Specifications

Eaton 278830

Catalog Number: 278830

Eaton Moeller series xEffect - FAZ MCB. Miniature circuit breaker (MCB), 50 A, 2p, characteristic: Z



General specifications

Product Name
Eaton Moeller series xEffect - FAZ MCB

Catalog Number
278830

EAN
4015082788308

Product Length/Depth
80 mm

Product Height
75.5 mm

Product Width
36 mm

Product Weight
0.245 kg

Compliances
UL CSA09 (with supplementary protector only)
RoHS conform

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

Powering Business Worldwide

Product specifications

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.

10.2.2 Corrosion resistance

Meets the product standard's requirements.

10.2.3.1 Verification of thermal stability of enclosures

Resources

Catalogs

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

Characteristic curve

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

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

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

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

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

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

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

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

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-002.jpg

eaton-mcb-xeffect-faz-dimensions-002.eps

eaton-mcb-faz-xeffect-faz-3d-drawing-002.eps

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

eCAD model

DA-CE-ETN.FAZ-Z50_2

Installation instructions

IL019140ZU

mCAD model

faz_1pn_2p.stp

faz_1pn_2p.dwg

PEP Eco-passport

EATO-00047-V01.01-EN

Wiring diagrams

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

eaton-mcb-xeffect-faz-wiring-diagram-002.eps

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

IP20 (IEC)

IP40 (when fitted)

IP20

UL/CSA Type: -

Equipment heat dissipation, current-dependent

9.5 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)

480 Y/277 V AC; 96 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

2

Voltage rating at DC

60 V DC (per pole)

Voltage type

AC

Mounting position

As required

Overvoltage category

III

Number of poles

Two-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)

2

Number of poles (total)

2

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

400 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

9.5 W



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