

Fusetron®

Dual-Element, Time-Delay Fuses

Class RK5 -- 600 Volt

FRS-R

65-600A



Catalog Symbol: FRS-R

Dual-Element, Time-Delay – 10 seconds (minimum) at 500% rated current

Current-Limiting

Ampere Rating: 65 to 600A †

Voltage Rating: 600Vac (or less)

Interrupting Rating: 200,000A RMS Sym.

dc Ratings (20,000AIC @ 300Vdc)

Agency Information:

UL Listed, Std. 248-12, Class RK5, Guide JDDZ, File E4273

CSA Certified, C22.2 No. 248.12, Class 1422-01, File 53787

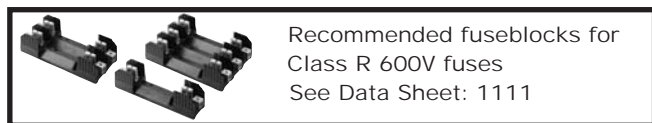
Catalog Numbers

| | | |
|-----------|-----------|-----------|
| FRS-R-65 | FRS-R-135 | FRS-R-325 |
| FRS-R-70 | FRS-R-150 | FRS-R-350 |
| FRS-R-75 | FRS-R-175 | FRS-R-400 |
| FRS-R-80 | FRS-R-200 | FRS-R-450 |
| FRS-R-90 | FRS-R-225 | FRS-R-500 |
| FRS-R-100 | FRS-R-250 | FRS-R-600 |
| FRS-R-110 | FRS-R-275 | — |
| FRS-R-125 | FRS-R-300 | — |

Carton Quantity and Weight

| Ampere Ratings | Carton Qty. | Weight* | |
|----------------|-------------|---------|-------|
| | | Lbs. | Kg. |
| 65-100 | 1 | 0.54 | 0.245 |
| 101-200 | 1 | 1.22 | 0.544 |
| 201-400 | 1 | 3.00 | 1.359 |
| 401-600 | 1 | 5.00 | 2.268 |

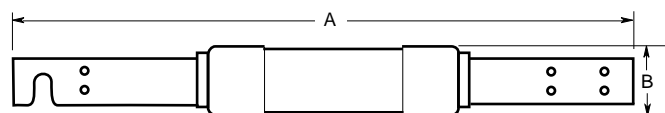
*Weight per carton.



Recommended fuseblocks for Class R 600V fuses
See Data Sheet: 1111

† To obtain information for 0-60A, access Data Sheet: 1017

Dimensional Data



Dimensions (inches)

| Ampere Ratings | A | B |
|----------------|-----------------|----------------|
| 65-100 | 7.88 (± 0.062) | 1.11 (± 0.020) |
| 110-200 | 9.63 (± 0.062) | 1.61 (± 0.020) |
| 225-400 | 11.63 (± 0.094) | 2.34 (± 0.020) |
| 450-600 | 13.38 (± 0.094) | 2.88 (± 0.020) |

General Information:

- 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 amperes to give maximum overcurrent protection.
- The time-delay feature makes it possible to use fuse ampere 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 costs.
- 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.

Fuse Reducers For Class R Fuses

| Equipment Fuse Clips | Desired Fuse (Case) Size | Catalog Number (Pairs) 600V |
|----------------------|--------------------------|-----------------------------|
| 200A | 100A | No. 2621-R |
| | 100A | No. 2641-R |
| 400A | 200A | No. 642-R |
| | 100A | No. 2661-R |
| 600A | 200A | No. 2662-R |
| | 400A | No. 2664-R* |

*Single reducer only (pair not required).

For additional information, see Data Sheet: 1118.

CE CE logo denotes compliance with European Union Low Voltage Directive (50-1000Vac, 75-1500Vdc). Refer to Data Sheet: 8002 or contact Bussmann Application Engineering at 636-527-1270 for more information.

Fusetron®

Dual-Element, Time-Delay Fuses

Class RK5 — 600 Volt

FRS-R
65-600A

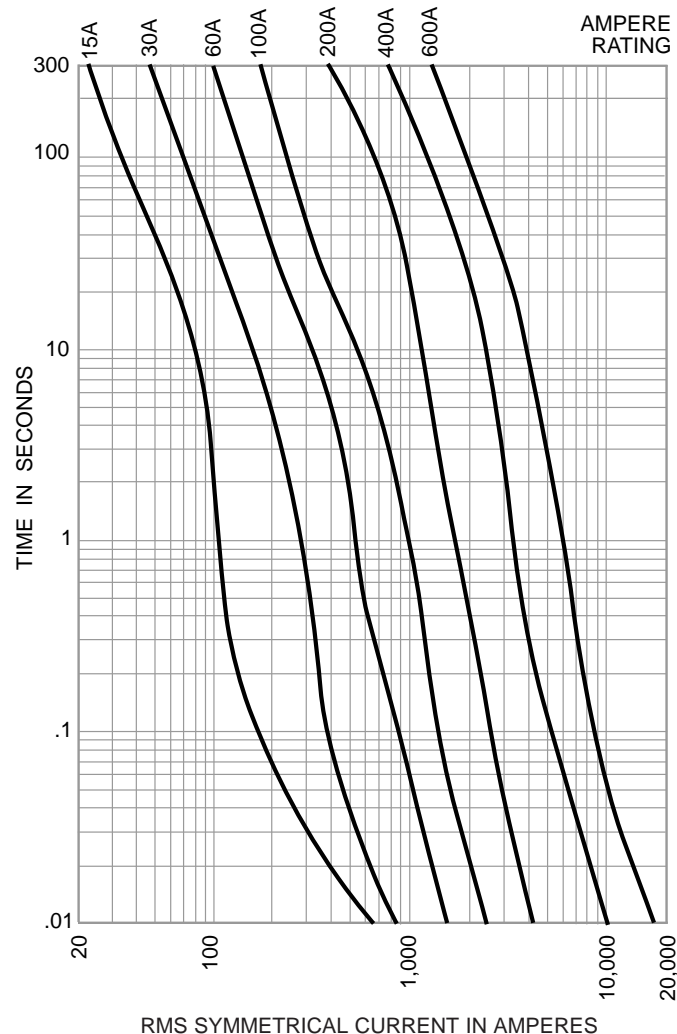
Current-Limiting Effects

FRS-R Apparent RMS Symmetrical Let-Through Current

| Prospective SCC | 30A | 60A | 100A | 200A | 400A | 600A |
|-----------------|-------|-------|-------|--------|--------|--------|
| 5,000 | 1,400 | 2,000 | 2,900 | 3,950 | 5,000 | 5,000 |
| 10,000 | 1,850 | 2,650 | 3,600 | 5,100 | 8,550 | 10,000 |
| 15,000 | 2,200 | 3,200 | 4,100 | 5,950 | 9,750 | 13,700 |
| 20,000 | 2,450 | 3,550 | 4,500 | 6,600 | 10,700 | 15,000 |
| 25,000 | 2,700 | 3,900 | 4,850 | 7,150 | 11,500 | 16,100 |
| 30,000 | 2,900 | 4,280 | 5,150 | 7,650 | 12,200 | 17,050 |
| 35,000 | 3,100 | 4,400 | 5,400 | 8,100 | 12,800 | 17,900 |
| 40,000 | 3,300 | 4,760 | 5,600 | 8,500 | 13,400 | 18,700 |
| 50,000 | 3,550 | 5,150 | 6,050 | 9,250 | 14,400 | 20,050 |
| 60,000 | 3,800 | 5,500 | 6,400 | 9,850 | 15,250 | 21,250 |
| 80,000 | 4,300 | 6,100 | 7,000 | 10,950 | 16,750 | 23,300 |
| 100,000 | 4,500 | 6,600 | 7,550 | 11,900 | 18,000 | 25,000 |
| 150,000 | 5,200 | 8,000 | 8,600 | 13,800 | 20,550 | 28,450 |
| 200,000 | 5,800 | 8,500 | 9,400 | 15,350 | 22,550 | 31,200 |

For information on previous design FRS-R, 70-600, see Data Sheet: 1153.

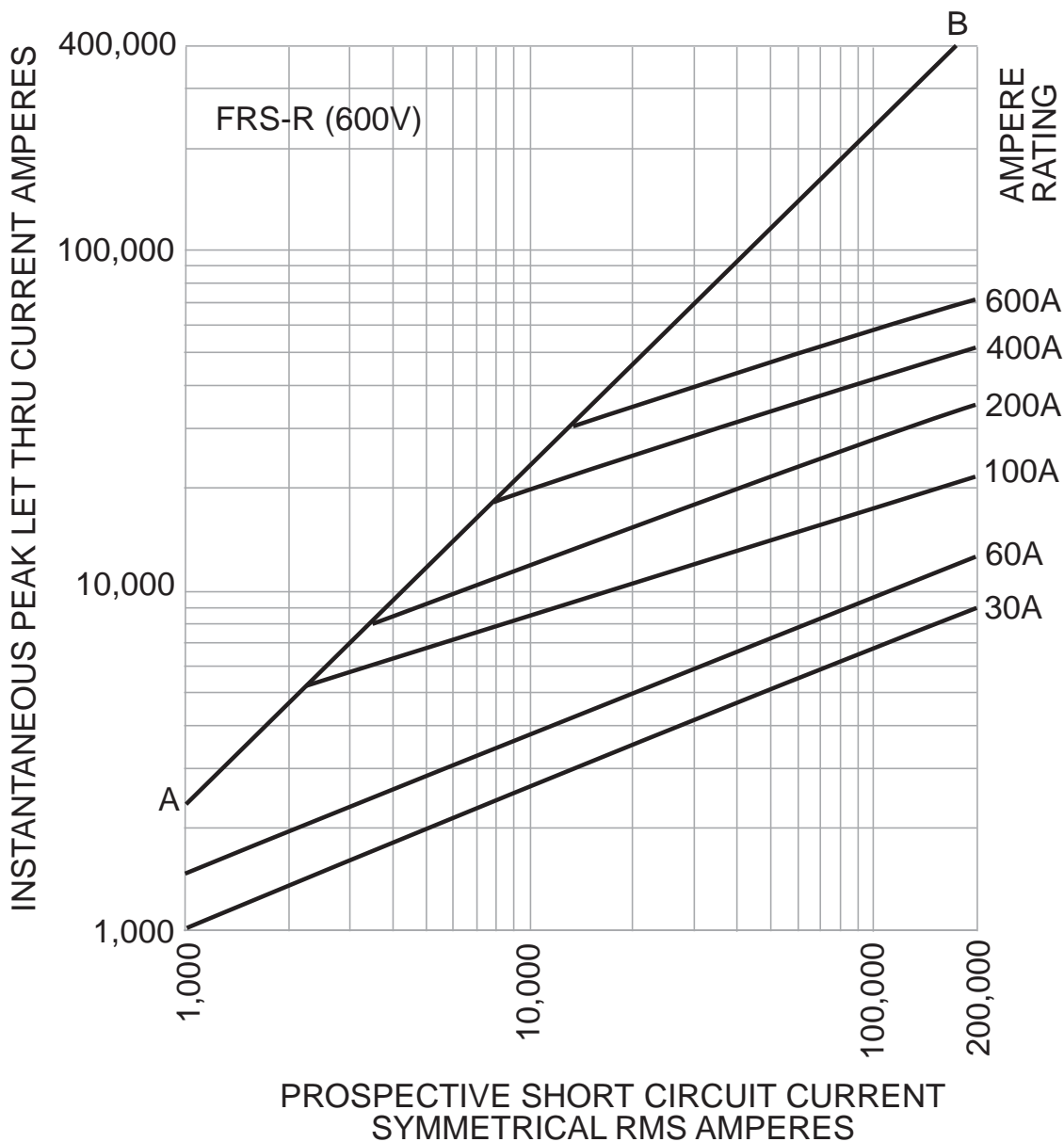
Time-Current Characteristic Curves—Average Melt



Fusetron®
 Dual-Element, Time-Delay Fuses
 Class RK5 — 600 Volt

FRS-R
 65-600A

Current-Limitation Curves



The only controlled copy of this Data Sheet is the electronic read-only version located on the Bussmann Network Drive. All other copies of this document are by definition uncontrolled. This bulletin is intended to clearly present comprehensive product data and provide technical information that will help the end user with design applications. Bussmann reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Bussmann also reserves the right to change or update, without notice, any technical information contained in this bulletin. Once a product has been selected, it should be tested by the user in all possible applications.