

# Fusetron™ 600 V Class RK5 FRS-R — 600 Vac/300 Vdc, 1/10-60 A, dual element, time-delay fuses



### Catalog symbols:

- FRS-R-(amp) (non-indicating)
- FRS-R-(amp)ID (indicating)

### Description:

Advanced protection, energy efficient Class RK5 dual-element, current-limiting, time-delay fuses with optional open fuse indication on select ratings. Time-delay — 10 second (minimum) at 500% of rated current.

### Specifications:

#### Ratings

- Volts
  - 600 Vac, 300 Vdc (1/10-30 A)
  - 600 Vac, 250 Vdc\* (35-60 A)
- Amps — 1/10-60 A
- Interrupting rating
  - 200 kA Vac RMS Sym
  - 20 kA Vdc

\* Indicating versions not Vdc rated.

#### Agency Information

- cULus Listed file No. JDDZ.E4273
  - UL 248-12 – Class RK5 Fuses
  - CSA C22.2 No. 248.12 – Class RK5 Fuses



### Catalog numbers (amps)

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

\* Open fuse indication available by inserting the suffix "ID." E.g., FRS-R-15ID. 35 to 60 amp indicating fuses are not Vdc rated.

### Carton quantity

- 10

### Features and benefits

- Dual-element feature provides the best time-delay performance, allowing closer sizing and superior protection of motors and transformers
- Closer sizing allows for smaller fuses and less costly switches
- Class RK5 fuses with a 200 kA interrupting rating for use in a broad range of applications
- Provides motor overload, ground fault, and short-circuit protection
- Helps protect motors against burnout from overloads and single-phasing when sized properly
- 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
- Offers a 10-second time delay at 5 times the rated current
- The time-delay feature makes it possible to use fuse amp ratings that are much smaller than those of non-time delay fuses. Considerable cost savings occur by permitting the use of smaller size switches, panels, and fuses themselves.
- Provides current limitation to help protect downstream components from high fault currents.
- Gives motor running back-up protection to motors without extra costs.

**Recommended fuse blocks**

Amps	Catalog no.		
	1-Pole	2-Pole	3-Pole
30	RM60030-1_	RM60030-2_	RM60030-3_
60	RM60060-1_	RM60060-2_	RM60060-3_

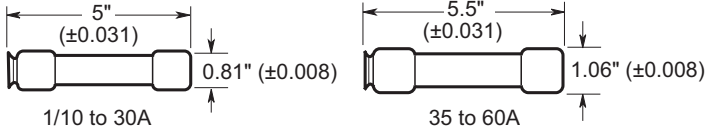
For additional information on the 600 volt fuse blocks, see data sheet no. 10489.

**Fuse reducers for Class R fuses**

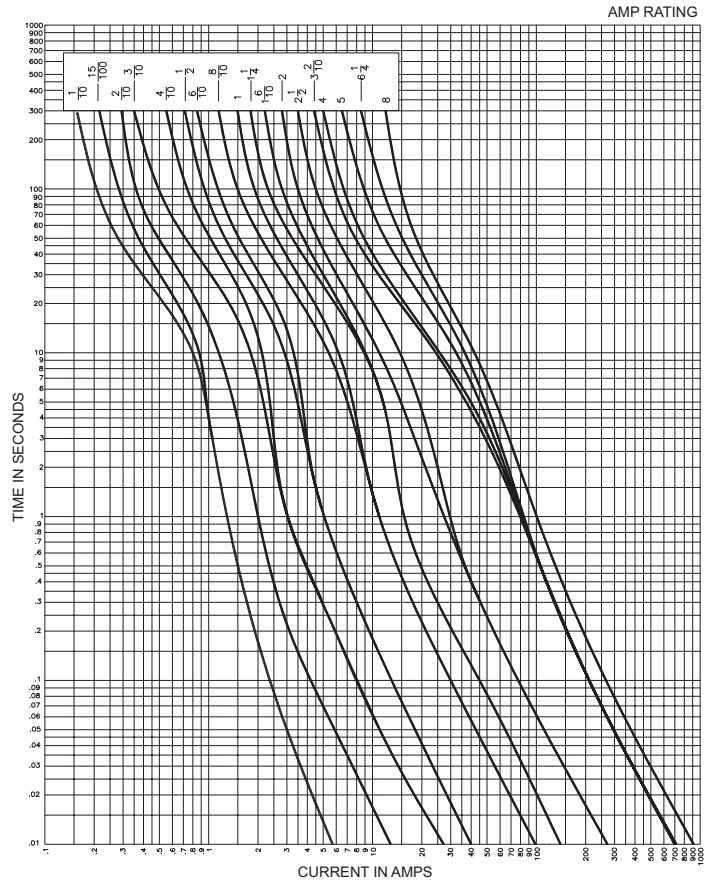
Equipment fuse clips	Desired fuse (case) size	Catalog no. (pairs) 600 V
60 A	30 A	NO.663-R
100 A	30 A	NO.216-R
200 A	60 A	NO.616-R
	60 A	NO.626-R

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

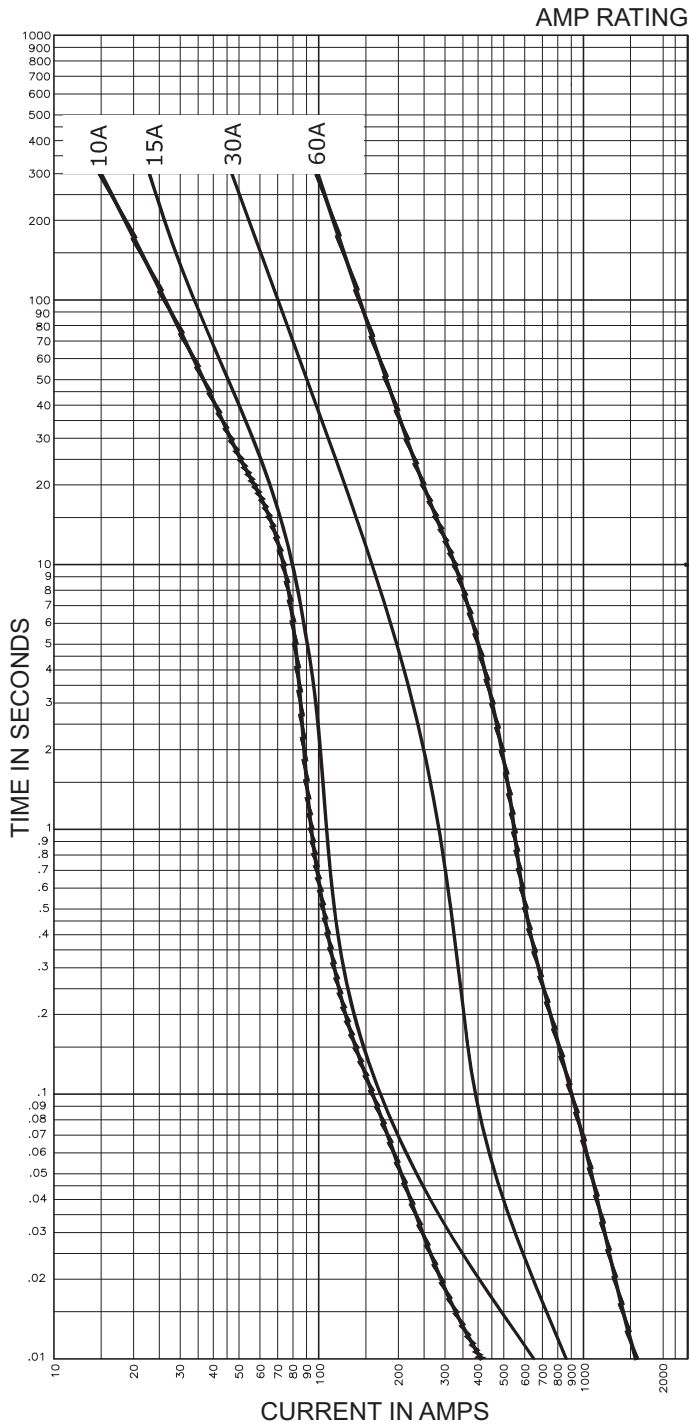
**Dimensions — in**



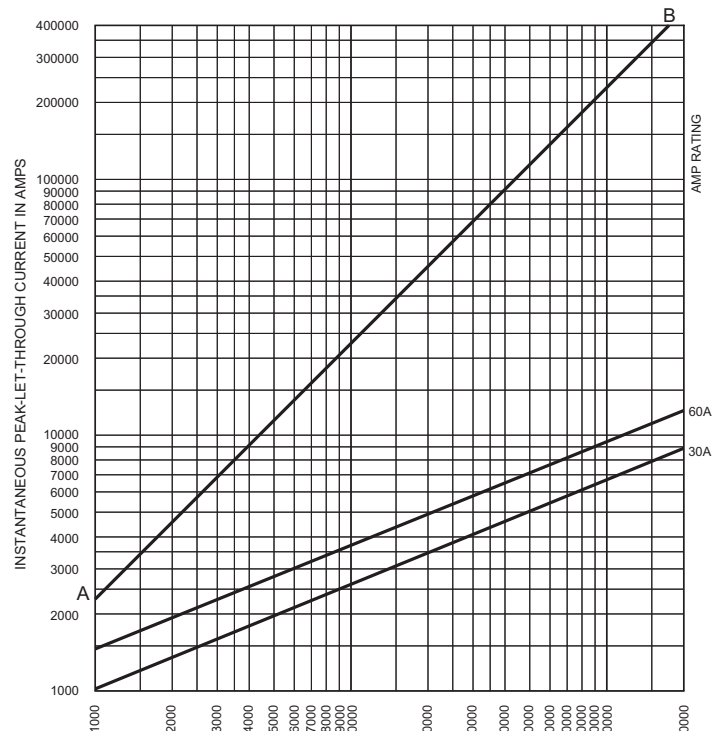
**Time-current curves - average melt**  
**1/10 to 8 amps**



**Time-current curves - average melt**  
**10 to 60 amps**



**Current-limitation curves**



**Current-limiting effects**

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

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