

## FRS-R – 600Vac/300Vdc, 65-600A, Dual Element, Time-Delay Fuses



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

**Catalog Symbol:** FRS-R-(amp)

**Ratings:**

- Volts – 600Vac, 300Vdc
- Amps – 65-600A
- IR – 200kA Vac RMS Sym.
- 20kA Vdc

**Agency Information:**

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

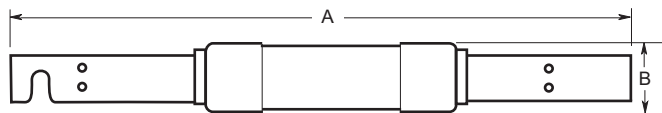
**Catalog Numbers (amps)**

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 and Weight**

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

**Dimensions - in**



Amp Ratings	A	B
65-100	7.88 (± 0.062)	1.11 (± 0.02)
110-200	9.63 (± 0.062)	1.61 (± 0.02)
225-400	11.63 (± 0.094)	2.34 (± 0.02)
450-600	13.38 (± 0.094)	2.88 (± 0.02)

**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.

**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 RM Series of 600 volt fuse blocks, see product brochure # 3192.

**Fuse Reducers For Class R Fuses**

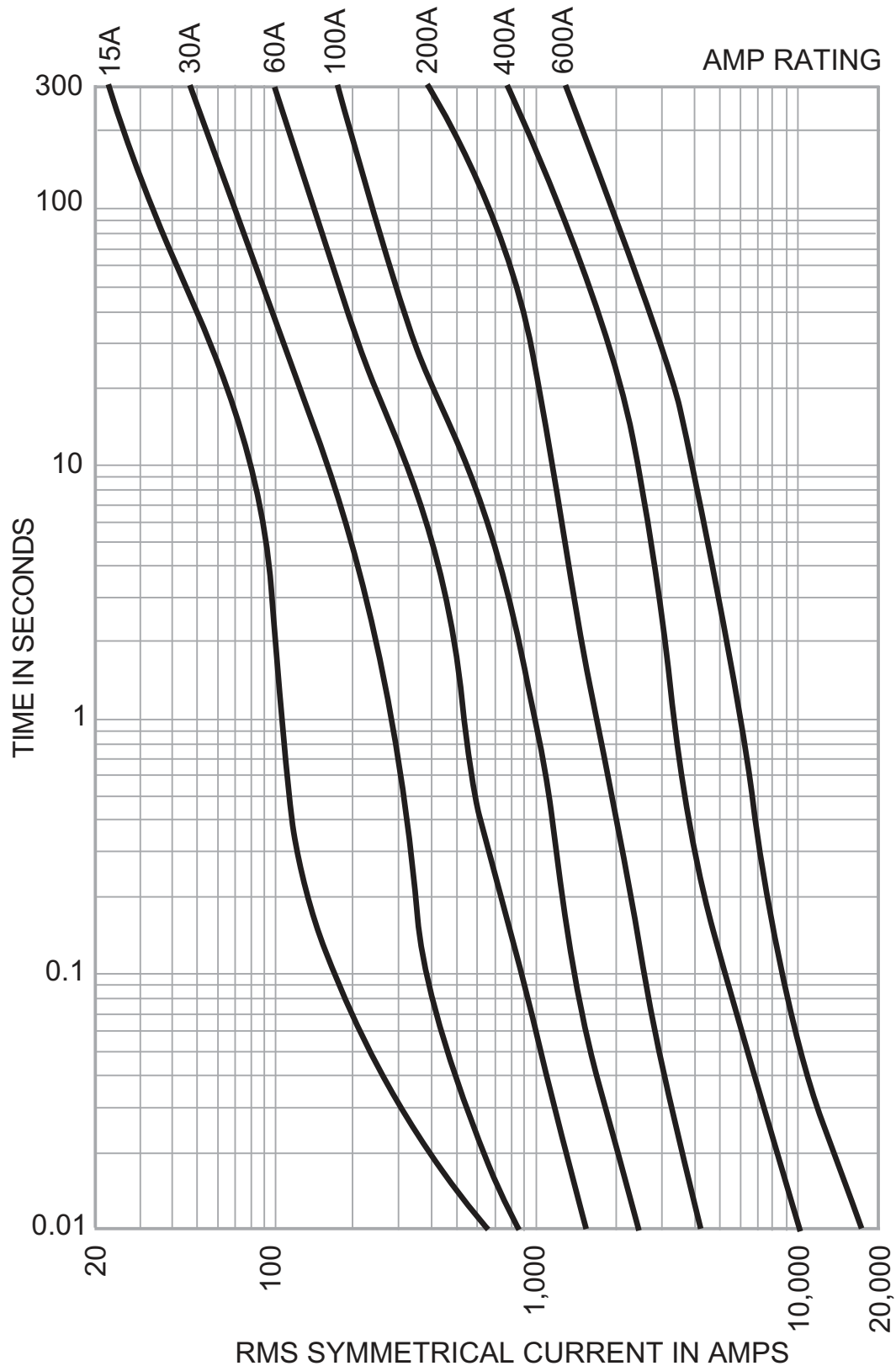
Equipment Fuse Clips	Desired Fuse (Case) Size	Catalog Numbers (Pairs) 600V
200A	100A	NO.2621-R
	200A	NO.2641-R
400A	100A	NO.642-R
	200A	NO.2661-R
600A	200A	NO.2662-R
	400A	NO.2664-R†

† Single reducer only (pair not required).

For additional information on Class R fuse reducers, see Data Sheet # 1118.

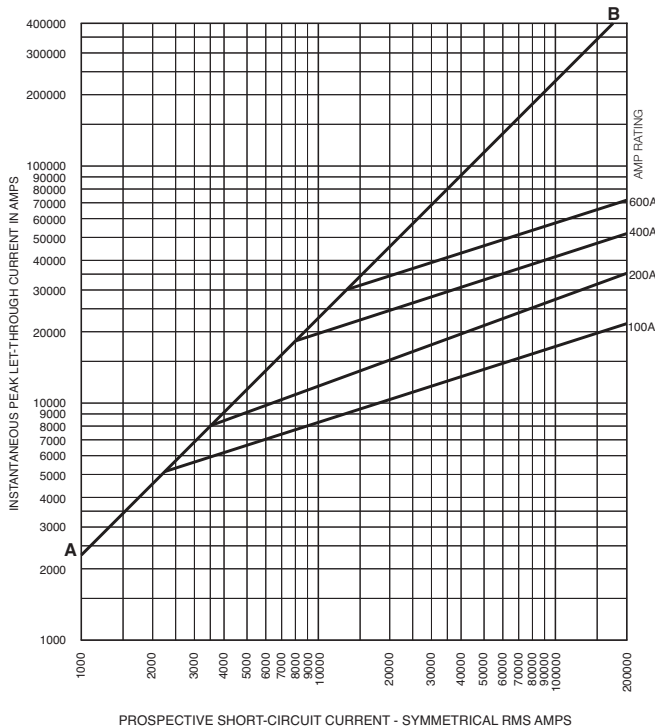
## FRS-R – 600Vac/300Vdc, 65-600A, Dual Element, Time-Delay Fuses

Time-Current Curves - Average Melt



## FRS-R – 600Vac/300Vdc, 65-600A, Dual Element, Time-Delay Fuses

### Current-Limitation Curves



### Current-Limiting Effects

Prosp. 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

The only controlled copy of this Data Sheet is the electronic read-only version located on the Cooper 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. Cooper Bussmann reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Cooper 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.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.