

# UL 1077 DIN rail supplementary protectors

## FAZ circuit breakers

### PRODUCT OVERVIEW

#### Optimum and efficient protection



Optimum product quality, tested reliability and safety stand for best protection of personnel, installations and plant. Eaton's FAZ DIN rail mountable circuit breaker is designed for use in control panel applications.

#### Powerful offering for machine and system builders

The FAZ is available with B, C, D, K, S, and Z characteristics in accordance with UL 1077, CSA C22.2 No.235 and IEC 60947-2. These devices are CE marked.

#### Typical applications

Supplementary protection

- Control circuits
- Lighting
- Business equipment
- Appliances

#### Features

- Complete range of UL 1077 recognized DIN rail mounted miniature circuit breakers up to 63 A current rating
- Standard ratings of 10 kAIC up to 277/480 Vac
- Current limiting design provides fast short-circuit interruption that reduces the let-through energy, which can damage the circuit
- Suitable for supplementary protection
- Thermal-magnetic overcurrent protection
  - Six levels of short-circuit protection, categorized by B, C, D, K, S, and Z curves
- Trip-free design—breaker can not be defeated by holding the handle in the ON position
- Captive screws cannot be lost
- Fulfill UL 1077, CSA C22.2 No.235 and also IEC 60947-2 Standard
- Field-installable shunt trip and auxiliary switch subsequent mounting
- Module width of only 17.7 mm (per pole)
- Contact position indicator (red/green)
- Easy installation on DIN rail
- Possibility for sealing the toggle in ON or OFF position

#### FAZ complies with the latest national and international standards

##### Standards— supplementary protection

##### UL 1077, CSA C22.2 No. 235

Apply to supplementary protectors intended for use as overcurrent, or overvoltage or undervoltage protection within an appliance or other electrical equipment where branch circuit protection is already provided, or is not required.



##### RoHS

These devices are RoHS compliant.



##### VDE

Devices with B, C, and D curves are VDE compliant.



##### CCC

Devices with B, C, and D curves are CCC compliant.



##### ABS

These devices are ABS compliant.



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### PRODUCT OVERVIEW

#### Discover these advanced features

Breakers install on standard DIN rail

Available in one-, two-, three-, four-pole, 1+N and 3+N models

Color-coded indicator provides breaker status for easy troubleshooting



Captive Posidrive terminal screws with finger and back-of-hand protection (IP20)

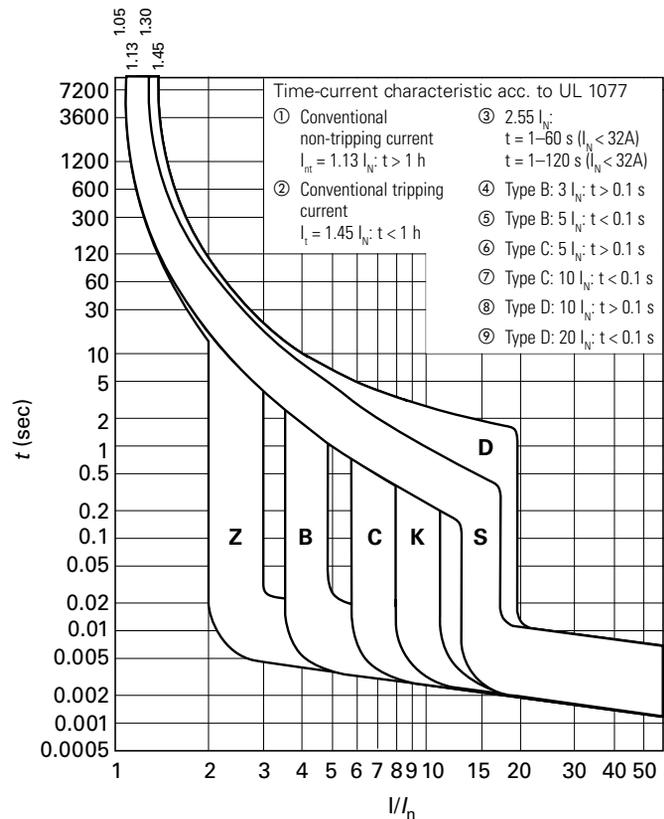
Trip-free design; breaker cannot be defeated by holding the handle in the ON position

Breaker information printed on the front of the device for quick identification

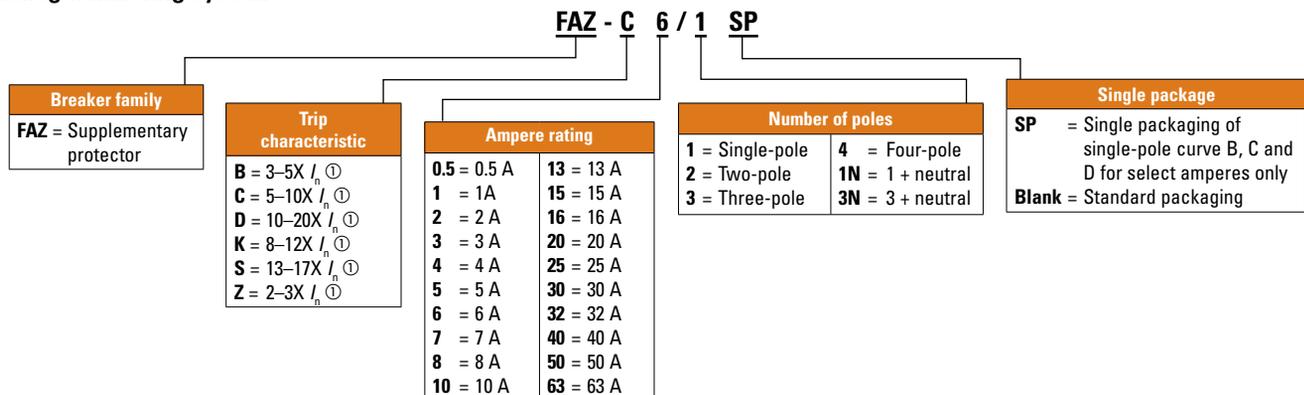
#### Six tripping curves to choose from

Eaton FAZ supplementary protectors are available with six different tripping characteristics, including Type B, C, D, K, S, and Z. Definitions for each trip curve are contained on the ordering pages and can be used to determine the optimal characteristic for your application. For example, low-level short-circuit faults in control wiring, such as PLCs, are best protected by devices with Type B trip characteristics (3–5X continuous rating of the device ( $I_n$ )).

Even though not required by NEC or CEC for supplementary protectors, Eaton's FAZ devices are current limiting, which means that they interrupt fault currents within one half cycle. Current limiting devices offer superior protection by reducing peak let-through current and energy.



#### Catalog numbering system



①  $I_n$  = Rated current for instantaneous trip characteristics.

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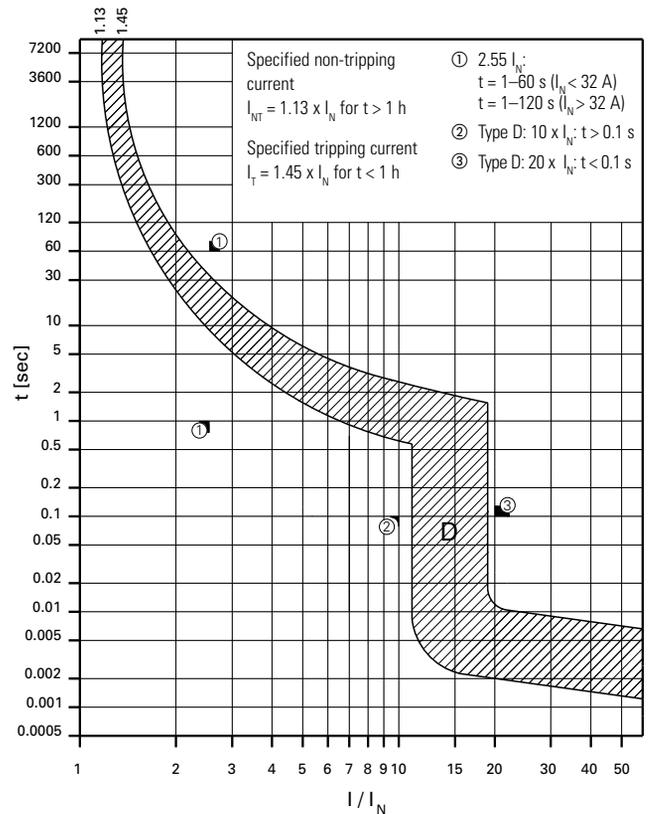
## FAZ circuit breakers

### PRODUCT SELECTION

#### FAZ product selection—D curve (10–20X $I_n$ current rating)

- Designed for highly inductive loads
- Response time of instantaneous trip: 10–20X  $I_n$  current rating
- UL recognized and CSA Certified as supplementary protectors
- For international and domestic use (conform to IEC 60947-2)
- UL file number 177451

Suitable for applications where high levels of inrush current are expected. Instantaneous trip is 10–20X rating of device ( $I_n$ ). The high magnetic trip point prevents nuisance tripping in high inductive applications such as motors, transformers and power supplies.



#### D curve (10–20X $I_n$ current rating)—designed for inductive loads ①



| Catalog number |               |            |            |            |                       |                      |
|----------------|---------------|------------|------------|------------|-----------------------|----------------------|
| Amperes        | Single-pole ② | Two-pole   | Three-pole | Four-pole  | Single-pole + neutral | Three-pole + neutral |
| 0.5            | FAZ-D0.5/1-SP | FAZ-D0.5/2 | FAZ-D0.5/3 | FAZ-D0.5/4 | FAZ-D0.5/1N           | FAZ-D0.5/3N          |
| 1              | FAZ-D1/1-SP   | FAZ-D1/2   | FAZ-D1/3   | FAZ-D1/4   | FAZ-D1/1N             | FAZ-D1/3N            |
| 2              | FAZ-D2/1-SP   | FAZ-D2/2   | FAZ-D2/3   | FAZ-D2/4   | FAZ-D2/1N             | FAZ-D2/3N            |
| 3              | FAZ-D3/1-SP   | FAZ-D3/2   | FAZ-D3/3   | FAZ-D3/4   | FAZ-D3/1N             | FAZ-D3/3N            |
| 4              | FAZ-D4/1-SP   | FAZ-D4/2   | FAZ-D4/3   | FAZ-D4/4   | FAZ-D4/1N             | FAZ-D4/3N            |
| 5              | FAZ-D5/1-SP   | FAZ-D5/2   | FAZ-D5/3   | FAZ-D5/4   | FAZ-D5/1N             | FAZ-D5/3N            |
| 6              | FAZ-D6/1-SP   | FAZ-D6/2   | FAZ-D6/3   | FAZ-D6/4   | FAZ-D6/1N             | FAZ-D6/3N            |
| 7              | FAZ-D7/1-SP   | FAZ-D7/2   | FAZ-D7/3   | FAZ-D7/4   | FAZ-D7/1N             | FAZ-D7/3N            |
| 8              | FAZ-D8/1-SP   | FAZ-D8/2   | FAZ-D8/3   | FAZ-D8/4   | FAZ-D8/1N             | FAZ-D8/3N            |
| 10             | FAZ-D10/1-SP  | FAZ-D10/2  | FAZ-D10/3  | FAZ-D10/4  | FAZ-D10/1N            | FAZ-D10/3N           |
| 13             | FAZ-D13/1-SP  | FAZ-D13/2  | FAZ-D13/3  | FAZ-D13/4  | FAZ-D13/1N            | FAZ-D13/3N           |
| 15             | FAZ-D15/1-SP  | FAZ-D15/2  | FAZ-D15/3  | FAZ-D15/4  | FAZ-D15/1N            | FAZ-D15/3N           |
| 16             | FAZ-D16/1-SP  | FAZ-D16/2  | FAZ-D16/3  | FAZ-D16/4  | FAZ-D16/1N            | FAZ-D16/3N           |
| 20             | FAZ-D20/1-SP  | FAZ-D20/2  | FAZ-D20/3  | FAZ-D20/4  | FAZ-D20/1N            | FAZ-D20/3N           |
| 25             | FAZ-D25/1-SP  | FAZ-D25/2  | FAZ-D25/3  | FAZ-D25/4  | FAZ-D25/1N            | FAZ-D25/3N           |
| 30             | FAZ-D30/1-SP  | FAZ-D30/2  | FAZ-D30/3  | FAZ-D30/4  | FAZ-D30/1N            | FAZ-D30/3N           |
| 32             | FAZ-D32/1-SP  | FAZ-D32/2  | FAZ-D32/3  | FAZ-D32/4  | FAZ-D32/1N            | FAZ-D32/3N           |
| 40             | FAZ-D40/1-SP  | FAZ-D40/2  | FAZ-D40/3  | FAZ-D40/4  | FAZ-D40/1N            | FAZ-D40/3N           |
| 50 ③           | FAZ-D50/1-SP  | FAZ-D50/2  | FAZ-D50/3  | FAZ-D50/4  | FAZ-D50/1N            | FAZ-D50/3N           |
| 63 ③           | FAZ-D63/1-SP  | FAZ-D63/2  | FAZ-D63/3  | FAZ-D63/4  | FAZ-D63/1N            | FAZ-D63/3N           |

① In North America, these switches are UL recognized and CSA Certified as supplementary protection devices. Per the intent of NEC (National Electrical Code), Article 240, and CEC (Canadian Electrical Code), Part 1 C22.1, supplementary breakers cannot be used as a substitute for the branch circuit protective device. They can be used to provide overcurrent protection within an appliance or other electrical equipment where branch circuit overcurrent protection is already provided, or is not required.

② Option for single packaging on single-pole B, C and D curves only; add suffix SP when ordering.

③ IEC 60947-2 only.