

# Fusetron™ FRN-R Class RK5 250Vac/125Vdc 1/10-60A, dual element, time-delay fuses



### Catalog symbols:

- FRN-R\_ (non-indicating)
- FRN-R\_ID (indicating)

### Description:

Eaton Bussmann® series advanced protection, energy efficient FRN-R Class RK5 dual element, current-limiting, time-delay fuses with optional open fuse indication on select ratings. Time-delay – 10 seconds (minimum) at 500% of rated current (8 seconds for 1/10-30A sizes).

### Specifications:

#### Ratings

- Volts
  - 250Vac
  - 125Vdc
- Amps 1/10-60A
- Interrupting rating
  - 200kA Vac RMS Sym.
  - 20kA Vdc

#### Agency information

- UL Listed, Std. 248-12, Class RK-5, Guide JDDZ, File E4273
- CSA Certified, C22.2 No. 248.12, Class 1422-02, File 53787
- CE

### Catalog numbers (amps) — non-indicating fuses

FRN-R-1/10	FRN-R-1-8/10	FRN-R-8*
FRN-R-1/8	FRN-R-2	FRN-R-9*
FRN-R-15/100	FRN-R-2-1/4	FRN-R-10*
FRN-R-2/10	FRN-R-2-1/2	FRN-R-12*
FRN-R-1/4	FRN-R-2-8/10	FRN-R-15*
FRN-R-3/10	FRN-R-3	FRN-R-17-1/2*
FRN-R-4/10	FRN-R-3-2/10	FRN-R-20*
FRN-R-1/2	FRN-R-3-1/2	FRN-R-25*
FRN-R-6/10	FRN-R-4	FRN-R-30*
FRN-R-8/10	FRN-R-4-1/2	FRN-R-35*
FRN-R-1	FRN-R-5	FRN-R-40*
FRN-R-1-1/8	FRN-R-5-6/10	FRN-R-45*
FRN-R-1-1/4	FRN-R-6	FRN-R-50*
FRN-R-1-4/10	FRN-R-6-1/4	FRN-R-60*
FRN-R-1-1/2	FRN-R-7	
FRN-R-1-6/10	FRN-R-7-1/2	

\* Open fuse indication available by inserting the suffix "ID." E.g., FRN-R-15ID.

### Carton Quantity:

Amp rating	Carton qty.
1/10 – 60	10

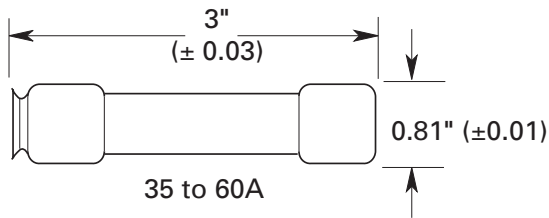
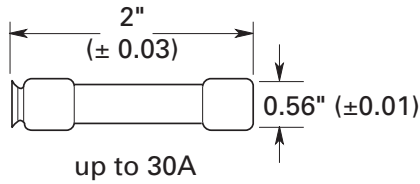
### Features:

- Provides motor overload, ground fault and short-circuit protection
- Helps protect motors against burnout from overloads
- Helps protect motors against burnout from single-phasing on three-phase systems
- Simplifies and improves blackout prevention (selective coordination)
- Dual-element fuses can be applied in circuits subject to temporary motor overloads and surge currents to provide both high performance short-circuit and overload protection
- The overload element provides protection against low level overcurrent of overloads and will hold an overload which is five times greater than the ampere rating of the fuse for a minimum of ten seconds



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**Dimensions - in:**



**Recommended fuse blocks:**

Fuse amps	1-pole	2-pole	3-pole
up to 30	RM25030-1_	RM25030-2_	RM25030-3_
35 to 60	RM25060-1CR	RM25060-2CR	RM25060-3CR

For additional information see data sheet no. 10289.

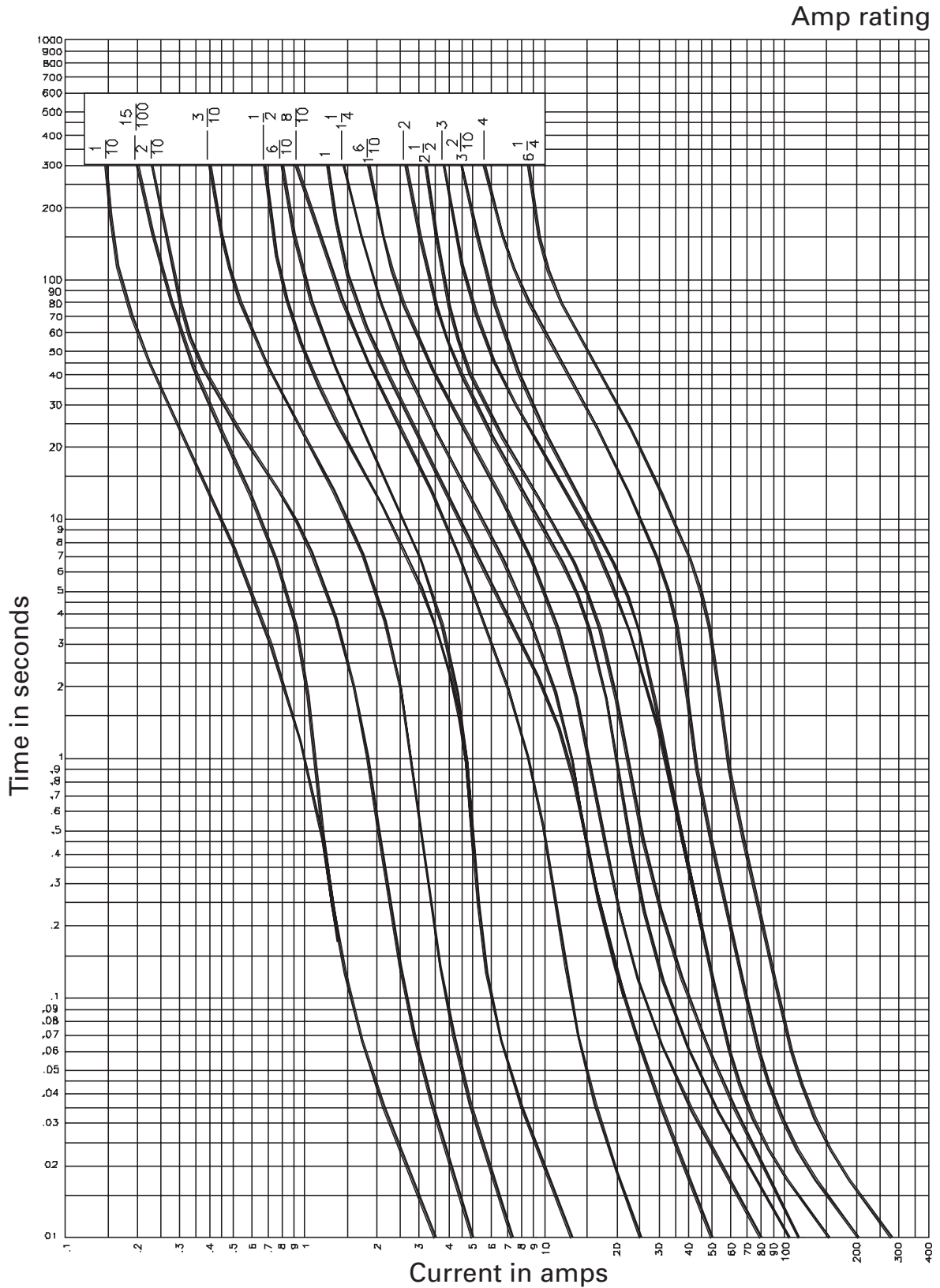
**Fuse reducers for Class R fuses**

Fuse size	Amp size of fuse block or disconnect switch	Catalog no. (pairs)
Up to 30A	60A	No.263-R
Up to 30A	100A	No.213-R
35 to 60A		No.216-R
35 to 60A	200A	No.226-R

For additional information on Class R fuse reducers, see data sheet no 1118.

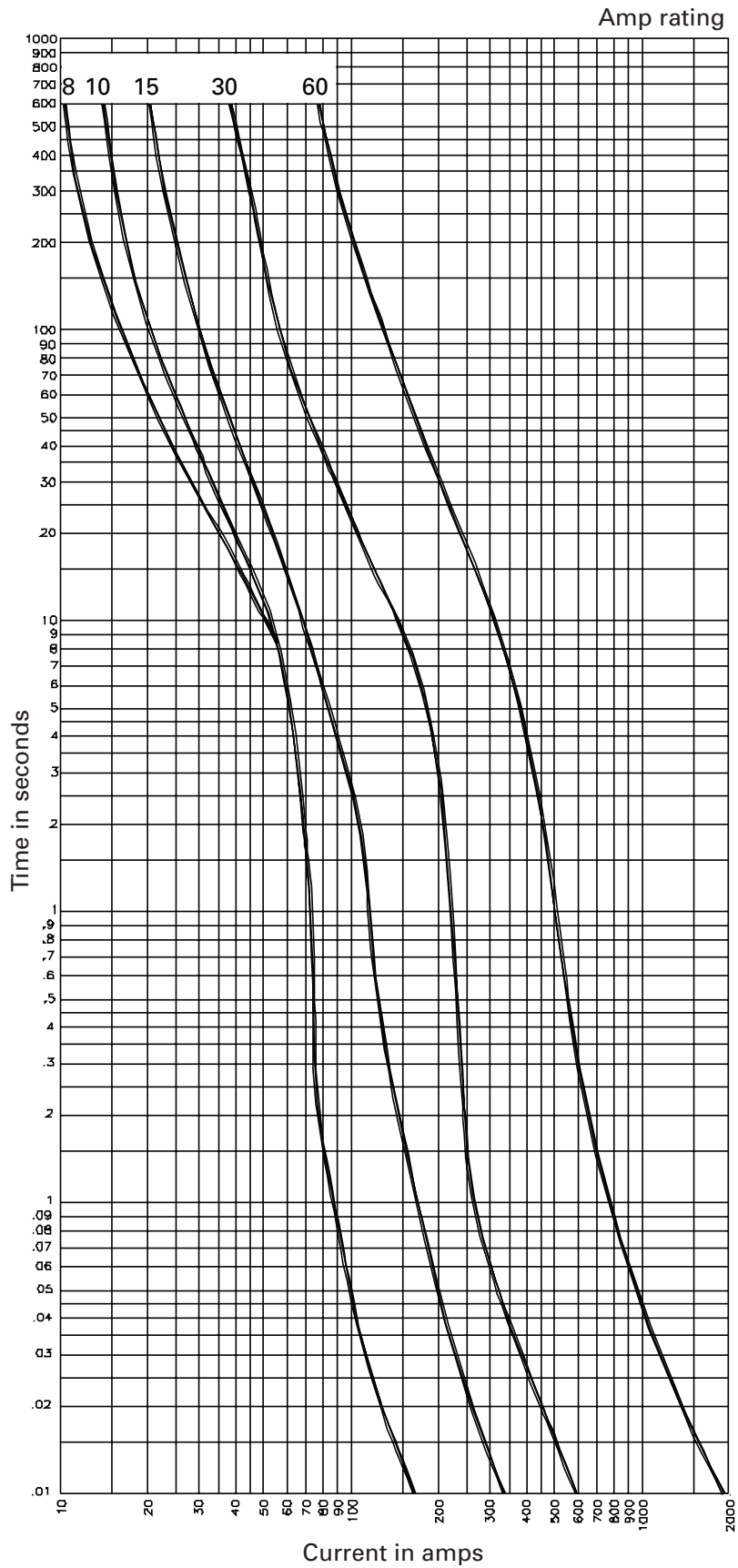
**Time-current curves — average melt:**

1/10 to 6-1/4 amps

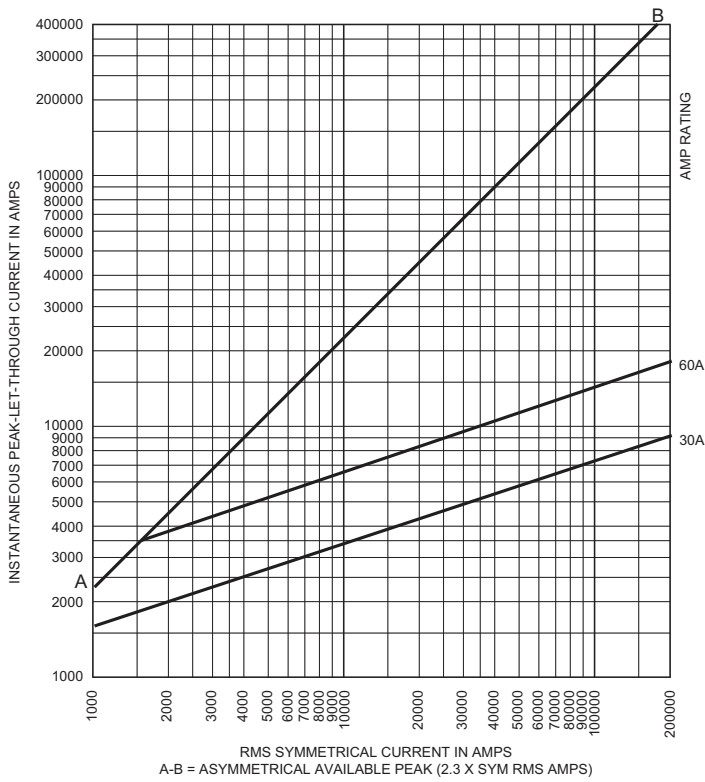


**Time-current curves — average melt:**

8 to 60 amps



**Current-limitation curves:**



**Current-limiting effects:**

Prosp. S.C.C.	Let-through current (apparent RMS Sym. vs. fuse rating)	
	30A	60A
—	30A	60A
5000	1000	2000
10,000	2000	3000
15,000	2000	3000
20,000	2000	4000
25,000	2000	4000
30,000	2000	4000
35,000	2000	4000
40,000	2000	5000
50,000	3000	5000
60,000	3000	5000
70,000	3000	6000
80,000	3000	6000
90,000	3000	6000
100,000	3000	6000
150,000	4000	7000
200,000	4000	8000

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# Fusetron™ FRN-R Class RK5 250Vac, 125/250Vdc 70-600A, dual element, time-delay fuses



### Catalog symbols:

- FRN-R\_

### Description:

Eaton Bussmann® series advanced protection, energy efficient FRN-R Class RK5 dual element, current-limiting, time-delay fuses. Time-delay – 10 seconds (minimum) at 500% of rated current.

### Specifications:

#### Ratings

- Volts
  - 250Vac
  - 125Vdc (110-200A)
  - 250Vdc (225-600A)
- Amps 70-600A
- Interrupting rating
  - 200kA Vac RMS Sym.
  - 20kA Vdc

#### Agency information

- UL Listed, Std. 248-12, Class RK5, Guide JDDZ, File E4273
- CSA Certified, C22.2 No. 248.12, Class 1422-02, File 53787
- CE

### Catalog numbers (amps)

FRN-R-70	FRN-R-125	FRN-R-350
FRN-R-75	FRN-R-150	FRN-R-400
FRN-R-80	FRN-R-175	FRN-R-450
FRN-R-85	FRN-R-200	FRN-R-500
FRN-R-90	FRN-R-225	FRN-R-600
FRN-R-100	FRN-R-250	
FRN-R-110	FRN-R-300	

### Carton Quantity:

Amp rating	Carton qty.
70 – 100	5
110 – 600	1

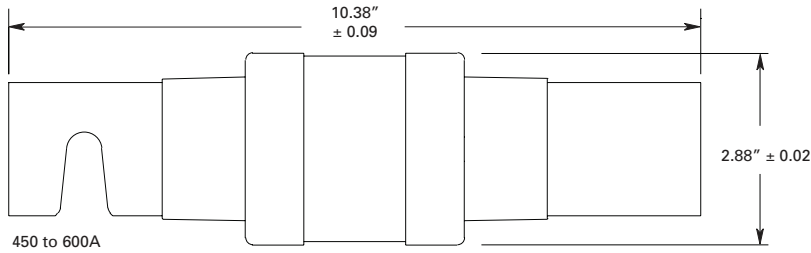
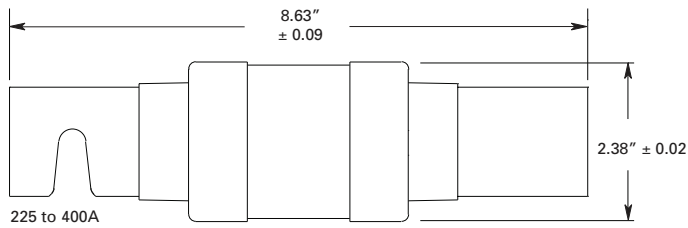
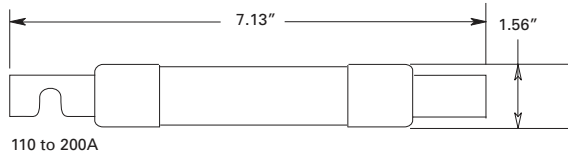
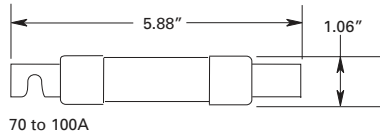
### Features:

- Provides motor overload, ground fault and short-circuit protection
- Helps protect motors against burnout from overloads and single-phasing when sized properly
- Simplifies and improves blackout prevention (selective coordination)
- Dual-element fuses can be applied in circuits subject to temporary motor overloads and surge currents to provide both high performance short-circuit and overload protection
- The overload element provides protection against low level overcurrent of overloads and will hold on inrush current which is five times greater than the amp rating of the fuse for a minimum of ten seconds



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**Dimensions - in:**



**Recommended fuse blocks:**

Fuse amps	1-pole	2-pole	3-pole
70-100	RM25100-1CR	RM25100-2CR	RM25100-3CR
110-200	RM25200-1CR	RM25200-2CR	RM25200-3CR
225-400	RM25400-1CR	RM25400-2CR	RM25400-3CR
450-600	RM25600-1CR	RM25600-2CR	RM25600-3CR

For additional information on the RM 250 volt fuse blocks, see product brochure no. 3192.

**use reducers for Class R fuses**

Fuse size	Amp size of fuse block or disconnect switch	Catalog no. (pairs)
65 to 100A	400A	No.2641-R*
110 to 200A		No.242-R*
65 to 100A	600A	No.2661-R*
110 to 200A		No.2662-R*
225 to 400A		No.2664-R*†

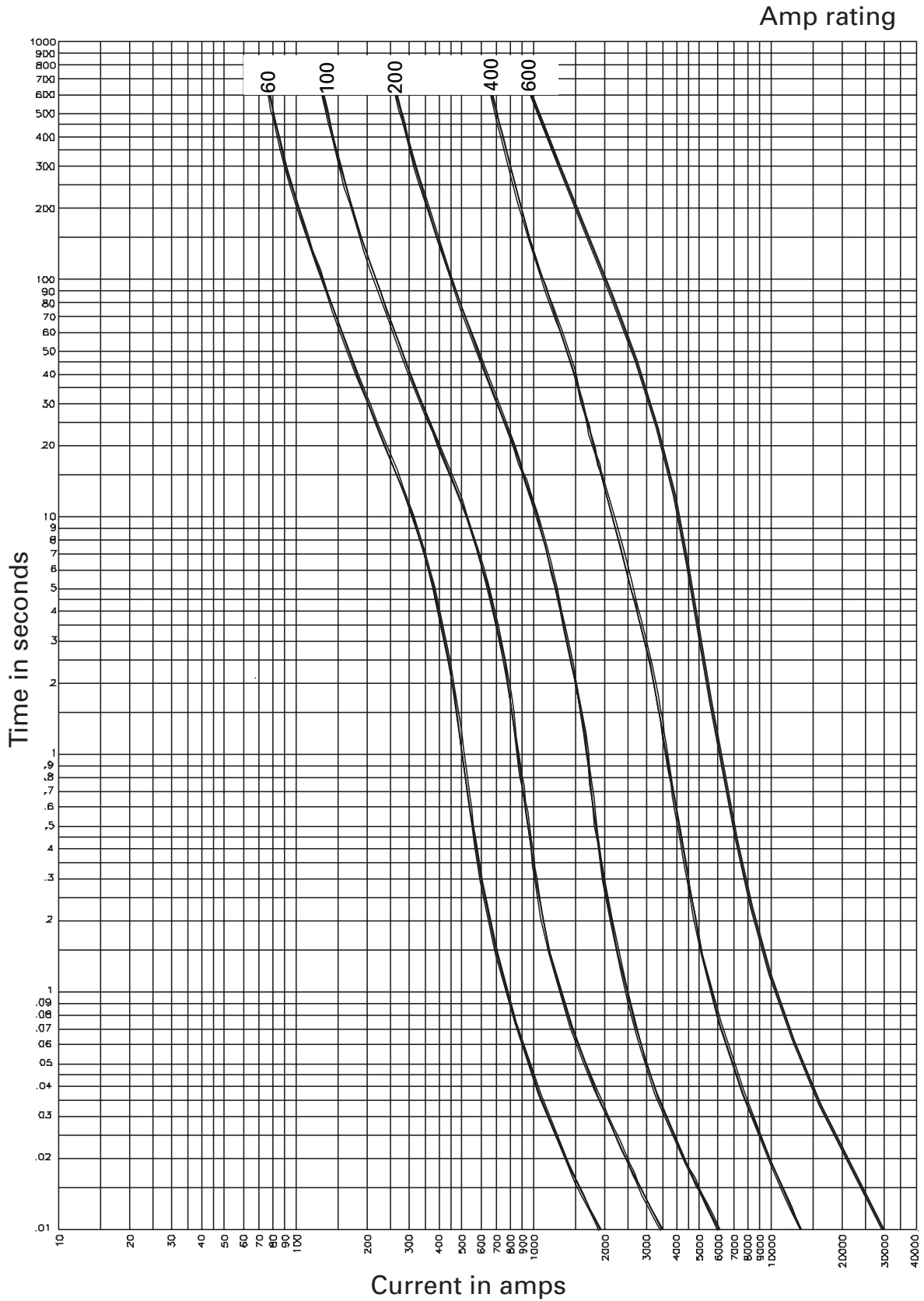
\* These reducers are not CSA Certified.

† Single reducer only (pair not required)

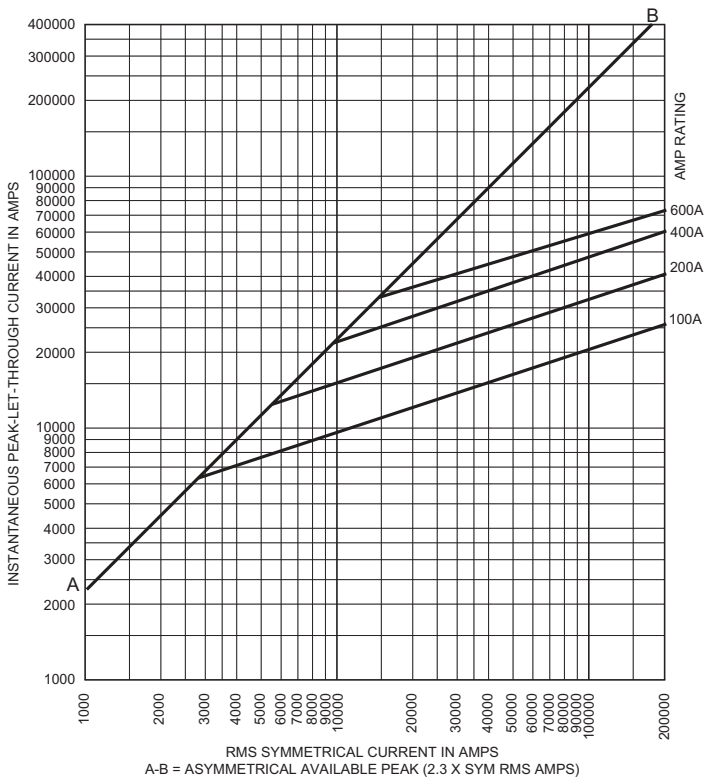
For additional information on Class R fuse reducers, see data sheet no 1118.



**Time-current curves — average melt:**



**Current-limitation curves:**



**Current-limiting effects:**

Prospect. S.C.C.	Let-through current (apparent RMS Sym. vs. fuse rating)			
	100A	200A	400A	600A
—	100A	200A	400A	600A
5000	3000	5000	5000	5000
10,000	4000	7000	10,000	10,000
15,000	5000	8000	11,000	15,000
20,000	5000	8000	12,000	16,000
25,000	6000	9000	13,000	17,000
30,000	6000	10,000	14,000	18,000
35,000	6000	10,000	15,000	19,000
40,000	7000	11,000	15,000	20,000
50,000	7000	11,000	17,000	21,000
60,000	8000	12,000	18,000	22,000
70,000	8000	13,000	19,000	23,000
80,000	8000	13,000	19,000	24,000
90,000	9000	14,000	20,000	25,000
100,000	9000	14,000	21,000	26,000
150,000	10,000	16,000	24,000	29,000
200,000	11,000	18,000	26,000	32,000

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