

# Eaton 190813

Catalog Number: 190813

Eaton Moeller series xEffect - FAZ-NA, FAZ-RT MCB. Miniature circuit breaker (MCB), 35 A, 4p, characteristic: D, ring tongue



### General specifications

#### Product Name

Eaton Moeller series xEffect - FAZ-NA,  
FAZ-RT MCB

#### Catalog Number

190813

#### EAN

4015081904600

#### Product Length/Depth

105 mm

#### Product Height

75.5 mm

#### Product Width

70.8 mm

#### Product Weight

0.512 kg

#### Compliances

RoHS conform

#### Certifications

CSA (File No. 204453)

UL 489

IEC 60947-2

North America (UL listed, CSA certified)

CE marking

UL 489, CSA C22.2 No. 5

Specially designed for North America,  
suitable as BCPD

CSA-C22.2 No. 5-09

UL (File No. E235139)

UL (Category Control Number DIVQ)

CSA (Class No. 1432-01)

IEC/EN 60947-2

EN45545-2

IEC 61373

## Delivery program

### Application

Feeder circuits, branch circuits  
Switchgear for export to North America (UL-listed)  
xEffect - Switchgear for industrial and advanced commercial applications

### Number of poles

Four-pole

### Number of poles (total)

4

### Number of poles (protected)

4

### Tripping characteristic

D

### Release characteristic

D

### Amperage Rating

35 A

### Type

FAZ-RT  
Miniature circuit breaker

## Technical data - electrical

### Voltage type

AC

### Voltage rating

277 V AC / 480 V AC

### Voltage rating at DC

60 V DC

### Voltage rating (IEC/EN 60947-2)

415 V

### Voltage rating (UL)

240 V

### Rated operational voltage (Ue) - max

240 V

### Rated insulation voltage (Ui)

440 V

### Rated impulse withstand voltage (Uimp)

4 kV

### Frequency rating - min

50 Hz

### Frequency rating - max

60 Hz

### Rated switching capacity (IEC/EN 60947-2)

15 kA

### Operational switching capacity

7.5 kA

### Rated short-circuit breaking capacity (EN 60898) at 230 V

10 kA

### Rated short-circuit breaking capacity (EN 60898) at 400 V

15 kA

### Rated short-circuit breaking capacity (IEC 60947-2) at 230 V

10 kA

### Rated short-circuit breaking capacity (IEC 60947-2) at 400 V

14 kA

### Admissible back-up fuse - max

125 A gL/gG

### Selectivity class

3

Overvoltage category

III

Pollution degree

2

Lifespan, electrical

min. 6000 operations (UL)

min. 1500 operations

Direction of incoming supply

As required

## Technical data - mechanical

Frame

45 mm

Enclosure width

105 mm

Width in number of modular spacings

4

Built-in depth

60 mm

Mounting width per pole

17.7 mm

Mounting width

17.7 mm

Mounting Method

Top-hat rail IEC/EN 60715

Mounting position

As required

Degree of protection

IP20

IP40 (when fitted)

IP20 (IEC)

UL/CSA Type: -

Terminals (top and bottom)

Lift terminal / ring-tongue

Connectable conductor cross section (solid-core) - min

1 mm<sup>2</sup>

Connectable conductor cross section (solid-core) - max

25 mm<sup>2</sup>

Connectable conductor cross section (multi-wired) - min

1 mm<sup>2</sup>

Connectable conductor cross section (multi-wired) - max

25 mm<sup>2</sup>

Terminal capacity of screw terminals for main cable

10 mm<sup>2</sup> (2x)

Terminal capacity (control cable)

25 mm<sup>2</sup> (1x)

Terminal protection

Finger and hand touch safe, DGUV VS3, EN 50274

#### Contact position indicator color

Red / green

#### Tightening torque

UL: 2.4 Nm (21 lb-in) for AWG 18 - AWG 12

UL: 4 Nm (36 lb-in) for AWG 6

UL: 2.8 Nm (25 lb-in) for AWG 10 - AWG 8

Max. 2.4 Nm

#### Lifespan, mechanical

10000 operations

### Design verification as per IEC/EN - technical data

#### Rated operational current for specified heat dissipation (In)

35 A

#### Heat dissipation per pole, current-dependent

0 W

#### Static heat dissipation, non-current-dependent

0 W

#### Heat dissipation capacity

0 W

#### Ambient operating temperature - min

-25 °C

#### Ambient operating temperature - max

75 °C

#### Ambient operating temperature (UL) - min

-5 °C

#### Ambient operating temperature (UL) - max

40 °C

### Design verification as per IEC/EN 61439

#### 10.2.2 Corrosion resistance

Meets the product standard's requirements.

#### 10.2.3.1 Verification of thermal stability of enclosures

Meets the product standard's requirements.

#### 10.2.3.2 Verification of resistance of insulating materials to normal heat

Meets the product standard's requirements.

#### 10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects

Meets the product standard's requirements.

#### 10.2.4 Resistance to ultra-violet (UV) radiation

Meets the product standard's requirements.

#### 10.2.5 Lifting

Does not apply, since the entire switchgear needs to be evaluated.

#### 10.2.6 Mechanical impact

Does not apply, since the entire switchgear needs to be evaluated.

### Additional information

#### Accessories required

Z-IHK-NA 113895

#### Current limiting class

3

#### Features

Additional equipment possible

#### Fitted with:

Z-IS/SPE-1TE 274418

#### Functions

Current limiting circuit breaker

#### Internal resistance at room temperature (single-pole, 50 Hz)

2.5 m Ω

#### Special features

Ambient temperature hint: a  
1 °C increase results in a  
0.5% linear reduction of  
current carrying capacity

### 10.2.7 Inscriptions

Meets the product standard's requirements.

### 10.3 Degree of protection of assemblies

Does not apply, since the entire switchgear needs to be evaluated.

### 10.4 Clearances and creepage distances

Meets the product standard's requirements.

### 10.5 Protection against electric shock

Does not apply, since the entire switchgear needs to be evaluated.

### 10.6 Incorporation of switching devices and components

Does not apply, since the entire switchgear needs to be evaluated.

### 10.7 Internal electrical circuits and connections

Is the panel builder's responsibility.

### 10.8 Connections for external conductors

Is the panel builder's responsibility.

### 10.9.2 Power-frequency electric strength

Is the panel builder's responsibility.

### 10.9.3 Impulse withstand voltage

Is the panel builder's responsibility.

### 10.9.4 Testing of enclosures made of insulating material

Is the panel builder's responsibility.

### 10.10 Temperature rise

The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.

### 10.11 Short-circuit rating

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

### 10.12 Electromagnetic compatibility

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

### 10.13 Mechanical function

The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Tripping signal contact for subsequent installation Z-NHK 248434

#### Suitable for

Flush-mounted installation

#### Used with

FAZ-XAA-NA110-415V AC 102036 (Shunt trip release) FAZ-XAA-NA12-110V AC 102037 (Shunt trip release) FAZ-RT Miniature circuit breaker FAZ-XAA-NA110-415V AC 102036 (Shunt trip release) FAZ-XAA-NA12-110V AC 102037 (Shunt trip release)

## Resources

### Brochures

[eaton-pdd-railrolling-stock-brochure-br011002en-en-us.pdf](#)

### Catalogs

[eaton-xeffect-faz-na-rt-mcb-catalog-ca003032en-en-us.pdf](#)

### Characteristic curve

[eaton-xeffect-faz-na,-mcb-3d-drawing-004.jpg](#)

[eaton-xeffect-faz-na,-mcb-characteristic-curve.jpg](#)

[eaton-mcb-xeffect-faz-na,-characteristic-curve.eps](#)

[eaton-xeffect-faz-na,-mcb-dimensions-004.jpg](#)

[eaton-xeffect-faz-na,-mcb-characteristic-curve-002.jpg](#)

[eaton-xeffect-faz-na,-mcb-3d-drawing-008.jpg](#)

[eaton-mcb-xeffect-faz-na,-characteristic-curve-002.eps](#)

### Declarations of conformity

[DA-DC-03\\_FAZ-B-C-D](#)

[DA-DC-03\\_FAZ-DU](#)

[DA-DC-03\\_FAZ-RT](#)

### Drawings

[eaton-xeffect-faz-na,-mcb-dimensions.jpg](#)

### eCAD model

[ETN.FAZ-D35\\_4-RT.edz](#)

### Installation instructions

[IL019133ZU](#)

### mCAD model

[DA-CS-faz\\_na\\_4p](#)

DA-CD-faz\_na\_4p

Wiring diagrams

eaton-xpole-mmc4-6-m-mcb-wiring-diagram-006.jpg



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