

# UL 489 DIN rail branch circuit breakers

## FAZ-NA 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-NA DIN rail mountable circuit breaker is designed for use in branch service applications.

#### Powerful offering for machine and system builders

The FAZ-NA is available with B, C and D characteristics in accordance with UL® 489, CSA® C22.2 No.5; UL 1077, CSA C22.2 No.235 and IEC 60947-2. These devices are CE marked.

#### Typical applications

Feeder and branch circuit protection

- Convenience receptacle circuits (internal/external)
- Motor control circuits
- Load circuits leaving the equipment (external)
- HACR equipment (heating, air conditioning, refrigeration) (internal/external)
- PLC I/O points
- Computers
- Power supplies
- Control instrumentation
- Relays
- UPS
- Power conditioners

#### Features

- Complete range of UL 489 listed DIN rail mounted miniature circuit breakers up to 63 A current rating
- Standard ratings of 10 kAIC up to 277/480 Vac
- Select amperages available at 14 kAIC up to 277/480 Vac and 10 kAIC up to 125 Vdc per pole
- Current limiting design provides fast short-circuit interruption that reduces the let-through energy, which can damage the circuit
- Suitable for branch circuit device protection
- Thermal-magnetic overcurrent protection
  - Three levels of short-circuit protection, categorized by B, C and D curves

- Single-, two-, three- and four-pole configurations available
- Trip-free design—breaker can not be defeated by holding the handle in the ON position
- Captive screws cannot be lost
- SWD (switching duty)—suitable for switching fluorescent lighting loads ( $I_n \leq 20$  A)
- Fulfill UL 489, CSA C22.2 No.5 and also IEC 60947-2 Standard
- For use in applications for which UL 1077 or CSA C22.2 No.235 are also allowed
- Field installable shunt trip and auxiliary switch subsequent mounting
- Separate version for ring-tongue connection (Type FAZ-RT), terminal screws can be removed (on both sides)
- 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-NA complies with the latest national and international standards

##### Standards—feeder and branch circuit protection

###### UL 489

|  |   |
|--|---|
| Standard for molded case circuit breakers (MCCB) for feeder and branch circuit protection. |  |
| Products meet the requirements of the National Electrical Code® (NEC®).                    |   |

###### CSA C22.2 No.5

|   |   |
|---|---|
| Standard for molded case circuit breakers (MCCB) for feeder and branch circuit protection (corresponds closely to UL 489 Standard). |  |
| Products meet the requirements of the Canadian Electrical Code (CEC).   |   |

###### RoHS

|                                   |   |
|-----------------------------------|---|
| These devices are RoHS compliant. |  |
|-----------------------------------|---|

###### VDE

|                                  |   |
|----------------------------------|---|
| These devices are VDE compliant. |  |
|----------------------------------|---|

###### ABS

|                                  |   |
|----------------------------------|---|
| These devices are ABS compliant. |  |
|----------------------------------|---|

# UL 489 DIN rail branch circuit breakers

FAZ-NA circuit breakers

PRODUCT OVERVIEW

## Tripping curves to choose from

Eaton FAZ-NA branch circuit breakers are available with “B,” “C” and “D” tripping characteristics. B-curve devices are suitable for applications where low levels of inrush current are expected.

C-curve devices are suitable for applications where medium levels of inrush current are expected. Applications include small transformers, lighting, pilot devices, control circuits and coils. C-curve devices provide a medium magnetic trip point.

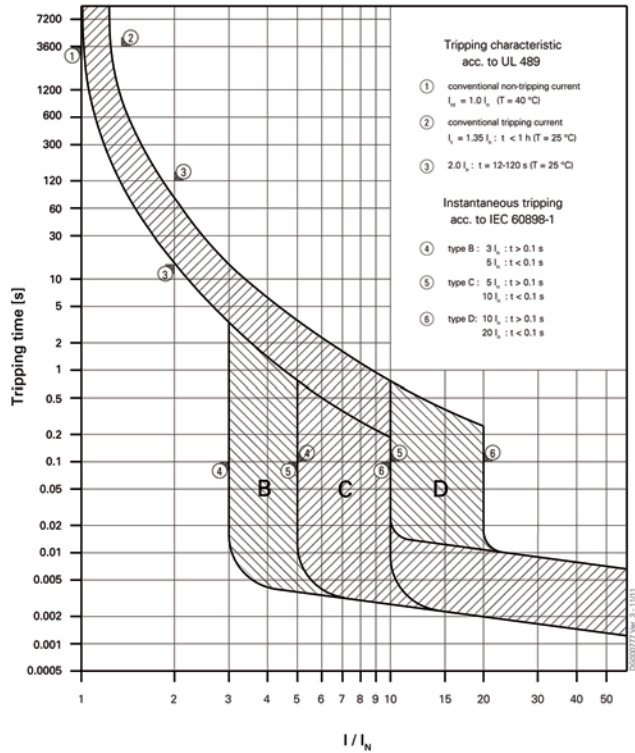
D-curve devices are suitable for applications where high levels of inrush current are expected. The high magnetic trip point prevents nuisance tripping in high inductive applications such as motors, transformers and power supplies.

Eaton FAZ-NA devices are current limiting, which means they interrupt fault currents within one half cycle of the fault. Current limiting devices offer superior protection by reducing peak let-through current and energy.

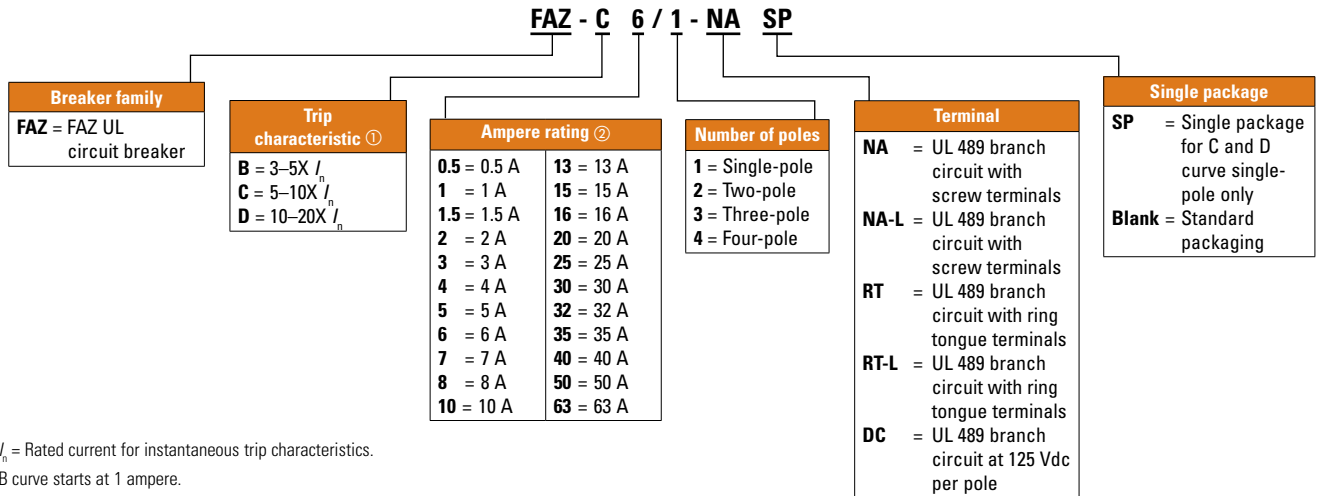
## Device printing on front and side

Installation options

These branch circuit breakers are available in two terminal configurations: standard box terminals that accept multiple conductors and ring-tongue terminals, ideally suited to demanding requirements of the semi-conductor industry. All breakers mount on standard 35 mm DIN rail. Bus connectors and feeder terminal facilitate mounting and wiring of multiple miniature circuit breaker arrays in control panel assemblies. These circuit breakers can also be reverse feed.



## Catalog numbering system



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

② B curve starts at 1 ampere.

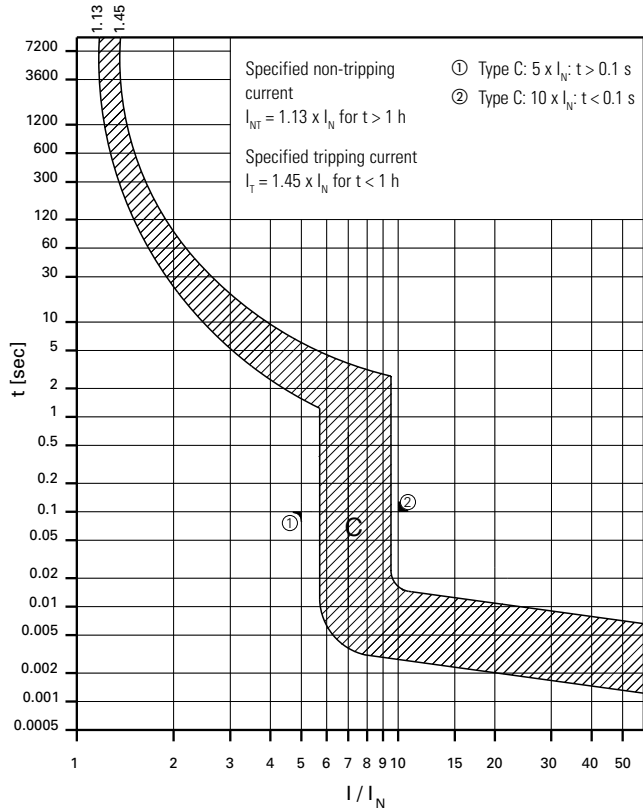
# UL 489 DIN rail branch circuit breakers

## FAZ-NA circuit breakers

### PRODUCT SELECTION

#### FAZ-NA product selection

- UL approved (UL 489) and CSA Certified (CSA C22.2 No.5-02) as branch circuit breakers
- Interrupting capacity: 10 kA UL/CSA; 15 kA IEC 60947-2
- Current limiting device
- UL file number E235139



#### FAZ-NA UL 489 circuit breakers at 480/277 Vac— 10 kAIC, 14 kAIC C curve (15–25 A)



| Catalog number   |                  |               |               |               |
|--|------------------|---------------|---------------|---------------|
| Amp.   | Single-pole ①    | Two-pole      | Three-pole    | Four-pole     |
| <b>C curve (5–10X <math>I_n</math> current rating)</b> |                  |               |               |               |
| 0.5  | FAZ-C0.5/1-NA-SP | FAZ-C0.5/2-NA | FAZ-C0.5/3-NA | FAZ-C0.5/4-NA |
| 1  | FAZ-C1/1-NA-SP   | FAZ-C1/2-NA   | FAZ-C1/3-NA   | FAZ-C1/4-NA   |
| 1.5  | FAZ-C1.5/1-NA-SP | FAZ-C1.5/2-NA | FAZ-C1.5/3-NA | FAZ-C1.5/4-NA |
| 2  | FAZ-C2/1-NA-SP   | FAZ-C2/2-NA   | FAZ-C2/3-NA   | FAZ-C2/4-NA   |
| 3  | FAZ-C3/1-NA-SP   | FAZ-C3/2-NA   | FAZ-C3/3-NA   | FAZ-C3/4-NA   |
| 4  | FAZ-C4/1-NA-SP   | FAZ-C4/2-NA   | FAZ-C4/3-NA   | FAZ-C4/4-NA   |
| 5  | FAZ-C5/1-NA-SP   | FAZ-C5/2-NA   | FAZ-C5/3-NA   | FAZ-C5/4-NA   |
| 6  | FAZ-C6/1-NA-SP   | FAZ-C6/2-NA   | FAZ-C6/3-NA   | FAZ-C6/4-NA   |
| 7  | FAZ-C7/1-NA-SP   | FAZ-C7/2-NA   | FAZ-C7/3-NA   | FAZ-C7/4-NA   |
| 8  | FAZ-C8/1-NA-SP   | FAZ-C8/2-NA   | FAZ-C8/3-NA   | FAZ-C8/4-NA   |
| 10   | FAZ-C10/1-NA-SP  | FAZ-C10/2-NA  | FAZ-C10/3-NA  | FAZ-C10/4-NA  |
| 13   | FAZ-C13/1-NA-SP  | FAZ-C13/2-NA  | FAZ-C13/3-NA  | FAZ-C13/4-NA  |
| 15   | FAZ-C15/1-NA-SP  | FAZ-C15/2-NA  | FAZ-C15/3-NA  | FAZ-C15/4-NA  |
| 16   | FAZ-C16/1-NA-SP  | FAZ-C16/2-NA  | FAZ-C16/3-NA  | FAZ-C16/4-NA  |
| 20   | FAZ-C20/1-NA-SP  | FAZ-C20/2-NA  | FAZ-C20/3-NA  | FAZ-C20/4-NA  |
| 25   | FAZ-C25/1-NA-SP  | FAZ-C25/2-NA  | FAZ-C25/3-NA  | FAZ-C25/4-NA  |
| 30   | FAZ-C30/1-NA-SP  | FAZ-C30/2-NA  | FAZ-C30/3-NA  | FAZ-C30/4-NA  |
| 32   | FAZ-C32/1-NA-SP  | FAZ-C32/2-NA  | FAZ-C32/3-NA  | FAZ-C32/4-NA  |

#### FAZ-RT UL 489 circuit breakers with ring-tongue terminals at 480/277 Vac—10 kAIC, 14 kAIC C curve (15–25 A)



| Catalog number  |                  |               |               |               |
|---|------------------|---------------|---------------|---------------|
| Amp.  | Single-pole ①    | Two-pole      | Three-pole    | Four-pole     |
| <b>C curve with ring-tongue terminals (5–10X <math>I_n</math> current rating)</b> |                  |               |               |               |
| 0.5   | FAZ-C0.5/1-RT-SP | FAZ-C0.5/2-RT | FAZ-C0.5/3-RT | FAZ-C0.5/4-RT |
| 1   | FAZ-C1/1-RT-SP   | FAZ-C1/2-RT   | FAZ-C1/3-RT   | FAZ-C1/4-RT   |
| 1.5   | FAZ-C1.5/1-RT-SP | FAZ-C1.5/2-RT | FAZ-C1.5/3-RT | FAZ-C1.5/4-RT |
| 2   | FAZ-C2/1-RT-SP   | FAZ-C2/2-RT   | FAZ-C2/3-RT   | FAZ-C2/4-RT   |
| 3   | FAZ-C3/1-RT-SP   | FAZ-C3/2-RT   | FAZ-C3/3-RT   | FAZ-C3/4-RT   |
| 4   | FAZ-C4/1-RT-SP   | FAZ-C4/2-RT   | FAZ-C4/3-RT   | FAZ-C4/4-RT   |
| 5   | FAZ-C5/1-RT-SP   | FAZ-C5/2-RT   | FAZ-C5/3-RT   | FAZ-C5/4-RT   |
| 6   | FAZ-C6/1-RT-SP   | FAZ-C6/2-RT   | FAZ-C6/3-RT   | FAZ-C6/4-RT   |
| 7   | FAZ-C7/1-RT-SP   | FAZ-C7/2-RT   | FAZ-C7/3-RT   | FAZ-C7/4-RT   |
| 8   | FAZ-C8/1-RT-SP   | FAZ-C8/2-RT   | FAZ-C8/3-RT   | FAZ-C8/4-RT   |
| 10  | FAZ-C10/1-RT-SP  | FAZ-C10/2-RT  | FAZ-C10/3-RT  | FAZ-C10/4-RT  |
| 13  | FAZ-C13/1-RT-SP  | FAZ-C13/2-RT  | FAZ-C13/3-RT  | FAZ-C13/4-RT  |
| 15  | FAZ-C15/1-RT-SP  | FAZ-C15/2-RT  | FAZ-C15/3-RT  | FAZ-C15/4-RT  |
| 16  | FAZ-C16/1-RT-SP  | FAZ-C16/2-RT  | FAZ-C16/3-RT  | FAZ-C16/4-RT  |
| 20  | FAZ-C20/1-RT-SP  | FAZ-C20/2-RT  | FAZ-C20/3-RT  | FAZ-C20/4-RT  |
| 25  | FAZ-C25/1-RT-SP  | FAZ-C25/2-RT  | FAZ-C25/3-RT  | FAZ-C25/4-RT  |
| 30  | FAZ-C30/1-RT-SP  | FAZ-C30/2-RT  | FAZ-C30/3-RT  | FAZ-C30/4-RT  |
| 32  | FAZ-C32/1-RT-SP  | FAZ-C32/2-RT  | FAZ-C32/3-RT  | FAZ-C32/4-RT  |

① Option for single packaging on single-pole C and D curves only; add suffix SP when ordering.

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#### Typical applications

Feeder and branch circuit protection

- Convenience receptacle circuits (internal/external)
- Motor control circuits
- Load circuits leaving the equipment (external)
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- PLC I/O points
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- Relays
- UPS
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#### Features

- Complete range of UL 489 listed DIN rail mounted miniature circuit breakers up to 63 A current rating
- Standard ratings of 10 kAIC up to 277/480 Vac
- Select amperages available at 14 kAIC up to 277/480 Vac and 10 kAIC up to 125 Vdc per pole
- Current limiting design provides fast short-circuit interruption that reduces the let-through energy, which can damage the circuit
- Suitable for branch circuit device protection
- Thermal-magnetic overcurrent protection
  - Three levels of short-circuit protection, categorized by B, C and D curves

- Single-, two-, three- and four-pole configurations available
- Trip-free design—breaker can not be defeated by holding the handle in the ON position
- Captive screws cannot be lost
- SWD (switching duty)—suitable for switching fluorescent lighting loads ( $I_n \leq 20$  A)
- Fulfill UL 489, CSA C22.2 No.5 and also IEC 60947-2 Standard
- For use in applications for which UL 1077 or CSA C22.2 No.235 are also allowed
- Field installable shunt trip and auxiliary switch subsequent mounting
- Separate version for ring-tongue connection (Type FAZ-RT), terminal screws can be removed (on both sides)
- Module width of only 17.7 mm (per pole)
- Contact Position Indicator (red/green)
- Easy installation on DIN rail
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| Products meet the requirements of the National Electrical Code® (NEC®).                    |   |

###### CSA C22.2 No.5

|   |   |
|---|---|
| Standard for molded case circuit breakers (MCCB) for feeder and branch circuit protection (corresponds closely to UL 489 Standard). |  |
| Products meet the requirements of the Canadian Electrical Code (CEC).   |   |

###### RoHS

|                                   |   |
|-----------------------------------|---|
| These devices are RoHS compliant. |  |
|-----------------------------------|---|

###### VDE

|                                  |   |
|----------------------------------|---|
| These devices are VDE compliant. |  |
|----------------------------------|---|

###### ABS

|                                  |   |
|----------------------------------|---|
| These devices are ABS compliant. |  |
|----------------------------------|---|

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## Tripping curves to choose from

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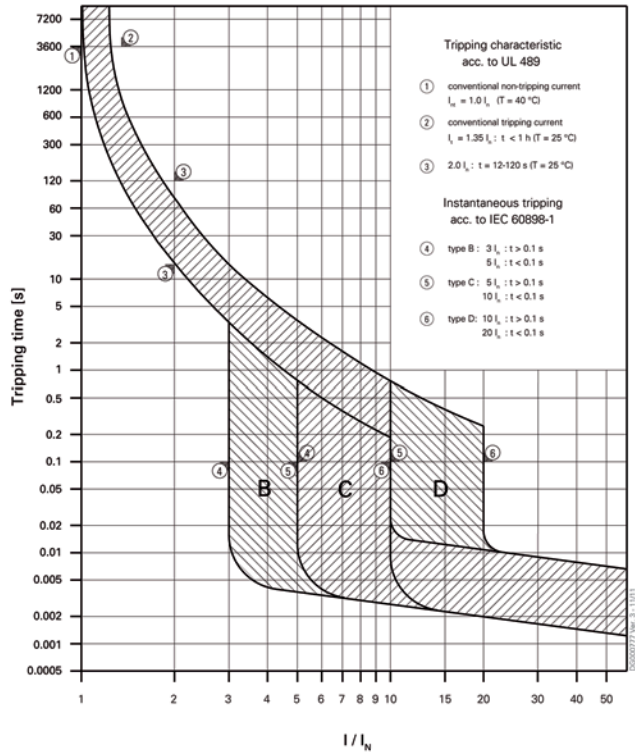
D-curve devices are suitable for applications where high levels of inrush current are expected. The high magnetic trip point prevents nuisance tripping in high inductive applications such as motors, transformers and power supplies.

Eaton FAZ-NA devices are current limiting, which means they interrupt fault currents within one half cycle of the fault. Current limiting devices offer superior protection by reducing peak let-through current and energy.

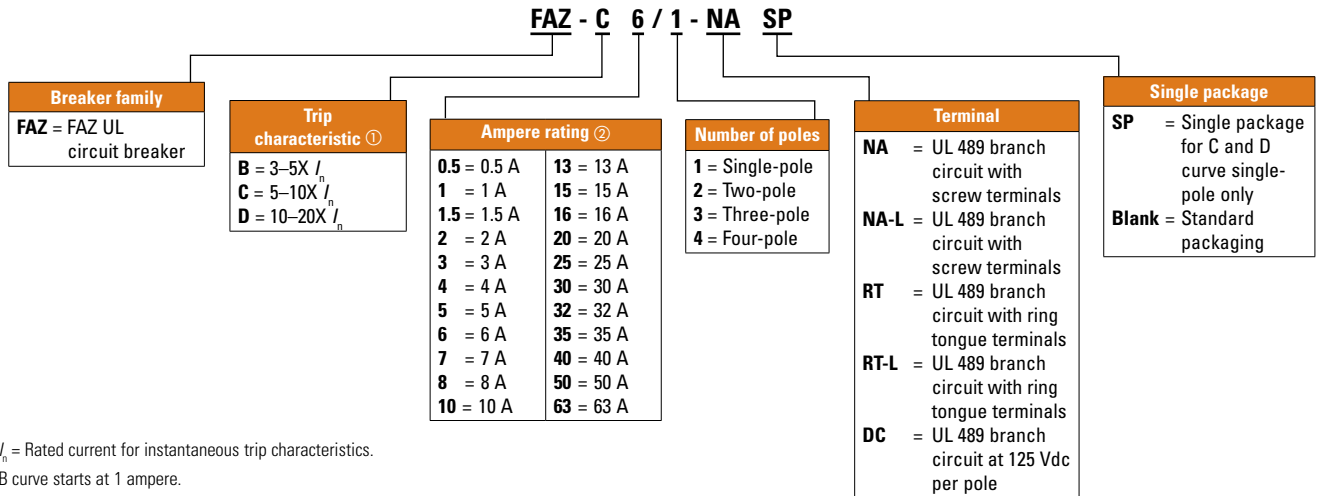
## Device printing on front and side

Installation options

These branch circuit breakers are available in two terminal configurations: standard box terminals that accept multiple conductors and ring-tongue terminals, ideally suited to demanding requirements of the semi-conductor industry. All breakers mount on standard 35 mm DIN rail. Bus connectors and feeder terminal facilitate mounting and wiring of multiple miniature circuit breaker arrays in control panel assemblies. These circuit breakers can also be reverse feed.



## Catalog numbering system



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

② B curve starts at 1 ampere.

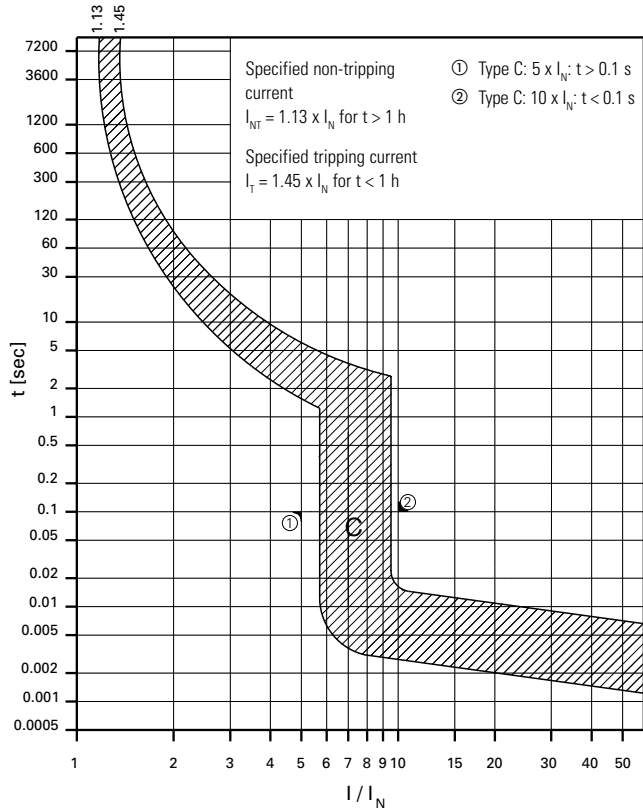
# UL 489 DIN rail branch circuit breakers

## FAZ-NA circuit breakers

### PRODUCT SELECTION

#### FAZ-NA product selection

- UL approved (UL 489) and CSA Certified (CSA C22.2 No.5-02) as branch circuit breakers
- Interrupting capacity: 10 kA UL/CSA; 15 kA IEC 60947-2
- Current limiting device
- UL file number E235139



#### FAZ-NA UL 489 circuit breakers at 480/277 Vac— 10 kAIC, 14 kAIC C curve (15–25 A)



| Catalog number   |                  |               |               |               |
|--|------------------|---------------|---------------|---------------|
| Amp.   | Single-pole ①    | Two-pole      | Three-pole    | Four-pole     |
| <b>C curve (5–10X <math>I_n</math> current rating)</b> |                  |               |               |               |
| 0.5  | FAZ-C0.5/1-NA-SP | FAZ-C0.5/2-NA | FAZ-C0.5/3-NA | FAZ-C0.5/4-NA |
| 1  | FAZ-C1/1-NA-SP   | FAZ-C1/2-NA   | FAZ-C1/3-NA   | FAZ-C1/4-NA   |
| 1.5  | FAZ-C1.5/1-NA-SP | FAZ-C1.5/2-NA | FAZ-C1.5/3-NA | FAZ-C1.5/4-NA |
| 2  | FAZ-C2/1-NA-SP   | FAZ-C2/2-NA   | FAZ-C2/3-NA   | FAZ-C2/4-NA   |
| 3  | FAZ-C3/1-NA-SP   | FAZ-C3/2-NA   | FAZ-C3/3-NA   | FAZ-C3/4-NA   |
| 4  | FAZ-C4/1-NA-SP   | FAZ-C4/2-NA   | FAZ-C4/3-NA   | FAZ-C4/4-NA   |
| 5  | FAZ-C5/1-NA-SP   | FAZ-C5/2-NA   | FAZ-C5/3-NA   | FAZ-C5/4-NA   |
| 6  | FAZ-C6/1-NA-SP   | FAZ-C6/2-NA   | FAZ-C6/3-NA   | FAZ-C6/4-NA   |
| 7  | FAZ-C7/1-NA-SP   | FAZ-C7/2-NA   | FAZ-C7/3-NA   | FAZ-C7/4-NA   |
| 8  | FAZ-C8/1-NA-SP   | FAZ-C8/2-NA   | FAZ-C8/3-NA   | FAZ-C8/4-NA   |
| 10   | FAZ-C10/1-NA-SP  | FAZ-C10/2-NA  | FAZ-C10/3-NA  | FAZ-C10/4-NA  |
| 13   | FAZ-C13/1-NA-SP  | FAZ-C13/2-NA  | FAZ-C13/3-NA  | FAZ-C13/4-NA  |
| 15   | FAZ-C15/1-NA-SP  | FAZ-C15/2-NA  | FAZ-C15/3-NA  | FAZ-C15/4-NA  |
| 16   | FAZ-C16/1-NA-SP  | FAZ-C16/2-NA  | FAZ-C16/3-NA  | FAZ-C16/4-NA  |
| 20   | FAZ-C20/1-NA-SP  | FAZ-C20/2-NA  | FAZ-C20/3-NA  | FAZ-C20/4-NA  |
| 25   | FAZ-C25/1-NA-SP  | FAZ-C25/2-NA  | FAZ-C25/3-NA  | FAZ-C25/4-NA  |
| 30   | FAZ-C30/1-NA-SP  | FAZ-C30/2-NA  | FAZ-C30/3-NA  | FAZ-C30/4-NA  |
| 32   | FAZ-C32/1-NA-SP  | FAZ-C32/2-NA  | FAZ-C32/3-NA  | FAZ-C32/4-NA  |

#### FAZ-RT UL 489 circuit breakers with ring-tongue terminals at 480/277 Vac—10 kAIC, 14 kAIC C curve (15–25 A)



| Catalog number  |                  |               |               |               |
|---|------------------|---------------|---------------|---------------|
| Amp.  | Single-pole ①    | Two-pole      | Three-pole    | Four-pole     |
| <b>C curve with ring-tongue terminals (5–10X <math>I_n</math> current rating)</b> |                  |               |               |               |
| 0.5   | FAZ-C0.5/1-RT-SP | FAZ-C0.5/2-RT | FAZ-C0.5/3-RT | FAZ-C0.5/4-RT |
| 1   | FAZ-C1/1-RT-SP   | FAZ-C1/2-RT   | FAZ-C1/3-RT   | FAZ-C1/4-RT   |
| 1.5   | FAZ-C1.5/1-RT-SP | FAZ-C1.5/2-RT | FAZ-C1.5/3-RT | FAZ-C1.5/4-RT |
| 2   | FAZ-C2/1-RT-SP   | FAZ-C2/2-RT   | FAZ-C2/3-RT   | FAZ-C2/4-RT   |
| 3   | FAZ-C3/1-RT-SP   | FAZ-C3/2-RT   | FAZ-C3/3-RT   | FAZ-C3/4-RT   |
| 4   | FAZ-C4/1-RT-SP   | FAZ-C4/2-RT   | FAZ-C4/3-RT   | FAZ-C4/4-RT   |
| 5   | FAZ-C5/1-RT-SP   | FAZ-C5/2-RT   | FAZ-C5/3-RT   | FAZ-C5/4-RT   |
| 6   | FAZ-C6/1-RT-SP   | FAZ-C6/2-RT   | FAZ-C6/3-RT   | FAZ-C6/4-RT   |
| 7   | FAZ-C7/1-RT-SP   | FAZ-C7/2-RT   | FAZ-C7/3-RT   | FAZ-C7/4-RT   |
| 8   | FAZ-C8/1-RT-SP   | FAZ-C8/2-RT   | FAZ-C8/3-RT   | FAZ-C8/4-RT   |
| 10  | FAZ-C10/1-RT-SP  | FAZ-C10/2-RT  | FAZ-C10/3-RT  | FAZ-C10/4-RT  |
| 13  | FAZ-C13/1-RT-SP  | FAZ-C13/2-RT  | FAZ-C13/3-RT  | FAZ-C13/4-RT  |
| 15  | FAZ-C15/1-RT-SP  | FAZ-C15/2-RT  | FAZ-C15/3-RT  | FAZ-C15/4-RT  |
| 16  | FAZ-C16/1-RT-SP  | FAZ-C16/2-RT  | FAZ-C16/3-RT  | FAZ-C16/4-RT  |
| 20  | FAZ-C20/1-RT-SP  | FAZ-C20/2-RT  | FAZ-C20/3-RT  | FAZ-C20/4-RT  |
| 25  | FAZ-C25/1-RT-SP  | FAZ-C25/2-RT  | FAZ-C25/3-RT  | FAZ-C25/4-RT  |
| 30  | FAZ-C30/1-RT-SP  | FAZ-C30/2-RT  | FAZ-C30/3-RT  | FAZ-C30/4-RT  |
| 32  | FAZ-C32/1-RT-SP  | FAZ-C32/2-RT  | FAZ-C32/3-RT  | FAZ-C32/4-RT  |

① Option for single packaging on single-pole C and D curves only; add suffix SP when ordering.