Specifications

Eaton 190791

Catalog Number: 190791

Eaton Moeller series xEffect - FAZ-NA, FAZ-RT MCB. Miniature circuit breaker (MCB), 50 A, 3p, characteristic: C, NA



General specifications

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

Catalog Number
190791

EAN
4015081930616

Product Length/Depth
105 mm

Product Height
75.5 mm

Product Width
53.1 mm

Product Weight
0.382 kg

Compliances
RoHS conform

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

Powering Business Worldwide

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

Three-pole

Number of poles (total)

3

Number of poles (protected)

3

Tripping characteristic

C

Release characteristic

C

Amperage Rating

50 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)

240 V AC / 415 V AC

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

Breaking capacity

10 kA (UL489)

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

15 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. 1500 operations

min. 6000 operations (UL)

Direction of incoming supply

As required

Technical data - mechanical

Frame

45 mm

Enclosure width

105 mm

Width in number of modular spacings

3

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

UL/CSA Type: -

IP40 (when fitted)

IP20 (IEC)

IP20

Terminals (top and bottom)

Lift terminal / ring-tongue

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 capacity of screw terminals for main cable

10 mm² (2x)

Terminal capacity (control cable)

25 mm² (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
Max. 2.4 Nm
UL: 2.8 Nm (25 lb-in) for AWG 10 - AWG 8

Lifespan, mechanical

10000 operations

Design verification as per IEC/EN - technical data

Rated operational current for specified heat dissipation (In)

50 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)

1.6 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)
Miniature circuit breaker
FAZ-NA
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-characteristic-curve.jpg

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

eaton-xeffect-faz-na,-mcb-dimensions-003.jpg

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

eaton-xeffect-faz-na,-mcb-3d-drawing-007.jpg

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

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

Declarations of conformity

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

DA-DC-03_FAZ-NA

Drawings

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

eCAD model

ETN.FAZ-C50_3-NA.edz

Installation instructions

IL019133ZU

mCAD model

DA-CS-faz_na_3p

DA-CD-faz_na_3p

Wiring diagrams

eaton-xpole-mmc4-6-m-mcb-wiring-diagram-005.jpg

Eaton Corporation plc
Eaton House
30 Pembroke Road
Dublin 4, Ireland
Eaton.com

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