

# 6

## High speed fuses

North American



### Introduction

#### North American contents

Catalog number	Volts	Amp range	Page
DFJ	600	1-600	6-5
FWA	130	1000-4000	6-6
FWA	150	70-1000	6-8
FWX	250	35-2500	6-10
FWH	500	35-1600	6-12
KAC	600	1-1000	6-14
KBC	600	35-800	6-15
FWP	700	5-1200	6-16
FWJ	1000	35-2000	6-19

#### Accessories

Fuse bases 6-21

#### 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.

### DFJ Class J

#### Specifications

**Description:** High speed, current-limiting fuse. The Bussmann series DFJ drive fuse will provide maximum protection for AC and DC drives and controllers and meet NEC® branch circuit protection requirements. The drive fuse has the lowest I<sup>2</sup>t of any branch circuit fuse to protect power semiconductor devices that utilize diodes, GTOs, SCRs and SSRs.



**Dimensions:** See page 1-5 for Class J dimensions.

**Construction:** Melamine tube with silver fuse element.

#### Ratings:

Volts — 600Vac (or less), 450Vdc (or less, 15-600A)

Amps — 1-600A

IR — 200kA RMS Sym., 100kA DC

**Agency information:** CE, UL Listed, Std. 248-8, Class J, Guide JDDZ, File E4273, CSA Certified, Class 1422-02, File 53787.

#### Features and benefits

- Easily coordinated with existing and new variable speed drives and electric controllers.
- Standard Class J dimensions allowing the use of readily available fuse blocks, holders, and switches.
- Allows the lowest let-thru energy of any branch circuit overcurrent protective device.

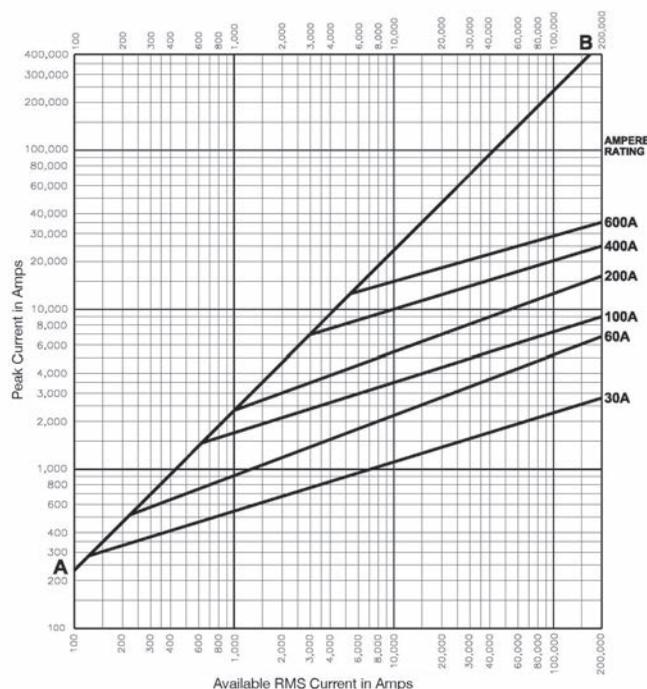
#### Typical applications

- Protection of AC and DC drives
- Equipment using power semiconductor devices

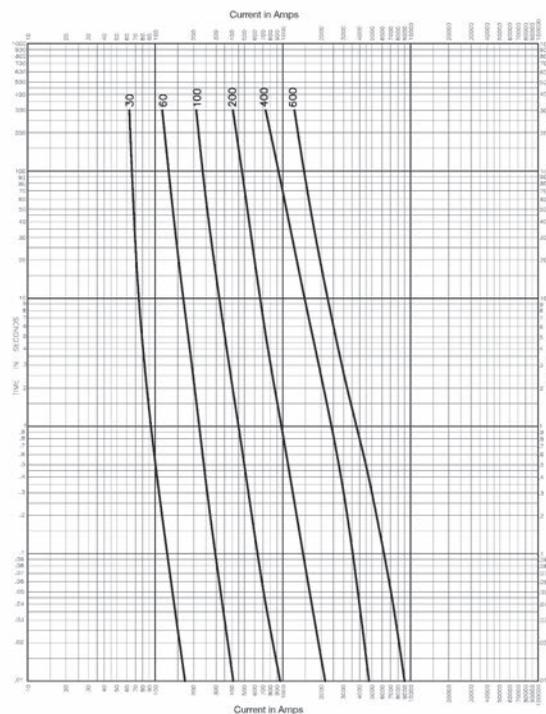
#### Catalog numbers (amps)

Catalog number	Rated current RMS amps	I <sup>2</sup> t (A <sup>2</sup> Sec) @ 600Vac / 100kA		Watts loss
		Pre-arc	Clearing	
DFJ-1	1	—	—	—
DFJ-2	2	—	—	—
DFJ-3	3	—	—	—
DFJ-4	4	—	—	—
DFJ-5	5	—	—	—
DFJ-6	6	—	—	—
DFJ-8	8	—	—	—
DFJ-12	12	—	—	—
DFJ-15	15	4	110	4.1
DFJ-20	20	8	365	4.0
DFJ-25	25	12	610	4.9
DFJ-30	30	20	1000	5.5
DFJ-35	35	55	1100	6.8
DFJ-40	40	90	1900	8.6
DFJ-45	45	90	1900	8.6
DFJ-50	50	140	2800	8.7
DFJ-60	60	290	6000	8.5
DFJ-70	70	450	3100	12
DFJ-80	80	650	4600	13
DFJ-90	90	1010	7200	13
DFJ-100	100	1460	10500	13
DFJ-110	110	1710	9500	17
DFJ-125	125	3580	20000	15
DFJ-150	150	5080	28000	19
DFJ-175	175	6310	35000	23
DFJ-200	200	9850	54500	24
DFJ-225	225	11420	51000	29
DFJ-250	250	17000	74500	30
DFJ-300	300	23500	103000	36
DFJ-350	350	38800	170000	39
DFJ-400	400	62200	272000	40
DFJ-450	450	44600	270000	56
DFJ-500	500	79500	480000	52
DFJ-600	600	138000	830000	57

#### Current limitation curves



#### Time-current characteristic curves—average melt



High speed fuses