Specifications

# Eaton 278631

## Catalog Number: 278631

Eaton Moeller series xEffect - FAZ MCB. Miniature circuit breaker (MCB), 50 A, 1p, characteristic: Z




### General specifications

**Product Name**
Eaton Moeller series xEffect - FAZ MCB

**Catalog Number**
278631

**EAN**
4015082786311

**Product Length/Depth**
80 mm

**Product Height**
75.5 mm

**Product Width**
17.7 mm

**Product Weight**
0.122 kg

**Compliances**
UL CSA09 (with supplementary protector only)
RoHS conform

**Certifications**
CSA (Class No. 3215-30)
CE marking
UL (Category Control Number QVNU2, QVNU8)
IEC/EN 60898
UL 1077
UL (File No. E177451)
CSA (File No. 204453)
North America (UL recognized, CSA certified)
CSA-C22.2 No. 235
IEC/EN 60947-2
EN45545-2
IEC 61373

Powering Business Worldwide

## Product specifications

### Used with

FAZ

Miniature circuit breaker

### Type

FAZ

Miniature circuit breaker

### Special features

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

### Application

Branch circuits, not as BCPD

Switchgear for industrial and advanced commercial applications

xEffect - Switchgear for industrial and advanced commercial applications

### Amperage Rating

50 A

### Voltage rating

240 V AC / 415 V AC

### Features

Additional equipment possible

### 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.

## Resources

### Catalogs

eaton-xeffect-industrial-switchgear-range-catalog-ca003002en-en-us.pdf

### Characteristic curve

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

eaton-mcb-characteristic-xeffect-faz-characteristic-curve-004.eps

eaton-mcb-characteristic-xeffect-faz-characteristic-curve-007.eps

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

eaton-mcb-tripping-characteristic-xeffect-faz-characteristic-curve-002.eps

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

eaton-xeffect-faz-mcb-characteristic-curve-006.jpg

eaton-xeffect-faz-mcb-characteristic-curve-005.jpg

eaton-mcb-current-xeffect-faz-characteristic-curve.eps

eaton-mcb-current-xeffect-faz-characteristic-curve-002.eps

### Declarations of conformity

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

### Drawings

eaton-xeffect-faz-mcb-dimensions.jpg

eaton-mcb-xeffect-faz-dimensions.eps

eaton-mcb-faz-xeffect-faz-3d-drawing.eps

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

### eCAD model

DA-CE-ETN.FAZ-Z50_1

### Installation instructions

IL019140ZU

### mCAD model

faz_1p.dwg

faz_1p.stp

### PEP Eco-passport

EATO-00047-V01.01-EN

### Wiring diagrams

eaton-xpole-mmc4-6-m-mcb-wiring-diagram-002.jpg

eaton-mcb-xeffect-faz-wiring-diagram.eps

### 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.

### 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.

### Frame

45 mm

### Pollution degree

2

### Mounting Method

Top-hat rail IEC/EN 60715

### Degree of protection

UL/CSA Type: -

IP20 (IEC)

IP20

IP40 (when fitted)

### Equipment heat dissipation, current-dependent

4.8 W

### Rated impulse withstand voltage (Uimp)

4 kV

### Admissible back-up fuse - max

125 A gL/gG

### Busbar material thickness

0.8 mm - 2 mm

### Terminal protection

Finger and hand touch safe, DGUV VS3, EN 50274

### Terminals (top and bottom)

Twin-purpose terminals

### Tripping characteristic

Z

### Voltage rating (UL CSA 13)

277 V AC; 48 V DC

### Ambient operating temperature - max

75 °C

### Ambient operating temperature - min

-25 °C

### Built-in depth

70.5 mm

### Connectable conductor cross section (multi-wired) - max

25 mm²

Connectable conductor cross section (multi-wired) - min

1 mm²

Connectable conductor cross section (solid-core) - max

25 mm²

Connectable conductor cross section (solid-core) - min

1 mm²

Current limiting class

3

Enclosure width

80 mm

Frequency rating - max

60 Hz

Frequency rating - min

50 Hz

Heat dissipation capacity

0 W

Heat dissipation per pole, current-dependent

0 W

Direction of incoming supply

As required

Width in number of modular spacings

1

Voltage rating at DC

60 V DC (per pole)

Voltage type

AC

Mounting position

As required

Overvoltage category

III

Number of poles

Single-pole

Lifespan, electrical

10000 operations

Release characteristic

Z

Mounting width

17.5 mm

Selectivity class

3

Mounting width per pole

17.5 mm

Number of poles (protected)

1

Number of poles (total)

1

Operational switching capacity

7.5 kA

Rated insulation voltage (Ui)

440 V

Rated operational current for specified heat dissipation (In)

50 A

Rated operational voltage (Ue) - max

230 V

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

10 kA

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

10 kA

Rated switching capacity (IEC/EN 60947-2)

10 kA

Static heat dissipation, non-current-dependent

0 W

Terminal capacity (control cable)

25 mm² (1x)

Terminal capacity of screw terminals for main cable

10 mm² (2x)

Power loss

4.8 W




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