# 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 | |

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

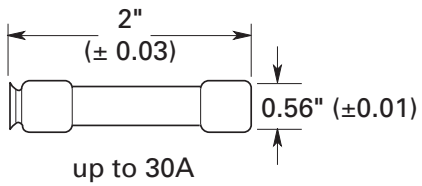
### Carton Quantity:

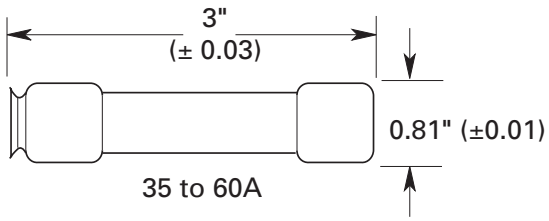
| Amp rating | Carton qty. |
|---|---|
| 1/10 – 60 | 10 |

## 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.

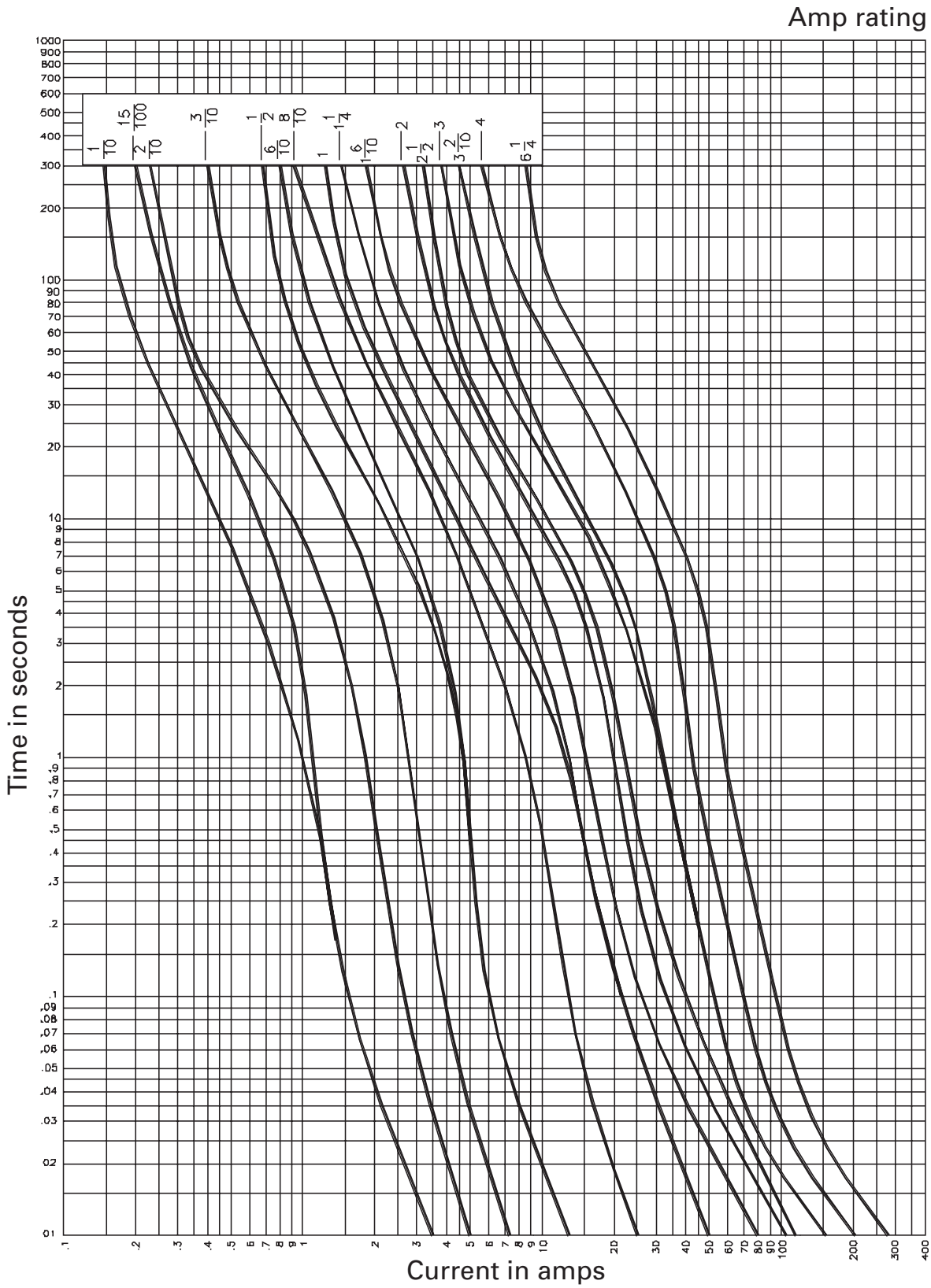
**Fuse reducers for Class R fuses**

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

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

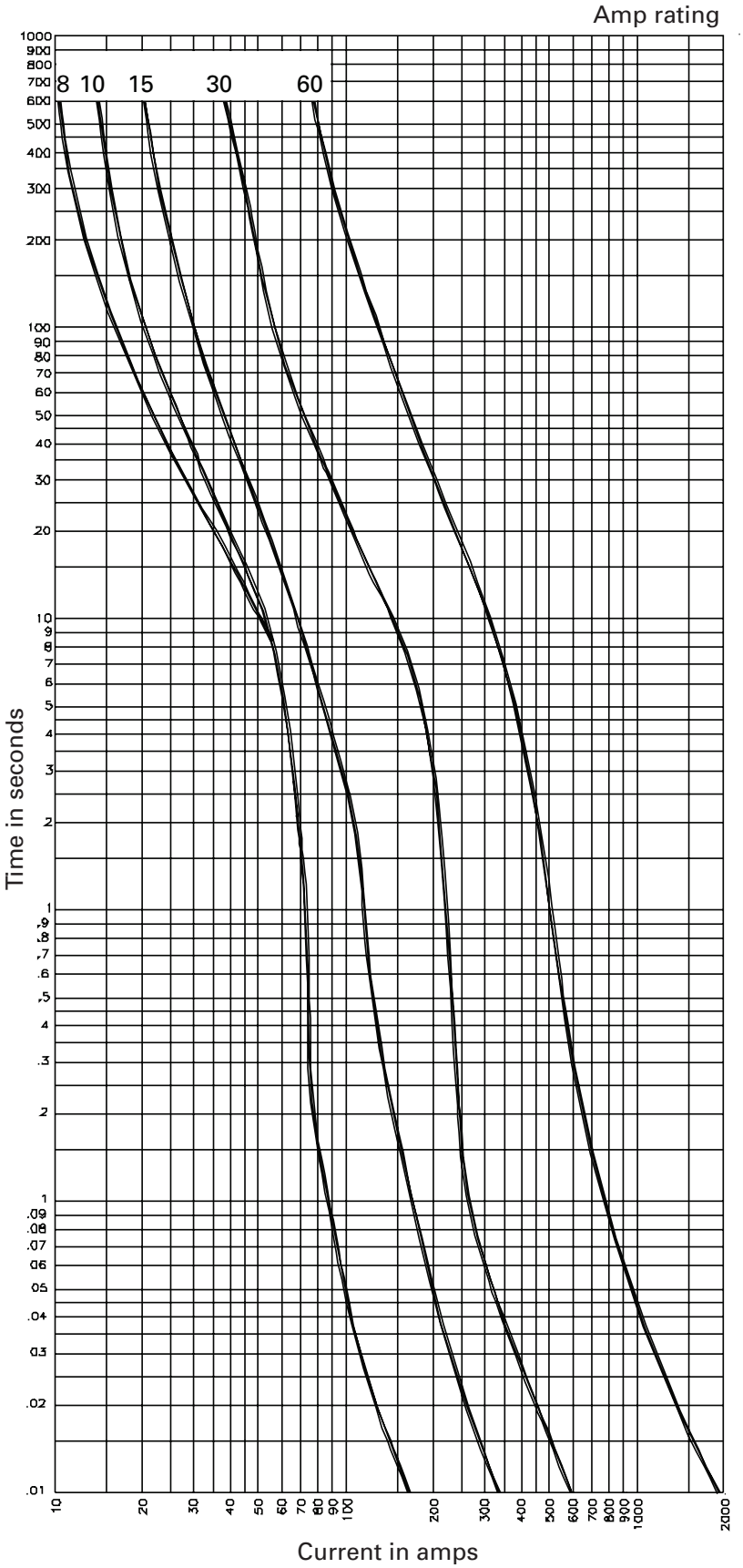
## Time-current curves — average melt:

### 1/10 to 6-1/4 amps

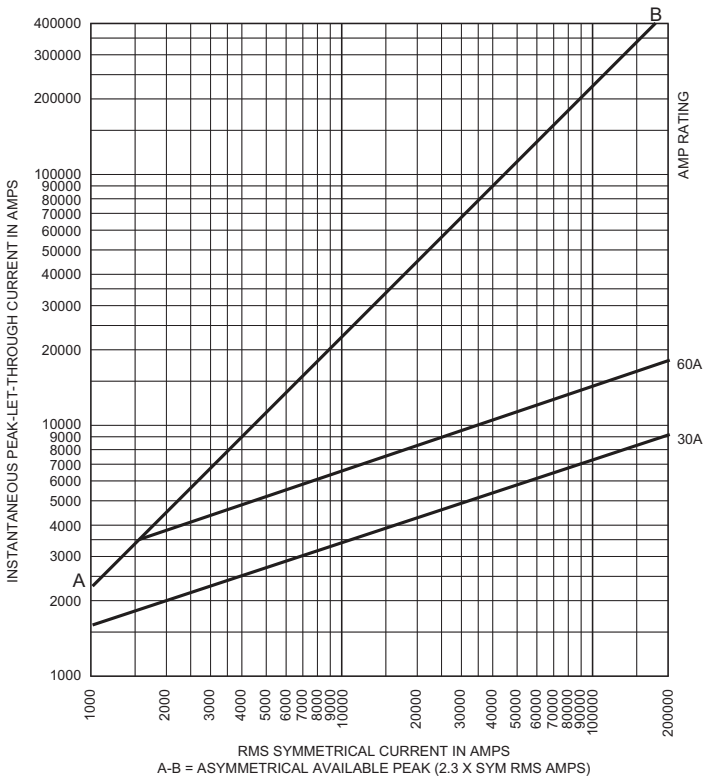


## Time-current curves — average melt:

**8 to 60 amps**



## Current-limitation curves:




## Current-limiting effects:

| Prosp. S.C.C. | Let-through current (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 |

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