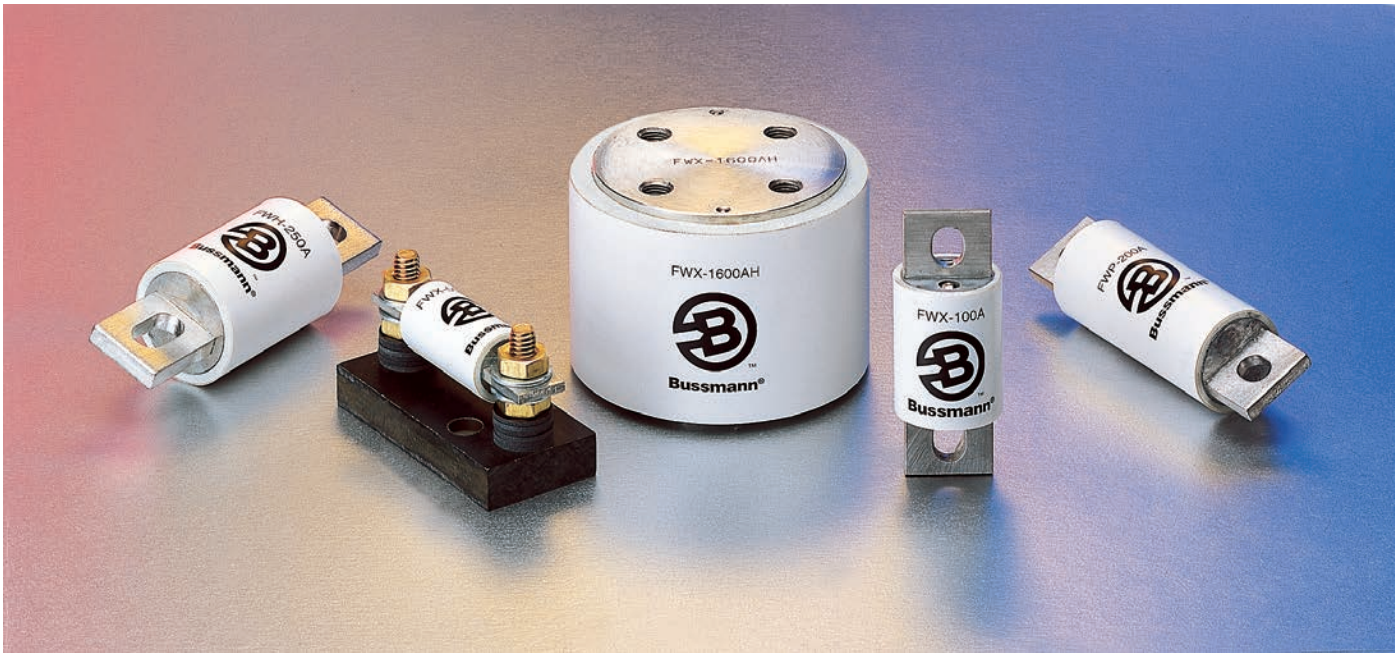
6 High speed fuses

North American



Introduction

North American contents

Accessories

North American fuse ranges

Amps	Volts	AC	DC
1000-4000	130	X	X
70-1000	150	X	X
35-2500	250	X	X
35-1600	500	X	X
1-1000	600	X	—
5-1200	700	X	X
40-600	800	—	X
35-2000	1000	X	—

General information

Eaton offers a complete range of North American blade and flush-end style fuses and accessories. Their design and construction were optimized to provide:

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

North American style fuses provide an excellent solution for medium power applications. While there are currently no published standards for these fuses, the industry has standardized on mounting centers that accept Bussmann series fuses.

Voltage rating

All Eaton North American style fuses are tested at their rated voltage. Eaton should be consulted for applications exceeding those values.

Accessories

External and internal open fuse indication is available for selected portions of the North American line. Fuse blocks are available for most applications.

FWX 250V: 35-2500A

Specifications

Description: North American style stud-mount and flush-end fuses.

Dimensions: See dimensions illustrations.

Ratings:

Volts: — 250Vac/dc

Amps: — 35-2500A

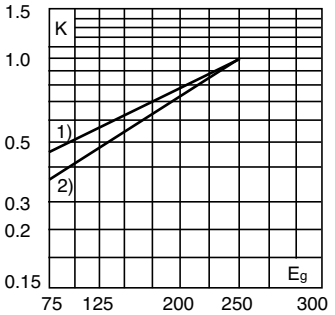
IR: — 200kA RMS Sym.
50kA@250Vdc (35-800A)

Agency information: CE, UL Recognized JFHR2.E56412 and CSA Component Acceptance file Class 1422-30, (53787) on 35-800A fuses (50kA IR @250Vdc).

Electrical characteristics

Total clearing I²t

The total clearing I²t at rated voltage and at power factor of 15% 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) 35-800A Range
2) 1000-2500A Range

Dimensions - in

Amp range	Fig.	A	B	C	D	E	F	G	H	J	Tapped thread depth
35-60	1	3.19	0.81	1.59	2.59	2.25	0.34	0.63	0.13	0.52	—
70-200	1	3.13	1.22	1.59	2.44	2.19	0.34	1.00	0.19	0.47	—
225-600	1	3.84	1.50	1.59	2.94	2.25	0.41	1.00	0.25	0.75	—
700-800	1	3.84	2.00	1.59	3.03	2.28	0.41	1.50	0.25	0.78	—
1000-1200	2	2.59	3.00	1.50	—	—	—	—	—	—	⅜"-24 x ½"
1500-2500	3	2.59	3.50	1.50	1.50	—	—	—	—	—	⅜"--24 x ½"

1mm = 0.0394" / 1" = 25.4mm

Fig. 1: 35-800A

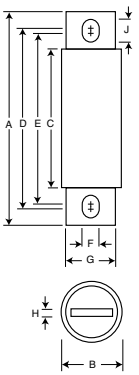


Fig. 2: 1000-1200A

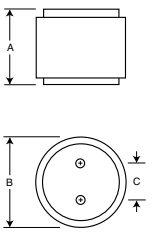
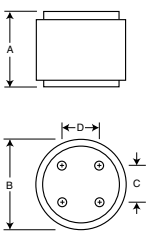
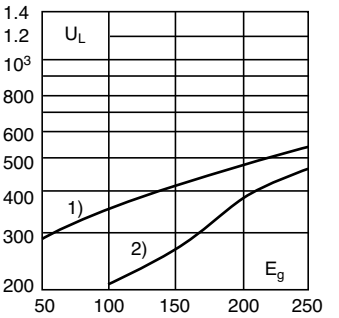


Fig. 3: 1500-2500A



Arc voltage

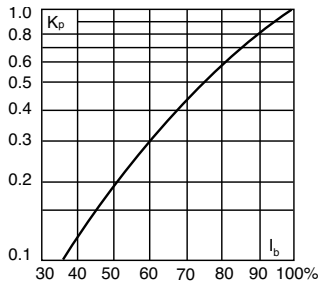
This curve gives the peak arc voltage, U_L, which may appear across the fuse during its operation as a function of the applied working voltage, E_g, (rms) at a power factor of 15%.



1) 35-800A Range
2) 1000-2500A Range

Power losses

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



Catalog numbers

Catalog number	Electrical characteristics: Rated current RMS-amps	I²t (A² Sec): Pre-arc	I²t (A² Sec): Clearing at 250V	Watts loss
FWX-35A	35	50	230	4.2
FWX-40A	40	60	310	5.2
FWX-45A	45	80	390	5.7
FWX-50A	50	100	520	6.0
FWX-60A	60	140	740	8.1
FWX-70A	70	330	1400	7.2
FWX-80A	80	430	1850	8.1
FWX-90A	90	570	2450	9.0
FWX-100A	100	740	3150	10.0
FWX-125A	125	1130	4850	12.5
FWX-150A	150	1620	6950	15.7
FWX-175A	175	2170	9300	18.5
FWX-200A	200	2790	12000	22
FWX-225A	225	3210	14700	24
FWX-250A	250	3960	18100	27
FWX-275A	275	4720	21600	31
FWX-300A	300	6000	27300	32
FWX-350A	350	10600	48600	39
FWX-400A	400	14500	66100	44
FWX-450A	450	22100	101000	49
FWX-500A	500	28000	128000	54
FWX-600A	600	41100	188000	62
FWX-700A	700	48800	190000	72
FWX-800A	800	59000	230000	84
FWX-1000AH	1000	44000	360000	100
FWX-1200AH	1200	92000	750000	103
FWX-1500AH	1500	120000	880000	140
FWX-1600AH	1600	160000	1200000	140
FWX-2000AH	2000	320000	2300000	151
FWX-2500AH	2500	670000	4700000	163

• Watts loss provided at rated current. • See accessories on page 6-21.

Features and benefits

- Excellent DC performance
- Low arc voltage and low energy let-through (I²t)
- Superior cycling capability

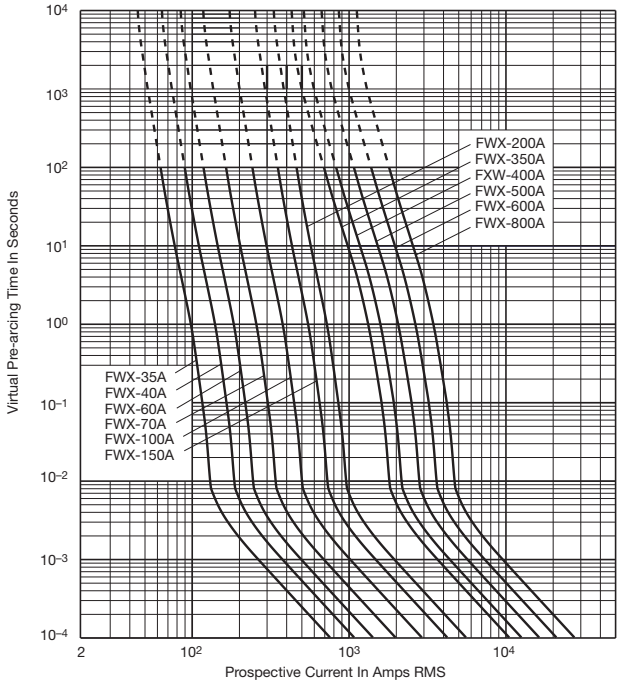
Typical applications

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

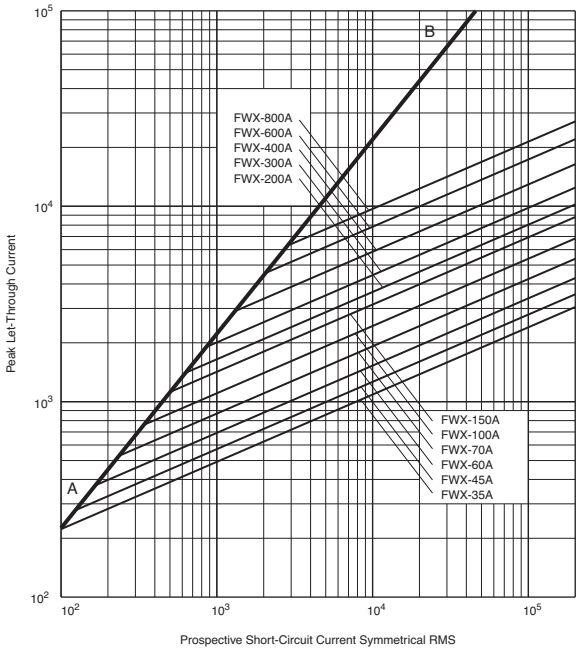
Data Sheet: 720005

FWX 35-800A: 250V

Time-current curve



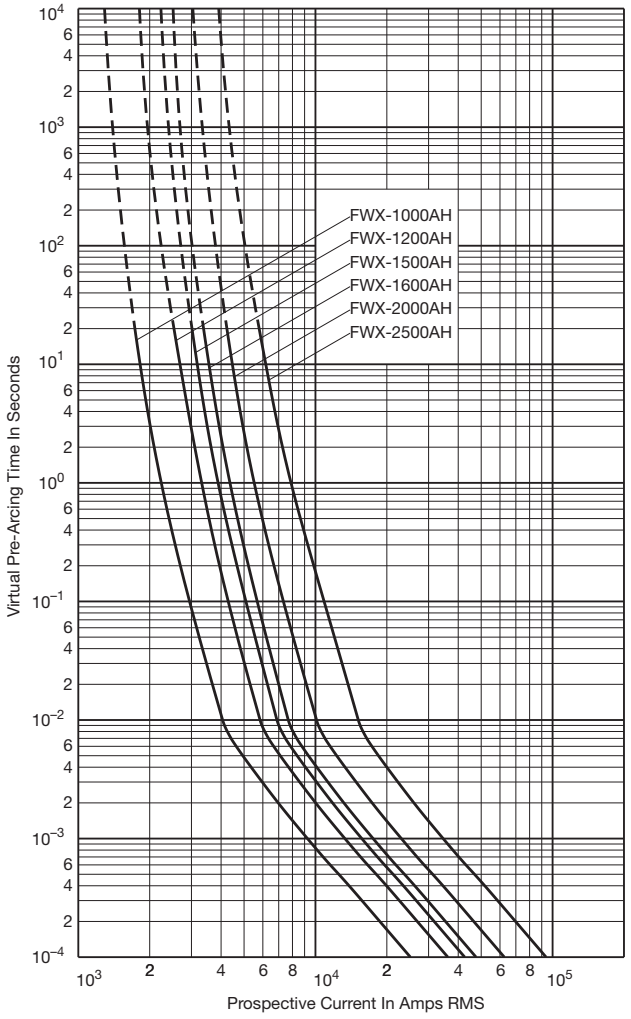
Peak let-through curve



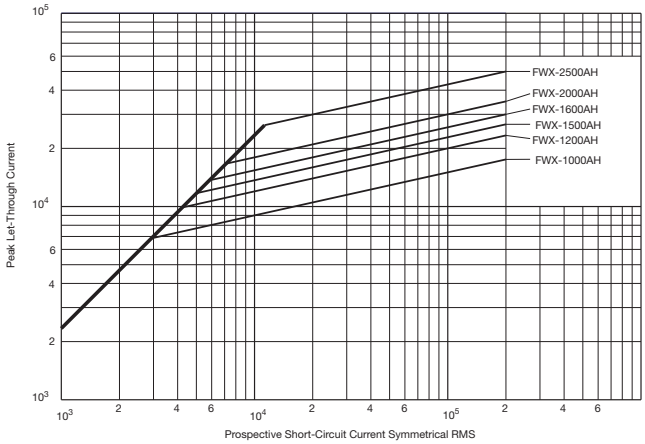
Data Sheet: 359

FWX 1000-2500A(H): 250V

Time-current curve



Peak let-through curve



Data Sheet: 35785299