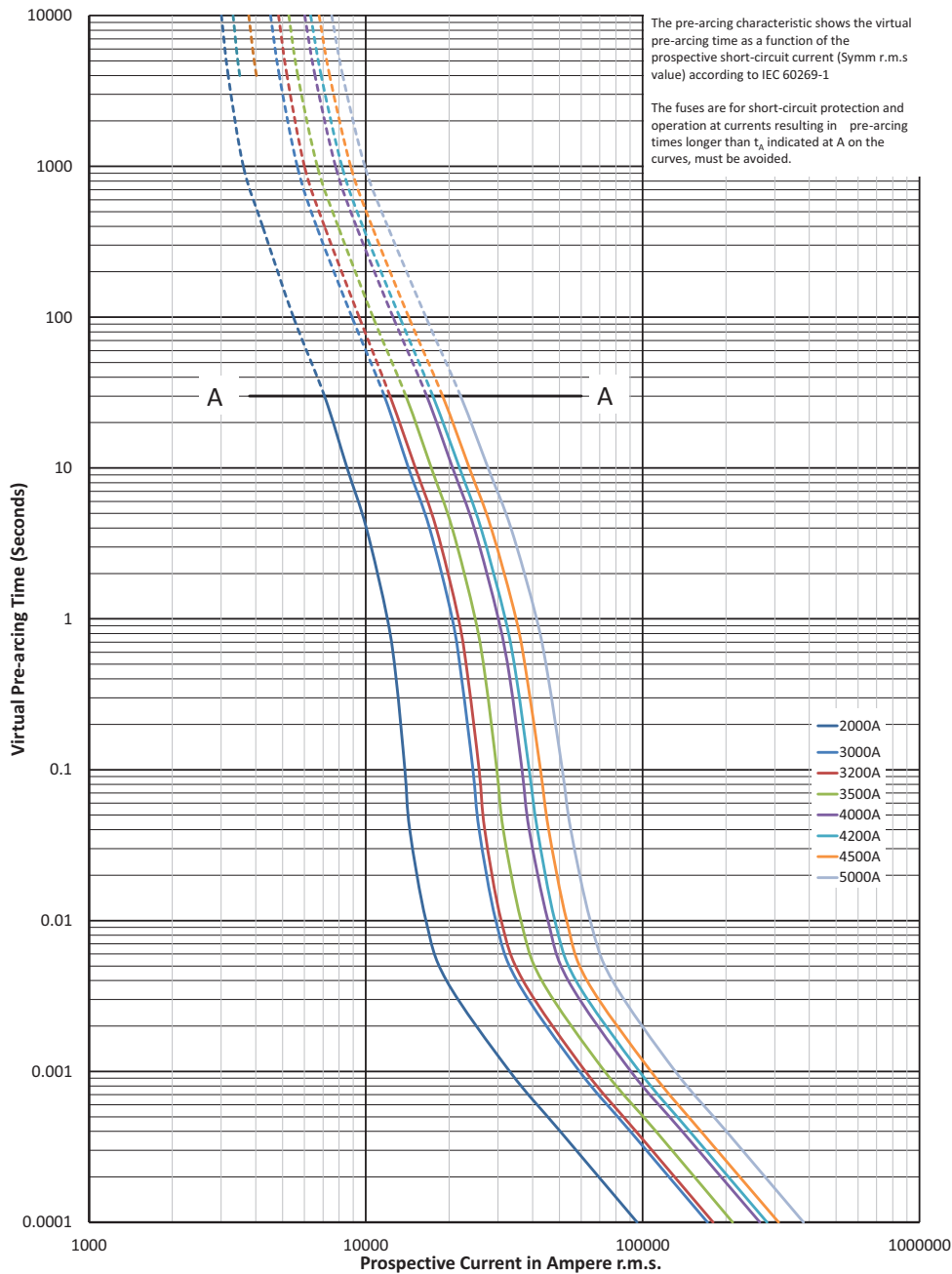
The normal position of the indicator is as shown position N, position E on request only

When using these fuse links, please consult Eaton for application assistance at [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com).

Data sheets: 170K8514

# 170M - Size 24, Flush end contact, 1000 V a.c. (IEC), 2000 A to 5000 A

## Time-current curve - 2000 A to 5000 A



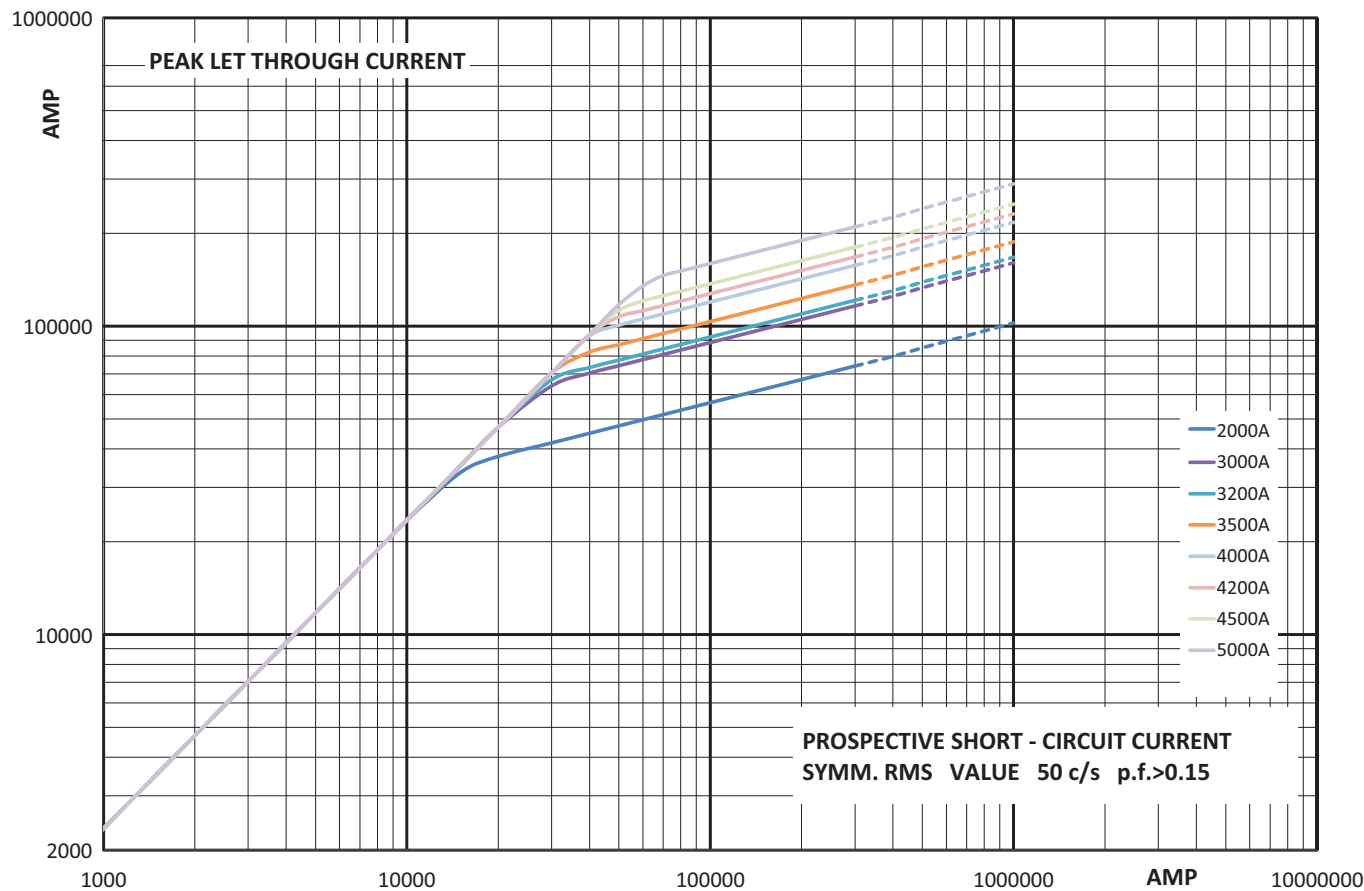
$K_b = 1$   $N = 1.5$



Square body fuse links

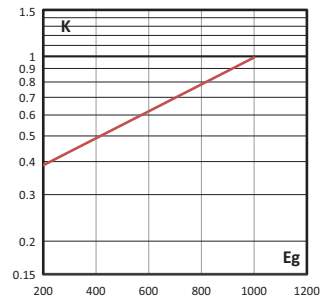
170M - Size 24, Flush end contact, 1000 V a.c. (IEC), 2000 A to 5000 A

Cut-off curve - 2000 A to 5000 A



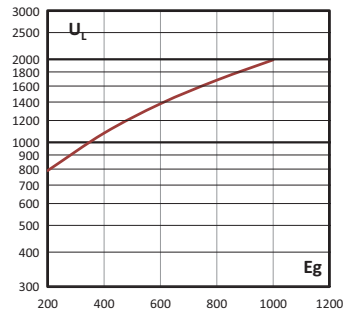
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



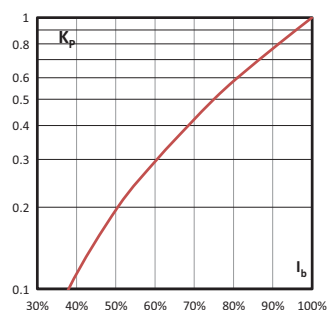
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



## 170M - Size 5, Flush end contact, 1100-2000 V a.c. (IEC), 1800 A to 5500 A

### Specifications

#### Description

Square body flush end contact high speed fuse links, for the protection or isolation for components such as diodes, silicon controlled rectifiers (SCRs), Gate Turn-Off Thyristors (GTOs) and IGBTs. Typical application include AC and DC drives, high power rectifiers.

#### Technical data

- Rated voltage: 1100-2000 V a.c. (IEC)
- Rated current: 1800 A to 5500 A
- Breaking capacity: 300 kA RMS Sym. estimated: 197 kA tested
- Operating class: aR

#### Standards / Agency information

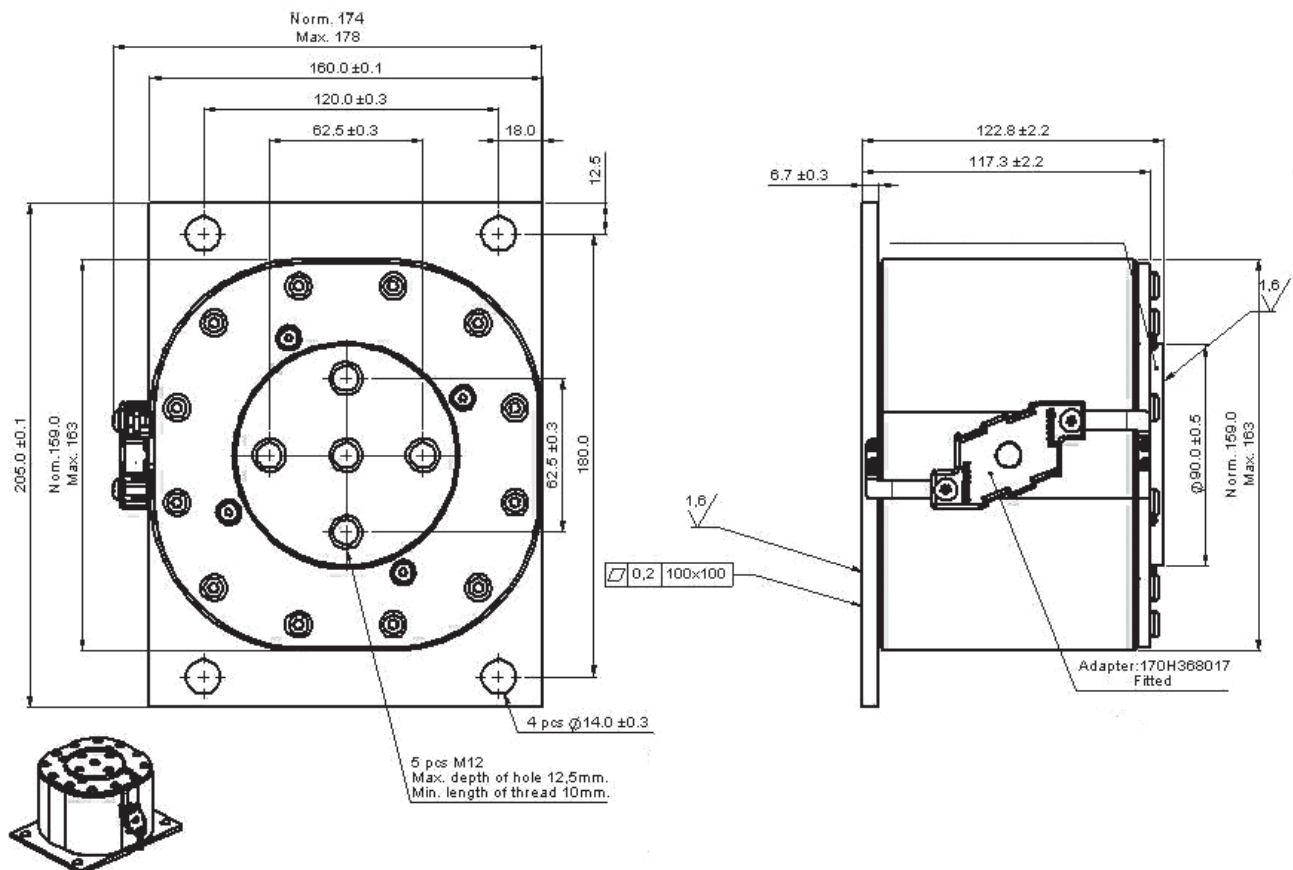
Consult Eaton [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com)

#### Catalogue Numbers

Consult Eaton [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com)



#### Dimensions (mm)



This dimension drawing is an example of the range of size 5 fuse links available.

# Square body fuse links

## DFJ - Drive fuse links, 600 V a.c. / 450 V d.c. (UL), 1 A to 600 A

### Specifications

#### Description

Bolted tags high speed fuse links that provide maximum protection for AC and DC drives and controllers. The DFJ fuse link has the lowest I<sub>2</sub>t of any branch circuit fuse to protect power semi-conductor devices that utilise diodes, GTOs, SCRs and SSRs. The DFJ fuse links combine the performance of high speed fuse links and the convenience of Class J branch circuit fuse links, allowing the use of readily available Class J fuse blocks, holders and switches.

#### Technical data

- Rated voltage: 600 V a.c. / 450 V d.c. (UL)
- Rated current: 1 A to 600 A
- Breaking capacity: 200 kA RMS Sym., 100 kA DC
- Operating class: aR
- 

#### Standards / Agency information

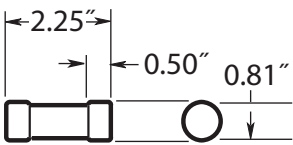
UL Listed, Std 248-8, Class J, Guide JDDZ, File E4273 CSA Certified, C22-2 No 248.8, Class 1422-02, File 53787 meets NEC branch circuit protection.



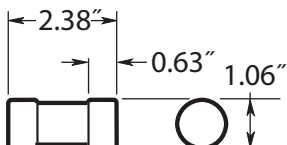
#### Catalogue numbers

| Rated voltage                             | Rated current (Amps) | Catalogue numbers |
|-------------------------------------------|----------------------|-------------------|
| 600 V a.c./<br>450 V d.c.<br>(UL)         | 1                    | DFJ-1             |
|                                           | 2                    | DFJ-2             |
|                                           | 3                    | DFJ-3             |
|                                           | 4                    | DFJ-4             |
|                                           | 5                    | DFJ-5             |
|                                           | 6                    | DFJ-6             |
|                                           | 8                    | DFJ-8             |
|                                           | 10                   | DFJ-10            |
|                                           | 12                   | DFJ-12            |
|                                           | 15                   | DFJ-15            |
|                                           | 20                   | DFJ-20            |
|                                           | 25                   | DFJ-25            |
|                                           | 30                   | DFJ-30            |
|                                           | 40                   | DFJ-40            |
|                                           | 45                   | DFJ-45            |
|                                           | 50                   | DFJ-50            |
| 600 -700<br>V a.c./<br>450 V d.c.<br>(UL) | 60                   | DFJ-60            |
|                                           | 70                   | DFJ-70            |
|                                           | 80                   | DFJ-80            |
|                                           | 90                   | DFJ-90            |
|                                           | 100                  | DFJ-100           |
|                                           | 110                  | DFJ-110           |
|                                           | 125                  | DFJ-125           |
|                                           | 150                  | DFJ-150           |
|                                           | 175                  | DFJ-175           |
|                                           | 100                  | DFJ-100           |
| 600 V a.c./<br>450 V d.c.<br>(UL)         | 225                  | DFJ-225           |
|                                           | 250                  | DFJ-250           |
|                                           | 300                  | DFJ-300           |
|                                           | 350                  | DFJ-350           |
|                                           | 400                  | DFJ-400           |
|                                           | 450                  | DFJ-450           |
|                                           | 500                  | DFJ-500           |
|                                           | 600                  | DFJ-600           |

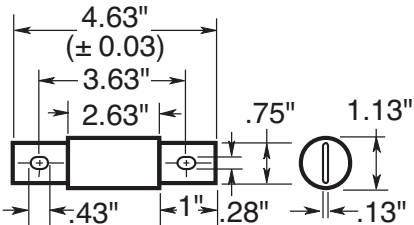
#### Dimensions (in)



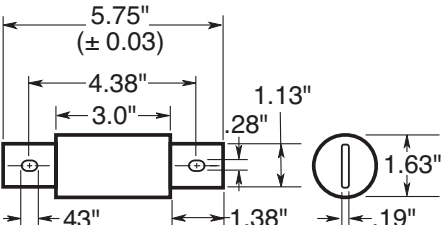
1 to 30 A



35 to 60 A



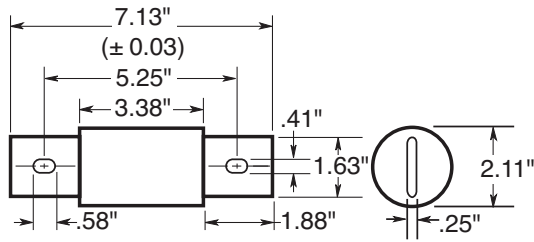
70 to 100 A



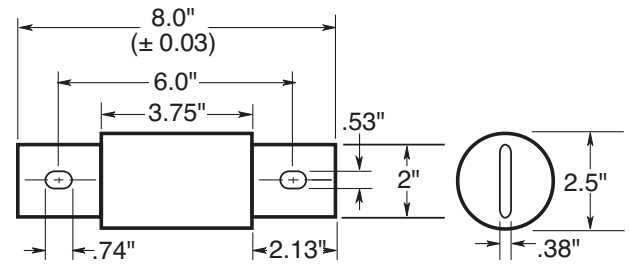
110 to 200 A

## DFJ - Drive fuse links, 600 V a.c. / 450 V d.c. (UL), 1 A to 600 A

### Dimensions (in)

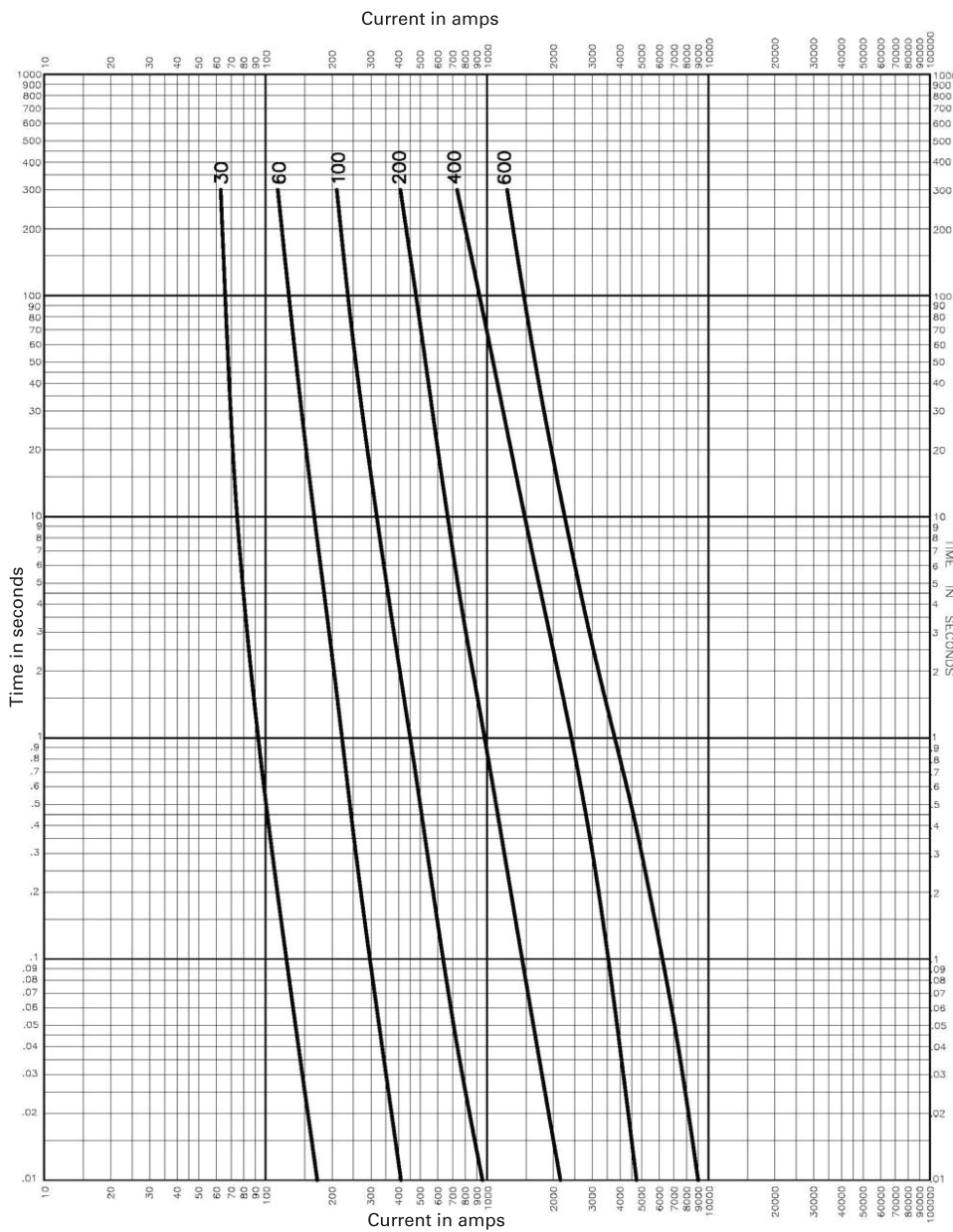


225 to 400 A



450 to 600 A

### Time-current curve - 30 A to 600 A

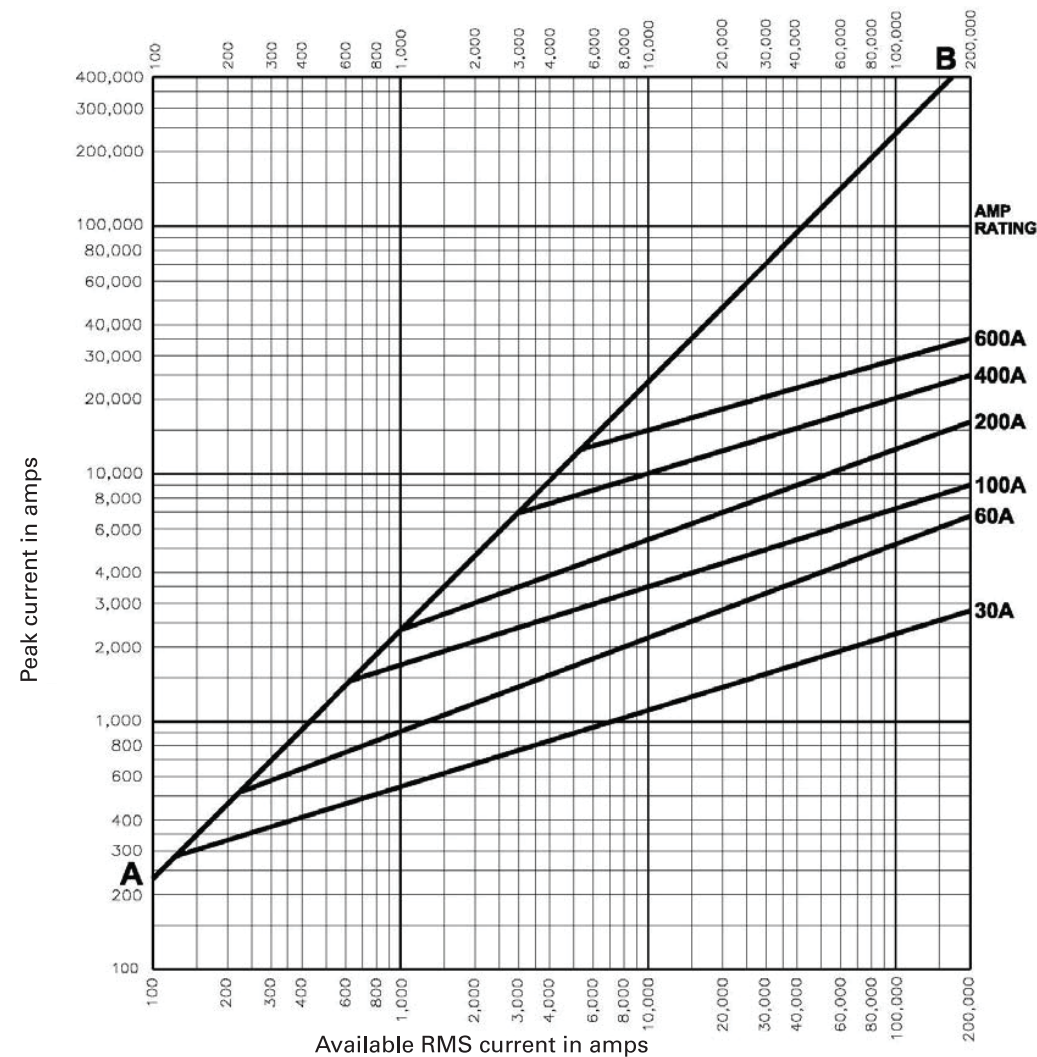


Data sheet: 1048

Square body fuse links

DFJ - Drive fuse links, 600 V a.c. / 450 V d.c. (UL), 1 A to 600 A

Cut-off curve - 30 A to 600 A



## 170M - Sizes 000 and 230, IGBT fuse links, 750 V d.c. (IEC), 800 V d.c. (UL), 25 A to 630 A

### Specifications

#### Description

Bolted tags high speed fuse links for the protection of IGBT modules, optimised for use in IGBT inverter circuits with DC link rated voltages up to 750 V d.c.. Low inductance  $\leq 15\text{nH}$ .

#### Technical data

- Rated voltage:
  - 750 V d.c. tested at 863V d.c. according to IEC 60269-4
  - 800 V d.c. tested at 800 V d.c. according to UL 248-1
- Rated current: 25 A to 630 A
- Breaking capacity: 50 kA DC (1ms tc) at 800 V d.c.
- Operating class: aR

#### Standards / Agency information

UL DC Recognised, 800 V d.c. L/R 1 mS max



#### Catalogue numbers

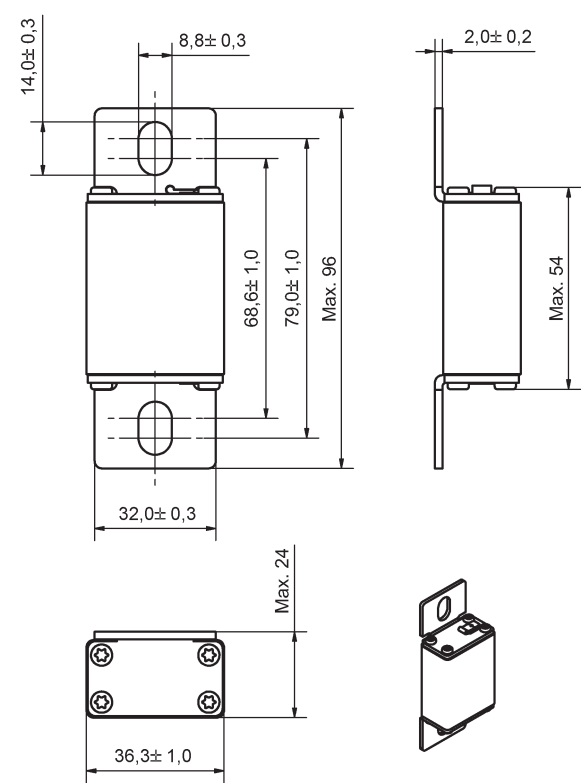
| Fuse link<br>body size | Rated voltage    | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec)<br>Pre-arcing | Watts loss<br>(W) | Catalogue numbers |          |
|------------------------|------------------|-------------------------|-----------------------------------------------------|-------------------|-------------------|----------|
|                        |                  |                         |                                                     |                   | -FU/70            | -FN/70   |
| 000                    | 750 V d.c. (IEC) | 25                      | 25                                                  | 12                | 170M1750          | 170M1730 |
|                        |                  | 32                      | 45                                                  | 13                | 170M1751          | 170M1731 |
|                        |                  | 40                      | 75                                                  | 14                | 170M1752          | 170M1732 |
|                        |                  | 50                      | 135                                                 | 16                | 170M1753          | 170M1733 |
|                        |                  | 63                      | 260                                                 | 17                | 170M1754          | 170M1734 |
|                        |                  | 80                      | 460                                                 | 20                | 170M1755          | 170M1735 |
|                        |                  | 100                     | 795                                                 | 25                | 170M1756          | 170M1736 |
|                        |                  | 125                     | 1300                                                | 29                | 170M1757          | 170M1737 |
|                        | 800 V d.c. (UL)  | 160                     | 2550                                                | 34                | 170M1758          | 170M1738 |
|                        |                  | 200                     | 4350                                                | 40                | 170M1759          | 170M1739 |
|                        |                  | 250                     | 7400                                                | 48                | 170M1760          | 170M1740 |
|                        |                  | 315                     | 12,500                                              | 60                | 170M1761          | 170M1741 |
|                        |                  | 350                     | 17,000                                              | 65                | 170M1762          | 170M1742 |
|                        |                  | 100                     | 380                                                 | 35                | 170M1770          | 170M1785 |
|                        |                  | 125                     | 645                                                 | 42                | 170M1771          | 170M1786 |
|                        |                  | 160                     | 1350                                                | 47                | 170M1772          | 170M1787 |
| 230                    | 750 V d.c. (IEC) | 200                     | 2550                                                | 54                | 170M1773          | 170M1788 |
|                        |                  | 250                     | 4950                                                | 62                | 170M1774          | 170M1789 |
|                        |                  | 315                     | 9350                                                | 72                | 170M1775          | 170M1790 |
|                        |                  | 350                     | 12,000                                              | 78                | 170M1776          | 170M1791 |
|                        | 800 V d.c. (UL)  | 400                     | 18,500                                              | 80                | 170M1777          | 170M1792 |
|                        |                  | 450                     | 27,000                                              | 85                | 170M1778          | 170M1793 |
|                        |                  | 500                     | 37,500                                              | 90                | 170M1779          | 170M1794 |
|                        |                  | 550                     | 48,500                                              | 95                | 170M1780          | 170M1795 |
|                        |                  | 630                     | 69,500                                              | 105               | 170M1781          | 170M1796 |

Data sheets: 170K6422 (Size 000), 170K6426 (Size 230)

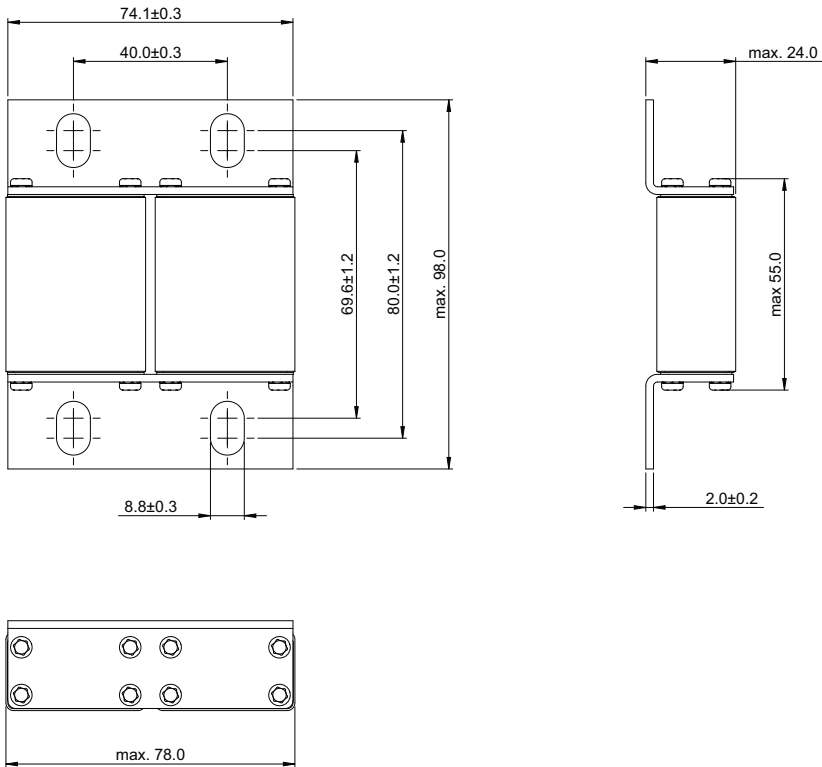
# Square body fuse links

**170M** - Sizes 000 and 230, IGBT fuse links, 750 V d.c. (IEC), 800 V d.c. (UL), 25 A to 630 A

## Dimensions (mm) - Size 000



## Dimensions (mm) - Size 230

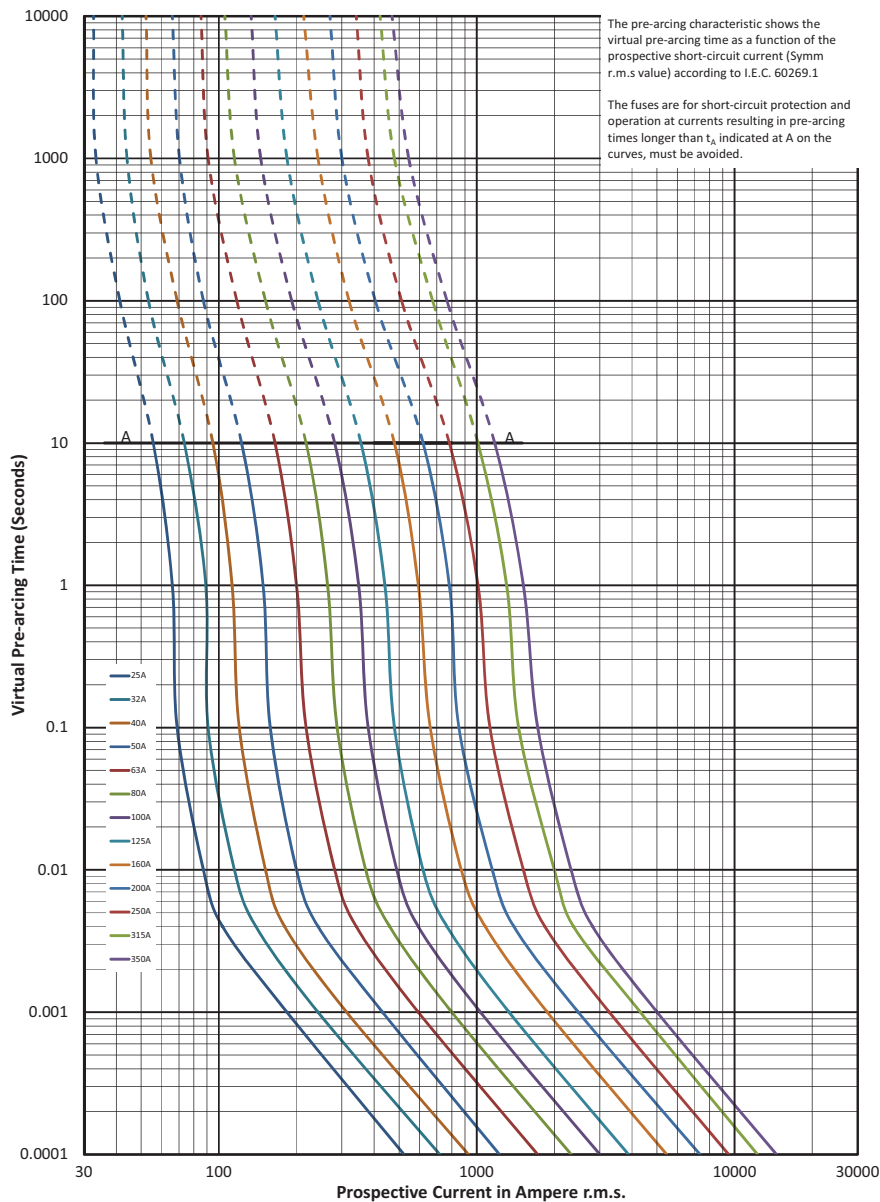


Data sheets: 170K6422 (Size 000), 170K6426 (Size 230)



# 170M - Sizes 000 and 230, IGBT fuse links, 750 V d.c. (IEC), 800 V d.c. (UL), 25 A to 630 A

Time-current curve - Size 000, 25 A to 350 A



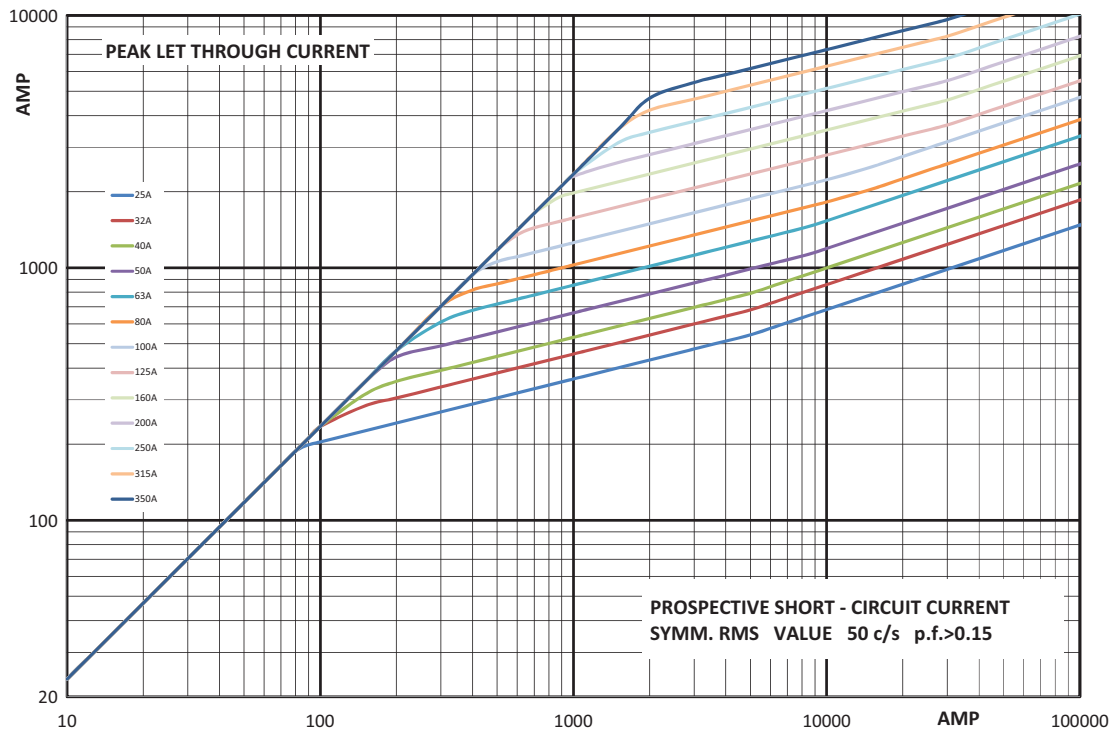
$K_b = 1$   $N = 1,6$



# Square body fuse links

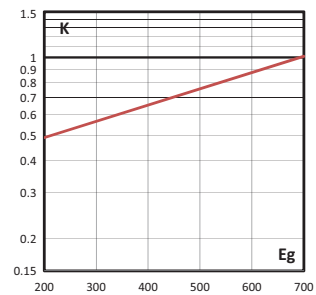
## 170M - Sizes 000 and 230, IGBT fuse links, 750 V d.c. (IEC), 800 V d.c. (UL), 25 A to 630 A

Cut-off curve - Size 000, 25 A to 350 A



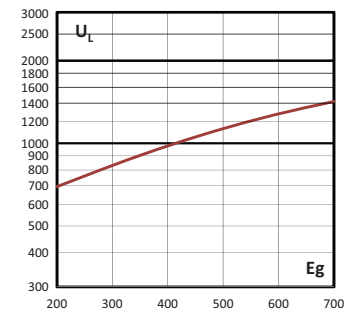
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



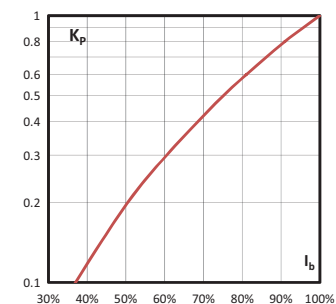
### Arc voltage

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 percent.



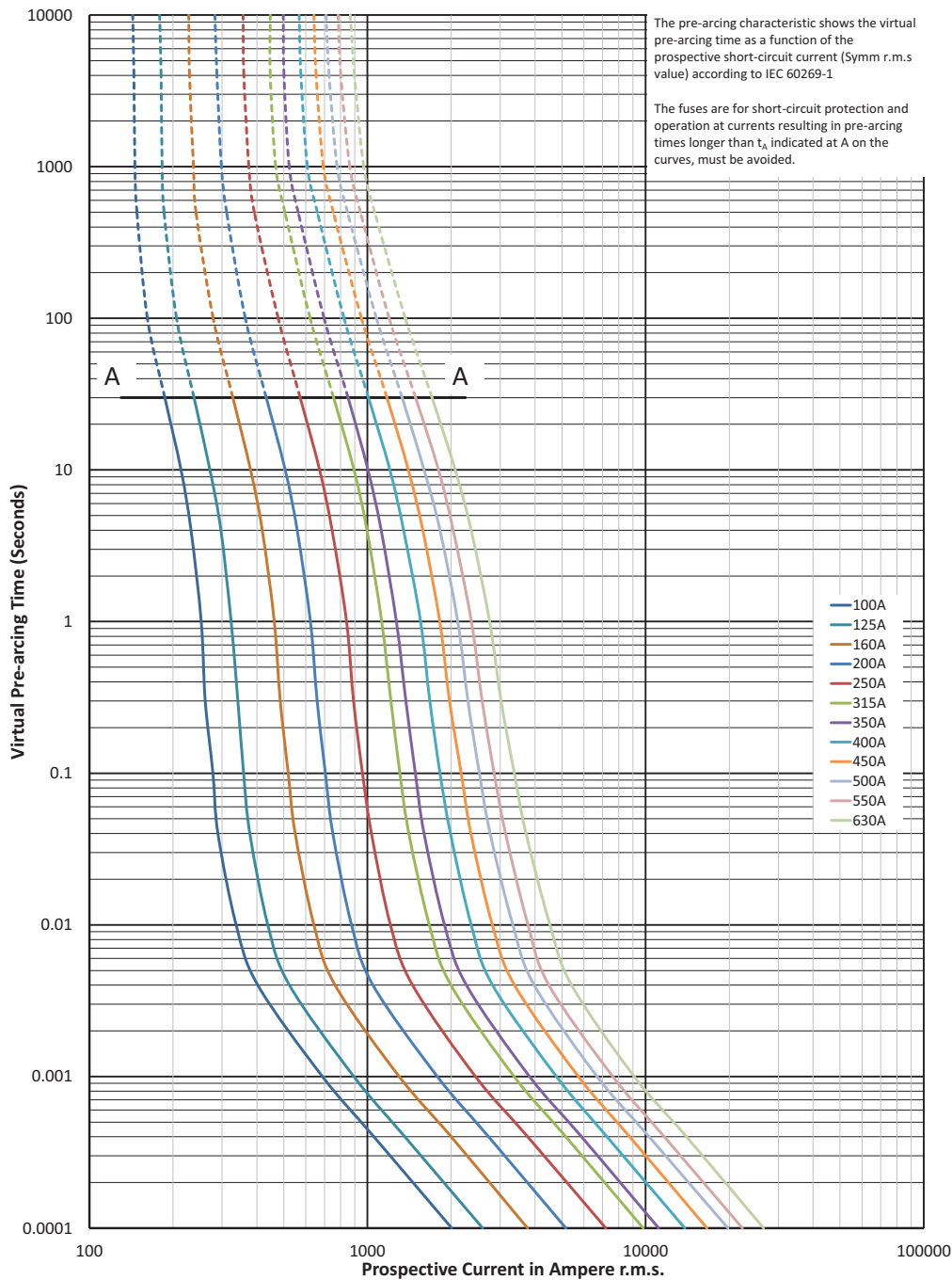
### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



# 170M - Sizes 000 and 230, IGBT fuse links, 750 V d.c. (IEC), 800 V d.c. (UL), 25 A to 630 A

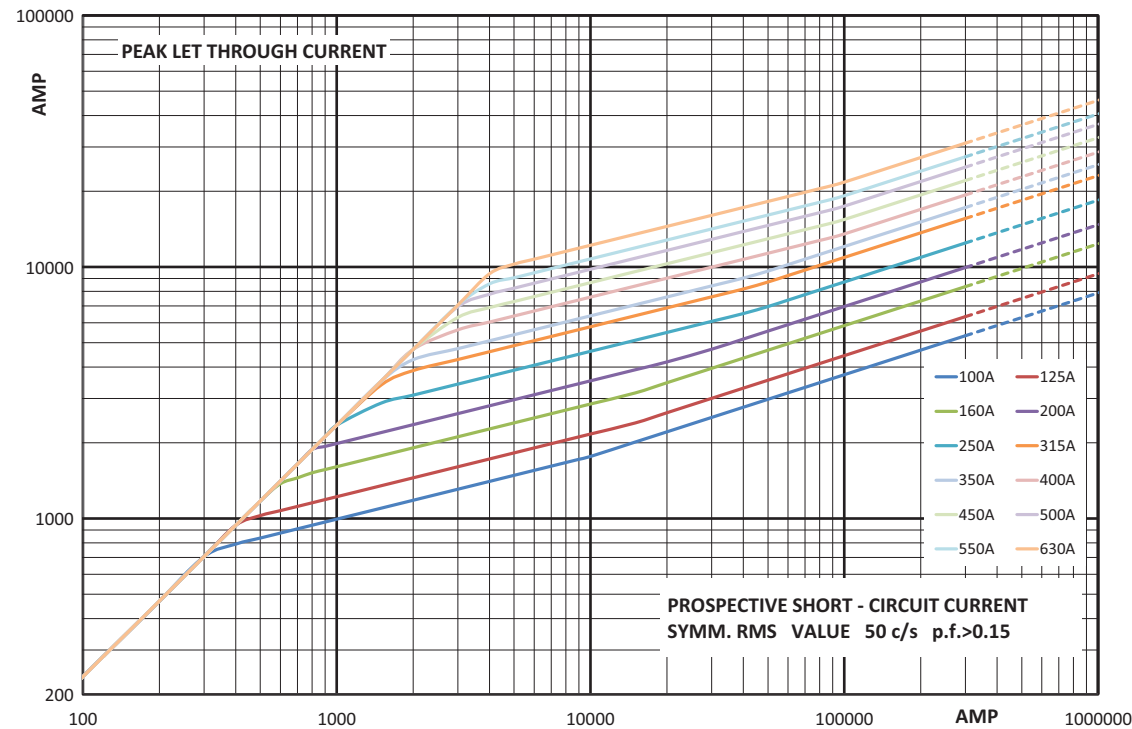
Time-current curve - Size 230, 100 A to 630 A



# Square body fuse links

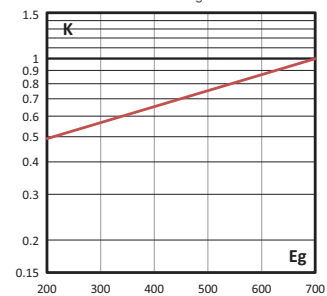
## 170M - Sizes 000 and 230, IGBT fuse links, 750 V d.c. (IEC), 800 V d.c. (UL), 25 A to 630 A

Cut-off curve - Size 230, 100 A to 630 A



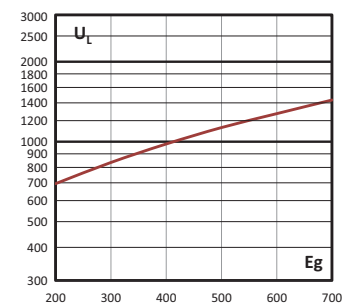
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



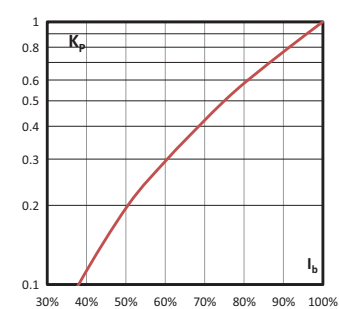
### Arc voltage

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 percent.



### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



## 170M - Sizes 000 and 230, IGBT fuse links, 1000 V d.c. (IEC and UL), 25 A to 500 A

### Specifications

#### Description

High speed bolted tags high speed fuse links for the protection of IGBT modules, optimised for use in IGBT inverter circuits with DC link rated voltages up to 1000 V d.c.. Low inductance  $\leq 20\text{nH}$ .

#### Technical data

- Rated voltage: 1000 V d.c. tested at 1000 V d.c. according to UL 248-1
- Rated current: 25 A to 500 A
- Breaking capacity: 50 kA DC (1ms to UL)
- Operating class: aR

#### Standards / Agency information

UL DC Recognised, 1000 V d.c. L/R 1mS max.

CE



### Catalogue numbers

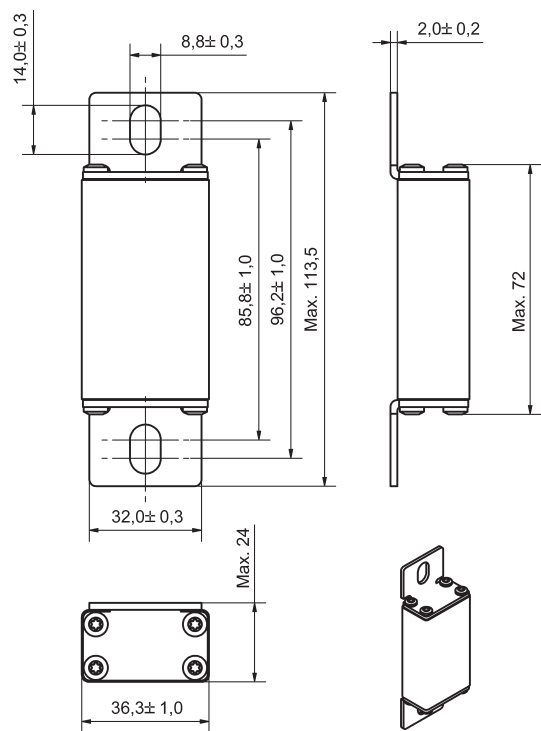
| Fuse link<br>body size | Rated voltage    | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |  | Watts loss<br>(W) | Catalogue numbers |          |
|------------------------|------------------|-------------------------|---------------------------------------|--|-------------------|-------------------|----------|
|                        |                  |                         | Pre-arcing                            |  |                   | -FU/90            | -FN/90   |
| 000                    | 1000 V d.c. (UL) | 25                      | 19                                    |  | 14                | 170M1802          | 170M1842 |
|                        |                  | 32                      | 34                                    |  | 17                | 170M1803          | 170M1843 |
|                        |                  | 40                      | 61                                    |  | 20                | 170M1804          | 170M1844 |
|                        |                  | 50                      | 135                                   |  | 21                | 170M1805          | 170M1845 |
|                        |                  | 63                      | 245                                   |  | 22                | 170M1806          | 170M1846 |
|                        |                  | 80                      | 505                                   |  | 27                | 170M1807          | 170M1847 |
|                        |                  | 100                     | 1050                                  |  | 32                | 170M1808          | 170M1848 |
|                        |                  | 125                     | 1900                                  |  | 34                | 170M1809          | 170M1849 |
|                        |                  | 160                     | 4050                                  |  | 37                | 170M1810          | 170M1850 |
|                        |                  | 200                     | 8500                                  |  | 43                | 170M1811          | 170M1851 |
|                        |                  | 225                     | 12,000                                |  | 45                | 170M1812          | 170M1852 |
|                        |                  | 250                     | 16,000                                |  | 48                | 170M1813          | 170M1853 |
| 230                    | 1000 V d.c. (UL) | 100                     | 600                                   |  | 38                | 170M1824          | 170M1860 |
|                        |                  | 125                     | 1200                                  |  | 42                | 170M1825          | 170M1861 |
|                        |                  | 160                     | 2550                                  |  | 48                | 170M1826          | 170M1862 |
|                        |                  | 200                     | 4650                                  |  | 55                | 170M1827          | 170M1863 |
|                        |                  | 250                     | 9300                                  |  | 62                | 170M1828          | 170M1864 |
|                        |                  | 315                     | 18,500                                |  | 68                | 170M1829          | 170M1865 |
|                        |                  | 350                     | 24,500                                |  | 75                | 170M1830          | 170M1866 |
|                        |                  | 400                     | 37,500                                |  | 80                | 170M1831          | 170M1867 |
|                        |                  | 450                     | 52,000                                |  | 85                | 170M1832          | 170M1868 |
|                        |                  | 500                     | 69,500                                |  | 90                | 170M1833          | 170M1869 |

Data sheets: 170K6680 (Size 000), 170K6682 (Size 230)

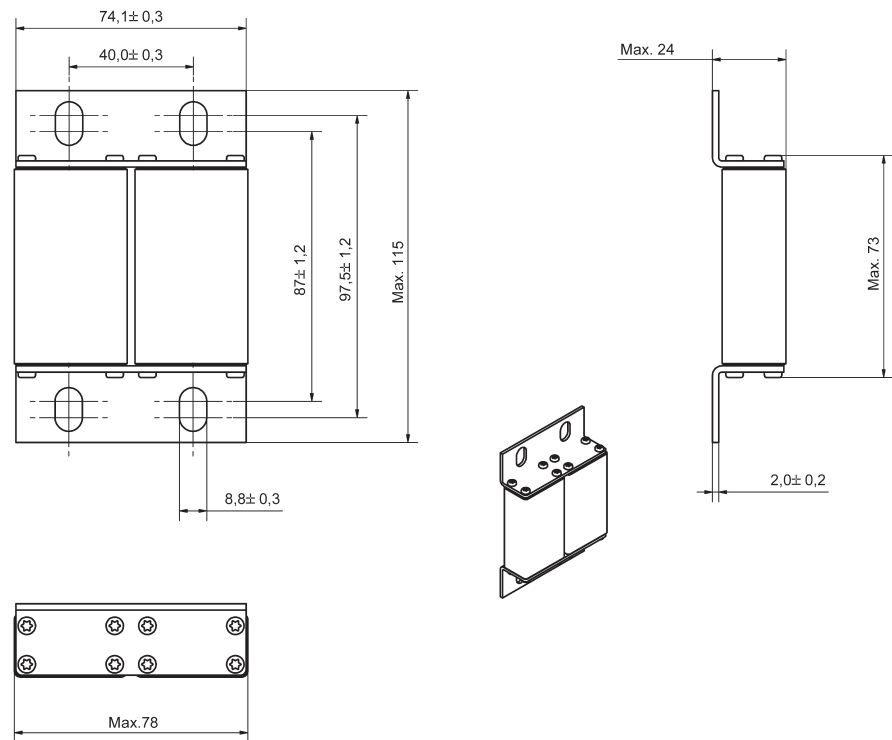
# Square body fuse links

## 170M - Sizes 000 and 230, IGBT fuse links, 1000 V d.c. (IEC and UL), 25 A to 500 A

### Dimensions (mm) - Size 000

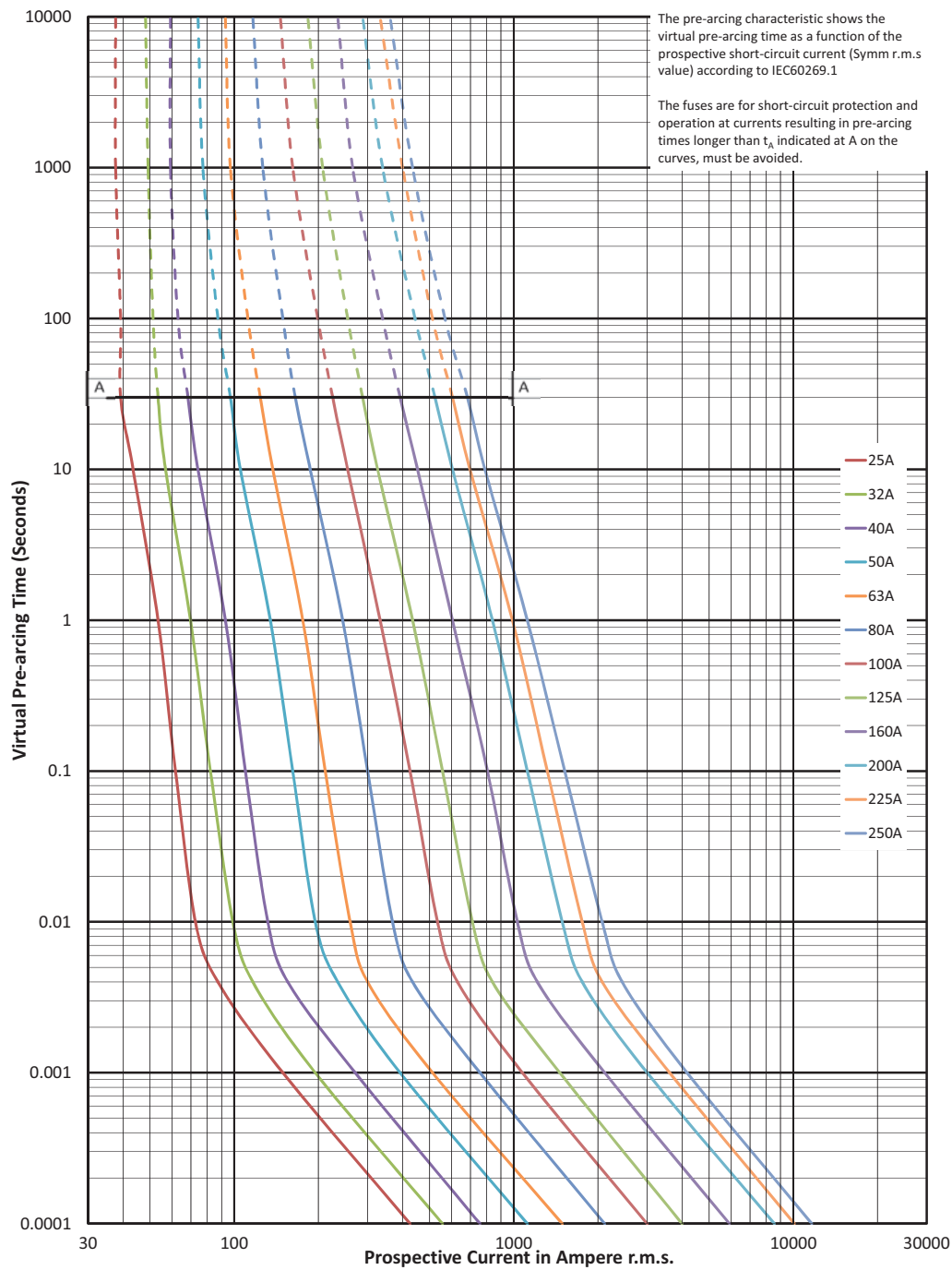


### Dimensions (mm) - Size 230



# 170M - Sizes 000 and 230, IGBT fuse links, 1000 V d.c. (IEC and UL), 25 A to 500 A

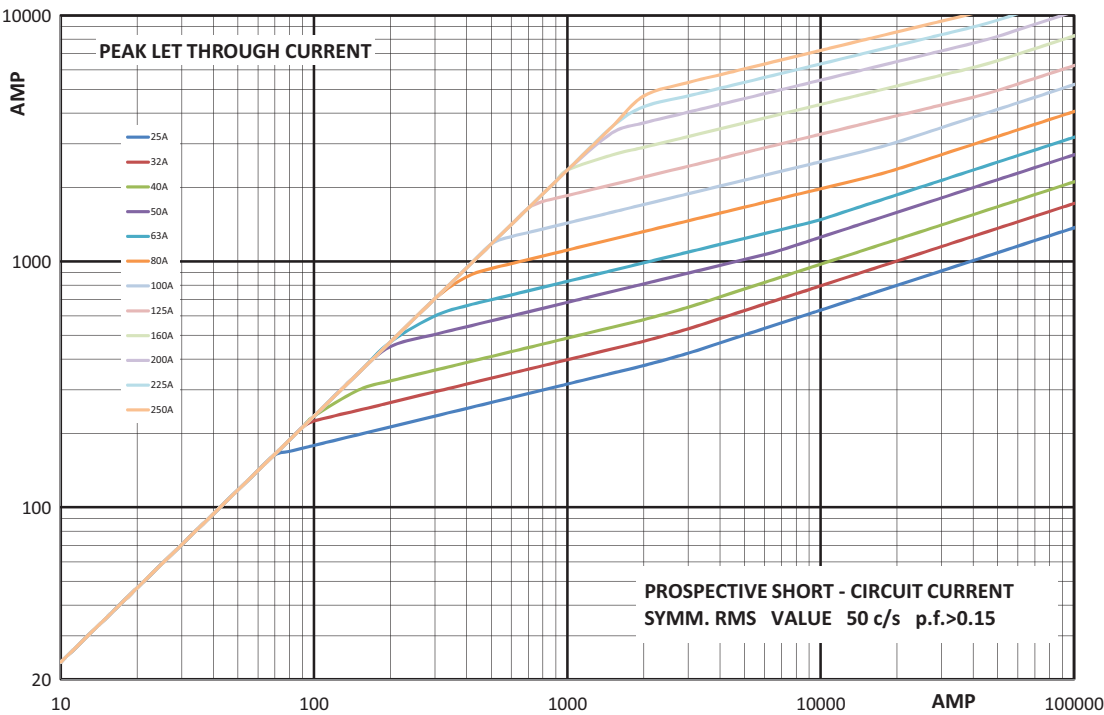
Time-current curve - Size 000, 25 A to 250 A



Square body fuse links

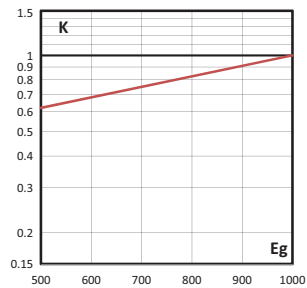
170M - Sizes 000 and 230, IGBT fuse links, 1000 V d.c. (IEC and UL), 25 A to 500 A

Cut-off curve - Size 000, 25 A to 250 A



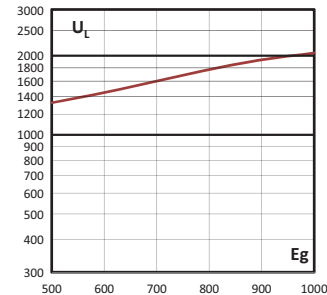
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



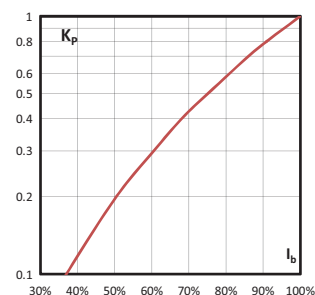
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



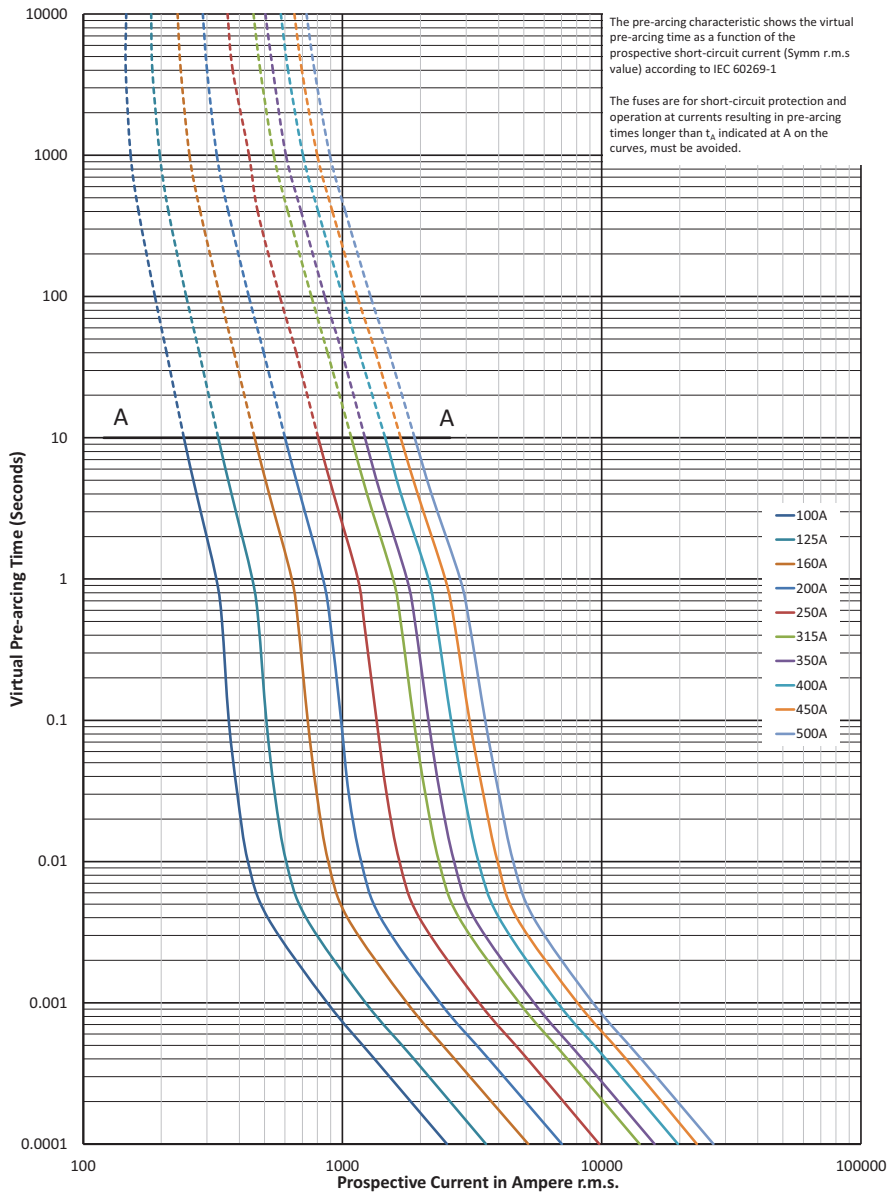
Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



# 170M - Sizes 000 and 230, IGBT fuse links, 1000 V d.c. (IEC and UL), 25 A to 500 A

## Time-current curve - Size 230, 100 A to 500 A

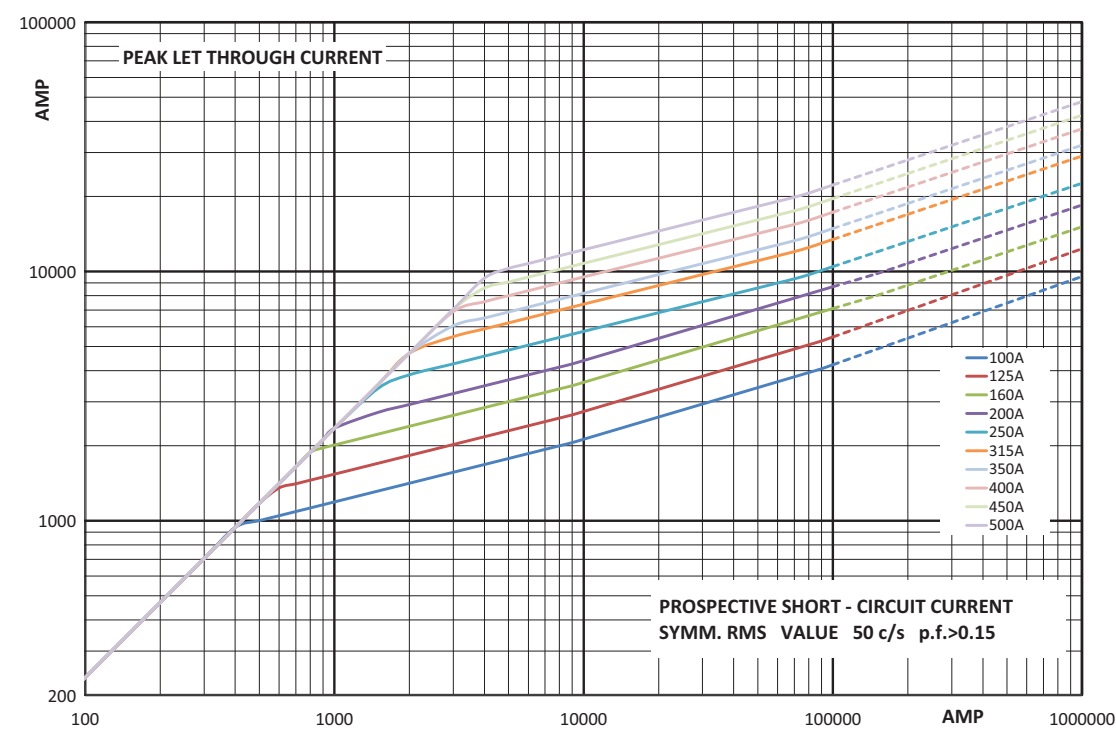




# Square body fuse links

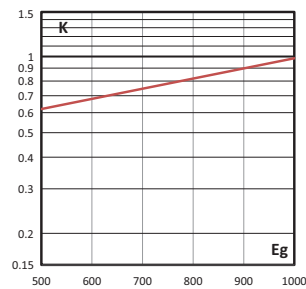
## 170M - Sizes 000 and 230, IGBT fuse links, 1000 V d.c. (IEC and UL), 25 A to 500 A

Cut-off curve - Size 230, 100 A to 500 A



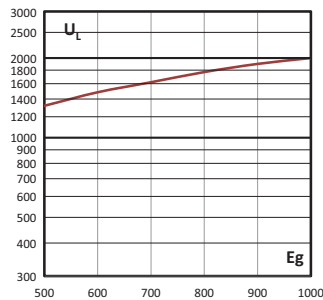
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



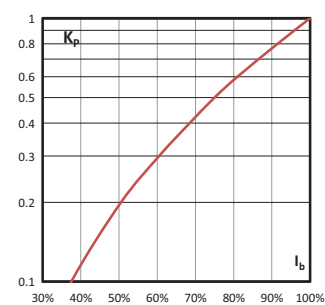
### Arc voltage

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 percent.



### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



# Traction fuse links

## 170M - Sizes 1\*, 3 and 23, Square body fuse links, 750 V d.c. (IEC), 50 A to 1600 A

### Specifications

#### Description

Traction flush end square body high speed fuse links for superior protection of DC third rail applications up to 750 V d.c.

#### Technical data

- Rated voltage: 750 V d.c. (IEC)
- Rated current: 50 A to 1600 A
- Breaking capacity: see details in table below
- Operating class:
  - aR size 1\*
  - gR: size 1\* (at 900 V d.c.), 3 and 23

#### Standards / Agency information

IEC 60269



### Catalogue numbers

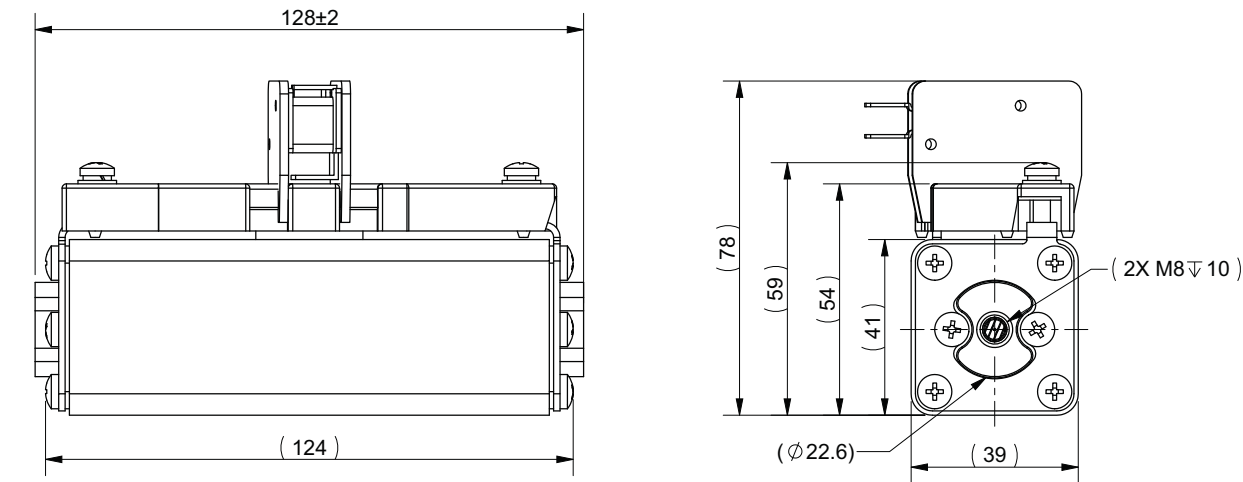
| Fuse link type | Fuse link body size | Rated voltage                 | Rated current (Amps) | Breaking capacity               | I <sup>2</sup> t (A <sup>2</sup> Sec) |                        | Watts loss (W)     |                | Catalogue numbers |
|----------------|---------------------|-------------------------------|----------------------|---------------------------------|---------------------------------------|------------------------|--------------------|----------------|-------------------|
|                |                     |                               |                      |                                 | Pre-arcing                            | Clearing at 750 V d.c. | 0.8 I <sub>n</sub> | I <sub>n</sub> |                   |
| Flush end      | 1*                  | 750 V d.c. / 900 V d.c. (IEC) | 50                   | 80 kA at 750 V d.c. L/R 65 ms   | 390                                   | 1300                   | 15                 | 27             | 170M2000          |
|                |                     |                               | 63                   |                                 | 610                                   | 2050                   | 18                 | 35             | 170M2001          |
|                |                     |                               | 80                   |                                 | 670                                   | 2250                   | 19                 | 37             | 170M2002          |
|                |                     |                               | 100                  |                                 | 2450                                  | 8150                   | 21                 | 40             | 170M2003          |
|                |                     |                               | 125                  |                                 | 2950                                  | 9800                   | 24                 | 47             | 170M2004          |
|                |                     |                               | 160                  |                                 | 5500                                  | 18,250                 | 29                 | 56             | 170M2005          |
| Flush end      | 3                   | 750 V d.c. (IEC)              | 450                  | 100 kA at 700 V d.c. L/R 100 ms | 65,700                                | 272,300                | 46                 | 87             | 170M2010          |
|                |                     |                               | 500                  |                                 | 83,200                                | 344,800                | 52                 | 98             | 170M2011          |
|                |                     |                               | 550                  |                                 | 136,700                               | 566,500                | 67                 | 126            | 170M2012          |
|                |                     |                               | 630                  |                                 | 173,500                               | 719,000                | 75                 | 142            | 170M2013          |
|                |                     |                               | 700                  |                                 | 268,000                               | 1,110,500              | 78                 | 156            | 170M2014          |
|                |                     |                               | 750                  |                                 | 307,600                               | 1,275,000              | 83                 | 167            | 170M2015          |
|                |                     |                               | 800                  |                                 | 349,900                               | 1,450,000              | 89                 | 178            | 170M2016          |
| Parallel       | 23                  | 800 V d.c. (IEC/ UL)          | 1000                 | 100 kA at 800 V d.c., L/R 40 ms | 476,300                               | 1,973,700              | 112                | 187            | 170M2017          |
|                |                     |                               | 1250                 |                                 | 694,000                               | 2,875,800              | 134                | 224            | 170M2018          |
|                |                     |                               | 1400                 |                                 | 1,071,600                             | 4,440,500              | 152                | 254            | 170M2019          |
|                |                     |                               | 1500                 |                                 | 1,230,200                             | 5,097,700              | 165                | 275            | 170M2020          |
|                |                     |                               | 1600                 |                                 | 1,399,700                             | 5,800,100              | 180                | 300            | 170M2021          |

Data sheets: 720140, size 1\* 5785524, 3 5785521, 23 5785525

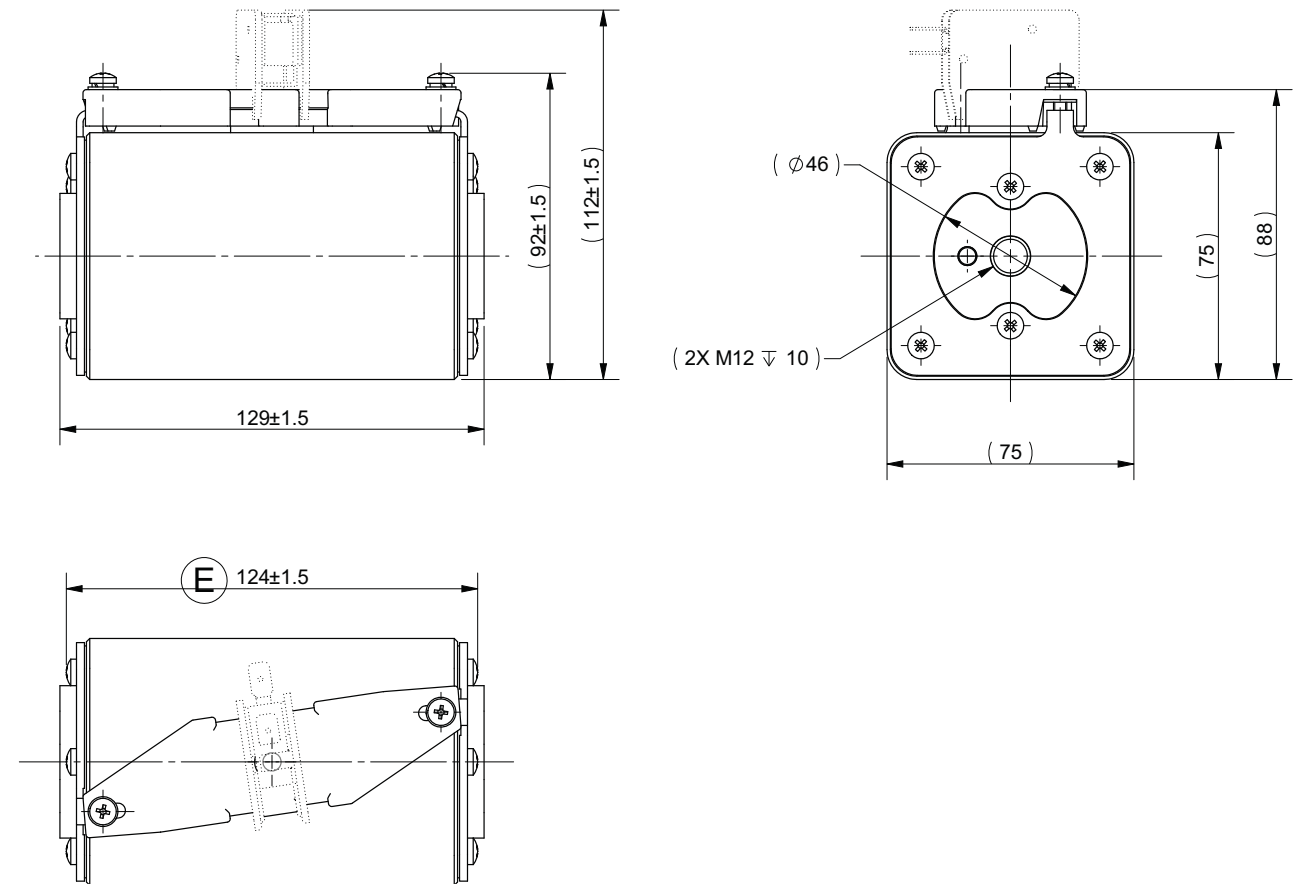
Traction fuse links

170M - Sizes 1\*, 3 and 23, Square body fuse links, 750 V d.c. (IEC), 50 A to 1600 A

Dimensions (mm) - Size 1\*, 170M2000 to 170M2005, Flush end

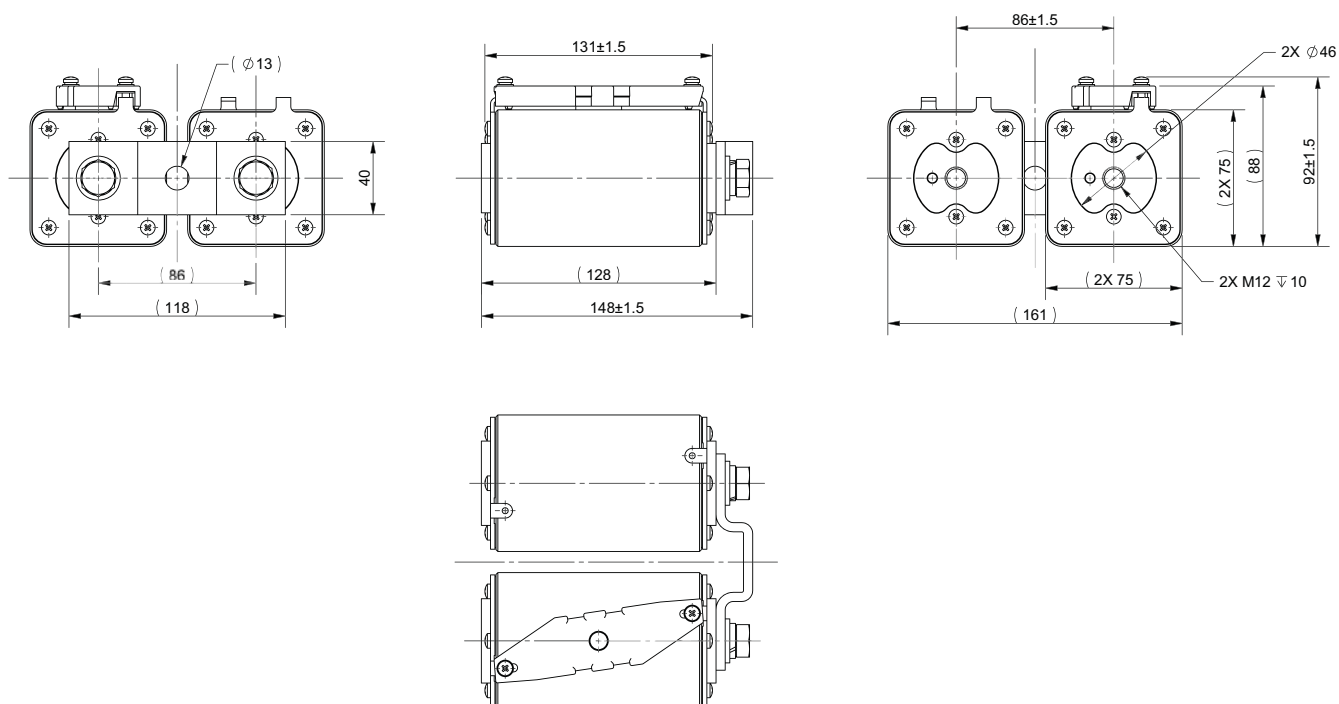


Dimensions (mm) - Size 3, 170M2010 to 170M2016, Flush end

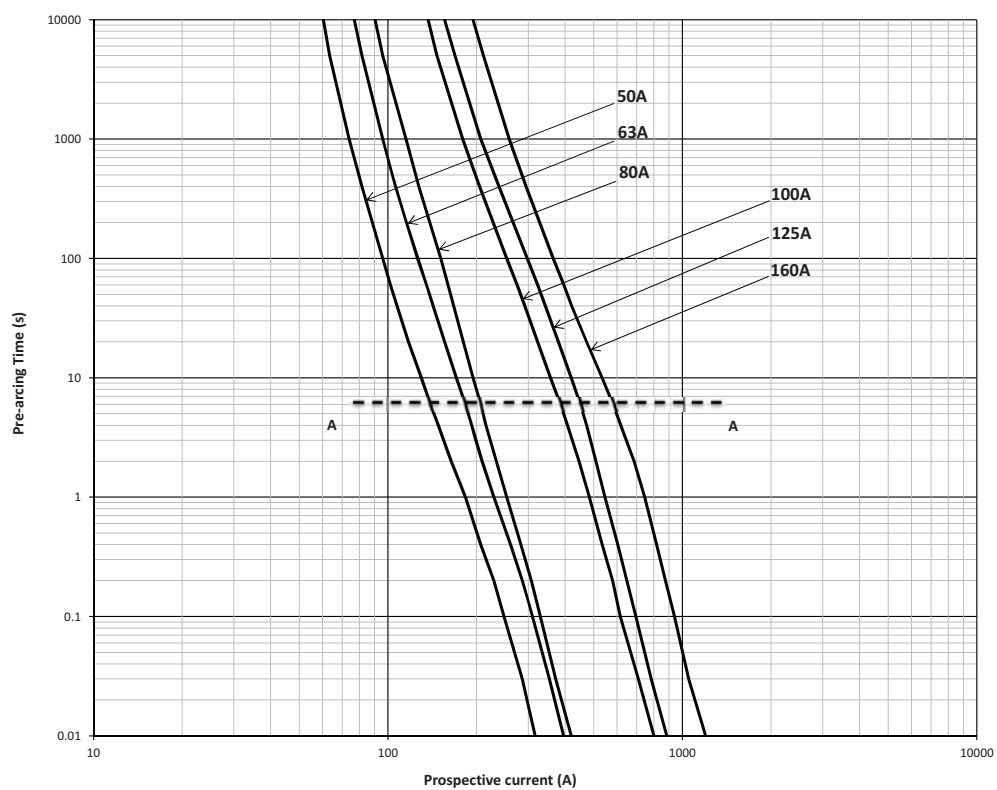


## 170M - Sizes 1\*, 3 and 23, Square body fuse links, 750 V d.c. (IEC), 50 A to 1600 A

Dimensions (mm) - Size 23, 170M2017 to 170M2021, Parallel



Time-current curve - 170M2000 to 170M2005, 50 A to 160 A

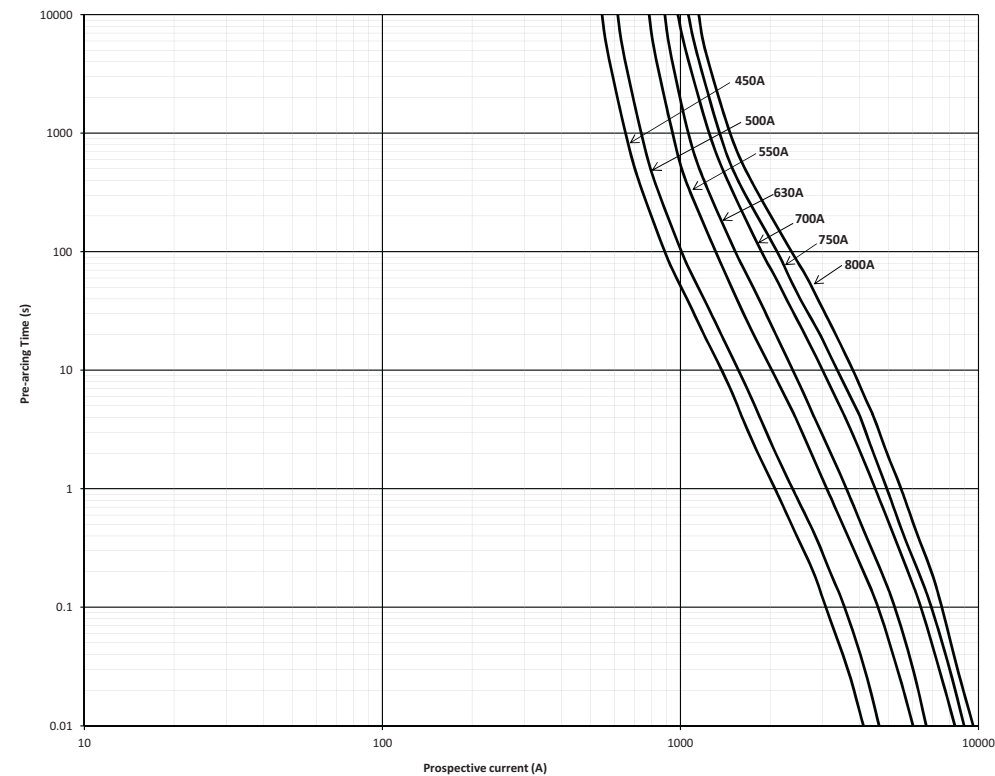


Data sheets: 720140, size 1\* 5785524, 3 5785521, 23 5785525

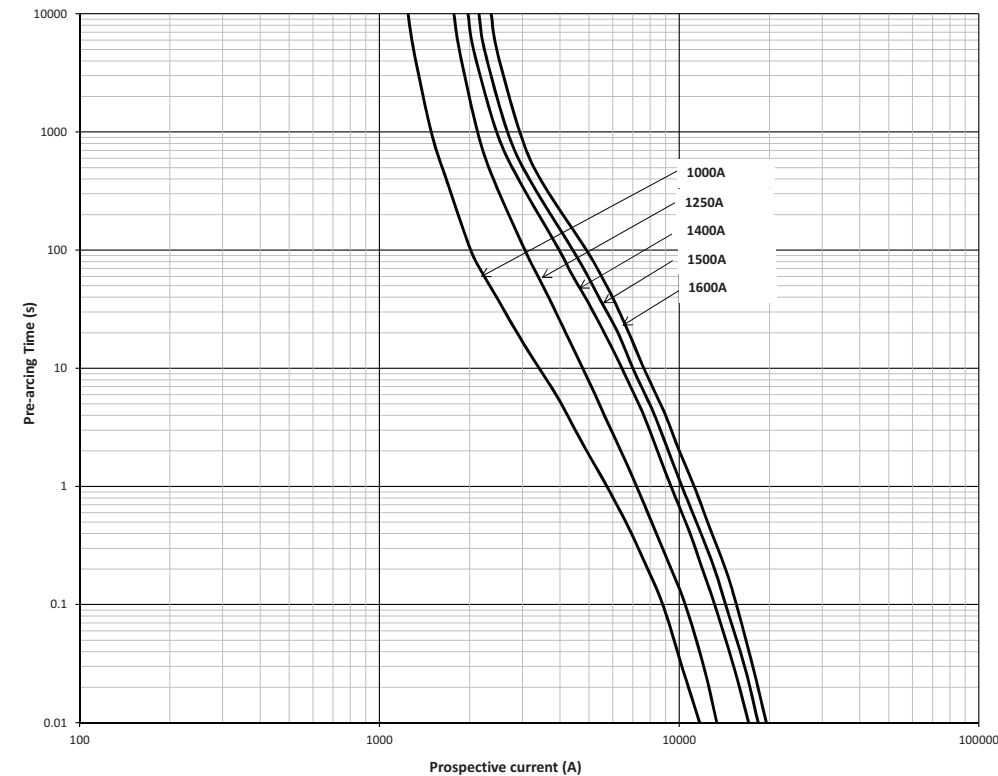
Traction fuse links

170M - Sizes 1\*, 3 and 23, Square body fuse links, 750 V d.c. (IEC), 50 A to 1600 A

Time-current curve - 170M2010 to 170M2016, 450 A to 800 A



Time-current curve - 170M2017 to 170M2021, 1000 A to 1600 A



## 170E - Sizes 1\*, 1, 2 and 3, Square body fuse links, 750 V d.c. (IEC), 63 A to 500 A

### Specifications

#### Description

Traction flush end square body high speed fuse links for superior protection of DC third rail applications up to 750 V d.c..

#### Technical data

- Rated voltage: 750 V d.c. (IEC)
- Rated current: 63 A to 500 A
- Breaking capacity: see details below
- Operating class: aR

#### Standards / Agency information

Consult Eaton [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com)



### Catalogue numbers

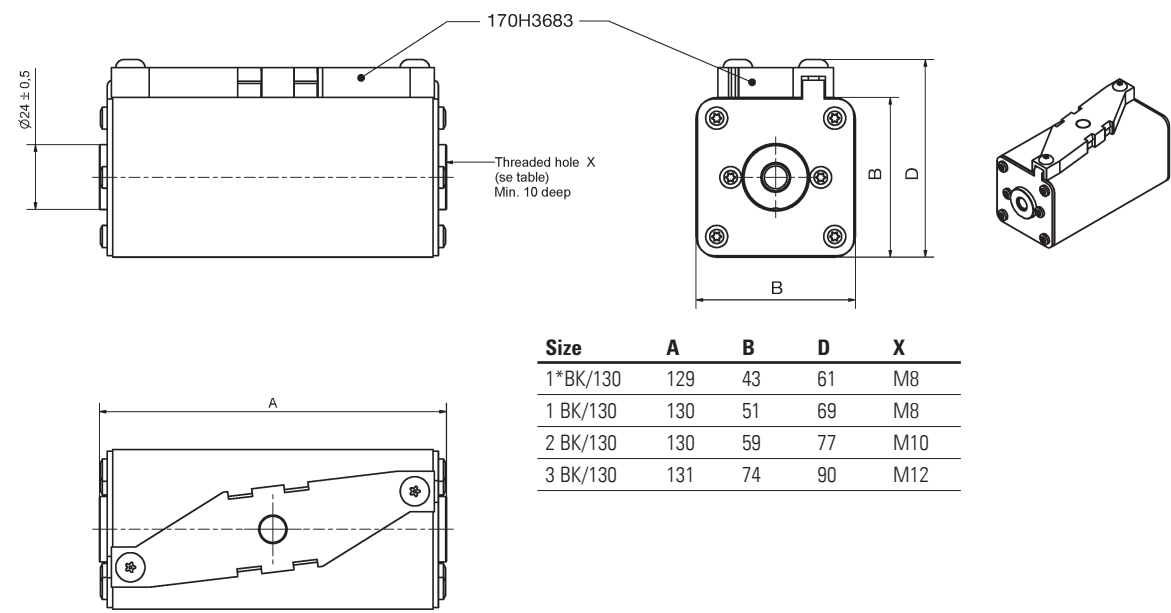
| Fuse link body size | Rated voltage    | Breaking capacity | Rated current (Amps) | $I^2t$ (A <sup>2</sup> s) |    | Watts loss (W) | Catalogue numbers |                 | Fuse link type |
|---------------------|------------------|-------------------|----------------------|---------------------------|----|----------------|-------------------|-----------------|----------------|
|                     |                  |                   |                      | Pre-arcing                |    |                | -BK flush end     | -EK knife blade |                |
| 1*                  | 750 V d.c. (IEC) | 80 kA at 43ms     | 63                   | 1100                      | 10 | 170E3577       | BK/130            | 170E3583        | EK/155         |
|                     |                  |                   | 80                   | 1750                      | 13 | 170E3578       |                   | 170E3584        |                |
|                     |                  |                   | 100                  | 3000                      | 16 | 170E3579       |                   | 170E3585        |                |
|                     |                  |                   | 125                  | 4500                      | 21 | 170E3580       |                   | 170E3586        |                |
|                     |                  |                   | 160                  | 7700                      | 26 | 170E3581       |                   | 170E3587        |                |
| 1                   | 750 V d.c. (IEC) | 50 kA at 15ms     | 200                  | 11,000                    | 37 | 170E5417       |                   | 170E5420        | EK/165         |
|                     |                  |                   | 250                  | 18,000                    | 46 | 170E5418       |                   | 170E5421        |                |
| 2                   | 750 V d.c. (IEC) | 50 kA at 15ms     | 250                  | 17,000                    | 47 | 170E8335       |                   | 170E8345        | EK/170         |
|                     |                  |                   | 315                  | 28,000                    | 57 | 170E8336       |                   | 170E8346        |                |
|                     |                  |                   | 400                  | 55,000                    | 73 | 170E8337       |                   | 170E8347        |                |
| 3                   | 750 V d.c. (IEC) | 50 kA at 15 ms    | 500                  | 75,500                    | 93 | 170E9681       |                   | 170E9685        | EK/170         |

Data sheets: 170K3620 (size 1\*), 170k3622 (size 1), 170K3624 (size 2), 170K3626-A (size 3)

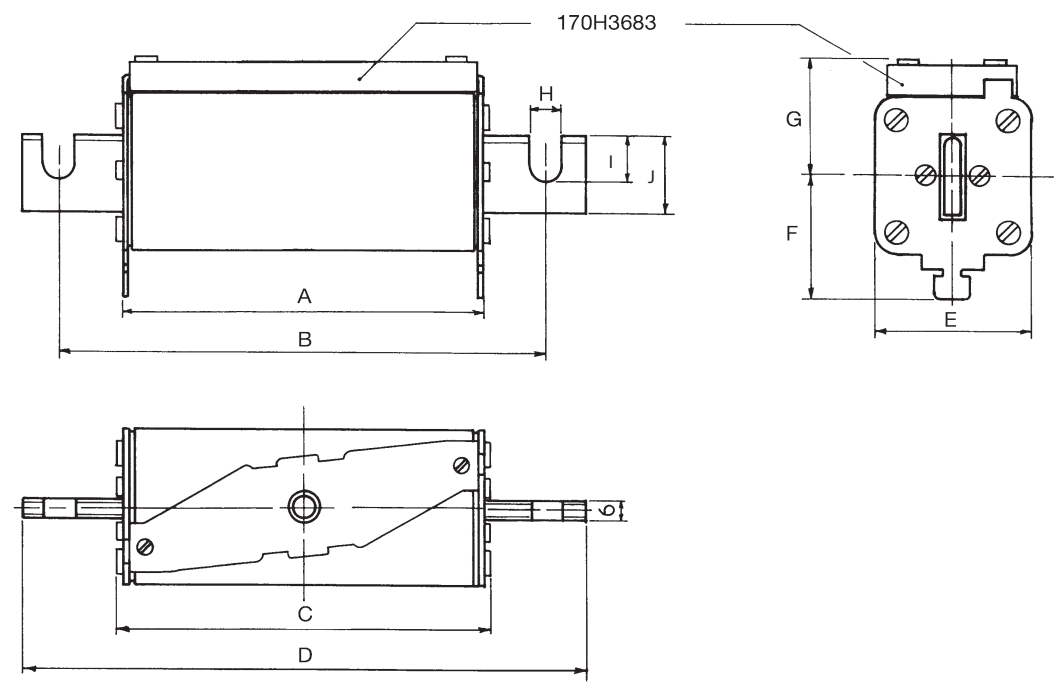
Traction fuse links

170E - Sizes 1\*, 1, 2 and 3, Square body fuse links, 750 V d.c. (IEC), 63 A to 500 A

Dimensions (mm) - BK/130



Dimensions (mm) - EK/

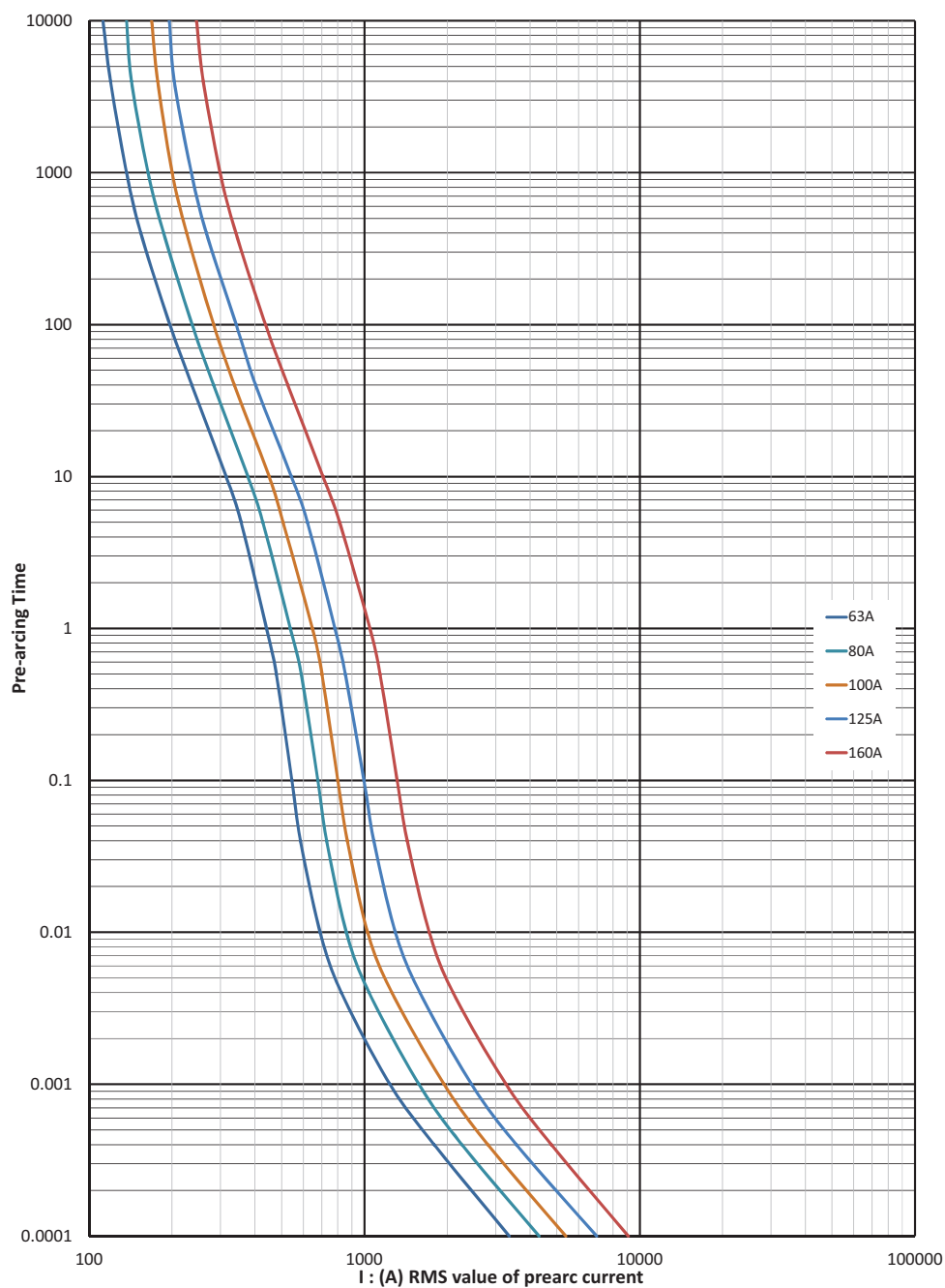


| Size     | A   | B   | C   | D   | E  | F  | G  | H  | I  | J  |
|----------|-----|-----|-----|-----|----|----|----|----|----|----|
| 1*EK/155 | 124 | 156 | 129 | 180 | 43 | 36 | 41 | 9  | 9  | 18 |
| 1 EK/165 | 124 | 166 | 129 | 191 | 51 | 37 | 41 | 11 | 14 | 25 |
| 2 EK/170 | 124 | 170 | 129 | 205 | 59 | 42 | 48 | 13 | 21 | 30 |
| 3 EK/170 | 125 | 170 | 130 | 206 | 74 | 51 | 56 | 13 | 20 | 36 |

Data sheets: 170K3620 (size 1\*), 170k3622 (size 1), 170K3624 (size 2), 170K3626-A (size 3)

## 170E - Sizes 1\*, 1, 2 and 3, Square body fuse links, 750 V d.c. (IEC), 63 A to 500 A

Time-current curve - Size 1\*, 63 A to 160 A



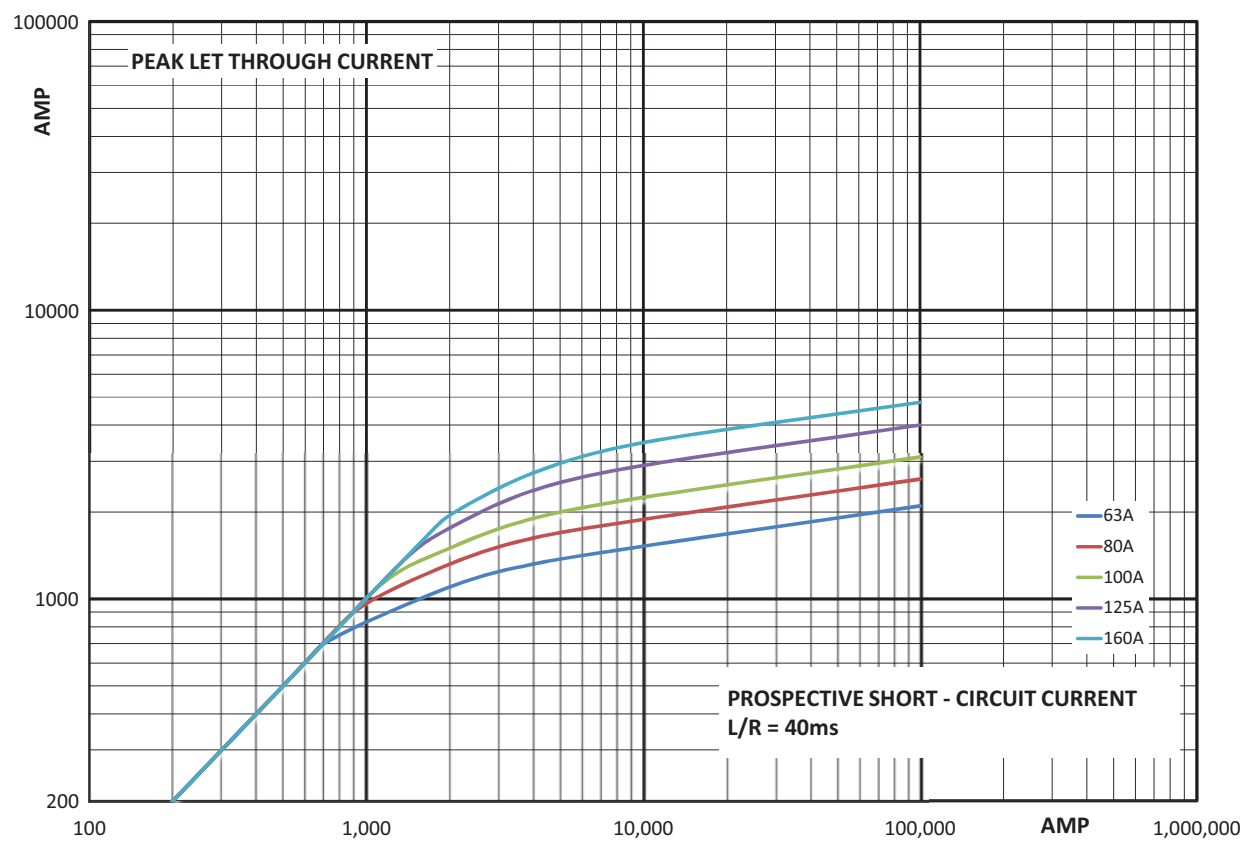
Data sheets: 170K3620 (size 1\*), 170k3622 (size 1), 170K3624 (size 2), 170K3626-A (size 3)



# Traction fuse links

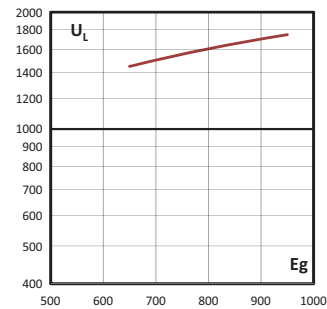
## 170E - Sizes 1\*, 1, 2 and 3, Square body fuse links, 750 V d.c. (IEC), 63 A to 500 A

Cut-off curve - Size 1\*, 63 A to 160 A



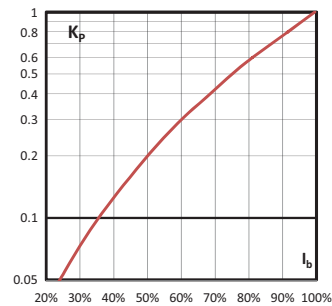
### Arc voltage

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 percent.



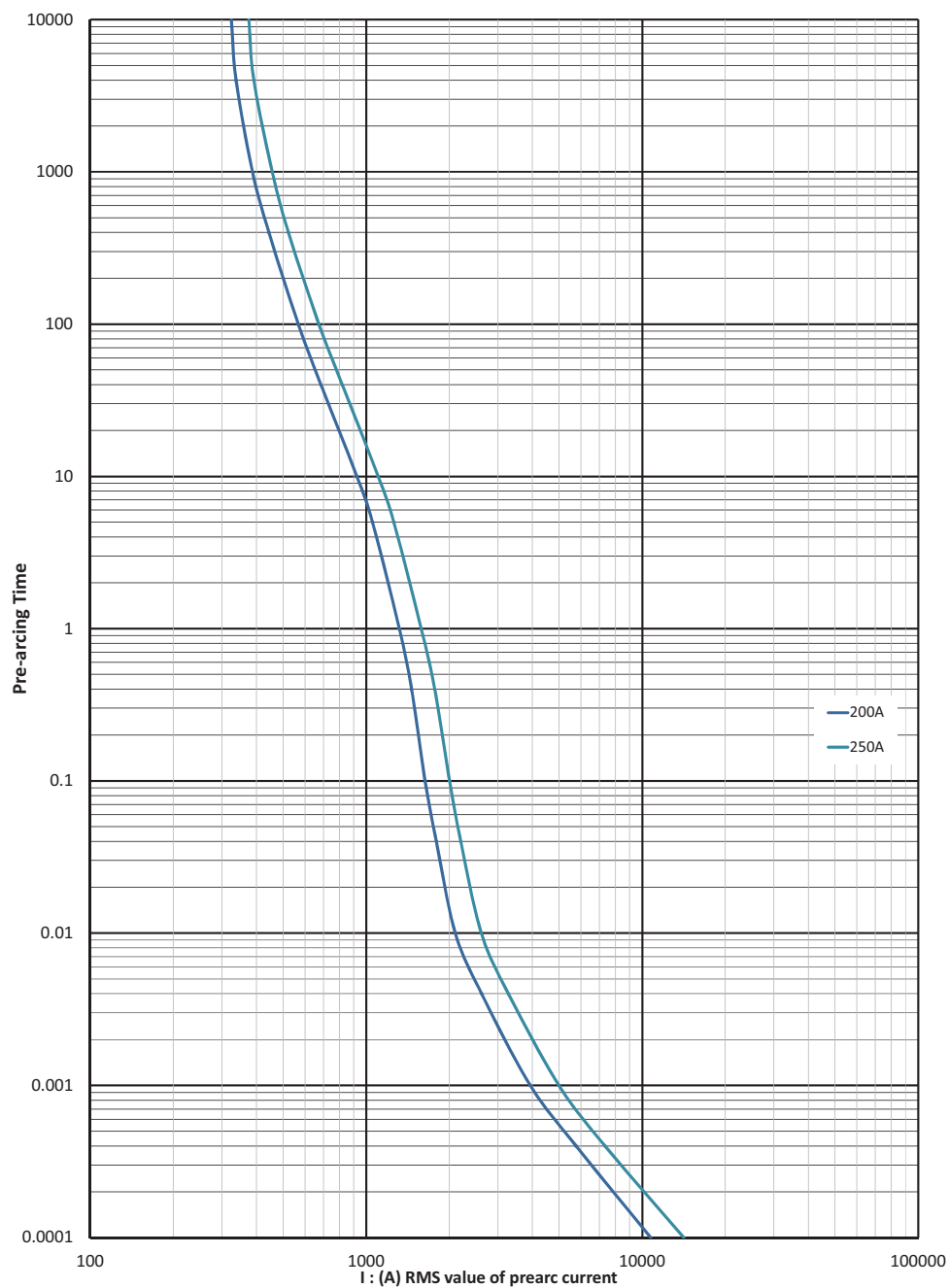
### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



**170E - Sizes 1\*, 1, 2 and 3, Square body fuse links, 750 V d.c. (IEC), 63 A to 500 A**

Time-current curve - Size 1, 200 A and 250 A

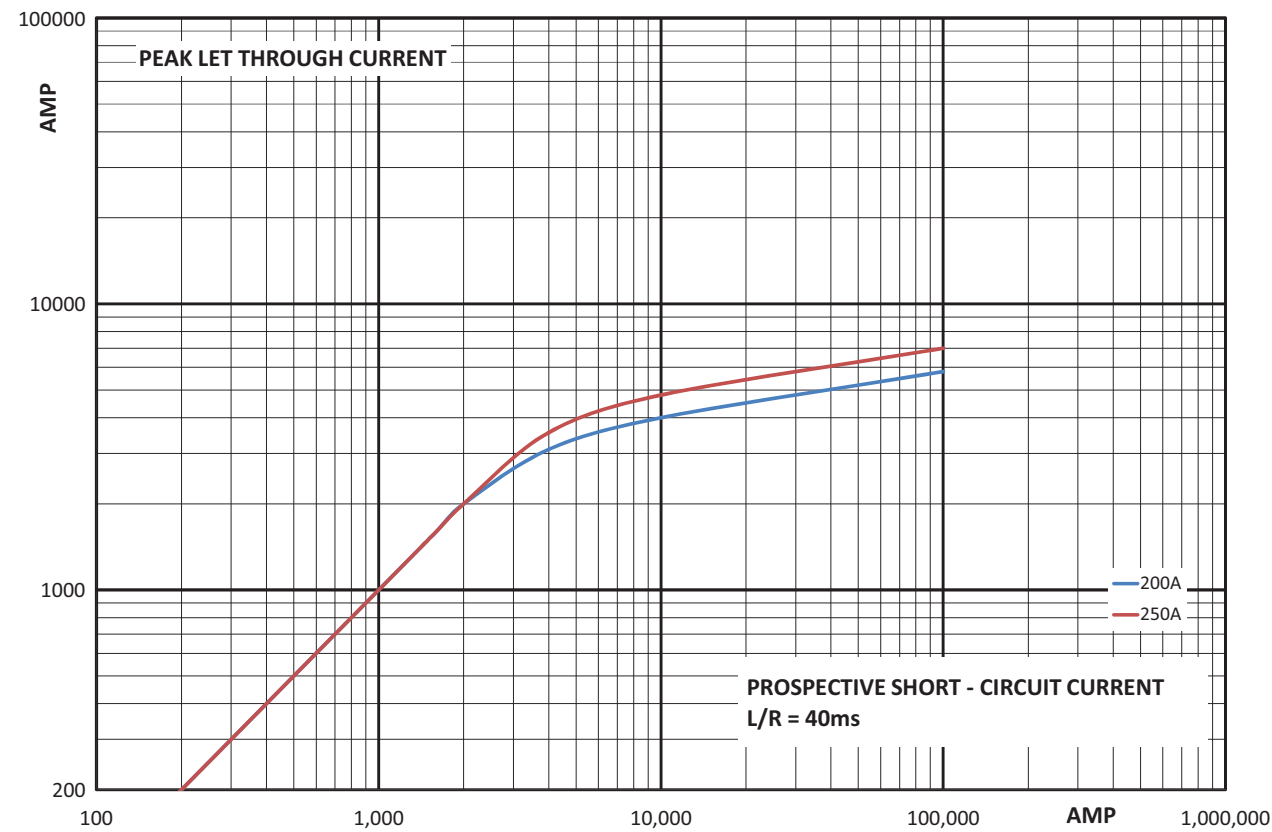


Data sheets: 170K3620 (size 1\*), 170k3622 (size 1), 170K3624 (size 2), 170K3626-A (size 3)

Traction fuse links

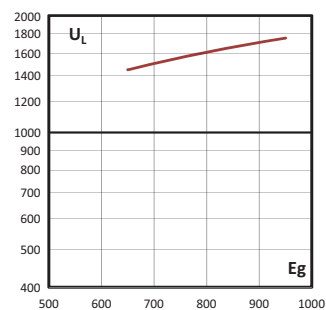
170E - Sizes 1\*, 1, 2 and 3, Square body fuse links, 750 V d.c. (IEC), 63 A to 500 A

Cut-off curve - Size 1, 200 A and 250 A



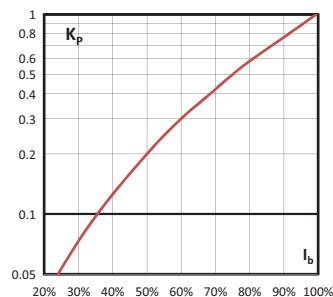
Arc voltage

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 percent.



Watts losses

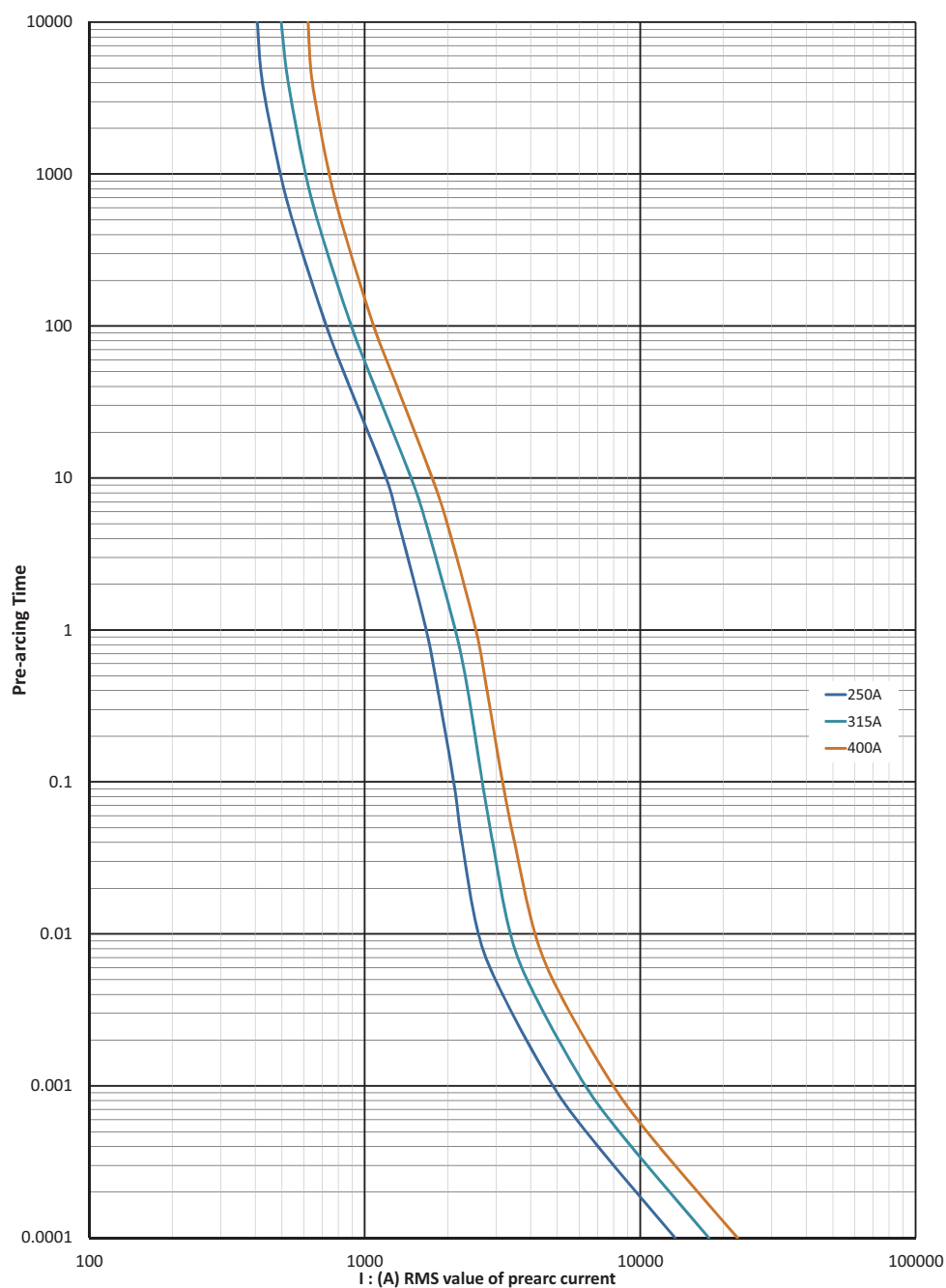
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor,  $K_p$ , is given as a function of the RMS load current,  $I_b$ , in percent of the rated current.



Data sheets: 170K3620 (size 1\*), 170k3622 (size 1), 170K3624 (size 2), 170K3626-A (size 3)

**170E - Sizes 1\*, 1, 2 and 3, Square body fuse links, 750 V d.c. (IEC), 63 A to 500 A**

Time-current curve - Size 2, 250 A to 400 A

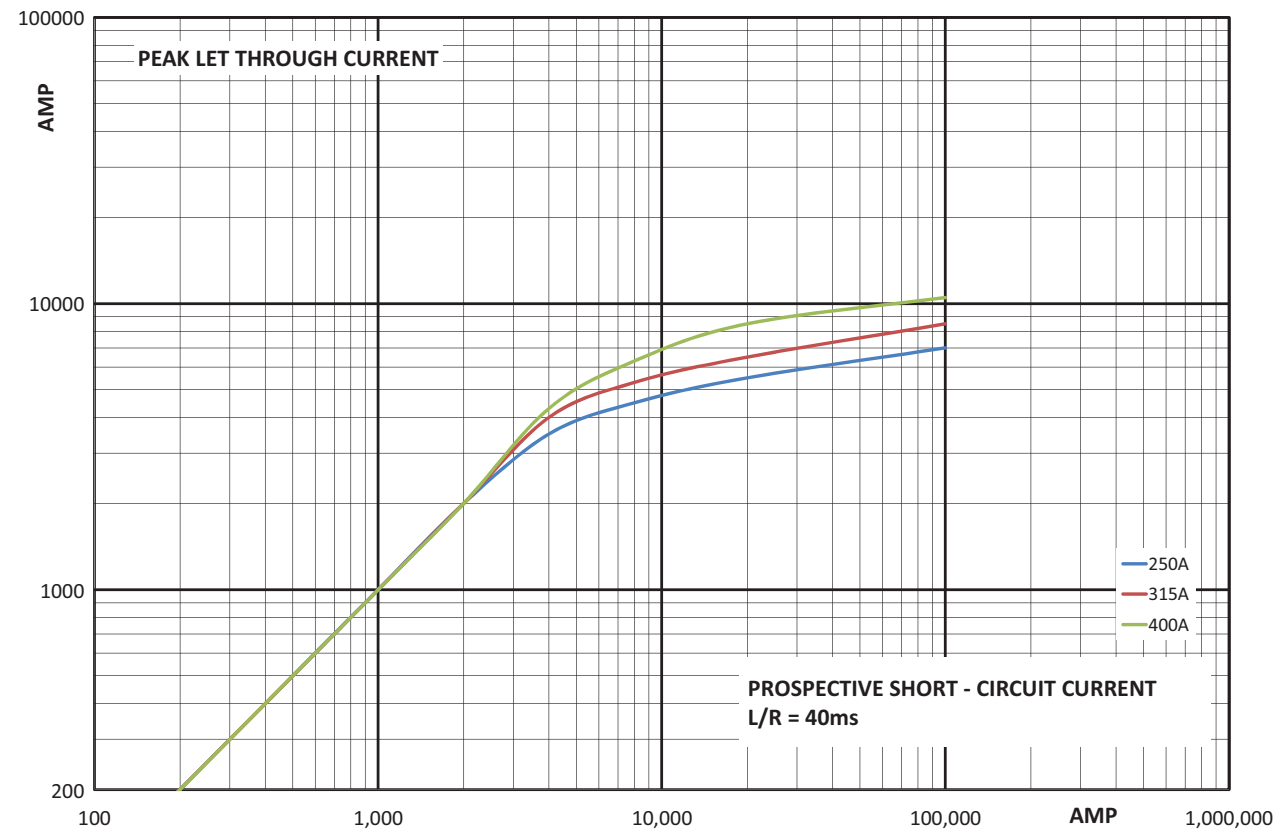


Data sheets: 170K3620 (size 1\*), 170k3622 (size 1), 170K3624 (size 2), 170K3626-A (size 3)

Traction fuse links

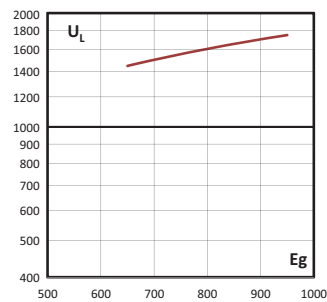
170E - Sizes 1\*, 1, 2 and 3, Square body fuse links, 750 V d.c. (IEC), 63 A to 500 A

Cut-off curve - Size 2, 250 A to 400 A



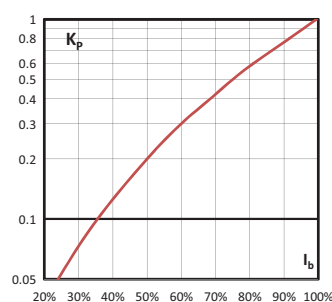
Arc voltage

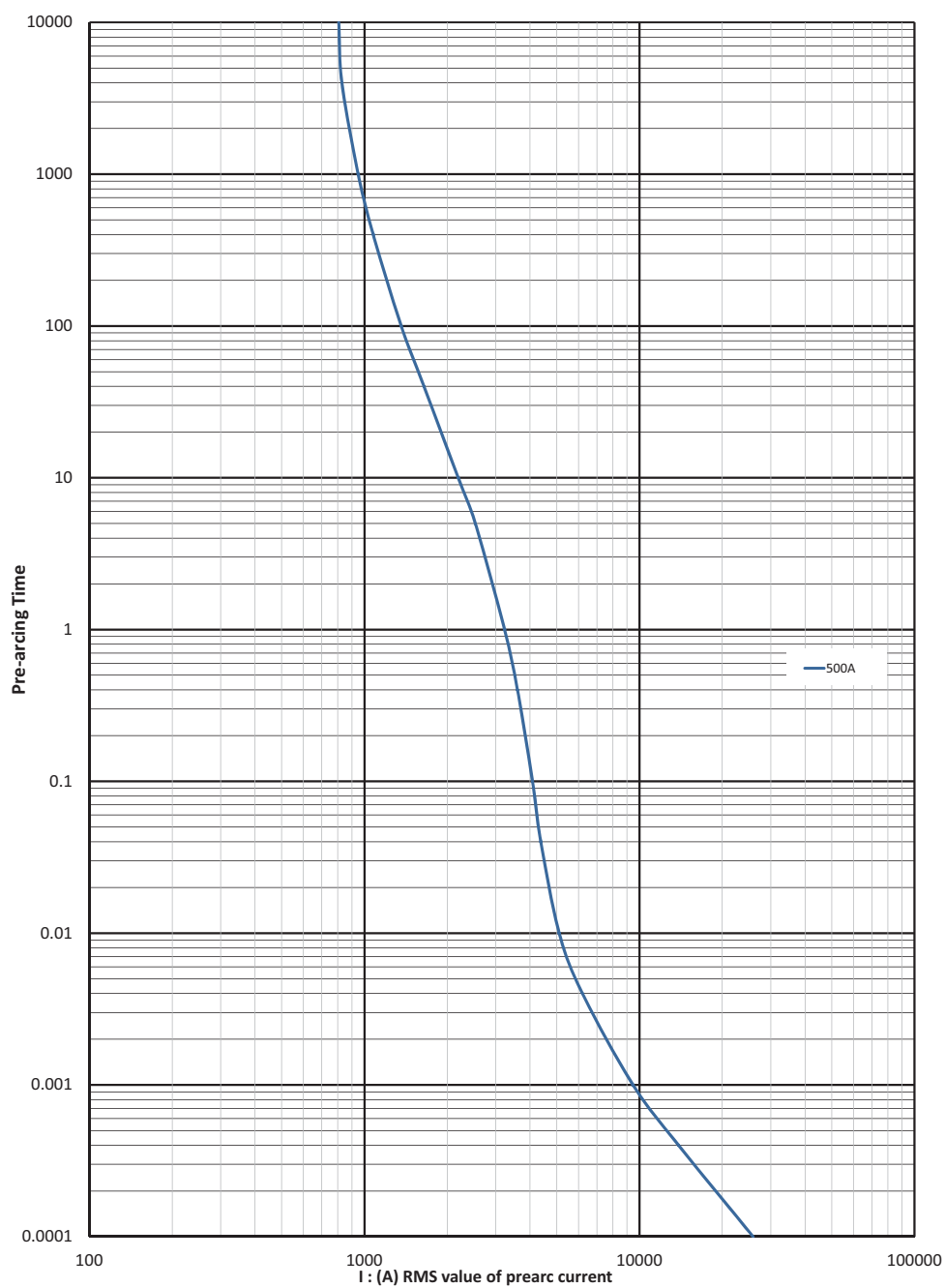
This curve gives the peak arc voltage,  $U_L$ , which may appear across the fuse during its operation as a function of the applied working voltage,  $E_g$ , (RMS) at a power factor of 15 percent.



Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



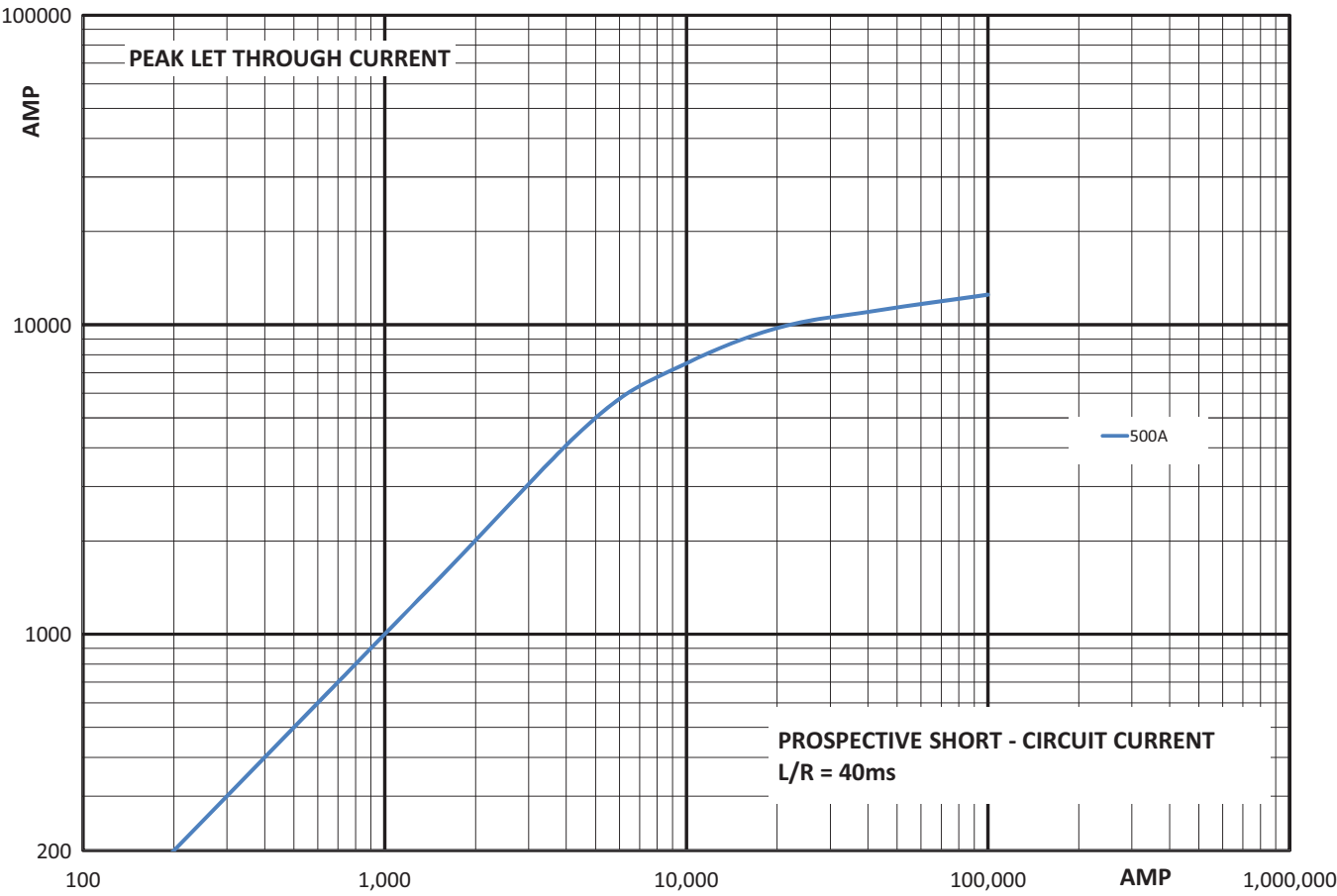
**170E - Sizes 1\*, 1, 2 and 3, Square body fuse links, 750 V d.c. (IEC), 63 A to 500 A****Time-current curve - Size 3, 500 A**

Data sheets: 170K3620 (size 1\*), 170k3622 (size 1), 170K3624 (size 2), 170K3626-A (size 3)

Traction fuse links

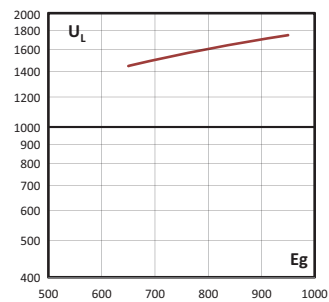
170E - Sizes 1\*, 1, 2 and 3, Square body fuse links, 750 V d.c. (IEC), 63 A to 500 A

Cut-off curve - Size 2, 500 A



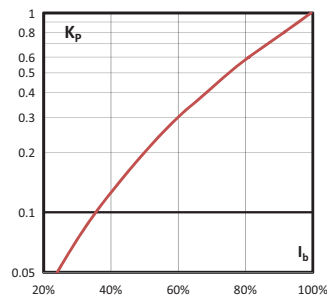
Arc voltage

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 percent.



Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



## 170M7217 - Size 4, Square body fuse links, 1250 V a.c. / 850 V d.c. (IEC), 1400 A

### Specifications

#### Description

Traction flush end square body high speed fuse link suitable for use in third rail collector systems to protect high speed DC breakers in low time constant, high fault conditions. Suitable for 1250 V a.c. / 850 V d.c. systems.

#### Technical data

- Rated voltage: 1250 V a.c. / 850 V d.c. (IEC)
- Rated current: 1400 A
- Tested breaking capacity:
  - 100 kA at 1250 V a.c.
  - 80 kA at 850 V d.c., L/R 8ms
- Operating class: aR

#### Standards / Agency information

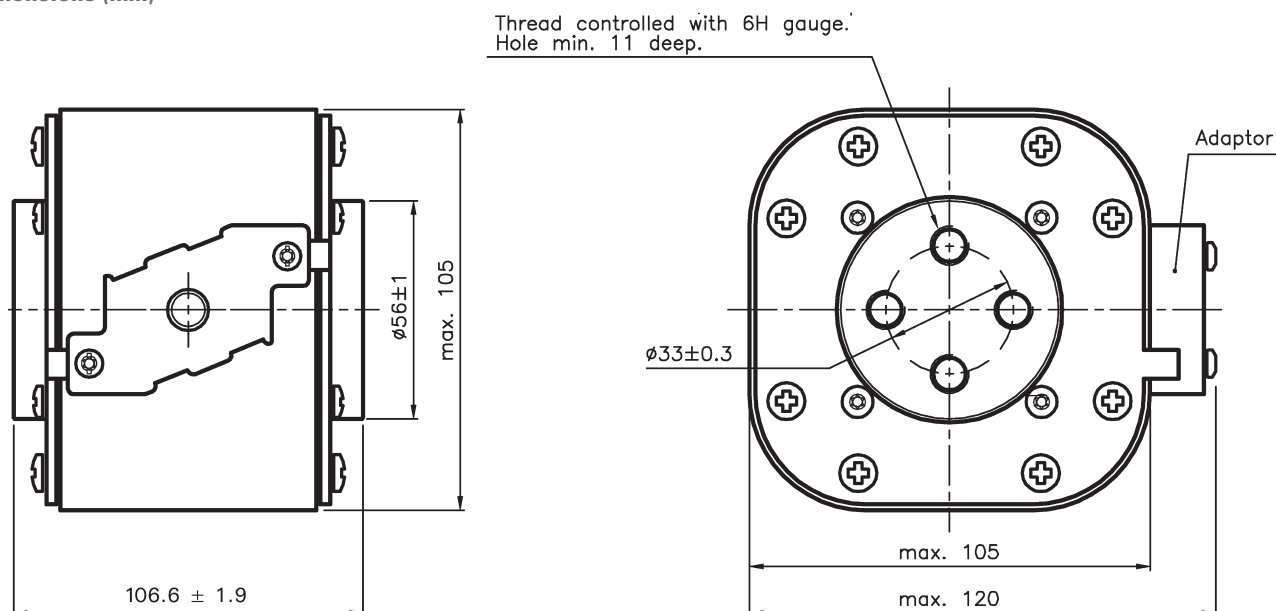
Consult Eaton [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com)



#### Catalogue numbers

| Fuse link<br>body size | Rated voltage                 | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                            | Watts loss<br>(W) | Catalogue<br>numbers |
|------------------------|-------------------------------|-------------------------|---------------------------------------|----------------------------|-------------------|----------------------|
|                        |                               |                         | Pre-arcing                            | Clearing<br>at 1250 V a.c. |                   |                      |
| 4                      | 850 V d.c./ 1250 V a.c. (IEC) | 1400                    | 800,000                               | 5,000,000                  | 195               | 170M7217             |
|                        | 1000 V d.c. 180 kA IR (UL)    |                         |                                       |                            |                   |                      |
|                        | 1200 V d.c. 85 kA IR (UL)     |                         |                                       |                            |                   |                      |

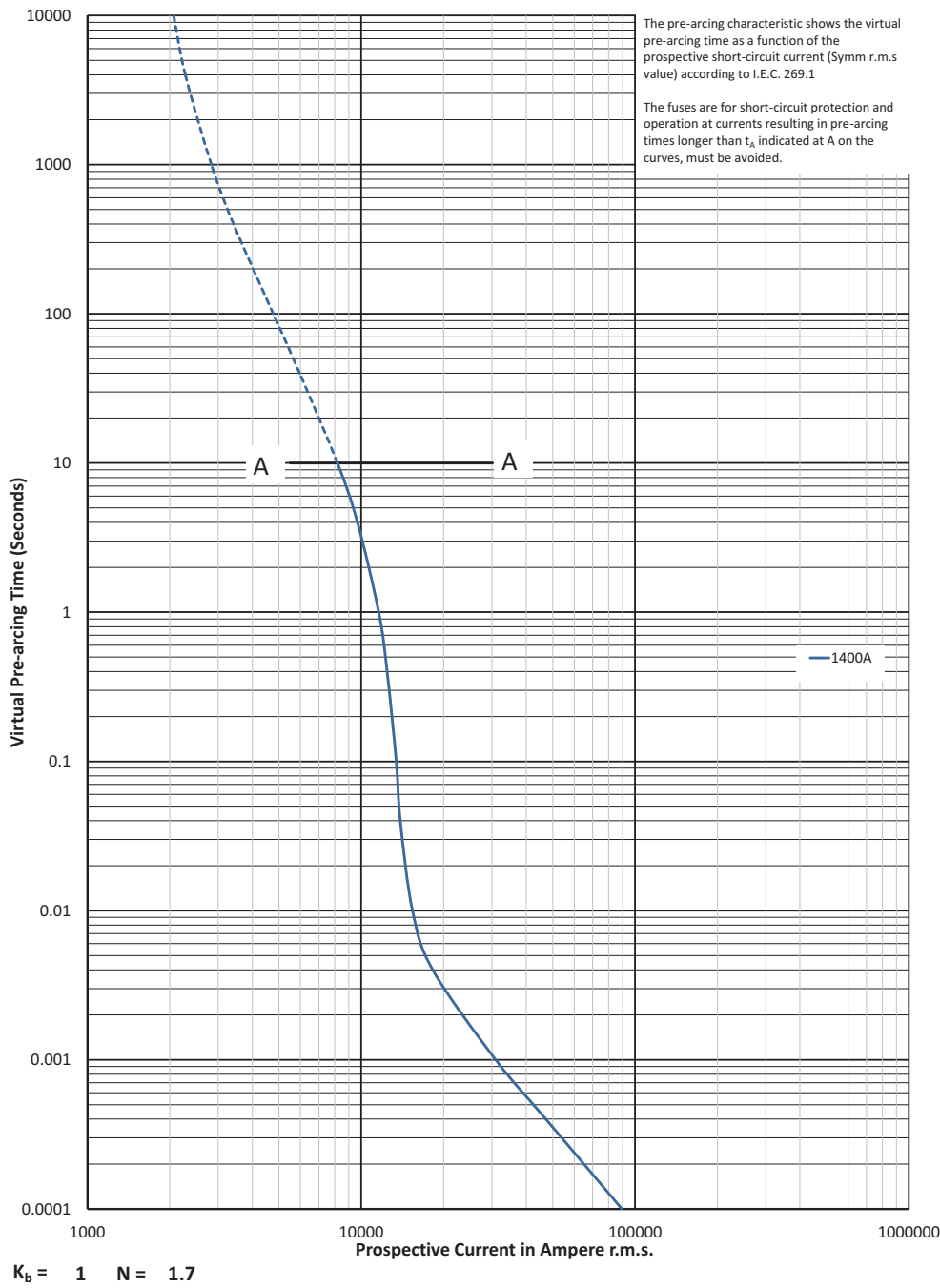
#### Dimensions (mm)





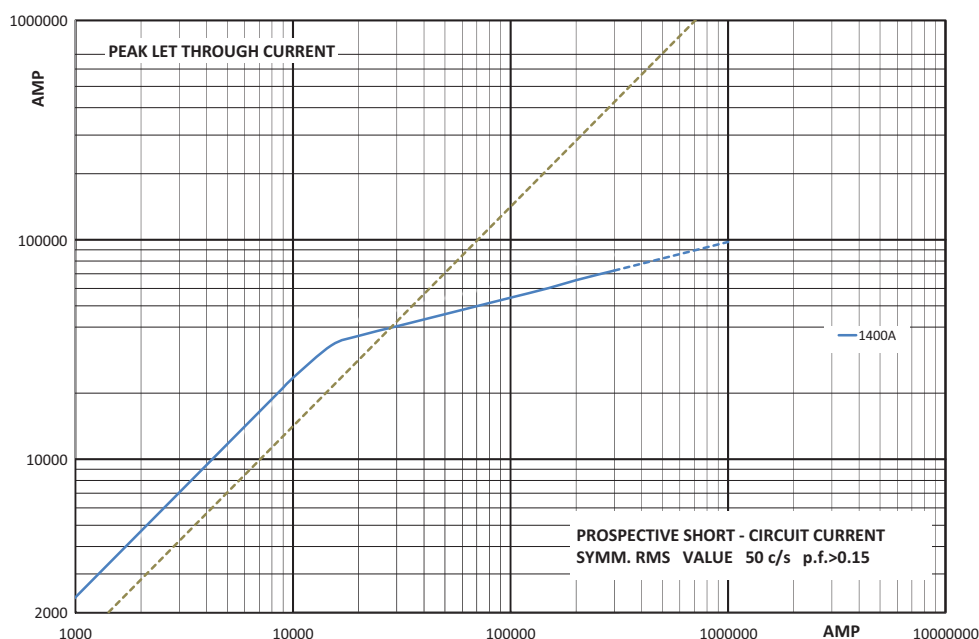
170M7217 - Size 4, Square body fuse links, 1250 V a.c. / 850 V d.c. (IEC), 1400 A

Time-current curve - 1400 A



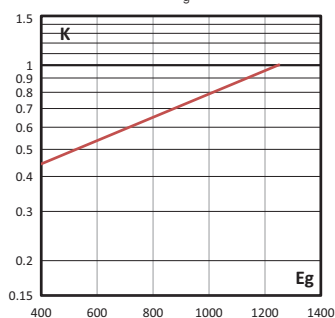
## 170M7217 - Size 4, Square body fuse links, 1250 V a.c. / 850 V d.c. (IEC), 1400 A

### Cut-off curve - 1400 A



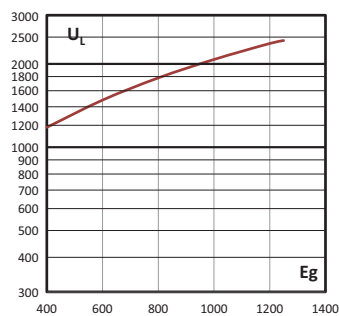
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



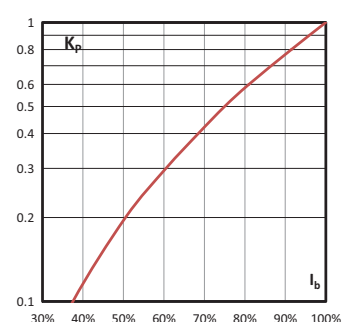
### Arc voltage

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 percent.



### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



Traction fuse links

170M - Size 1\*, Square body fuse links, 1200 V d.c. (IEC), 20 A to 215A

Specifications

Description

Traction bolted tags square body high speed fuse links for superior protection of DC third rail applications up to 1200 V d.c.

Technical data

- Rated voltage: 1200 V d.c. (IEC)
- Rated current: 20 A to 215 A
- Tested breaking capacity: 100 kA at 1200 V d.c., L/R 15ms
- Operating class: aR

Standards / Agency information

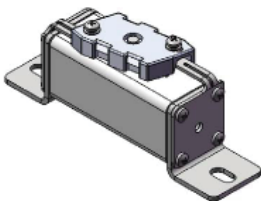
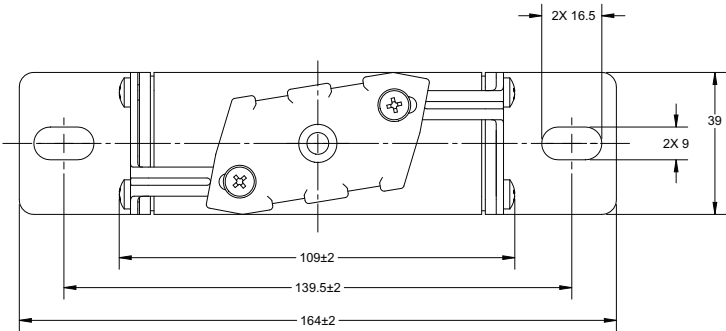
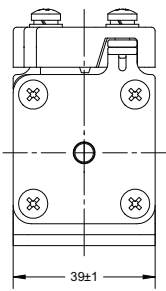
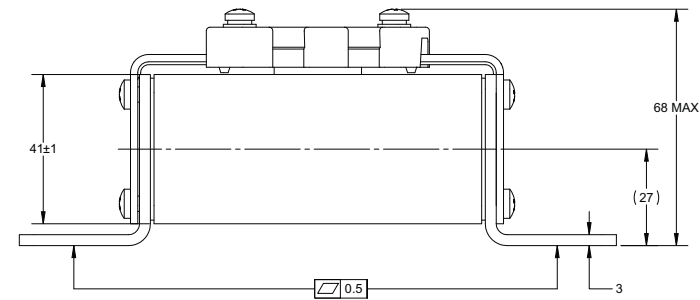
IEC 60269

Catalogue numbers

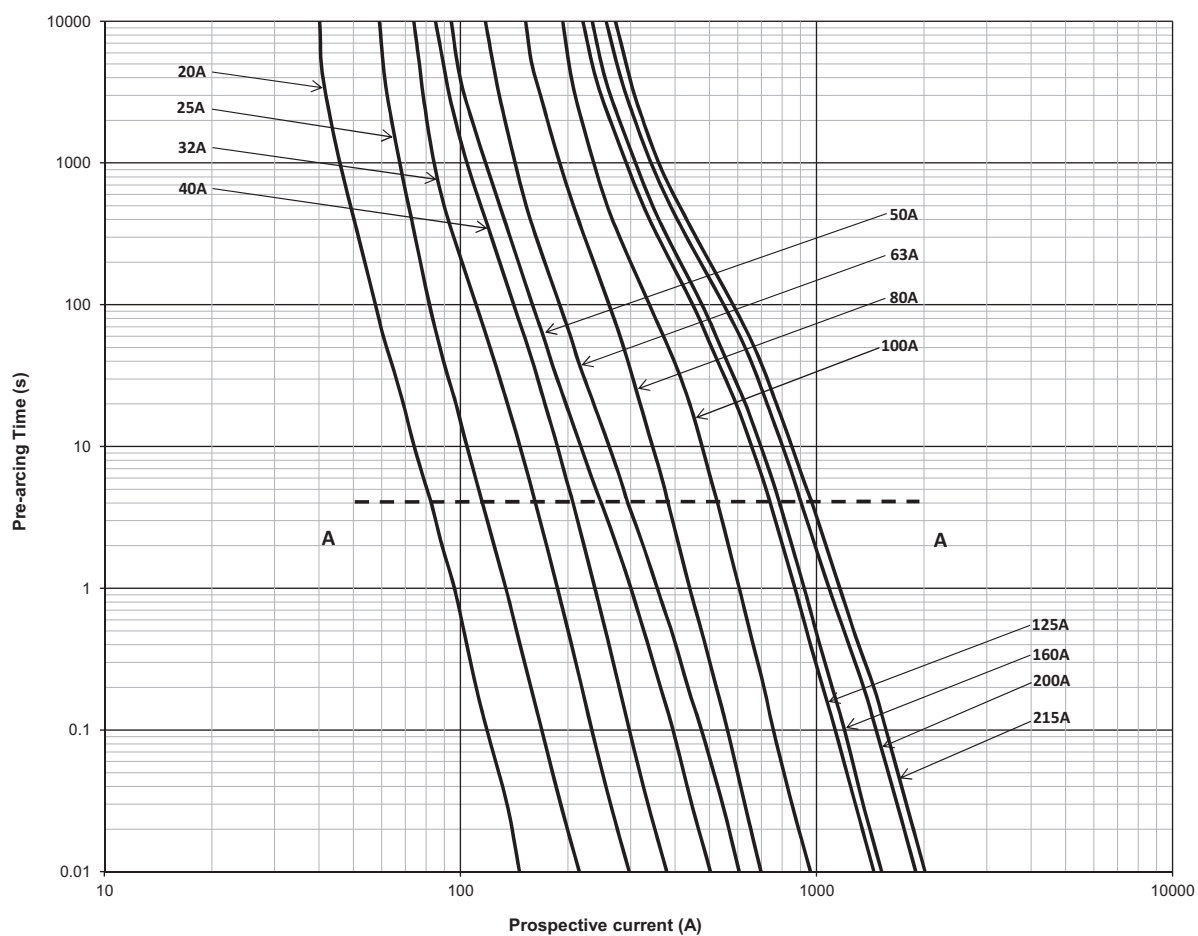


| Fuse link type  | Fuse link body size | Rated voltage     | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                         | Watts loss (W)     |                | Catalogue numbers |
|-----------------|---------------------|-------------------|----------------------|---------------------------------------|-------------------------|--------------------|----------------|-------------------|
|                 |                     |                   |                      | Pre-arcing                            | Clearing at 1200 V d.c. | 0.8 I <sub>n</sub> | I <sub>n</sub> |                   |
| Single slot tag | 1*                  | 1200 V d.c. (IEC) | 20                   | 82                                    | 249                     | 1                  | 2              | 170M2100          |
|                 |                     |                   | 25                   | 173                                   | 526                     | 4                  | 8              | 170M2101          |
|                 |                     |                   | 32                   | 327                                   | 994                     | 5                  | 9              | 170M2102          |
|                 |                     |                   | 40                   | 550                                   | 1675                    | 1                  | 9              | 170M2103          |
|                 |                     |                   | 50                   | 950                                   | 2890                    | 7                  | 13             | 170M2104          |
|                 |                     |                   | 63                   | 1310                                  | 3990                    | 5                  | 9              | 170M2105          |
|                 |                     |                   | 80                   | 1970                                  | 6000                    | 13                 | 23             | 170M2106          |
|                 |                     |                   | 100                  | 3800                                  | 11,600                  | 14                 | 26             | 170M2107          |
|                 |                     |                   | 125                  | 8550                                  | 26,025                  | 13                 | 24             | 170M2108          |
|                 |                     |                   | 160                  | 8770                                  | 26,700                  | 24                 | 44             | 170M2109          |
|                 |                     |                   | 200                  | 15,200                                | 46,300                  | 29                 | 52             | 170M2110          |
|                 |                     |                   | 215                  | 16,430                                | 50,000                  | 32                 | 58             | 170M2111          |

Dimensions (mm)



Data sheet: 5785523

**170M - Size 1\*, Square body fuse links, 1200 V d.c. (IEC), 20 A to 215A****Time-current curve - 20 A to 215 A**

# Traction fuse links

## 170F - Size 2, Square body fuse links, 1200 V d.c. (IEC), 160 A to 420 A

### Specifications

#### Description

Traction bolted tags square body high speed fuse link for superior protection in DC traction applications up to 1200 V d.c.

#### Technical data

- Rated voltage:
  - 1200 V d.c. (IEC)
  - 1050 V d.c. (UL)
- Rated current: 160 A to 420 A
- Breaking capacity:
  - 100 kA at 1000 V d.c., L/R = 45ms
  - 100 kA at 1200 V d.c., L/R = 15ms
- Operating class: aR

#### Standards / Agency information

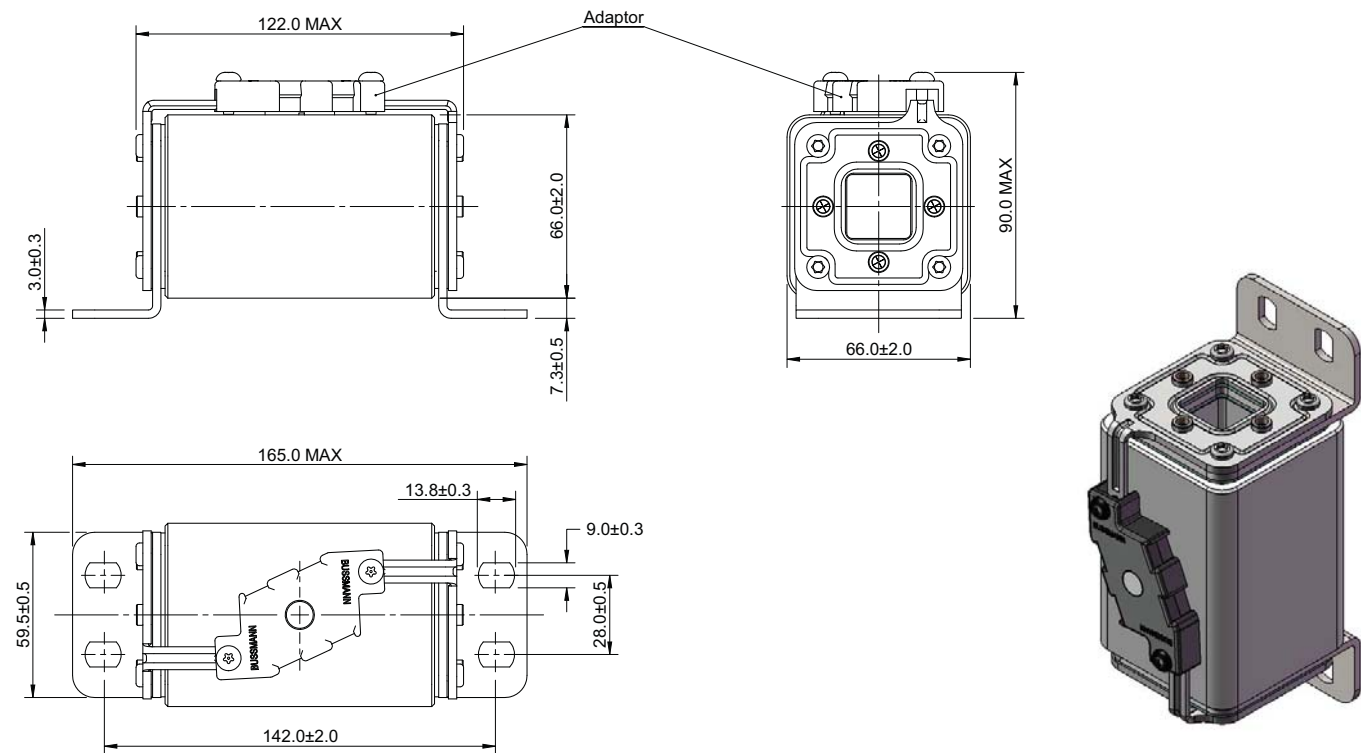
Contact Eaton [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com)



#### Catalogue numbers

| Fuse link type     | Fuse link body size | Rated voltage     | Rated current (Amps) | I <sub>t</sub> (A <sup>2</sup> Sec) |                      | Watts loss (W) | Catalogue numbers |
|--------------------|---------------------|-------------------|----------------------|-------------------------------------|----------------------|----------------|-------------------|
|                    |                     |                   |                      | 1000 V d.c. L/R 15ms                | 1000 V d.c. L/R 45ms |                |                   |
| Double slotted tag | 2                   | 1200 V d.c. (IEC) | 160                  | 12,000                              | 20,000               | 75             | 170F8230          |
|                    |                     |                   | 200                  | 20,000                              | 35,000               | 85             | 170F8231          |
|                    |                     |                   | 250                  | 43,000                              | 75,000               | 94             | 170F8232          |
|                    |                     | 1050 V d.c. (UL)  | 315                  | 87,000                              | 150,000              | 104            | 170F8233          |
|                    |                     |                   | 400                  | 180,000                             | 310,000              | 120            | 170F8234          |
|                    |                     |                   | 420                  | 215,000                             | 375,000              | 122            | 170F8235          |

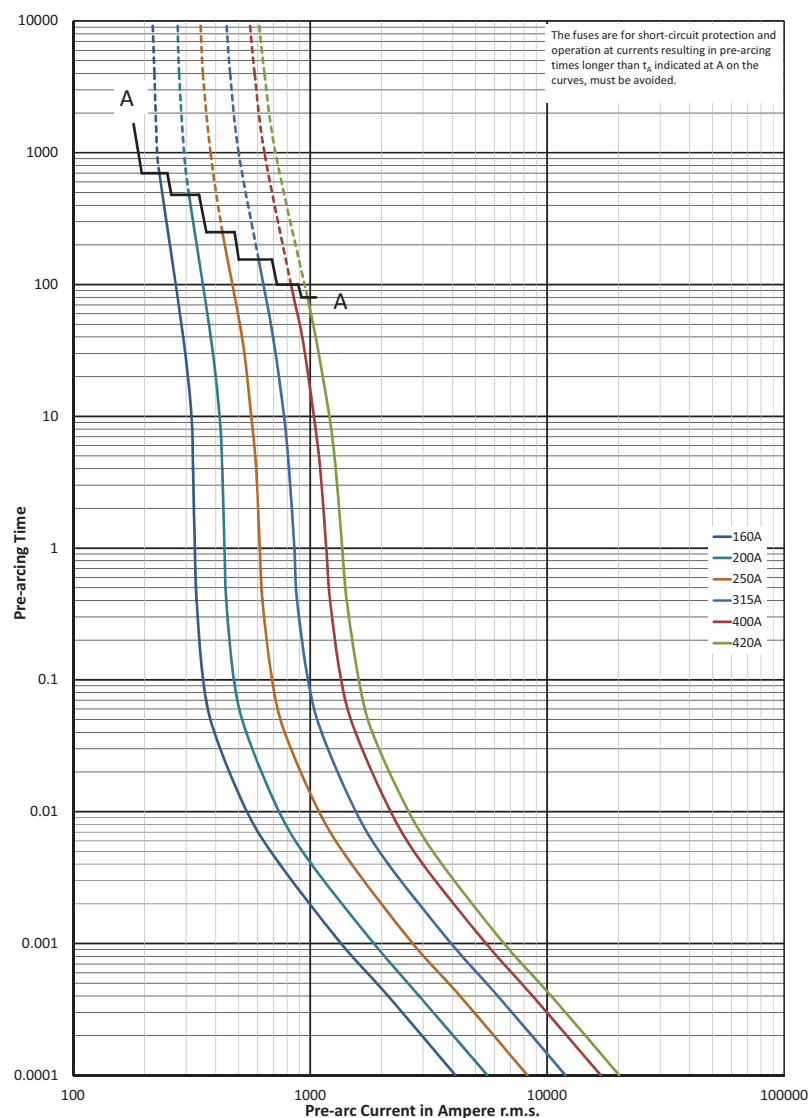
#### Dimensions (mm)



Data sheet: 170K5520

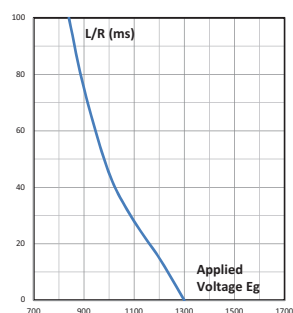
## 170F - Size 2, Square body fuse links, 1200 V d.c. (IEC), 160 A to 420 A

### Time-current curve - 160 A to 420 A



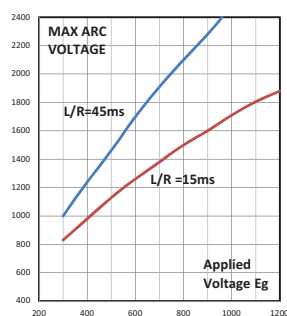
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



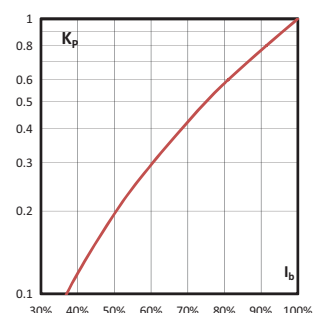
### Arc voltage

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 percent.



### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



Traction fuse links

170E - Size 1\*, Square body fuse links, 2000 V d.c. (IEC), 10 A to 80 A

Specifications

Description

Traction bolted tags square body high speed fuse link which provides superior protection in DC traction applications up to 2000 V d.c.

Technical data

- Rated voltage: 2000 V d.c. (IEC)
- Rated current: 10 A to 80 A
- Tested breaking capacity: 40 kA at 2000 V d.c., L/R 30ms
- Operating class: gR

Standards / Agency information

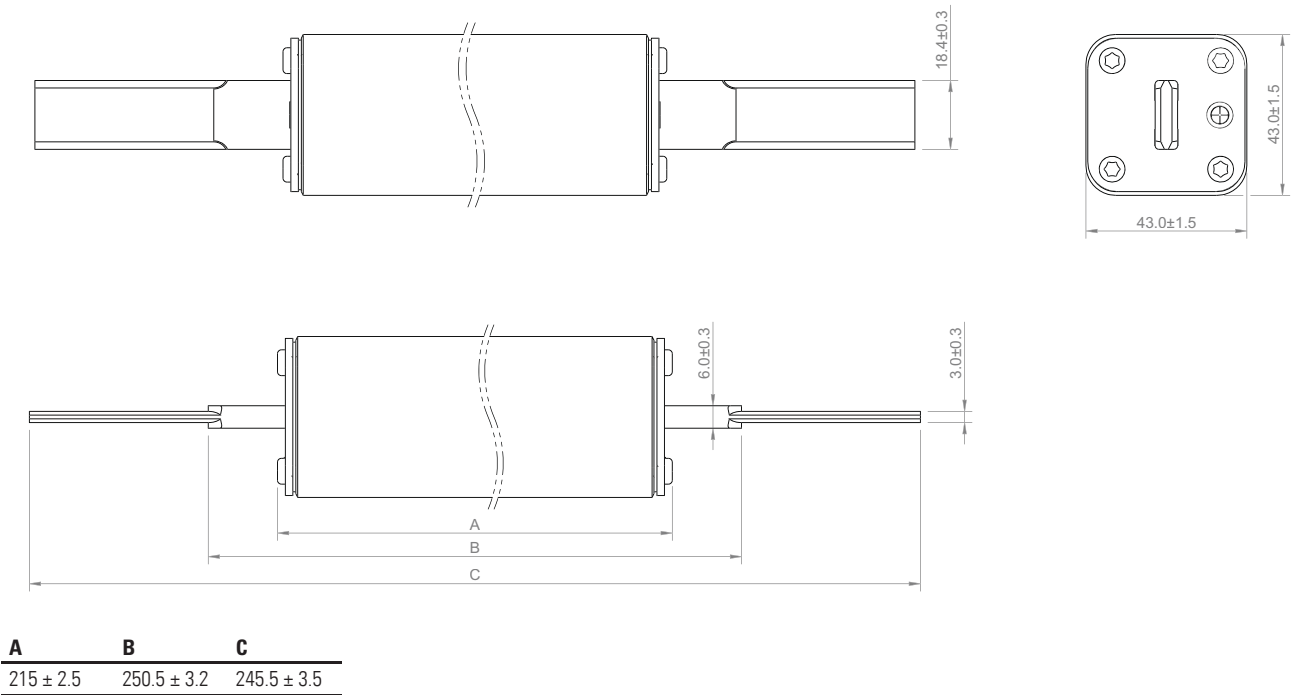
Contact Eaton [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com)



Catalogue numbers

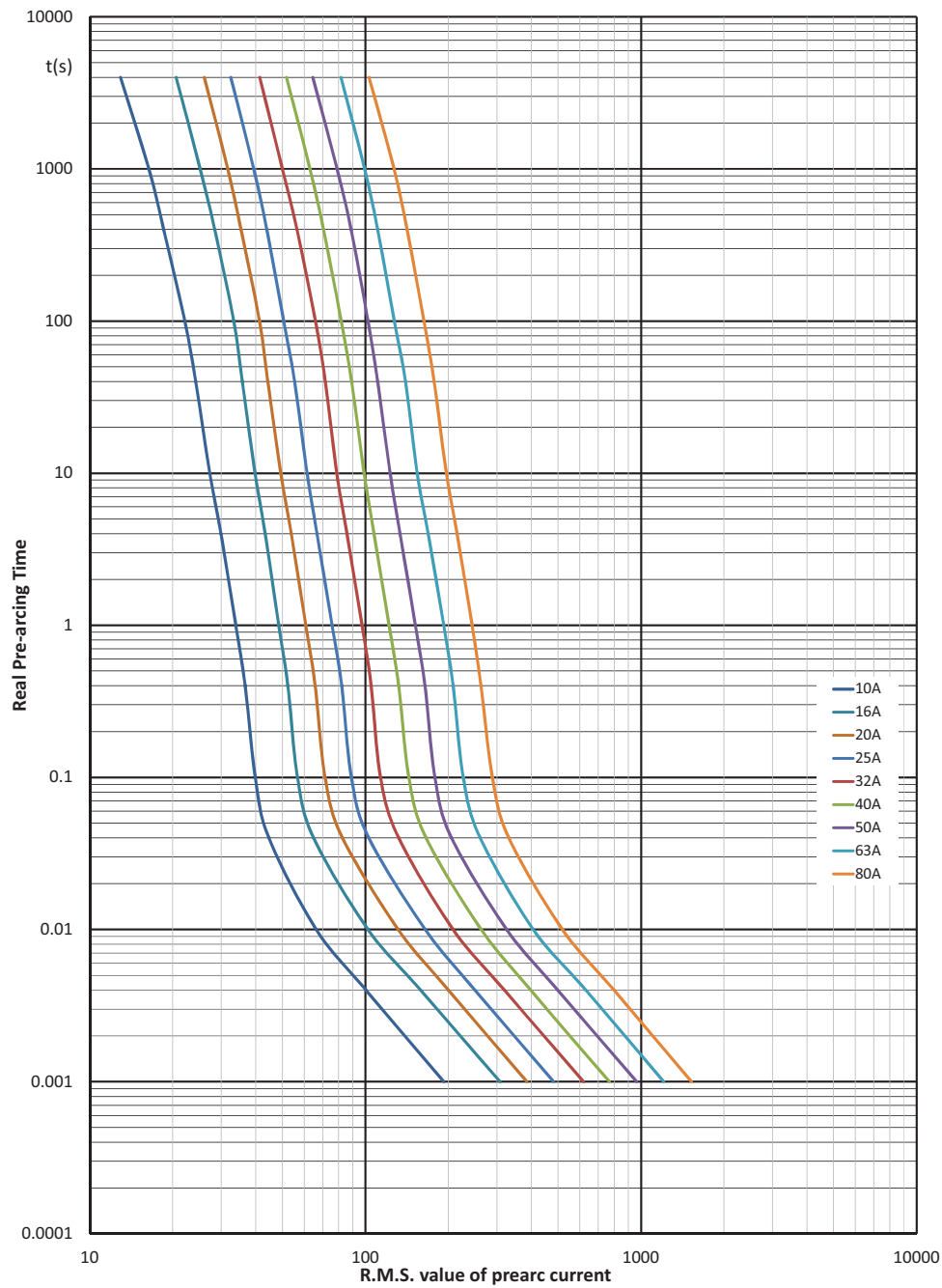
| Fuse link type       | Fuse link body size | Rated voltage | Rated current (Amps) | Watts loss (W) | Catalogue numbers |
|----------------------|---------------------|---------------|----------------------|----------------|-------------------|
| Knife blade style 1* | 2000 V d.c.(IEC)    |               | 10                   | 7              | 170E3977          |
|                      |                     |               | 12                   | 8              | 170E3982          |
|                      |                     |               | 16                   | 11             | 170E3971          |
|                      |                     |               | 20                   | 13             | 170E3906          |
|                      |                     |               | 25                   | 17             | 170E3907          |
|                      |                     |               | 32                   | 22             | 170E3908          |
|                      |                     |               | 40                   | 27             | 170E3909          |
|                      |                     |               | 50                   | 34             | 170E3910          |
|                      |                     |               | 63                   | 43             | 170E3911          |
|                      |                     |               | 80                   | 50             | 170E3912          |

Dimensions (mm)



170E - Size 1\*, Square body fuse links, 2000 V d.c. (IEC), 10 A to 80 A

Time-current curve - 10 A to 80 A

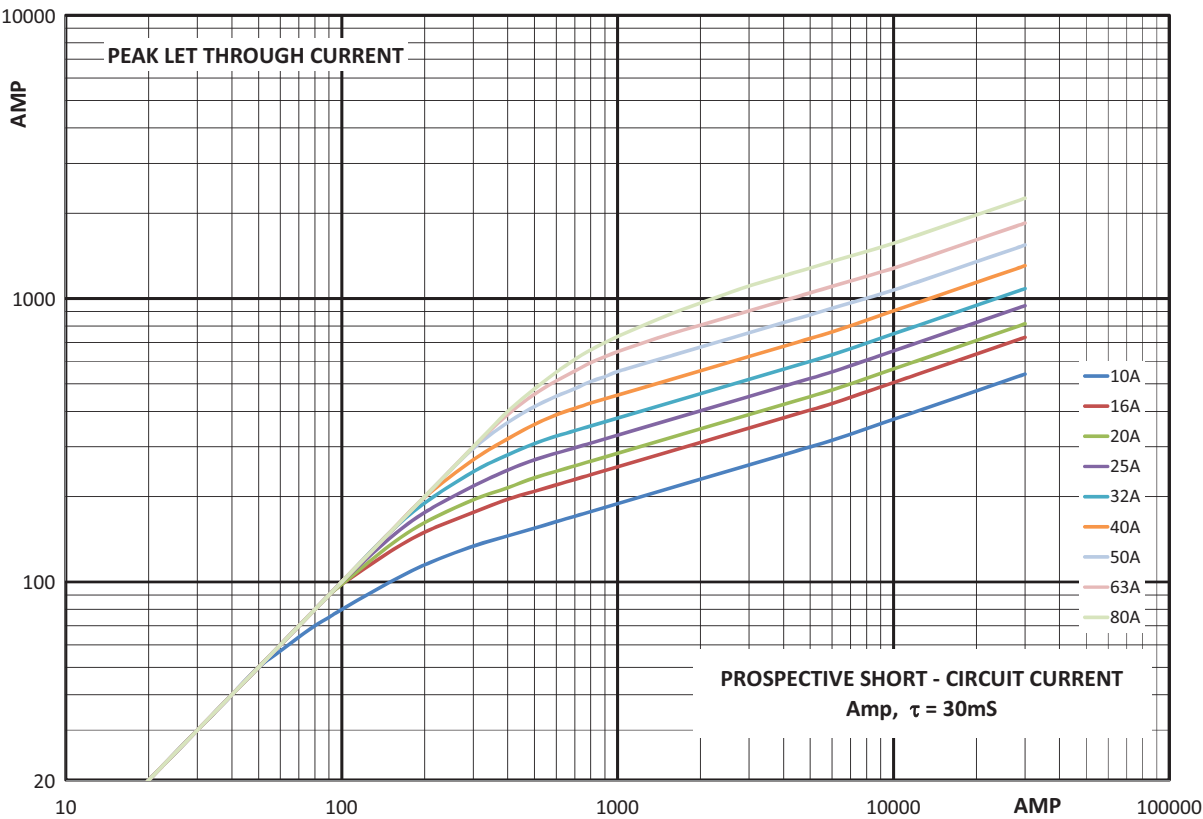




Traction fuse links

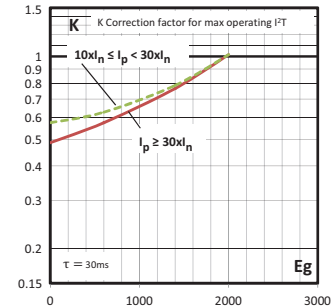
170E - Size 1\*, Square body fuse links, 2000 V d.c. (IEC), 10 A to 80 A

Cut-off curve - 10 A to 80 A



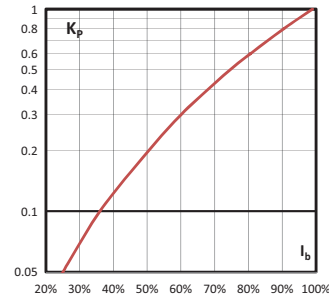
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



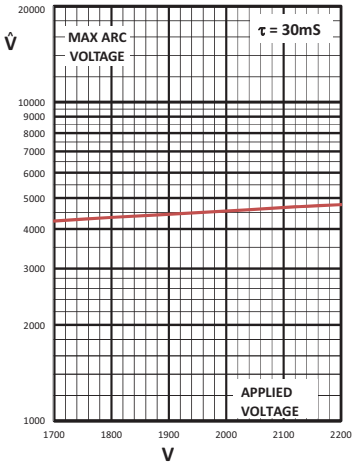
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>b</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



## 170E - Size 1\*, Square body fuse links, 2000 V d.c. (IEC), 10 A to 125 A

### Specifications

#### Description

Traction bolted tags square body high speed fuse link which provides superior protection in DC traction applications up to 2000 V d.c..

#### Technical data

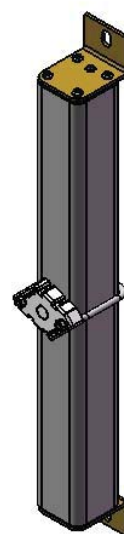
- Rated voltage: 2000 V d.c. (IEC)
- Rated current: 10 A to 125 A
- Tested breaking capacity: 40 kA at 2000 V d.c., L/R 20ms
- Operating class: aR

#### Standards / Agency information

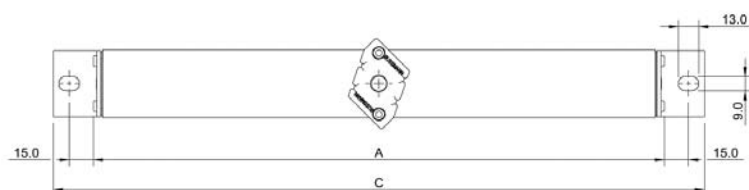
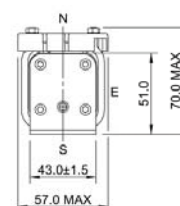
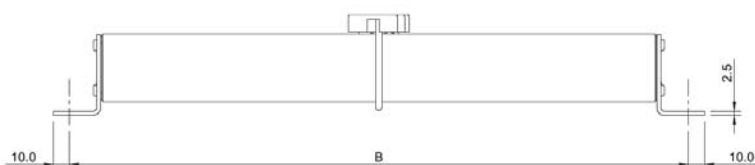
Contact Eaton [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com)

#### Catalogue numbers

| Fuse link type     | Fuse link body size | Rated voltage     | Rated current (Amps) | Watts loss (W) | Catalogue numbers |
|--------------------|---------------------|-------------------|----------------------|----------------|-------------------|
| Bolted blade Style | 1*                  | 2000 V d.c. (IEC) | 20                   | 13             | 170E3937          |
|                    |                     |                   | 25                   | 16             | 170E3938          |
|                    |                     |                   | 32                   | 20             | 170E3939          |
|                    |                     |                   | 40                   | 25             | 170E3940          |
|                    |                     |                   | 50                   | 32             | 170E3941          |
|                    |                     |                   | 63                   | 40             | 170E3942          |
|                    |                     |                   | 80                   | 51             | 170E3943          |
|                    |                     |                   | 100                  | 64             | 170E3944          |
|                    |                     |                   | 125                  | 80             | 170E3945          |
|                    |                     |                   | 10                   | 7              | 170E3976          |
|                    |                     |                   | 16                   | 11             | 170E3970          |
|                    |                     |                   | 20                   | 13             | 170E3950          |
|                    |                     |                   | 25                   | 17             | 170E3951          |
|                    |                     |                   | 32                   | 22             | 170E3952          |
|                    |                     |                   | 40                   | 27             | 170E3953          |
|                    |                     |                   | 50                   | 34             | 170E3954          |
|                    |                     |                   | 63                   | 43             | 170E3955          |
|                    |                     |                   | 80                   | 50             | 170E3956          |



#### Dimensions (mm)

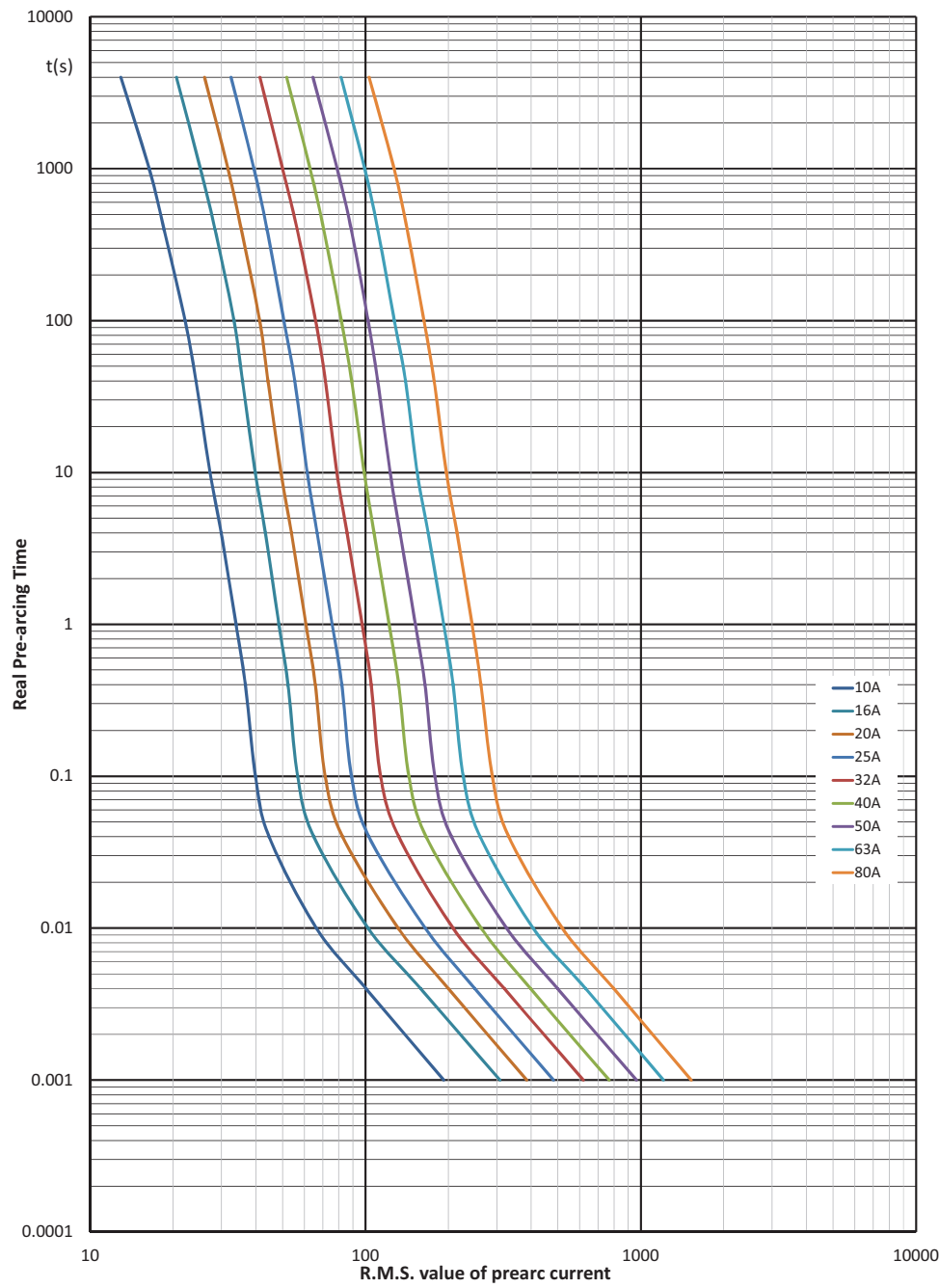


| A   | B   | C   |
|-----|-----|-----|
| 217 | 246 | 266 |

Data sheets: 170K4538 (10 A to 80 A), 170K4900 (20 A to 125 A)

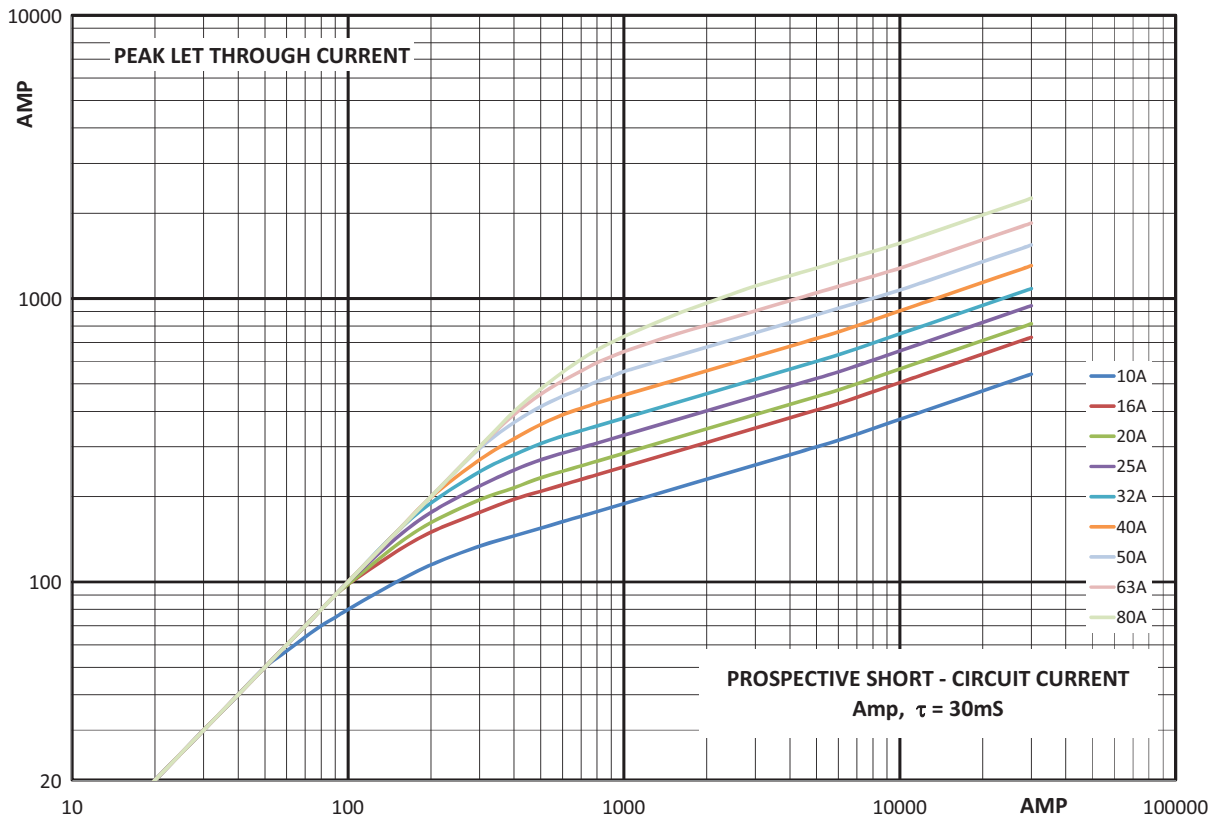
170E - Size 1\*, Square body fuse links, 2000 V d.c. (IEC), 10 A to 125 A

Time-current curve - 10 A to 80 A



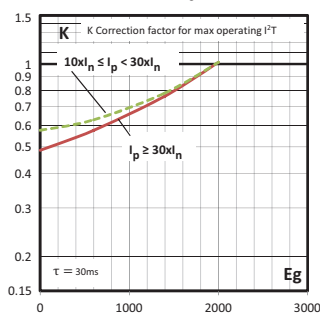
## 170E - Size 1\*, Square body fuse links, 2000 V d.c. (IEC), 10 A to 125 A

### Cut-off curve - 10 A to 80 A



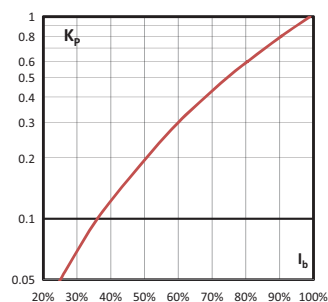
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



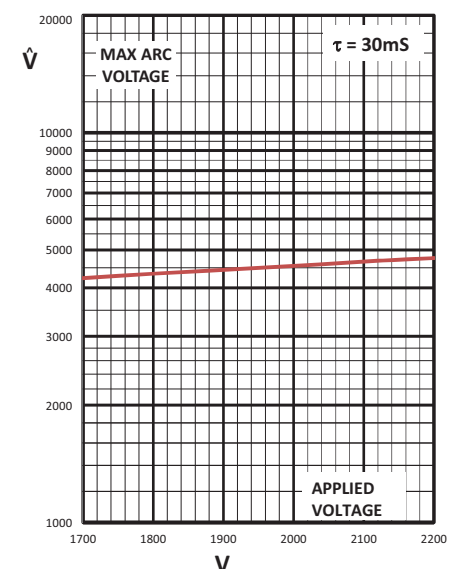
### Arc voltage

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 percent.



### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.

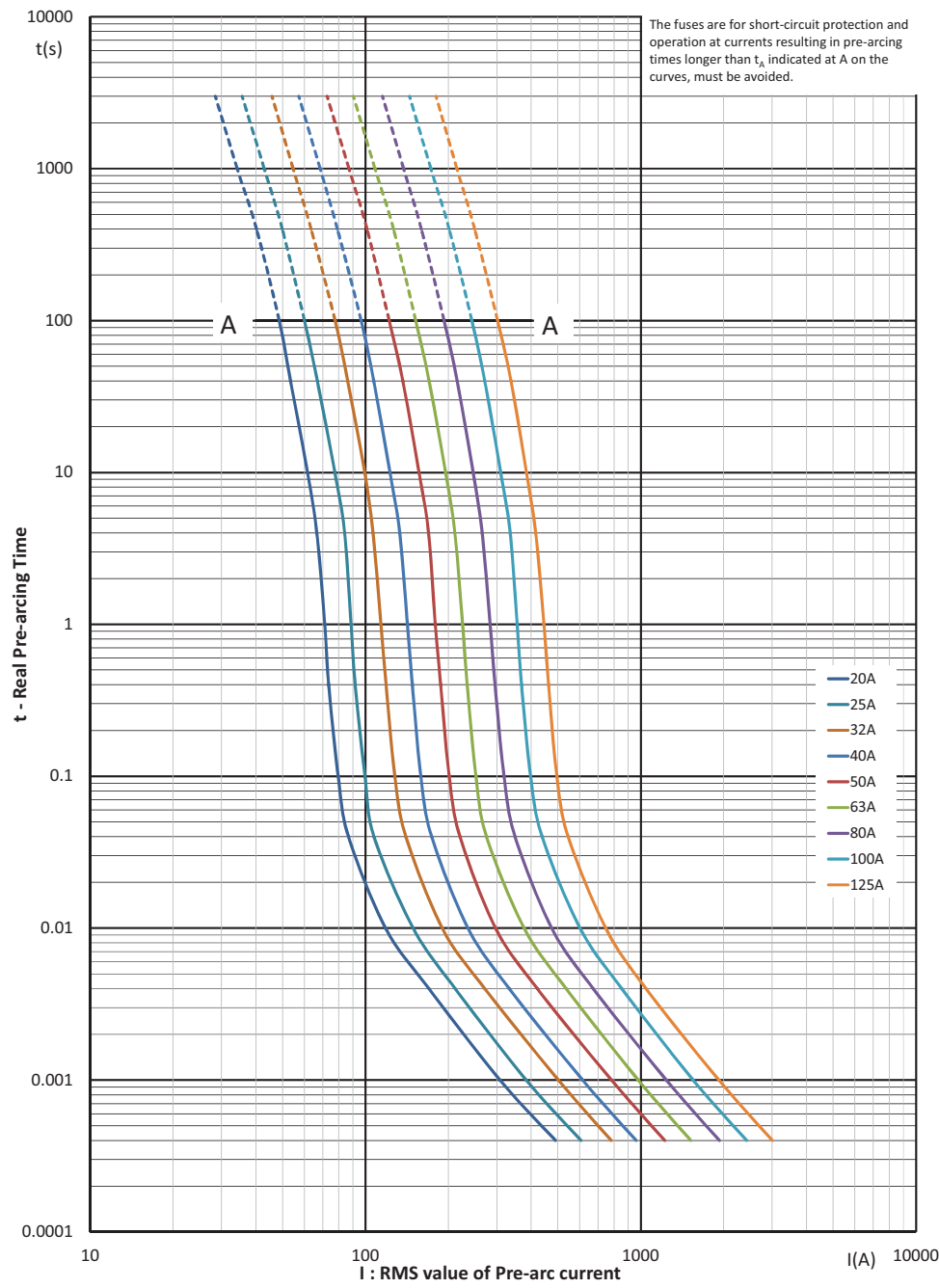


Data sheets: 170K4538 (10 A to 80 A), 170K4900 (20 A to 125 A)

Traction fuse links

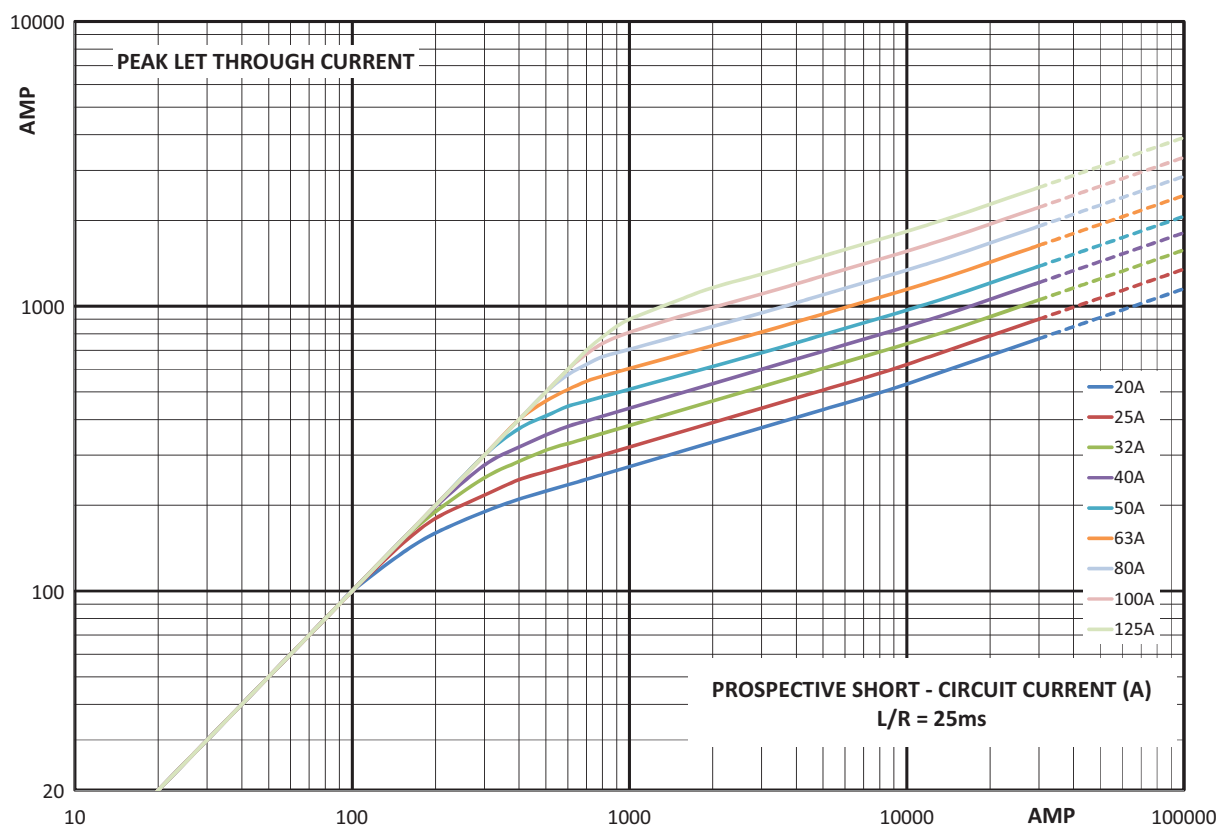
170E - Size 1\*, Square body fuse links, 2000 V d.c. (IEC), 10 A to 125 A

Time-current curve - 20 A to 125 A



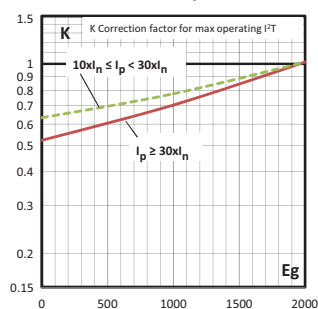
## 170E - Size 1\*, Square body fuse links, 2000 V d.c. (IEC), 10 A to 125 A

### Cut-off curve - 20 A to 125 A



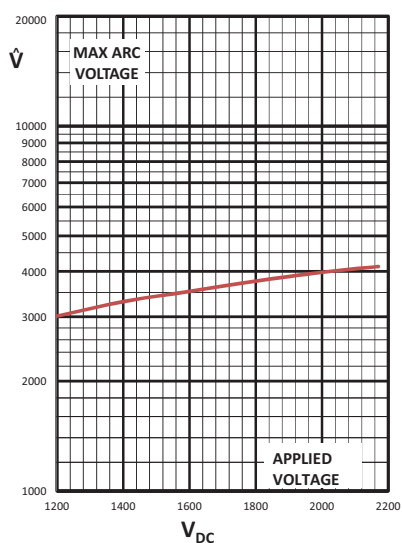
### Total clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



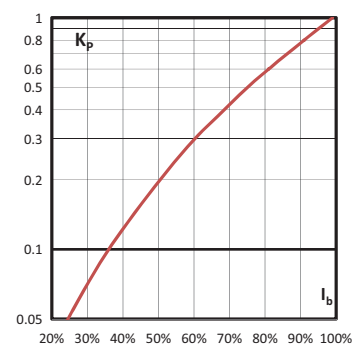
### Arc voltage

This curve gives the peak arc voltage,  $U_a$ , 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 percent.



### Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



# Traction fuse links

## 170M - Square body fuse links, 2000 V d.c. (IEC), 20 A to 600 A

### Specifications

#### Description

Traction bolted tags square body high speed fuse links which provides superior protection for DC traction third rail applications up to 2000 V d.c.

#### Technical data

- Rated voltage: 2000 V d.c. (IEC)
- Rated current:
  - 20 A to 215 A Single slot tag
  - 160 A to 400 A Double slot tag
  - 500 A to 600 A Parallel double slot tag
- Breaking capacity:
  - 100 kA at 2000 V d.c., L/R <15ms
  - 100 kA at 1500 V d.c., L/R <45ms
- Operating class: aR

#### Standards / Agency information

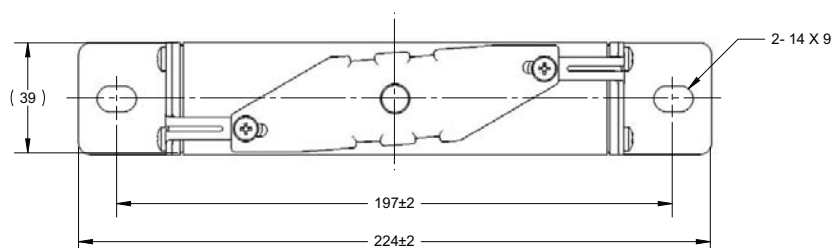
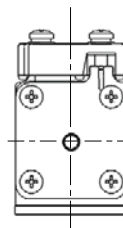
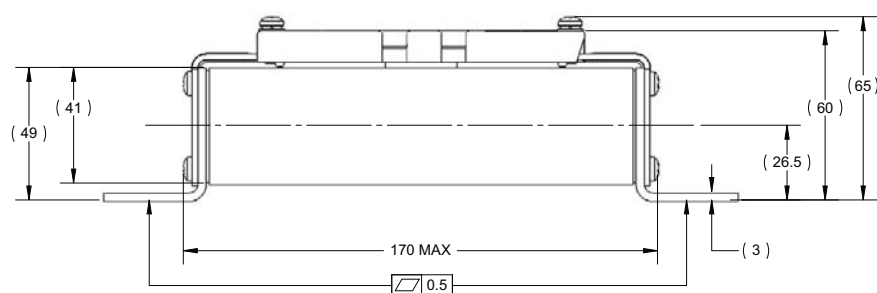
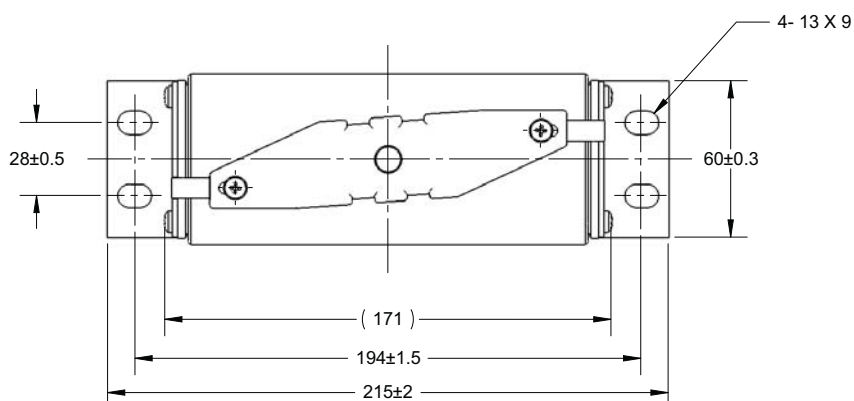
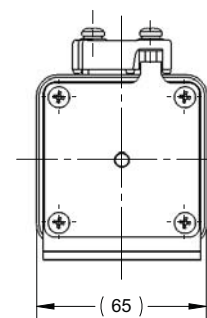
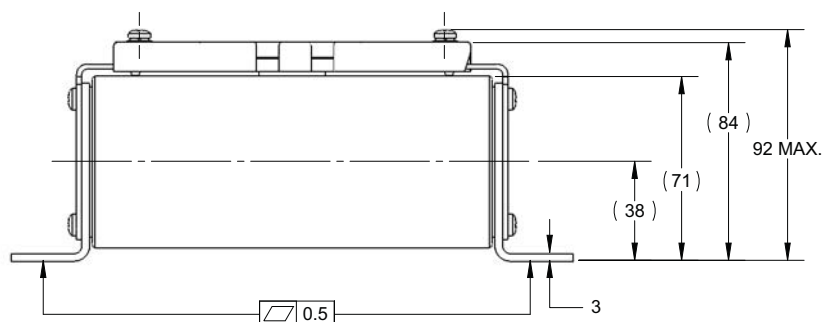
Tested in line with IEC 60269



#### Catalogue numbers

| Fuse link type           | Rated voltage     | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                      | Watts loss (W)     |                | Catalogue numbers |
|--------------------------|-------------------|-------------------------|---------------------------------------|----------------------|--------------------|----------------|-------------------|
|                          |                   |                         | Pre-arcing                            | Total at 2000 V d.c. | 0.8 I <sub>n</sub> | I <sub>n</sub> |                   |
| Single slot tag          | 2000 V d.c. (IEC) | 20                      | 85                                    | 240                  | 9                  | 12             | 170M2046          |
|                          |                   | 25                      | 130                                   | 390                  | 9                  | 16             | 170M2047          |
|                          |                   | 32                      | 220                                   | 645                  | 11                 | 18             | 170M2048          |
|                          |                   | 40                      | 390                                   | 1140                 | 12                 | 20             | 170M2049          |
|                          |                   | 50                      | 610                                   | 1780                 | 17                 | 33             | 170M2050          |
|                          |                   | 63                      | 1030                                  | 3000                 | 20                 | 39             | 170M2051          |
|                          | 1500 V d.c. (UL)  | 80                      | 1555                                  | 4550                 | 28                 | 53             | 170M2052          |
|                          |                   | 100                     | 2680                                  | 7840                 | 33                 | 63             | 170M2053          |
|                          |                   | 125                     | 4110                                  | 12,020               | 42                 | 79             | 170M2054          |
|                          |                   | 160                     | 6620                                  | 19,360               | 45                 | 87             | 170M2055          |
|                          |                   | 200                     | 10,720                                | 31,360               | 50                 | 95             | 170M2056          |
|                          |                   | 215                     | 21,870                                | 64,000               | 51                 | 97             | 170M2057          |
| Double slot tag          | 2000 V d.c. (IEC) | 160                     | 7900                                  | 42,000               | 68                 | 91             | 170M2039          |
|                          |                   | 200                     | 12,300                                | 66,000               | 85                 | 113            | 170M2040          |
|                          |                   | 250                     | 21,900                                | 120,000              | 100                | 133            | 170M2041          |
|                          |                   | 315                     | 38,900                                | 210,000              | 119                | 158            | 170M2042          |
|                          |                   | 400                     | 65,700                                | 350,000              | 148                | 176            | 170M2043          |
| Parallel double slot tag | 2000 V d.c. (IEC) | 500                     | 105,851                               | 163,010              | 109                | 230            | 170M2044          |
|                          |                   | 600                     | 188,179                               | 289,796              | 153                | 305            | 170M2045          |

Data sheets: 720142, 5785522 (Single slot, 5785519 Double slot tag, 5785526 Parallel double slot tag)

**170M - Square body fuse links, 2000 V d.c. (IEC), 20 A to 600 A****Dimensions (mm) - 170M2046 to 170M2057, Single slot tag****Dimensions (mm) - 170M2039 to 170M2043, Double slot tag**

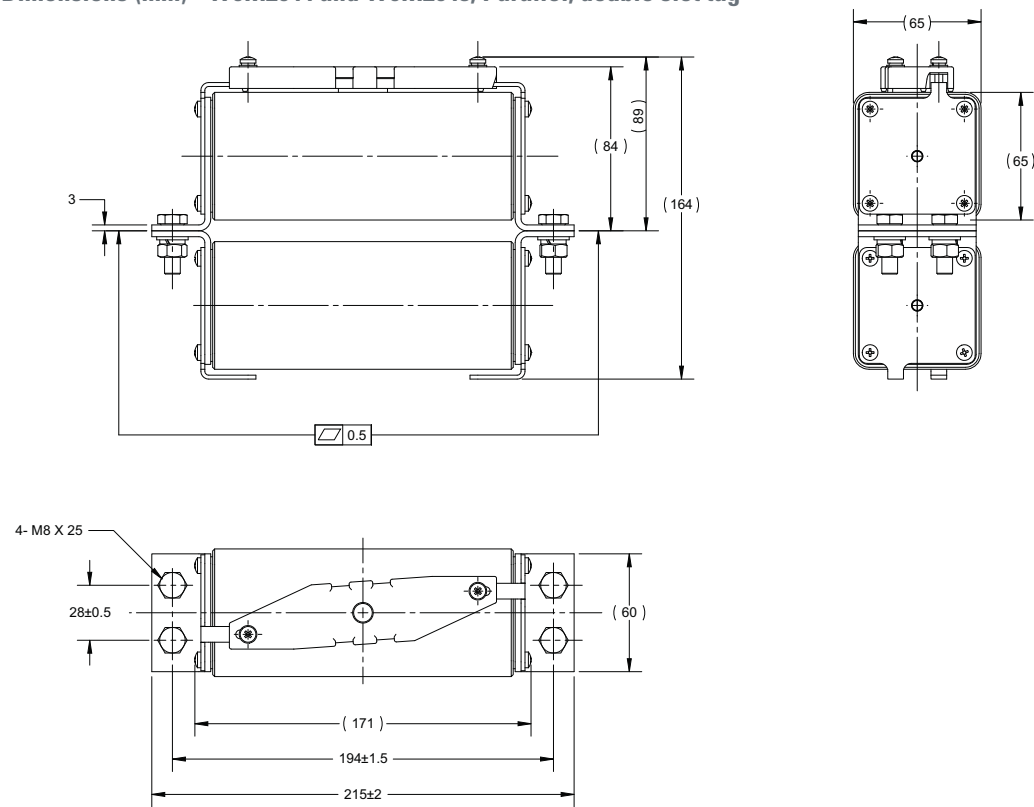
Data sheets: 720142, 5785522 (Single slot, 5785519 Double slot tag, 5785526 Parallel double slot tag)



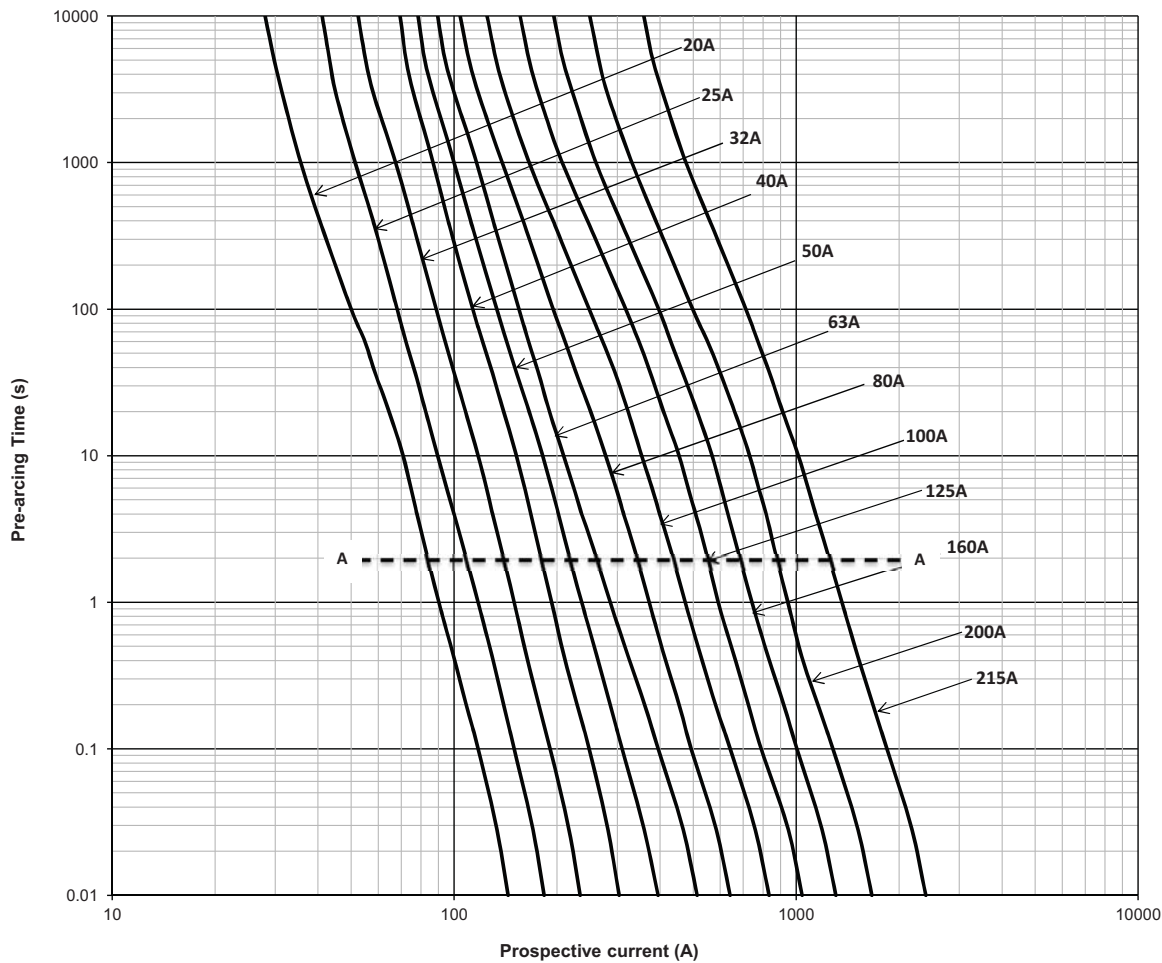
Traction fuse links

170M - Square body fuse links, 2000 V d.c. (IEC), 20 A to 600 A

Dimensions (mm) - 170M2044 and 170M2045, Parallel, double slot tag



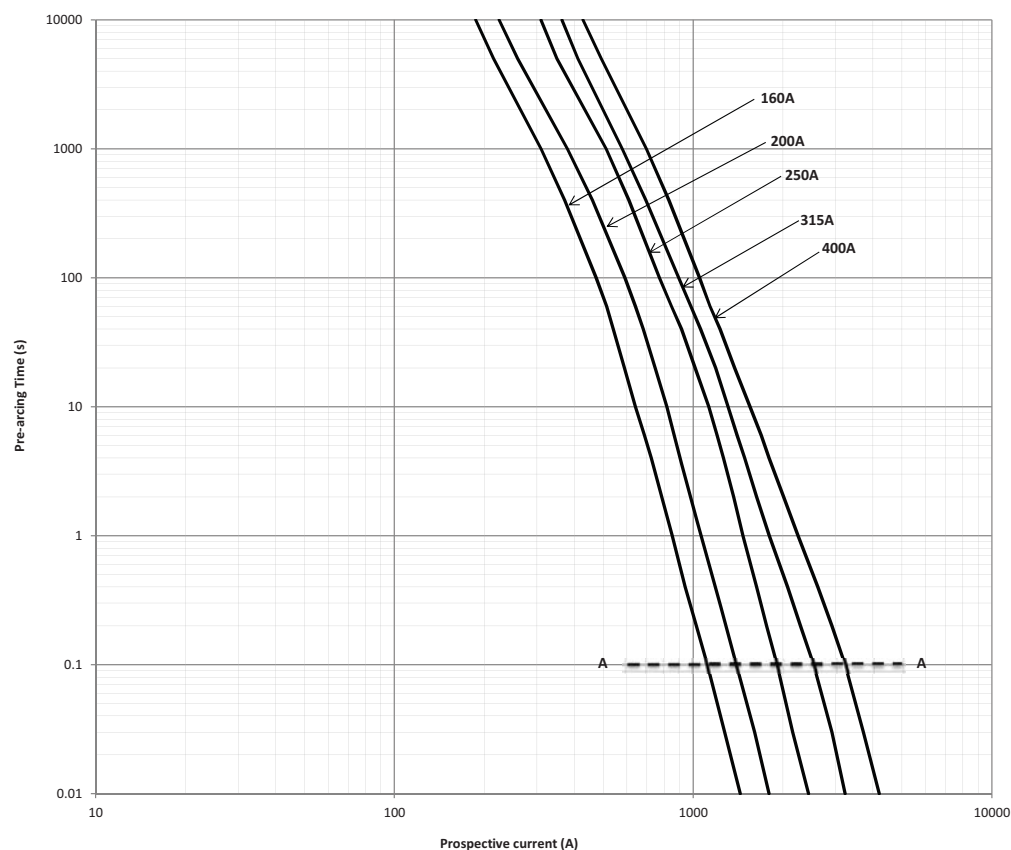
Time-current curve - 170M2046 to 170M2056, 20 A to 215 A



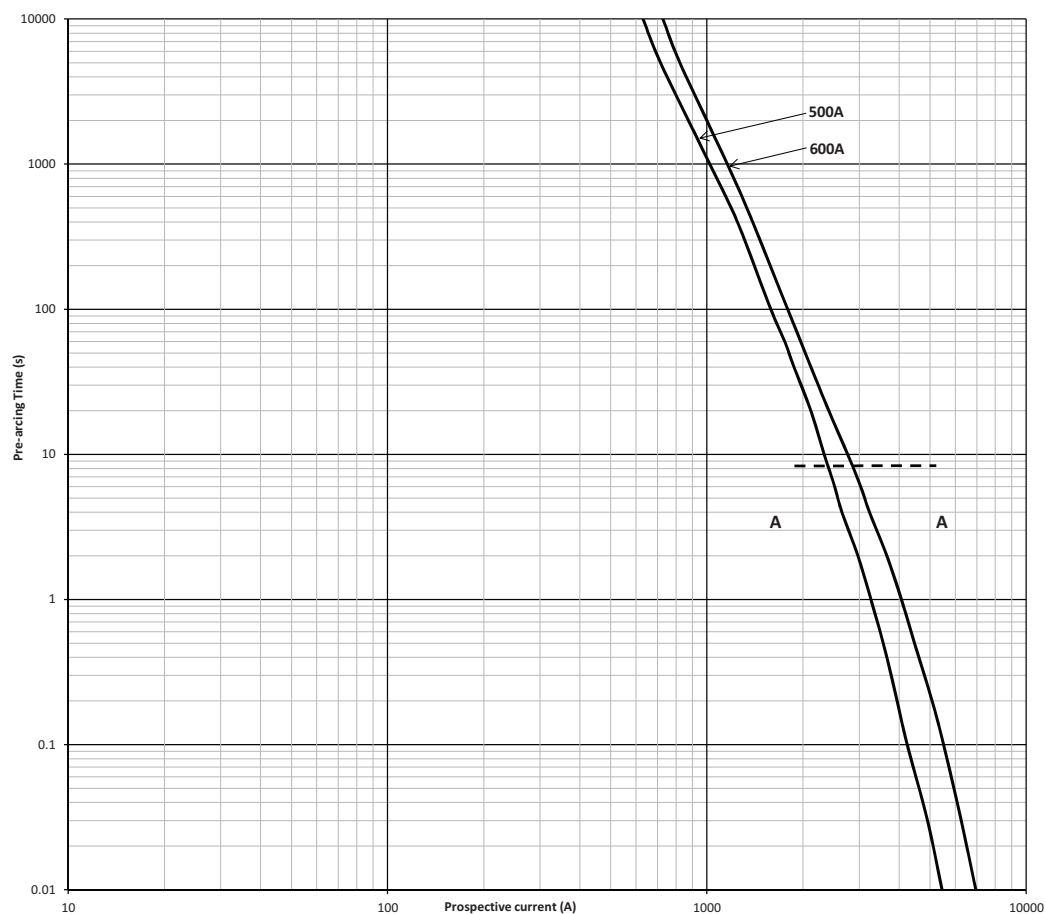
Data sheets: 720142, 5785522 (Single slot, 5785519 Double slot tag, 5785526 Parallel double slot tag)

## 170M - Square body fuse links, 2000 V d.c. (IEC), 20 A to 600 A

Time-current curve - 170M2039 to 170M2043, 160 A to 400 A



Time-current curve - 170M2044 to 170M2045, 500 A and 600 A



Data sheets: 720142, 5785522 (Single slot, 5785519 Double slot tag, 5785526 Parallel double slot tag)

Traction fuse links

170M - Size 3, Square body fuse links, 2400 V d.c. (IEC), 100 A to 400 A

Specifications

Description

Traction bolted tags square body high speed fuse links for superior protection of DC third rail applications up to 2400 V d.c.

Technical data

- Rated voltage: 2400 V d.c. (IEC)
- Rated current: 100 A to 400 A
- Tested breaking capacity:
  - 100 kA at 2400 V d.c., L/R < 15ms
  - 100 kA at 2000 V d.c., L/R < 45ms
- Operating class: aR

Standards / Agency information

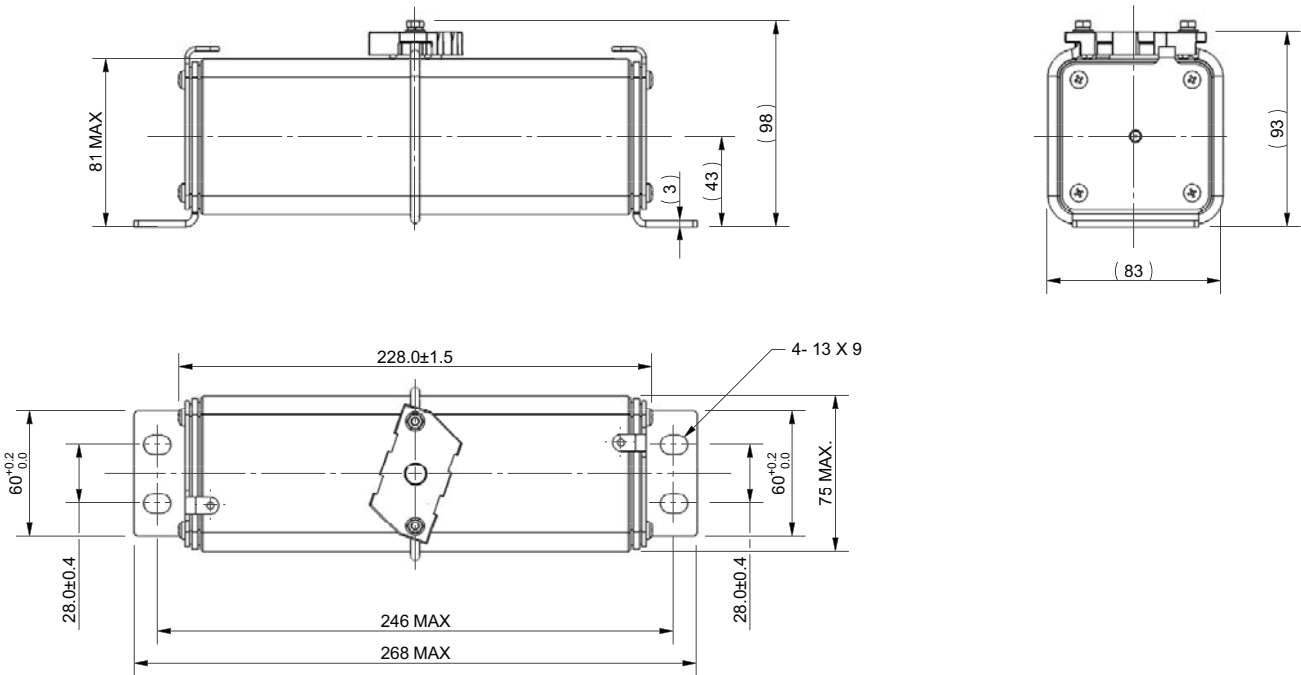
Tested in line with IEC 60269



Catalogue numbers

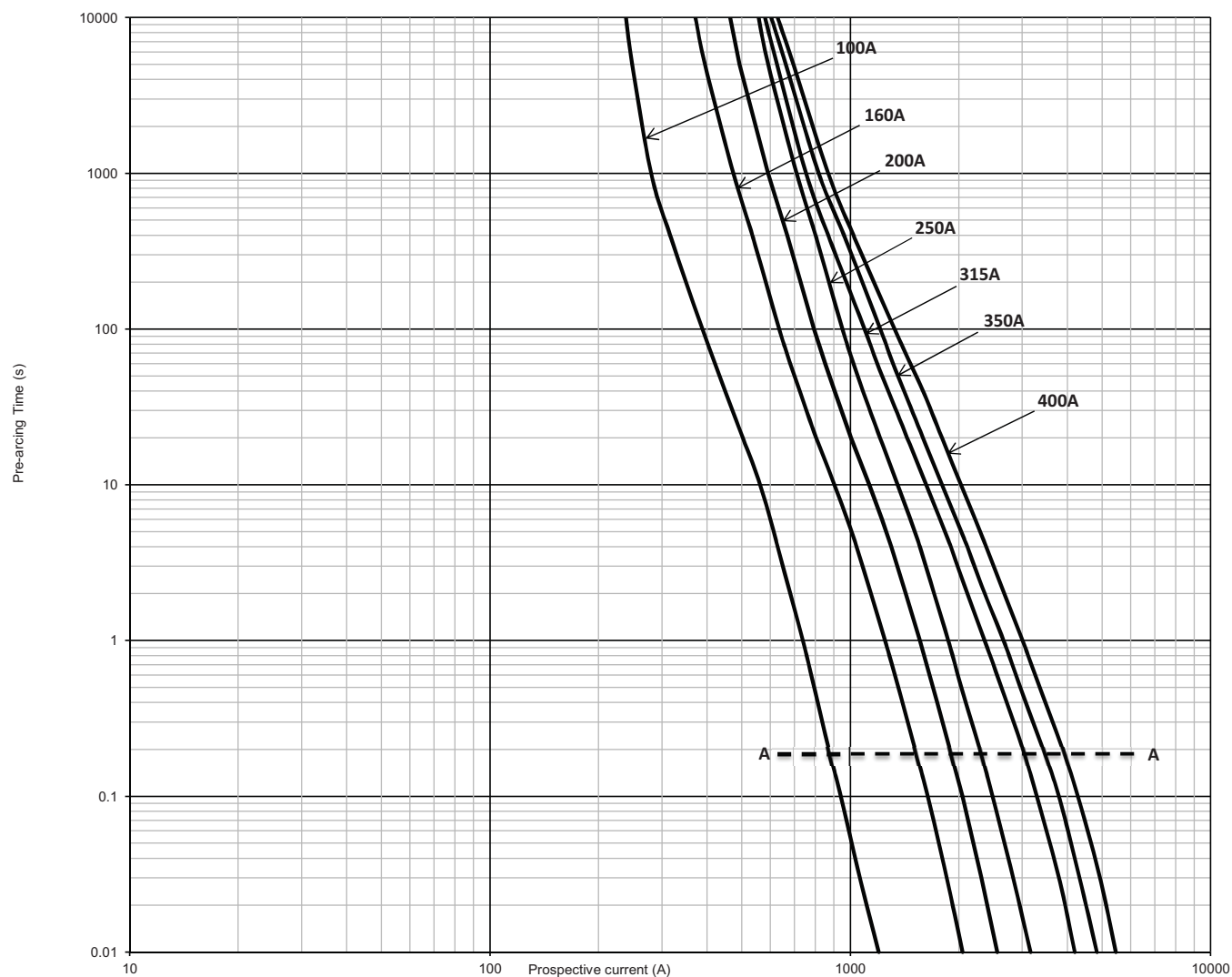
| Fuse link type  | Fuse link body size | Rated voltage     | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                      | Watts loss (W)     |                | Catalogue numbers |
|-----------------|---------------------|-------------------|----------------------|---------------------------------------|----------------------|--------------------|----------------|-------------------|
|                 |                     |                   |                      | Pre-arcing                            | Total at 2000 V d.c. | 0.8 I <sub>n</sub> | I <sub>n</sub> |                   |
| Double slot tag | 3                   | 2400 V d.c. (IEC) | 100                  | 5468                                  | 15,457               | 20                 | 39             | 170M2090          |
|                 |                     |                   | 160                  | 16,427                                | 46,439               | 43                 | 84             | 170M2091          |
|                 |                     |                   | 200                  | 25,667                                | 72,561               | 53                 | 97             | 170M2092          |
|                 |                     |                   | 250                  | 36,960                                | 104,488              | 60                 | 103            | 170M2093          |
|                 |                     |                   | 315                  | 66,977                                | 189,346              | 82                 | 162            | 170M2094          |
|                 |                     |                   | 350                  | 87,480                                | 247,309              | 89                 | 175            | 170M2095          |
|                 |                     |                   | 400                  | 110,717                               | 313,000              | 103                | 203            | 170M2096          |

Dimensions (mm)



**170M** - Size 3, Square body fuse links, 2400 V d.c. (IEC), 100 A to 400 A

Time-current curve - 100 A to 400 A



# Traction fuse links

## 170E - Size 1\*, Square body fuse links, 4000 V d.c. (IEC), 20 A to 125 A

### Specifications

#### Description

Traction bolted tags square body high speed fuse link for superior protection in DC traction applications up to 4000 V d.c.

#### Technical data

- Rated voltage: 4000 V d.c. (IEC)
- Rated current: 20 A to 125 A
- Tested breaking capacity: 50 kA at 4000 V d.c., L/R 10ms
- Operating class: aR

#### Standards / Agency information

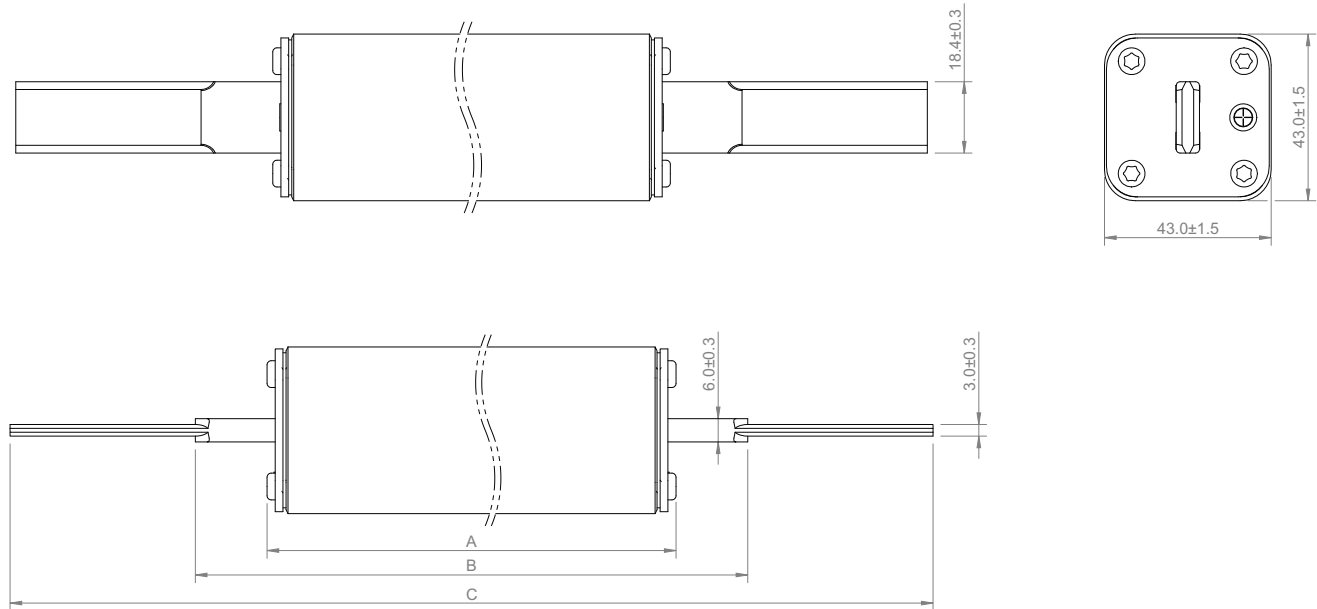
Consult Eaton [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com)



### Catalogue numbers

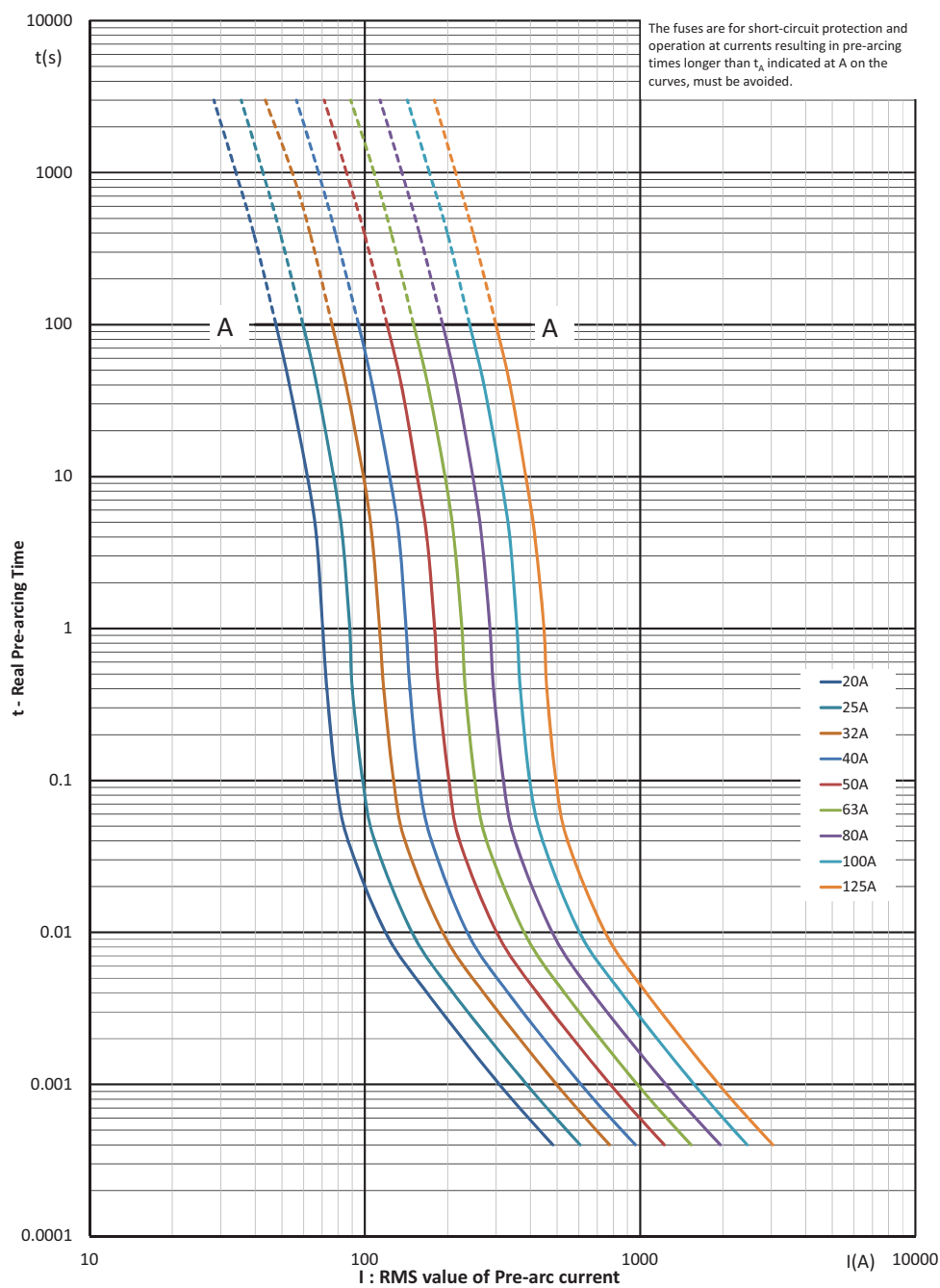
| Fuse link<br>body size | Rated voltage     | Rated current<br>(Amps) | Watts loss<br>(W) | Catalogue<br>numbers |
|------------------------|-------------------|-------------------------|-------------------|----------------------|
| 1*                     | 4000 V d.c. (IEC) | 20                      | 23                | 170E3924             |
|                        |                   | 25                      | 28                | 170E3925             |
|                        |                   | 32                      | 34                | 170E3926             |
|                        |                   | 40                      | 45                | 170E3927             |
|                        |                   | 50                      | 57                | 170E3928             |
|                        |                   | 63                      | 72                | 170E3929             |
|                        |                   | 80                      | 91                | 170E3930             |
|                        |                   | 100                     | 114               | 170E3931             |
|                        |                   | 125                     | 143               | 170E3932             |

### Dimensions (mm)



## 170E - Size 1\*, Square body fuse links, 4000 V d.c. (IEC), 20 A to 125 A

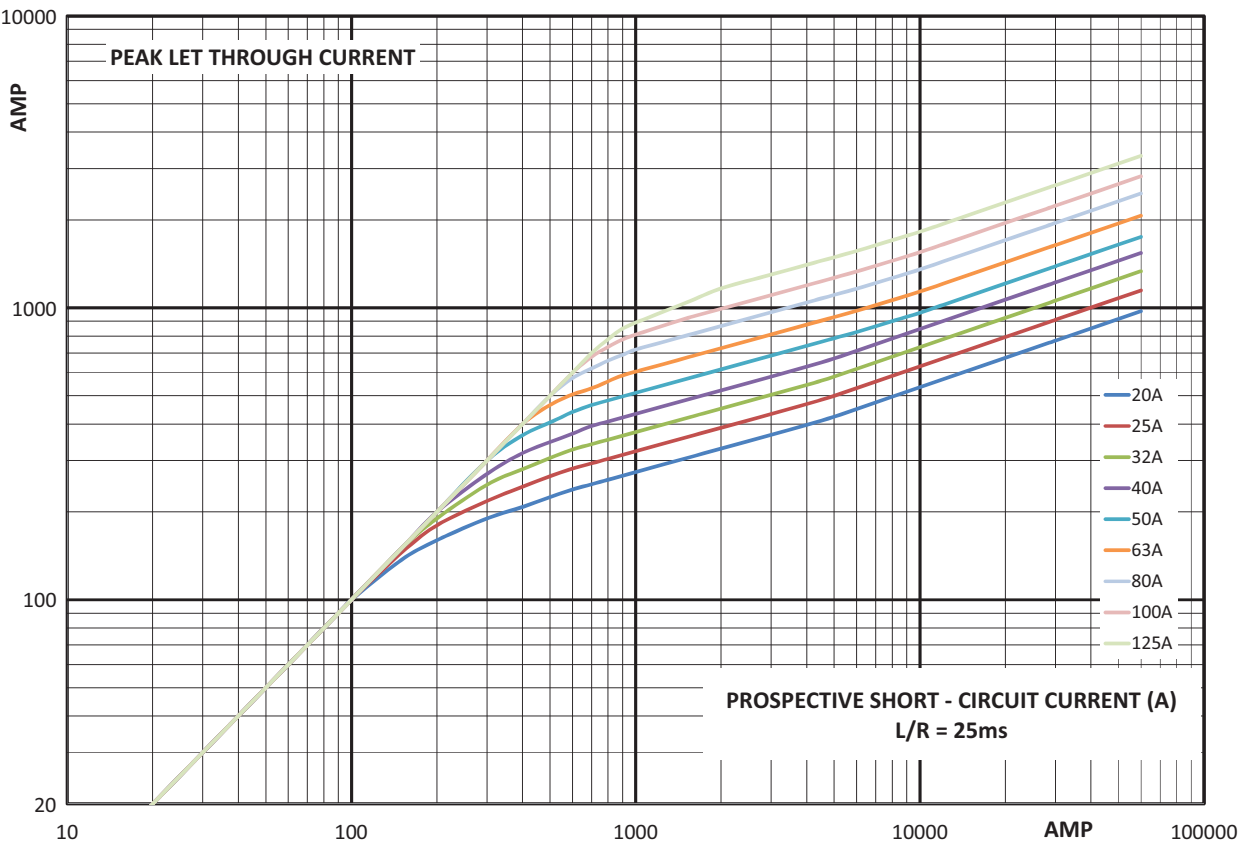
Time-current curve - 20 A to 125 A



Traction fuse links

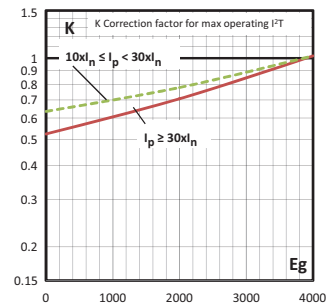
170E - Size 1\*, Square body fuse links, 4000 V d.c. (IEC), 20 A to 125 A

Cut-off curve - 20 A to 125 A



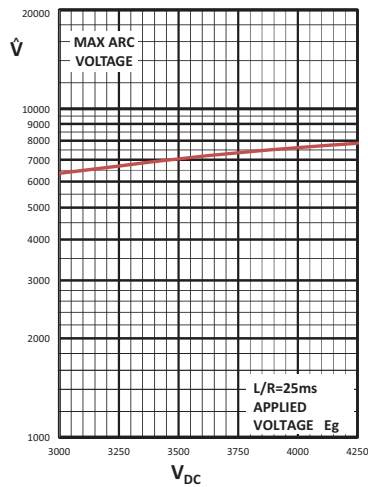
Total clearing  $I^2t$

The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent 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).



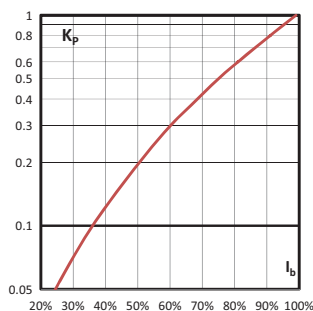
Arc voltage

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 percent.



Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts 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 percent of the rated current.



## 170E - Sizes 1\*, 2 and 2//2, Square body fuse links, 4000 V d.c. (IEC), 20 A to 450 A

### Specifications

#### Description

Traction bolted tags square body high speed fuse link for superior protection in DC traction applications up to 4000 V d.c..

#### Technical data

- Rated voltage: 4000 V d.c. (IEC)
- Rated current: 20 A to 500 A
- Breaking capacity: 60 kA at 4000 V d.c., L/R 25ms
- Operating class: aR

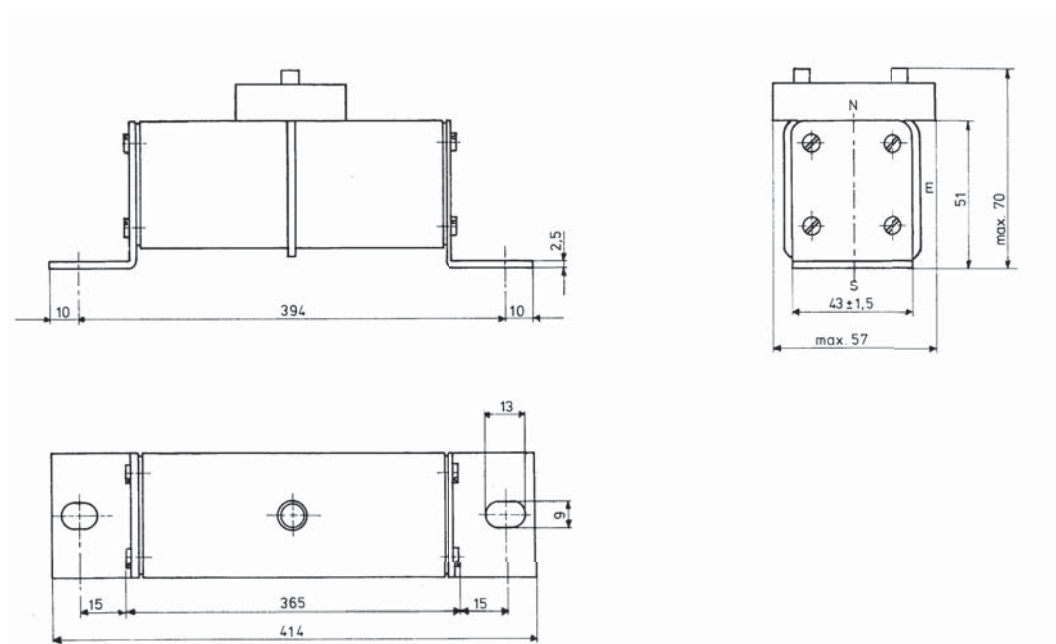
#### Standards / Agency information

Contact Eaton [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com)

#### Catalogue numbers

| Fuse link body size | Rated voltage     | Rated current (Amps) | Watts loss (W) | Catalogue numbers |
|---------------------|-------------------|----------------------|----------------|-------------------|
| 1*                  | 4000 V d.c. (IEC) | 20                   | 23             | 170E3914          |
|                     |                   | 25                   | 28             | 170E3915          |
|                     |                   | 32                   | 34             | 170E3916          |
|                     |                   | 40                   | 45             | 170E3917          |
|                     |                   | 50                   | 57             | 170E3918          |
|                     |                   | 63                   | 72             | 170E3919          |
|                     |                   | 80                   | 91             | 170E3984          |
|                     |                   | 100                  | 114            | 170E3933          |
|                     |                   | 125                  | 143            | 170E3922          |
| 2                   | 4000 V d.c. (IEC) | 160                  | 182            | 170E8882          |
|                     |                   | 200                  | 228            | 170E8883          |
|                     |                   | 250                  | 285            | 170E8884          |
|                     |                   | 315                  | 360            | 170E8885          |
| 2//2                | 4000 V d.c. (IEC) | 350                  | 400            | 170E8886          |
|                     |                   | 400                  | 455            | 170E8887          |
|                     |                   | 450                  | 515            | 170E8888          |
|                     |                   | 500                  | 600            | 170E8889          |

#### Dimensions (mm) - Size 1\*



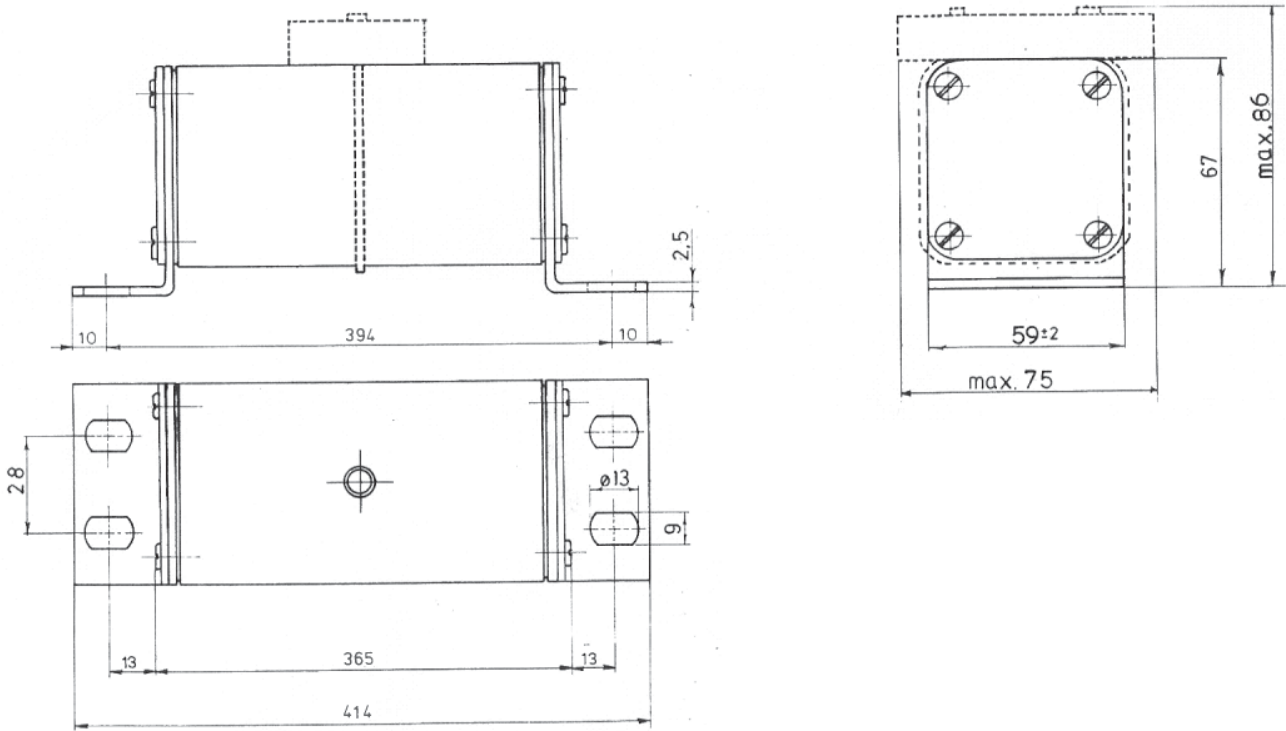
Data sheets: 1\* 170K6600, 2 and 2//2 170K6604



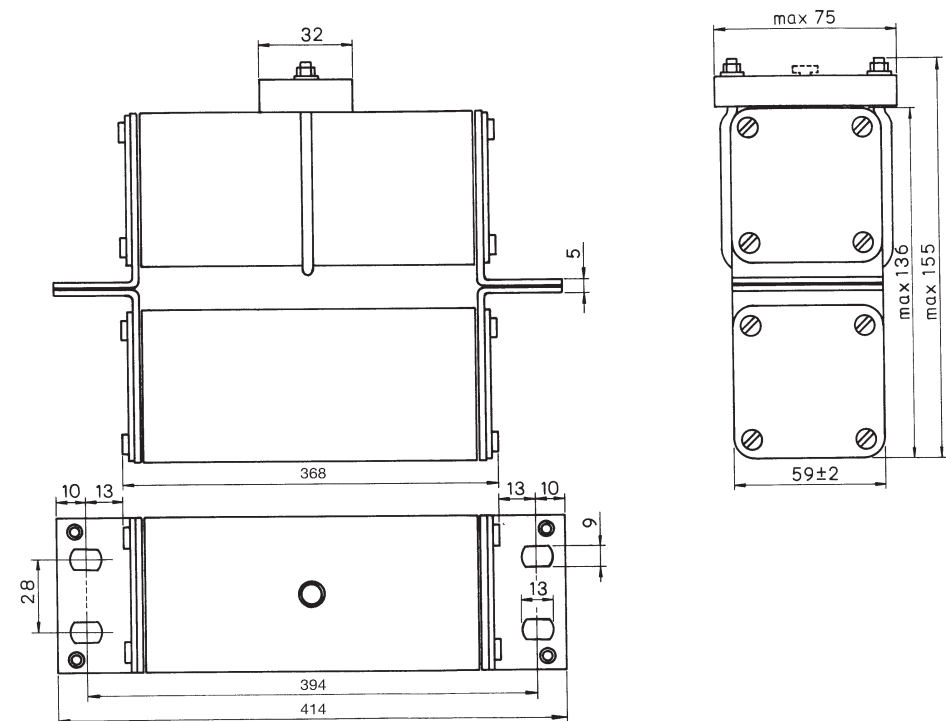
Traction fuse links

170E - Sizes 1\*, 2 and 2//2, Square body fuse links, 4000 V d.c. (IEC), 20 A to 450 A

Dimensions (mm) - Size 2



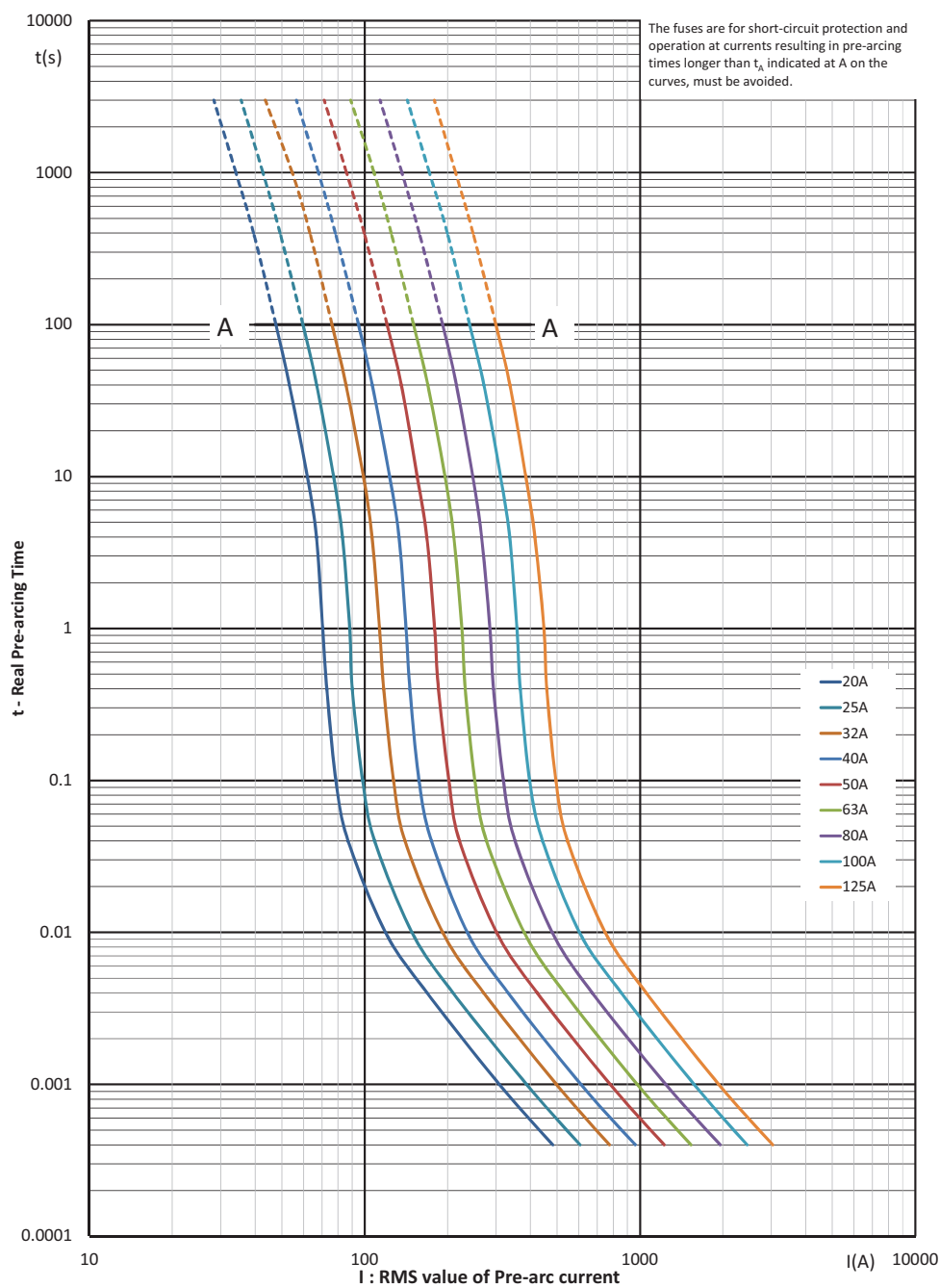
Dimensions (mm) - Size 2/2



Data sheets: 1\* 170K6600, 2 and 2//2 170K6604

## 170E - Sizes 1\*, 2 and 2//2, Square body fuse links, 4000 V d.c. (IEC), 20 A to 450 A

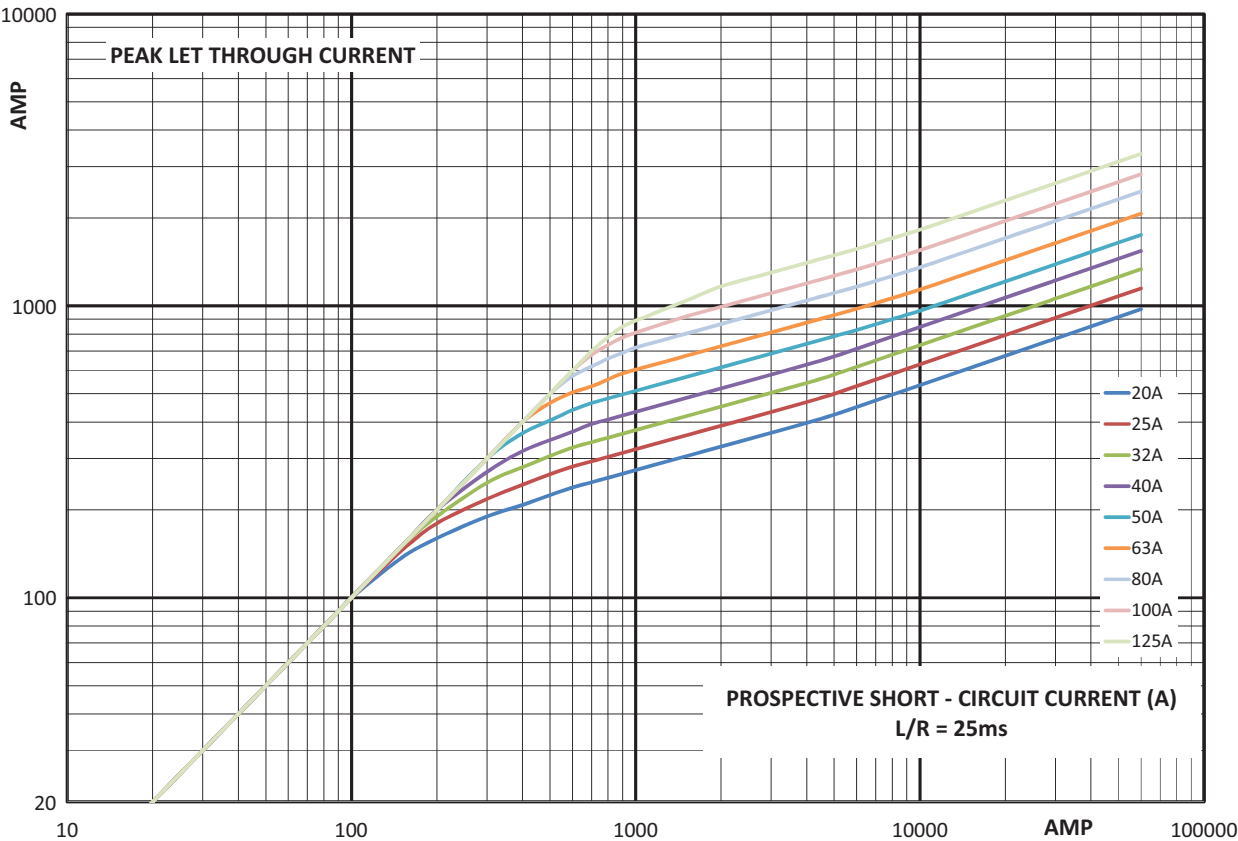
Time-current curve - Size 1\*, 20 A to 125 A



Traction fuse links

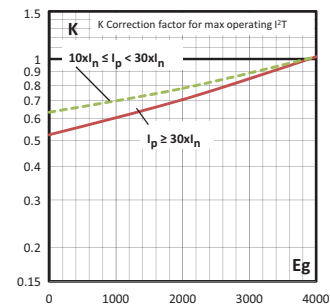
170E - Sizes 1\*, 2 and 2//2, Square body fuse links, 4000 V d.c. (IEC), 20 A to 450 A

Cut-off curve - Size 1\*, 20 A to 125 A



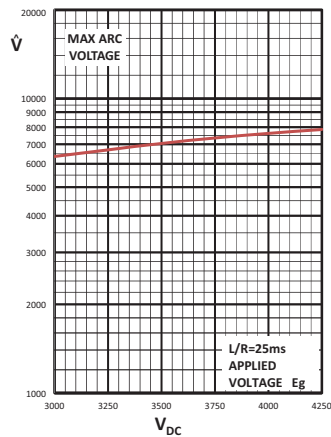
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



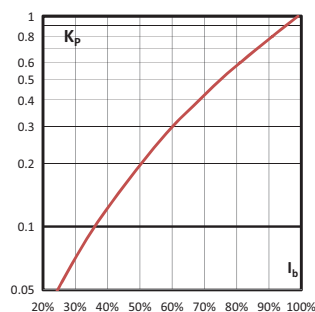
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



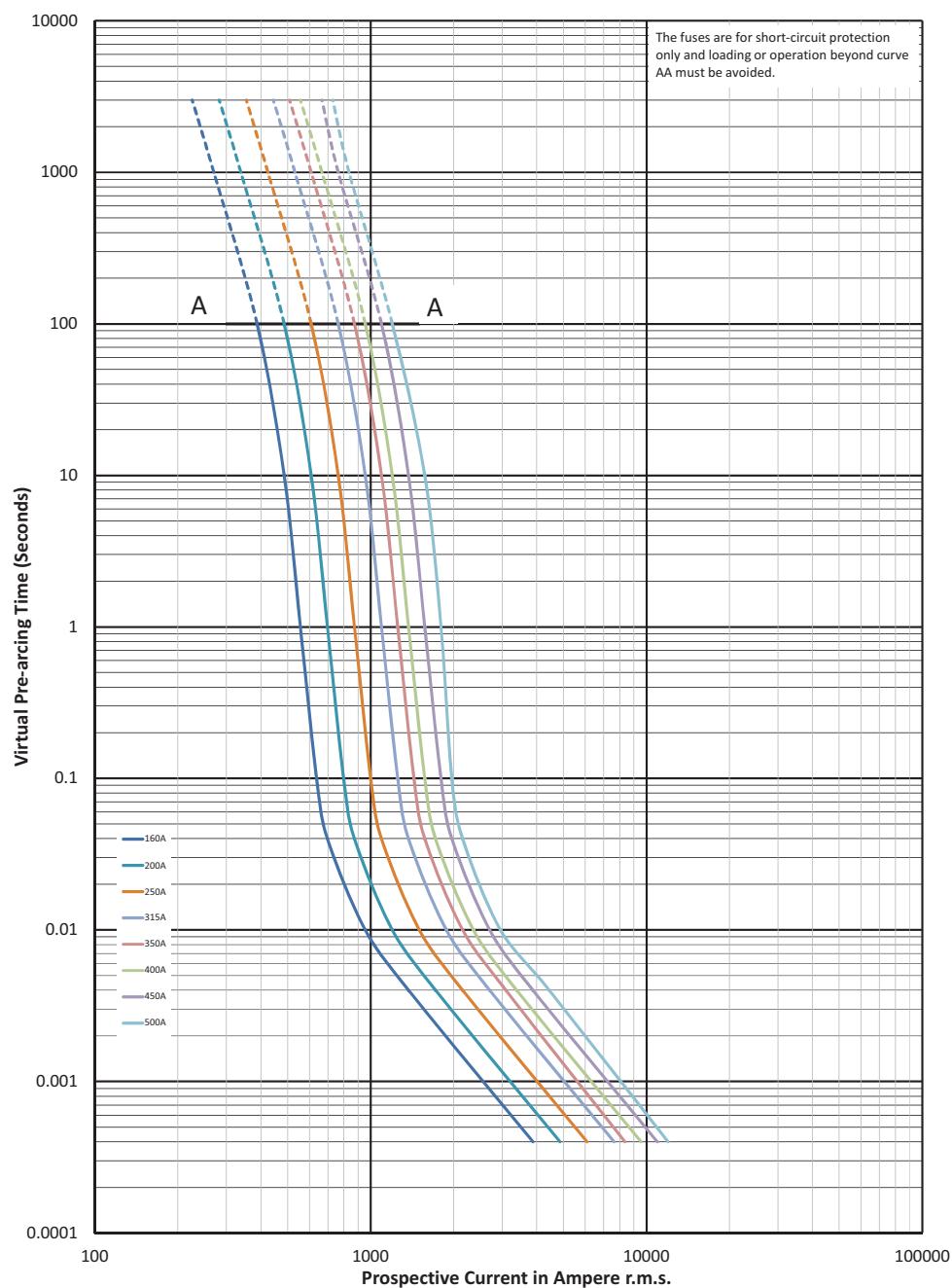
Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



## 170E - Sizes 1\*, 2 and 2//2, Square body fuse links, 4000 V d.c. (IEC), 20 A to 450 A

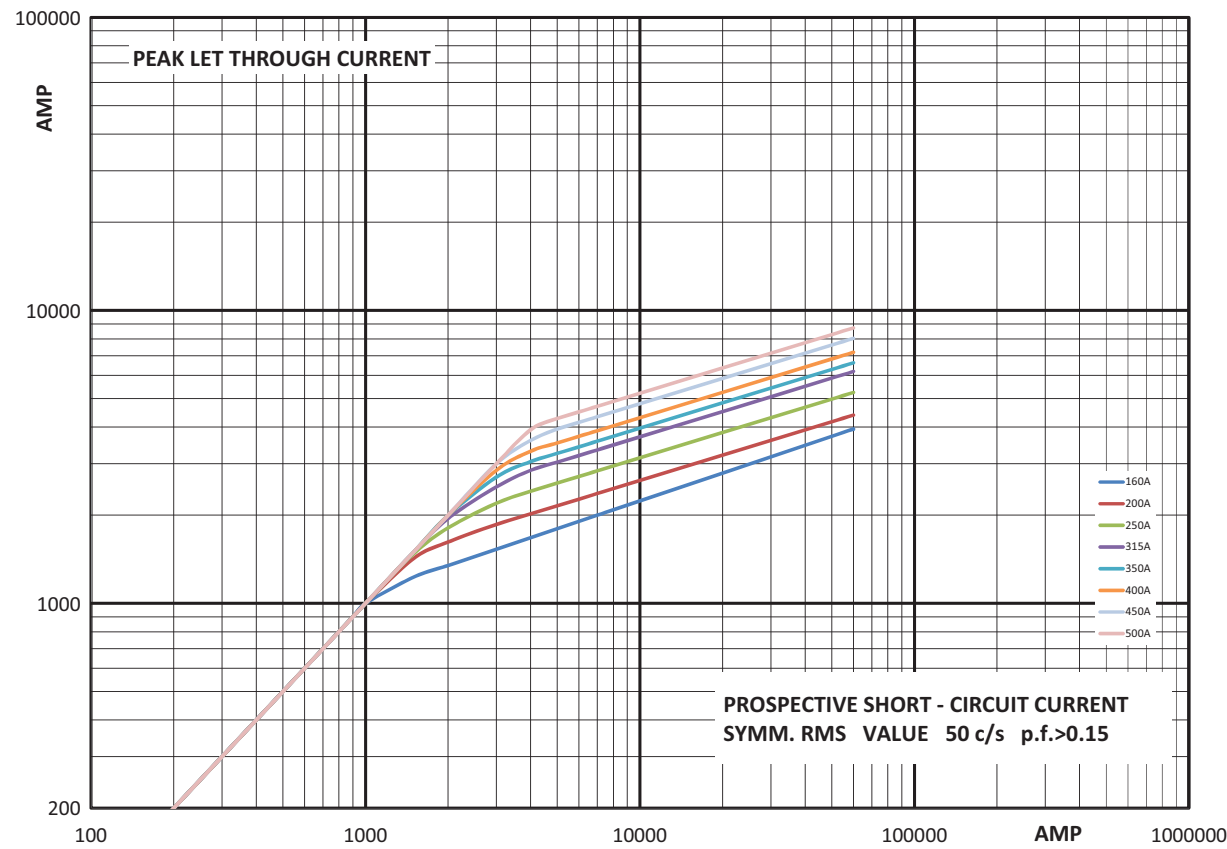
Time-current curve - Sizes 2 and 2//2, 160 A to 500 A



Traction fuse links

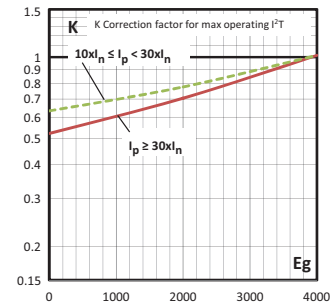
170E - Sizes 1\*, 2 and 2//2, Square body fuse links, 4000 V d.c. (IEC), 20 A to 450 A

Cut-off curve - Sizes 2 and 2//2, 160 A to 500 A



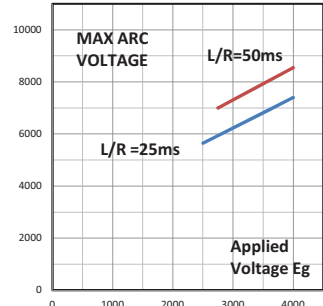
Total clearing I²t

The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



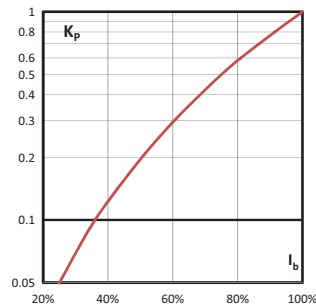
Arc voltage

This curve gives the peak arc voltage, U<sub>L</sub>, which may appear across the fuse during its operation as a function of the applied working voltage, E<sub>g</sub>, (RMS) at a power factor of 15 percent.



Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K<sub>p</sub>, is given as a function of the RMS load current, I<sub>b</sub>, in percent of the rated current.



**FWK - 20 x 127 and 25 x 146 mm, Ferrule fuse links, 750 V d.c. (IEC), 5 A to 60 A****Specifications****Description**

Ferrule high speed fuse links for light rail applications in auxiliary power and distribution equipment.

**Technical data**

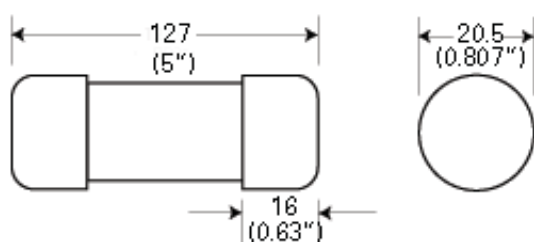
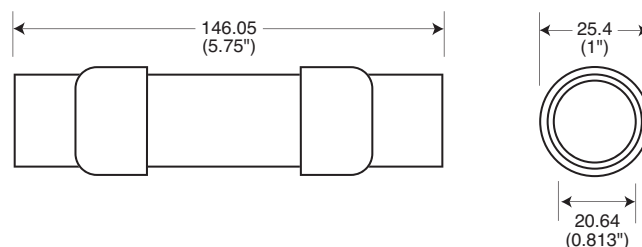
- Rated voltage: 750 V d.c. (IEC)
- Rated current:
  - 5 A to 30 A (20 x 127 mm)
  - 35 A to 60 A (25 x 146 mm)
- Breaking capacity: 50 kA at 750 V d.c., L/R 10-15ms
- Operating class: gG

**Standards / Agency information**

Tested in line with IEC 60269

**Catalogue numbers**

| Fuse link size                                          | Rated voltage    | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                        | Watts loss (W) | Catalogue numbers |
|---------------------------------------------------------|------------------|----------------------|---------------------------------------|------------------------|----------------|-------------------|
|                                                         |                  |                      | Pre-arcing                            | Clearing at 750 V d.c. |                |                   |
| 20 x 127 mm<br>(1 <sup>13</sup> / <sub>16</sub> " x 5") | 750 V d.c. (IEC) | 5                    | 8.5                                   | 16                     | 6.7            | FWK-5A20F         |
|                                                         |                  | 8                    | 50                                    | 100                    | 8.8            | FWK-8A20F         |
|                                                         |                  | 10                   | 95                                    | 200                    | 8.5            | FWK-10A20F        |
|                                                         |                  | 15                   | 100                                   | 240                    | 5              | FWK-15A20F        |
|                                                         |                  | 20                   | 125                                   | 315                    | 7.8            | FWK-20A20F        |
|                                                         |                  | 25                   | 400                                   | 1100                   | 6.5            | FWK-25A20F        |
|                                                         |                  | 30                   | 800                                   | 2600                   | 6.5            | FWK-30A20F        |
| 25 x 146 mm<br>(1" x 5 <sup>3</sup> / <sub>4</sub> ")   | 750 V d.c. (IEC) | 35                   | 1300                                  | 4300                   | 6              | FWK-35A25F        |
|                                                         |                  | 40                   | 1600                                  | 5300                   | 6.8            | FWK-40A25F        |
|                                                         |                  | 50                   | 3100                                  | 12000                  | 7.3            | FWK-50A25F        |
|                                                         |                  | 60                   | 5900                                  | 24000                  | 7.7            | FWK-60A25F        |

**Dimensions mm (in) - 5 A to 30 A****Dimensions mm (in) - 35 A to 60 A**

# Traction fuse links

## LRC750 - Ferrule fuse links, 750 V d.c. (IEC), 30 A to 50 A

### Specifications

#### Description

Ferrule high speed fuse links for light rail applications in auxiliary power and distribution equipment. Also suitable for heavy rails applications in instrumentation and control circuits equipment.

#### Technical data

- Rated voltage: 750 V d.c. (IEC)
- Rated current: 30 A to 50 A
- Breaking capacity: 50 kA at 750 V d.c., L/R 15-20ms
- Operating class: gR

#### Standards / Agency information

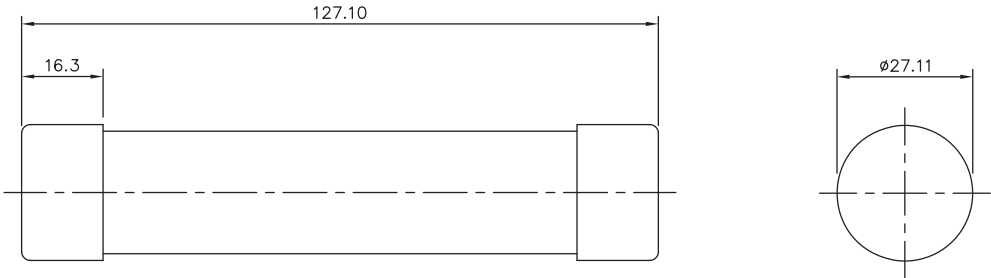
Tested in line with IEC 60269



#### Catalogue numbers

| Fuse link type | Rated voltage    | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                           | Watts loss<br>(W) | Catalogue<br>numbers |
|----------------|------------------|-------------------------|---------------------------------------|---------------------------|-------------------|----------------------|
|                |                  |                         | Pre-arcing                            | Clearing at<br>750 V d.c. |                   |                      |
| LRC750         | 750 V d.c. (IEC) | 30                      | 700                                   | 2250                      | 4.5               | 30LRC750             |
|                |                  | 40                      | 1800                                  | 5300                      | 5.8               | 40LRC750             |
|                |                  | 50                      | 3100                                  | 12000                     | 9.4               | 50LRC750             |

#### Dimensions (mm)



**FWL and FWS - 20 x 127 mm, Ferrule fuse links, 1200-1400-2000 V a.c. (IEC), 1000 V d.c. (IEC), 2 A to 30 A****Specifications****Description**

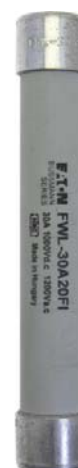
Ferrule high speed fuse links for light rail applications in auxiliary power and distribution equipment.

**Technical data**

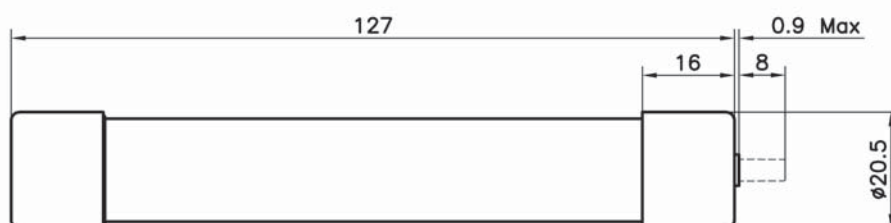
- Rated voltage:
  - FWL: 1200 V a.c. (IEC) / 1000 V d.c.
  - FWS: 2000 V a.c. / 1000 V d.c. (IEC, 2 A to 8 A)  
1400 V a.c. / 1000 V d.c. (IEC 10 A to 15 A)
- Rated current: 2 A to 30 A
- Breaking capacity: 50 kA at 1000 V d.c., L/R 15ms
- Operating class: gG

**Standards / Agency information**

Consult Eaton [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com)

**Catalogue numbers**

| Fuse link size              | Rated voltage                        | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                         | Watts loss (W) | Catalogue numbers |                |
|-----------------------------|--------------------------------------|----------------------|---------------------------------------|-------------------------|----------------|-------------------|----------------|
|                             |                                      |                      | Pre-arcing                            | Clearing at 1000 V d.c. |                | Without indicator | With indicator |
| 20 x 127 mm<br>(13/16" x 5) | 2000 V a.c./<br>1000 V d.c.<br>(IEC) | 2                    | 0.8                                   | 2.4                     | 4.4            | FWS-2A20F         | FWS-2A20FI     |
|                             |                                      | 6                    | 27                                    | 81                      | 6.7            | FWS-6A20F         | FWS-6A20FI     |
|                             |                                      | 8                    | 64                                    | 192                     | 7.6            | FWS-8A20F         | FWS-8A20FI     |
|                             | 1400 V a.c./<br>1000 V d.c.<br>(IEC) | 10                   | 118                                   | 277                     | 3.0            | FWS-10A20F        | FWS-10A20FI    |
|                             |                                      | 12                   | 170                                   | 380                     | 3.4            | FWS-12A20F        | FWS-12A20FI    |
|                             |                                      | 15                   | 209                                   | 500                     | 5.0            | FWS-15A20F        | FWS-15A20FI    |
| 20 x 127 mm<br>(13/16" x 5) | 1200 V a.c./<br>1000 V d.c.<br>(IEC) | 20                   | 675                                   | 1550                    | 5.9            | FWL-20A20F        | FWL-20A20FI    |
|                             |                                      | 25                   | 1200                                  | 2760                    | 6.5            | FWL-25A20F        | FWL-25A20FI    |
|                             |                                      | 30                   | 1850                                  | 4300                    | 7.5            | FWL-30A20F        | FWL-30A20FI    |

**Dimensions (mm)**



Traction fuse links

KC36 - Round body fuse links, 750 V d.c. (IEC), 5 A to 60 A

Specifications

Description

Ferrule high speed fuse links for light rail applications in auxiliary power and distribution equipment. Also suitable for heavy rails applications in instrumentation and control circuits equipment.

Technical data

- Rated voltage: 750 V d.c. (IEC)
- Rated current: 5 A to 60 A
- Breaking capacity: 50 kA at 750 V d.c., L/R 15-20ms
- Operating class: gG

Standards / Agency information

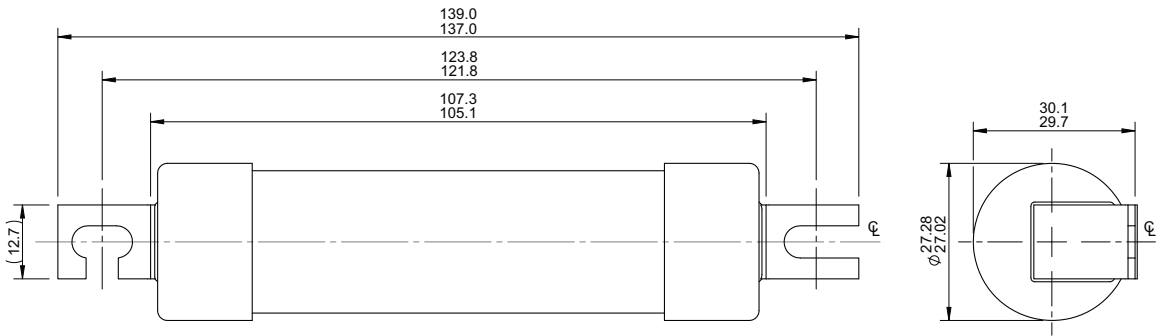
Tested in line with IEC 60269



Catalogue numbers

| Fuse link type | Rated voltage    | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                        | Watts loss (W) | Catalogue numbers |
|----------------|------------------|----------------------|---------------------------------------|------------------------|----------------|-------------------|
|                |                  |                      | Pre-arcing                            | Clearing at 750 V d.c. |                |                   |
| KC36           | 750 V d.c. (IEC) | 5                    | 8.5                                   | 16                     | 6.7            | 5KC36             |
|                |                  | 8                    | 50                                    | 100                    | 8.8            | 8KC36             |
|                |                  | 10                   | 95                                    | 200                    | 8.5            | 10KC36            |
|                |                  | 15                   | 100                                   | 240                    | 5              | 15KC36            |
|                |                  | 20                   | 125                                   | 315                    | 7.8            | 20KC36            |
|                |                  | 25                   | 400                                   | 1100                   | 6.5            | 25KC36            |
|                |                  | 30                   | 800                                   | 2600                   | 6.5            | 30KC36            |
|                |                  | 35                   | 1300                                  | 4300                   | 6              | 35KC36            |
|                |                  | 40                   | 1600                                  | 5300                   | 6.8            | 40KC36            |
|                |                  | 50                   | 3100                                  | 12,000                 | 7.3            | 50KC36            |
|                |                  | 60                   | 5900                                  | 24,000                 | 7.7            | 60KC36            |

Dimensions (mm)



## RC - Round body fuse links, 750 V d.c. (IEC), 200 A to 400 A

### Specifications

#### Description

Round bodied bolted tags high speed traction fuse links which provides protection for DC traction third rail applications.

#### Technical data

- Rated voltage: 750 V d.c. (IEC)
- Rated current: 200 A to 400 A
- Breaking capacity: Consult Eaton  
bulehighspeedtechnical@eaton.com
- Operating class: gG

#### Standards / Agency information

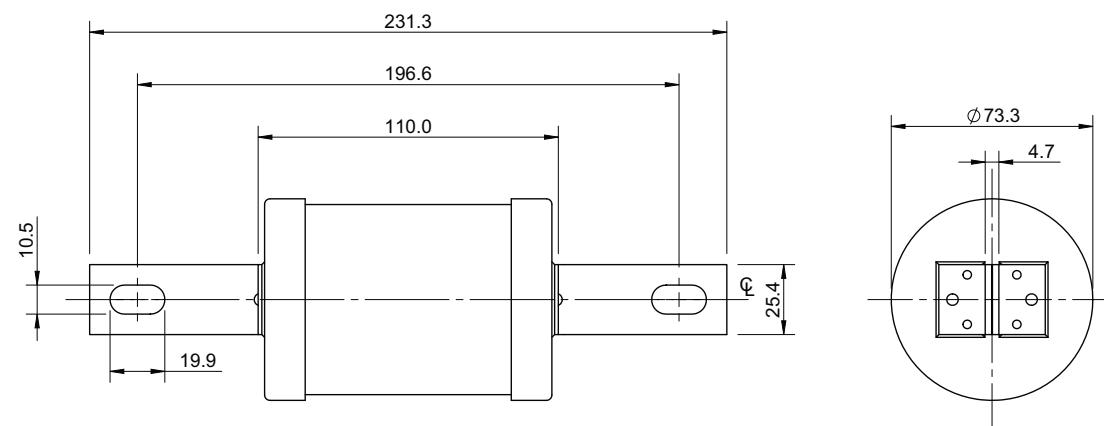
Consult Eaton bulehighspeedtechnical@eaton.com



#### Catalogue numbers

| Rated voltage    | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> s) | Watts loss (W) | Catalogue numbers |
|------------------|----------------------|-------------------------------------|----------------|-------------------|
| 750 V d.c. (IEC) | 200                  | 85,000                              | 31             | 200RC             |
|                  | 250                  | 225,000                             | 33             | 250RC             |
|                  | 300                  | 340,000                             | 37             | 300RC             |
|                  | 350                  | 530,000                             | 41             | 350RC             |
|                  | 400                  | 765,000                             | 48             | 400RC             |

#### Dimensions (mm)



# Traction fuse links

## SF - Round body fuse links900 V d.c. (IEC), 160 A to 1000 A

### Specifications

#### Description

Round bodied flush end high speed traction fuse links which provides protection for DC traction third rail applications.

#### Technical data

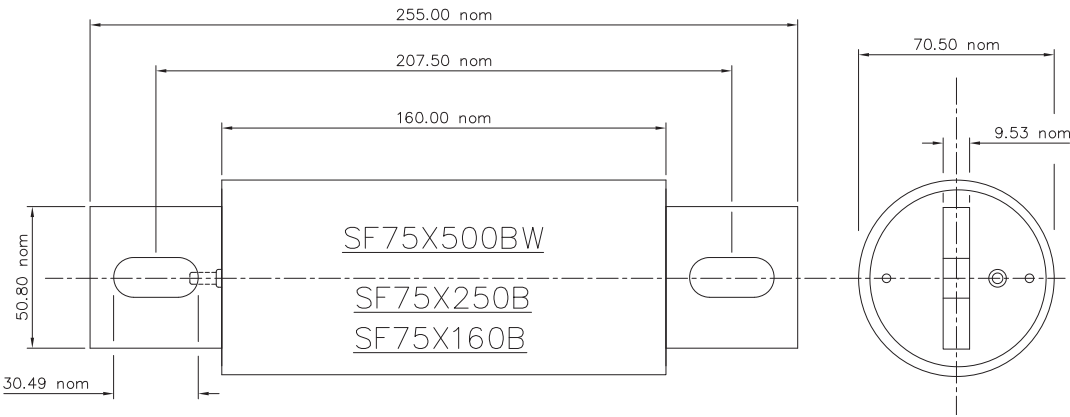
- Rated voltage: 900 V d.c. (IEC)
- Rated current: 160 A to 1000 A
- Breaking capacity: 80 kA at 900 V d.c., L/R 80ms<sup>1</sup>
- Operating class: aR (600 to 1000 A)/gR (160 to 320 A)



#### Catalogue numbers

| Rated voltage   | Rated current (Amps) | I²t (A²s) | Total at 900 V d.c. | Catalogue numbers |                   |
|-----------------|----------------------|-----------|---------------------|-------------------|-------------------|
|                 |                      |           |                     | Blade contact     | Flush end contact |
| 900 V d.c.(IEC) | 160                  | 23,000    | 205,000             | SF75X160B         | -                 |
|                 | 250                  | 54,000    | 90,000              | SF75X250B         | -                 |
|                 | 500                  | 150,000   | 570,000             | SF75X500BW        | -                 |
|                 | 600                  | 585,000   | 4,000,000           | SF75X600BW        | -                 |
|                 | 800                  | 1,400,000 | 9,000,000           | SF75X800BW        | SF75X800BB        |
|                 | 1000                 | -         | -                   | SF100X1000        | SF100X1000HP      |

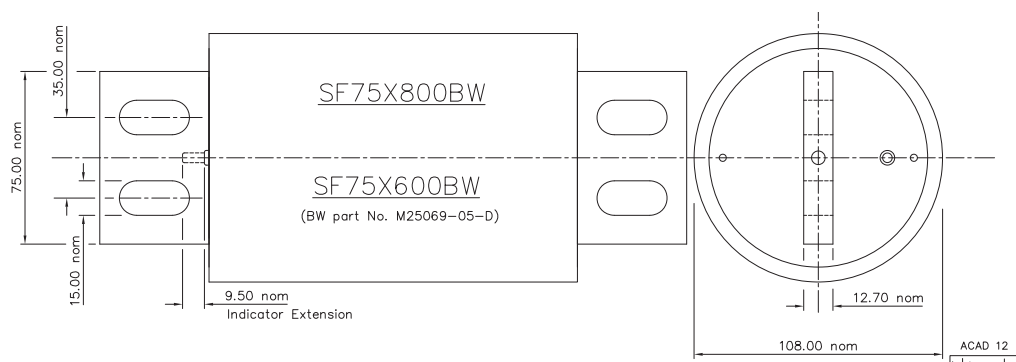
#### Dimensions (mm) - SF75X500BW, SF75X250B and SF75X500B, Blade contact



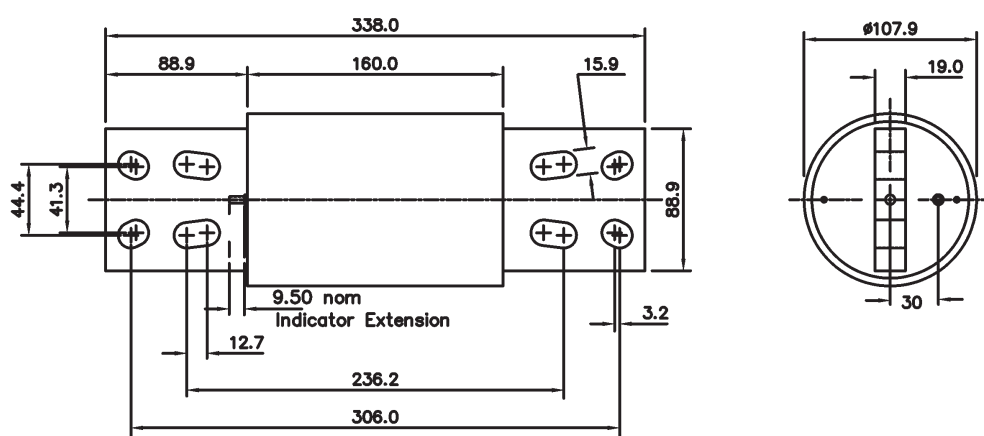
<sup>1</sup> Consult Eaton for full details [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com).

## SF - Round body fuse links 900 V d.c. (IEC), 160 A to 1000 A

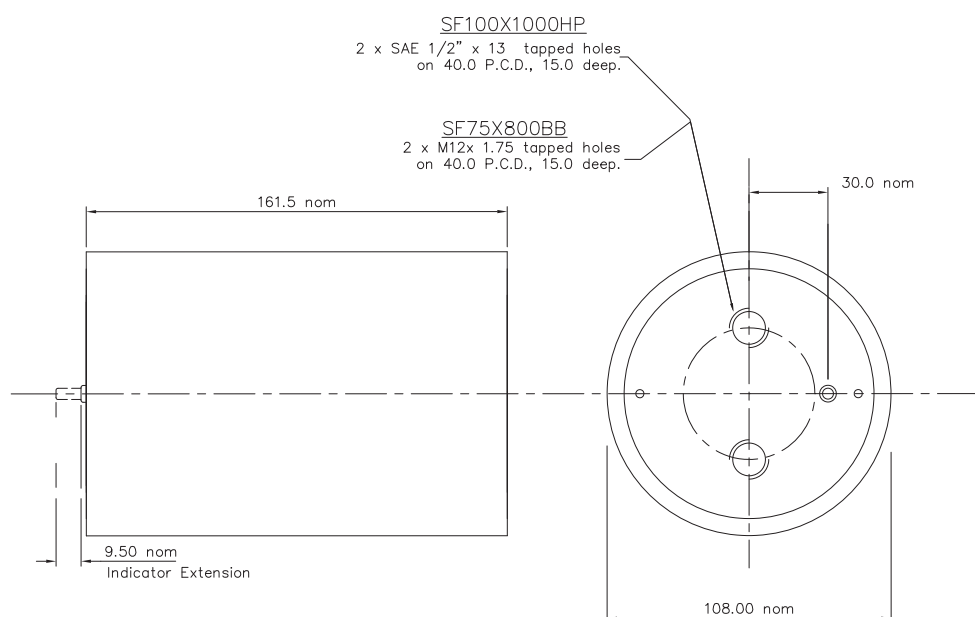
### Dimensions (mm) - SF75X600BW and SF75X800BW , Blade contact



### Dimensions (mm) - SF100X1000 , Blade contact



### Dimensions (mm) - SF75X800BB and SF100X1000HP, Blade contact



# Traction fuse links

## NBC - Round body fuse links, 1500 V d.c. (IEC), 25 A to 200 A

### Specifications

#### Description

A range of round body bolted tags high speed fuse links for heavy rail applications such as auxiliary and distribution equipment.

#### Technical data

- Rated voltage: 1500 V d.c. (IEC)
- Rated current: 25 A to 200 A
- Breaking capacity: Consult Eaton for interrupting rating and time constant capabilities.
- Operating class: gR

#### Standards / Agency information

Consult Eaton [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com)



#### Catalogue numbers

| Fuse link type | Rated voltage     | Rated current (Amps) | Catalogue numbers |
|----------------|-------------------|----------------------|-------------------|
| NBC            | 1500 V d.c. (IEC) | 25                   | NBC-25            |
|                |                   | 60                   | NBC-60            |
|                |                   | 70                   | NBC-70            |
|                |                   | 100                  | NBC-100           |
|                |                   | 150                  | NBC-150           |
|                |                   | 200                  | NBC-200           |

Consult Eaton [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com) for dimensions drawings:

25 and 60 Amps: BU-NBC-25-60

70 and 100 Amps: BU-NBC-70-100

150 and 200 Amps: BU-NBC-150 and 200

# Photovoltaic fuse links, fuse bases and holders

## PVM - 10 x 38 mm, 600 V d.c. (UL), 4 A to 30 A

### Specifications

#### Description

A range of UL 2579 fast-acting 600 V d.c. midjet fuse links specifically designed to protect solar power systems in extreme ambient temperature, high cycling and low level fault Rated current conditions (reverse rated current, multi-array fault).

#### Technical data

- Rated voltage: 600 V d.c. to UL 2579
- Rated current: 4 A to 30 A
- Breaking capacity: 50 kA DC (4 A to 30 A)

#### Compatible fuse holder

CHPV see page 322

#### Standards / Agency information

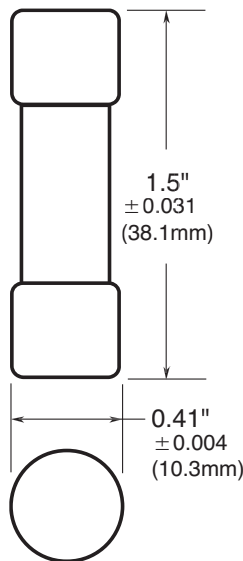
UL Listed 2579, Guide JFGA, File E335324, CSA Component Certified C22.2

#### Catalogue numbers

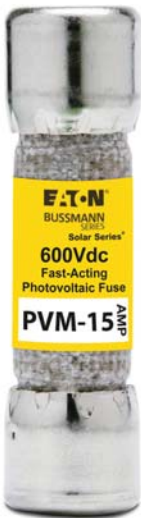
| Rated voltage   | Rated current<br>(Amps) | Power Loss (W)       |                    | Catalogue<br>numbers |
|-----------------|-------------------------|----------------------|--------------------|----------------------|
|                 |                         | 0.8 x I <sub>n</sub> | 1 x I <sub>n</sub> |                      |
| 600 V d.c. (UL) | 4                       |                      |                    | PVM-4                |
|                 | 5                       |                      |                    | PVM-5                |
|                 | 6                       |                      |                    | PVM-6                |
|                 | 7                       |                      |                    | PVM-7                |
|                 | 8                       |                      |                    | PVM-8                |
|                 | 9                       |                      |                    | PVM-9                |
|                 | 10                      | 1                    | 1.9                | PVM-10               |
|                 | 12                      |                      |                    | PVM-12               |
|                 | 15                      | 1                    | 1.7                | PVM-15               |
|                 | 20                      |                      |                    | PVM-20               |
|                 | 25                      |                      |                    | PVM-25               |
|                 | 30                      | 1.6                  | 2.9                | PVM-30               |

Please contact [FUSETECH@eaton.com](mailto:FUSETECH@eaton.com) for further information

#### Dimensions in (mm)



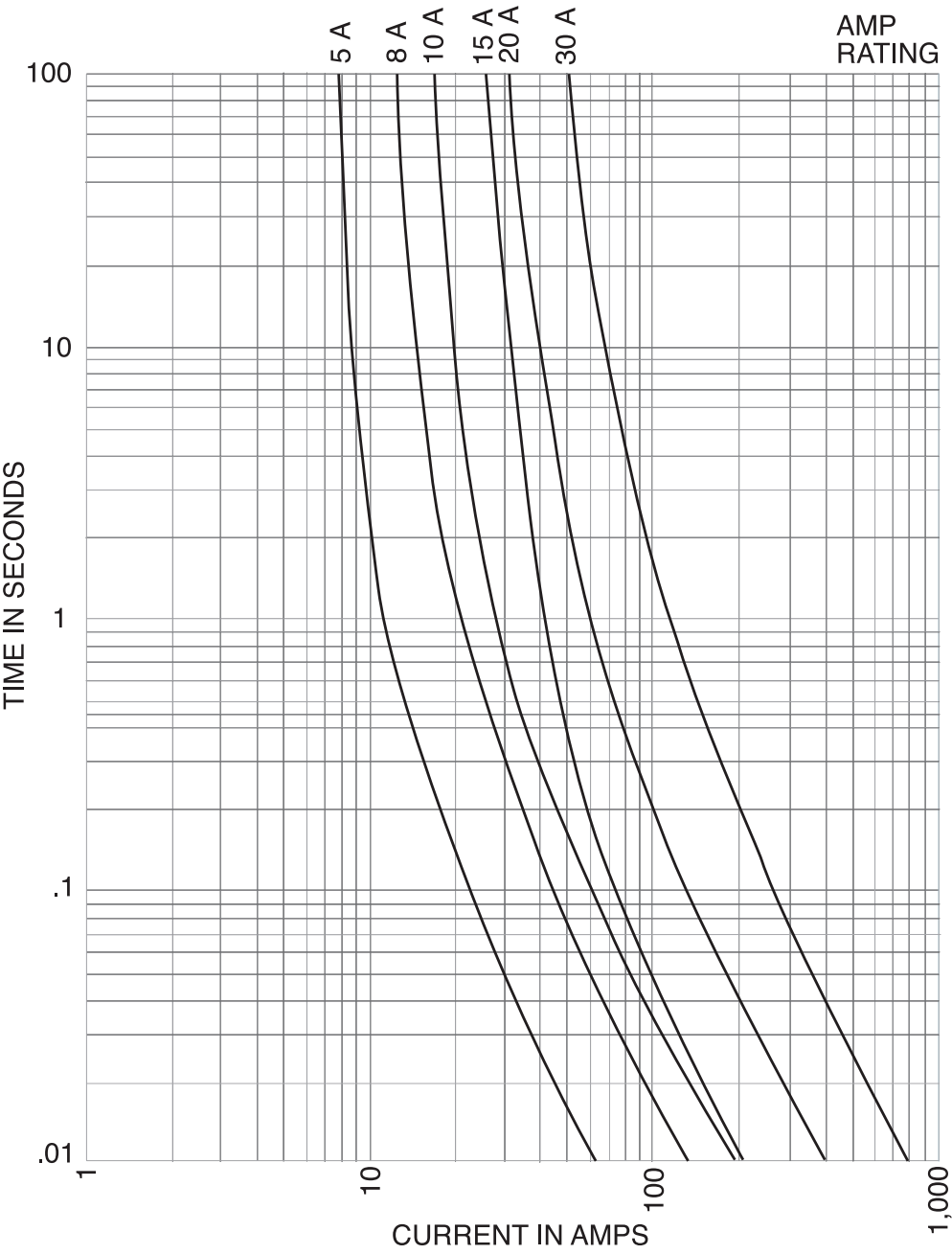
Data sheet: 2153



Photovoltaic fuse links, fuse bases and holders

PVM - 10 x 38 mm, 600 V d.c. (UL), 4 A to 30 A

Time-current curve - 5 A to 30 A



Please contact [FUSETECH@eaton.com](mailto:FUSETECH@eaton.com) for further information

**PV-A10 - 10 x 38 mm, 1000 V d.c. (IEC/UL), 1 A to 20 A****Specifications****Description**

A range of fuse links in a 10 x 38 mm package specifically designed for the protection and isolation of photovoltaic strings. The fuse links are capable of interrupting low over rated currents associated with faulted PV (reverse rated current, multi-array fault) string arrays.

**Technical data**

- Rated voltage: 1000 V d.c. (IEC/UL)
- Rated current: 1 A to 20 A
- Breaking capacity: 50 kA
- Operating class: gPV and UL PV fuse links

**Compatible fuse holder**

CHPV see page 322

**Standards / Agency information**

IEC 60269-6, UL Recognised 2579 (File number E335324), CSA, CCC (1-15A), RoHS compliant.

**Catalogue numbers - Cylindrical and bolt fixing fuse links**

| Rated voltage        | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                      | Watts loss (W)     |                | Catalogue numbers |             |
|----------------------|----------------------|---------------------------------------|----------------------|--------------------|----------------|-------------------|-------------|
|                      |                      | Pre-arcing                            | Total at 1000 V d.c. | 0.8 I <sub>n</sub> | I <sub>n</sub> | Cylindrical       | Bolt fixing |
| 1000 V d.c. (UL/IEC) | 1                    | 0.2                                   | 0.4                  | 0.8                | 1.5            | PV-1A10F          | PV-1A10-T   |
|                      | 2                    | 1.2                                   | 4                    | 0.6                | 1.0            | PV-2A10F          | PV-2A10-T   |
|                      | 2.5                  | 3                                     | 9                    | 0.6                | 1.0            | PV-2-5A10F        | PV-2-5A10-T |
|                      | 3                    | 4                                     | 11                   | 0.8                | 1.3            | PV-3A10F          | PV-3A10-T   |
|                      | 3.5                  | 6.6                                   | 18                   | 0.9                | 1.4            | PV-3-5A10F        | PV-3-5A10-T |
|                      | 4                    | 9.5                                   | 26                   | 1.0                | 1.5            | PV-4A10F          | PV-4A10-T   |
|                      | 5                    | 19                                    | 50                   | 1.0                | 1.6            | PV-5A10F          | PV-5A10-T   |
|                      | 6                    | 30                                    | 90                   | 1.1                | 1.8            | PV-6A10F          | PV-6A10-T   |
|                      | 8                    | 3                                     | 32                   | 1.2                | 2.1            | PV-8A10F          | PV-8A10-T   |
|                      | 10                   | 7                                     | 70                   | 1.2                | 2.3            | PV-10A10F         | PV-10A10-T  |
|                      | 12                   | 12                                    | 120                  | 1.5                | 2.7            | PV-12A10F         | PV-12A10-T  |
|                      | 15                   | 15                                    | 160                  | 1.7                | 2.9            | PV-15A10F         | PV-15A10-T  |
|                      | 16                   | 19                                    | 200                  | 1.8                | 3              | PV-16A10F         | PV-16A10-T  |
|                      | 20                   | 34                                    | 350                  | 2.1                | 3.6            | PV-20A10F         | PV-20A10-T  |

**Catalogue numbers - PCB fixing fuse links**

| Rated voltage        | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                      | Watts loss (W)     |                | Catalogue numbers     |                       |                                  |
|----------------------|----------------------|---------------------------------------|----------------------|--------------------|----------------|-----------------------|-----------------------|----------------------------------|
|                      |                      | Pre-arcing                            | Total at 1000 V d.c. | 0.8 I <sub>n</sub> | I <sub>n</sub> | PCB fixing single pin | PCB fixing double pin | PCB fixing double pin silver cap |
| 1000 V d.c. (UL/IEC) | 1                    | 0.2                                   | 0.4                  | 0.8                | 1.5            | PV-1A10-1P            | PV-1A10-2P            | PV-1A10-2P-S                     |
|                      | 2                    | 1.2                                   | 4                    | 0.6                | 1.0            | PV-2A10-1P            | PV-2A10-2P            | PV-2A10-2P-S                     |
|                      | 2.5                  | 3                                     | 9                    | 0.6                | 1.0            | PV-2-5A10-1P          | PV-2-5A10-2P          | PV-2-5A10-2P-S                   |
|                      | 3                    | 4                                     | 11                   | 0.8                | 1.3            | PV-3A10-1P            | PV-3A10-2P            | PV-3A10-2P-S                     |
|                      | 3.5                  | 6.6                                   | 18                   | 0.9                | 1.4            | PV-3-5A10-1P          | PV-3-5A10-2P          | PV-3-5A10-2P-S                   |
|                      | 4                    | 9.5                                   | 26                   | 1.0                | 1.5            | PV-4A10-1P            | PV-4A10-2P            | PV-4A10-2P-S                     |
|                      | 5                    | 19                                    | 50                   | 1.0                | 1.6            | PV-5A10-1P            | PV-5A10-2P            | PV-5A10-2P-S                     |
|                      | 6                    | 30                                    | 90                   | 1.1                | 1.8            | PV-6A10-1P            | PV-6A10-2P            | PV-6A10-2P-S                     |
|                      | 8                    | 3                                     | 32                   | 1.2                | 2.1            | PV-8A10-1P            | PV-8A10-2P            | PV-8A10-2P-S                     |
|                      | 10                   | 7                                     | 70                   | 1.2                | 2.3            | PV-10A10-1P           | PV-10A10-2P           | PV-10A10-2P-S                    |
|                      | 12                   | 12                                    | 120                  | 1.5                | 2.7            | PV-12A10-1P           | PV-12A10-2P           | PV-12A10-2P-S                    |
|                      | 15                   | 15                                    | 160                  | 1.7                | 2.9            | PV-15A10-1P           | PV-15A10-2P           | PV-15A10-2P-S                    |
|                      | 16                   | 19                                    | 200                  | 1.8                | 3              | PV-16A10-1P           | PV-16A10-2P           | PV-16A10-2P-S                    |
|                      | 20                   | 34                                    | 350                  | 2.1                | 3.6            | PV-20A10-1P           | PV-20A10-2P           | PV-20A10-2P-S                    |

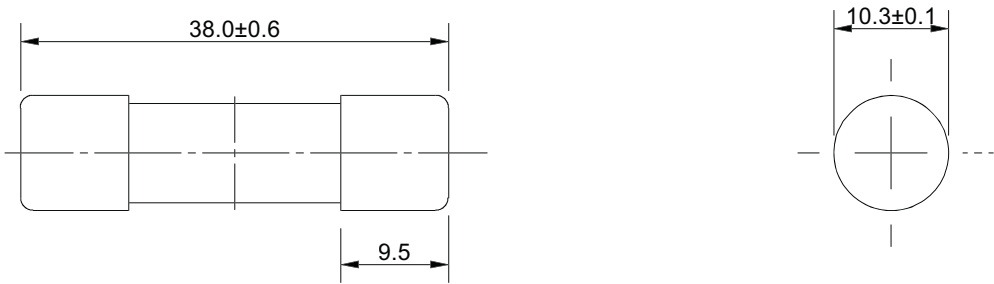
Data sheet: 720110



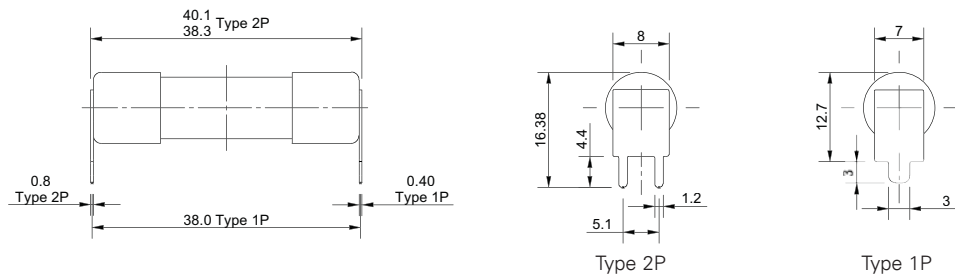
# Photovoltaic fuse links, fuse bases and holders

## PV-A10 - 10 x 38 mm, 1000 V d.c. (IEC/UL), 1 A to 20 A

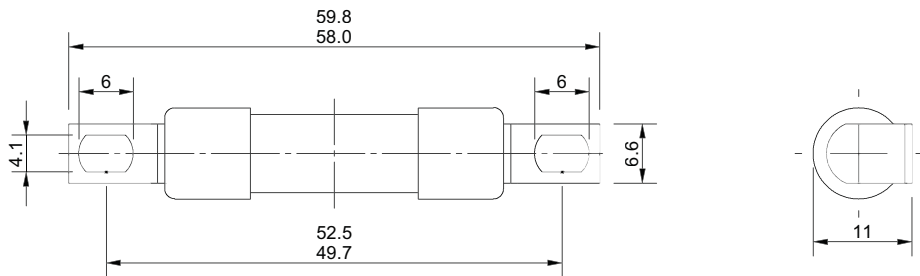
Dimensions (mm) - PV-\*\*A10F, Cylindrical



Dimensions (mm) - PV-\*\*A10-xP, PCB fixing

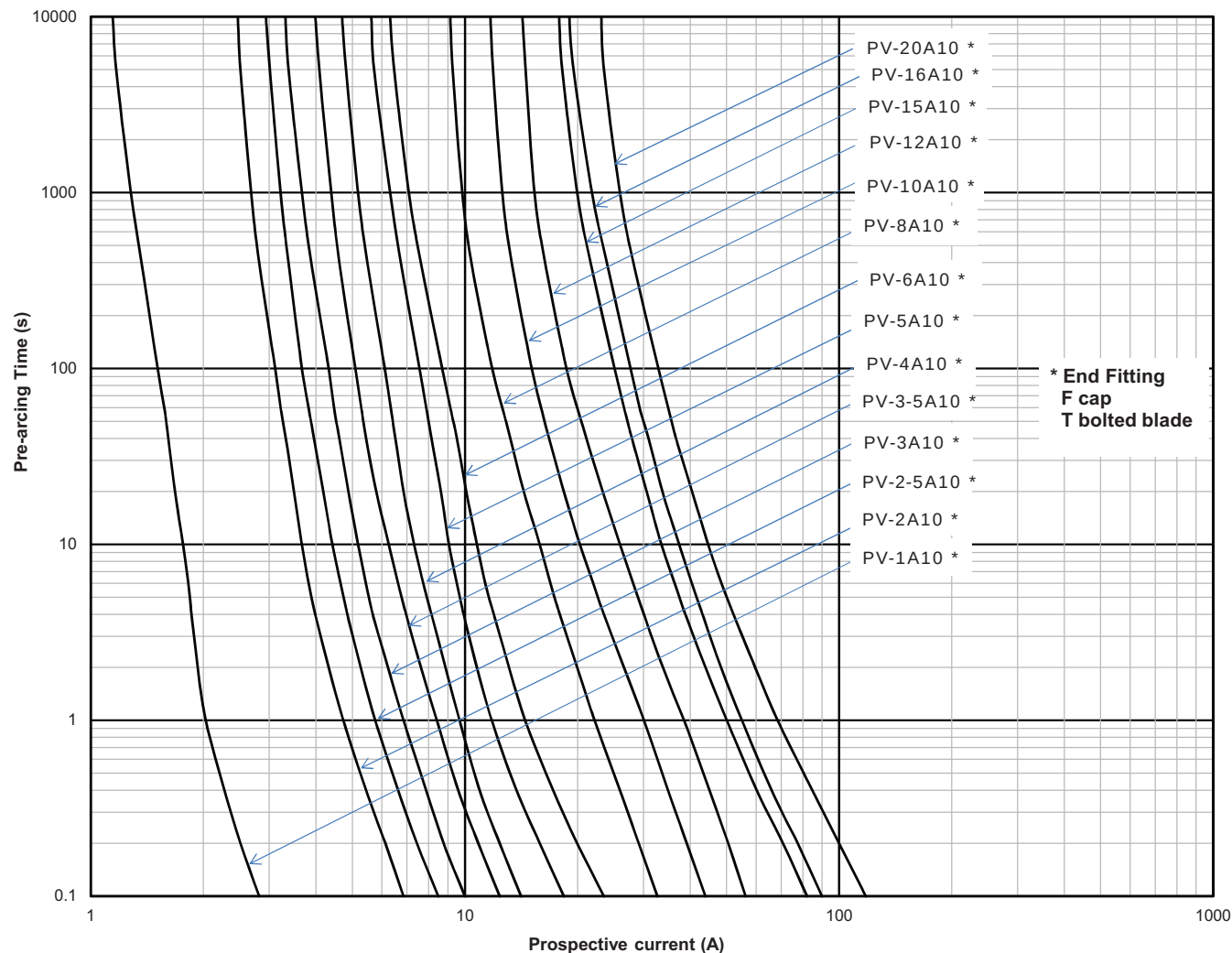


Dimensions (mm) - PV-\*\*A10-T, Bolt fixing

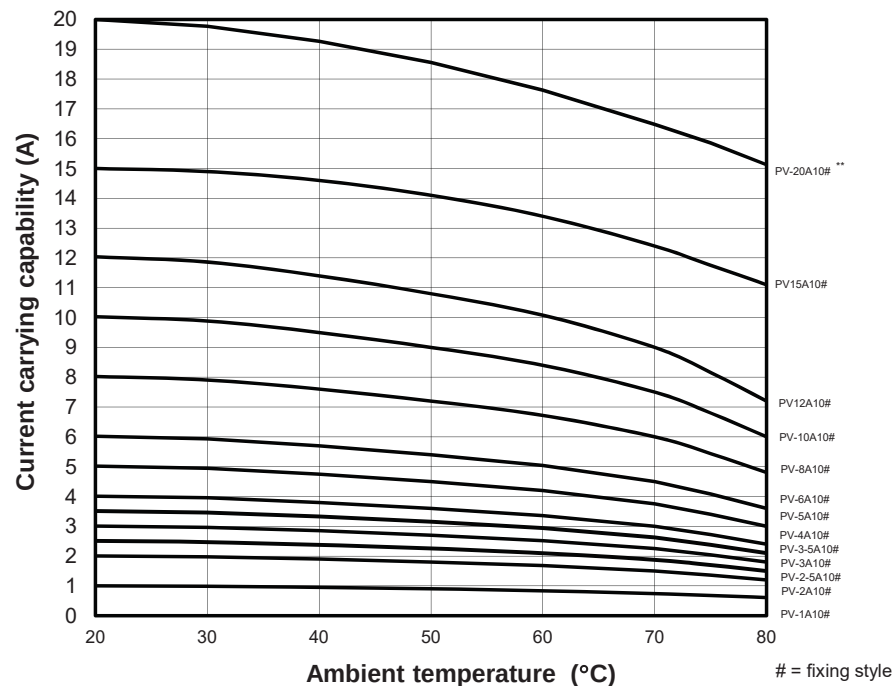


PV-A10 - 10 x 38 mm, 1000 V d.c. (IEC/UL), 1 A to 20 A

Time-current curve - 1 A to 20 A



Temperature deratings



# Photovoltaic fuse links, fuse bases and holders

## CHPV - Modular fuse holders, 1000 V d.c. (IEC/UL), 32 A (IEC), 30 A (UL)

### Specifications

#### Description

Compact DIN-Rail mounting fuse holders specifically designed for 10 x 38 mm photovoltaic fuse links.

#### Catalogue numbers

- CHPV1U 1-pole modular fuse holder
- CHPV2U 2-pole modular fuse holder
- CHPV1IU 1-pole modular fuse holder with neon indicator
- CHPV2IU 2-pole modular fuse holder with neon indicator



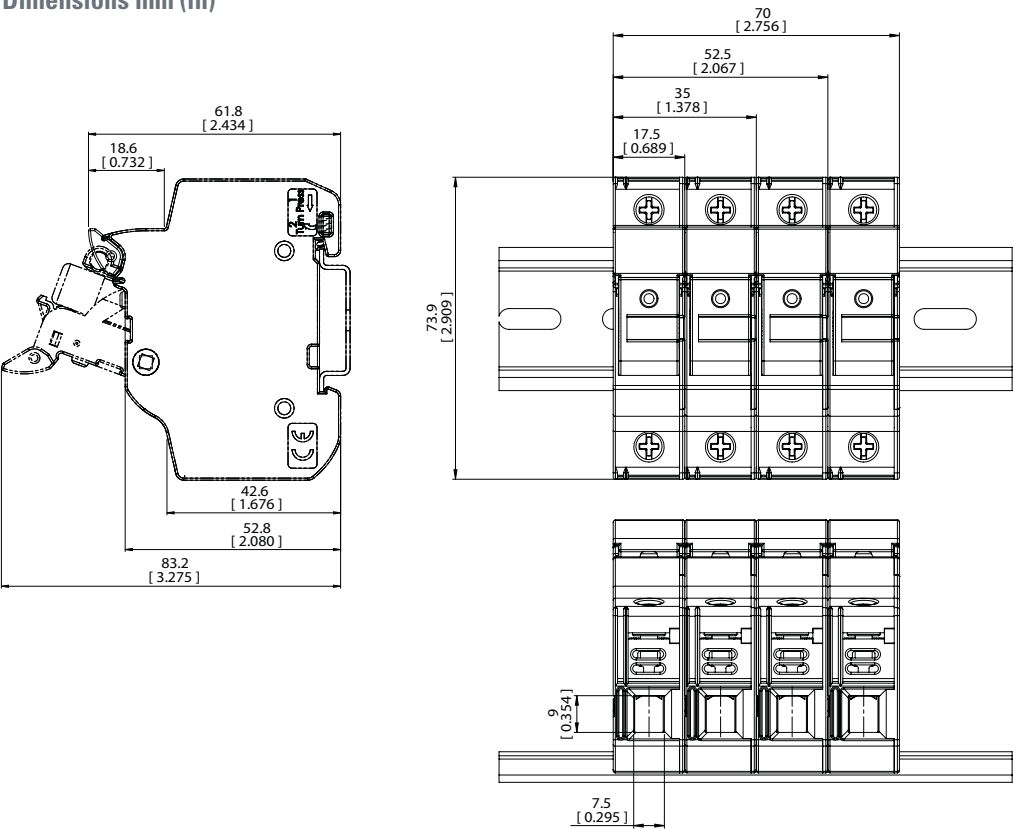
#### Technical data

| IEC           |               | UL            |               | Terminal rating                                                                                                        | Rated breaking withstand capacity | Compatible Bussmann series fuse links |
|---------------|---------------|---------------|---------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------------------------------|
| Rated voltage | Rated current | Rated voltage | Rated current |                                                                                                                        |                                   |                                       |
| 1000 V d.c.   | 32 A          | 1000 V d.c.   | 30 A          | IEC 1 to 25 mm <sup>2</sup><br>70°C PVC<br>Copper cable (solid stranded or fine stranded)<br>Spade lug<br>Comb bus bar | 33 kA rms sym                     | Solar PV range: PVM, PV-A10F          |

#### Standards / Agency information

| IEC         | UL                                       | CSA                                 | CCC        | CE      |
|-------------|------------------------------------------|-------------------------------------|------------|---------|
| IEC 60269-1 | UL 4248-1<br>UL4248-19<br>UL file E14853 | C22.2 No 4248.1<br>C22.2 No 4248.19 | GB 13539.1 | DCB 272 |

#### Dimensions mm (in)



**PV-A10F85L - 10 x 85 mm, 1500 V d.c. (IEC/UL), 2.25 A to 30 A****Specifications****Description**

A range of fuse links in a 10 x 85 mm package specifically designed for the protection and isolation of photovoltaic strings.

**Technical data**

- Rated voltage: 1500 V d.c.
- Rated current: 2.25 A to 30 A
- Breaking capacity: 30 kA 1 ms
- Operating class: gPV

**Compatible fuse holder**

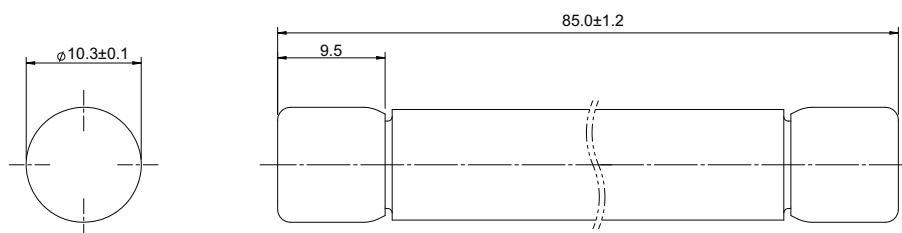
CHPV15L85 see page 325

**Standards / Agency information**

IEC 60269-6, UL 248-19, RoHS compliant

**Catalogue numbers**

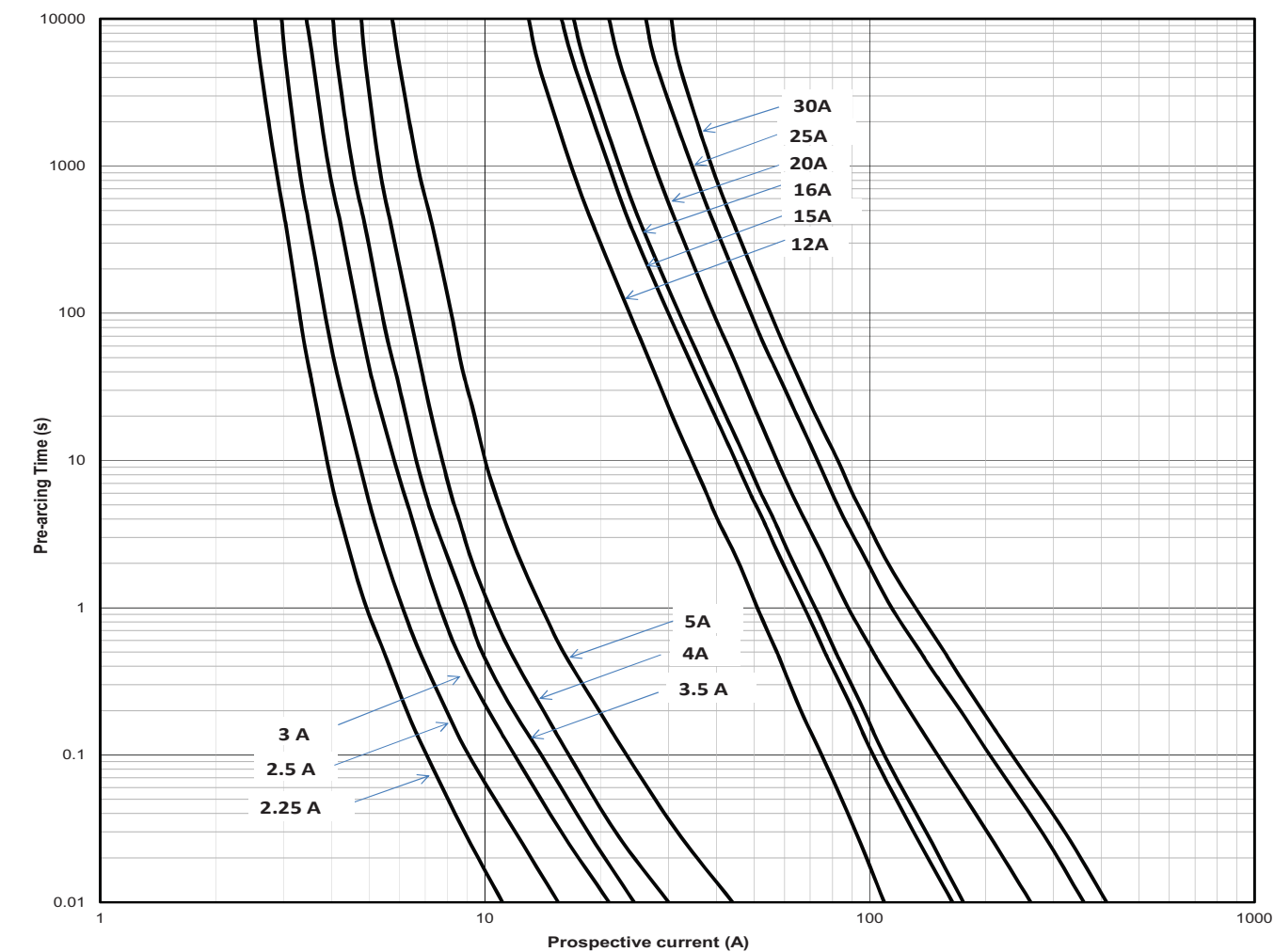
| Rated voltage        | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                      | Watts loss (W)     |                | Catalogue numbers |
|----------------------|----------------------|---------------------------------------|----------------------|--------------------|----------------|-------------------|
|                      |                      | Pre-arcing                            | Total at 1500 V d.c. | 0.8 I <sub>n</sub> | I <sub>n</sub> |                   |
| 1500 V d.c. (IEC/UL) | 2.25                 | 3                                     | 10                   | 1.4                | 2.4            | PV-2-25A10F85L    |
|                      | 2.5                  | 4                                     | 10                   | 1.3                | 2.1            | PV-2.5A10F85L     |
|                      | 3                    | 7                                     | 20                   | 1.3                | 2.2            | PV-3A10F85L       |
|                      | 3.5                  | 10                                    | 20                   | 1.6                | 2.6            | PV-3.5A10F85L     |
|                      | 4                    | 15                                    | 30                   | 1.7                | 2.8            | PV-4A10F85L       |
|                      | 5                    | 33                                    | 60                   | 1.7                | 2.8            | PV-5A10F85L       |
|                      | 12                   | 19                                    | 240                  | 2.1                | 3.5            | PV-12A10F85L      |
|                      | 15                   | 42                                    | 300                  | 2.2                | 3.6            | PV-15A10F85L      |
|                      | 16                   | 48                                    | 350                  | 2.1                | 3.5            | PV-16A10F85L      |
|                      | 20                   | 108                                   | 800                  | 2.7                | 4.5            | PV-20A10F85L      |
|                      | 25                   | 190                                   | 1400                 | 3.4                | 5.6            | PV-25A10F85L      |
|                      | 30                   | 485                                   | 3500                 | 4                  | 6.6            | PV-30A10F85L      |

**Dimensions (mm)**

Photovoltaic fuse links, fuse bases and holders

PV-A10F85L - 10 x 85 mm, 1500 V d.c. (IEC/UL), 2.25 A to 30 A

Time-current curve - 2.25 A to 30 A



**CHPV15L85 -10 x 85 mm fuse holder, 1500 V d.c.. 32 A (IEC/UL)****Specifications****Description**

Eaton's Bussmann series 10 x 85 mm fuse holders are suitable for use with 10 x 85 mm and 14 x 85 mm cylindrical gPV fuse links. The unique design offers high degree of safety. There is no possibility of any accidental contact with live parts during replacement of the fuse links. When the fuse carrier is extracted, a spring loaded cover moves out covering the live parts hence protecting against accidental damage.

**Catalogue symbol**

CHPV15L85

**Compatible fuse links**

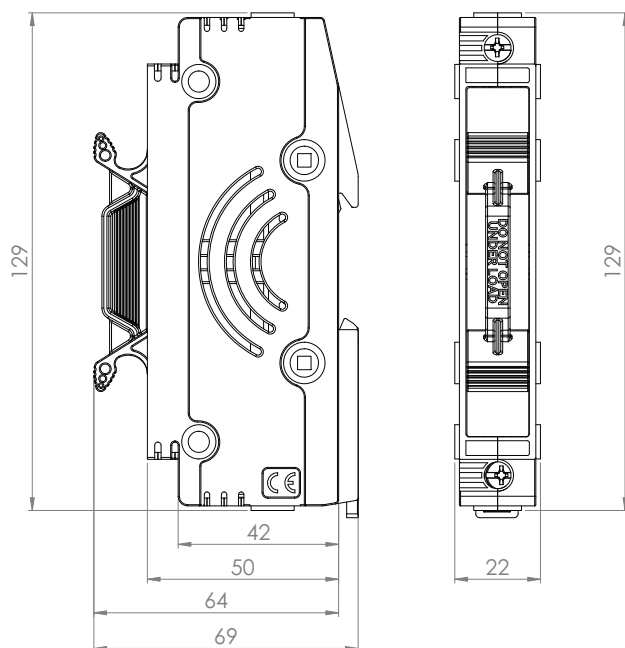
- 10 x 85 mm fuse links - PV-A10F85L see page 323
- 14 x 85 mm fuse links - PV-A14LF see page 329

**Technical data**

- Rated voltage: 1500 V d.c.
- Rated current: 32 A (IEC/UL)
- Breaking capacity: 50 kA

**Standards / Agency information**

IEC 60269-1 and UL 4248-1 Edition 1 (File number 348242), UL 4248-19 Edition 1

**Dimensions (mm)**

# Photovoltaic fuse links, fuse bases and holders

## PV-14F - 14 x 51 mm, 1000 and 1100 V d.c. (IEC/UL), 15 A to 32 A

### Specifications

#### Description

A range of fuse links in a 14 x 51 mm package specifically designed for the protection and isolation of photovoltaic strings. The fuse links are capable of interrupting low overrated currents associated with faulted PV (reverse rated current, multi-array fault).

#### Technical data

- Rated voltage:
  - 1100 V d.c. (IEC and UL, 15 A and 20 A)
  - 1000 V d.c. (IEC and UL, 25 A and 32 A)
- Rated current: 15 A to 32 A
- Breaking capacity: 30 kA
- Operating class: gPV and UL PV fuse links

#### Compatible fuse holder

- CHPV14 see page 328

#### Standards / Agency information

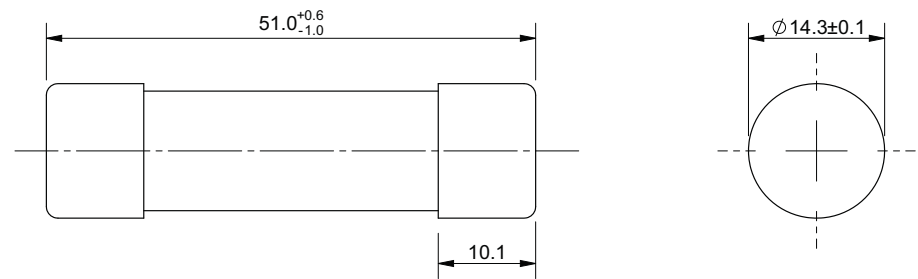
IIEC 60269-6, UL Recognised 2579 (File number E335324), RoHS compliant. Pending: CCC

#### Catalogue numbers

| Rated voltage        | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                        | Watts loss (W)     |                | Catalogue numbers |
|----------------------|----------------------|---------------------------------------|------------------------|--------------------|----------------|-------------------|
|                      |                      | Pre-arcing                            | Total at rated voltage | 0.8 I <sub>n</sub> | I <sub>n</sub> |                   |
| 1100 V d.c. (IEC/UL) | 15                   | 14                                    | 270                    | 2.1                | 4              | PV-15A14F         |
|                      | 20                   | 27                                    | 570                    | 2.9                | 5.5            | PV-20A14F         |
| 1000 V d.c. (IEC/UL) | 25                   | 65                                    | 950                    | 2.8                | 5.3            | PV-25A14F         |
|                      | 32                   | 120                                   | 1750                   | 4                  | 7.5            | PV-32A14F         |

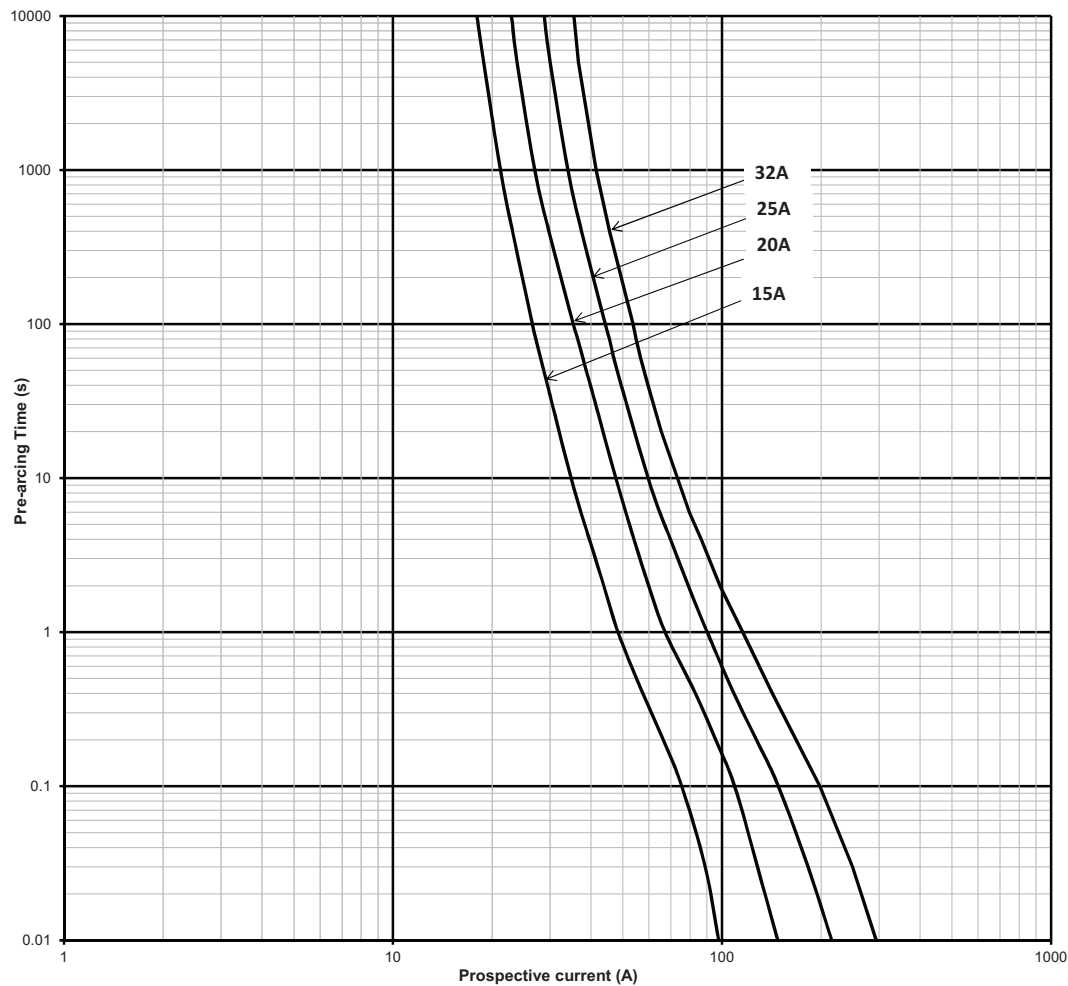


#### Dimensions (mm)



PV-14F - 14 x 51 mm, 1000 and 1100 V d.c. (IEC/UL), 15 A to 32 A

Time-current curve - 15 A to 32 A





# Photovoltaic fuse links, fuse bases and holders

## CHPV14 - 14 x 51 mm, Modular fuse holders, 1500 V d.c., 50 A

### Specifications

#### Description

Compact DIN-Rail mounting fuse holders specifically designed for 14 x 51 mm photovoltaic fuse links.

#### Catalogue numbers

- CHPV141U 1-pole without indicator
- CHPV142 2-pole without indicator
- CHPV141IU 1-pole with indicator
- CHPV142IU 2-pole with indicator

#### Standards / Agency information

IEC 60269-1 and 2, UL Listed file number E348242



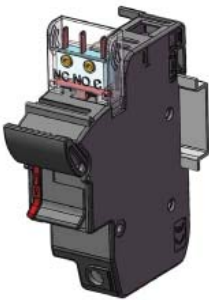
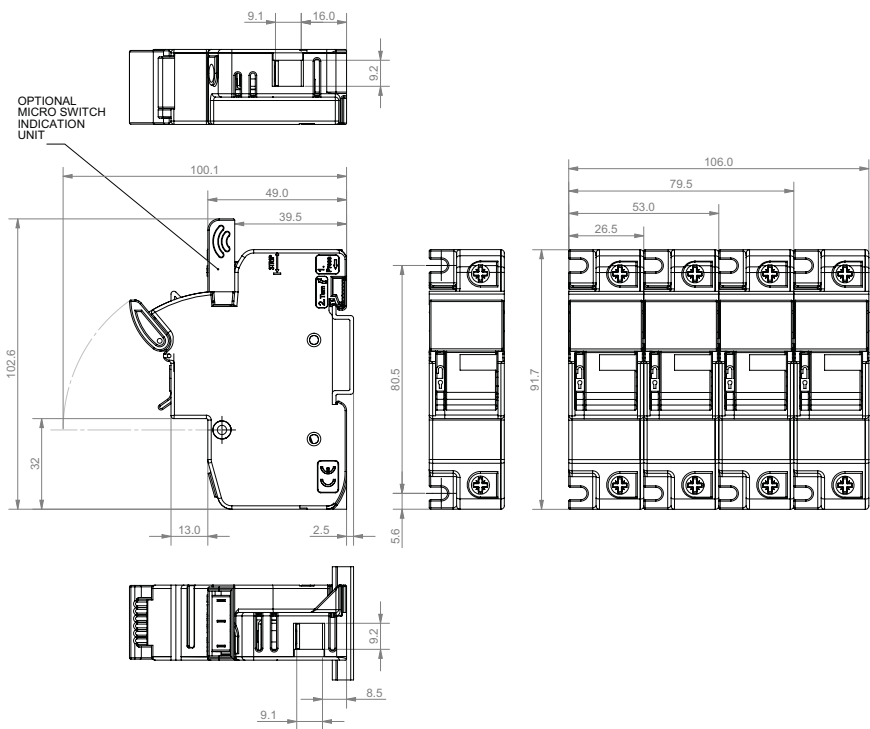
#### Technical data

| Rated voltage | Rated current | Agency markings                                    | Terminal rating                                                                                                                                                      | Rated breaking withstand capacity | Compatible Bussmann series fuse links |
|---------------|---------------|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------------------------------|
| IEC and UL    | IEC and UL    |                                                    |                                                                                                                                                                      |                                   |                                       |
| 1500 V d.c.   | 32 A          | IEC 60269-1 and 2<br>UL Listed file number E348242 | Cable size: 1.5-50 mm <sup>2</sup><br>Recommended torque setting: 3.5 Nm<br>Maximum torque setting: 3.5Nm<br>Mounting 35 mm DIN-Rail or 2 x M4 panel mounting screws | 10 kA d.c.                        | PV-A14F                               |

#### Accessories

| Catalogue numbers | Description                                                                                           | Unit packing |
|-------------------|-------------------------------------------------------------------------------------------------------|--------------|
| JV-L              | Multi-pole connector kit. One kit will gang up to 4-poles together                                    | 12           |
| CH14-CTP          | IP20 Protection accessory, provides IP20 protection to terminals with 10mm <sup>2</sup> or less cable | 12           |

#### Dimensions (mm)



Data sheet: 10080

**PV-14L - 14 x 65 mm, 1300-1500 V d.c. (IEC and UL), 2.25 A to 32 A****Specifications****Description**

A range of fuse links in a 14 x 65 mm package specifically designed for the protection and isolation of photovoltaic strings. The fuse links are capable of interrupting low overrated currents associated with faulted PV (reverse rated current, multi-array fault).

**Technical data**

- Rated voltage:
  - 1500 V d.c. (IEC and UL, 2.25 A to 20 A)
  - 1300 V d.c. (IEC and UL, 25 A and 32 A)
- Rated current: 2.25 A to 32 A
- Breaking capacity: 10 kA
- Operating class: gPV and UL PV fuse links

**Compatible fuse holder for PV-A14LF10F**

CHPV15L85 see page 325

**Standards / Agency information**

IEC 60269-6, UL Recognised 2579 (File number E335324), RoHS compliant, Pending: CCC.

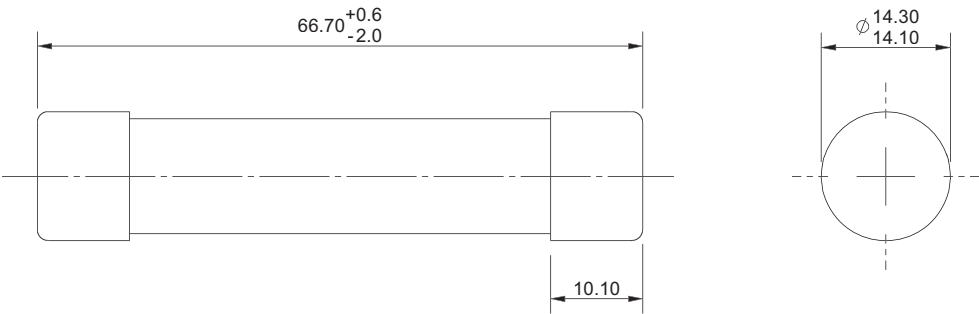
**Catalogue numbers**

| Rated voltage           | Rated current (Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                        | Watts loss (W)     |                | Catalogue numbers |                       |                               |
|-------------------------|----------------------|---------------------------------------|------------------------|--------------------|----------------|-------------------|-----------------------|-------------------------------|
|                         |                      | Pre-arcing                            | Total at rated voltage | 0.8 I <sub>n</sub> | I <sub>n</sub> | Cylindrical       | Cylindrical with tags | Cylindrical with 10mm fixings |
| 1500 V d.c.<br>(IEC/UL) | 2.25                 | 4                                     | 8                      | 1.4                | 2.3            | PV-2.25A14LF      | N/A                   | PV-2.25A14LF10F               |
|                         | 2.5                  | 5                                     | 10                     | 1.5                | 2.5            | PV-2.5A14LF       | PV-2.5A14L-T          | PV-2.5A14LF10F                |
|                         | 3                    | 8                                     | 14                     | 1.7                | 2.8            | PV-3A14LF         | PV-3A14L-T            | PV-3A14LF10F                  |
|                         | 3.5                  | 12                                    | 23                     | 1.8                | 3.0            | N/A               | N/A                   | PV-3.5A14LF10F                |
|                         | 4                    | 18                                    | 34                     | 2                  | 3.3            | PV-4A14LF         | PV-4A14L-T            | PV-4A14LF10F                  |
|                         | 15                   | 16                                    | 190                    | 2.9                | 5.1            | PV-15A14LF        | PV-15A14L-T           | PV-15A14LF10F                 |
|                         | 20                   | 34                                    | 400                    | 3.8                | 6.9            | PV-20A14LF        | PV-20A14L-T           | PV-20A14LF10F                 |
| 1300 V d.c.<br>(IEC/UL) | 25                   | 65                                    | 550                    | 4.1                | 7.5            | PV-25A14LF        | PV-25A14L-T           | PV-25A14LF10F                 |
|                         | 32                   | 105                                   | 900                    | 5.7                | 10.4           | PV-32A14LF        | PV-32A14L-T           | PV-32A14LF10F                 |

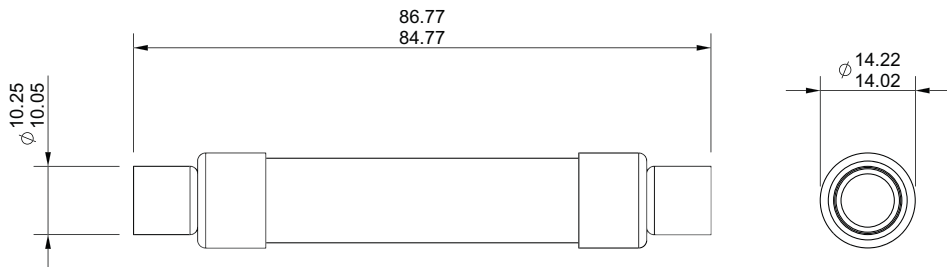
# Photovoltaic fuse links, fuse bases and holders

## PV-14L - 14 x 65 mm, 1300-1500 V d.c. (IEC and UL), 2.25 A to 32 A

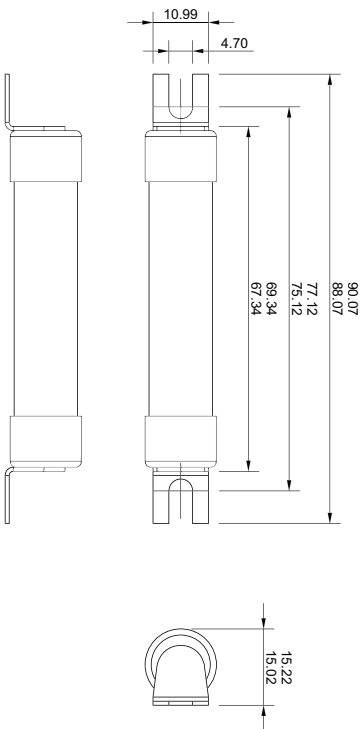
Dimensions (mm) - PV-\*A14LF, Cylindrical



Dimensions (mm) - PV-\*A14LF10F, Cylindrical with 10 mm Fixings

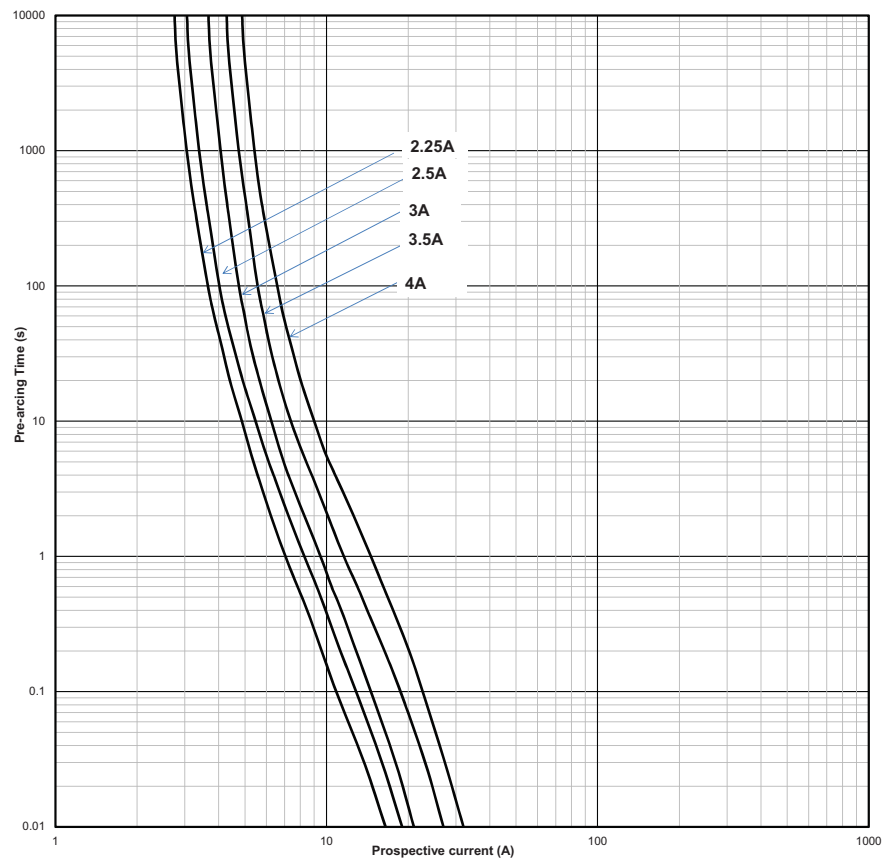


Dimensions (mm) - PV-\*A14L-T, Cylindrical with tags

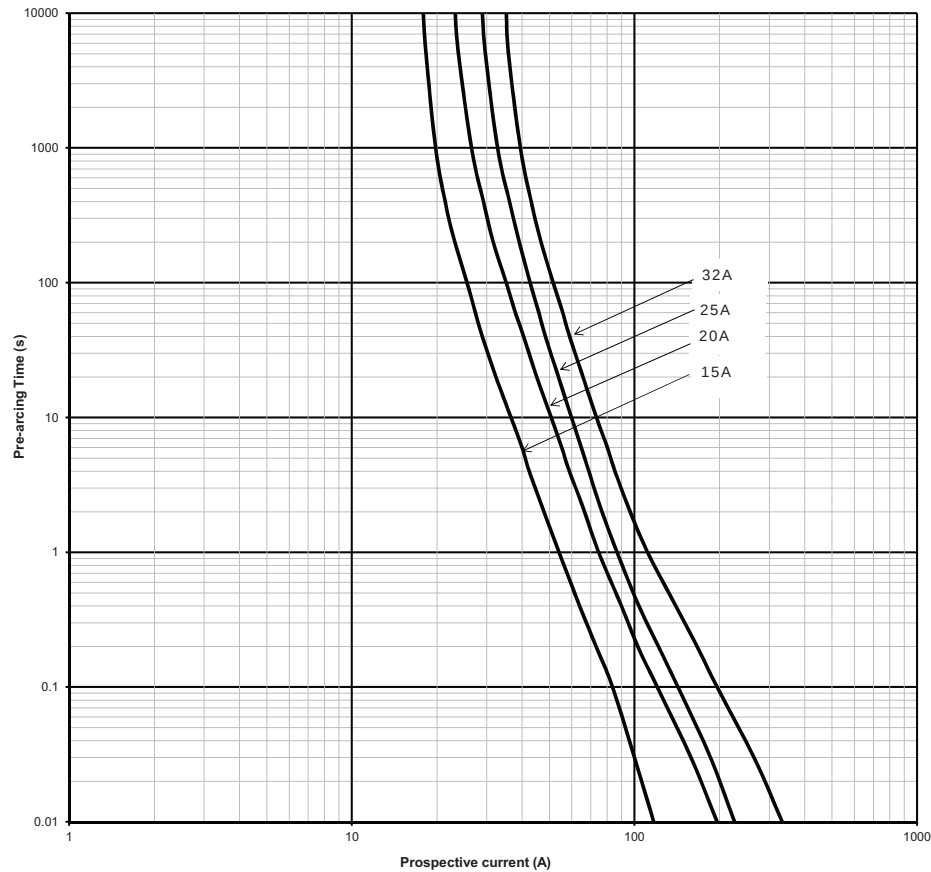


PV-14L - 14 x 65 mm, 1300-1500 V d.c. (IEC and UL), 2.25 A to 32 A

Time-current curve - 2.25 A to 4 A



Time-current curve - 3.5 A to 32 A



# Photovoltaic fuse links, fuse bases and holders

## NH 170M - 800 V a.c. (IEC/UL), 32 A to 400 A

### Specifications

#### Description

Eaton's Bussmann series NH size 800 V a.c. fuse links are specifically designed to meet the needs of branch circuit and transformer protection in photovoltaic inverter systems. The fuse links are capable of interrupting low overcurrents associated with faulted PV systems (reverse current, multi-array fault).

#### Technical data

- Rated voltage: 800 V a.c.
- Rated current: 32 A to 400 A
- Breaking capacity: 65 kA
- Operating class: gR

#### Compatible fuse base

SD-D-PV see page 338

#### Microswitches, for use with bladed version

- 170H0236
- 170H0238

#### Standards / Agency information

UL 248-13 (file number E125085), IEC 60269-4 (see details below)

#### Catalogue numbers

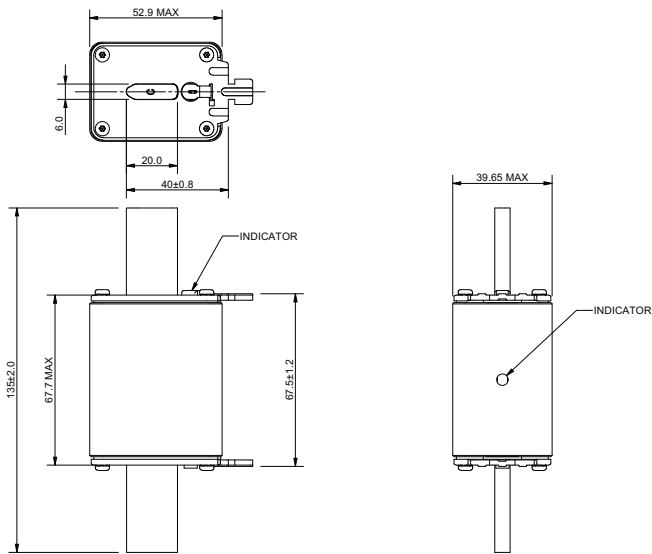
| Fuse link<br>body size | Rated voltage | Rated current<br>(Amps) | I <sup>t</sup> (A <sup>2</sup> Sec) |                        | Watts loss<br>(W) | Catalogue<br>numbers |                                  |
|------------------------|---------------|-------------------------|-------------------------------------|------------------------|-------------------|----------------------|----------------------------------|
|                        |               |                         | Pre-arcing                          | Total<br>at 800 V a.c. |                   | Bladed with<br>lugs  | Blade with bolt<br>holes no lugs |
| NH1                    | 800 V a.c.    | 32                      | 80                                  | 2000                   | 8                 | 170M7350             |                                  |
|                        |               | 40                      | 185                                 | 3000                   | 9                 | 170M7351             |                                  |
|                        |               | 50                      | 400                                 | 6000                   | 11                | 170M7352             |                                  |
|                        |               | 63                      | 470                                 | 7000                   | 12                | 170M7353*            | 170M7353-B*                      |
|                        |               | 80                      | 640                                 | 9000                   | 15                | 170M7354             | 170M7354-B                       |
|                        |               | 100                     | 1300                                | 17000                  | 16                | 170M7355             | 170M7355-B                       |
|                        |               | 125                     | 2600                                | 34000                  | 17                | 170M7356*            | 170M7356-B*                      |
|                        |               | 160                     | 5200                                | 68000                  | 27                | 170M7357*            | 170M7357-B*                      |
|                        |               | 200                     | 10200                               | 140000                 | 25                | 170M7358*            | 170M7358-B*                      |
|                        |               | 160                     | 4600                                | 36800                  | 28                | 170M7397             | 170M7397-B                       |
| NH2                    | 800 V a.c.    | 200                     | 9500                                | 76000                  | 32                | 170M7398             | 170M7398-B                       |
|                        |               | 250                     | 17000                               | 136000                 | 38                | 170M7399             | 170M7399-B                       |
|                        |               | 315                     | 32000                               | 230000                 | 44                | 170M7400*            | 170M7400-B*                      |
| NH3                    | 800 V a.c.    | 355                     | 44500                               | 320000                 | 46                | 170M7401*            |                                  |
|                        |               | 400                     | 67500                               | 480000                 | 50                | 170M7402*            |                                  |
|                        |               | 355                     | 38000                               | 270000                 | 48                |                      | 170M7401-B*                      |
|                        |               | 400                     | 61000                               | 430000                 | 50                |                      | 170M7402-B*                      |

\*UL 248-13 and IEC 60269-4

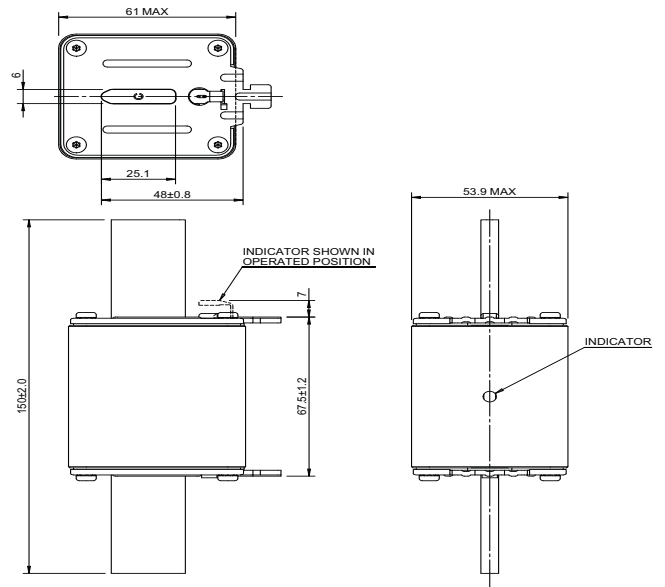


## NH 170M - 800 V a.c. (IEC/UL), 32 A to 400 A

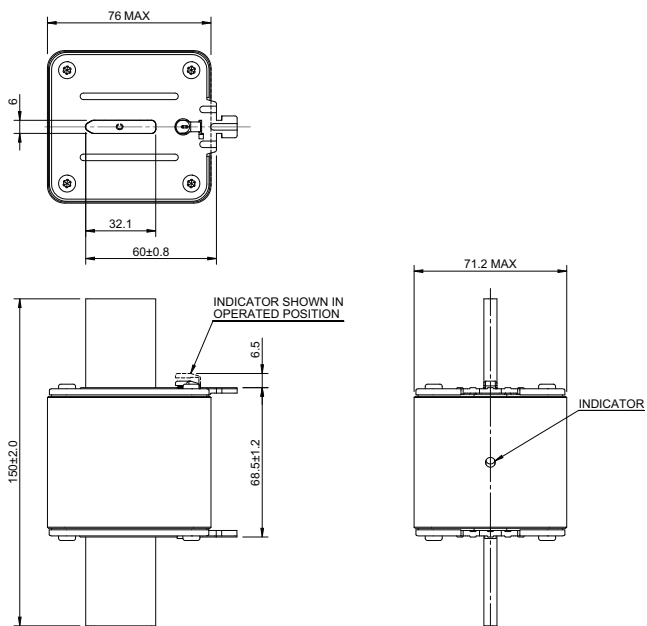
Dimensions (mm) - NH1, bladed with lugs



Dimensions (mm) - NH2, bladed with lugs



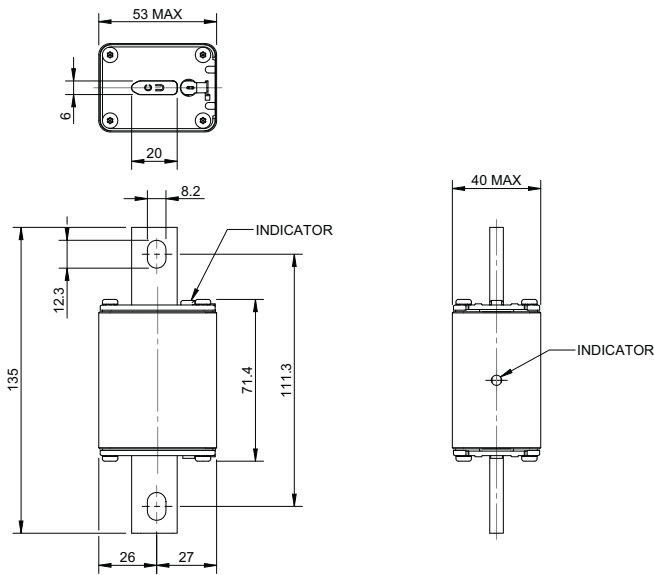
Dimensions (mm) - NH3, bladed with lugs



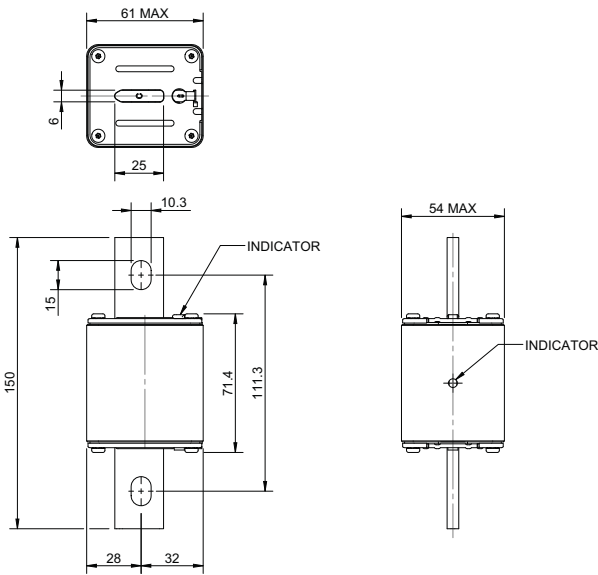
# Photovoltaic fuse links, fuse bases and holders

## NH 170M - 800 V a.c. (IEC/UL), 32 A to 400 A

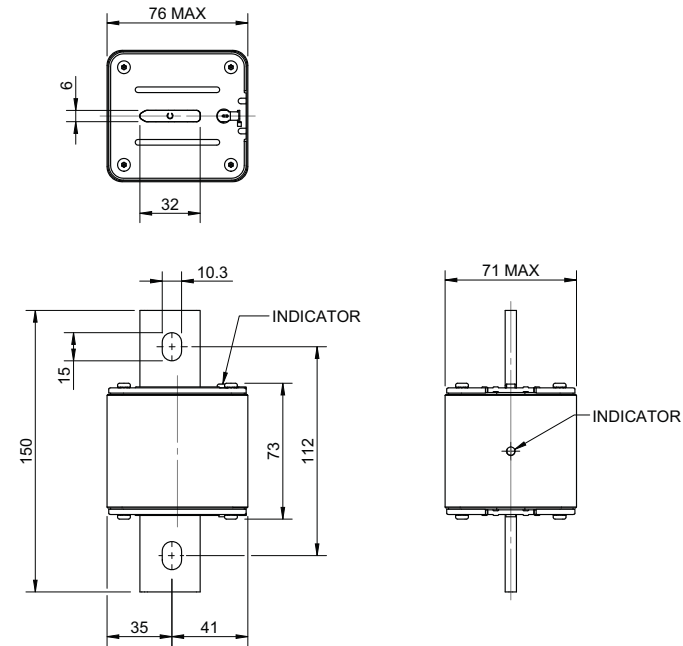
Dimensions (mm) - NH1, bolt holes no lugs



Dimensions (mm) - NH2, bolt holes no lugs

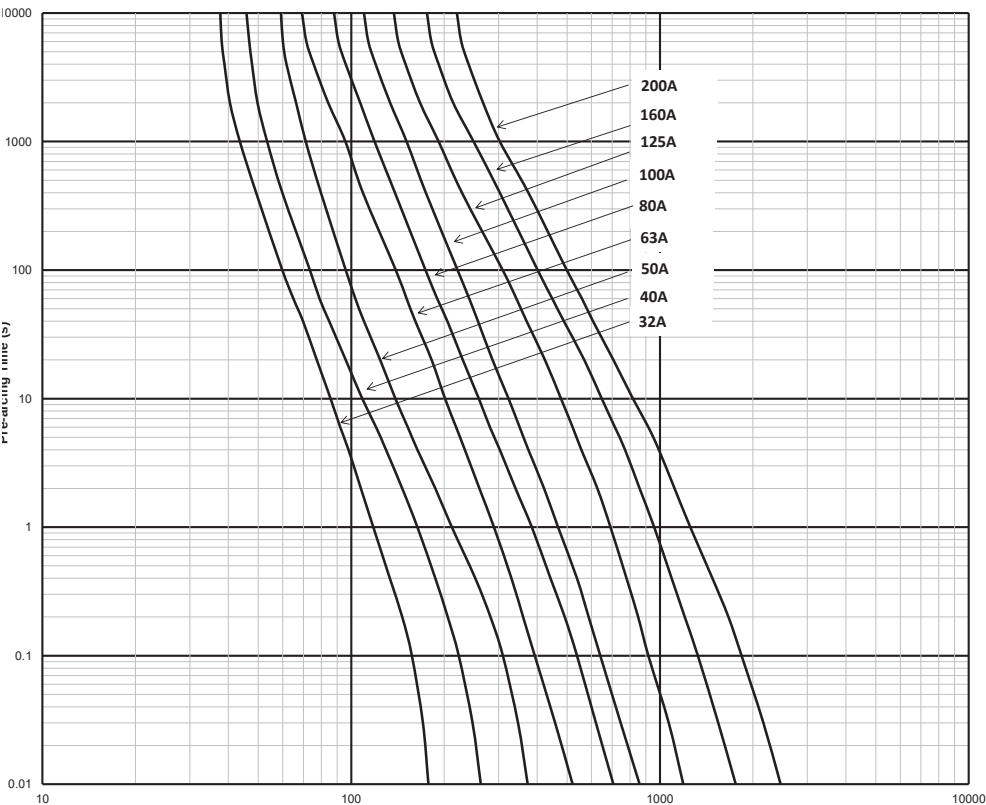


Dimensions (mm) - NH3, bolt holes no lugs

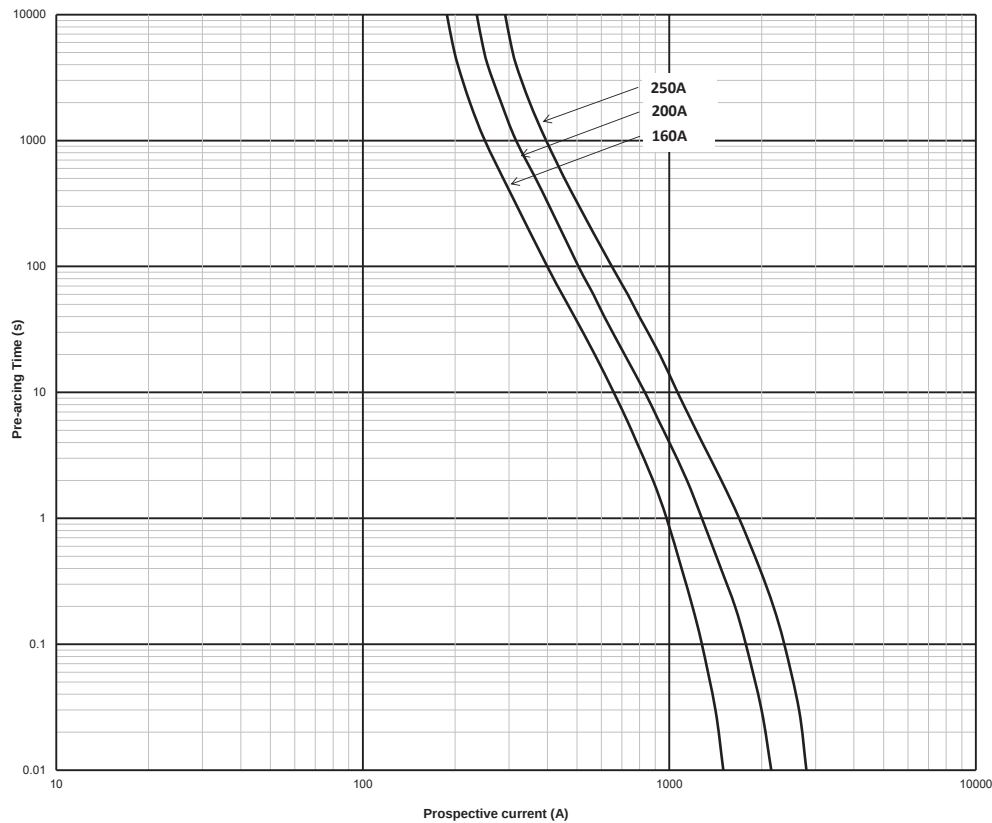


NH 170M - 800 V a.c. (IEC/UL), 32 A to 400 A

Time-current curve - Size 1, 32 A to 200 A



Time-current curve - Size 2, 160 A to 250 A

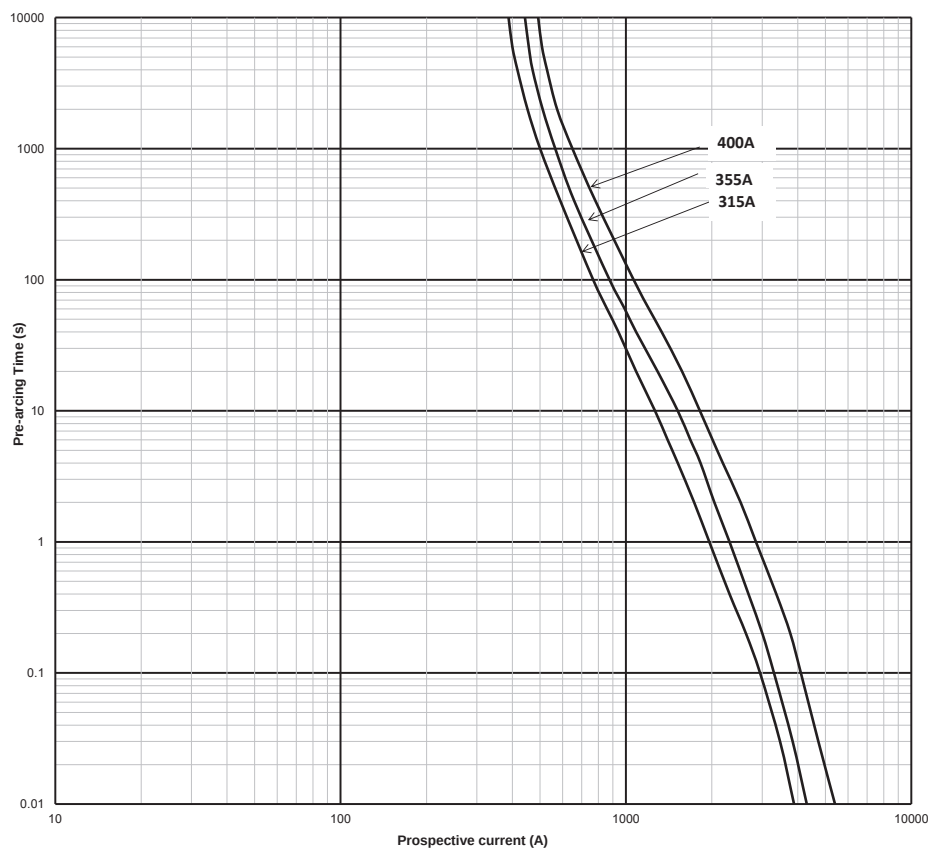




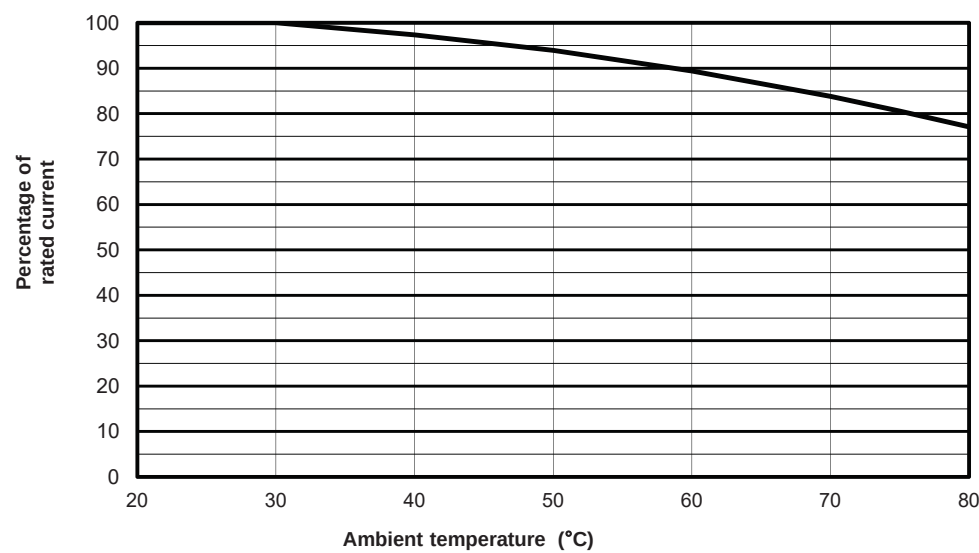
# Photovoltaic fuse links, fuse bases and holders

## NH 170M - 800 V a.c. (IEC/UL), 32 A to 400 A

Time-current curve - Size 3, 315 A to 400 A

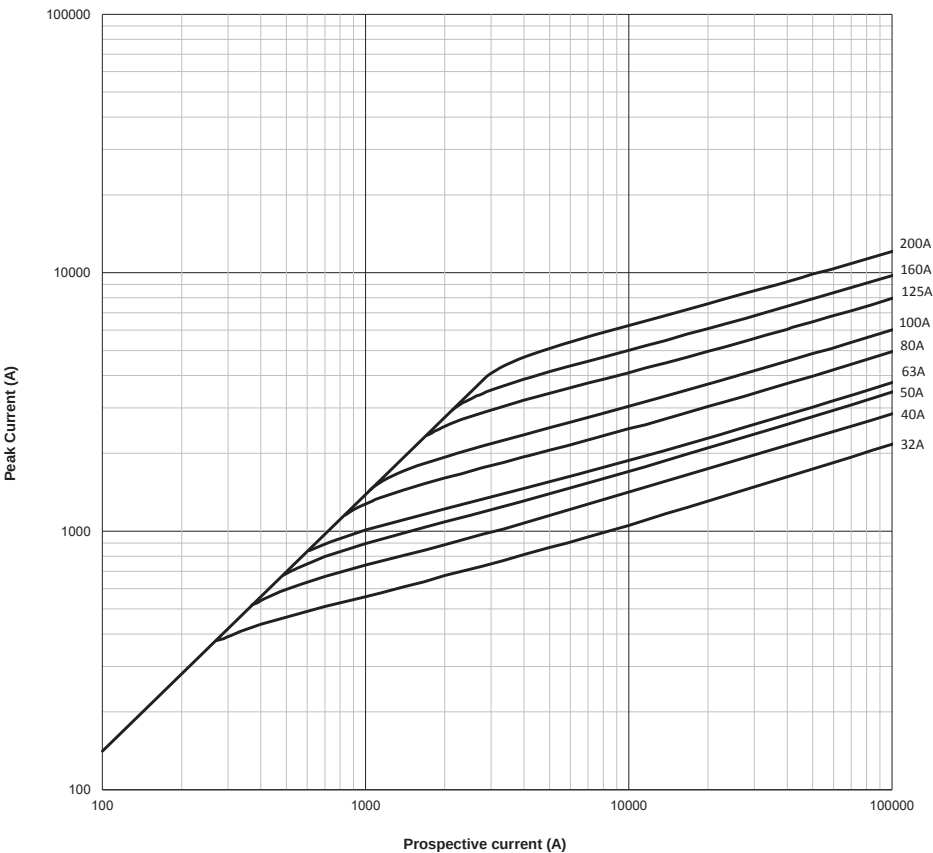


Temperature derating curve

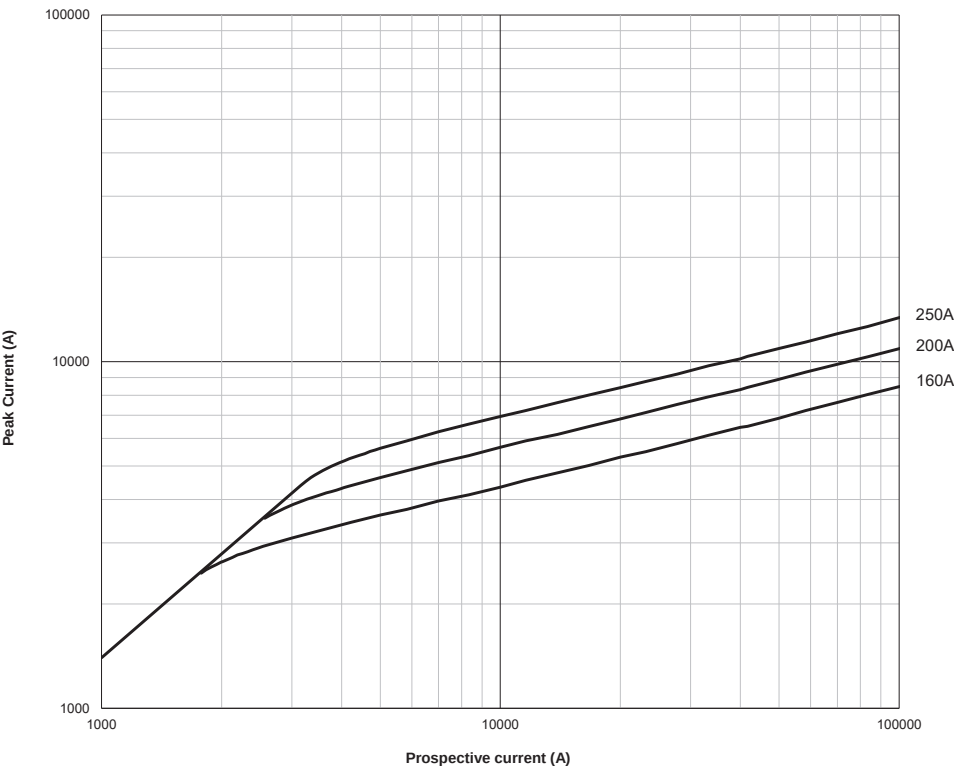


NH 170M - 800 V a.c. (IEC/UL), 32 A to 400 A

Cut-off curve - Size 1, 32 A to 200 A



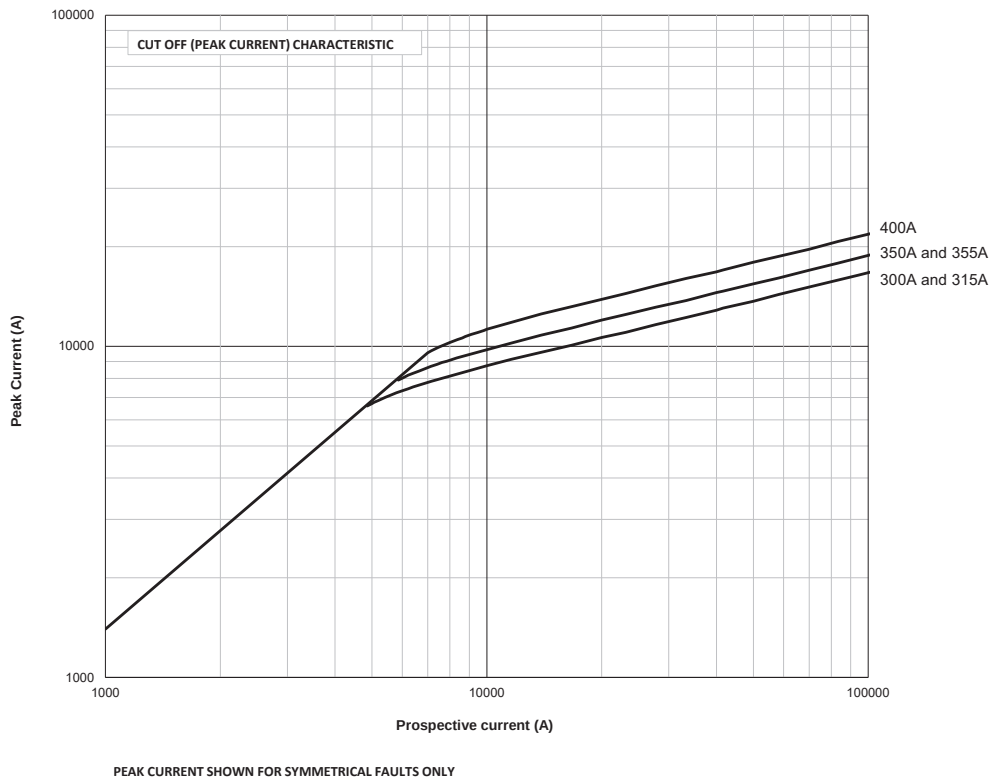
Cut-off peak current curve - Size 2, 160 A to 250 A



PEAK CURRENT SHOWN FOR SYMMETRICAL FAULTS ONLY

NH 170M - 800 V a.c. (IEC/UL), 32 A to 400 A

Cut-off peak current curve - Size 3, 315 A to 400 A



**NH PV-ANH - 1000 V d.c. (IEC/UL), 32 A to 400 A****Specifications****Description**

A range of NH size bladed fuse links specifically designed for protecting and isolating photovoltaic array combiners and disconnects. These fuse links are capable of interrupting low overrated currents associated with faulted PV systems (reverse rated current, multi-array fault).

**Technical data**

- Rated voltage: 1000 V d.c. (IEC and UL)
- Rated current: 32 A to 400 A
- Breaking capacity: 50 kA
- Operating class: gPV and UL PV fuse links

**Compatible fuse base**

SD-D-PV see page 338

**Standards / Agency information**

IEC 60269-6, UL Recognised file 2579 E335324 for size 1 only, RoHS compliant

**Catalogue numbers**

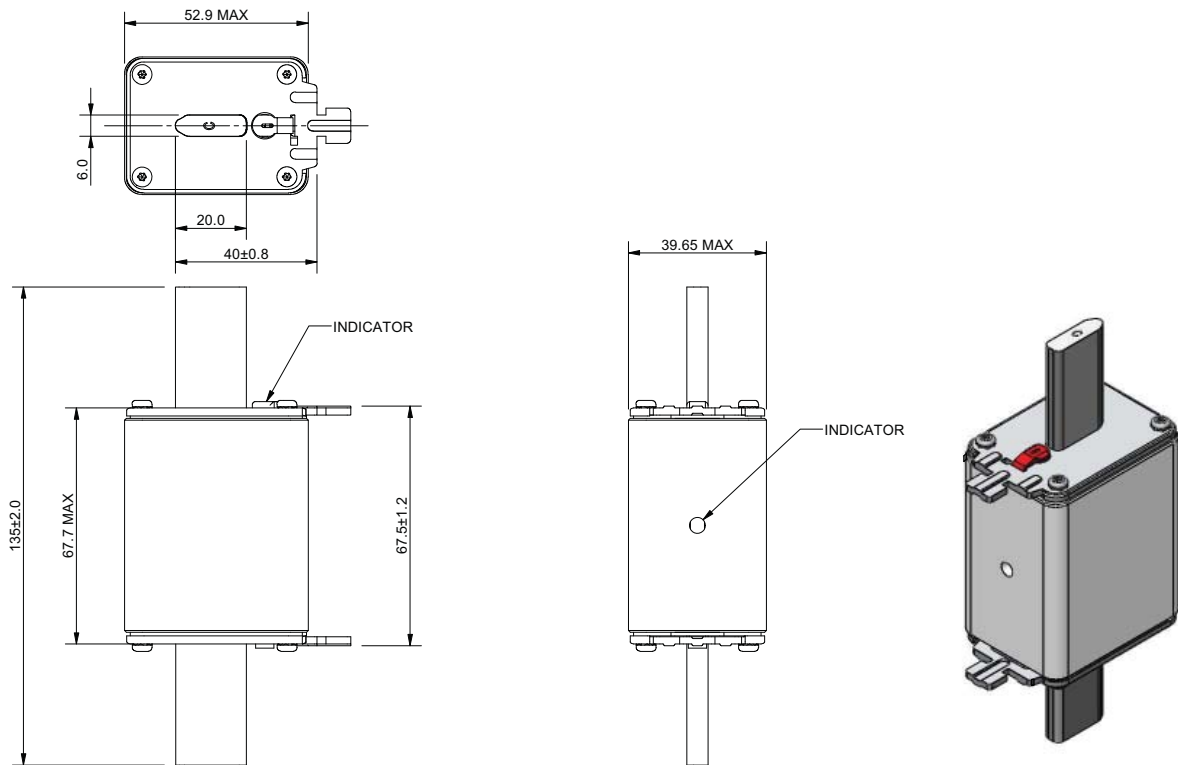
| Fuse link<br>body size | Rated voltage           | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                         | Watts loss (W)     |                | Catalogue<br>numbers        |                          |                                   |
|------------------------|-------------------------|-------------------------|---------------------------------------|-------------------------|--------------------|----------------|-----------------------------|--------------------------|-----------------------------------|
|                        |                         |                         | Pre-arcing                            | Total<br>at 1000 V d.c. | 0.8 I <sub>n</sub> | I <sub>n</sub> | Blade without<br>bolt holes | Blade with bolt<br>holes | Blade with bolt<br>holes and lugs |
| NH1                    | 1000 V d.c.<br>(IEC/UL) | 32                      | 80                                    | 720                     | 4                  | 8              | PV-32ANH1                   | PV-32ANH1-B              |                                   |
|                        |                         | 40                      | 185                                   | 1670                    | 5                  | 9              | PV-40ANH1                   | PV-40ANH1-B              |                                   |
|                        |                         | 50                      | 400                                   | 3600                    | 6                  | 11             | PV-50ANH1                   | PV-50ANH1-B              |                                   |
|                        |                         | 63                      | 470                                   | 4300                    | 6                  | 12             | PV-63ANH1                   |                          |                                   |
|                        |                         | 80                      | 640                                   | 5760                    | 8                  | 15             | PV-80ANH1                   |                          |                                   |
|                        |                         | 100                     | 1300                                  | 11700                   | 8                  | 16             | PV-100ANH1                  |                          |                                   |
|                        |                         | 110                     | 2100                                  | 18900                   | 9                  | 18.5           | PV-110ANH1                  |                          |                                   |
|                        |                         | 125                     | 2600                                  | 23400                   | 9                  | 17             | PV-125ANH1                  |                          |                                   |
|                        |                         | 160                     | 5200                                  | 46800                   | 14                 | 27             | PV-160ANH1                  |                          |                                   |
|                        |                         | 175                     | 8300                                  | 74700                   | 15                 | 29             | PV-175ANH1                  |                          |                                   |
| NH2                    | 1000 V d.c.<br>(IEC/UL) | 200                     | 10200                                 | 82000                   | 13                 | 25             | PV-200ANH1                  |                          |                                   |
|                        |                         | 160                     | 4600                                  | 37000                   | 14                 | 28             | PV-160ANH2                  |                          |                                   |
|                        |                         | 200                     | 9500                                  | 76000                   | 16                 | 32             | PV-200ANH2                  |                          |                                   |
| NH3                    | 1000 V d.c.<br>(IEC/UL) | 250                     | 17000                                 | 136000                  | 19                 | 38             | PV-250ANH2                  |                          |                                   |
|                        |                         | 300                     | 32000                                 | 260000                  | 24                 | 40             | PV-300ANH3                  |                          |                                   |
|                        |                         | 315                     | 32000                                 | 260000                  | 26                 | 44             | PV-315ANH3                  |                          |                                   |
|                        |                         | 350                     | 44500                                 | 370000                  | 27                 | 45             | PV-350ANH3                  |                          |                                   |
|                        |                         | 355                     | 44500                                 | 370000                  | 28                 | 46             | PV-355ANH3                  |                          |                                   |
| NH1                    | 1000 V d.c.<br>(IEC/UL) | 400                     | 67500                                 | 550000                  | 30                 | 50             | PV-400ANH3                  |                          |                                   |
|                        |                         | 63                      | 470                                   | 4300                    | 6                  | 12             |                             | PV-63ANH1-B              | PV-63ANH1-BL                      |
|                        |                         | 80                      | 640                                   | 5760                    | 8                  | 15             |                             | PV-80ANH1-B              | PV-80ANH1-BL                      |
|                        |                         | 100                     | 1300                                  | 11700                   | 8                  | 16             |                             | PV-100ANH1-B             | PV-100ANH1-BL                     |
|                        |                         | 125                     | 2600                                  | 23400                   | 9                  | 17             |                             | PV-125ANH1-B             | PV-125ANH1-BL                     |
|                        |                         | 160                     | 5200                                  | 46800                   | 14                 | 27             |                             | PV-160ANH1-B             | PV-160ANH1-BL                     |
| NH2                    | 1000 V d.c.<br>(IEC/UL) | 200                     | 10200                                 | 82000                   | 13                 | 25             |                             | PV-200ANH1-B             | PV-200ANH1-BL                     |
|                        |                         | 160                     | 4600                                  | 37000                   | 14                 | 28             |                             | PV-160ANH2-B             | PV-160ANH2-BL                     |
|                        |                         | 200                     | 9500                                  | 76000                   | 16                 | 32             |                             | PV-200ANH2-B             | PV-200ANH2-BL                     |
| NH3                    | 1000 V d.c.<br>(IEC/UL) | 250                     | 17000                                 | 136000                  | 19                 | 38             |                             | PV-250ANH2-B             | PV-250ANH2-BL                     |
|                        |                         | 315                     | 32000                                 | 260000                  | 26                 | 44             |                             | PV-315ANH3-B             | PV-315ANH3-BL                     |
|                        |                         | 355                     | 38000                                 | 310000                  | 29                 | 48             |                             | PV-355ANH3-B             | PV-355ANH3-BL                     |
|                        |                         | 400                     | 61000                                 | 490000                  | 32                 | 50             |                             | PV-400ANH3-B             | PV-400ANH3-BL                     |

Data sheet: 720133

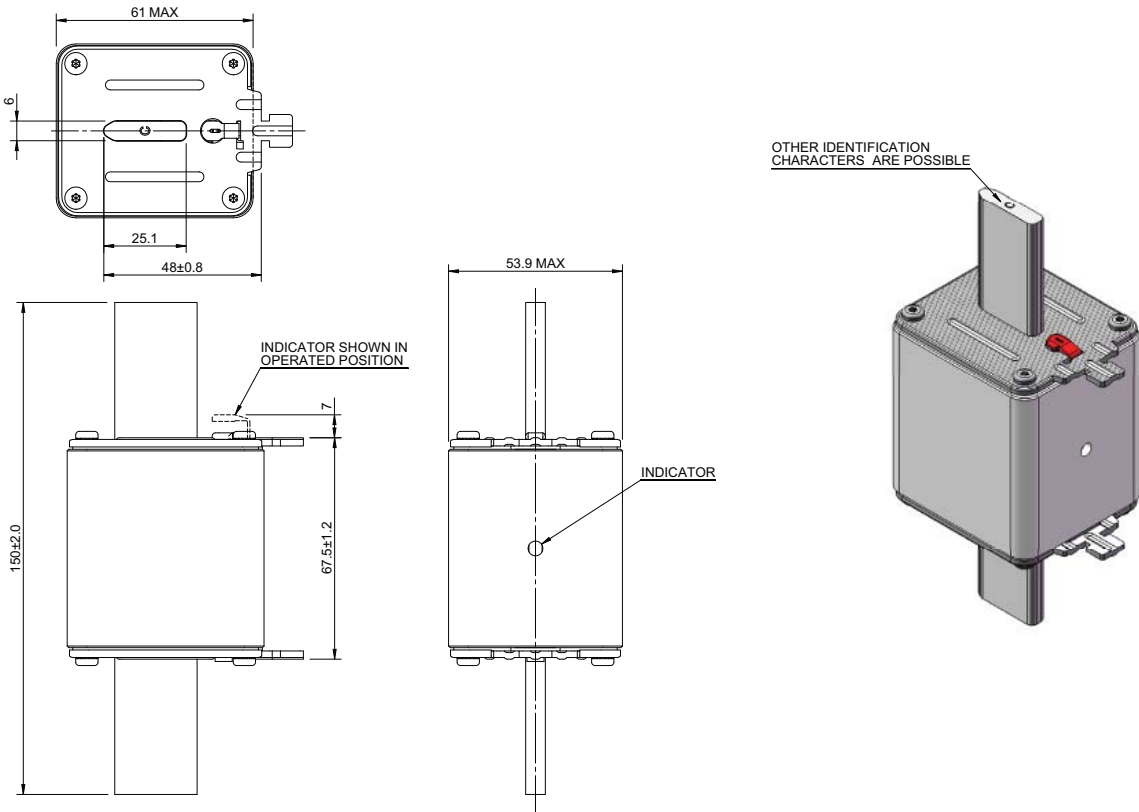
# Photovoltaic fuse links, fuse bases and holders

## NH PV-ANH - 1000 V d.c. (IEC/UL), 32 A to 400 A

Dimensions (mm) - NH1, blade without bolt holes

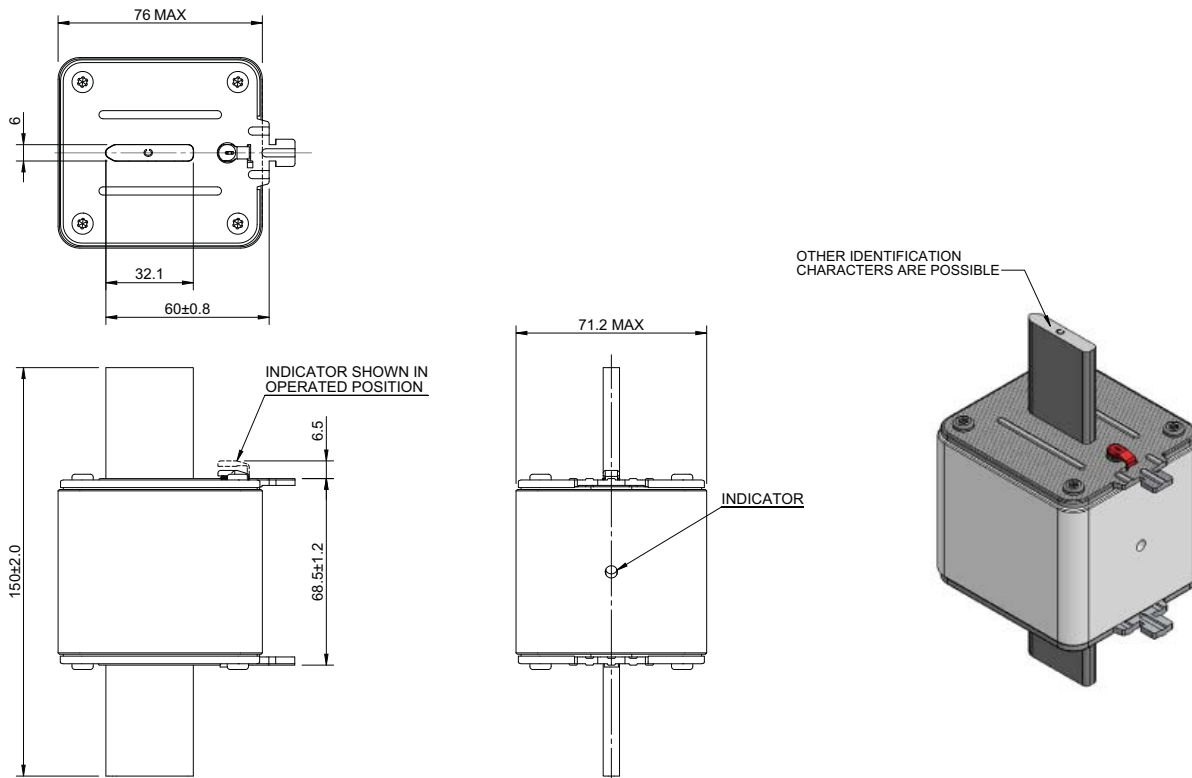


Dimensions (mm) - NH2, blade without bolt holes

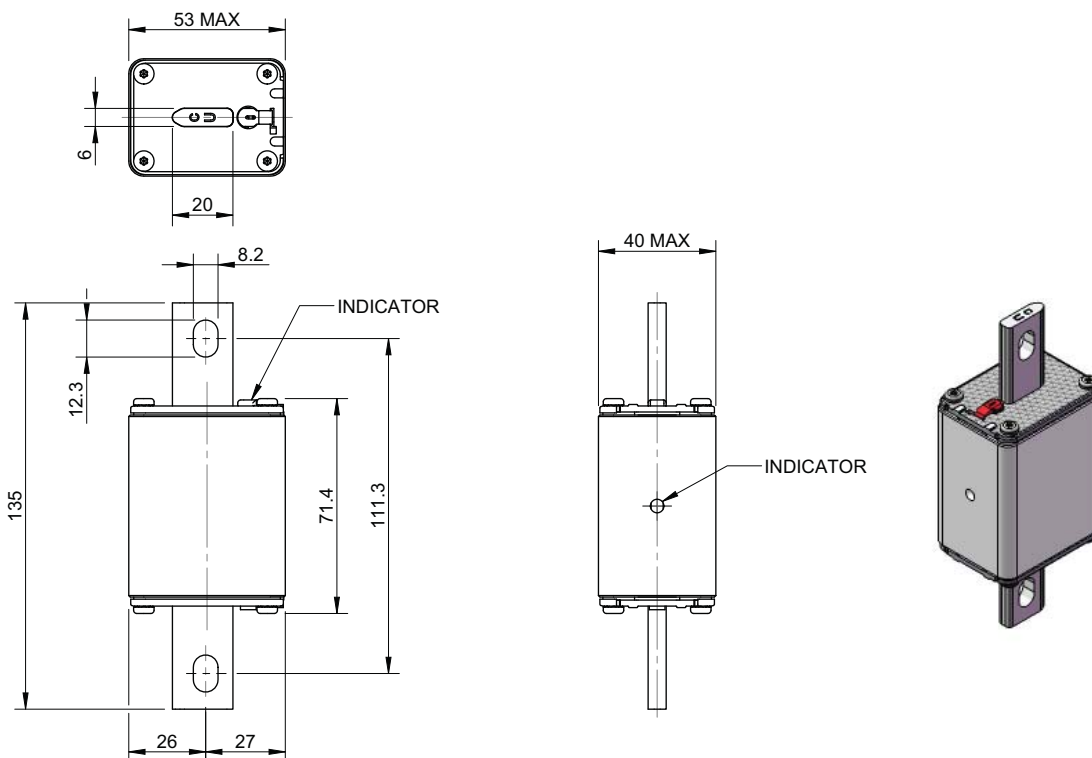


## NH PV-ANH - 1000 V d.c. (IEC/UL), 32 A to 400 A

### Dimensions (mm) - NH3, blade without bolt holes



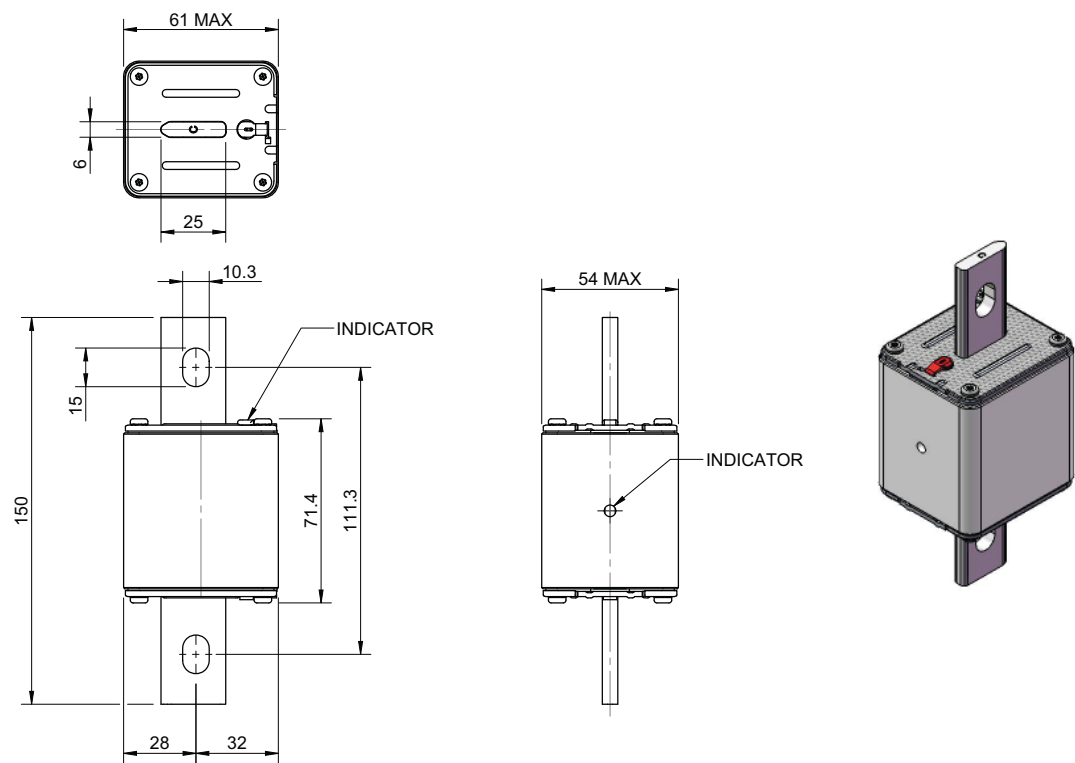
### Dimensions (mm) - NH1, blade with bolt holes



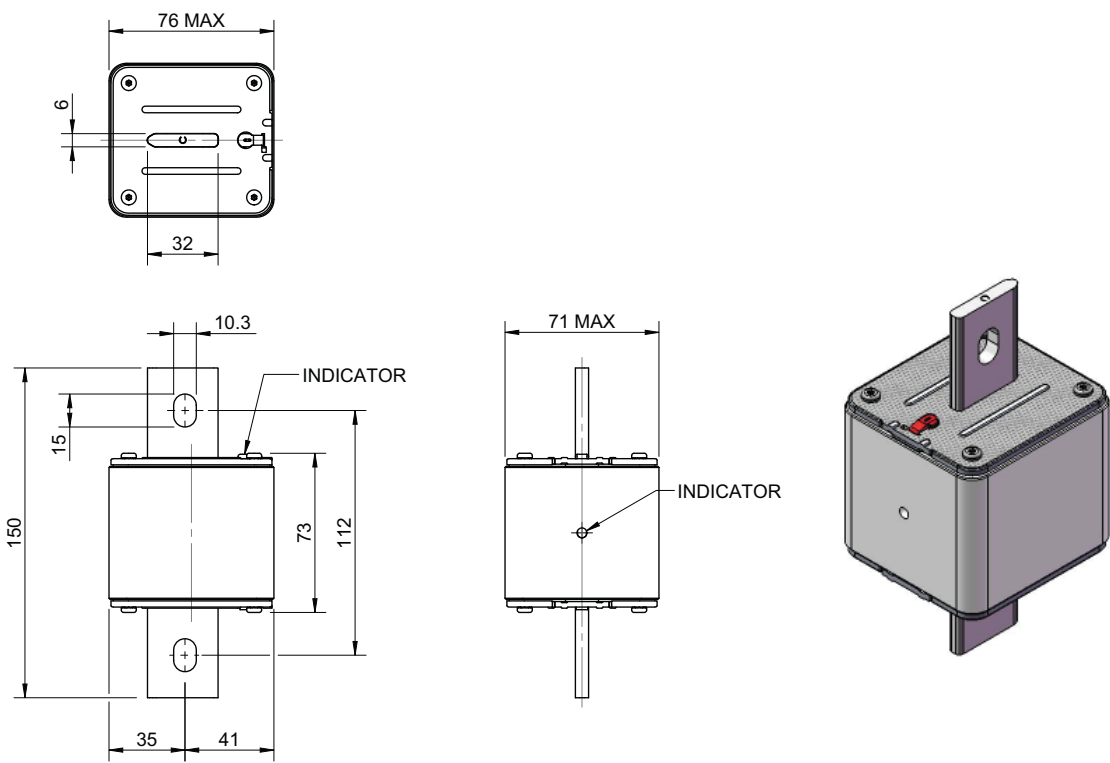
Photovoltaic fuse links, fuse bases and holders

NH PV-ANH - 1000 V d.c. (IEC/UL), 32 A to 400 A

Dimensions (mm) - NH2, blade with bolt holes

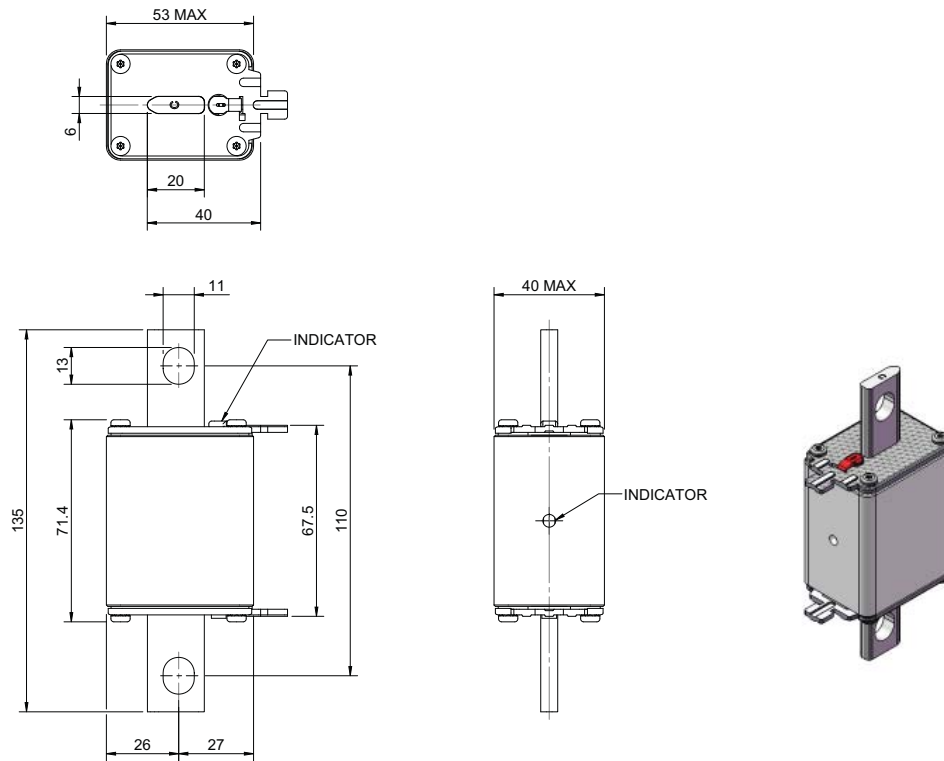


Dimensions (mm) - NH3, blade with bolt holes

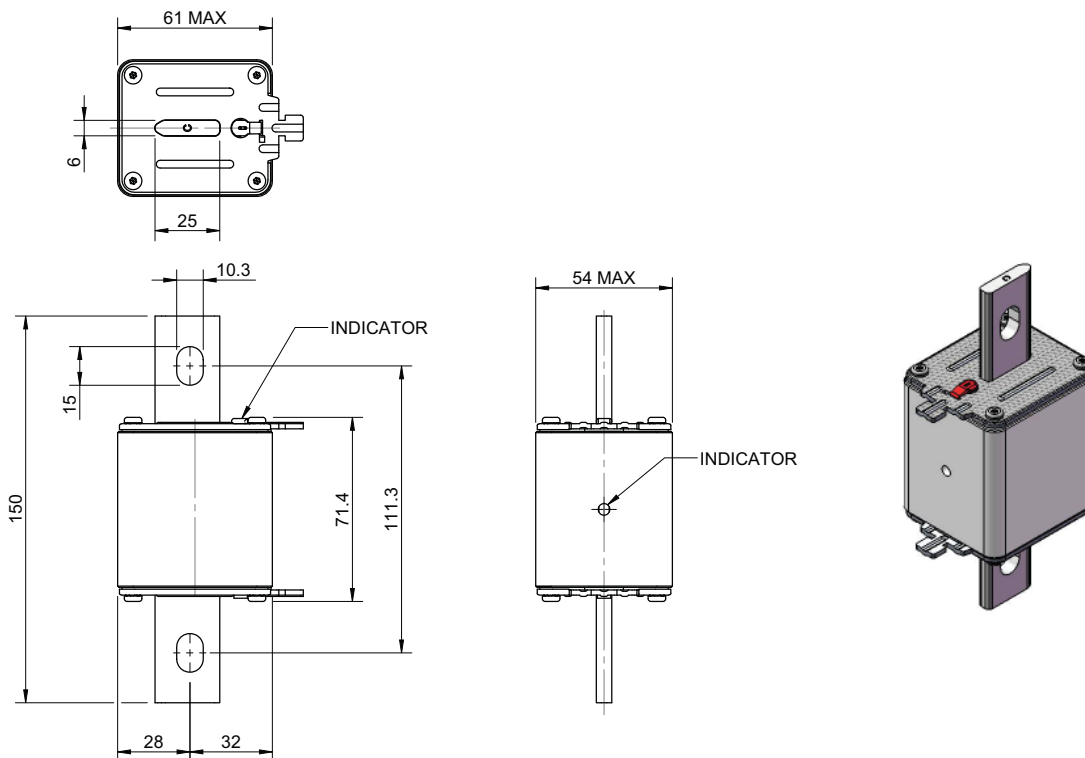


## NH PV-ANH - 1000 V d.c. (IEC/UL), 32 A to 400 A

Dimensions (mm) - NH1, blade with bolt holes and lugs



Dimensions (mm) - NH2, blade with bolt holes and lugs

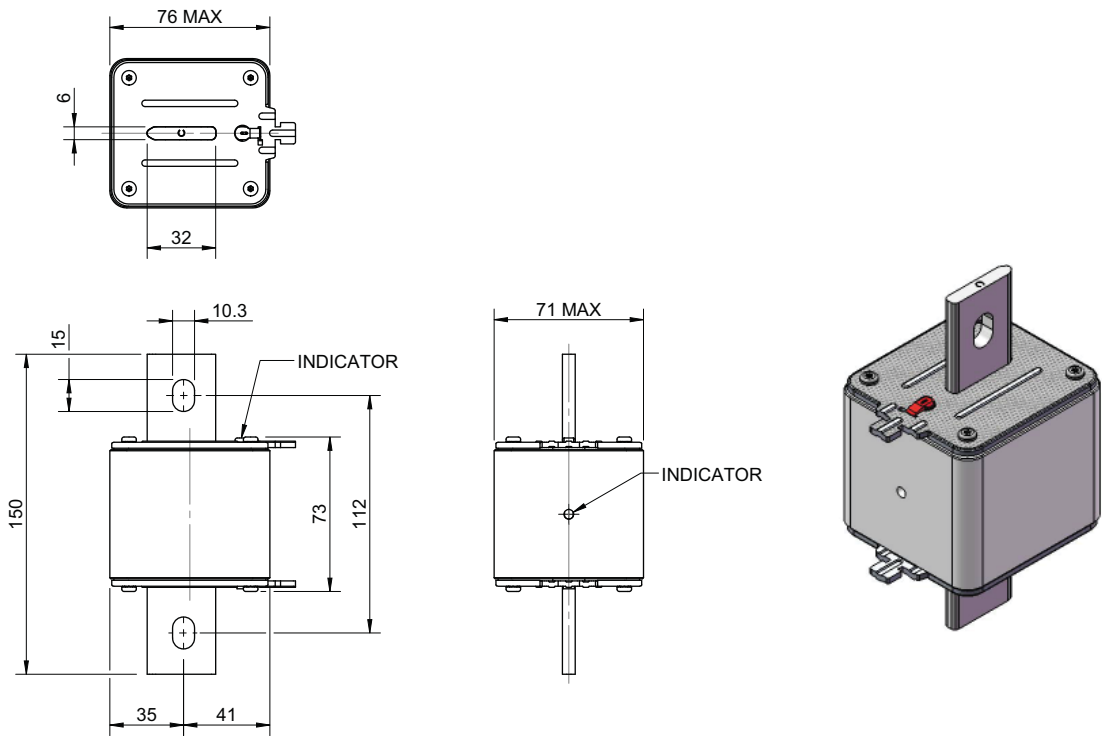




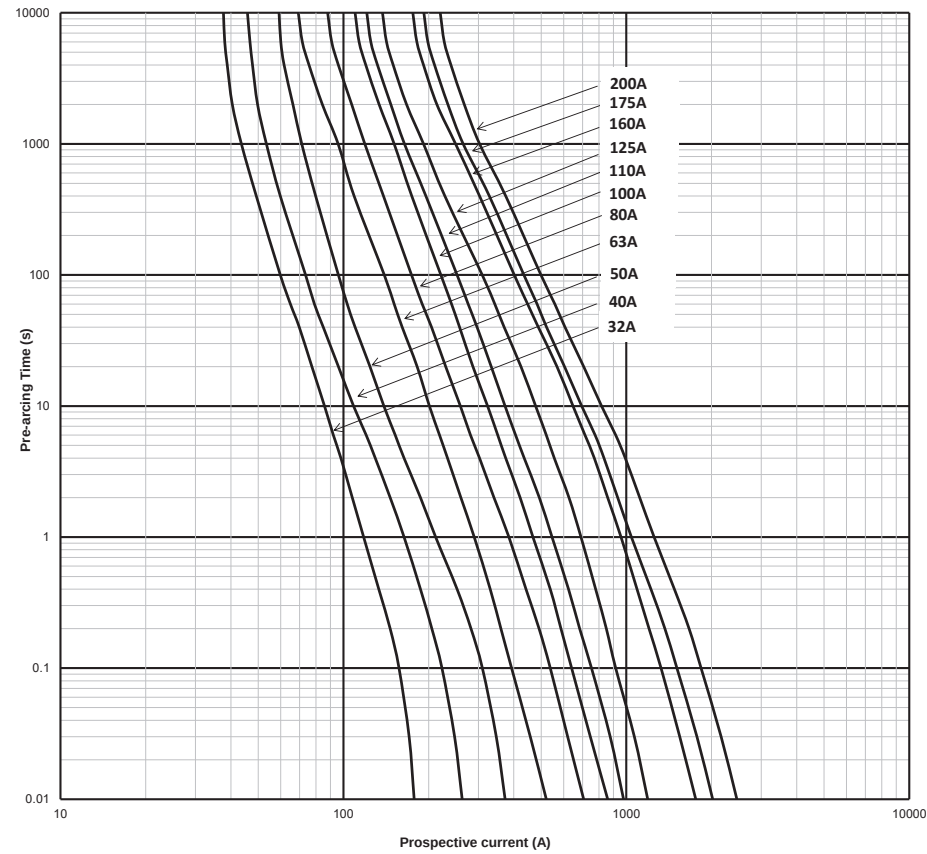
# Photovoltaic fuse links, fuse bases and holders

## NH PV-ANH - 1000 V d.c. (IEC/UL), 32 A to 400 A

Dimensions (mm) - NH3, blade with bolt holes and lugs

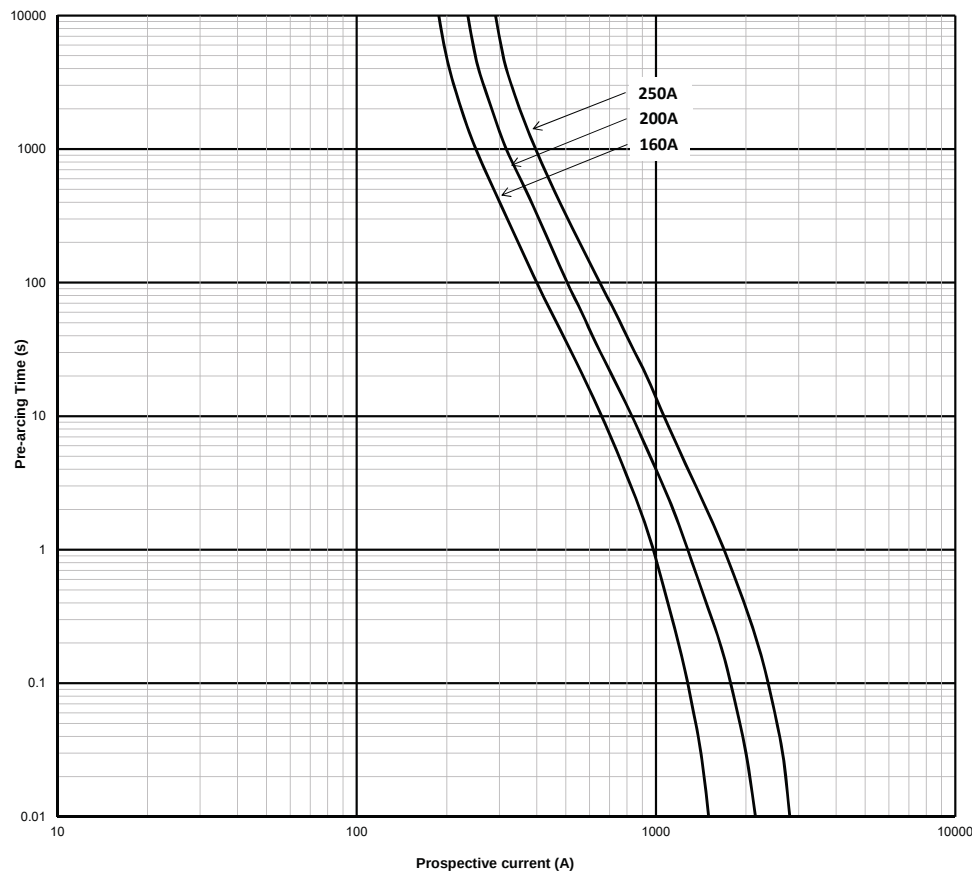


### Time-current curve - Size 1, 32 A to 200 A

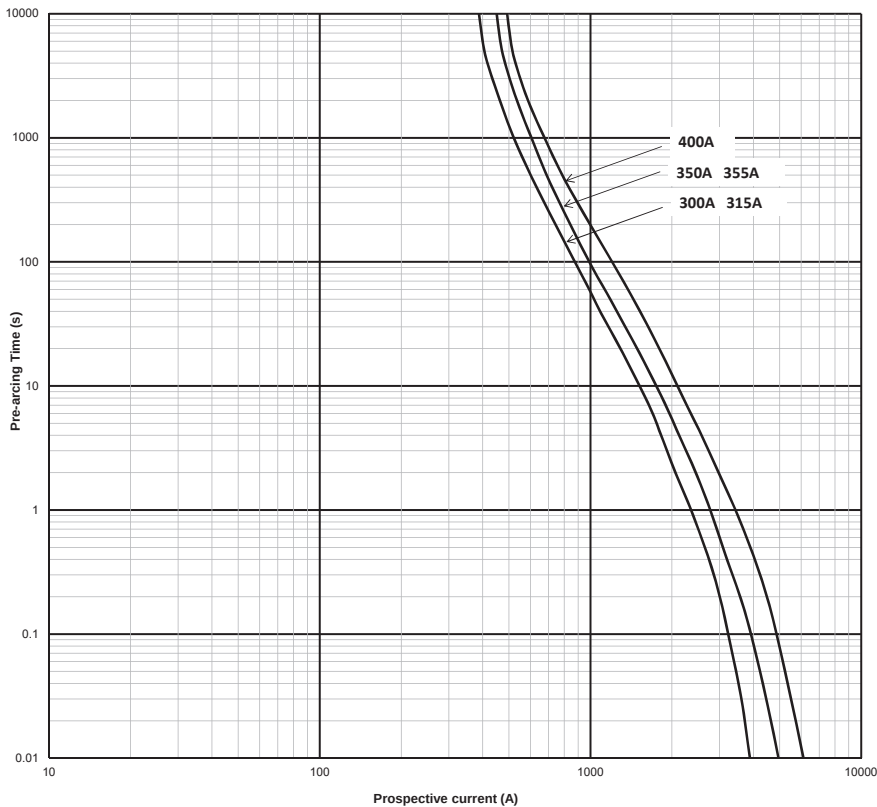


NH PV-ANH - 1000 V d.c. (IEC/UL), 32 A to 400 A

Time-current curve - Size 2, 160 A to 250 A



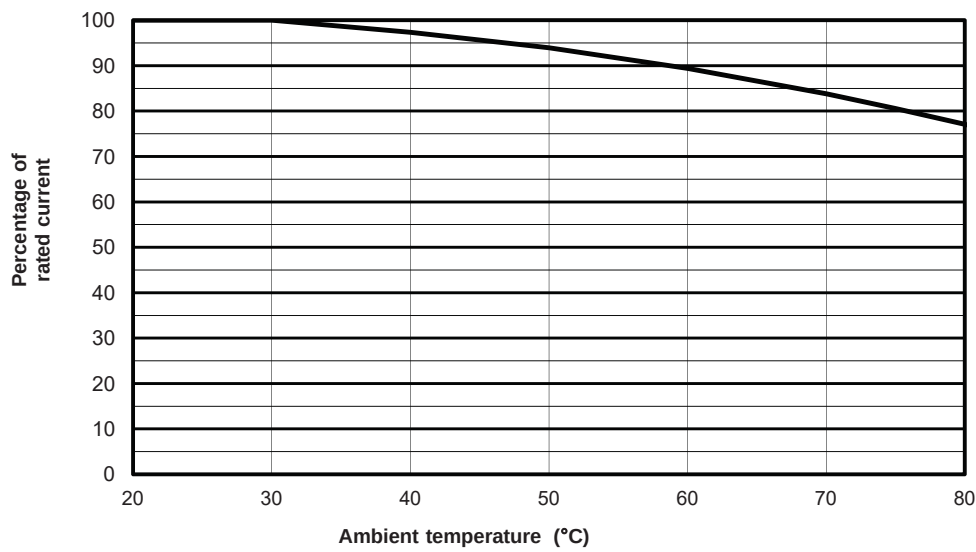
Time-current curve - Size 3, 300 A to 400 A



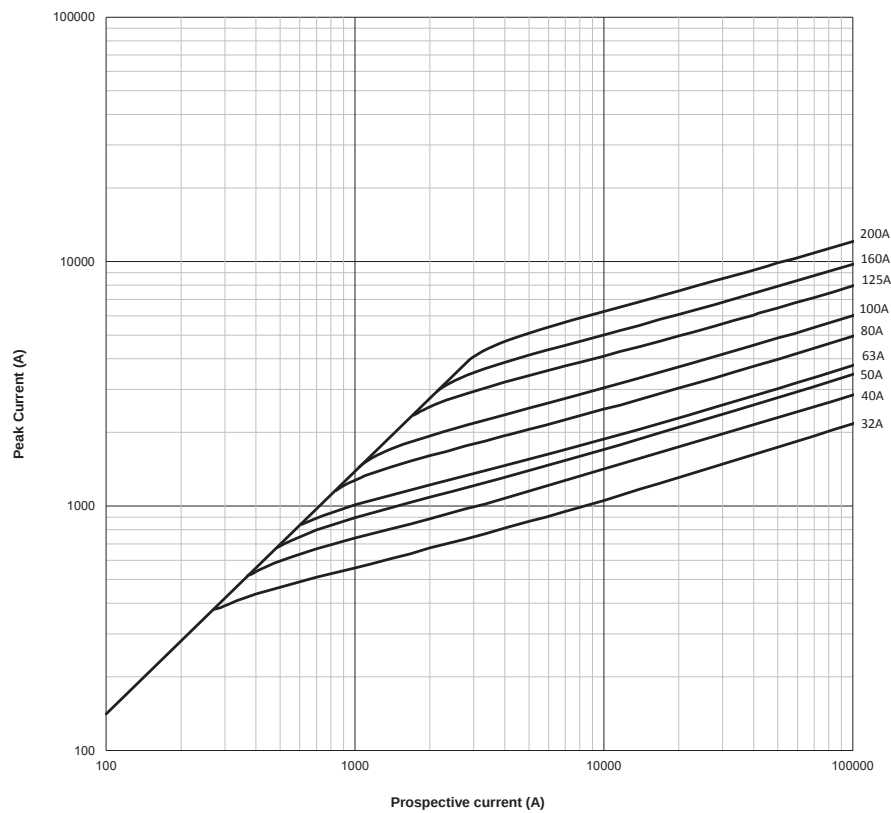
# Photovoltaic fuse links, fuse bases and holders

## NH PV-ANH - 1000 V d.c. (IEC/UL), 32 A to 400 A

Temperature derating curve - Sizes 1 to 3

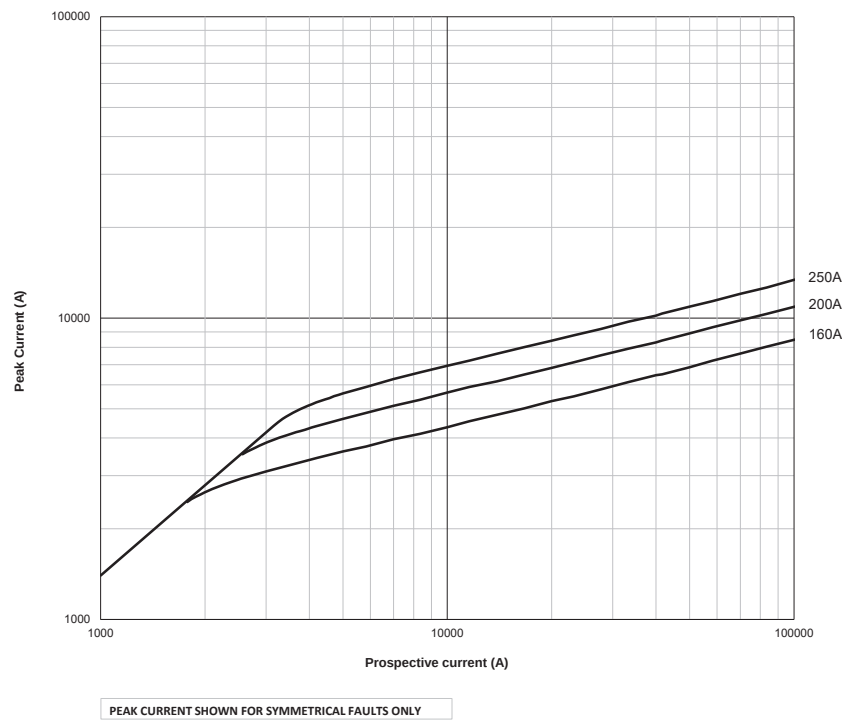


Cut-off curve - Size 1, 32 A to 200 A

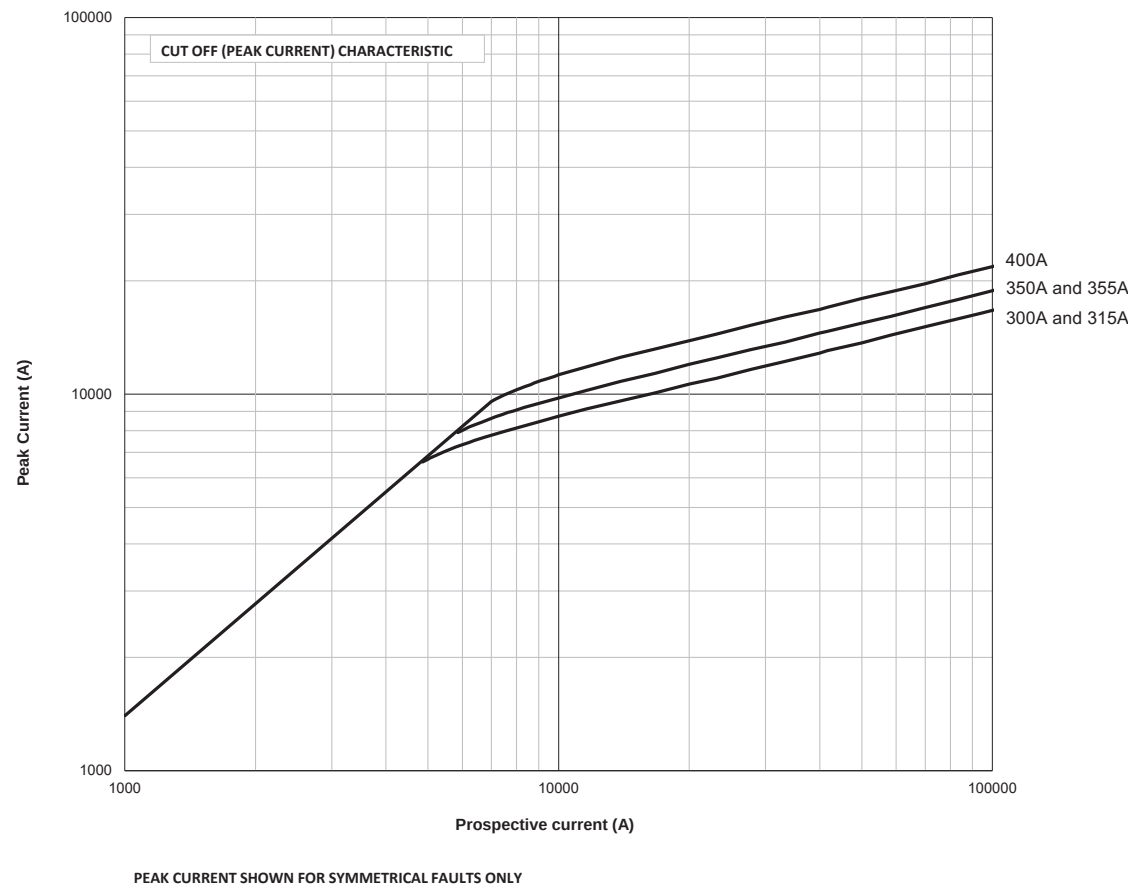


NH PV-ANH - 1000 V d.c. (IEC/UL), 32 A to 400 A

Cut-off curve - Size 2, 160 A to 250 A



Cut-off curve - Size 3, 300 A to 400 A



# Photovoltaic fuse links, fuse bases and holders

## SD-D-PV - NH fuse bases, 1500 V d.c. (IEC), 1000 V d.c. (UL/CSA) 250 A to 630 A, sizes 1 to 3

### Specifications

#### Description

Sizes 1 to 3 NH Fuse bases specifically designed for use with Bussmann series range of NH PV (Photovoltaic) fuse links.

#### Technical data

- Rated voltage:
  - 1500 V d.c. (IEC)
  - 1000 V d.c. (UL/CSA)
- Rated current:
  - 250 A (SD1)
  - 400 A (SD2)
  - 630 A (SD3)
- Fuse base sizes: 1 to 3
- Withstand: 50 kA
- Power acceptance
  - SD1: 32 W
  - SD2: 45 W
  - SD3: 60 W



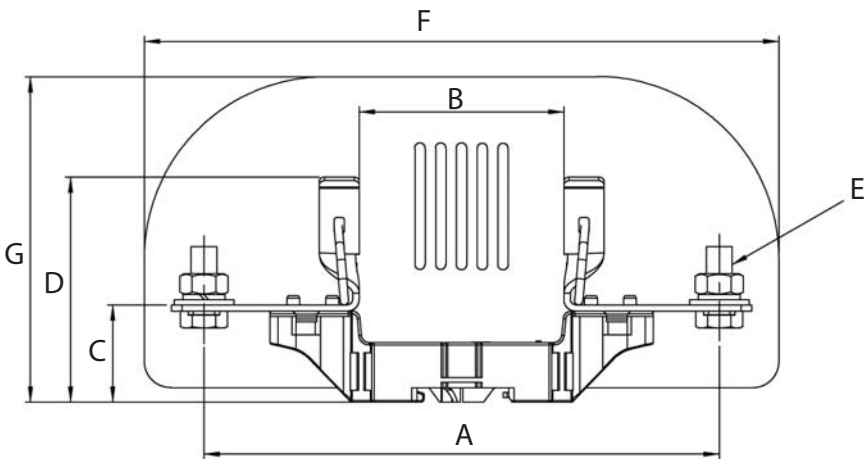
#### Standards / Agency information

IEC 60269-1, UL Listed - UL File #E348242, CSA file #47235

#### Accessories:

- Microswitches - 170H0236, 170H0238 and BVL50
- IP20 Finger-Safe Protection Kit - TD1-IP20, TD2-IP20, TD3-IP20
- Fuse extraction handle
- Shroud kits

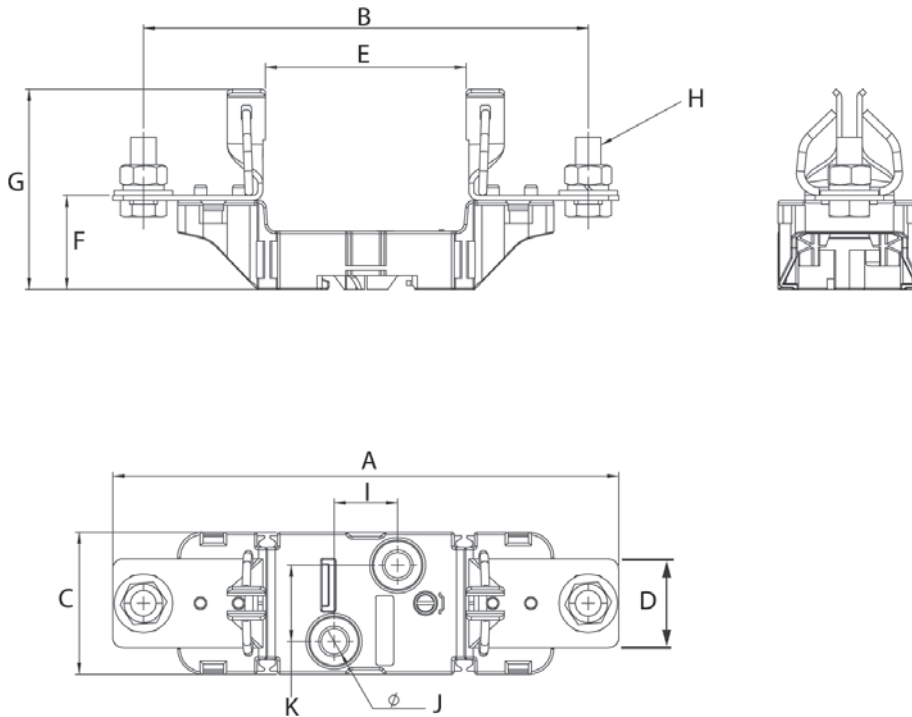
#### Dimensions (mm) - 1-pole with phase barriers



| Catalogue numbers | Poles/Type | A   | B  | C    | D  | E      | F   | G     |
|-------------------|------------|-----|----|------|----|--------|-----|-------|
| SD1-D-PV          | 1-pole     | 175 | 79 | 37   | 78 | M10x25 | 245 | 125.5 |
| SD2-D-PV          | 1 pole     | 199 | 79 | 37.5 | 86 | M10x25 | 245 | 125.5 |
| SD3-D-PV          | 1-pole     | 209 | 82 | 37.5 | 88 | M12x30 | 260 | 137.5 |

## SD-D-PV - NH fuse bases, 1500 V d.c. (IEC), 1000 V d.c. (UL/CSA) 250 A to 630 A, sizes 1 to 3

Dimensions (mm) - 1-pole without phase barriers



| Catalogue numbers | Poles  | A   | B   | C  | D  | E  | F    | G  | H      | I  | J  | K  |
|-------------------|--------|-----|-----|----|----|----|------|----|--------|----|----|----|
| SD1-D-PV          | 1-pole | 199 | 175 | 56 | 35 | 79 | 37   | 78 | M10x25 | 25 | 10 | 30 |
| SD2-D-PV          | 1 pole | 224 | 199 | 56 | 35 | 79 | 37.5 | 86 | M10x25 | 25 | 10 | 30 |
| SD3-D-PV          | 1-pole | 239 | 209 | 56 | 36 | 82 | 37.5 | 88 | M12x30 | 25 | 10 | 30 |

# Photovoltaic fuse links, fuse bases and holders

## PV-AF - Flush end, 1000 V d.c. (IEC/UL), 160 A to 400 A

### Specifications

#### Description

A range of flush end fuse links specifically designed for protecting and isolating photovoltaic array combiners and disconnects. These fuse links are capable of interrupting low overrated currents associated with faulted PV systems (reverse rated current, multi-array fault).

#### Technical data

- Rated voltage: 1000 V d.c. (IEC and UL)
- Rated current: 160 A to 400 A
- Breaking capacity: 50 kA
- Operating class: gPV and UL PV fuse links



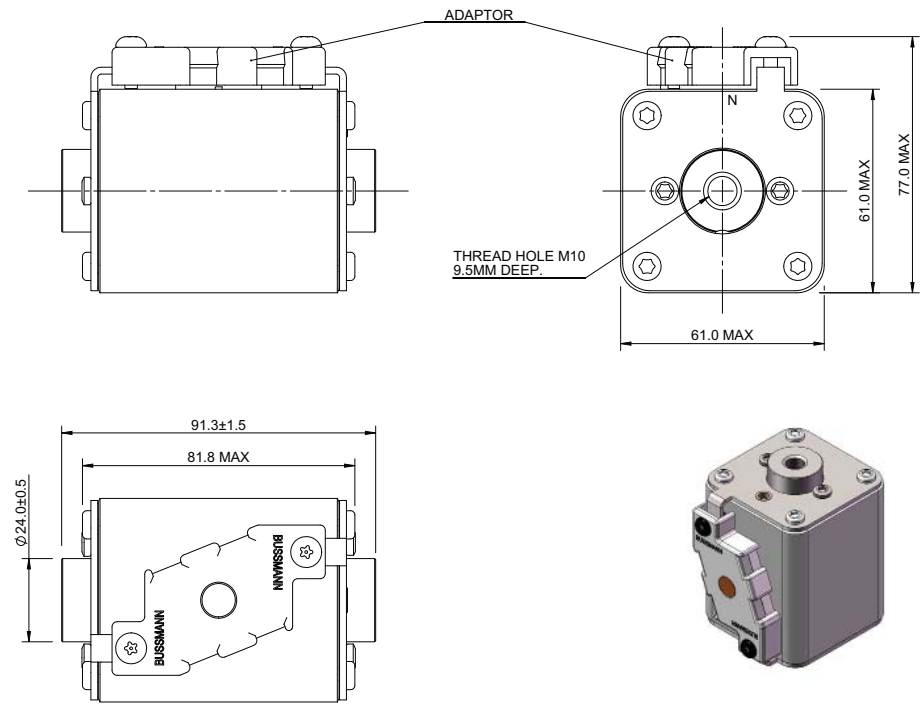
#### Standards / Agency information

IEC 60269-6, UL 2579 (file number E335324), CSA Listed, RoHS compliant

#### Catalogue numbers

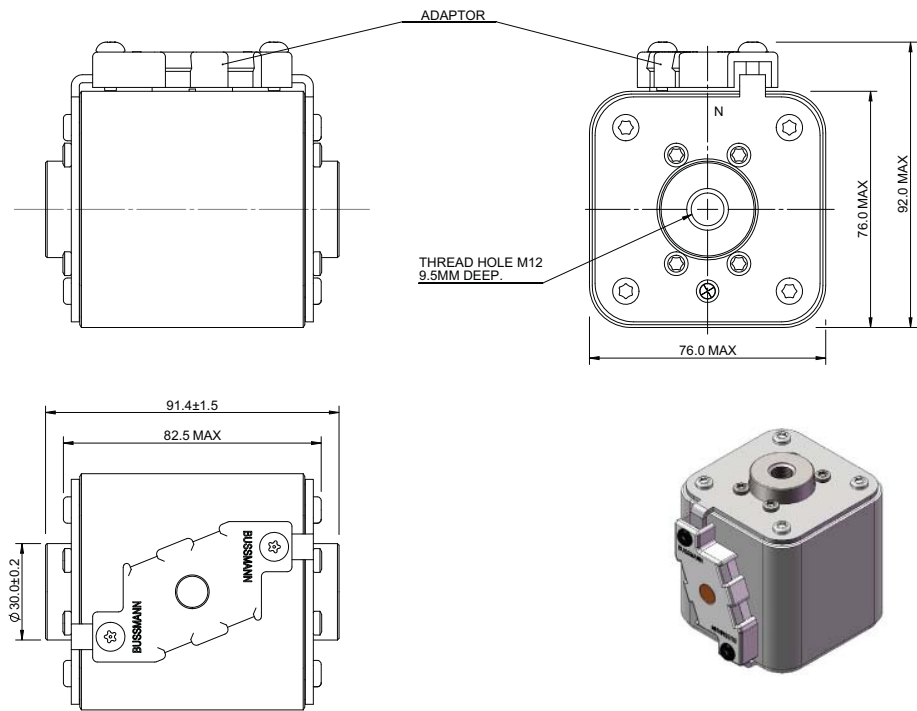
| Fuse link type | Fuse link body size | Rated voltage       | Rated current (Amps) | I <sub>t</sub> (A <sup>2</sup> Sec) |                      | Watts loss (W)     |                | Catalogue numbers |
|----------------|---------------------|---------------------|----------------------|-------------------------------------|----------------------|--------------------|----------------|-------------------|
|                |                     |                     |                      | Pre-arcing                          | Total at 1000 V d.c. | 0.8 I <sub>n</sub> | I <sub>n</sub> |                   |
| Flush end      | 2                   | 1000 V d.c.(IEC/UL) | 160                  | 4600                                | 37,000               | 15                 | 30             | PV-160AF2         |
|                |                     |                     | 200                  | 9500                                | 76,000               | 17                 | 34             | PV-200AF2         |
|                |                     |                     | 250                  | 17,000                              | 136,000              | 19                 | 38             | PV-250AF2         |
|                | 3                   | 1000 V d.c.(IEC/UL) | 315                  | 27,000                              | 240,000              | 30                 | 49             | PV-315AF3         |
|                |                     |                     | 355                  | 37,000                              | 350,000              | 31                 | 51             | PV-355AF3         |
|                |                     |                     | 400                  | 61,500                              | 550,000              | 32                 | 52             | PV-400AF3         |

#### Dimensions (mm) - Size 2

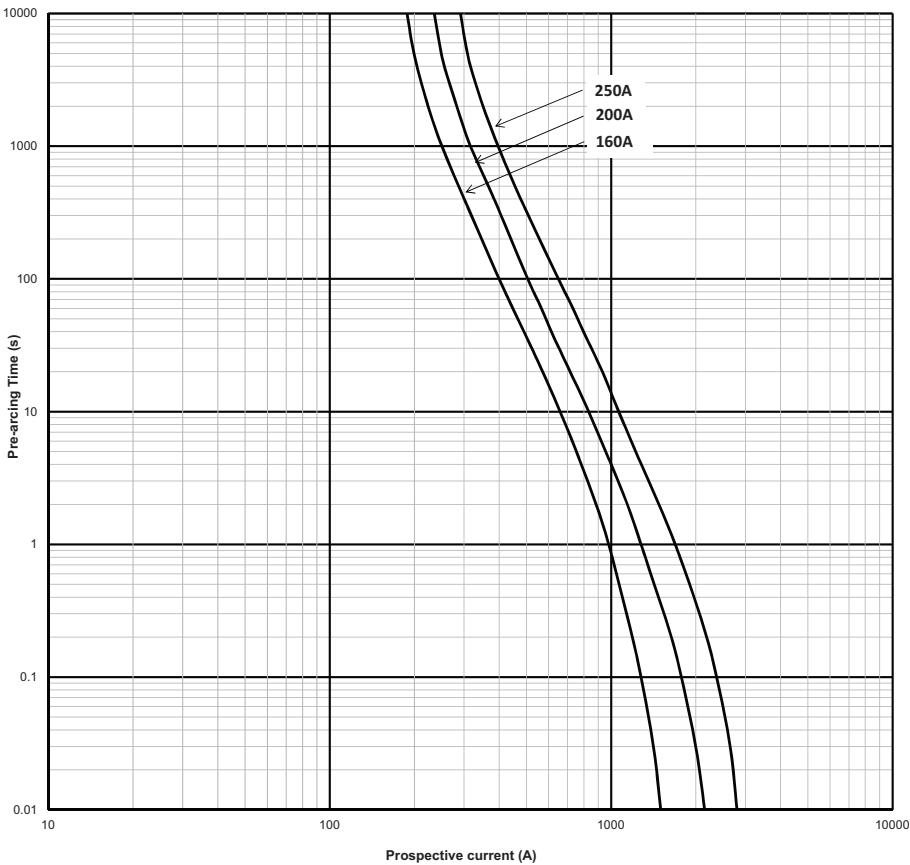


PV-AF - Flush end, 1000 V d.c. (IEC/UL), 160 A to 400 A

Dimensions (mm) - Size 3



Time-current curve - Size 2, 160 A to 250 A

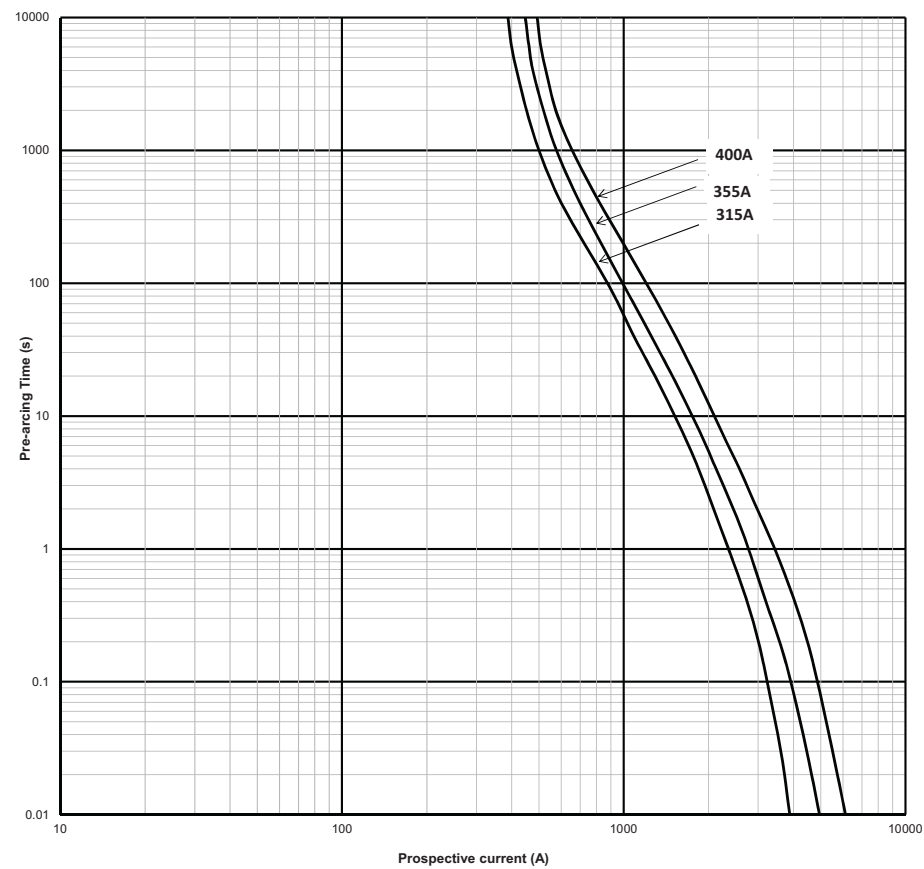




Photovoltaic fuse links, fuse bases and holders

PV-AF - Flush end, 1000 V d.c. (IEC/UL), 160 A to 400 A

Time-current curve -Size 3, 315 A to 400 A



## PV-XL - XL Style, 1000-1500 V d.c. (IEC/UL), 50 A to 600 A

### Specifications

#### Description

A range of XL package bladed fuse links specifically designed for protecting and isolating photovoltaic array combiners and disconnects. These fuse links are capable of interrupting low overrated currents associated with faulted PV systems (reverse rated current, multi-array fault).

#### Technical data

- Rated voltage:
  - 1000 V d.c. (IEC and UL 63 to 600 A)
  - 1500 V d.c. (IEC and UL 50 to 400 A)
- Rated current: 50 A to 600 A
- Breaking capacity:
  - Size 01 and 3: 50 kA at 1000 V d.c., 30 kA at 1500 V d.c.
  - Size 1 and 2: 33 kA at 1000 V d.c., 30 kA at 1500 V d.c.
  - Size 3L: 100 kA at 1500 V d.c.6ms
- Operating class: gPV and UL PV fuse links

#### Compatible fuse base

- SD-S-PV see page 363

#### Microswitches

- For bladed fuse links
  - 170H0235 or 170H0237 for 01XL
  - 170H0236 or 170H0238 for 1XL, 2XL and 3L
- For bolted fuse links
  - 170H0069 for all sizes

#### Standards / Agency information

IEC 60269-6, UL Recognised file 2579 E335324, RoHS compliant

#### Catalogue numbers - PV-XL fuse links, 1000 V d.c.

| Fuse link<br>body size | Rated voltage | Rated current<br>(Amps) | Breaking<br>capacity<br>(kA) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                         | Watts loss<br>(W)  |                | Catalogue<br>numbers |                             |
|------------------------|---------------|-------------------------|------------------------------|---------------------------------------|-------------------------|--------------------|----------------|----------------------|-----------------------------|
|                        |               |                         |                              | Pre-arcing                            | Total<br>at 1000 V d.c. | 0.7 I <sub>n</sub> | I <sub>n</sub> | Bladed version       | Bolted version              |
| 01                     | 1000 V d.c.   | 63                      | 50                           | 260                                   | 1900                    | 10                 | 24             | PV-63A-01XL          | PV-63A-01XL-B               |
|                        |               | 80                      | 50                           | 490                                   | 3600                    | 12                 | 29             | PV-80A-01XL          | PV-80A-01XL-B               |
|                        |               | 100                     | 50                           | 870                                   | 6300                    | 13                 | 32             | PV-100A-01XL         | PV-100A-01XL-B              |
|                        |               | 125                     | 50                           | 1930                                  | 13,900                  | 16                 | 40             | PV-125A-01XL         | PV-125A-01XL-B              |
|                        |               | 160                     | 50                           | 3900                                  | 28,100                  | 18                 | 44             | PV-160A-01XL         | PV-160A-01XL-B              |
| 2                      | 1000 V d.c.   | 160                     | 33                           | 2780                                  | 21,000                  | 18                 | 44             | PV-160A-2XL          | PV-160A-2XL-B               |
|                        |               | 200                     | 33                           | 4950                                  | 37,000                  | 20                 | 50             | PV-200A-2XL          | PV-200A-2XL-B               |
|                        |               | 250                     | 33                           | 9450                                  | 70,000                  | 24                 | 60             | PV-250A-2XL          | PV-250A-2XL-B               |
|                        |               | 315                     | 33                           | 16,600                                | 123,000                 | 26                 | 66             | PV-315A-2XL          | PV-315A-2XL-B               |
|                        |               | 355                     | 33                           | 26,000                                | 192,000                 | 27                 | 68             | PV-355A-2XL          | PV-355A-2XL-B               |
|                        |               | 160                     | 33                           | 2780                                  | 21,000                  | 18                 | 44             |                      | PV-160A-2XL-3B <sup>1</sup> |
|                        |               | 200                     | 33                           | 4950                                  | 37,000                  | 20                 | 50             |                      | PV-200A-2XL-3B <sup>1</sup> |
|                        |               | 250                     | 33                           | 9450                                  | 70,000                  | 24                 | 60             |                      | PV-250A-2XL-3B <sup>1</sup> |
|                        |               | 315                     | 33                           | 16,600                                | 123,000                 | 26                 | 66             |                      | PV-315A-2XL-3B <sup>1</sup> |
|                        |               | 355                     | 33                           | 26,000                                | 192,000                 | 27                 | 68             |                      | PV-355A-2XL-3B <sup>1</sup> |
| 3                      | 1000 V d.c.   | 350                     | 50                           | 31,000                                | 161,200                 | 26                 | 65             | PV-350A-3L           | PV-350A-3L-B                |
|                        |               | 400                     | 50                           | 44,500                                | 231,400                 | 33                 | 82             | PV-400A-3L           | PV-400A-3L-B                |
|                        |               | 500                     | 50                           | 85,000                                | 442,000                 | 34                 | 85             | PV-500A-3L           | PV-500A-3L-B                |
|                        |               | 600                     | 50                           | 137,000                               | 712,400                 | 43                 | 108            | PV-600A-3L           | PV-600A-3L-B                |

<sup>1</sup> PV-\*A-2XL-3B and PV-\*A-2XL-3B-15 have revised bolting patterns, which are identical to size 3L bolting pattern. This allows utilisation of both size 2XL and size 3L fuse links without changing the dimensional layout of the inverter, combiners and disconnects.



# Photovoltaic fuse links, fuse bases and holders

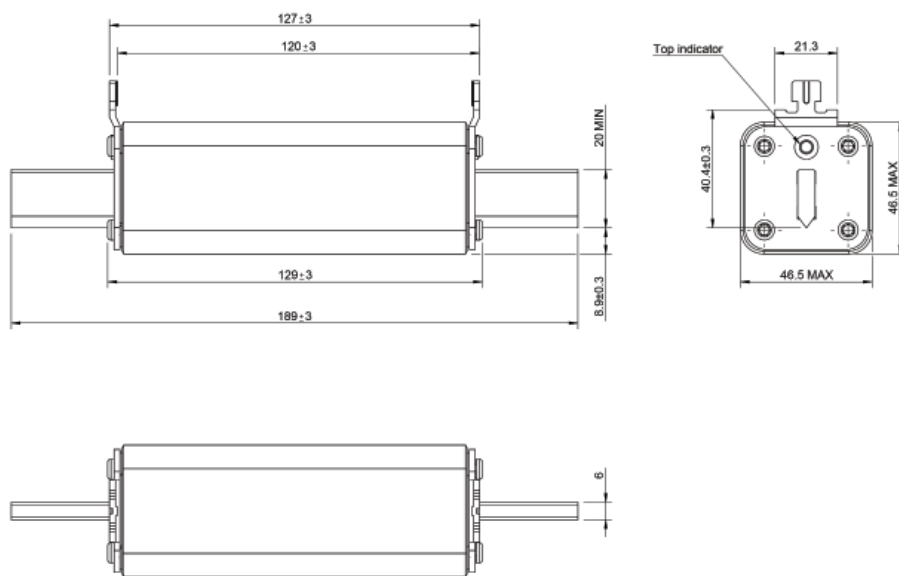
## PV-XL - XL Style - 1000-1500 V d.c. (IEC/UL), 50 A to 600 A

Catalogue numbers - PV-XL fuse links, 1500 V d.c.

| Fuse link body size | Rated voltage | Rated current (Amps) | Breaking capacity (kA) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                              | Watts loss (W)     |                | Catalogue numbers         |                              |                                    |                                 |
|---------------------|---------------|----------------------|------------------------|---------------------------------------|------------------------------|--------------------|----------------|---------------------------|------------------------------|------------------------------------|---------------------------------|
|                     |               |                      |                        | Pre-arcing                            | Total at 1500 V <sup>1</sup> | 0.7 I <sub>n</sub> | I <sub>n</sub> | Bladed with top indicator | Bladed without top indicator | Bolted version with side indicator | Bolted without side indicator   |
| 01                  | 1500 V d.c.   | 50                   | 30                     | 175                                   | 1000                         | 10                 | 25             | PV-50A-01XL-15            |                              | PV-50A-01XL-B-15                   |                                 |
|                     |               | 63                   | 30                     | 362                                   | 2250                         | 10                 | 26             | PV-63A-01XL-15            |                              | PV-63A-01XL-B-15                   |                                 |
|                     |               | 80                   | 30                     | 565                                   | 3300                         | 14                 | 35             | PV-80A-01XL-15            |                              | PV-80A-01XL-B-15                   |                                 |
|                     |               | 100                  | 30                     | 1100                                  | 6600                         | 16                 | 40             | PV-100A-01XL-15           |                              | PV-100A-01XL-B-15                  |                                 |
|                     |               | 125                  | 30                     | 2200                                  | 10,500                       | 18                 | 44             | PV-125A-01XL-15           |                              | PV-125A-01XL-B-15                  |                                 |
| 1                   | 1500 V d.c.   | 100                  | 30                     | 1250                                  | 6000                         | 24                 | 43             | PV-100A-1XL-15            |                              | PV-100A-1XL-B-15                   |                                 |
|                     |               | 125                  | 30                     | 1950                                  | 9360                         | 25                 | 52             | PV-125A-1XL-15            |                              | PV-125A-1XL-B-15                   |                                 |
|                     |               | 160                  | 30                     | 4200                                  | 20,160                       | 26                 | 54             | PV-160A-1XL-15            |                              | PV-160A-1XL-B-15                   |                                 |
|                     |               | 200                  | 30                     | 9400                                  | 45,120                       | 31                 | 60             | PV-200A-1XL-15            |                              | PV-200A-1XL-B-15                   |                                 |
|                     |               | 250                  | 30                     | 16,600                                | 85,000                       | 28                 | 70             | PV-250A-2XL-15            | PV-250A-2XL-U-15             | PV-250A-2XL-B-15                   | PV-250A-2XL-BU-15               |
| 2                   | 1500 V d.c.   | 160                  | 30                     | 5000                                  | 32,000                       | 19                 | 48             | PV-160A-2XL-15            | PV-160A-2XL-U-15             | PV-160A-2XL-B-15                   | PV-160A-2XL-BU-15               |
|                     |               | 200                  | 30                     | 8800                                  | 51,000                       | 23                 | 57             | PV-200A-2XL-15            | PV-200A-2XL-U-15             | PV-200A-2XL-B-15                   | PV-200A-2XL-BU-15               |
|                     |               | 250                  | 30                     | 16,600                                | 85,000                       | 28                 | 70             | PV-250A-2XL-15            | PV-250A-2XL-U-15             | PV-250A-2XL-B-15                   | PV-250A-2XL-BU-15               |
|                     |               | 125                  | 30                     | 2200                                  | 15,000                       | 18                 | 44             |                           |                              | PV-125A-2XL-3B-15 <sup>1</sup>     | PV-125A-2XL-3BU-15 <sup>1</sup> |
|                     |               | 160                  | 30                     | 5000                                  | 32,000                       | 19                 | 48             |                           |                              | PV-160A-2XL-3B-15 <sup>1</sup>     | PV-160A-2XL-3BU-15 <sup>1</sup> |
|                     |               | 200                  | 30                     | 8800                                  | 51,000                       | 23                 | 57             |                           |                              | PV-200A-2XL-3B-15 <sup>1</sup>     | PV-200A-2XL-3BU-15 <sup>1</sup> |
|                     |               | 250                  | 30                     | 16,600                                | 85,000                       | 28                 | 70             |                           |                              | PV-250A-2XL-3B-15 <sup>1</sup>     | PV-250A-2XL-3BU-15 <sup>1</sup> |
|                     |               | 250                  | 100                    | 74,000                                | 263,000                      | 20                 | 49             | PV-250A-3L-15             | PV-250A-3L-U-15              | PV-250A-3L-B-15                    | PV-250A-3L-BU-15                |
| 3                   | 1500 V d.c.   | 315                  | 100                    | 150,000                               | 533,000                      | 21                 | 52             | PV-315A-3L-15             | PV-315A-3L-U-15              | PV-315A-3L-B-15                    | PV-315A-3L-BU-15                |
|                     |               | 350                  | 100                    | 195,000                               | 693,000                      | 24                 | 59             | PV-350A-3L-15             | PV-350A-3L-U-15              | PV-350A-3L-B-15                    | PV-350A-3L-BU-15                |
|                     |               | 355                  | 100                    | 195,000                               | 693,000                      | 24                 | 59             | PV-355A-3L-15             | PV-355A-3L-U-15              | PV-355A-3L-B-15                    | PV-355A-3L-BU-15                |
|                     |               | 400                  | 100                    | 296,000                               | 1,060,000                    | 24                 | 61             | PV-400A-3L-15             | PV-400A-3L-U-15              | PV-400A-3L-B-15                    | PV-400A-3L-BU-15                |
|                     |               | 450                  | 100                    | 412,000                               | 1,470,000                    | 27                 | 67             | PV-450A-3L-15             | PV-450A-3L-U-15              | PV-450A-3L-B-15                    | PV-450A-3L-BU-15                |
|                     |               | 500                  | 100                    | 532,000                               | 1,890,000                    | 29                 | 73             | PV-500A-3L-15             | PV-500A-3L-U-15              | PV-500A-3L-B-15                    | PV-500A-3L-BU-15                |

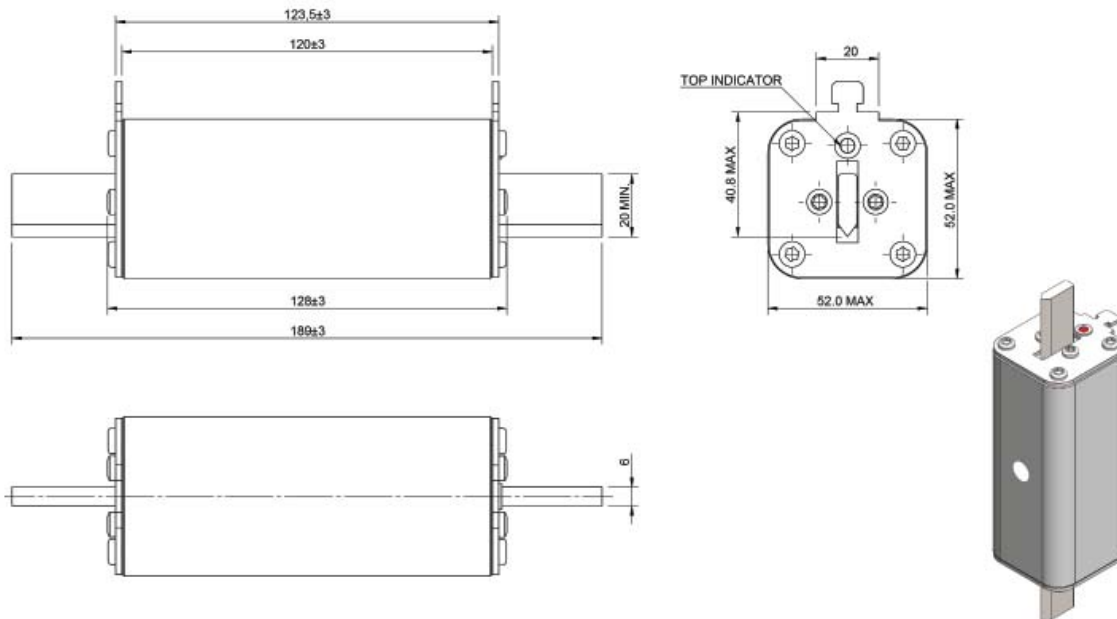
<sup>1</sup> PV-\*A-2XL-3B and PV-\*A-2XL-3B-15 have revised bolting patterns, which are identical to size 3L bolting pattern. This allows utilisation of both size 2XL and size 3L fuse links without changing the dimensional layout of the inverter, combiners and disconnects.

### Dimensions (mm) - Size 01, bladed

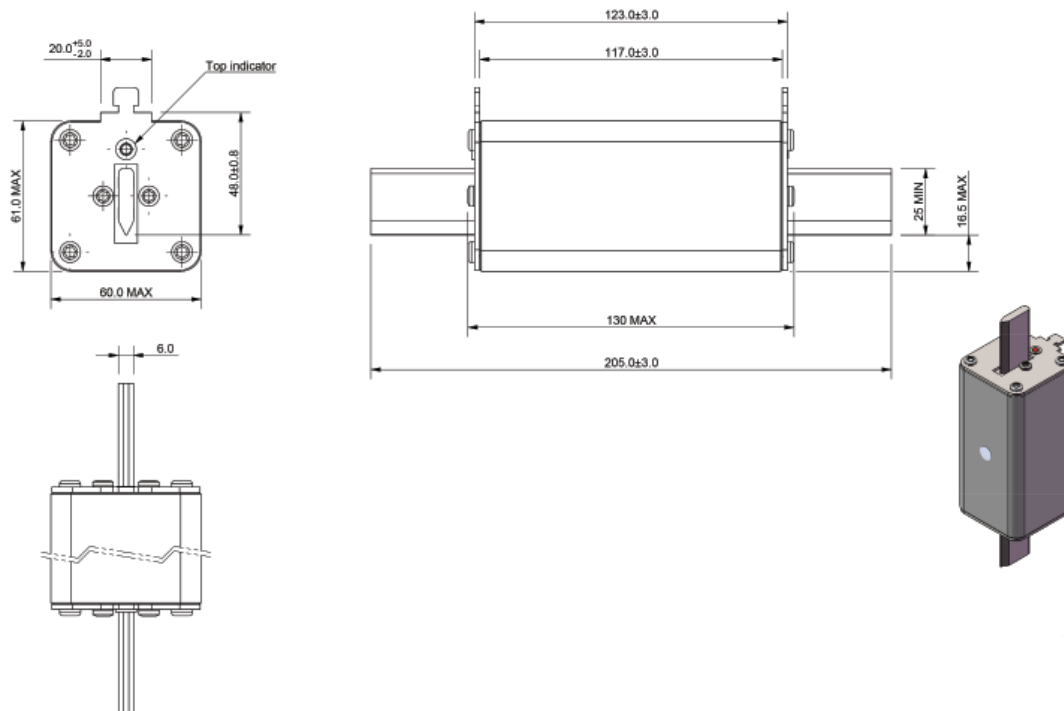


## PV-XL - XL Style - 1000-1500 V d.c. (IEC/UL), 50 A to 600 A

### Dimensions (mm) - Size 1, bladed



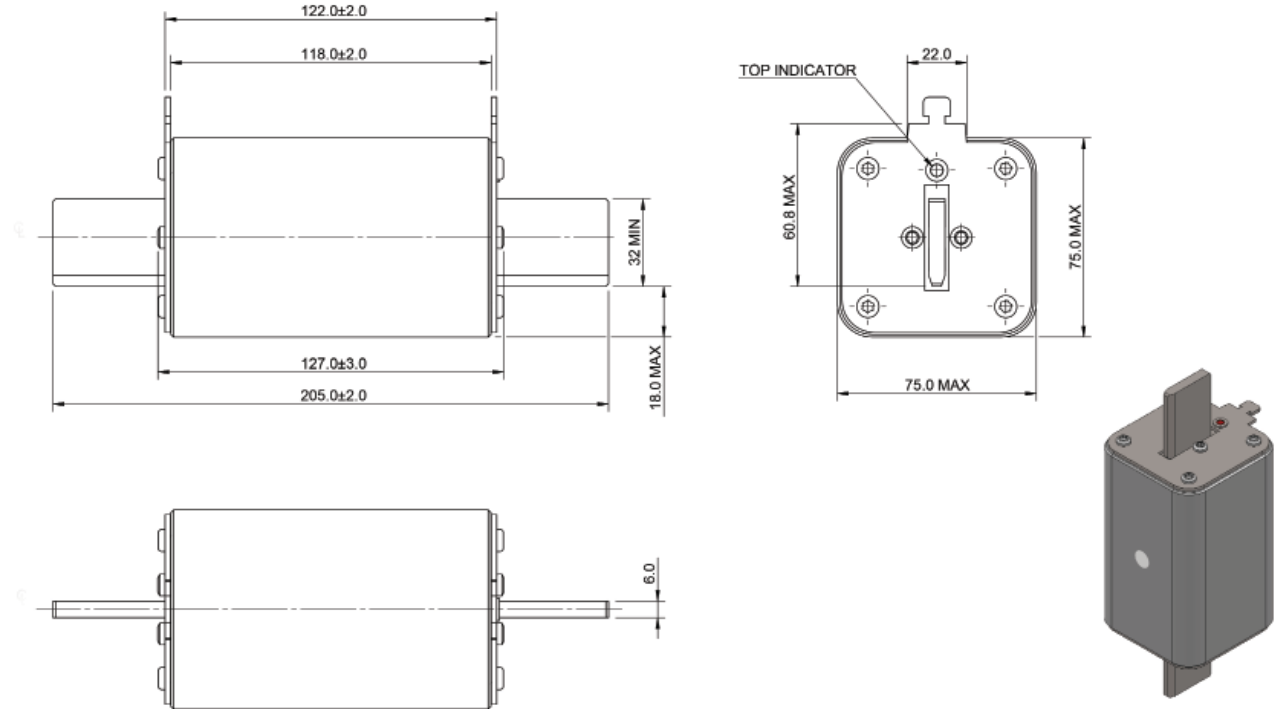
### Dimensions (mm) - Size 2, bladed



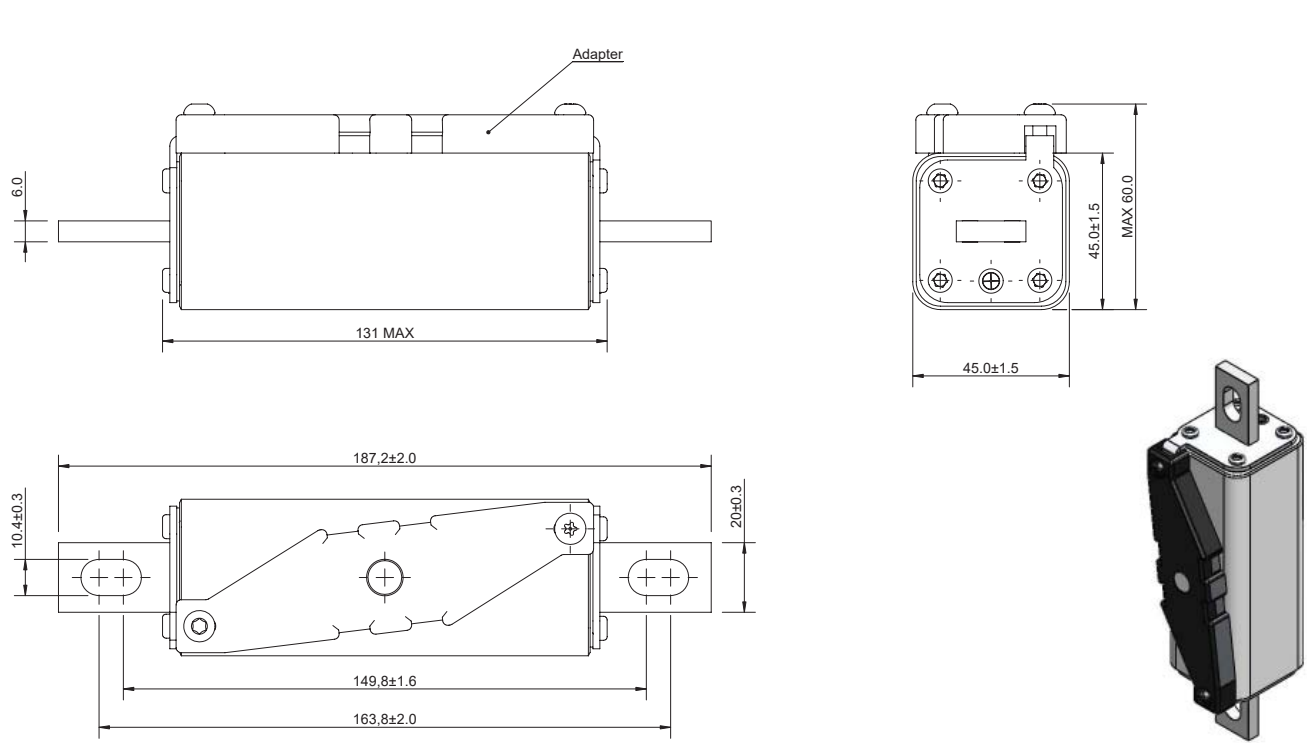
Photovoltaic fuse links, fuse bases and holders

PV-XL - XL Style - 1000-1500 V d.c. (IEC/UL), 50 A to 600 A

Dimensions (mm) - Size 3, bladed

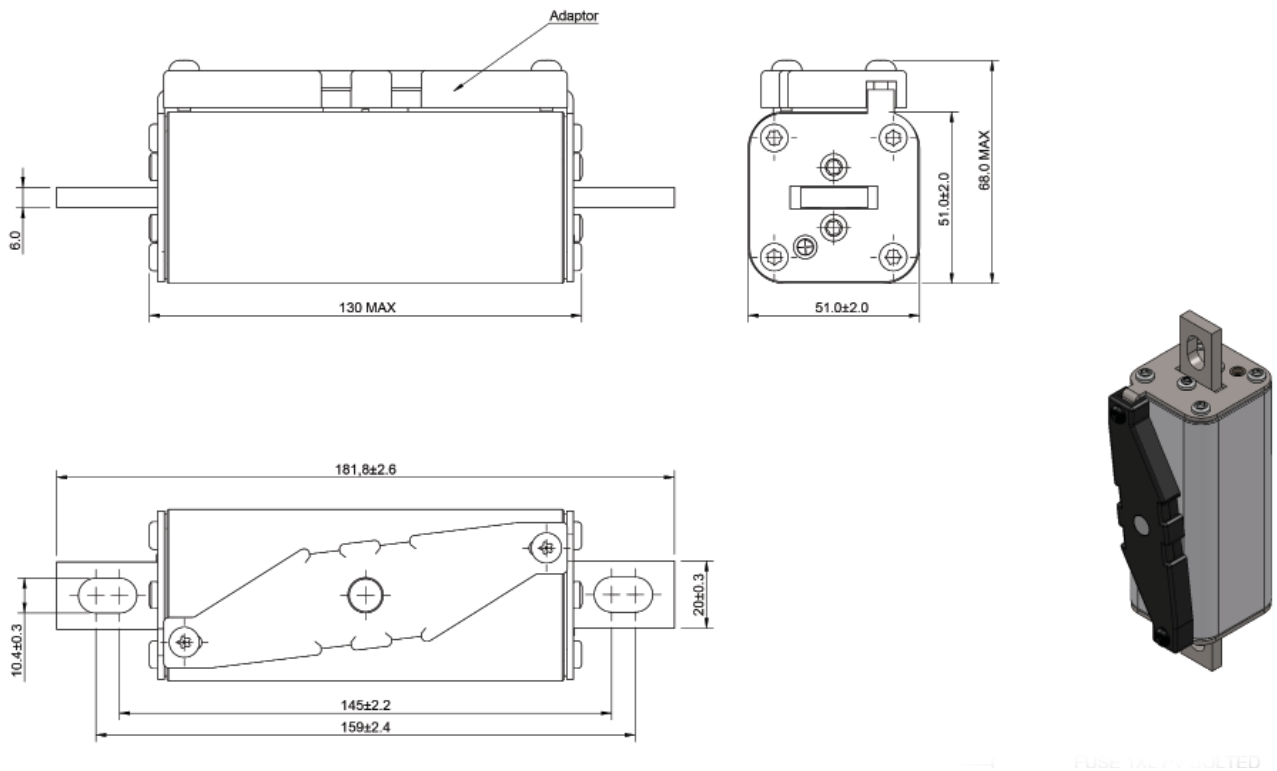


Dimensions (mm) - Size 01, bolted

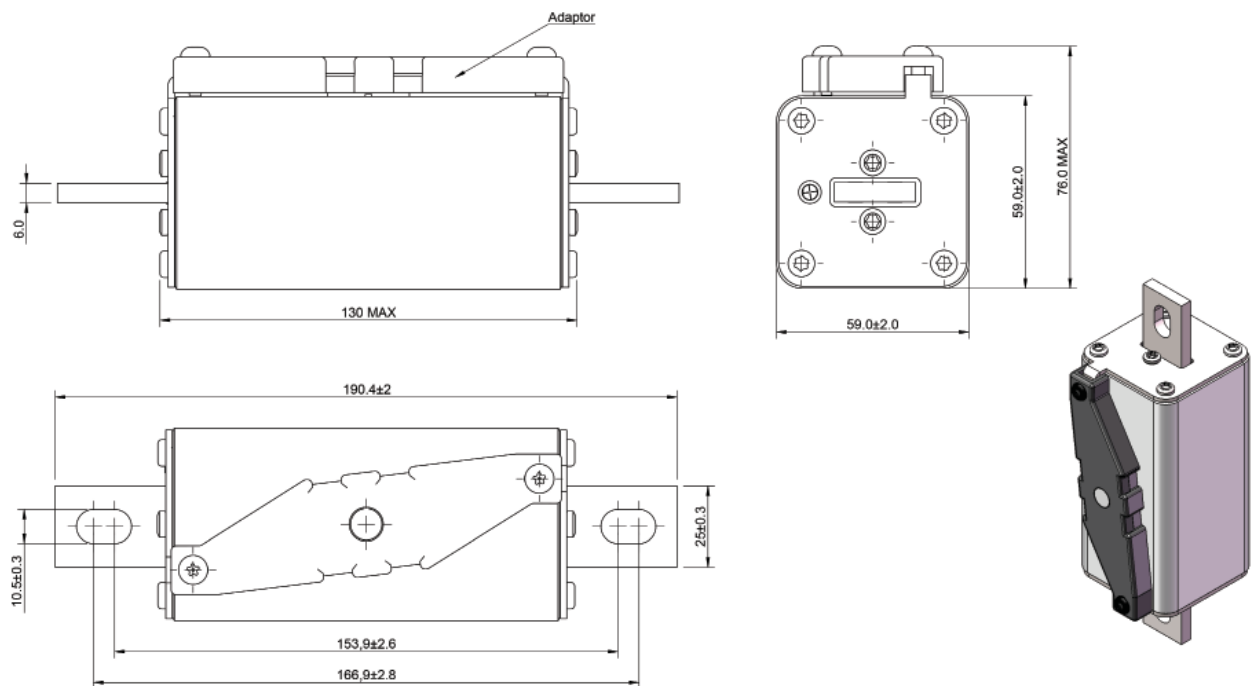


## PV-XL - XL Style - 1000-1500 V d.c. (IEC/UL), 50 A to 600 A

### Dimensions (mm) - Size 1, bolted



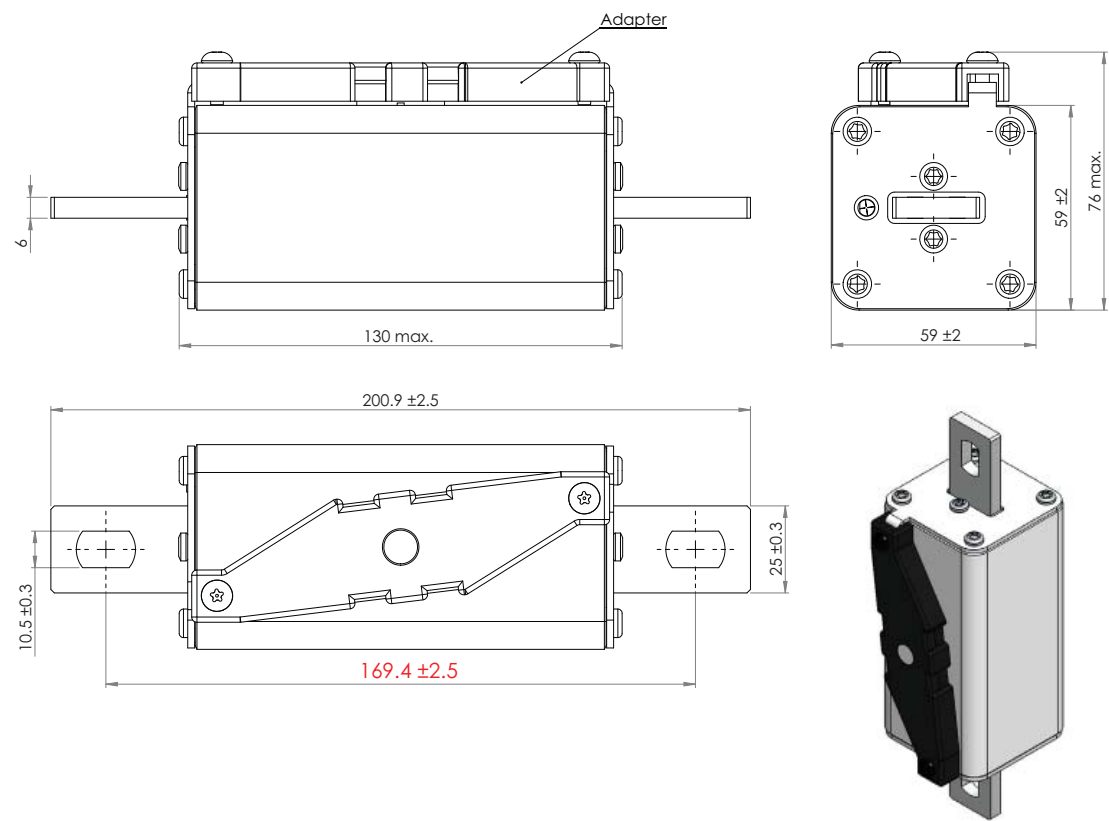
### Dimensions (mm) - Size 2, bolted



Photovoltaic fuse links, fuse bases and holders

PV-XL - XL Style - 1000-1500 V d.c. (IEC/UL), 50 A to 600 A

Dimensions (mm) - Size 2XL-3B, bolted

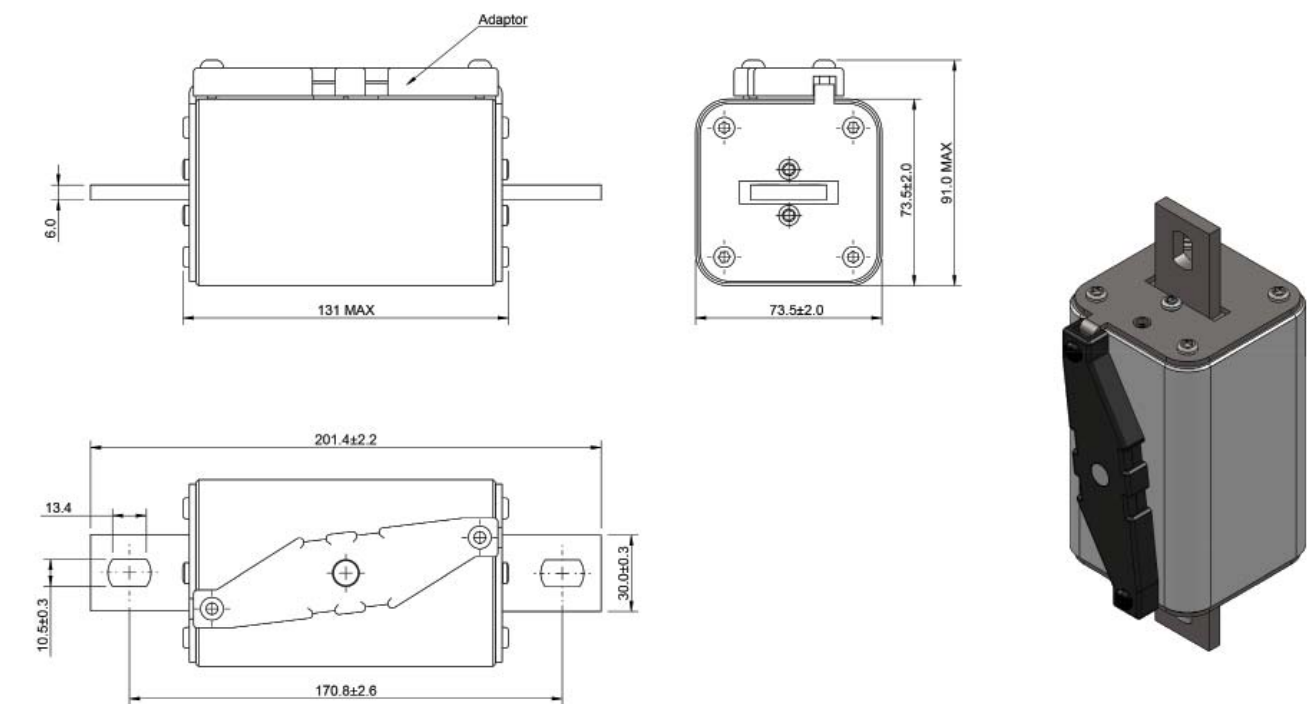


PV-\*A-2XL-3B and PV-\*A-2XL-3B-15 have revised bolting patterns, which are identical to size 3L bolting pattern. This allows utilisation of both size 2XL and size 3L fuse links without changing the dimensional layout of the inverter, combiners and disconnects.

Mounting dimensions comparison

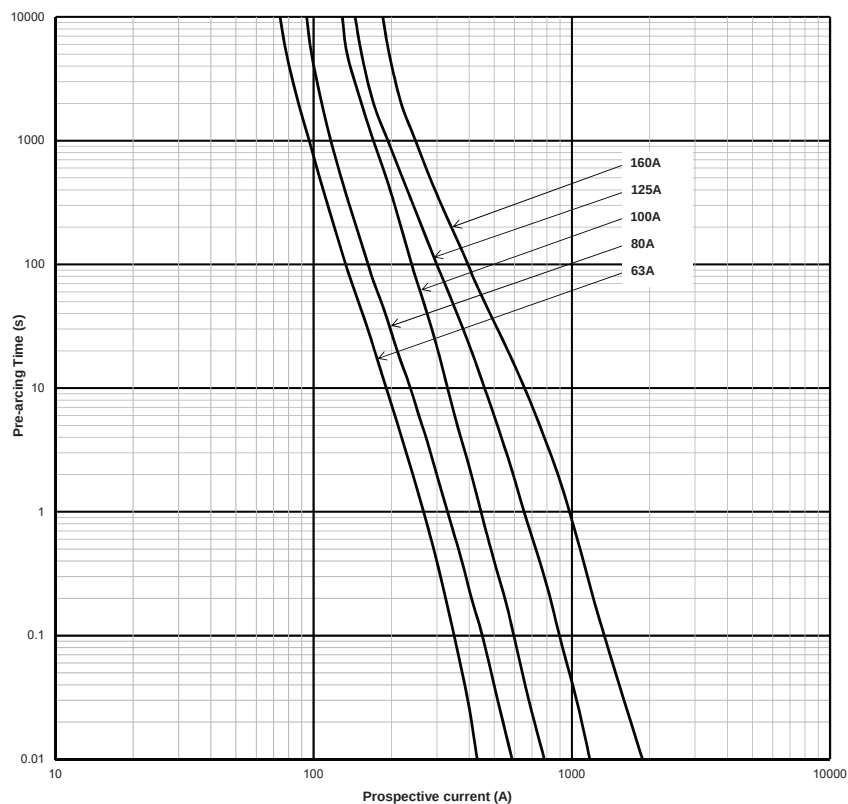
| 2XL-3B | 3L    |
|--------|-------|
| 169.4  | 170.8 |

Dimensions (mm) - Size 3, bolted

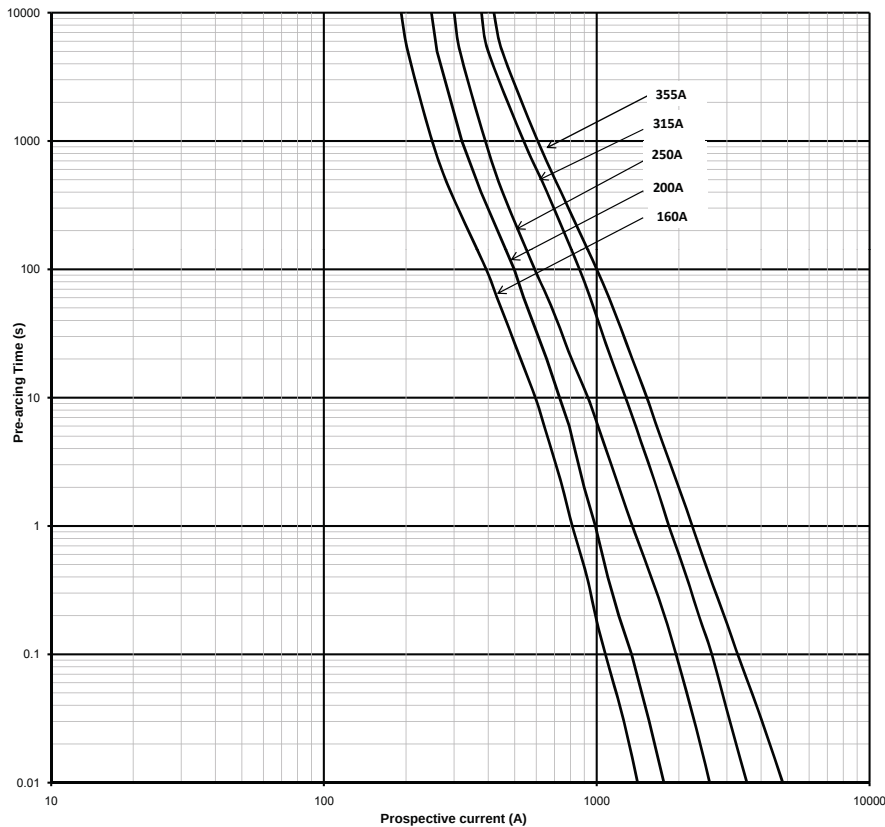


PV-XL - XL Style - 1000-1500 V d.c. (IEC/UL), 50 A to 600 A

Time-current curve - Size 01XL, bladed and bolted, 1000 V d.c., 63 A to 160 A



Time-current curve - Size 2XL, bladed and bolted, 1000 V d.c., 160 A to 355 A

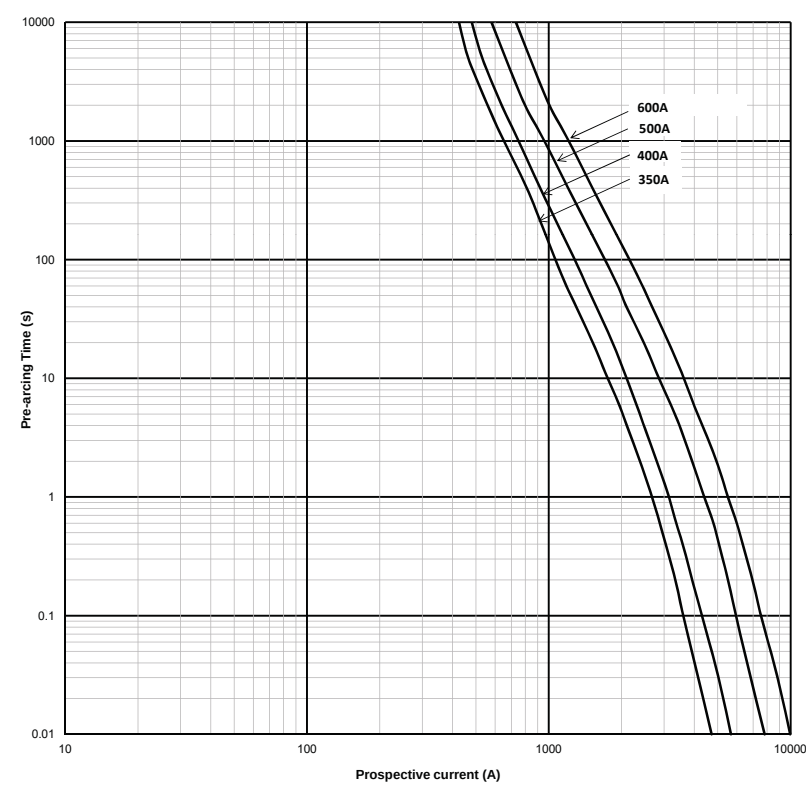




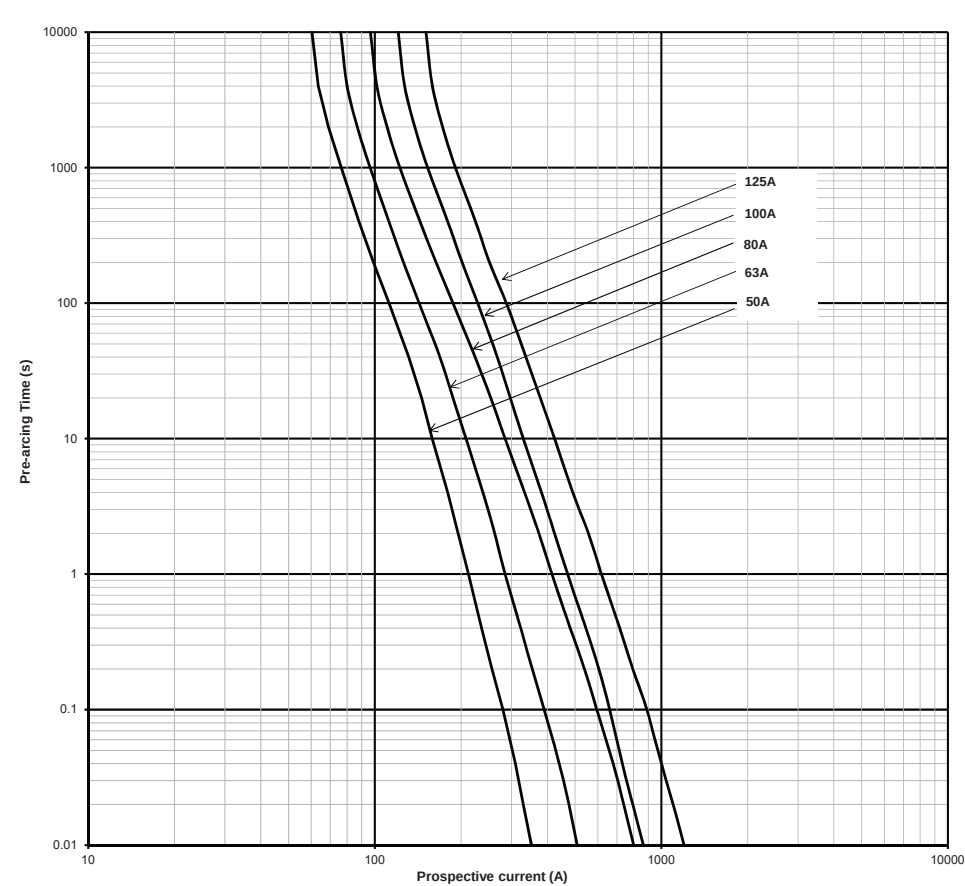
Photovoltaic fuse links, fuse bases and holders

PV-XL - XL Style - 1000-1500 V d.c. (IEC/UL), 50 A to 600 A

Time-current curve - Size 3L, bladed and bolted, 1000 V d.c., 350 A to 600 A

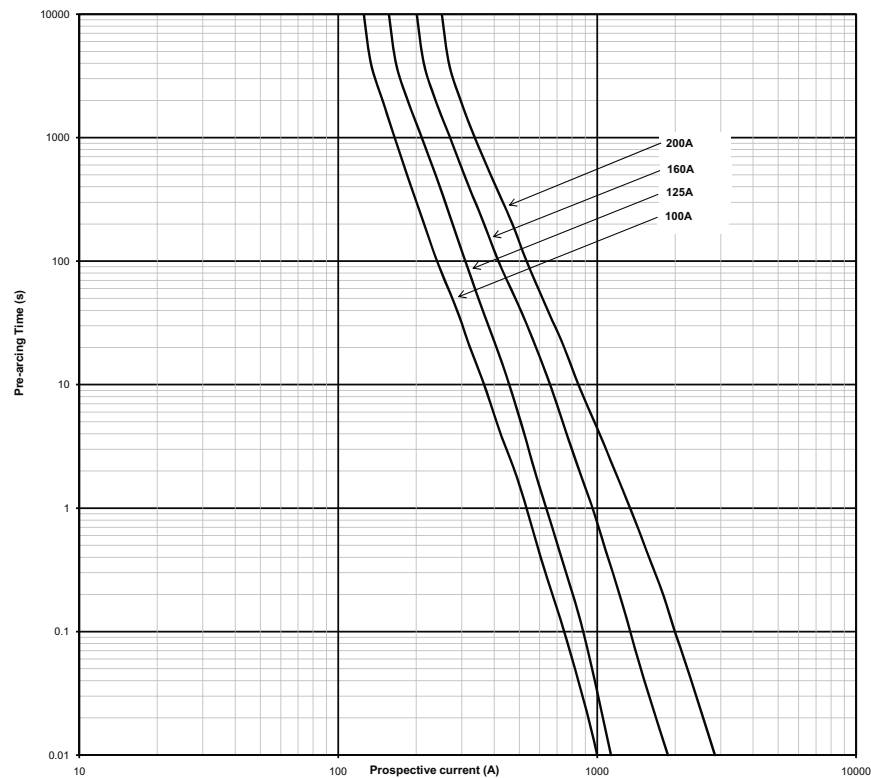


Time-current curve - Size 01XL, bladed and bolted, 1500 V d.c., 50 A to 125 A

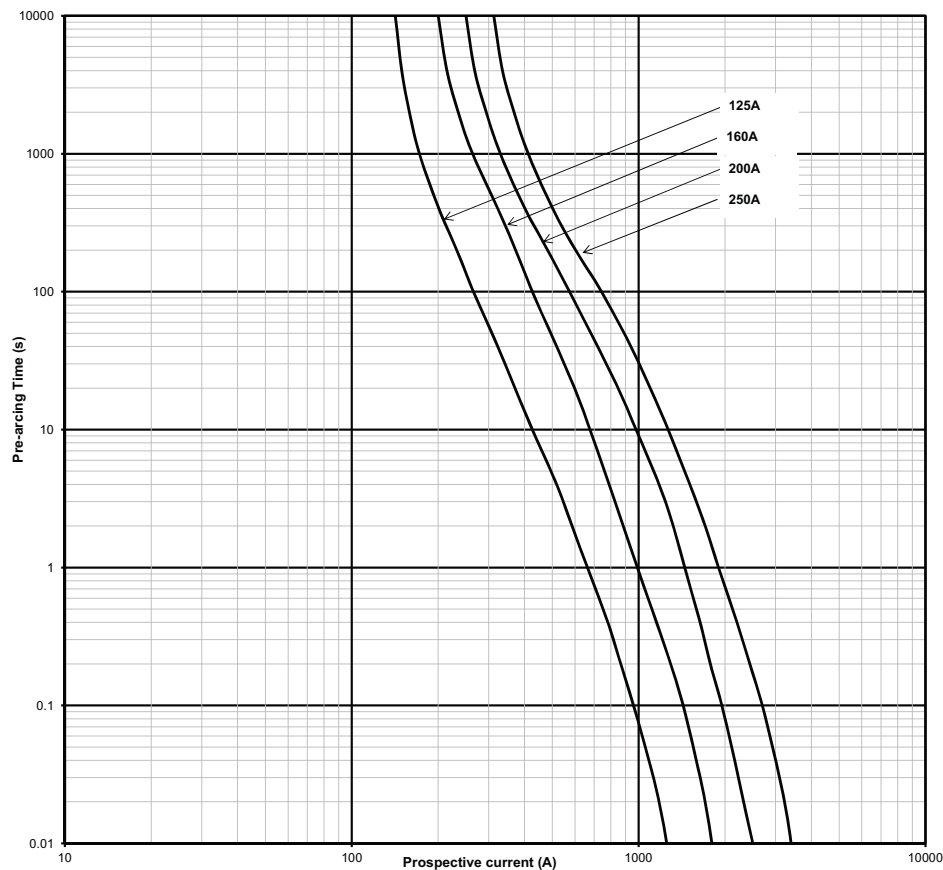


PV-XL - XL Style - 1000-1500 V d.c. (IEC/UL), 50 A to 600 A

Time-current curve - Size 1XL, bladed and bolted, 1500 V d.c., 100 A to 200 A



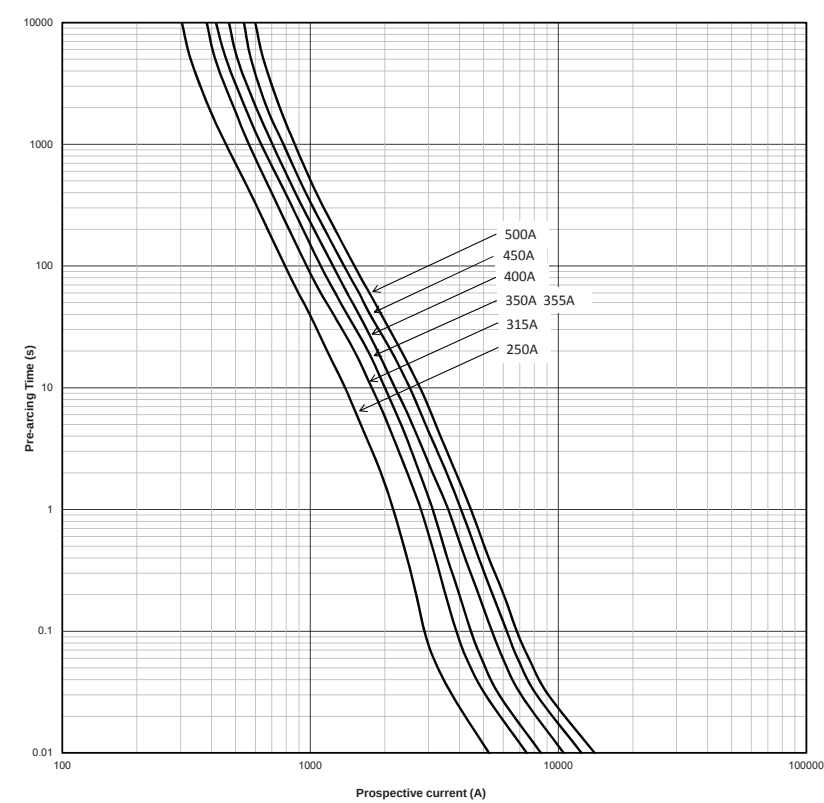
Time-current curve - Size 2XL, bladed and bolted, 1500 V d.c., 125 A to 250 A



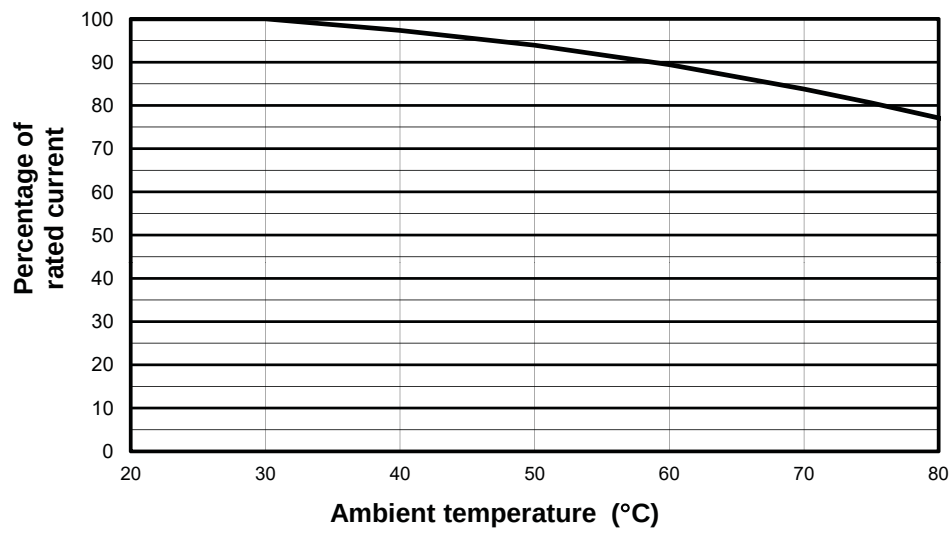
# Photovoltaic fuse links, fuse bases and holders

## PV-XL - XL Style - 1000-1500 V d.c. (IEC/UL), 50 A to 600 A

Time-current curve - Size 3L, bladed and bolted, 1500 V d.c., 250 A to 500 A



### Temperature derating curve



## SD-S-PV - XL fuse bases, 1500 V d.c. (IEC), 200 A to 500 A, sizes 1 to 3

### Specifications

#### Description

Sizes 1 to 3 XL Fuse bases specifically designed for use with the Bussmann series range of XL PV (Photovoltaic) fuse links.

#### Technical data

- Rated voltage: 1500 V d.c. (IEC)
- Rated current: 200 A, 400 A and 630 A
- Fuse base size: 1 to 3
- Compatible fuse links: PV XL see page 353

#### Standards / Agency information

- IEC 60269-1
- UL Listed (file number E348242)

#### Accessories:

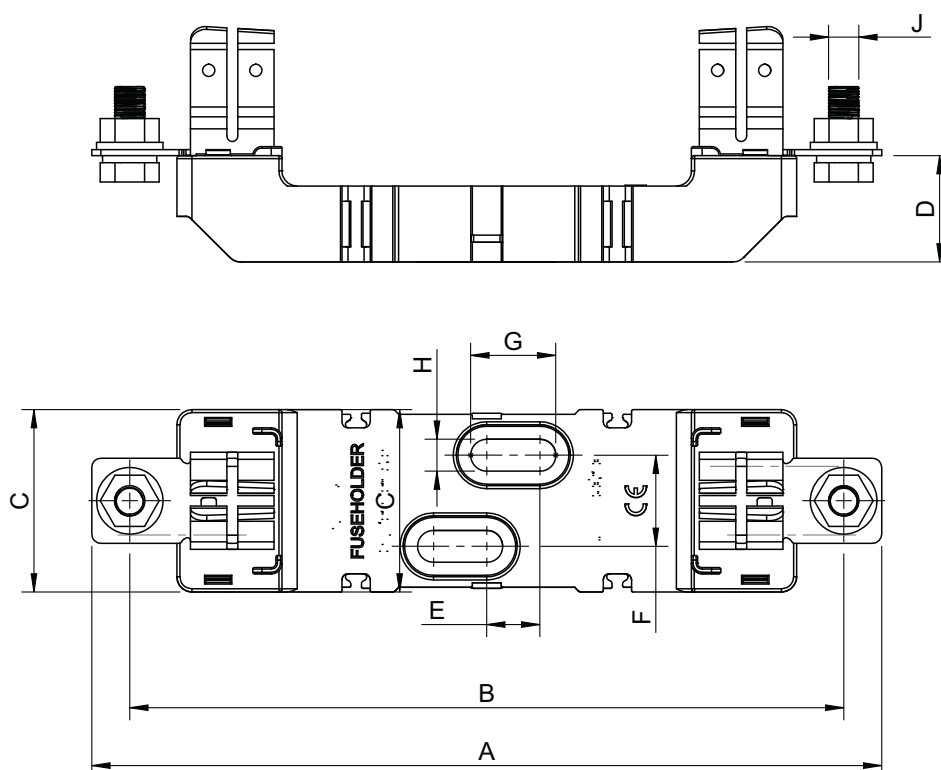
Fuse extraction handle available in sizes 01XL to 3L

Part numbers: FEH1500B

Unit packing: 1



#### Dimensions (mm)



| Catalogue numbers | XL Style fuse link size | Maximum fuse rated current (Amps) | Power acceptance | A   | B   | C  | D  | E    | F  | G  | H    | J   |
|-------------------|-------------------------|-----------------------------------|------------------|-----|-----|----|----|------|----|----|------|-----|
| SD1XL-S-PV        | 01XL, 1XL               | 200                               | 57W              | 260 | 235 | 60 | 35 | 17.5 | 30 | 28 | 10.5 | M10 |
| SD2XL-S-PV        | 2XL                     | 400                               | 75W              | 285 | 260 | 60 | 35 | 17.5 | 30 | 28 | 10.5 | M12 |
| SD3L-S-PV         | 3L                      | 500                               | 108W             | 300 | 270 | 60 | 35 | 17.5 | 30 | 28 | 10.5 | M12 |

# Battery storage fuse links

## BSF-NH - NH Style, 1000 V d.c. (IEC/UL), 63 A to 400 A

### Specifications

#### Description

Eaton's Bussmann series NH battery storage fuses are specifically designed to protect and isolate battery array combiners and disconnects. These fuse links are capable of interrupting low overcurrents associated with faulted battery storage systems (reverse current, multi-array fault).

#### Technical data

- Rated voltage: 1000 V d.c.
- Rated current: 63 A to 400 A
- Operating class: gBat proposed for full range fuse links for protection of battery storage systems
- Breaking capacity: 100 kA
- Time constant: 4.5 ms at 100 kA

#### Microswitches

- For bladed fuse links only
  - 170H0236
  - 170H0238

#### Fuse holders

- For bladed fuse links only (see page 348)
  - SD1-D-PV
  - SD2-D-PV
  - SD3-D-PV

#### Standards / Agency information

IEC 60269-7 for battery storage fuse links is under preparation.

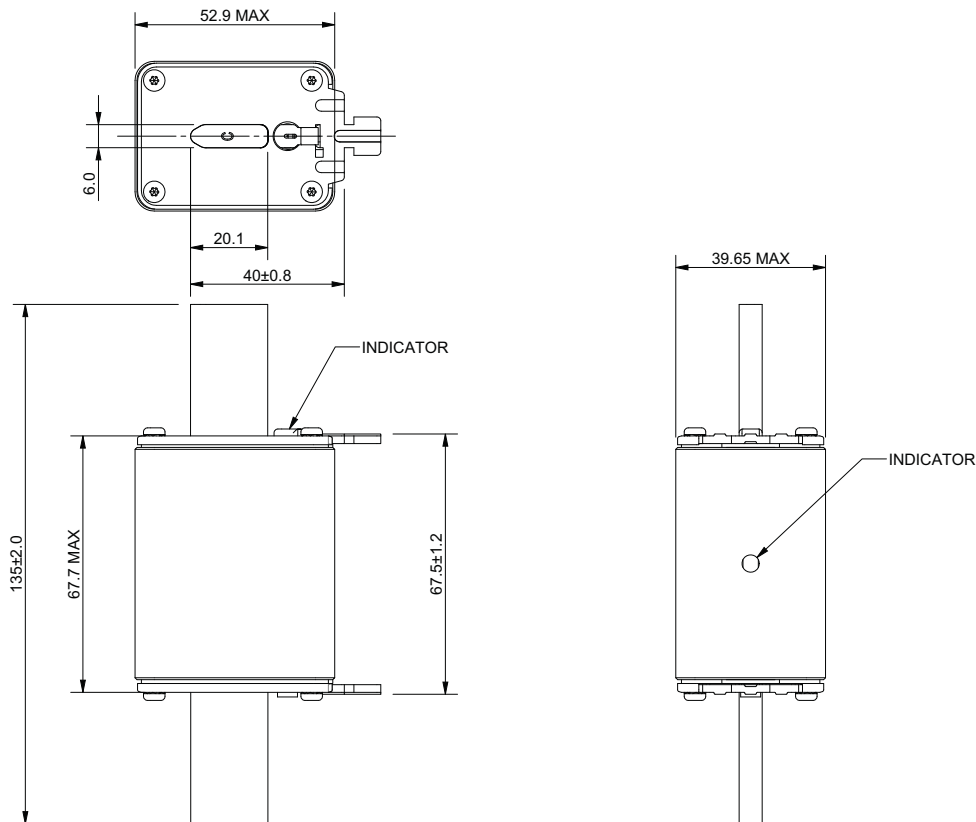
#### Catalogue numbers

| Fuse link<br>body size | Rated voltage | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                         | Watts loss<br>(W)  |                | Catalogue<br>numbers |                  |
|------------------------|---------------|-------------------------|---------------------------------------|-------------------------|--------------------|----------------|----------------------|------------------|
|                        |               |                         | Pre-arcing                            | Total<br>at 1000 V d.c. | 0.7 I <sub>n</sub> | I <sub>n</sub> | Bladed version       | Bolted version   |
| 1                      | 1000 V d.c.   | 63                      | 470                                   | 4300                    | 5                  | 12             | BSF-063G-NH110       | BSF-063G-NH110-B |
|                        |               | 80                      | 640                                   | 5760                    | 6                  | 15.5           | BSF-080G-NH110       | BSF-080G-NH110-B |
|                        |               | 100                     | 1300                                  | 11,700                  | 7                  | 16.5           | BSF-100G-NH110       | BSF-100G-NH110-B |
|                        |               | 125                     | 2600                                  | 23,400                  | 7                  | 17.5           | BSF-125G-NH110       | BSF-125G-NH110-B |
|                        |               | 160                     | 5200                                  | 46,800                  | 11                 | 27.5           | BSF-160G-NH110       | BSF-160G-NH110-B |
|                        |               | 200                     | 10,200                                | 82,000                  | 10                 | 25             | BSF-200G-NH110       | BSF-200G-NH110-B |
| 2                      | 1000 V d.c.   | 160                     | 4600                                  | 37,000                  | 11                 | 28             | BSF-160G-NH210       | BSF-160G-NH210-B |
|                        |               | 200                     | 9500                                  | 76,000                  | 13                 | 32             | BSF-200G-NH210       | BSF-200G-NH210-B |
|                        |               | 250                     | 17,000                                | 136,000                 | 15                 | 38             | BSF-250G-NH210       | BSF-250G-NH210-B |
| 3                      | 1000 V d.c.   | 315                     | 32,000                                | 260,000                 | 18                 | 44             | BSF-315G-NH310       | BSF-315G-NH310-B |
|                        |               | 355                     | 44,500                                | 370,000                 | 18                 | 46             | BSF-355G-NH310       | BSF-355G-NH310-B |
|                        |               | 400                     | 67,500                                | 550,000                 | 20                 | 50             | BSF-400G-NH310       | BSF-400G-NH310-B |

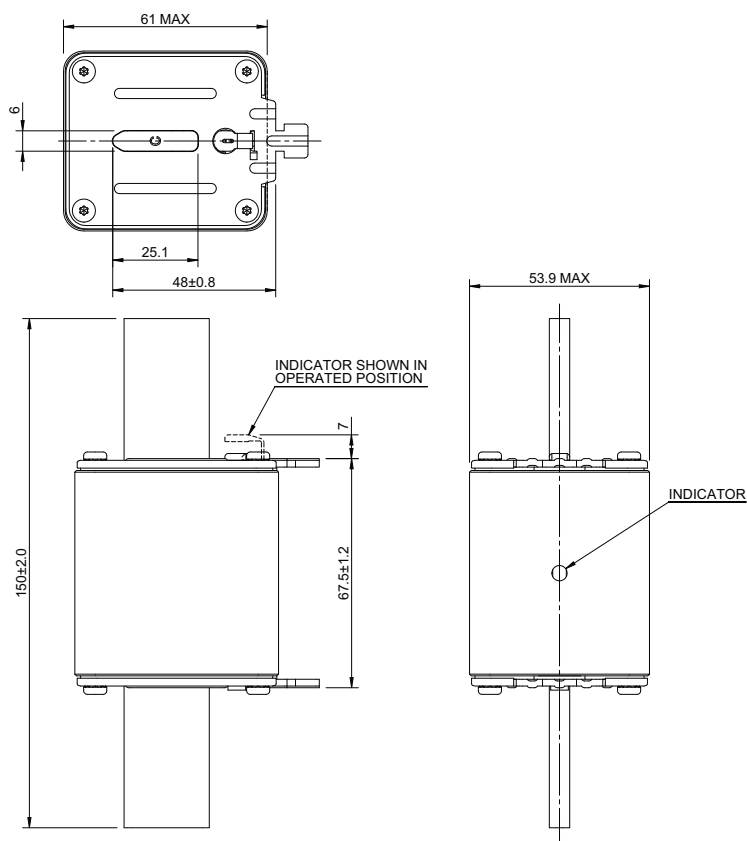


## BSF-NH - NH Style, 1000 V d.c. (IEC/UL), 63 A to 400 A

### Dimensions (mm) - Size 1, bladed



### Dimensions (mm) - Size 2, bladed

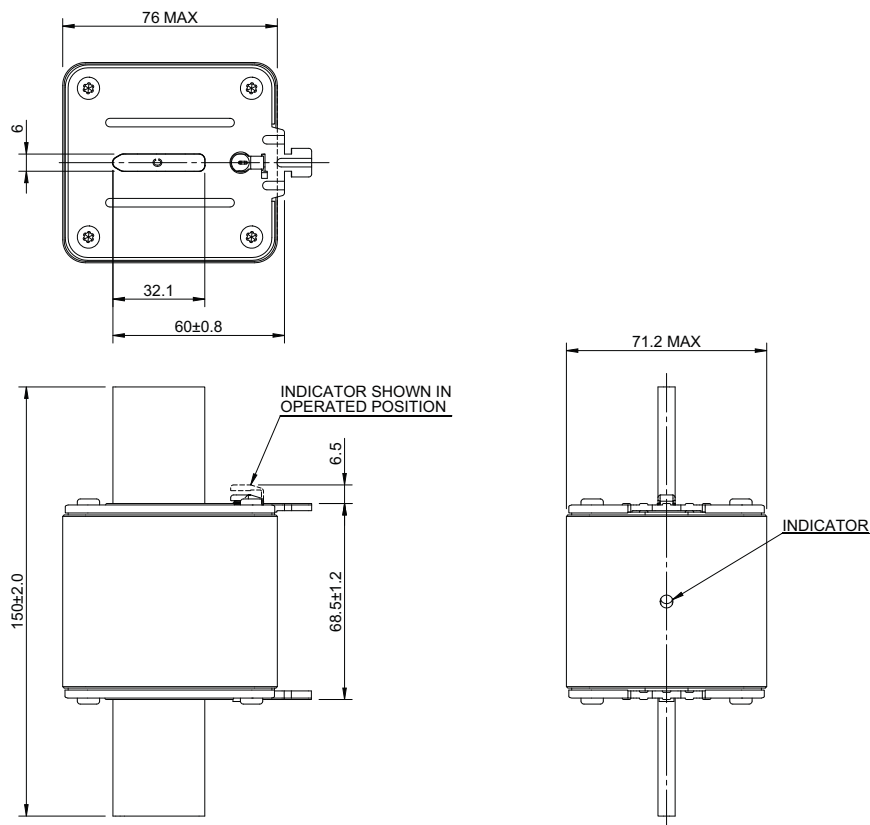


Data sheet: 135001

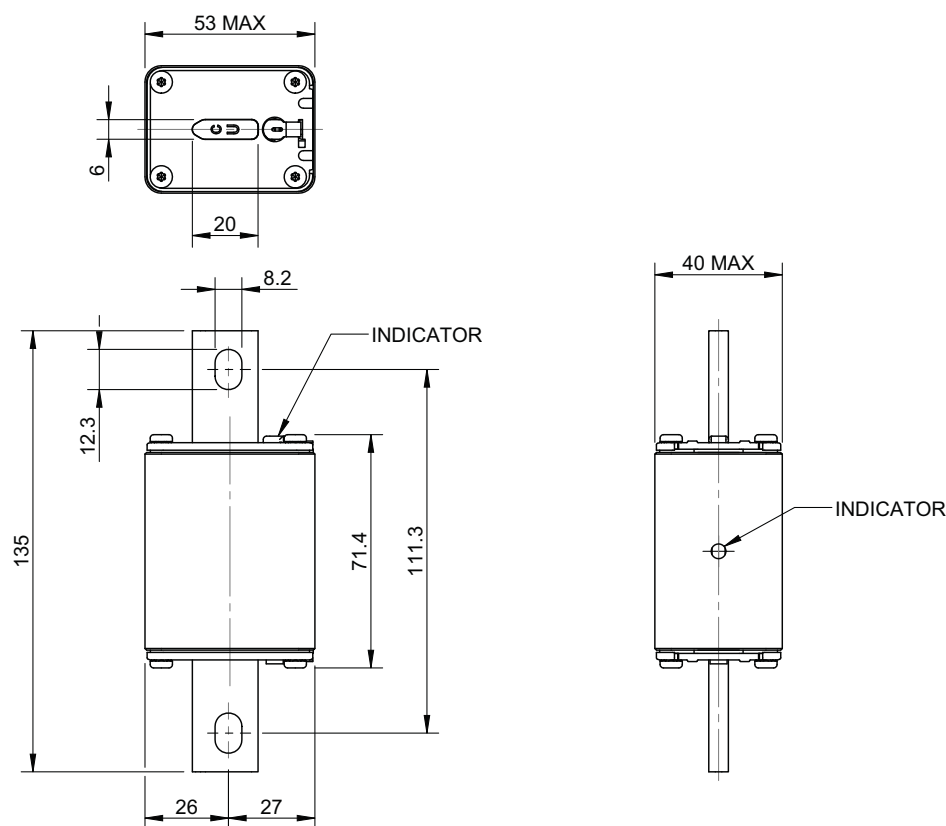
# Battery storage fuse links

## BSF-NH - NH Style, 1000 V d.c. (IEC/UL), 63 A to 400 A

### Dimensions (mm) - Size 3, bladed

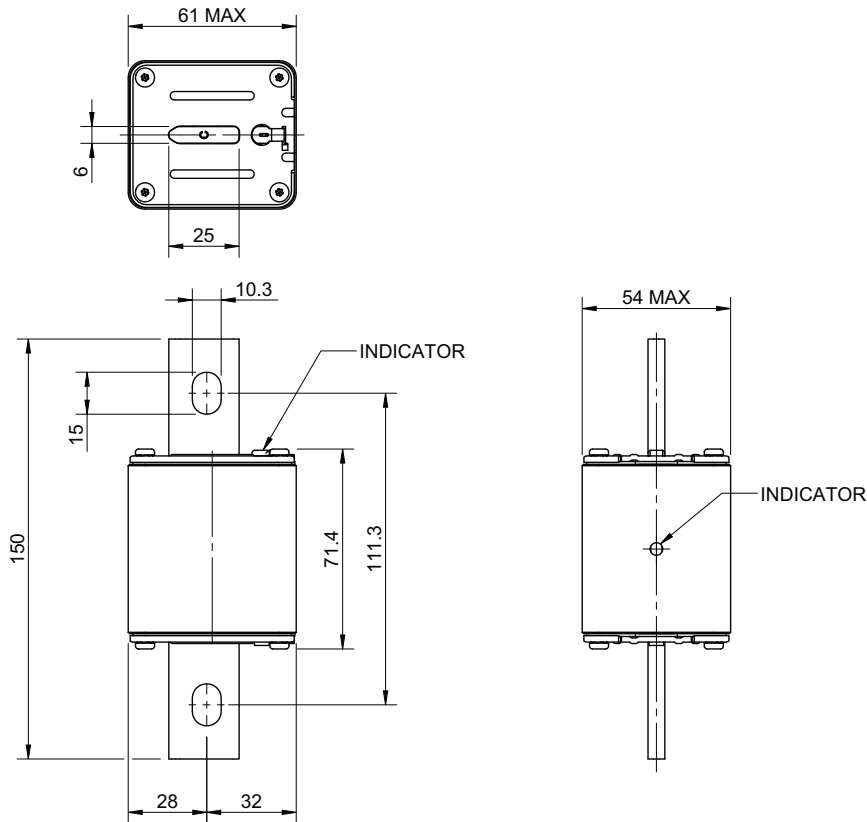


### Dimensions (mm) - Size 1, bolted

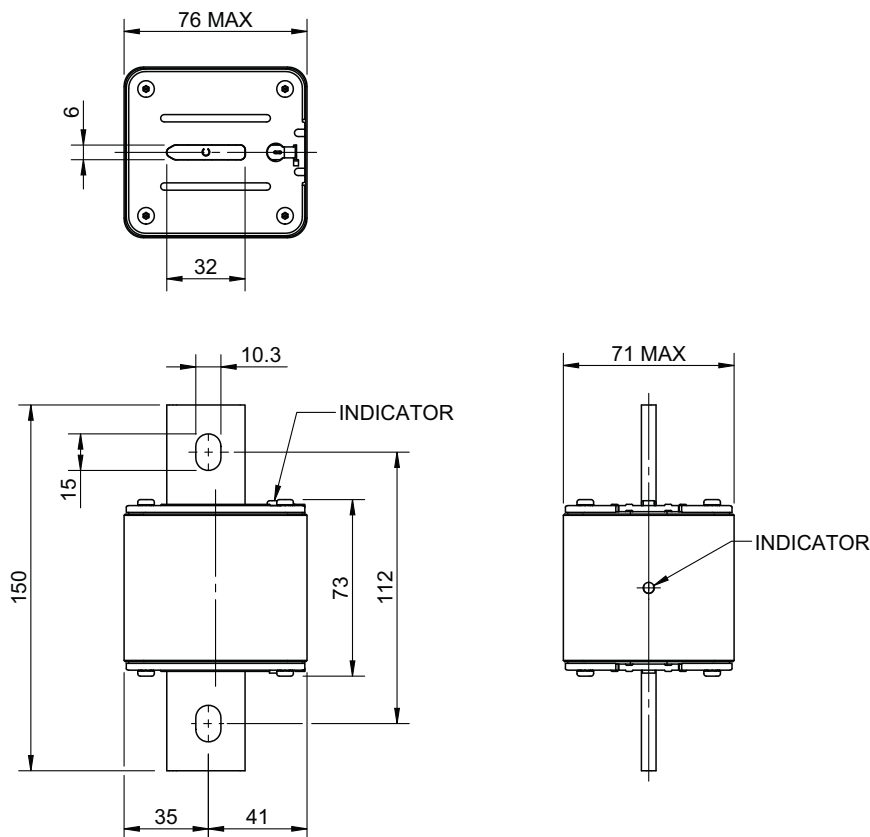


## BSF-NH - NH Style, 1000 V d.c. (IEC/UL), 63 A to 400 A

### Dimensions (mm)- Size 2, bolted



### Dimensions (mm) - Size 3, bolted

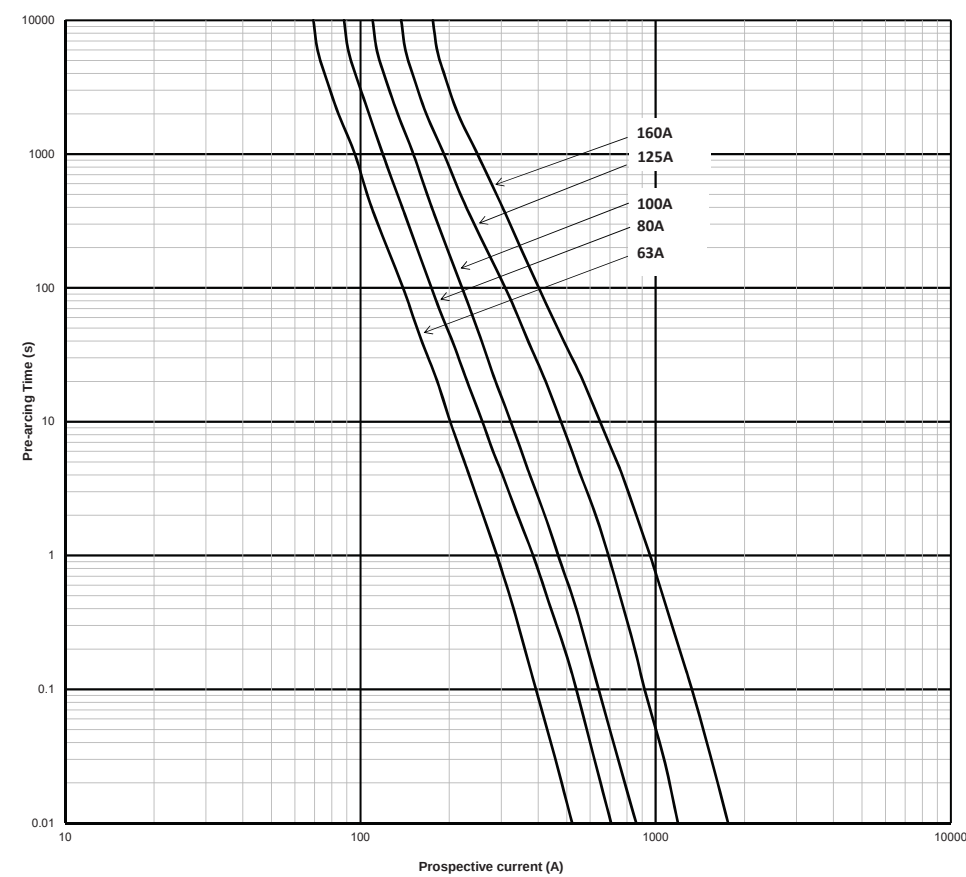




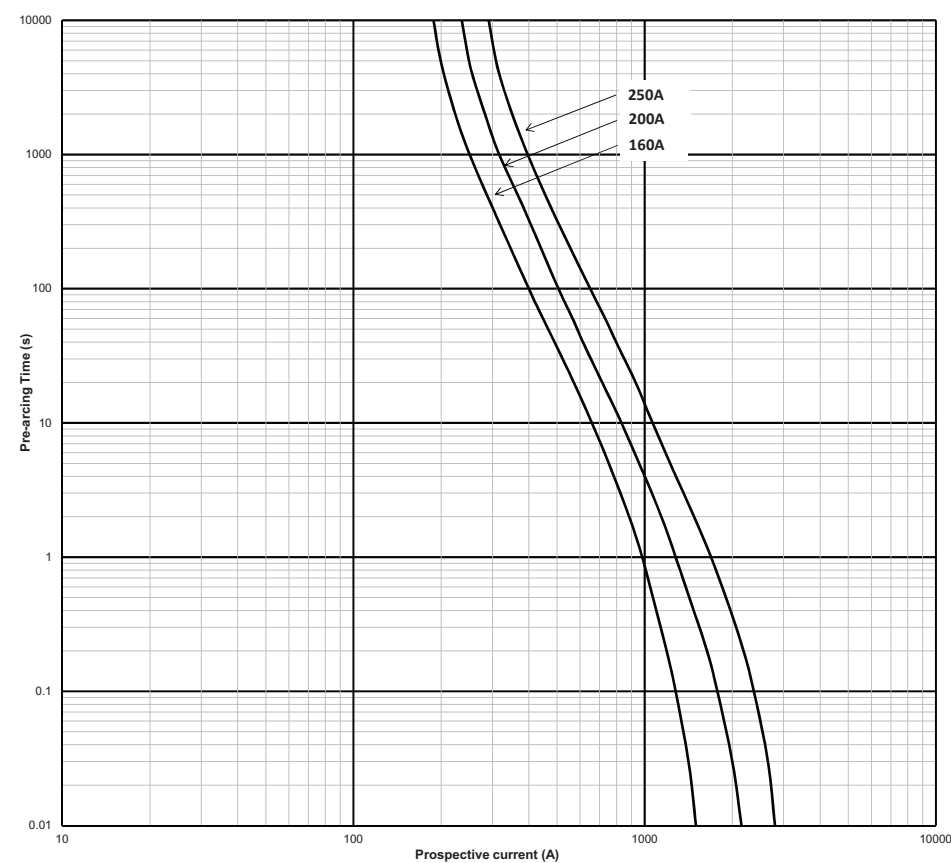
Battery storage fuse links

BSF-NH - NH Style, 1000 V d.c. (IEC/UL), 63 A to 400 A

Time-current curve - Size 1, 63 A to 200 A



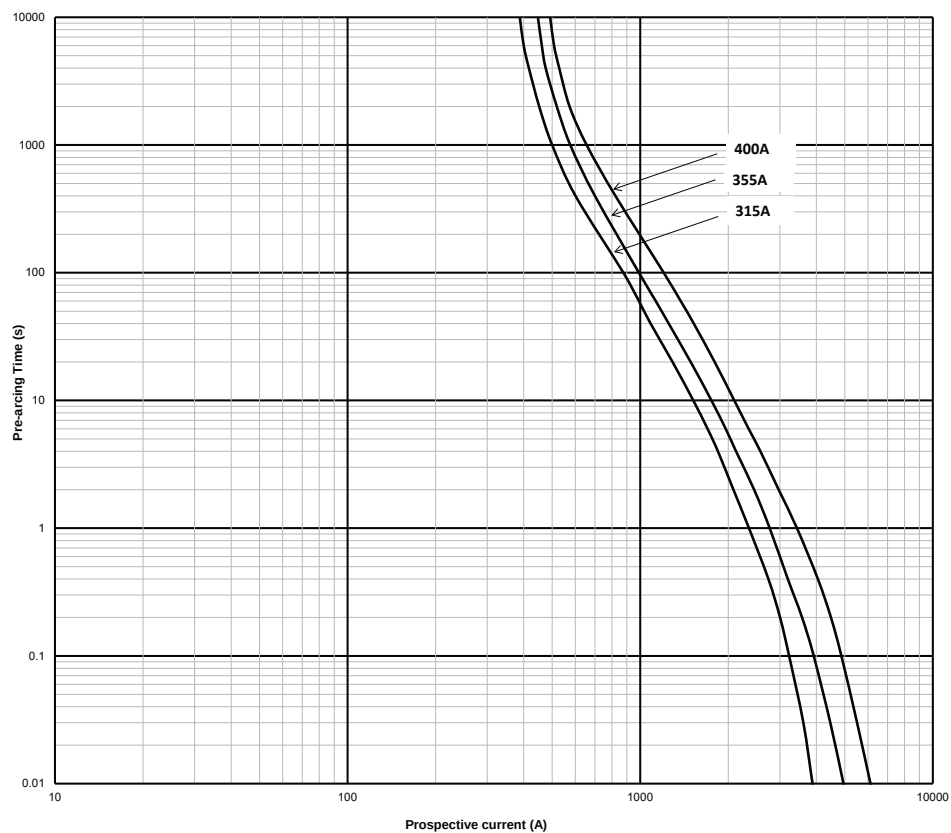
Time-current curve - Size 2, 160 A to 250 A



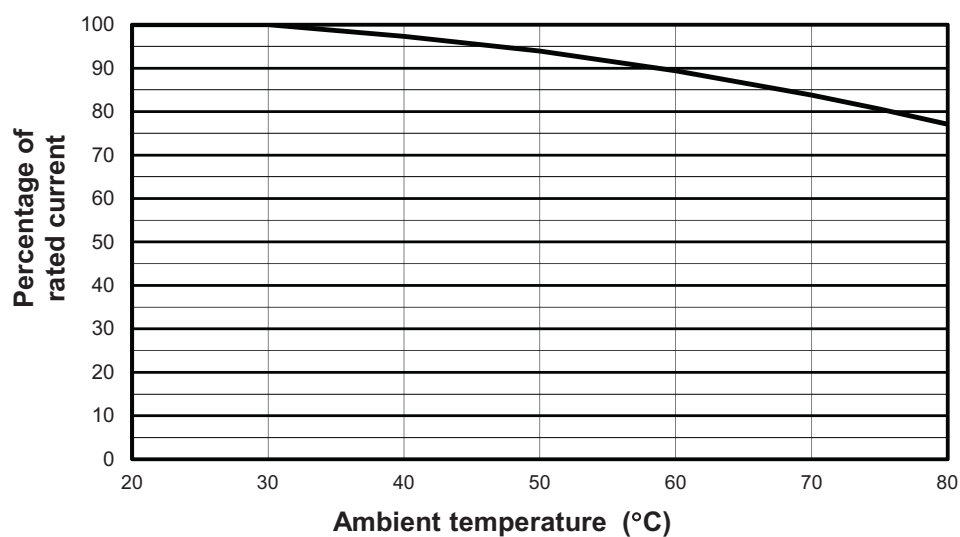
Data sheet: 135001

## BSF-NH - NH Style, 1000 V d.c. (IEC/UL), 63 A to 400 A

### Time-current curve - Size 3, 315 A to 400 A



### Temperature derating



(The ambient temperature is that local to the fuse link)

# Battery storage fuse links

## BSF-3XL - XL Style, 1500 V d.c. (IEC/UL), 250 A to 500 A

### Specifications

#### Description

Eaton's Bussmann series XL battery storage fuses are specifically designed to protect and isolate battery array combiners and disconnects. These fuse links are capable of interrupting low overcurrents associated with faulted battery storage systems (reverse current, multi-array fault).

#### Technical data

- Rated voltage: 1500 V d.c.
- Rated current: 250 A to 500 A
- Operating class: gBat proposed for full range fuse links for protection of battery storage systems
- Breaking capacity: 100 kA
- Time constant: 4.5 ms at 100 kA

#### Microswitches

- For bladed fuse links
  - 170H0236
  - 170H0238
- For bolted fuse links
  - 170H0069

#### Compatible fuse bases

- SD3L-S-PV see page 363

#### Standards / Agency information

IEC 60269-7 for battery storage fuse links is under preparation.

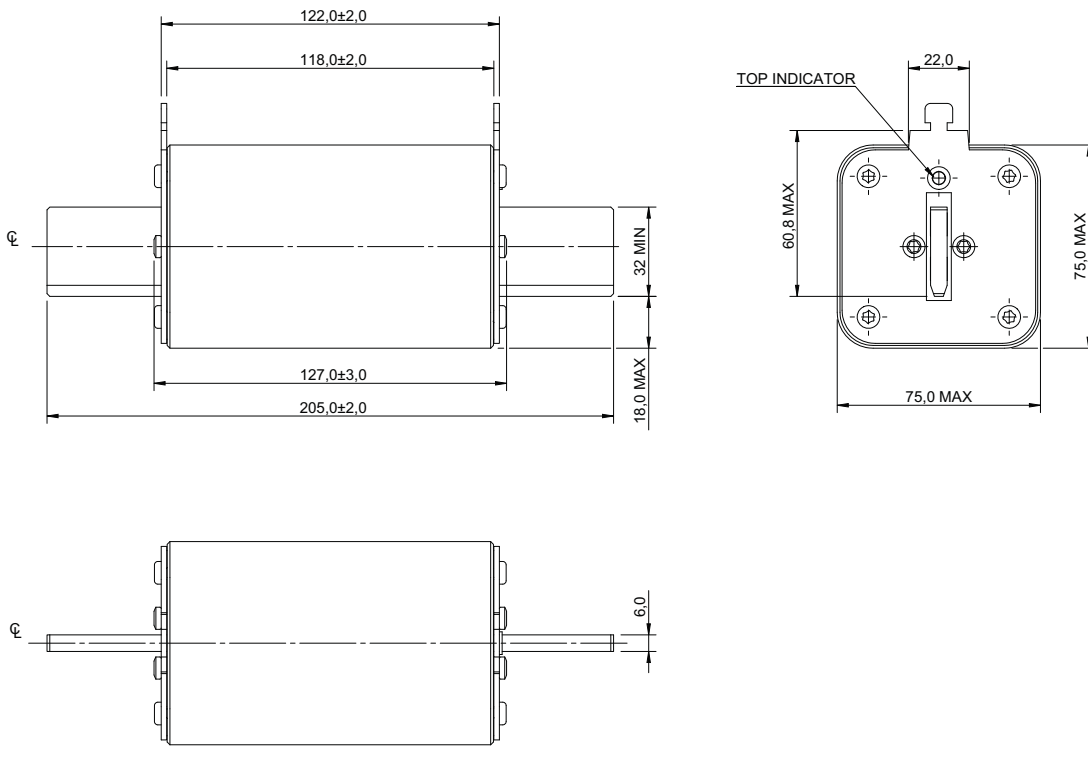


#### Catalogue numbers

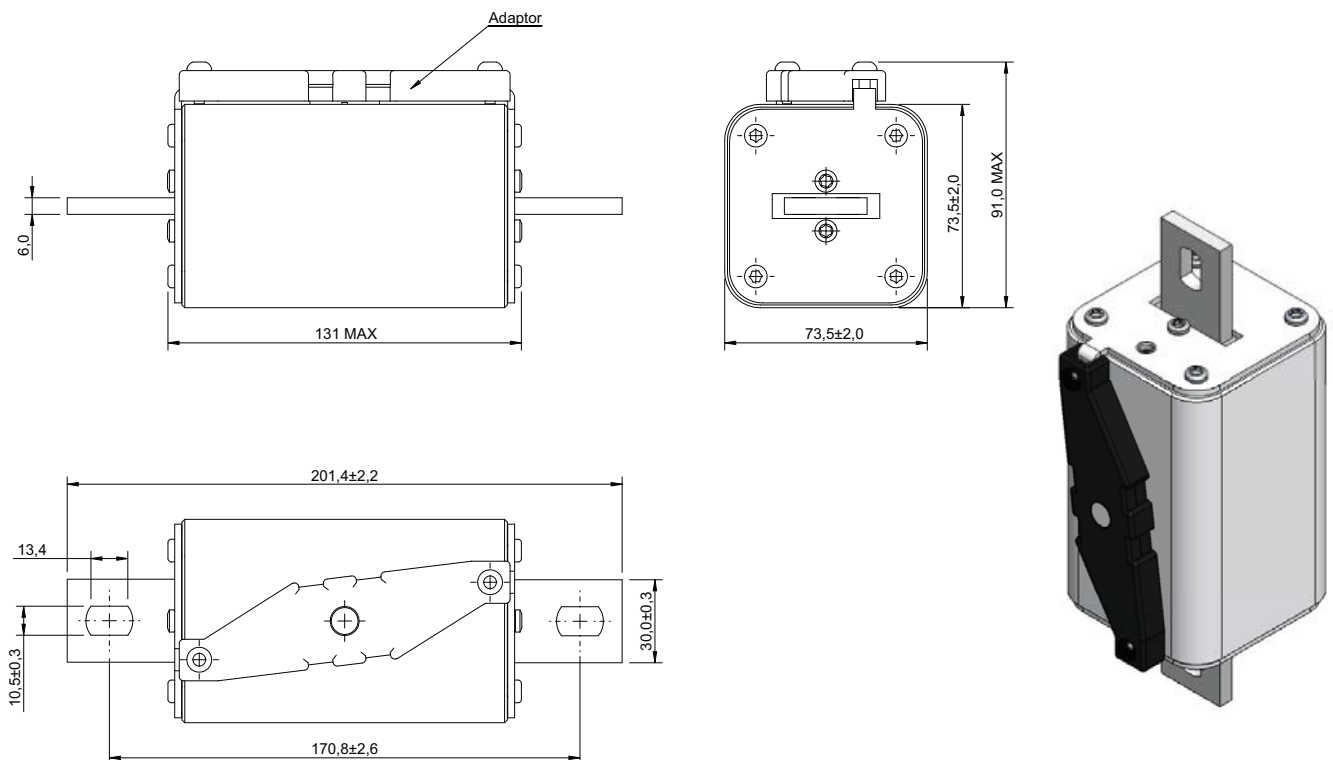
| Fuse link<br>body size | Rated voltage | Rated current<br>(Amps) | I <sup>2</sup> t (A <sup>2</sup> Sec) |                         | Watts loss<br>(W)  |                | Catalogue<br>numbers |                  |
|------------------------|---------------|-------------------------|---------------------------------------|-------------------------|--------------------|----------------|----------------------|------------------|
|                        |               |                         | Pre-arcing                            | Total<br>at 1500 V d.c. | 0.7 I <sub>n</sub> | I <sub>n</sub> | Bladed version       | Bolted version   |
| 3                      | 1500 V d.c.   | 250                     | 74,000                                | 263,000                 | 20                 | 49             | BSF-250G-3XL15       | BSF-250G-3XL15-B |
|                        |               | 315                     | 150,000                               | 533,000                 | 21                 | 52             | BSF-315G-3XL15       | BSF-315G-3XL15-B |
|                        |               | 355                     | 195,000                               | 693,000                 | 24                 | 59             | BSF-355G-3XL15       | BSF-355G-3XL15-B |
|                        |               | 400                     | 296,000                               | 1,060,000               | 24                 | 61             | BSF-400G-3XL15       | BSF-400G-3XL15-B |
|                        |               | 450                     | 412,000                               | 1,470,000               | 27                 | 67             | BSF-450G-3XL15       | BSF-450G-3XL15-B |
|                        |               | 500                     | 532,000                               | 1,890,000               | 29                 | 73             | BSF-500G-3XL15       | BSF-500G-3XL15-B |

## BSF-3XL - XL Style, 1500 V d.c. (IEC/UL), 250 A to 500 A

### Dimensions (mm) - Size 3, bladed



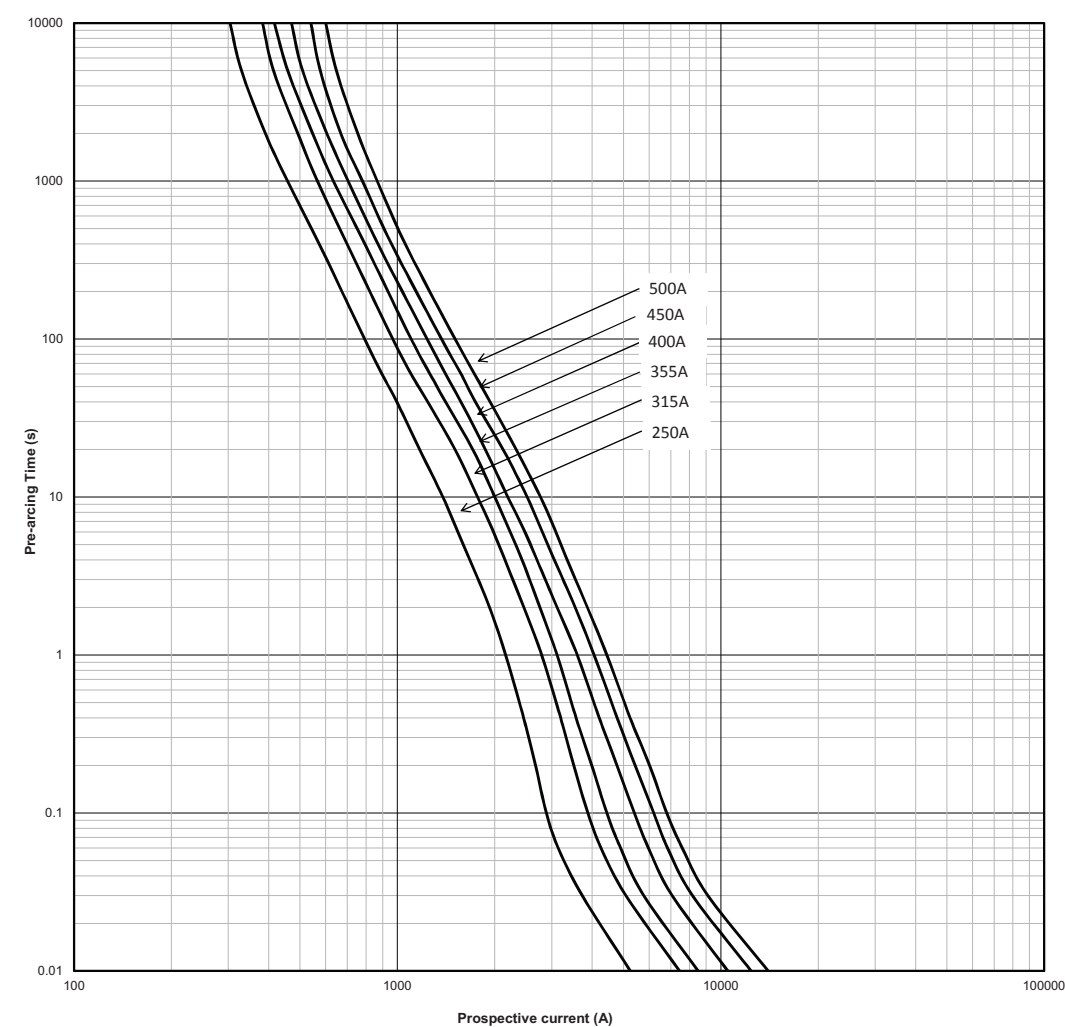
### Dimensions (mm) - Size 3, bolted



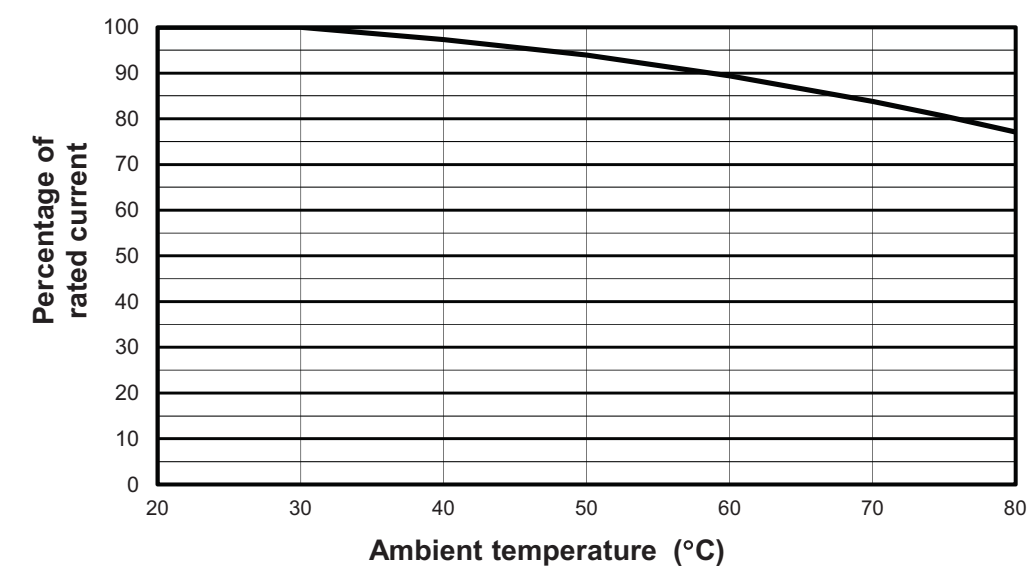
Battery storage fuse links

BSF-3XL - XL Style, 1500 V d.c. (IEC/UL), 250 A to 500 A

Time-current curve - Size 3, 250 A to 500 A



Temperature derating



Modular style fuse bases for North American, British and square body fuse links

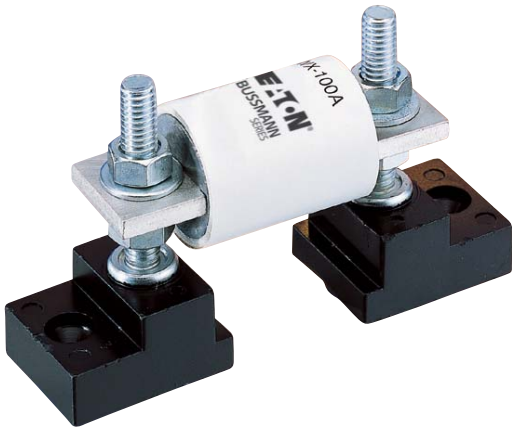
Description

Eaton's Bussmann series offers a comprehensive line of fuse bases that provide the user with design and manufacturing flexibility. Two identical half bases make up a Bussmann series modular fuse base. These 'split' units can be panel mounted any distance apart to accomodate any length fuse.

1 - Stud type

The simpler design is the C5268 modular fuse base. With this design, the fuse terminal and cable (with termination) are mounted on the same stud, minimizing labor needed for installation. The stud type base is available in the configurations shown in the table below.

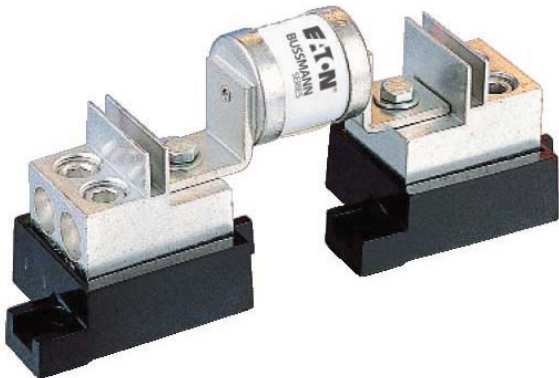
| Catalogue numbers | Max fuse amp rating | Stud height (in) | Stud dia. & threads |
|-------------------|---------------------|------------------|---------------------|
| C5268-1           | 200                 | 1                | 5/16"-18            |
| C5268-2           | 200                 | 1.75             | 5/16"-18            |
| C5268-3           | 200                 | 0.75             | 5/16"-18            |
| C5268-4           | 100                 | 1                | 1/4"-20             |
| C5268-5           | 100                 | 1.75             | 1/4"-20             |



2 - Connector Type

Eaton's Bussmann series also offers a modular style fuse base that utilises a tin-plated connector for wire termination and heat dissipation) and a plated-steel stud (for fuse mounting). The connector type fuse base is available in the configurations shown below. Consult Eaton for additional product details.

| Catalogue numbers | Max rated voltage | Max fuse Amp rating |
|-------------------|-------------------|---------------------|
| 1BS101            | 600               | 100                 |
| 1BS102            | 600               | 400                 |
| 1BS103            | 600               | 400                 |
| 1BS104            | 600               | 600                 |



3 - BH

BH fuse blocks provide a wide range of mounting configurations for Bussmann High Speed semi-conductors fuse links. BH fuse blocks have a Short-Circuit rated current rating of any installed fuse up to 200 kA RMS Sym.

| Catalogue numbers | Max rated voltage | Max fuse Amp rating |
|-------------------|-------------------|---------------------|
| BH-0              | 700               | 100                 |
| BH-1              | 2500              | 400                 |
| BH-2              | 5000              | 600                 |
| BH-3              | 1250              | 700                 |



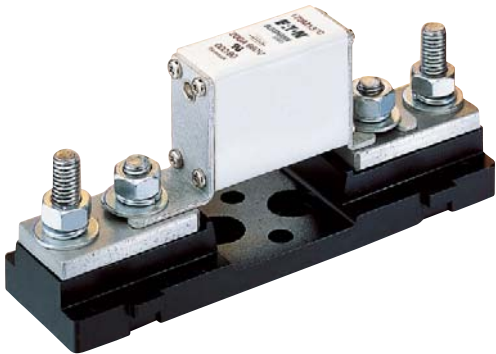
Fixed center fuse bases for DIN 43653 square body fuse links

Description

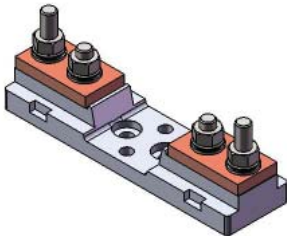
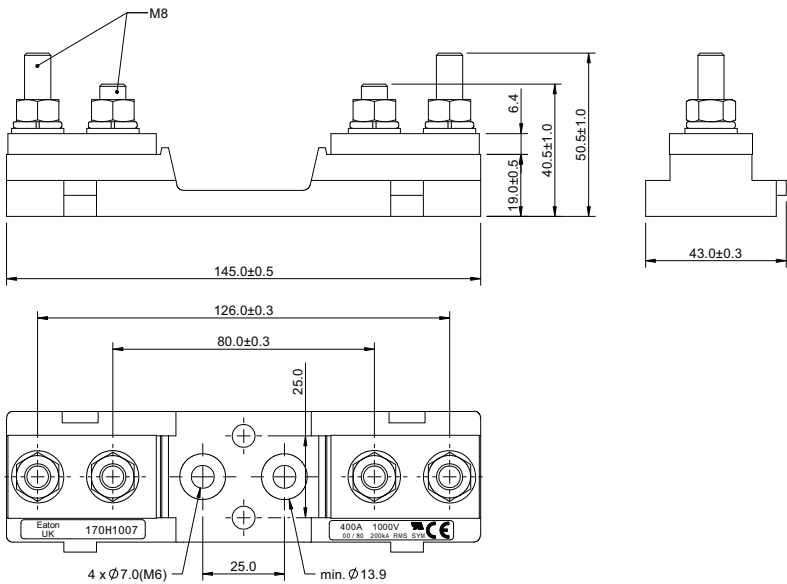
Fuse bases (blocks) to be used with DIN 43653 square body fuse links with centre distances of 80 and 110mm. Available for sizes 000, 00, 1\*, 1, 2 and 3.

Sizes 000 to 00 Fuse bases

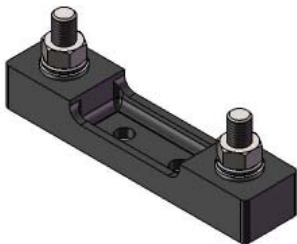
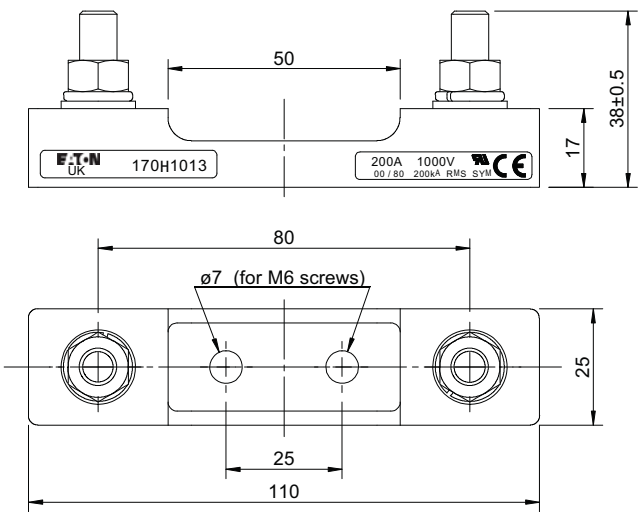
| Catalogue numbers | Max rated voltage (Volts) | Max fuse Amp rating (Amps) | Centre distance (mm) | Fuse sizes |
|-------------------|---------------------------|----------------------------|----------------------|------------|
| 170H1007          | 1000                      | 400                        | 80                   | 00, 000    |
| 170H1013          | 690                       | 200                        | 80                   | 0000, 000  |



Dimensions (mm) - 170H1007



Dimensions (mm) - 170H1013



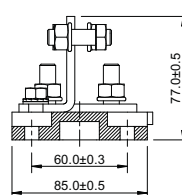
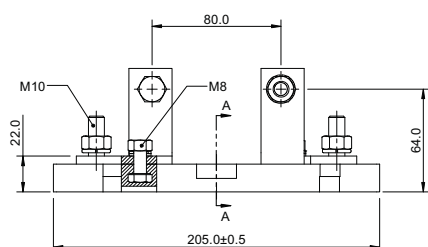
## Fixed center fuse bases for DIN 43653 square body fuse links

### Sizes 1\* to 3

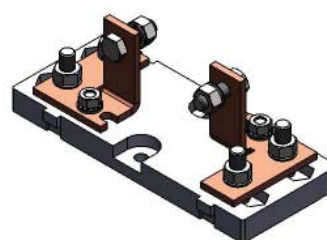
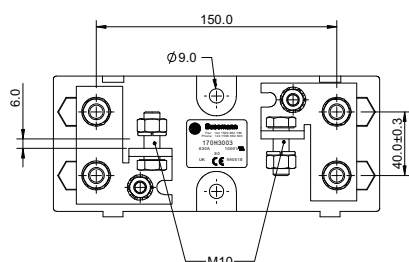
| Catalogue numbers | Max rated voltage (Volts) | Max fuse Amp rating (Amps) | Centre distance (mm) |
|-------------------|---------------------------|----------------------------|----------------------|
| 170H3003          | 1000 V a.c./V d.c.        | 630                        | 80                   |
| 170H3004          | 1000 V a.c./V d.c.        | 1250                       | 80                   |
| 170H3005          | 1400 V a.c./V d.c.        | 630                        | 110                  |
| 170H3006          | 1400 V a.c./V d.c.        | 1250                       | 110                  |



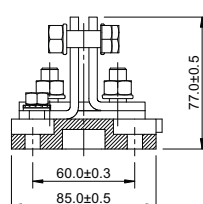
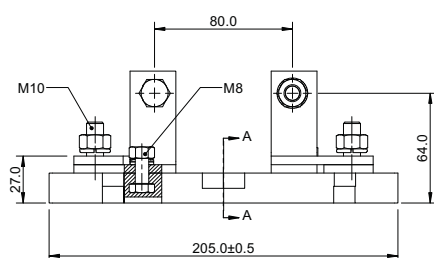
### Dimensions (mm) - 170H3003



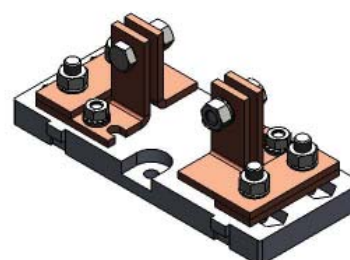
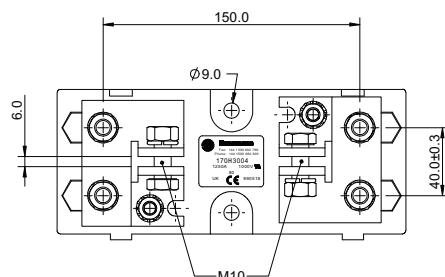
SECTION A-A



### Dimensions (mm) - 170H3004



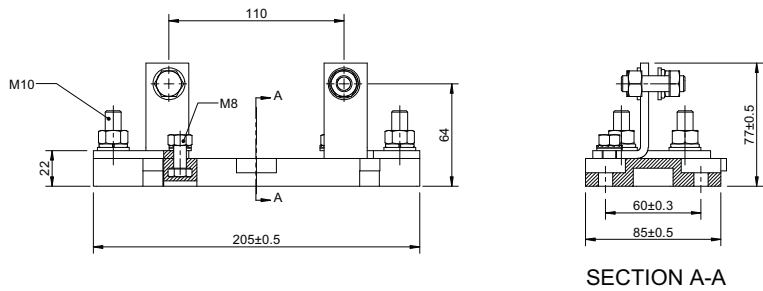
SECTION A-A



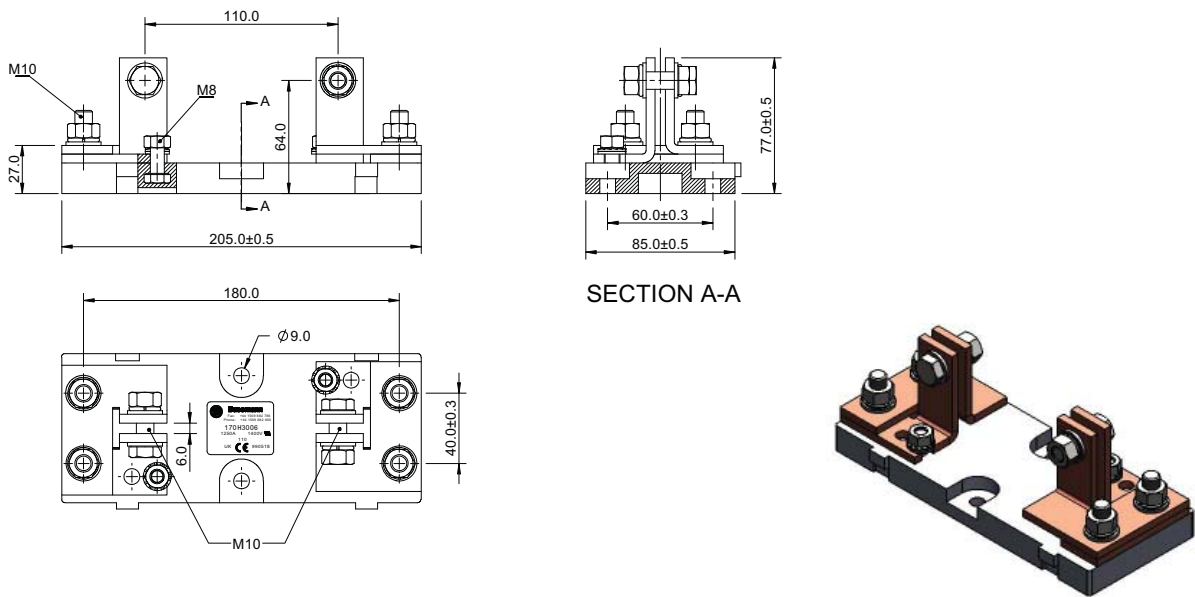


Fixed center fuse bases for DIN 43653 square body fuse links

Dimensions (mm) - 170H3005



Dimensions (mm) - 170H3006



Fuse links with higher current ratings than 1250 A can be used with 170H3004 or 170H3006 if the maximum load current is derated according to the table below.

| Fuse amp rating | Max. Amp load in fuse base |
|-----------------|----------------------------|
| 1400            | 1325                       |
| 1500            | 1400                       |
| 1600            | 1500                       |
| 1800            | 1650                       |
| 2000            | 1800                       |

## BMM - Fuse bases for ferrule fuse links, 600 V a.c. (UL), 30 A

### Specifications

#### Description

Modular, open-style fuse blocks for cylindrical industrial fuse links. Versatile 35mm DIN rail or screw-to-panel mounting.

#### Technical data

- Rated voltage: 600 V a.c. (UL)
- Rated current:
  - 30 A (box lug terminal)
  - 20 A (with quick connector terminal)
- Compatible fuse links:
  - FWA-A10F see page 52
  - FWC-A10F see page 62
  - PVM see page 317
  - PV-A10F see page 319

#### Standards / Agency information

- UL Recognised E14853-IZLT2
- CSA Certified 47235-6225-01
- CE
- RoHS compliant
- Conflict mineral free
- Reach declaration available upon request



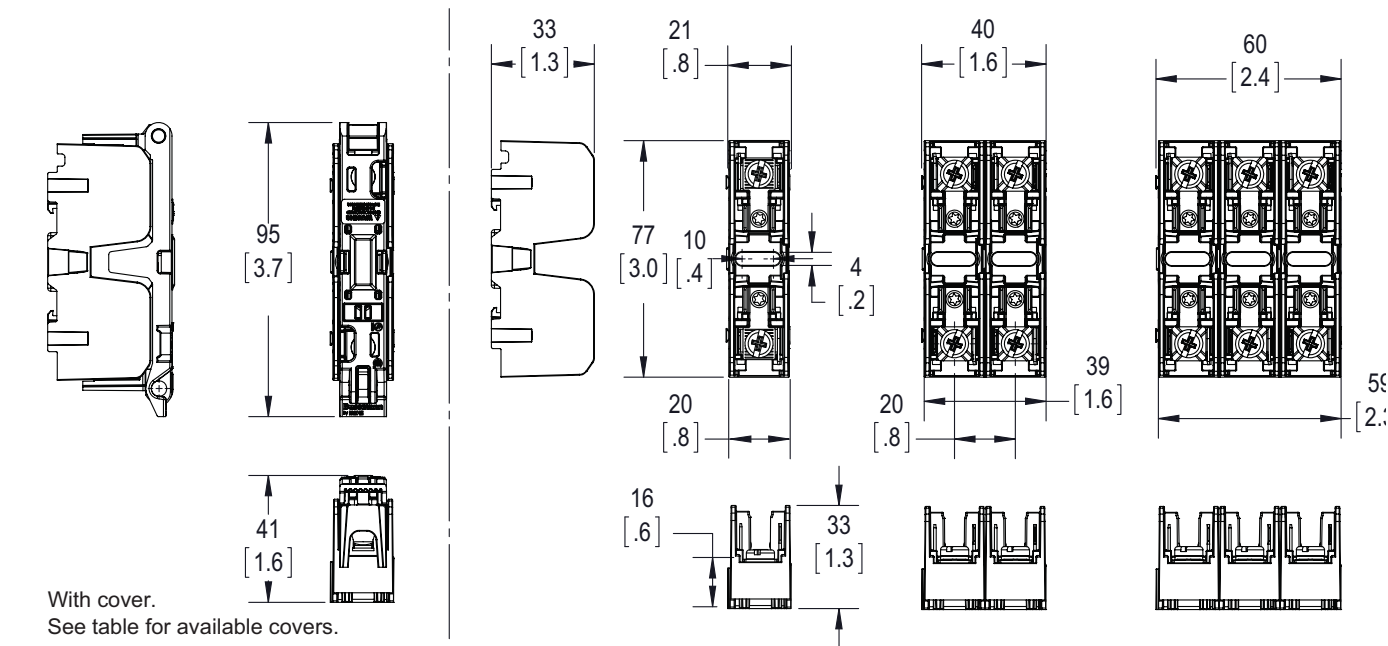
### Catalogue numbers

| Terminal type                      |                                             |           |                           |                 |
|------------------------------------|---------------------------------------------|-----------|---------------------------|-----------------|
| Screw w/quick connect <sup>1</sup> | Pressure plate w/quick connect <sup>1</sup> | Box lug   | Fuse link size            | Number of poles |
| BMM603-1SQ                         | BMM603-1PQ                                  | BMM603-1C | 10 x 38 (13/32" x 1-1/2") | 1               |
| BMM603-2SQ                         | BMM603-2PQ                                  | BMM603-2C | 10 x 38 (13/32" x 1-1/2") | 2               |
| BMM603-3SQ                         | BMM603-3PQ                                  | BMM603-3C | 10 x 38 (13/32" x 1-1/2") | 3               |

<sup>1</sup> Quick connect terminals rated for 20 A maximum.

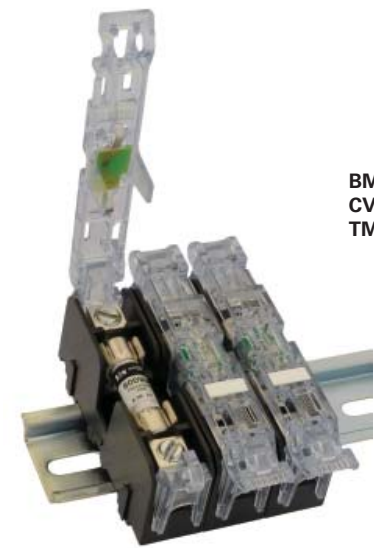
BMM - Fuse bases for ferrule fuse links, 600 V a.c. (UL), 30 A

Dimensions mm (in)



Recommended covers

| Terminal type                     | Cover part numbers |                |
|-----------------------------------|--------------------|----------------|
|                                   | Indicating         | Non indicating |
| Box lug (CR)                      | CVRI-CCM           | CVR-CCM        |
| Screw/quick connect (SQ)          | CVRI-CCM-QC        | CVR-CCM-QC     |
| Pressure plate/quick connect (PQ) | CVRI-CCM-QC        | CVR-CCM-QC     |



BMM603-3C with  
CVRI-CCM covers and  
TM27CB marker labels

## JM70100 - Fuse bases for ferrule fuse links, 700 V a.c. (UL), 100 A

### Specifications

#### Description

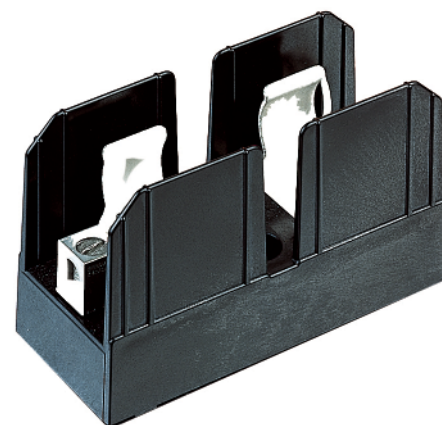
Modular, open-style fuse blocks for cylindrical industrial fuse links.  
Versatile 35mm DIN rail or screw-to-panel mounting.

#### Technical data

- Rated voltage: 700 V a.c. (UL)
- Rated current: 100 A
- Compatible fuse links: FWP-A22F(I) see page 76

#### Standards / Agency information

UL Recognised, Guide IZTL2, File 14853.

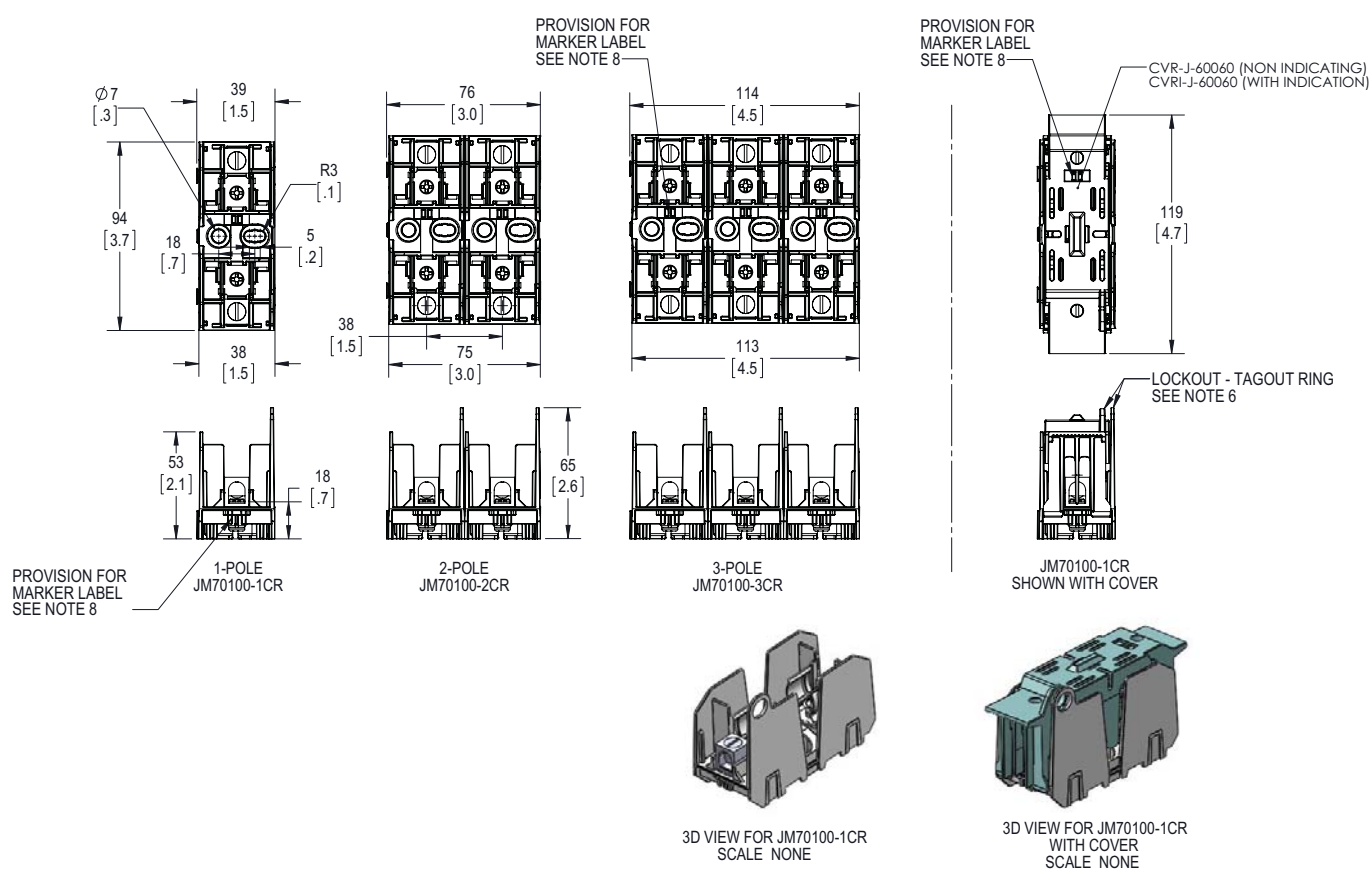


### Catalogue numbers

#### Terminal type

| Box lug with retaining clip | Fuse link size | Number of poles |
|-----------------------------|----------------|-----------------|
| JM70100-1CR                 | 22 x 58 mm     | 1               |
| JM70100-2CR                 |                | 2               |
| JM70100-3CR                 |                | 3               |

### Dimensions mm (in)



## JM60 - Modular knifeblade fuse blocks, 600 V a.c. (UL), 70 A to 600 A

### Specifications

#### Description

Industry's first modular fuse block simplifies design and enhances safety.

#### Technical data

- Rated voltage: 600V a.c. (UL)
- Rated current: see table below
- Compatible fuse links: DFJ see page 250



#### Standards / Agency information

Blocks

- UL - Listed cULus E14853 - IZLT & IZLT7
- CSA - Certified 47235-6225-01

Covers

- UL - Listed UL E58836 - JDVS2
- CSA - Certified 47235-6225-01

#### Catalogue numbers

| Class J Block | Covers without indication* | Covers with indication* | Rated voltage | Rated current (Amps) | Number of poles | Compatible Bussmann series fuse links |
|---------------|----------------------------|-------------------------|---------------|----------------------|-----------------|---------------------------------------|
| JM60100-1CR   |                            |                         |               |                      | 1               |                                       |
| JM60100-2CR   | CVR-J-60100                | CVRI-J-60100            | 600 V a.c.    | 70-100               | 2               |                                       |
| JM60100-3CR   |                            |                         |               |                      | 3               |                                       |
| JM60200-1CR   |                            |                         |               |                      | 1               |                                       |
| JM60200-2CR   | CVR-J-60200                | CVRI-J-60200            | 600 V a.c.    | 110-200              | 2               |                                       |
| JM60200-3CR   |                            |                         |               |                      | 3               |                                       |
| JM60400-1CR   |                            |                         |               |                      | 1               | DFJ                                   |
| JM60400-2CR   | CVR-J-60400-M              | CVRI-J-60400-M          | 600 V a.c.    | 225-400              | 2               |                                       |
| JM60400-3CR   |                            |                         |               |                      | 3               |                                       |
| JM60600-1CR   |                            |                         |               |                      | 1               |                                       |
| JM60600-2CR   | CVR-J-60600                | CVRI-J-60600            | 600 V a.c.    | 450-600              | 2               |                                       |
| JM60600-3CR   |                            |                         |               |                      | 3               |                                       |

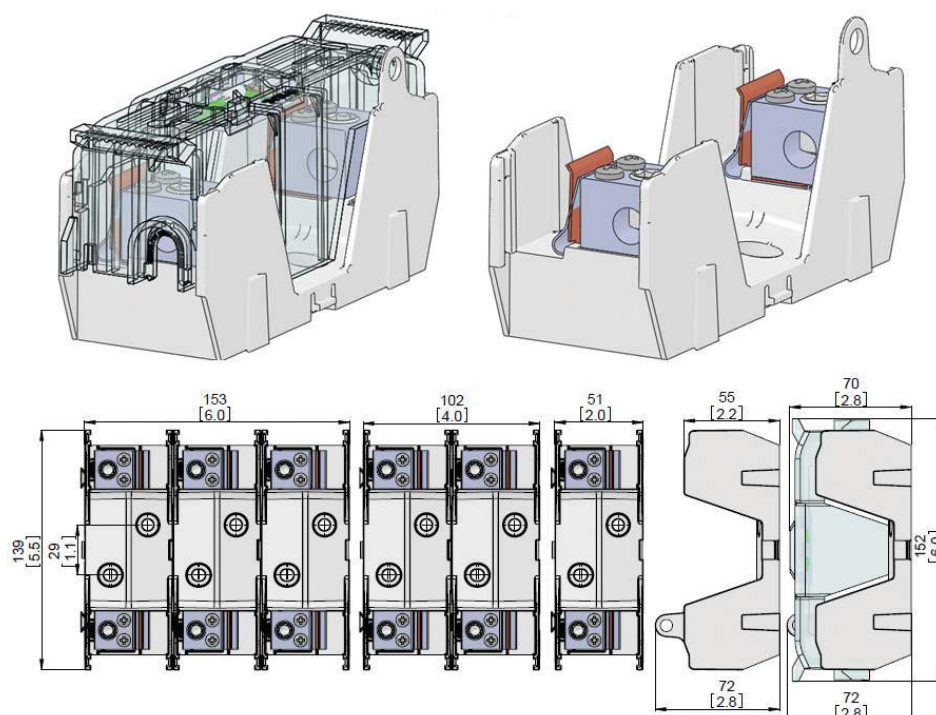
\* Covers sold separately. Blown fuse indication requires 90 volts minimum and closed circuit to operate.

#### Wire range and torque values

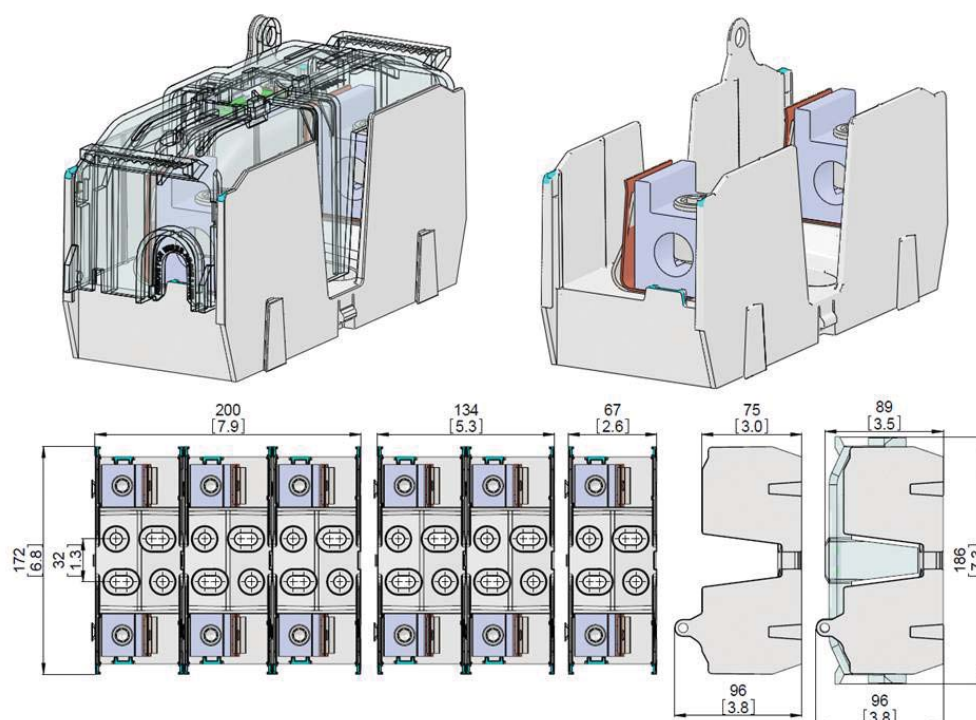
| Catalogue numbers | Wire range (solid and stranded) | Wire range (fine stranded) | Torque N•m (Lb-in) |
|-------------------|---------------------------------|----------------------------|--------------------|
| Class J Block     |                                 |                            |                    |
| JM60100-1CR       | 1/0-3 AWG; (2) Cu 4-6 AWG       | 1-3 AWG                    | 6.2 (55)           |
| JM60100-2CR       | 4-6 AWG; (2) Cu 8 AWG           | 4-6 AWG                    | 5.6 (50)           |
| JM60100-3CR       | 8 AWG; (2) Cu 10-14 AWG         | 8 AWG                      | 5.1 (45)           |
|                   | Cu 10-14 AWG; Al 10-12 AWG      |                            | 4.5 (40)           |
| JM60200-1CR       |                                 |                            | 4.0 (35)           |
| JM60200-2CR       | 250 MCM -1 AWG                  | 3/0-1 AWG                  | 42 (375)           |
| JM60200-3CR       | 2-6 AWG; (2) Cu 2-6 AWG         | 2-6 AWG                    | 31 (275)           |
| JM60400-1CR       | 600kcmil                        |                            | 57 (500)           |
| JM60400-2CR       | 500kcmil-4 AWG                  | N/A                        | 51 (450)           |
| JM60400-3CR       | (2) Cu 3/0 - 4 AWG              |                            | 57 (500)           |
|                   | (2) Al 3/0 - 4 AWG              |                            | 34 (300)           |
| JM60600-1CR       |                                 |                            |                    |
| JM60600-2CR       | (2) 500kcmil-4 AWG              | N/A                        | 51 (450)           |

## JM60 - Modular knifeblade fuse blocks, 600 V a.c. (UL), 70 A to 600 A

Dimensions mm (in) - 100 A



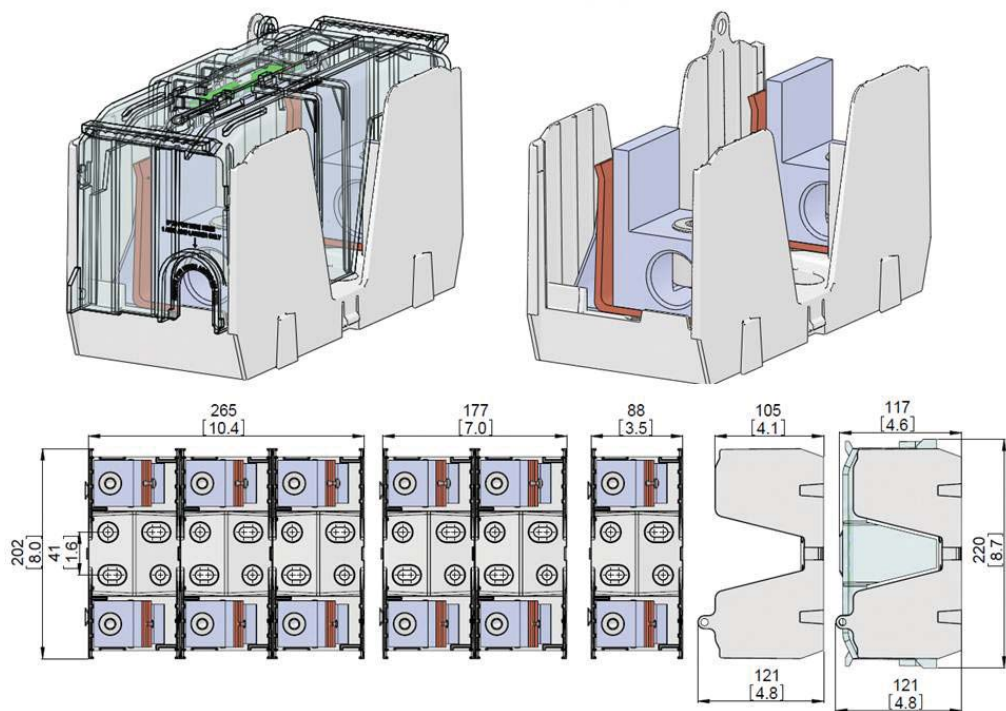
Dimensions mm (in) - 200 A



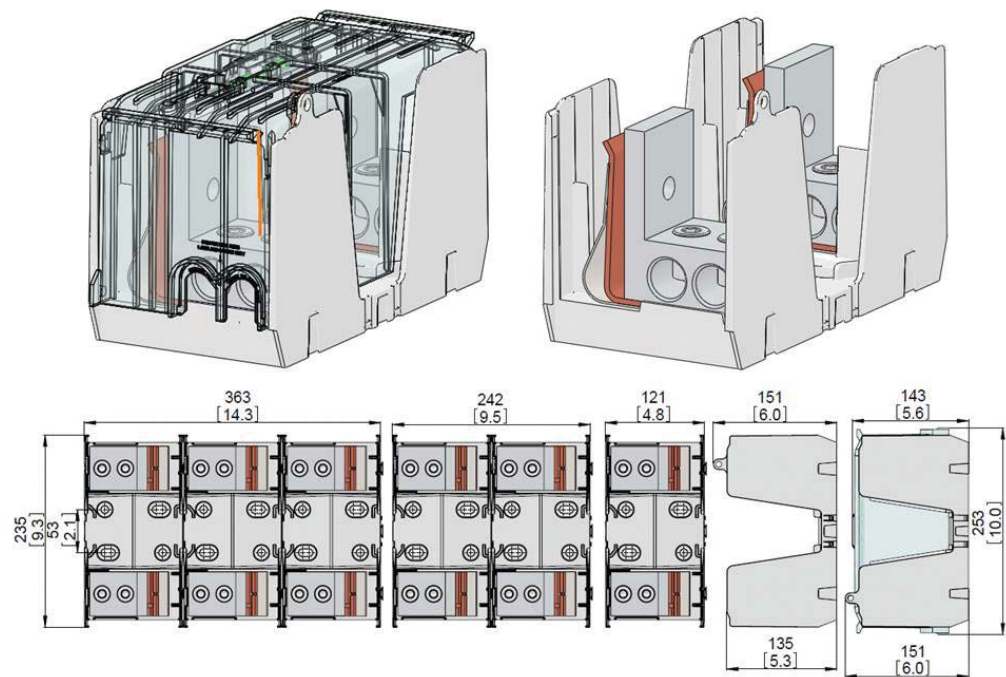


JM60 - Modular knifeblade fuse blocks, 600 V a.c. (UL), 70 A to 600 A

Dimensions mm (in) - 400 A



Dimensions mm (in) - 600 A



## CHM - Modular fuse holders for 10 x 38 mm fuse links

### Specifications

#### Description

Compact DIN-Rail mounting fuse holders for 10 x 38 mm cylindrical fuse links

#### Technical data

See table page 384

#### Catalogue numbers

| Catalogue number                                                   | Number of poles | Description                                              |
|--------------------------------------------------------------------|-----------------|----------------------------------------------------------|
| <b>Modular fuse holders for IEC industrial applications (Red)</b>  |                 |                                                          |
| <b>Neutral only</b>                                                |                 |                                                          |
| CHM1DNXU                                                           | 1               | Neutral fuse holder                                      |
| <b>Fuse holder only</b>                                            |                 |                                                          |
| CHM1DU                                                             | 1               | 1-pole modular fuse holder                               |
| CHM2DU                                                             | 2               | 2-pole modular fuse holder                               |
| CHM3DU                                                             | 3               | 3-pole modular fuse holder                               |
| CHM4DU                                                             | 4               | 4-pole modular fuse holder                               |
| <b>Fuse holder and neutral</b>                                     |                 |                                                          |
| CHM1DNU                                                            | 2               | 1-pole + neutral modular fuse holder                     |
| CHM3DNU                                                            | 4               | 3-pole + neutral modular fuse holder                     |
| <b>Fuse holder with neon indicator</b>                             |                 |                                                          |
| CHM1DIU                                                            | 1               | 1-pole modular fuse holder with neon indicator           |
| CHM2DIU                                                            | 2               | 2-pole modular fuse holder with neon indicator           |
| CHM3DIU                                                            | 3               | 3-pole modular fuse holder with neon indicator           |
| CHM4DIU                                                            | 4               | 4-pole modular fuse holder with neon indicator           |
| <b>Fuse holder with neon indicator and neutral</b>                 |                 |                                                          |
| CHM1DNIU                                                           | 2               | 1-pole + neutral modular fuse holder with neon indicator |
| CHM3DNIU                                                           | 4               | 3-pole + neutral modular fuse holder with neon indicator |
| <b>Fuse holder with LED Indicator</b>                              |                 |                                                          |
| CHM1DI-48U                                                         | 1               | 1-pole modular fuse holder with LED indicator            |
| <b>Modular fuse holders for photovoltaic applications (Yellow)</b> |                 |                                                          |
| <b>Fuse holder only</b>                                            |                 |                                                          |
| CHPV1U                                                             | 1               | 1-pole modular fuse holder                               |
| CHPV2U                                                             | 2               | 2-pole modular fuse holder holder                        |
| <b>Fuse holder with neon indicator</b>                             |                 |                                                          |
| CHPV1IU                                                            | 1               | 1-pole modular fuse holder with neon indicator           |
| CHPV2IU                                                            | 2               | 2-pole modular fuse holder with neon indicator           |
| <b>Modular fuse holders for UL Class CC applications (Black)</b>   |                 |                                                          |
| <b>Fuse holder only</b>                                            |                 |                                                          |
| CHCC1DU                                                            | 1               | 1-pole modular fuse holder                               |
| CHCC2DU                                                            | 2               | 2-pole modular fuse holder                               |
| CHCC3DU                                                            | 3               | 3-pole modular fuse holder                               |
| <b>Fuse holder with neon indicator</b>                             |                 |                                                          |
| CHCC1DIU                                                           | 1               | 1-pole modular fuse holder with neon indicator           |
| CHCC2DIU                                                           | 2               | 2-pole modular fuse holder with neon indicator           |
| CHCC3DIU                                                           | 3               | 3-pole modular fuse holder with neon indicator           |
| <b>Fuse holder with LED Indicator</b>                              |                 |                                                          |
| CHCC1DI-48U                                                        | 1               | 1-pole modular fuse holder with LED indicator            |





CHM - Modular fuse holders for 10 x 38 mm fuse links

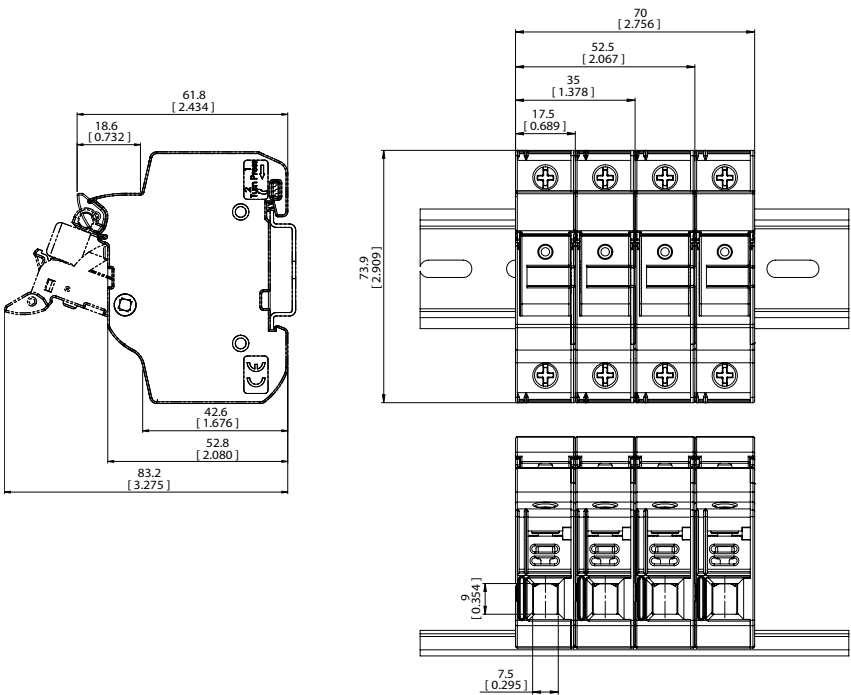
Technical data

|                                                                      | Rated voltage |             | Rated current |      | Terminal rating                                                                                                        | Rated breaking withstand capacity | Compatible Bussmann series fuse links                |
|----------------------------------------------------------------------|---------------|-------------|---------------|------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------|------------------------------------------------------|
| Type                                                                 | IEC           | UL          | IEC           | UL   |                                                                                                                        |                                   |                                                      |
| Modular fuse holders for IEC industrial applications (Red)           |               |             |               |      |                                                                                                                        |                                   |                                                      |
| CHM1                                                                 | 690 V a.c.    | 600 V a.c.  | 32 A          | 30 A | IEC 1 to 25 mm <sup>2</sup><br>70°C PVC<br>Copper cable (solid stranded or fine stranded)<br>Spade lug<br>Comb bus bar | IEC 120 kA rms sym                | IEC: C10 and FWP-G10F                                |
| CHM_DN(X)U                                                           | 690 V a.c.    | 600 V a.c.  | 32 A          | 30 A |                                                                                                                        | UL 200 kA rms sym                 | UL: FNQ, KLM, FNM, KTK, BAF, FWA, PVM, AGU, BAN, FWC |
| CHM1DI-48U                                                           | 48 V d.c.     | 48 V d.c.   | 32 A          | 30 A |                                                                                                                        | CCC 100 kA rms sym                |                                                      |
| Modular fuse holders for Photovoltaic applications (Yellow)          |               |             |               |      |                                                                                                                        |                                   |                                                      |
| CHPV                                                                 | 1000 V d.c.   | 1000 V d.c. | 32 A          | 30 A | IEC 1 to 25 mm <sup>2</sup><br>70°C PVC<br>Copper cable (solid stranded or fine stranded)<br>Spade lug<br>Comb bus bar | 33 kA rms sym                     | Solar PV range: PVM, PV-A10F                         |
| Modular fuse holders for UL Class CC Industrial applications (Black) |               |             |               |      |                                                                                                                        |                                   |                                                      |
| CHCC                                                                 | N/A           | 600 V a.c.  | N/A           | 30 A | Cable 75°C and 90°C Cu cable                                                                                           | 200 kA rms sym                    | LP-CC, FNQ-R, KTK-R                                  |
| CHCC1DI-48U                                                          | N/A           | 48 V d.c.   | N/A           | 30 A |                                                                                                                        |                                   |                                                      |

Standards / Agency information

|                         | IEC                        | UL                                       | CSA                                 | CCC                      | CE                          |
|-------------------------|----------------------------|------------------------------------------|-------------------------------------|--------------------------|-----------------------------|
| CHMD(I)U                | IEC 60269-1<br>IEC 60269-2 | UL 4248-1<br>UL file E14853              | C22.2 No 4248.1                     | GB 13539.1<br>GB 13539.2 | DCB 272                     |
| CHMDN(I)U               | IEC 60269-1<br>IEC 60269-2 | UL 4248-1<br>UL file E14853              | C22.2 No 4248.1                     | GB 13539.1<br>GB 13539.2 | DCB 272                     |
| CHM1DI-48U              | IEC 60269-1<br>IEC 60269-2 | UL 4248-1<br>UL file E14853              | C22.2 No 4248.1                     | GB 13539.1<br>GB 13539.2 | DCB 272                     |
| CHM1DNXU                | IEC 60269-1<br>IEC 60269-2 | UL 4248-1<br>UL file E14853              | C22.2 No 4248.1                     | GB 13539.1<br>GB 13539.2 | DCB 272                     |
| CHPV                    | IEC 60269-1                | UL 4248-1<br>UL4248-19<br>UL file E14853 | C22.2 No 4248.1<br>C22.2 No 4248.19 | GB 13539.1               | DCB 272                     |
| CHCC1D(I) to CHCC3D(I)U | N/A                        | UL 4248-1<br>UL file E14853              | C22.2 No 4248.1                     | N/A                      | Contact: fusetech@eaton.com |
| CHCC1DI-48U             | N/A                        | UL 4248-1<br>UL file E14853              | C22.2 No 4248.1                     | N/A                      | Contact: fusetech@eaton.com |

Dimensions mm (in)



## CH14 - Modular fuse holders for 14 x 51 mm fuse links, 690 V a.c. / 750 and 1500V d.c., 50 A

### Specifications

#### Description

Compact DIN-Rail mount fuse holders for 14 x 51 mm cylindrical fuse links. Available in different versions with neutral and microswitch.

#### Technical data

Rated voltage & Rated current: see table page 386

#### Compatible fuse links

- C14G and C14M14 x 51 mm gG and gM cylindrical fuse links
- FW Ferrule
  - FWH-A14F see page 60
  - FWX-A14F see page 55
  - FWP-A14F see page 73 (please consult Eaton's Bussmann business application engineers if you wish to use a FWP fuse link with a striker option)
  - FWP-G14F see page 67
- PV-A14F see page 326



#### Standards / Agency information

IEC 60269-1 and 60269-2

#### Catalogue numbers

| Catalogue number                                   | Number of poles | Description                                                                                |
|----------------------------------------------------|-----------------|--------------------------------------------------------------------------------------------|
| <b>Neutral only</b>                                |                 |                                                                                            |
| CH141DNXU                                          | 1               | Neutral modular fuse holder                                                                |
| <b>Fuse holder only</b>                            |                 |                                                                                            |
| CH141DU                                            | 1               | 1-pole modular fuse holder                                                                 |
| CH142DU                                            | 2               | 2-pole modular fuse holder                                                                 |
| CH143DU                                            | 3               | 3-pole modular fuse holder                                                                 |
| CH144DU                                            | 4               | 4-pole modular fuse holder                                                                 |
| <b>Fuse holder and neutral</b>                     |                 |                                                                                            |
| CH141DNU                                           | 2               | 1-pole + neutral modular fuse holder                                                       |
| CH143DNU                                           | 4               | 2-pole + neutral modular fuse holder                                                       |
| <b>Fuse holder with neon indicator</b>             |                 |                                                                                            |
| CH141DIU                                           | 1               | 1-pole modular fuse holder with neon indicator                                             |
| CH142DIU                                           | 2               | 2-pole modular fuse holder with neon indicator                                             |
| CH143DIU                                           | 3               | 3-pole modular fuse holder with neon indicator                                             |
| CH144DIU                                           | 4               | 4-pole modular fuse holder with neon indicator                                             |
| <b>Fuse holder with neon indicator and neutral</b> |                 |                                                                                            |
| CH141DNUI                                          | 2               | 1-pole + neutral modular fuse holder with neon indicator                                   |
| CH143DNUI                                          | 4               | 3-pole + neutral modular fuse holder with neon indicator                                   |
| <b>Fuse holder with microswitch</b>                |                 |                                                                                            |
| CH141DMSU-F                                        | 1               | 1-pole modular fuse holder with microswitch for remote fuse indication operation           |
| CH143DMSU-F                                        | 3               | 3-pole modular fuse holder with microswitch for remote fuse indication operation           |
| <b>Fuse holder with microswitch and neutral</b>    |                 |                                                                                            |
| CH143DNMSU-F                                       | 4               | 3-pole + neutral modular fuse holder with microswitch for remote fuse indication operation |
| <b>Fuse holder with LED Indicator</b>              |                 |                                                                                            |
| CHPV141DI-48U                                      | 1               | 1-pole modular fuse holder with LED indicator                                              |
| <b>Fuse holder for photovoltaic applications</b>   |                 |                                                                                            |
| CHPV141U                                           | 1               | 1-pole modular fuse holder                                                                 |
| CHPV141IU                                          | 1               | 1-pole modular fuse holder with neon indicator                                             |
| CHPV142U                                           | 2               | 2-pole modular fuse holder                                                                 |
| CHPV142IU                                          | 2               | 2-pole modular fuse holder with neon indicator                                             |

Data sheet: 10080

Accessories

CH14 - Modular fuse holders for 14 x 51 mm fuse links, 690 V a.c. / 750 and 1500V d.c., 50 A

Technical data

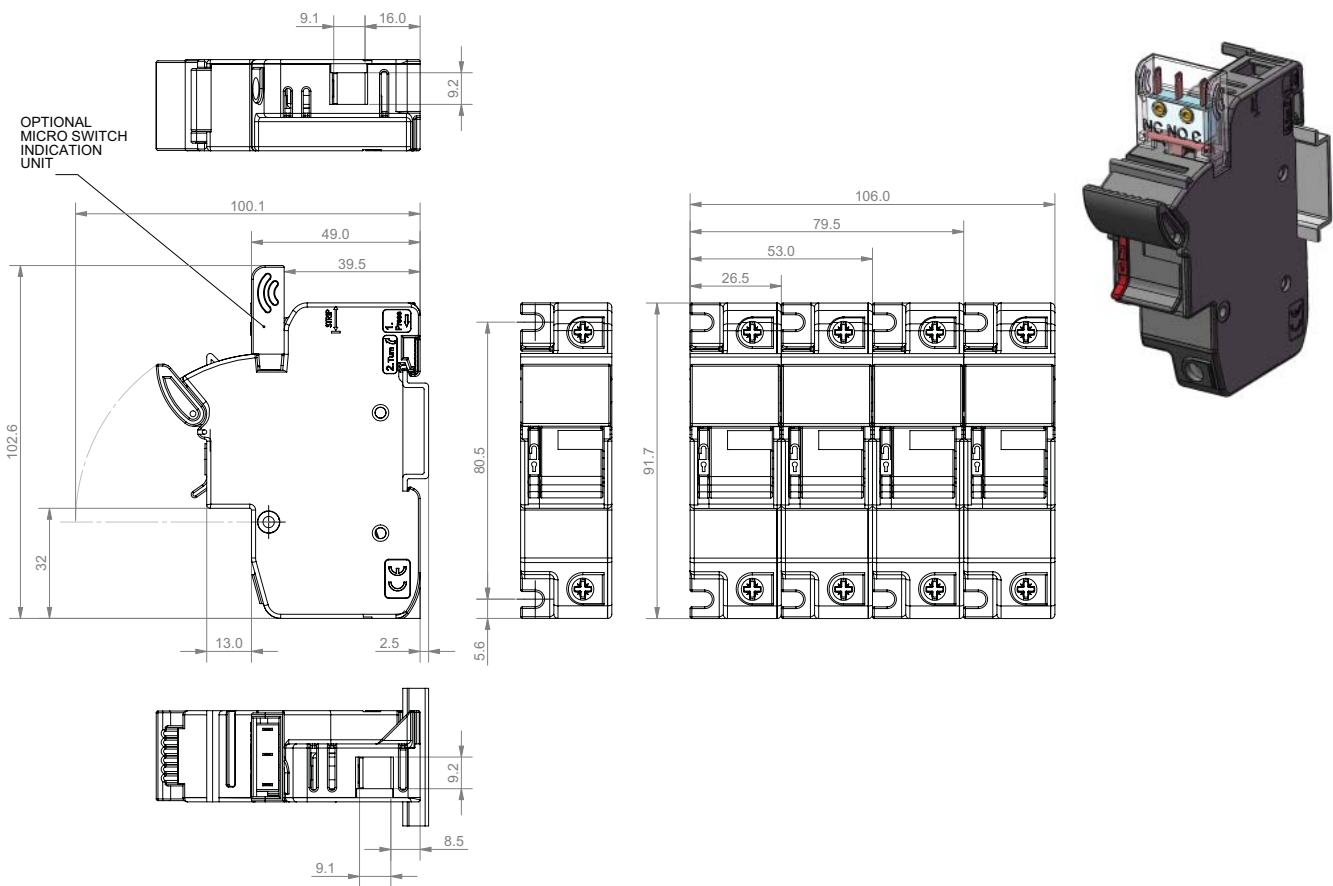
| Type              | Rated voltage        |      | Rated current           |             | Agency markings                                    | Terminal rating                                                                                  | Rated breaking withstand capacity | Compatible Bussmann series fuse links                           |
|-------------------|----------------------|------|-------------------------|-------------|----------------------------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------------------------------------|
|                   | IEC                  | UL   | IEC                     | UL          |                                                    |                                                                                                  |                                   |                                                                 |
| CH14              | 50 A (a.c. and d.c.) | 50 A | 690 V a.c. / 750 V d.c. | 700 V a.c.  | IEC 60269-1 and 2<br>UL Listed file number E14853  | Cable size: 1.5-50 mm²<br>Recommended torque setting: 3.5 N•m<br>Maximum torque setting: 3.5 N•m | 120 kA a.c.                       | C14G and C14M<br>FWX-A14F¹<br>FWH-A14F¹<br>FWP-A14F<br>FWP-G14F |
| CHPV Photovoltaic | 50 A (a.c. and d.c.) | 50 A | 1500 V d.c.             | 1500 V d.c. | IEC 60269-1 and 2<br>UL Listed file number E348242 | Mounting 35 mm DIN-Rail or 2 x M4 panel mounting screws                                          | 10 kA d.c.                        | PV-A14F                                                         |

¹ Maximum allowed continuous current applies. Please refer to data sheet for details.

Accessories

| Catalogue numbers | Description                                                                               | Unit packing |
|-------------------|-------------------------------------------------------------------------------------------|--------------|
| JV-L              | Multi-pole connector kit. One kit will gang up to 4-poles together                        | 12           |
| CH14-SPS          | Microswitch to work on CH141D(I)U, 1 n/o + 1 n/c changeover type                          | 3            |
| CH14-TPS          | Microswitch to work on CH143D(I)U, 1 n/o + 1 n/c changeover type                          | 3            |
| CH14-CTP          | IP20 protection accessory, provides IP20 protection to terminals with 10mm² or less cable | 12           |

Dimensions (mm)



## CH22 - Modular fuse holders for 22 x 58 mm fuse links, 690 V a.c./1000 V d.c., 125 A

### Specifications

#### Description

Compact DIN-Rail mount fuse holders for 22 x 58 mm cylindrical fuse links. Available in different versions with neutral and microswitch.

#### Technical data

Rated voltage & Rated current: see table below

#### Compatible fuse links

- C22G and C22M 22 x 58 mm gG and gM cylindrical fuse links
- FWP-A22F Ferrule see page 76 (please consult Eaton for derating information [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com))
- FWP-G22F see page 70

#### Standards / Agency information

IEC 60269-1 and 60269-2



#### Catalogue numbers

| Catalogue number                                   | Number of poles | Description                                                                      |
|----------------------------------------------------|-----------------|----------------------------------------------------------------------------------|
| <b>Neutral only</b>                                |                 |                                                                                  |
| CH221DNXU                                          | 1               | Neutral holder                                                                   |
| <b>Fuse holder only</b>                            |                 |                                                                                  |
| CH221DU                                            | 1               | 1-pole modular fuse holder                                                       |
| CH222DU                                            | 2               | 2-pole modular fuse holder                                                       |
| CH223DU                                            | 3               | 3-pole modular fuse holder                                                       |
| CH224DU                                            | 4               | 4-pole modular fuse holder                                                       |
| <b>Fuse holder with neon indicator</b>             |                 |                                                                                  |
| CH221DIU                                           | 1               | 1-pole modular fuse holder with neon indicator                                   |
| CH222DIU                                           | 2               | 2-pole modular fuse holder with neon indicator                                   |
| CH223DIU                                           | 3               | 3-pole modular fuse holder with neon indicator                                   |
| CH224DIU                                           | 4               | 4-pole modular fuse holder with neon indicator                                   |
| <b>Fuse holder and neutral</b>                     |                 |                                                                                  |
| CH221DNU                                           | 2               | 1-pole + neutral modular fuse holder                                             |
| CH223DNU                                           | 4               | 3-pole + neutral modular fuse holder                                             |
| <b>Fuse holder with neutral and neon indicator</b> |                 |                                                                                  |
| CH221DNIU                                          | 2               | 1-pole + neutral modular fuse holder + neon indicator                            |
| CH223DNIU                                          | 4               | 3-pole + neutral modular fuse holder + neon indicator                            |
| <b>Fuse holder with microswitch</b>                |                 |                                                                                  |
| CH221DMSU-F                                        | 1               | 1-pole modular fuse holder with microswitch (pre-breaking/fuse operation)        |
| CH223DMSU-F                                        | 3               | 3-pole modular fuse holder with microswitch (pre-breaking/fuse operation)        |
| <b>Fuse holder with neutral and microswitch</b>    |                 |                                                                                  |
| CH223DNMSU-F                                       | 3               | 3-pole modular fuse holder + neutral + microswitch (pre-breaking/fuse operation) |
| <b>Fuse holder with LED Indicator</b>              |                 |                                                                                  |
| CH221DI-48U                                        | 1               | 1-pole modular fuse holder with LED Indicator                                    |

#### Technical data

| Rated voltage             |            | Rated current            |              | Agency markings                                   | Terminal rating                                                                                                                                                     | Rated breaking withstand capacity | Compatible Bussmann series fuse links |
|---------------------------|------------|--------------------------|--------------|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------------------------------|
| IEC                       | UL         | IEC                      | UL           |                                                   |                                                                                                                                                                     |                                   |                                       |
| 690 V a.c.<br>1000 V d.c. | 700 V a.c. | 125 A (a.c.<br>and d.c.) | 100 A (a.c.) | IEC 60269-1 and 2<br>UL Listed file number E14853 | Cable size: 2.5-70 mm <sup>2</sup><br>Recommended torque setting: 4 N•m<br>Maximum torque setting: 5 N•m<br>Mounting 35 mm DIN-Rail or 2 x M4 panel mounting screws | 120 kA a.c.<br>50 kA d.c.         | FWP Ferrule <sup>1</sup>              |

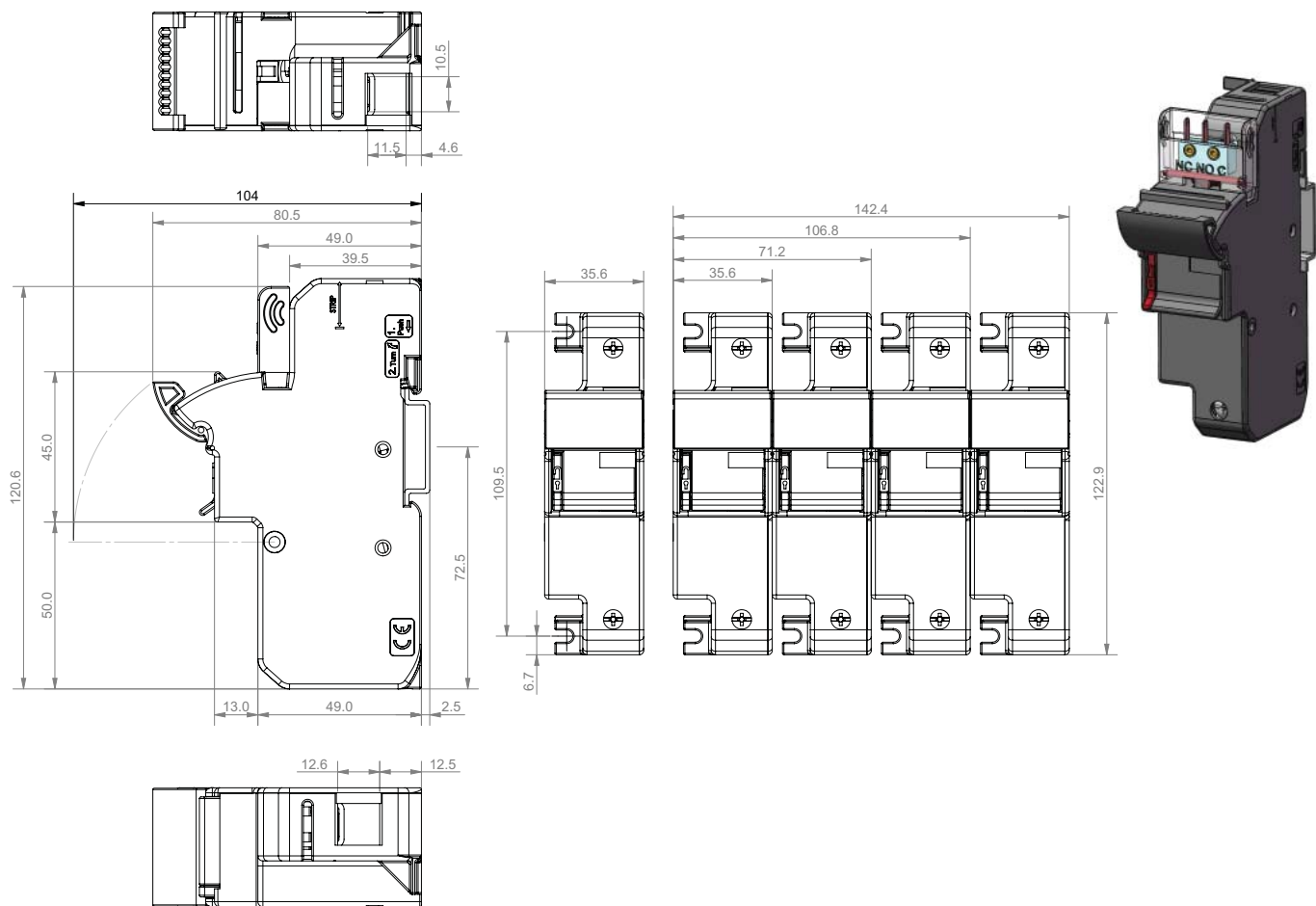
<sup>1</sup> Maximum allowed continuous current applies. Please refer to data sheet for details.

CH22 - Modular fuse holders for 22 x 58 mm fuse links, 690 V a.c./1000 V d.c., 125 A

Accessories

| Catalogue numbers | Description                                                                                           | Unit packing |
|-------------------|-------------------------------------------------------------------------------------------------------|--------------|
| JV-L              | Multi-pole connector kit. One kit will gang up to 4-poles together                                    | 12           |
| CH22-CTP          | IP20 protection accessory, provides IP20 protection to terminals with 10mm <sup>2</sup> or less cable | 12           |
| CH22-SPS          | Microswitch to work on CH221D(I)U, 1 n/o + 1 n/c changeover type                                      | 3            |
| CH22-TPS          | Microswitch to work on CH223D(I)U, 1 n/o + 1 n/c changeover type                                      | 3            |

Dimensions (mm)



## 170H - Microswitches for square body fuse links - indicator systems

High Speed square body fuse links are available with three different indicators.

### 1 - Visual Indicator

The indicator situated in one end plate is clearly visible as soon as the fuse link has operated. The minimum rated voltage for operating the indicator is 20 V.

### 2 - Type T Indicator

The indicator is situated on one cover plate with a cover plate tag to accommodate an auxiliary switch. The minimum rated voltage for operating the indicator is 20 V. A special low rated voltage indicator (1.5V) is available on request).

### 3 - Type K Indicator

The indicator is situated on the fuse link body. It is covered by an adaptor for snap-on mounting of an auxiliary switch. The operating Rated voltage of the indicator is 1.5V. As a matter of safety, the factory mounted adaptor must not be removed from the fuse link.



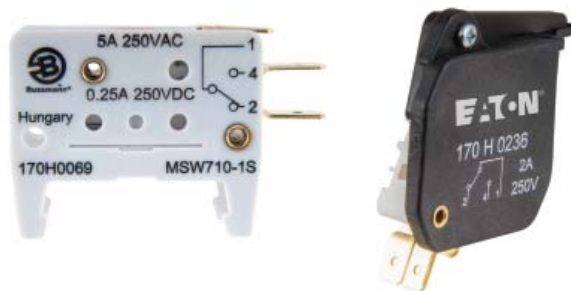
## Microswitches

### Specifications

High Speed square body fuse links with either Type T indicator or Type K indicator can be equipped with a microswitch. For remote electrical indication of fuse link operations. All microswitches have one normally open and one normally closed contact.

### Technical data

- Rated voltage: 10-250 V a.c.
- Rated current: 30mA-2A



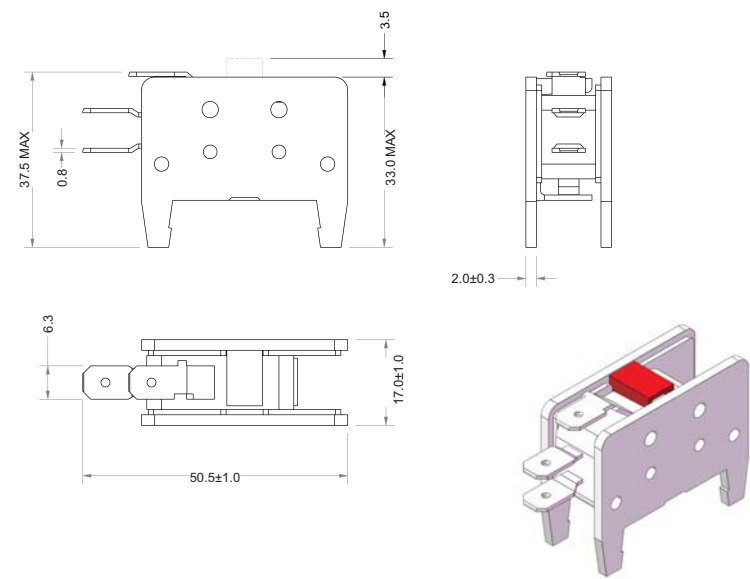
| Fuse link body size | DIN 43653 |          | DIN 43620             |                        | French style |          | Flush end |          | US Style | Terminal size    |                  |
|---------------------|-----------|----------|-----------------------|------------------------|--------------|----------|-----------|----------|----------|------------------|------------------|
|                     | Type T    | Type K   | aR                    | gR and dual indication | Type T       | Type K   | Type T    | Type K   | Type K   | 6.3 x 0.8mm lugs | 2.8 x 0.5mm lugs |
| 000                 | 170H0236  |          | 170H0236              | 170H0236               |              |          |           |          |          | X                |                  |
|                     | 170H0238  |          | 170H0238              | 170H0238               |              |          |           |          |          |                  | X                |
| 00                  | 170H0235  |          | 170H0236              | 170H0236               |              |          | 170H0235  |          |          | X                |                  |
|                     | 170H0237  |          | 170H0238              | 170H0238               |              |          | 170H0237  |          |          |                  | X                |
| 1*                  | 170H0235  | 170H0069 | 170H0235              |                        | 170H0236     | 170H0069 |           | 170H0069 | 170H0069 | X                |                  |
|                     | 170H0237  |          | 170H0237              |                        | 170H0238     |          |           |          |          |                  | X                |
| 1                   | 170H0235  | 170H0069 | 170H0235 <sup>1</sup> | 170H0236               | 170H0236     | 170H0069 |           | 170H0069 | 170H0069 | X                |                  |
|                     | 170H0237  |          | 170H0237 <sup>1</sup> | 170H0238               | 170H0238     |          |           |          |          |                  | X                |
| 2                   | 170H0235  | 170H0069 | 170H0235              | 170H0236               | 170H0236     | 170H0069 |           | 170H0069 | 170H0069 | X                |                  |
|                     | 170H0237  |          | 170H0237              | 170H0238               | 170H0238     |          |           |          |          |                  | X                |
| 3                   | 170H0235  | 170H0069 | 170H0236              | 170H0236               | 170H0236     | 170H0069 |           | 170H0069 | 170H0069 | X                |                  |
|                     | 170H0237  |          | 170H0238              | 170H0238               | 170H0238     |          |           |          |          |                  | X                |
| 4                   |           |          |                       |                        |              |          |           | 170H0069 |          | X                |                  |
| 23                  |           |          |                       |                        |              |          |           | 170H0069 |          | X                |                  |
| 24                  |           |          |                       |                        |              |          |           | 170H0069 |          | X                |                  |

For special microswitches, double microswitches, DC rating of the microswitches, lower/higher signal levels and for insulation voltages please contact Eaton: [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com).

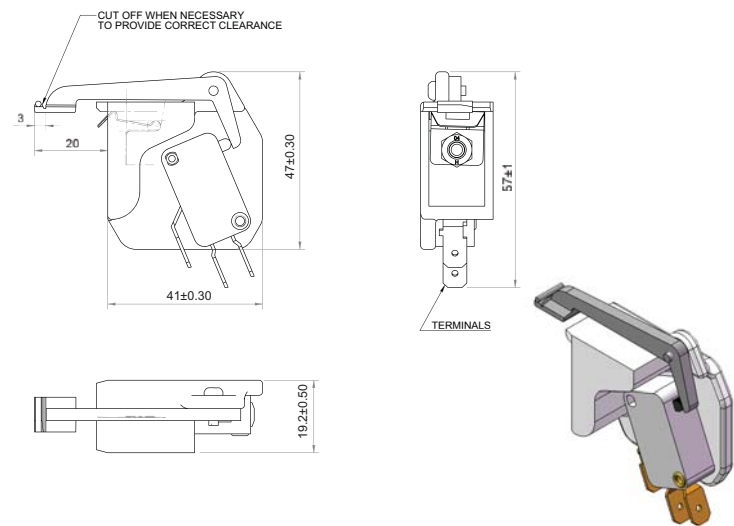
<sup>1</sup> DIN2\* (55x55), if DIN2 then use microswitch 170H0236, 170H0238.

170H - Microswitches for square body fuse links - indicator systems

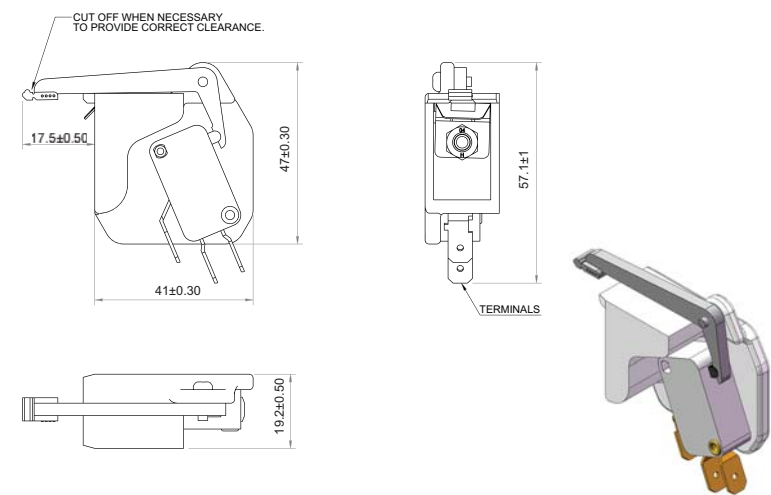
Dimensions (mm) - 170H0069



Dimensions (mm) - 170H0235 and 170H0237 for bent tags



Dimensions (mm) - 170H0236 and 170H0238 for straight tags



## Microswitches for British Standard BS88-4 fuse links - Trip indicator/Microswitches

### Specifications

Trip-indicator fuse links are available for use in parallel with the main BS88-4 fuse links. They can either be attached to the associated fuse link or mounted separately in panel mounted fuse clips. A push-on adaptor and microswitch attachment is available for use with the trip indicator to give the facility of remote indication.

Fuse ratings of 20 A and below cannot usually accommodate a trip fuse link in parallel.

### Catalogue numbers

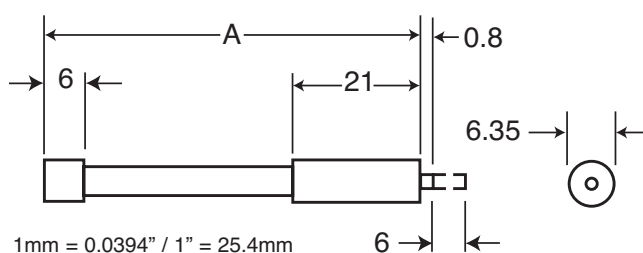
Trip indicator kit (indicator + clips)

| Fuse type | Catalogue number |
|-----------|------------------|
| ET        | EC-600           |
| EET       | EC-600           |
| FE        | EC-600           |
| FEE       | EC-600           |
| LET       | EC-250           |
| FM        | MC-600           |
| FMM       | MC-600           |
| LMT       | MC-250           |
| LMMT      | MC-250           |
| MT        | MC-700           |
| MMT       | MC-700           |

Indicator Only

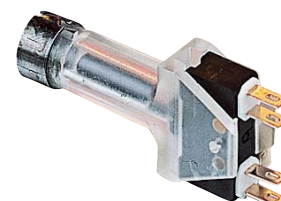
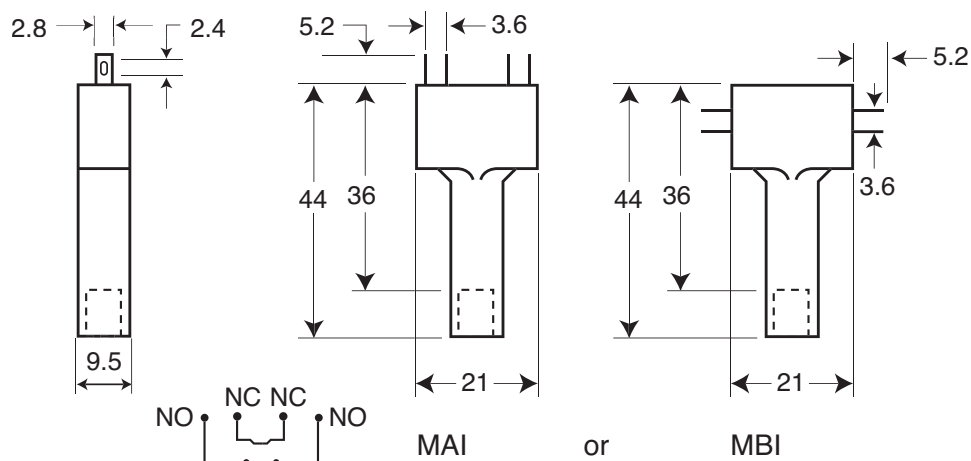
| Fuse type | Max RMS AC voltage (V a.c. RMS) | Dim 'A' (mm) |
|-----------|---------------------------------|--------------|
| TI250     | 250                             | 37.6         |
| TI500     | 500                             | 47.5         |
| TI600     | 600                             | 55.7         |
| TI700     | 700                             | 61.8         |
| TI1100    | 1100                            | 98.4         |
| TI1500    | 1500                            | 120.8        |
| TI2000    | 2000                            | 147.5        |
| TI2500    | 2500                            | 198.3        |

### Dimensions (mm)



### Microswitch/Adaptor: MAI and MBI

### Dimensions (mm)





### FW14-PCB Mountable fuse clip

#### Specifications

##### Catalogue number

FW14-PCB

##### Description

Mountable fuse clip compatible with any 14 mm Ø fuse links.

##### Technical data

- Max rated power acceptance: 6 Watts

Please note deratings apply to fuse links with watts loss greater than 6 Watts, contact [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com) for application assistance

- Material: Copper Alloy CuSn, tin plated
- Weight: 5 grams each

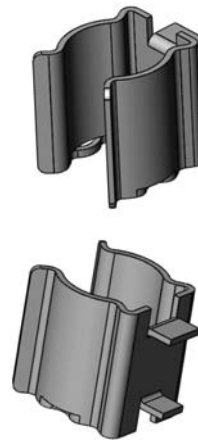
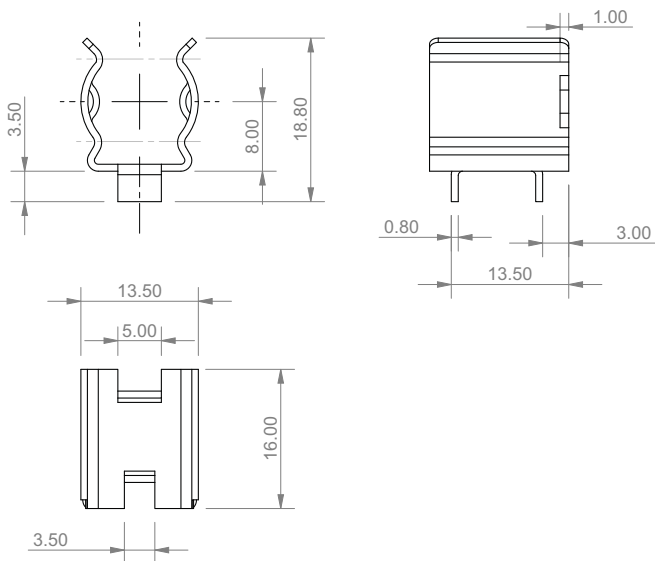
##### Compatible fuse links

- Any 14 mm Ø fuse links

##### Standards / Agency information

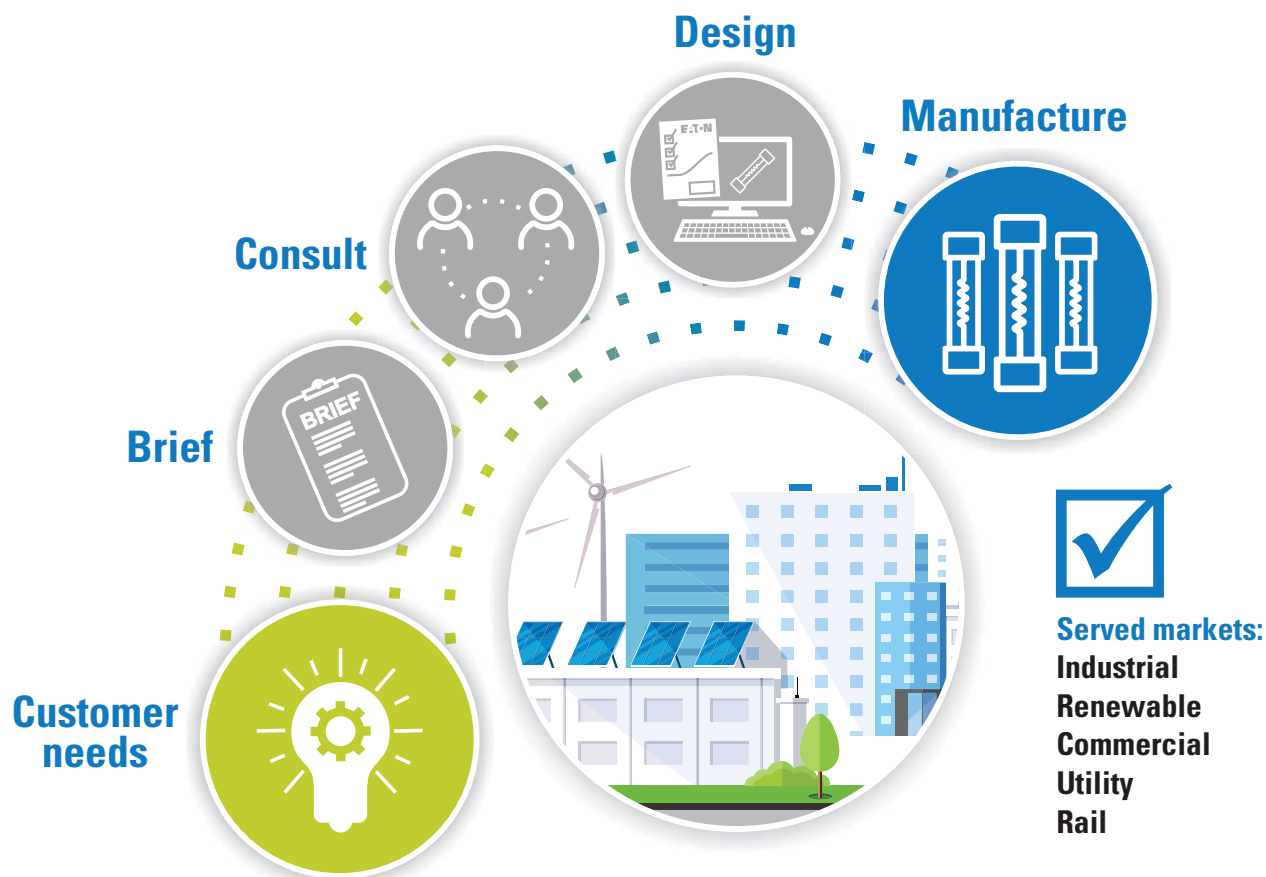
IEC 60269-1

##### Dimensions (mm)



Appropriate creepage and clearances distances between clips should be maintained when mounting on the PCB.

# Customised fuse design service



Eaton's Field Applications Engineers are able to draw upon more than 100 years of fuse design knowledge to fully meet your application needs and ensure you can rely on the best in class electrical circuit protection solutions.

As the trend towards clean energy continues to drive new technologies in renewable energy generation, energy storage, electrical transportation and the adoption of DC technology throughout wider industries, the demand for customised fusing products has only increased.

Our Application and Design Engineers located at R&D centres in North America, Europe and Asia can leverage over 100 years of fuse design and application experience along with our in-house test labs to meet any customised solution requests for **Eaton's Bussmann series fuses**.

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- Customised testing such as shock vibration

**Contact us today:**

**For general fuse enquiries:** [buletechnical@eaton.com](mailto:buletechnical@eaton.com)

**For high speed fuses enquiries :** [bulehighspeedtechnical@eaton.com](mailto:bulehighspeedtechnical@eaton.com)

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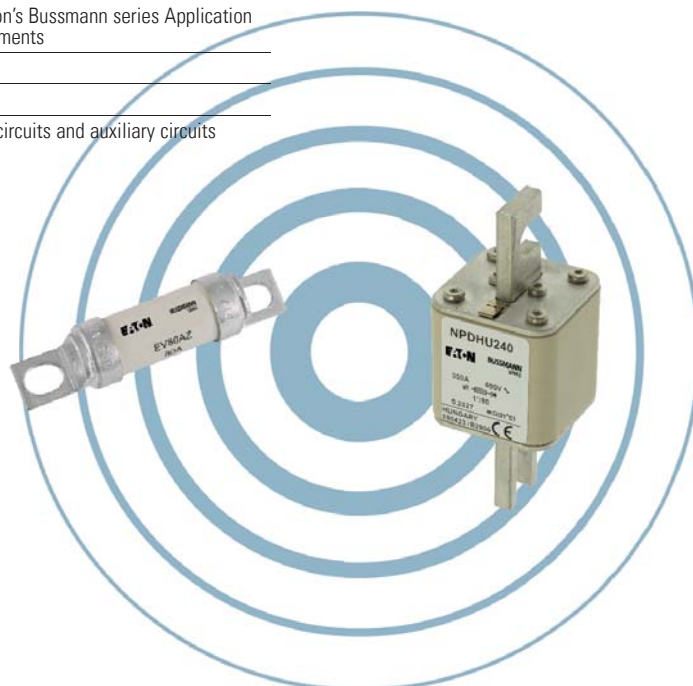
# Hybrid Electric Vehicles

As the automotive world is becoming ever more electrified the power requirements are changing, so have the protection needs. Eaton is continually developing designs to meet these ever changing requirements. The experience of Eaton in protecting semiconductor devices has proved invaluable as vehicle powertrain systems have moved to power based converters for the variable speed motor drives and also for auxiliary power conversion.

Utilising a global network of engineering, manufacture and distribution Eaton is able to draw upon a wealth of knowledge to fully meet your application needs.

## Hybrid Electric Vehicles (HEV)

|                   |                                                                                                                               |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Standards         | Most commonly ISO 8820-8, Jaso D622 amongst others                                                                            |
| Voltage           | Options up to 1000 V d.c., please contact Eaton's Bussmann series Application engineers to discuss your specific requirements |
| Current           | Options up to 1250 A, please contact Eaton's Bussmann series Application engineers to discuss your specific requirements      |
| Operating class   | aR & gR                                                                                                                       |
| Breaking capacity | Up to 150 kA                                                                                                                  |
| Applications      | Batteries, converters, inverters, charging circuits and auxiliary circuits                                                    |



# Contact details

## Customer Satisfaction team

Eaton's Customer Satisfaction team is available to answer questions regarding Bussmann series products.

Calls can be made between:

Monday - Friday 7.30 a.m. - 5.00 p.m. GMT

The Customer Satisfaction team can be reached via:

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Email: GBBURsales@eaton.com

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- Product cross reference
- Product profiles
- Online catalogues for the latest United States and European catalogues.

## Application engineering

Application Engineering assistance is available to all customers. The Application Engineering team is staffed by university-qualified electrical engineers who are available with technical and application support.

Calls can be made between:

Monday - Thursday 8.30 a.m. - 4.30 p.m. GMT

Friday 8.30 a.m. - 4.00 p.m. GMT

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Eaton's electrical business is a global leader with deep regional application expertise in power distribution and circuit protection; power quality, backup power and energy storage; control and automation; life safety and security; structural solutions; and harsh and hazardous environment solutions. Through end-to-end services, channel and an integrated digital platform & insights Eaton is powering what matters across industries and around the world, helping customers solve their most critical electrical power management challenges.

Eaton's mission is to improve the quality of life and the environment through the use of power management technologies and services. We provide sustainable solutions that help our customers effectively manage electrical, hydraulic and mechanical power – more safely, more efficiently and more reliably.

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