

FWA Ferrule high speed fuse links



Catalogue symbol

- FWA-(amps)A10F (5 to 30 A)
- FWA-(amps)A21F (35 to 60 A)

Description

Ferrule high speed fuse links.

Technical data

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

Agency information

- CE
- UL Recognised JFHR2.E91958

| Size | Catalogue numbers (amps) |
|---|--------------------------|
| 10 x 38 mm (¹³ / ₃₂ x 1 ¹ / ₂) | FWA-5A10F |
| | FWA-10A10F |
| | FWA-15A10F |
| | FWA-20A10F |
| | FWA-25A10F |
| | FWA-30A10F |
| 21 x 51 mm (¹³ / ₁₆ x 2") | FWA-35A21F |
| | FWA-40A21F |
| | FWA-45A21F |
| | FWA-50A21F |
| | FWA-60A21F |

Features and benefits

- Excellent cycling capability and DC performance
- Low arc voltage and low energy let-through (I²t)
- Low watts loss in a compact size
- Used with finger-safe holders/blocks

Typical applications

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

Carton quantity

- 10 per carton

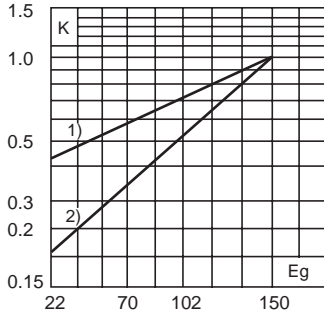
Carton weight

- 0.1 kg (5 to 30 A)
- 0.6 kg (35 to 60 A)

Electrical characteristics

Total clearing I²t

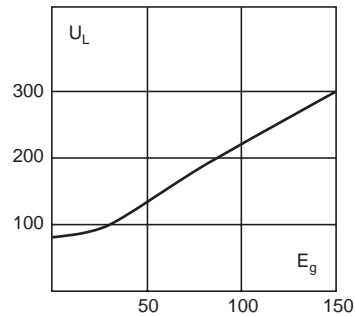
The total clearing I²t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage, E_g, (RMS).



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

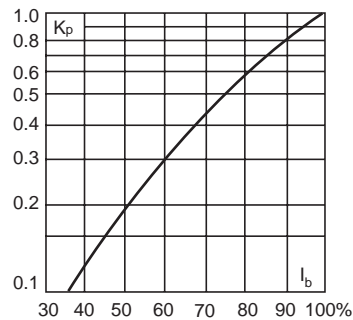
Arc voltage

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.

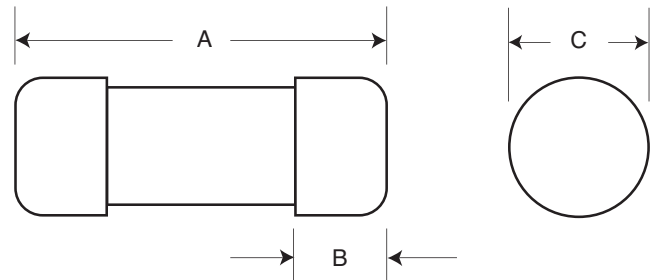


Technical data

| Catalogue numbers | Rated voltage V a.c. / V d.c. | Rated current RMS- Amps | I ² t (A ² Sec) | | |
|-------------------|-------------------------------------|-------------------------------|---------------------------------------|-------------------|--------------|
| | | | Pre-arc | Clearing at 150 V | Watts loss** |
| FWA-5A10F | 150 | 5 | 1.6 | 8 | 1 |
| FWA-10A10F | 150 | 10 | 3.6 | 16 | 2.7 |
| FWA-15A10F | 150 | 15 | 14 | 55 | 3.3 |
| FWA-20A10F | 150 | 20 | 33 | 130 | 3.8 |
| FWA-25A10F | 150 | 25 | 58 | 220 | 4.9 |
| FWA-30A10F | 150 | 30 | 100 | 400 | 4.9 |
| FWA-35A21F | 150 | 35 | 75 | 800 | 4.5 |
| FWA-40A21F | 150 | 40 | 100 | 1000 | 5.1 |
| FWA-45A21F | 150 | 45 | 130 | 1300 | 6 |
| FWA-50A21F | 150 | 50 | 170 | 1600 | 7.3 |
| FWA-60A21F | 150 | 60 | 250 | 2400 | 8 |

**Watts loss provided at rated current

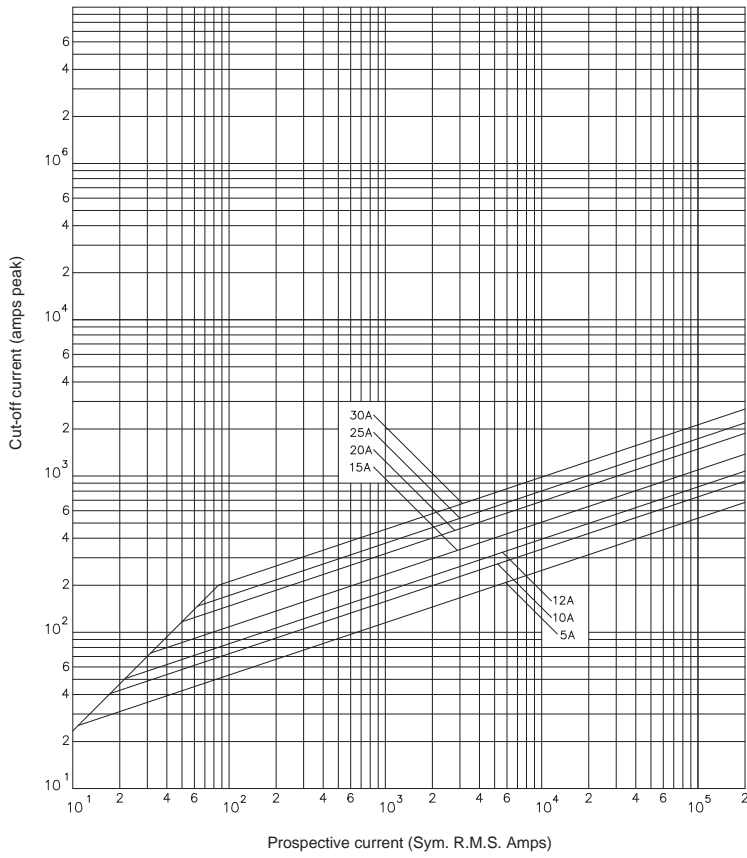
Dimensions - in (mm)



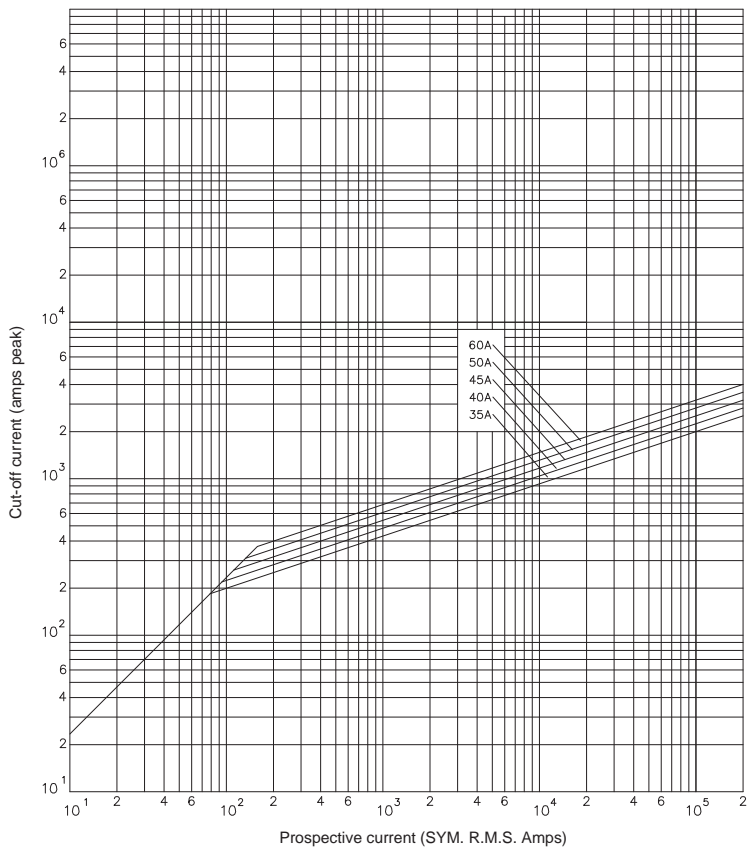
| Amp range | A | B | C |
|-----------|------------|-------------|-------------|
| 5-30 | 1.5 (38.1) | 0.38 (9.5) | 0.41 (10.3) |
| 35-60 | 2 (50.8) | 0.63 (15.9) | 0.81 (20.6) |

Cut-off curves

5 - 30 A

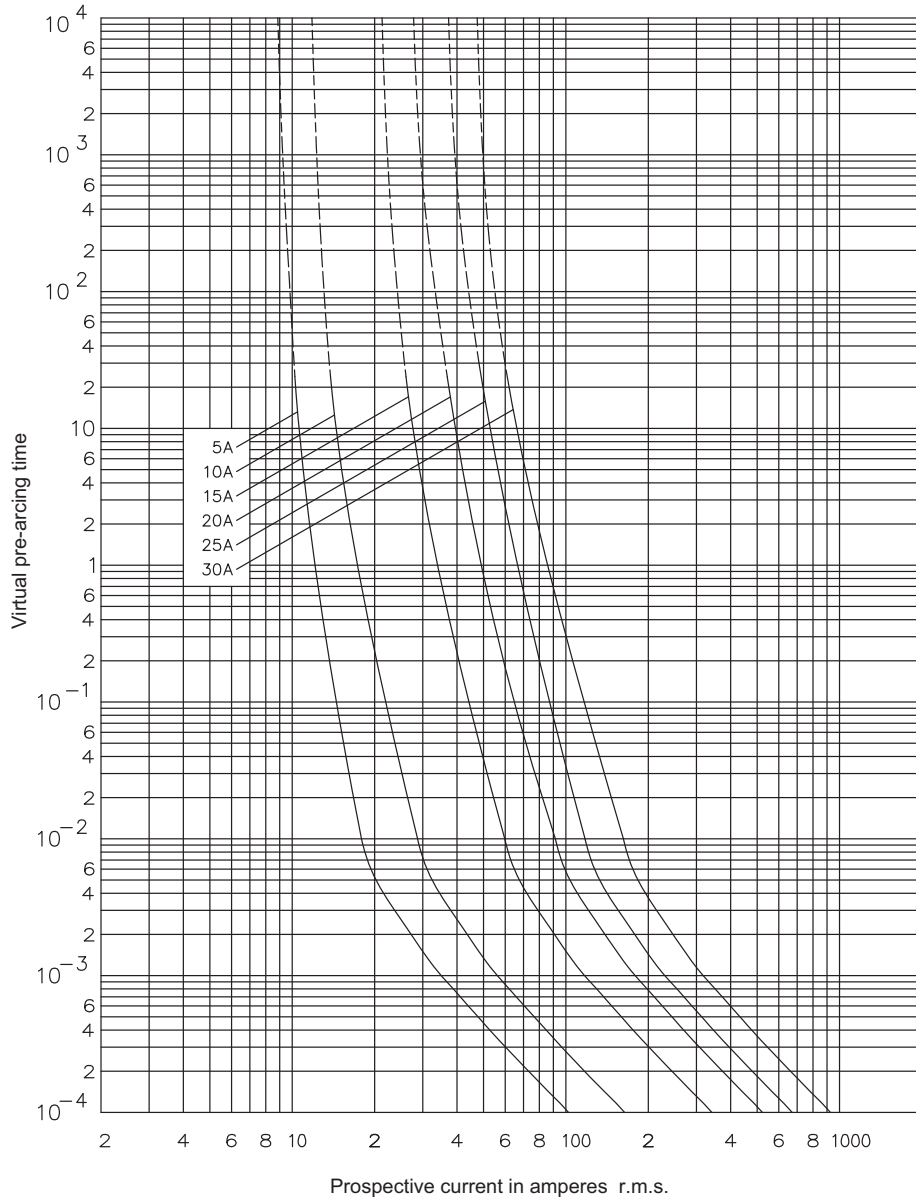


35 - 60 A



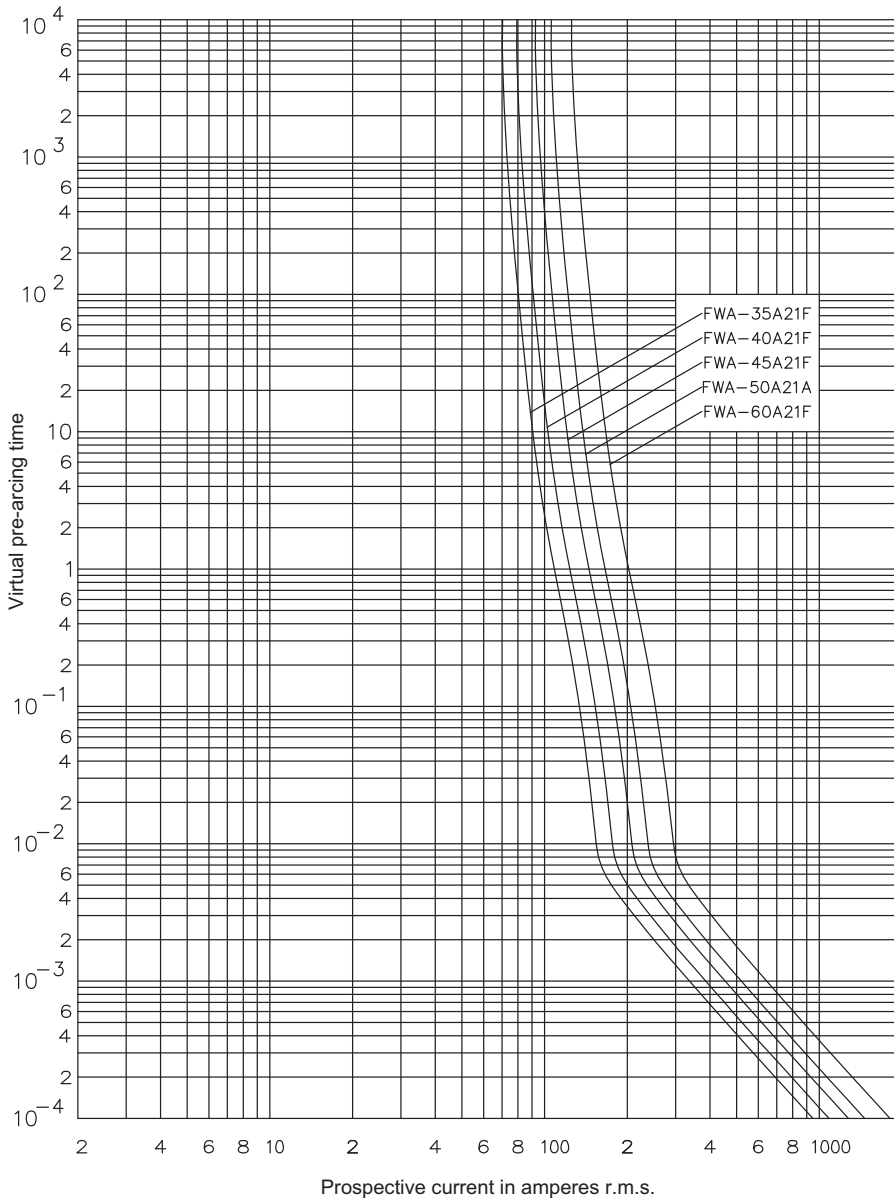
Time-current curve - nominal melt

5 - 30 A



Time-current curve - nominal melt

35 - 60 A



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