Specifications

# Eaton 102165

## Catalog Number: 102165

Eaton Moeller series xEffect - FAZ-NA, FAZ-RT MCB. FAZ-NA, 2-pole, tripping characteristic: C, rated current In: 7 A, Switchgear for export to North America (UL-listed)



## General specifications

**Product Name**
Eaton Moeller series xEffect - FAZ-NA, FAZ-RT MCB

**Catalog Number**
102165

**EAN**
4015081020416

**Product Length/Depth**
105 mm

**Product Height**
75.5 mm

**Product Width**
35.4 mm

**Product Weight**
0.243 kg

**Compliances**
RoHS conform

**Certifications**
CSA-C22.2 No. 5-09
IEC/EN 60947-2
UL 489
UL (Category Control Number DIVQ)
UL (File No. E235139)
Specially designed for North America, suitable as BCPD
CSA (File No. 204453)
North America (UL listed, CSA certified)
CSA (Class No. 1432-01)
IEC 60947-2
CE marking
UL 489, CSA C22.2 No. 5
EN45545-2
IEC 61373

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## Delivery program

### Application

Feeder circuits, branch circuits
Switchgear for export to North America (UL-listed)

### Number of poles

Two-pole

### Number of poles (total)

2

### Number of poles (protected)

2

### Tripping characteristic

C

### Release characteristic

C

### Amperage Rating

7 A

### Type

FAZ-NA
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)

440 V

### Voltage rating (UL)

480Y/277 V

### Rated operational voltage (Ue) - max

415 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

### Breaking capacity

10 kA (UL489)

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

0 kA

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

0 kA

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

15 kA

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

15 kA

### Selectivity class

3

### Overvoltage category

III

Pollution degree

2

Lifespan, electrical

20000 operations

Direction of incoming supply

As required

## Technical data - mechanical

Frame

45 mm

Enclosure width

105 mm

Width in number of modular spacings

2

Built-in depth

70.5 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

UL/CSA Type: -

IP20 (IEC)

IP40 (when fitted)

Terminals (top and bottom)

Twin-purpose terminals

Connectable conductor cross section (solid-core) - min

1 mm²

Connectable conductor cross section (solid-core) - max

25 mm²

Connectable conductor cross section (multi-wired) - min

1 mm²

Connectable conductor cross section (multi-wired) - max

25 mm²

Terminal protection

Finger and hand touch safe, DGUV VS3, EN 50274

Tightening torque

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

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

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

Max. 2.4 Nm

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

Rated operational current for specified heat dissipation (In)

7 A

Heat dissipation per pole, current-dependent

0 W

Equipment heat dissipation, current-dependent

2.8 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

## 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.

10.2.7 Inscriptions

Meets the product standard's requirements.

## Additional information

Current limiting class

3

Features

Additional equipment possible

Functions

Current limiting circuit breaker

Special features

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

Used with

FAZ-NA

Miniature circuit breaker

## Resources

Brochures

eaton-pdd-railrolling-stock-brochure-br011002en-en-us.pdf

Catalogs

eaton-xeffect-faz-na-rt-mcb-catalog-ca003032en-en-us.pdf

### 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.

## Characteristic curve

eaton-mcb-xeffect-faz-na,-characteristic-curve-002.eps

eaton-xeffect-faz-na,-mcb-dimensions-005.jpg

eaton-xeffect-faz-na,-mcb-characteristic-curve-002.jpg

eaton-xeffect-faz-na,-mcb-3d-drawing-006.jpg

eaton-xeffect-faz-na,-mcb-3d-drawing-002.jpg

eaton-mcb-xeffect-faz-na,-characteristic-curve.eps

eaton-xeffect-faz-na,-mcb-characteristic-curve.jpg

## Declarations of conformity

DA-DC-03_FAZ-B-C-D

DA-DC-03_FAZ-NA

## Drawings

eaton-xeffect-faz-na,-mcb-dimensions.jpg

eaton-mcb-xeffect-faz-na,-3d-drawing-003.eps

## eCAD model

DA-CE-ETN.FAZ-C7_2-NA

## Installation instructions

IL019133ZU

## mCAD model

faz_na_2p.stp

faz_na_2p.dwg

## Wiring diagrams

eaton-xpole-mmc4-6-m-mcb-wiring-diagram-003.jpg

eaton-mcb-xeffect-faz-na,-wiring-diagram-003.eps




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