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# Fusetron™ FRN-R Class RK5 250Vac/125Vdc 1/10-60A, dual element, time-delay fuses



### Catalog symbols:

- · FRN-R- (non-indicating)
- · FRN-R-\_ID (indicating)

#### **Description:**

Eaton Bussmann® series advanced protection, energy efficient FRN-R 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).

#### **Specifications:**

#### Ratings

- Volts
  - 250Vac
  - 125Vdc
- · Amps 1/10-60A
- · Interrupting rating
  - 200kA Vac RMS Sym.
  - 20kA Vdc

## Agency information

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



| Catalog numbers (amps) — non-indictaing fuses |              |               |  |  |
|---|--------------|---------------|--|--|
| FRN-R-1/10                                    | FRN-R-1-8/10 | FRN-R-8*      |  |  |
| FRN-R-1/8                                     | FRN-R-2      | FRN-R-9*      |  |  |
| FRN-R-15/100                                  | FRN-R-2-1/4  | FRN-R-10*     |  |  |
| FRN-R-2/10                                    | FRN-R-2-1/2  | FRN-R-12*     |  |  |
| FRN-R-1/4                                     | FRN-R-2-8/10 | FRN-R-15*     |  |  |
| FRN-R-3/10                                    | FRN-R-3      | FRN-R-17-1/2* |  |  |
| FRN-R-4/10                                    | FRN-R-3-2/10 | FRN-R-20*     |  |  |
| FRN-R-1/2                                     | FRN-R-3-1/2  | FRN-R-25*     |  |  |
| FRN-R-6/10                                    | FRN-R-4      | FRN-R-30*     |  |  |
| FRN-R-8/10                                    | FRN-R-4-1/2  | FRN-R-35*     |  |  |
| FRN-R-1                                       | FRN-R-5      | FRN-R-40*     |  |  |
| FRN-R-1-1/8                                   | FRN-R-5-6/10 | FRN-R-45*     |  |  |
| FRN-R-1-1/4                                   | FRN-R-6      | FRN-R-50*     |  |  |
| FRN-R-1-4/10                                  | FRN-R-6-1/4  | FRN-R-60*     |  |  |
| FRN-R-1-1/2                                   | FRN-R-7      |               |  |  |
| FRN-R-1-6/10                                  | FRN-R-7-1/2  |               |  |  |

 $<sup>^{\</sup>ast}$  Open fuse indication available by inserting the sufix "ID." E.g., FRN-R-15ID.

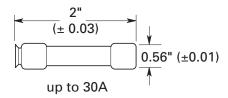
#### **Carton Quantity:**

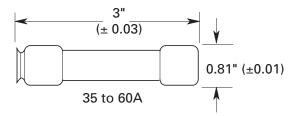
| Amp rating | Carton qty. |
|------------|-------------|
| 1/10 – 60  | 10          |

#### 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

## **Dimensions - in:**





# **Recommended fuse blocks:**

| Fuse amps | 1-pole      | 2-pole      | 3-pole      |
|-----------|-------------|-------------|-------------|
| up to 30  | RM25030-1_  | RM25030-2_  | RM25030-3_  |
| 35 to 60  | RM25060-1CR | RM25060-2CR | RM25060-3CR |

For additional information see data sheet no. 10289.

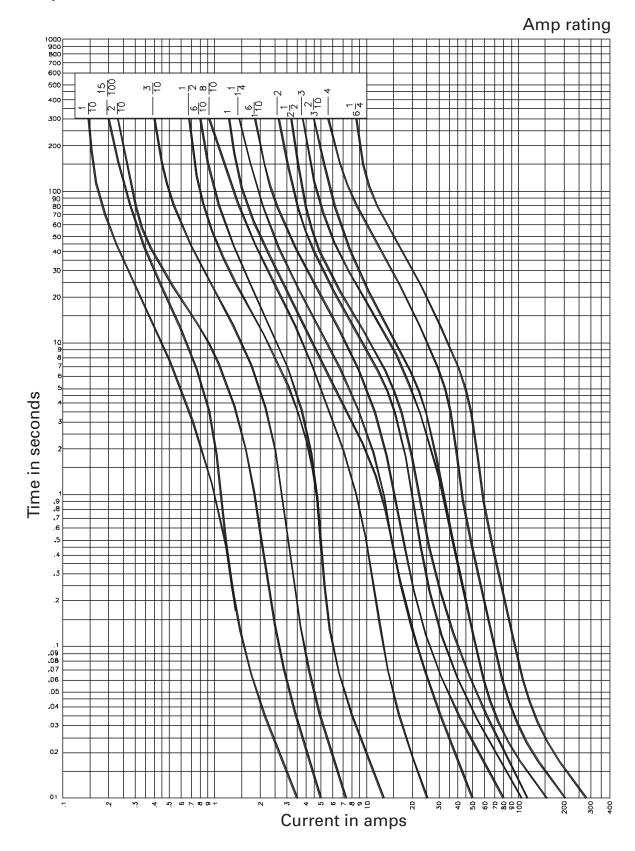
#### **Fuse reducers for Class R fuses**

| Fuer size | Amp size of fuse block or disconnect switch | Catalog no. |
|-----------|---|-------------|
| Fuse size | SWITCH                                      | (pairs)     |
| Up to 30A | 60A   | No.263-R    |
| Up to 30A | _ 1004                                      | No.213-R    |
| 35 to 60A | – 100A                                      | No.216-R    |
| 35 to 60A | 200A  | No.226-R    |

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

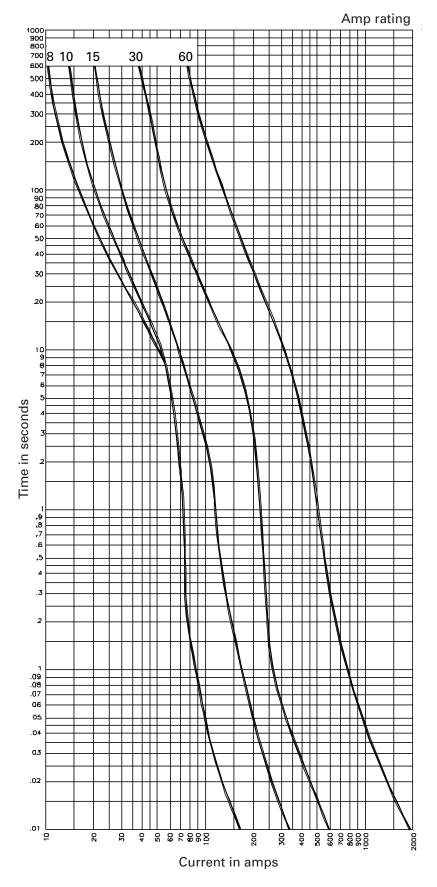
# Time-current curves — average melt:

1/10 to 6-1/4 amps

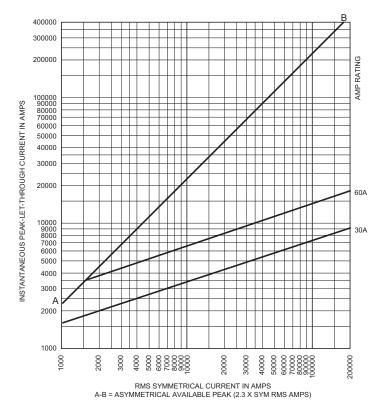


# Time-current curves — average melt:

8 to 60 amps



# **Current-limitation curves:**



# **Current-limiting effects:**

| Prosp. S.C.C. | Let-through current<br>(apparent RMS Sym. 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 |

FRN-R Class RK5 250Vac/125Vdc 1/10-60A, dual element, time-delay fuses

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