



# ELLIOTT ELECTRIC SUPPLY

We Deliver...Lower Cost, Quality Products, & Personal Service

3804 South Street  
75964-7263, TX Nacogdoches  
Phone: 936-569-7941  
Fax: 936-560-4685



## FRNR50 50A 250V TD Class RK5 Dual Elem Fuse-Fusetron

*Bussmann Fuses*

Catalog Number	FRNR50
Manufacturer	Bussmann Fuses
Description	Time Delay Fusetron Fuse, RK5 Class Fuse, Dual Element Fuse, 10 S @ 500% Response Time, Ferrule End X Ferrule End Connection, 50 A, 250 V Ac;125 V DC, Ferrule Terminal, 0.81 In Diameter, 3 In Overall Length, 0.12 LB
Weight per unit	0.1200 (lbs/each)
Product Category	Dual Element

### Features

amperage rating	50 A
class	RK-5
connection	Ferrule End X Ferrule End
element	Dual

### Dimensions and Weight

Size	0.81 In Diameter X 3.00 In Length
------	-----------------------------------

### Descriptions

Description	50A 250V TD CLASS RK5 DUAL ELEM FUSE-FUSETRON
-------------	---

### Manufacturer Information

GTIN	00051712101806
sub brand	Fusetron
UPC	051712101806

### Taxonomies, Classifications, and Categories

Category Description	Fuses & Fuse Accessories
Type	Current Limiting, Time Delay

### Packaging

Carton	10
Weight Per each	0.12

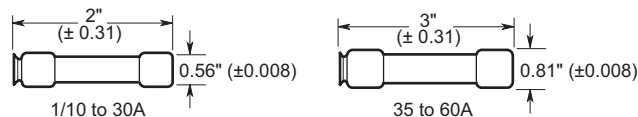
### Uses, Certifications, and Standards

standard	UL 248-12, CSA, CE
----------	--------------------

## FRN-R – 250Vac/125Vdc, 1/10-60A, Dual Element, Time-Delay Fuses



### Dimensions - in



**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 seconds (minimum) at 500% of rated current (8 seconds for 1/10-30A sizes).

**Catalog Symbol:** FRN-R-(amp) (non-indicating)  
FRN-R-(amp)ID (indicating)

### Ratings:

- Volts – 250Vac, 125Vdc
- Amps – 1/10-60 Amps
- IR – 200kA Vac RMS Sym.
- 20kA Vdc

### Agency Information:

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

### Catalog Numbers (amps) – Non-indicating fuses

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

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

### Carton Quantity and Weight

Amp Rating	Carton Qty.
1/10-15	10
17 1/2-30	10
35-60	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.

### Recommended Fuse Blocks

Fuse Amps	1-Pole	2-Pole	3-Pole
0-30	H25030-1	H25030-2	H25030-3
	R25030-1	R25030-2	R25030-3
35-60	H25060-1	H25060-2	H25060-3
	R25060-1	R25060-2	R25060-3

For additional information on the 250 volt fuse blocks, see Data Sheets # 1110 (R250), # 1112 (H250).

### Fuse Reducers For Class R Fuses

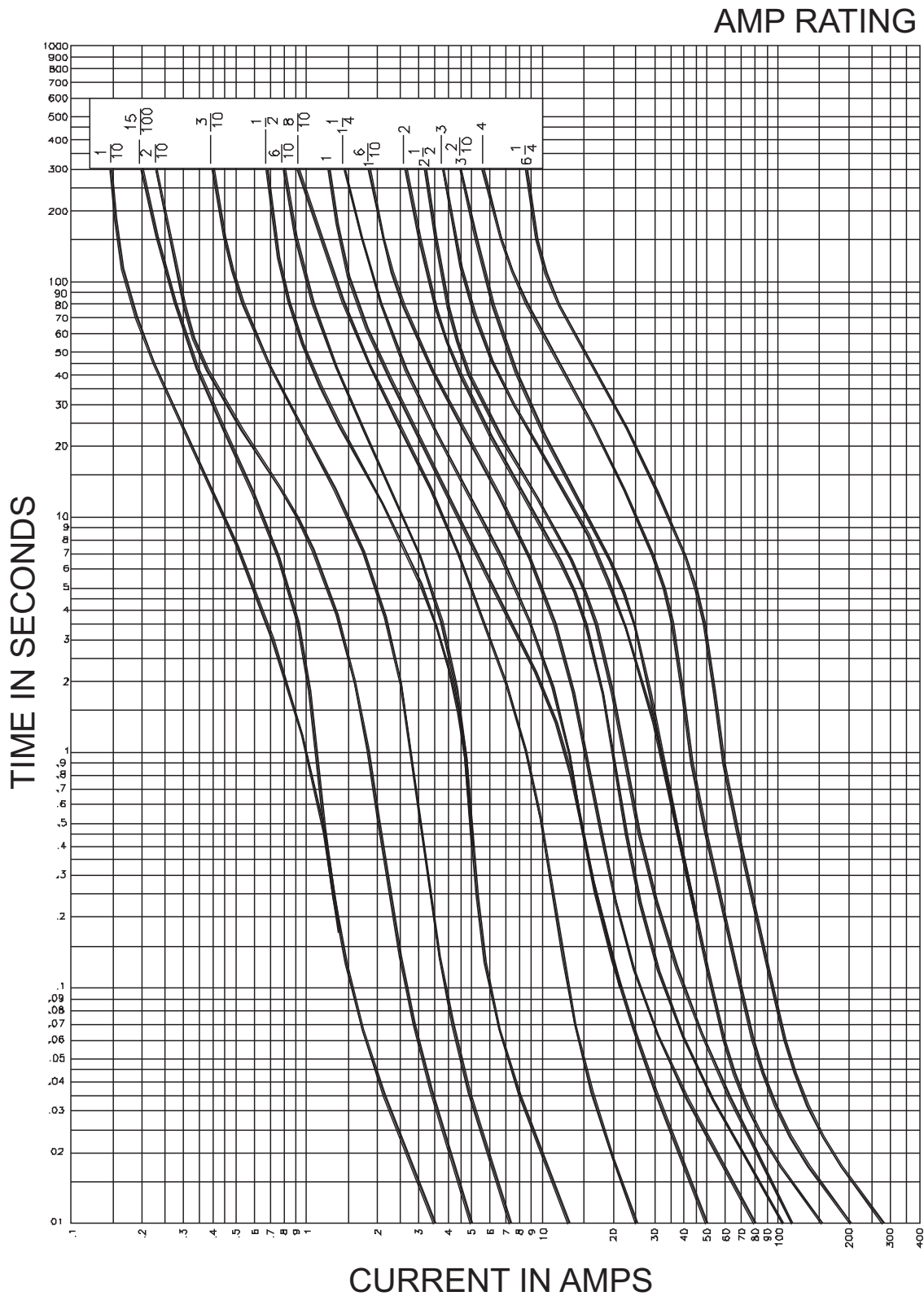
Equipment	Desired Fuse (Case) Size	Catalog Numbers (Pairs) 250V
60A	30A	NO.263-R
100A	30A	NO.213-R
	60A	NO.216-R
200A	60A	NO.226-R

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

## FRN-R — 250Vac/125Vdc, 1/10-60A, Dual Element, Time-Delay Fuses

### Time-Current Curves - Average Melt

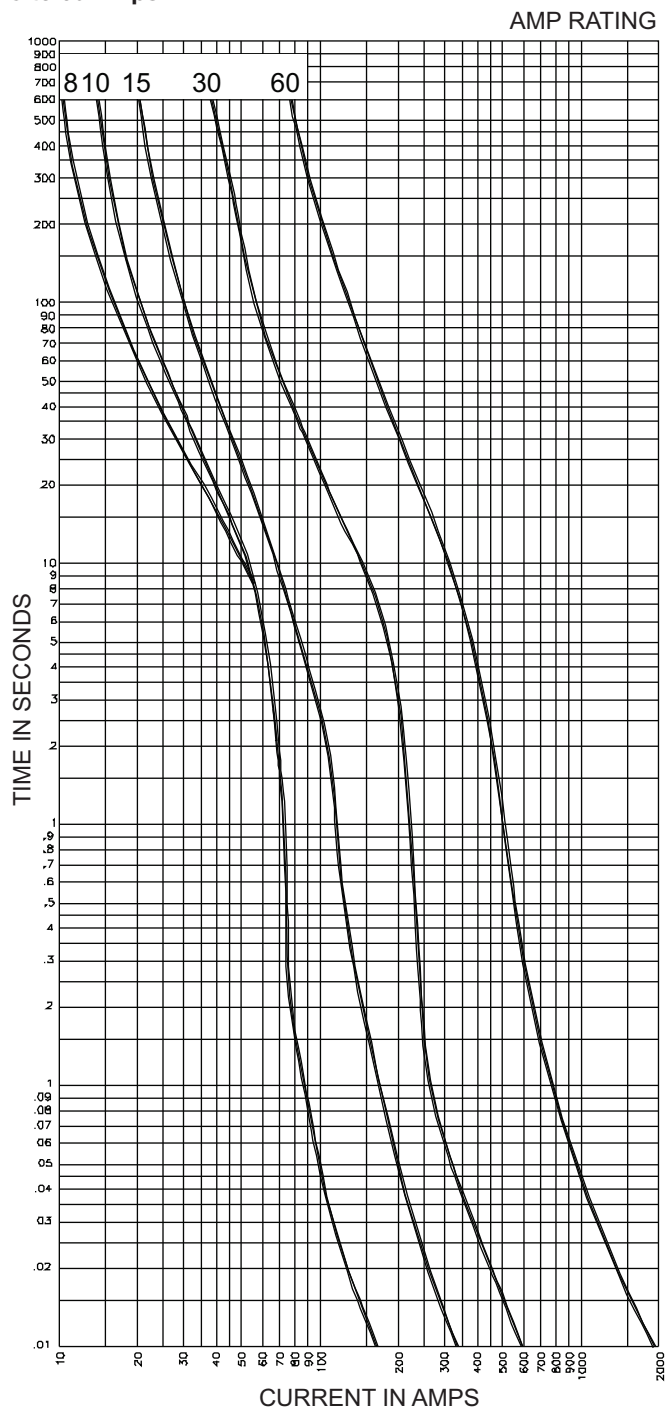
1/10 to 6 1/4 Amps



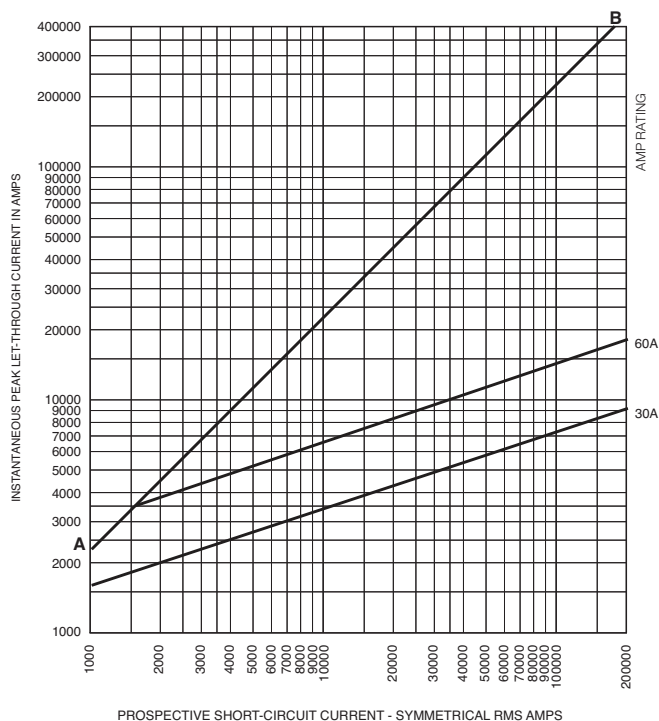
## FRN-R – 250Vac/125Vdc, 1/10-60A, Dual Element, Time-Delay Fuses

### Time-Current Curves - Average Melt

8 to 60 Amps



### Current-Limitation Curves



### Current-Limiting Effects

Prop. S.C.C.	Let-Through Current (Apparent RMS Symmetrical Vs. Fuse Rating)	
	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

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.