# **BUSSMANN** SERIES

# FWP North American style bolted tag fuse links



# **Catalogue symbol**

- FWP-(amps)B (5 to 30A, 70 to 100 A)
- FWP-(amps)A (125 to 1200 A)
- FWP-(amps)D (35 to 60A)

# **Description**

North American style bolted tag high speed fuse links.

#### **Technical data**

- · Rated voltage:
  - 700 V a.c. (UL)
  - DC voltage rating see breaking capacity
- Rated current: 5 1200 A
- · Breaking capacity:
  - 200kA RMS Sym
  - 50kA at 500Vdc (FWP-5B to 30B)
  - 50kA at 700Vdc (FWP-35D to 60D, 70B to 100B, 700A to 800A)
  - 10kA at 700Vdc (FWP-125A to 600A)

#### **Agency information**

- UL Recognized
  - JFHR2.E91958 (FWP-5A to FWP-30A, 70A to 100A, 700A to 1200A, 35D to 60D)
  - JFHR2.E56412 (FWP-125A to 600A)
- CSA Component Acceptance file class 1422-90 (53787) for 35 to 600A
- CE

#### Catalogue numbers (amps)

FWP-5B	FWP-125A
FWP-10B	FWP-150A
FWP-15B	FWP-175A
FWP-20B	FWP-200A
FWP-25B	FWP-225A
FWP-30B	FWP-250A
FWP-35D	FWP-300A
FWP-40D	FWP-350A
FWP-50D	FWP-400A
FWP-60D	FWP-450A
FWP-70B	FWP-500A
FWP-80B	FWP-600A
FWP-90B	FWP-700A
FWP-100B	FWP-800A
	FWP-900A
	FWP-1000A
	FWP-1200A

# **Features and benefits**

- Excellent DC performance
- Low arc voltage and low energy let-through (|2t)
- · Superior cycling capability

#### **Typical applications**

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

# **Carton quantity**

- 10 per carton (5 to 30 A)
- 5 per carton (35 to 60 A)
- 1 per carton (70 to 1200 A)

#### **Carton weight**

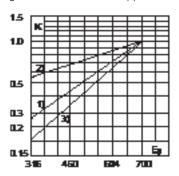
- 2.25 (lbs) 5 to 30 A
- 1.21 (lbs) 35 to 60 A
- 0.24 (lbs) 70 to 100 A
- 0.65 (lbs) 125 to 200 A
- 1.17 (lbs) 225 to 400 A2.39 (lbs) 450 to 600 A
- 1.21 (lbs) 700 to 800 A
- 6.60 (lbs) 900 to 1200 A



#### **Electrical characteristics**

#### Total clearing I2t

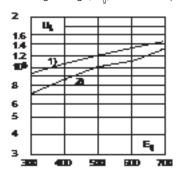
The total clearing  $I^2t$  at rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing  $I^2t$  is found by multiplying by correction factor, K, given as a function of applied working voltage,  $E_{\alpha}$ , (RMS).



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

#### Arc voltage

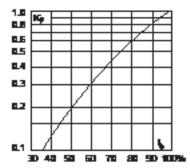
This curve gives the peak arc voltage,  $\rm U_L$ , which may appear across the fuse during its operation as a function of the applied working voltage,  $\rm E_{\rm a}$ , (RMS) at a power factor of 15 percent.



- 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,  $K_{\rm p}$ , is given as a function of the RMS load current,  $I_{\rm b}$ , in percent of the rated current.



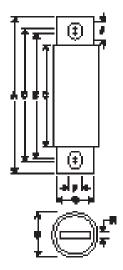
#### **Technical data**

			I²t (A² Sec)				
Catalogue numbers	Rated voltage V a.c. / V d.c.	Rated current RMS- Amps	Pre-arc	Clearing at 700 V a.c.	Watts loss**		
FWP-5B	700 V a.c. 500 V d.c. (UL)	5	1.6	11	1.5		
FWP-10B		10	3.6	22	4		
FWP-15B		15	10	70	5.5		
FWP-20B	_	20	26	180	6		
FWP-25B	_	25	44	320	7		
FWP-30B		30	58	450	9		
FWP-35D	700 V a.c.	35	34	160	12		
FWP-40D	/V d.c. (UL)	40	76	320	12		
FWP-50D	_	50	135	600	12		
FWP-60D	_	60	210	950	15.5		
FWP-70B		70	305	2000	18		
FWP-80B	-	80	360	2400	21		
FWP-90B		90	415	2700	25		
FWP-100B		100	540	3500	27		
FWP-125A	_	125	1800	7300	28		
FWP-150A		150	2900	11,700	32		
FWP-175A	_	175	4200	16,700	35		
FWP-200A		200	5500	22,000	43		
FWP-225A	_	225	7700	31,300	45		
FWP-250A	_	250	10,500	42,500	48		
FWP-300A		300	17,600	71,200	58		
FWP-350A	_	350	23,700	95,600	65		
FWP-400A		400	31,000	125,000	78		
FWP-450A		450	36,400	137,000	94		
FWP-500A	_	500	45,200	170,000	107		
FWP-600A	_	600	66,700	250,000	122		
FWP-700A	_	700	54,000	300,000	125		
FWP-800A		800	78,000	450,000	140		
FWP-900A		900	91,500	530,000	150		
FWP-1000A		1000	120,000	600,000	170		
FWP-1200A		1200	195,000	1,100,000	190		

<sup>\*\*</sup>Watts loss provided at rated current

# **Dimensions - in**

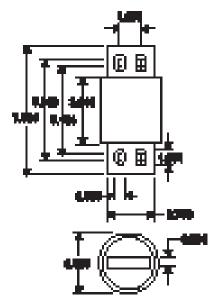
5 - 800 A



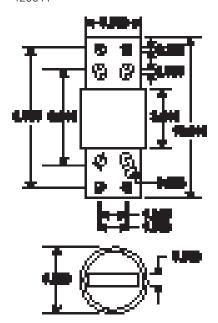
Amp range	Α	В	C	D	E	F	G	Н	J
5-30	2.87	0.56	1.86	2.48	2.48	0.25	0.41	0.06	0.25
35-60	4.38	0.81	2.75	3.71	3.31	0.34	0.73	0.13	0.54
70-100	4.41	0.95	2.59	3.63	3.56	0.34	0.75	0.13	0.38
125-200	5.09	1.5	2.84	4.19	3.5	0.41	1	0.25	0.75
225-400	5.09	2	2.84	4.28	3.53	0.41	1.5	0.25	0.78
450-600	7.09	2.5	2.84	5.72	4.19	0.53	2	0.38	1.3
700-800	6.63	2	2.76	5.56	5.06	0.63	1.5	0.25	0.88
900-1000	Refer to drawing								
1200	Refer to drawing								

<sup>1&</sup>quot; = 25.4mm

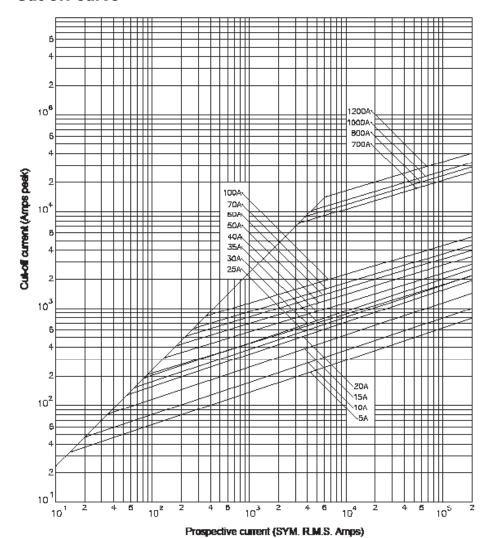
900 - 1000 A



1200 A

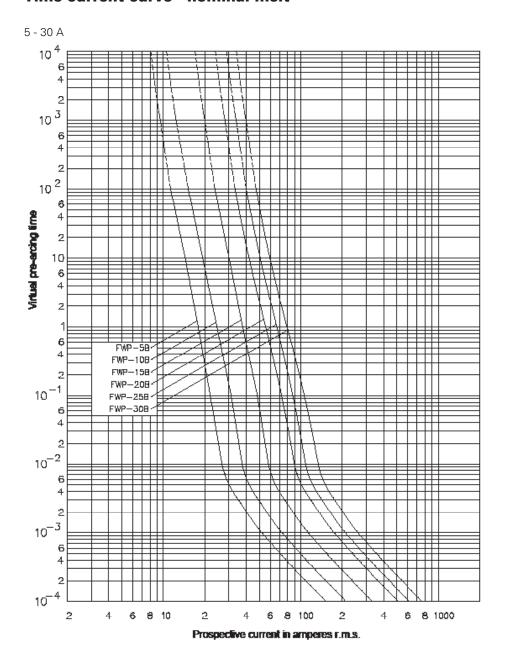


## **Cut-off curve**



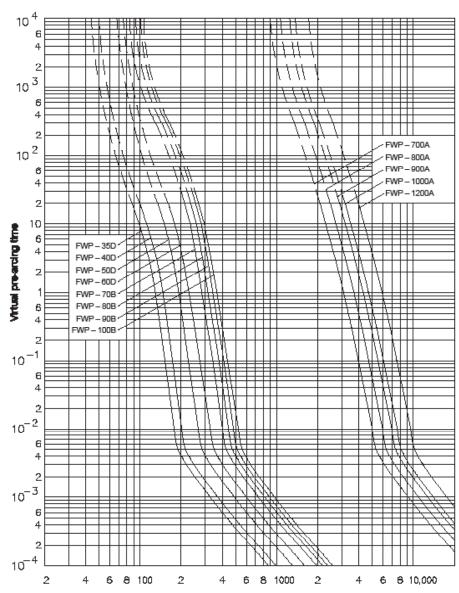
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# **Time-current curve - nominal melt**



#### **Time-current curve - nominal melt**





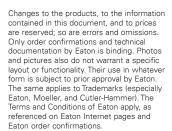
Prospective current in amperes r.m.s.

Eaton

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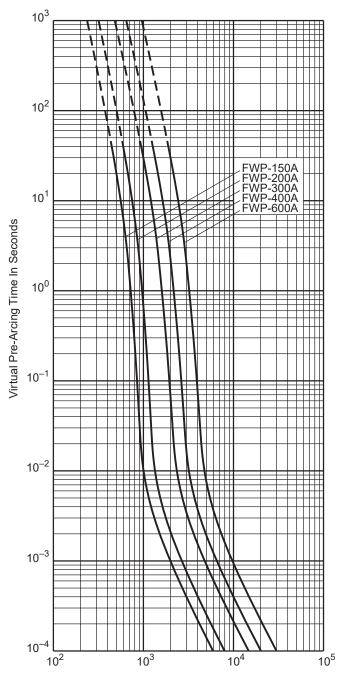


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# Time-current curve - minimal melt FWP 125A - 600A

FWP 125A - 600A



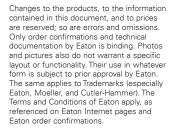
Prospective Current In Amperes RMS

#### Eaton

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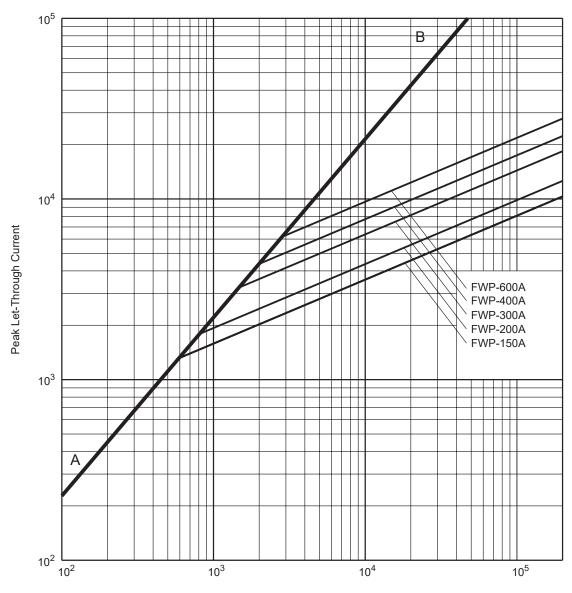


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# Time-current curve - peak let through FWP 125A - 600A

FWP 125A - 600A



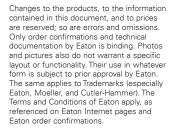
Prospective Short-Circuit Current Symmetrical RMS

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