

# 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 ( <sup>13</sup> / <sub>32</sub> x 1 1/2")	FWA-5A10F
	FWA-10A10F
	FWA-15A10F
	FWA-20A10F
	FWA-25A10F
	FWA-30A10F
21 x 51 mm ( <sup>13</sup> / <sub>16</sub> 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 (I<sup>2</sup>t)
- 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

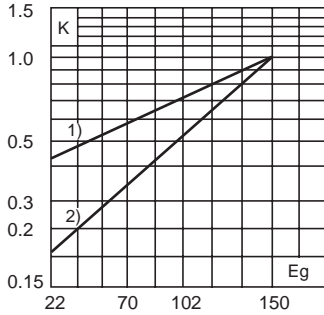
## Carton weight

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

### Electrical characteristics

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

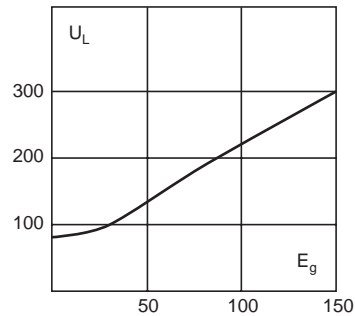
The total clearing I<sup>2</sup>t at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I<sup>2</sup>t is found by multiplying by correction factor, K, given as a function of applied working voltage, E<sub>g</sub>, (RMS).



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

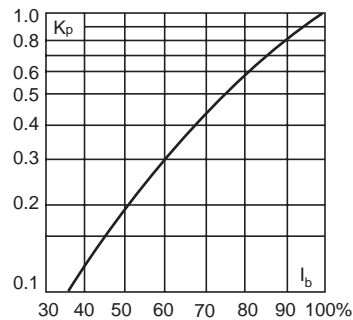
#### Arc voltage

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.

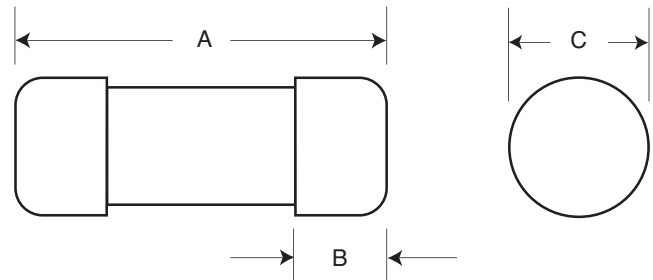


### Technical data

Catalogue numbers	Rated voltage V a.c. / V d.c.	Rated current RMS- Amps	I <sup>2</sup> t (A <sup>2</sup> 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

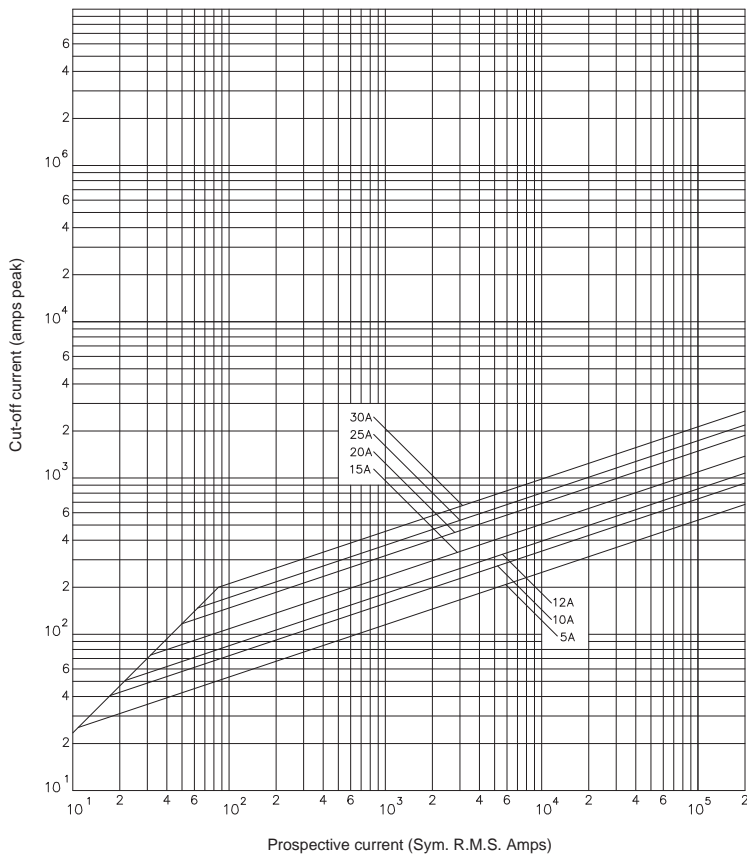
### Dimensions - in (mm)



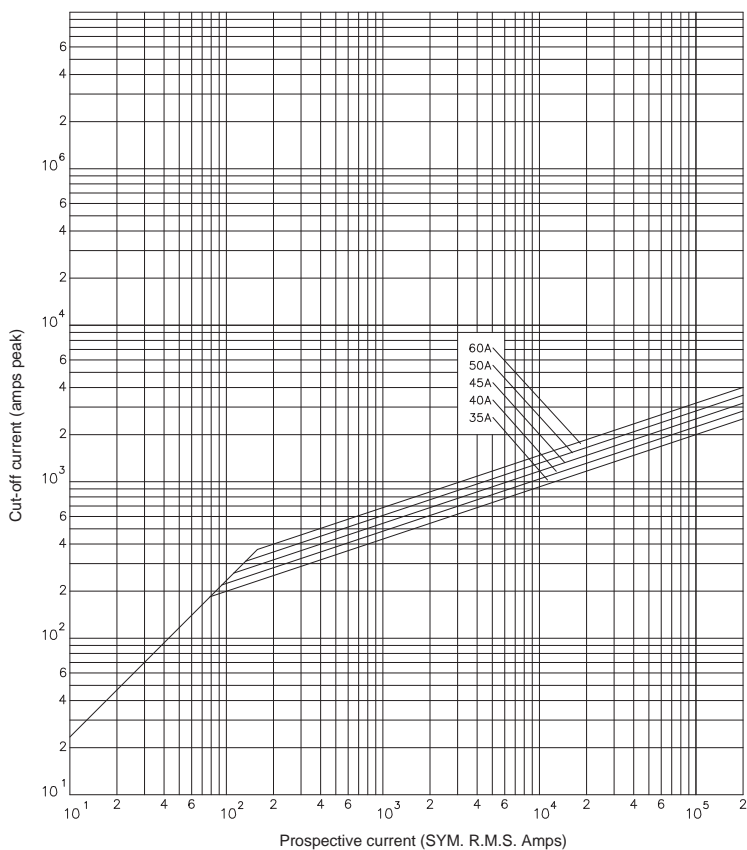
Amp range	A	B	C
5-30	1.5 (38.1)	0.38 (9.5)	0.41 (10.3)
35-60	2 (50.8)	0.63 (15.9)	0.81 (20.6)

**Cut-off curves**

5 - 30 A

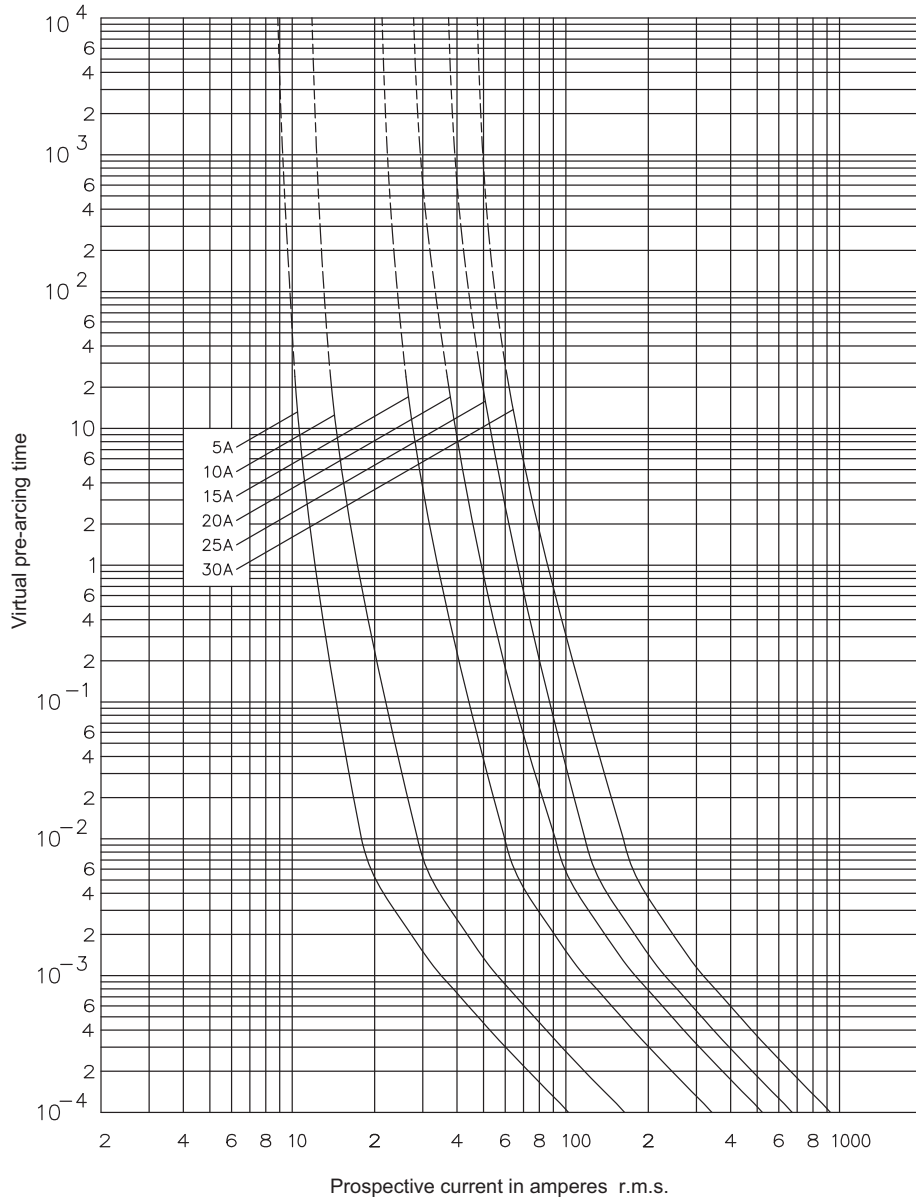


35 - 60 A



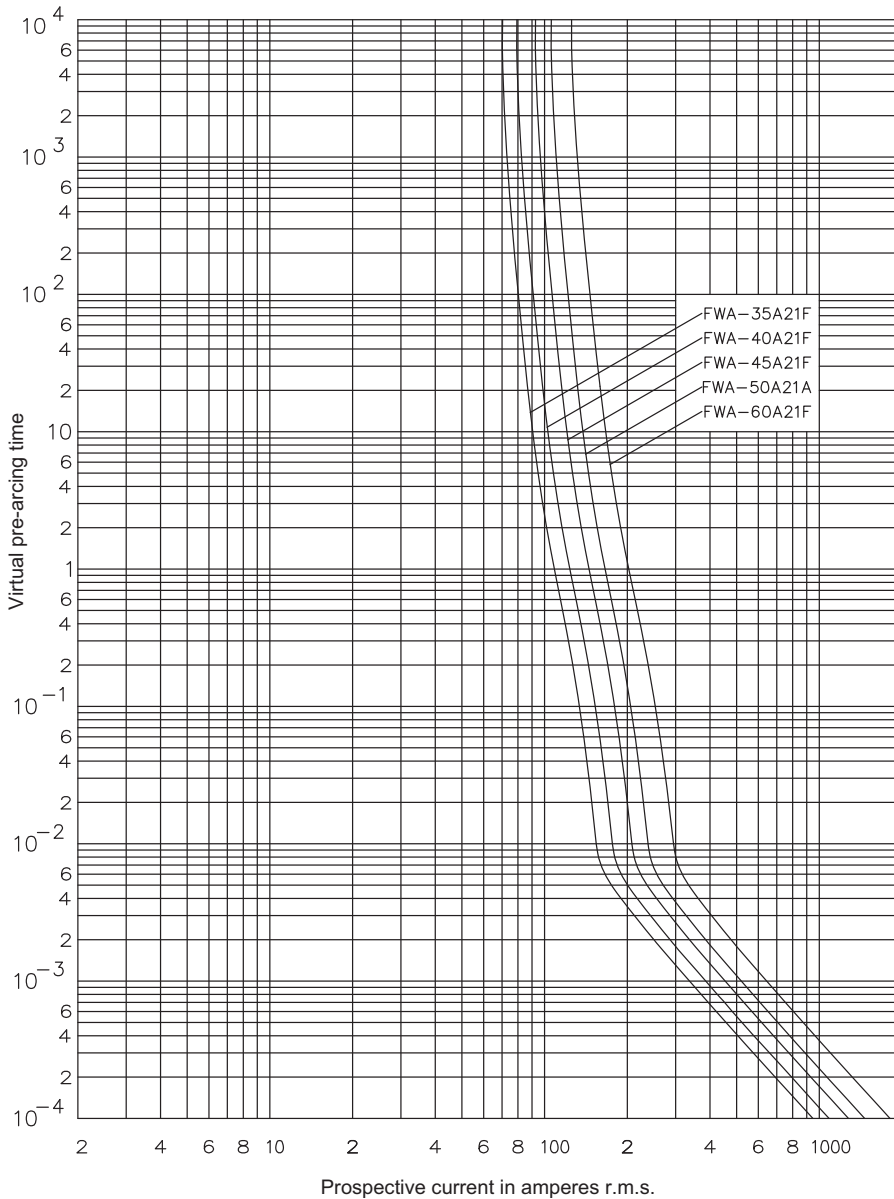
### Time-current curve - nominal melt

5 - 30 A



**Time-current curve - nominal melt**

35 - 60 A



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