

Fusetron™ 600V Class RK5

FRS-R — 600 Vac/300 Vdc, 65-600 A, dual element, time-delay fuses



Catalog symbol:

- FRS-R-(amp)

Description:

Advanced protection, energy efficient Class RK5 dual element, current-limiting, time-delay fuses. Time-delay – 10 seconds (minimum) at 500% of rated current.

Specifications:

Ratings

- Volts — 600Vac, 300Vdc
- Amps — 65-600A
- Interrupting rating
 - 200 kA Vac RMS Sym
 - 20 kA 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) | | |
|------------------------|-----------|-----------|
| FRS-R-65 | FRS-R-125 | FRS-R-350 |
| FRS-R-70 | FRS-R-150 | FRS-R-400 |
| FRS-R-75 | FRS-R-175 | FRS-R-450 |
| FRS-R-80 | FRS-R-200 | FRS-R-500 |
| FRS-R-90 | FRS-R-225 | FRS-R-600 |
| FRS-R-100 | FRS-R-250 | |
| FRS-R-110 | FRS-R-300 | |

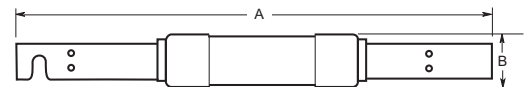
Carton quantity

| Amp ratings | Carton Qty. |
|-------------|-------------|
| 65-100 | 1 |
| 101-200 | 1 |
| 201-400 | 1 |
| 401-600 | 1 |

Features:

- Provides motor overload, ground fault and short-circuit protection. When used in circuits subject to surge currents such as those caused by motors, transformers and other inductive components, these fuses can be sized close to full-load amps to give maximum overcurrent protection
- The time-delay feature makes it possible to use fuse amp ratings which are much smaller than those of non-time delay fuses. Considerable cost saving occurs by permitting the use of smaller size switches, panels and fuses themselves
- Provides a good degree of short-circuit protection (greater current-limitation) to help protect downstream components from high fault currents
- Gives motor running back-up protection to motors without extra cost
- Helps protect motors against burnout from overloads and single-phasing when sized properly
- Simplifies and improves blackout prevention (selective coordination ratios)
- 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

Dimensions - in:



| Amp ratings | A | B |
|-------------|-------|------|
| 65-100 | 7.88 | 1.11 |
| 110-200 | 9.63 | 1.61 |
| 225-400 | 11.63 | 2.34 |
| 450-600 | 13.38 | 2.88 |

Recommended fuse blocks

| Fuse amps | 1-Pole | 2-Pole | 3-Pole |
|-----------|-------------|-------------|-------------|
| 70-100 | RM60100-1CR | RM60100-2CR | RM60100-3CR |
| 110-200 | RM60200-1CR | RM60200-2CR | RM60200-3CR |
| 225-400 | RM60400-1CR | RM60400-2CR | RM60400-3CR |
| 450-600 | RM60600-1CR | RM60600-2CR | RM60100-3CR |

For additional information on the RM600 volt fuse blocks, see data sheet No. 10489.

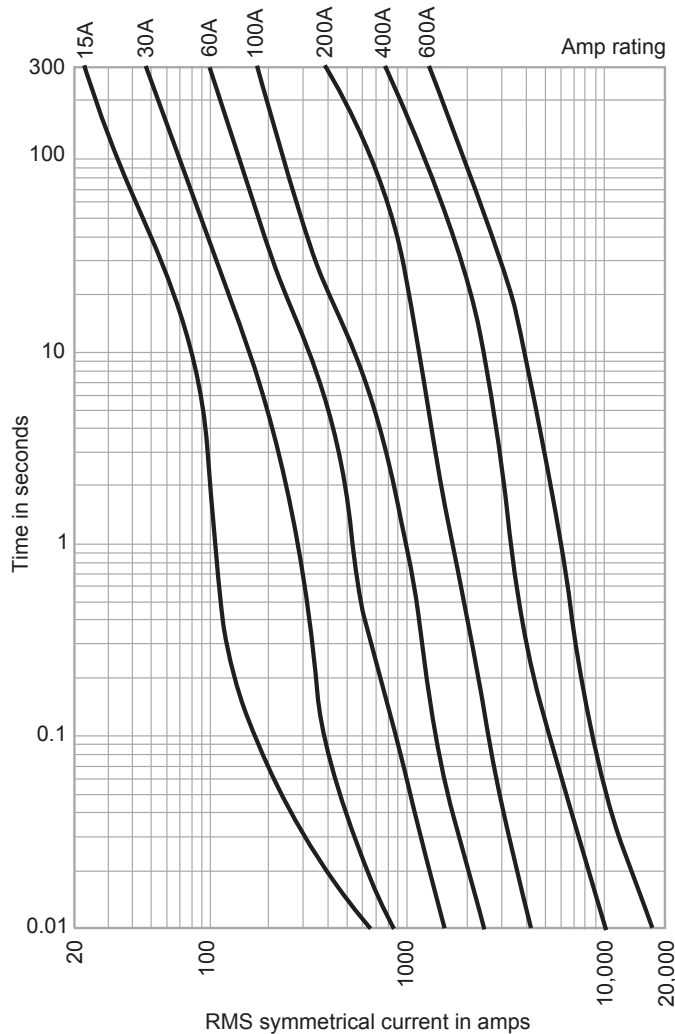
Fuse reducers for class R fuses

| Equipment fuse clips | Desired fuse (case) size | Catalog numbers (pairs) 600 V |
|----------------------|--------------------------|-------------------------------|
| 200 A | 100 A | NO.2621-R |
| 400 A | 100 A | NO.2641-R |
| | 200 A | NO.642-R |
| | 100 A | NO.2661-R |
| 600 A | 200 A | NO.2662-R |
| | 400 A | NO.2664-R† |

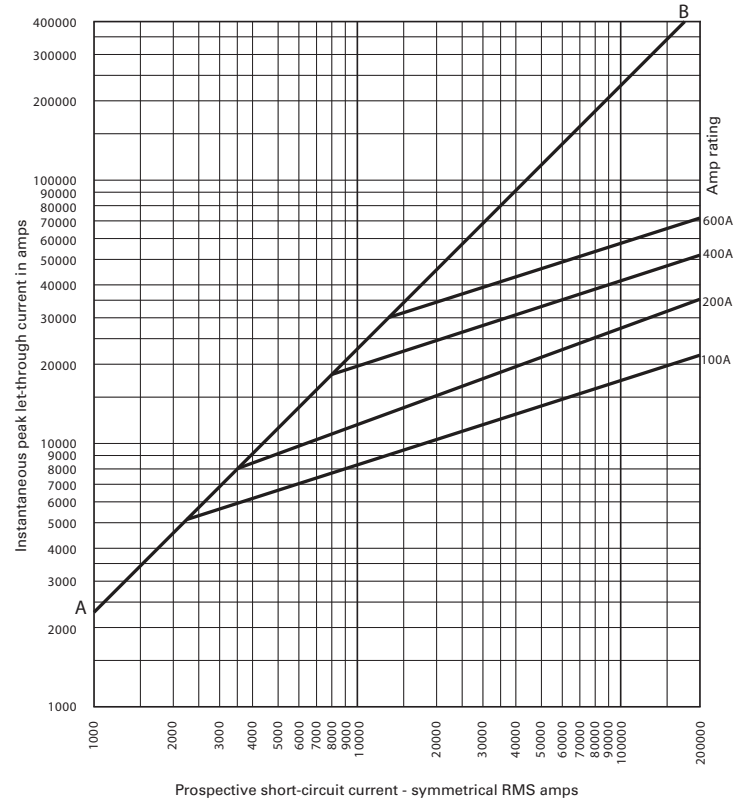
† Single reducer only (pair not required).

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

Time-current curves - average melt



Current-Limitation curves



Current-limiting effects

| Prop. S.C.C. | Let-through current (apparent RMS symmetrical vs. fuse rating) | | | |
|--------------|--|--------|--------|--------|
| | 100A | 200A | 400A | 600A |
| 5000 | 3000 | 4000 | 5000 | 5000 |
| 10,000 | 4000 | 5000 | 9000 | 10,000 |
| 15,000 | 4000 | 6000 | 10,000 | 14,000 |
| 20,000 | 5000 | 7000 | 11,000 | 15,000 |
| 25,000 | 5000 | 7000 | 12,000 | 17,000 |
| 30,000 | 5000 | 8000 | 13,000 | 18,000 |
| 35,000 | 5000 | 8000 | 13,000 | 18,000 |
| 40,000 | 6000 | 9000 | 14,000 | 19,000 |
| 50,000 | 6000 | 9000 | 14,000 | 20,000 |
| 60,000 | 6000 | 10,000 | 15,000 | 22,000 |
| 70,000 | 7000 | 11,000 | 17,000 | 23,000 |
| 80,000 | 7000 | 12,000 | 17,000 | 23,000 |
| 90,000 | 7000 | 12,000 | 17,000 | 24,000 |
| 100,000 | 8000 | 13,000 | 18,000 | 25,000 |
| 150,000 | 9000 | 14,000 | 21,000 | 27,000 |
| 200,000 | 9000 | 16,000 | 23,000 | 32,000 |

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