Specifications

Eaton 167706

Catalog Number: 167706

Eaton Moeller series xEffect - FRCmM-NA RCCB. Residual current circuit breaker (RCCB), 40A, 4p, 30mA, type G/A, UL, 110V

General specifications

Product Name Eaton Moeller series xEffect - FRCmM-NA RCCB	**Catalog Number** 167706
	Model Code FRCMM-40/4/003-G/A-NA-110
EAN 4015081642472	**Product Length/Depth** 80 mm
Product Height 71 mm	**Product Width** 70 mm
Product Weight 0.32 kg	**Compliances** RoHS conform
Certifications UL 1053 ÖVE E 8601 IEC/EN 61008 EN45545-2 IEC 61373	**Catalog Notes** Additionally protects against special forms of residual pulsating DC which have not been smoothed.

Powering Business Worldwide

Product specifications

Used with

FRCmM-NA-110

Type G/A (ÖVE E 8601)

Residual current circuit breakers

Type

Current test marks as per inscription

Maximum operating temperature is 75 °C:

Starting at 40 °C, the max. permissible continuous current decreases by 2.5% for every 1 °C

The maximum operating current of back-up fuse must not exceed the residual current circuit breaker's rated operational current

Special features

FRCmM-NA-110

Residual current circuit breakers

Type G/A (ÖVE E 8601)

Application

Switchgear for 110-V systems

Amperage Rating

40 A

Features

Residual current circuit breaker

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

Resources

Application notes

eaton-rcd-application-guide-br019003en-en-us.pdf

Brochures

UL 1053 DIN Rail RCCB

Catalogs

eaton-xeffect-frcmm-na-rccb-catalog-ca003019en-en-us.pdf

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

Declarations of conformity

DA-DC-03_FRCm

Drawings

eaton-circuit-breaker-xeffect-frcmm-na-rccb-dimensions.eps

eCAD model

ETN.FRCMM-40_4_003-G_A-NA-110.edz

Installation instructions

MA180503312

mCAD model

eaton-f9_ul1053_4p-3-d-model.stp

eaton-f9_ul1053_4p-drawing.dwg

Specifications and datasheets

Eaton Specification Sheet - 167706

Wiring diagrams

eaton-xeffect-frcmm-rccb-wiring-diagram-002.jpg

eaton-circuit-breaker-xeffect-frcmm-rccb-wiring-diagram-002.eps

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

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.

Fitted with:

Interlocking device

Frame

45 mm

Frequency rating

50 Hz / 60 Hz

Pollution degree

2

Mounting Method

DIN rail

Quick attachment with 2 latch positions for DIN-rail IEC/EN 60715

Climatic proofing

25-55 °C / 90-95% relative humidity according to IEC 60068-2

Equipment heat dissipation, current-dependent

13.1 W

Rated impulse withstand voltage (Uimp)

4 kV

Rated short-time withstand current (Icw)

10 kA

Admissible back-up fuse overload - max

40 A gG/gL

Ambient humdity range

5 - 95 %

Built-in width (number of units)

70 mm (4 SU)

Short-circuit rating

Max. admissible back-up fuse: 63 A gG/gL, 70 A class J fuse (UL)

Status indication

White / blue

Terminal protection

Finger and hand touch safe, DGUV VS3, EN 50274

Terminals (top and bottom)

Lift terminals

Test circuit range

100 V AC - 210 V AC, 94 V AC - 132 V AC (UL)

Ambient operating temperature - max

40 °C

Ambient operating temperature - min

-25 °C

Built-in depth

70.5 mm

Connectable conductor cross section (multi-wired) - max

16 mm²

Connectable conductor cross section (multi-wired) - min

1.5 mm²

Connectable conductor cross section (solid-core) - max

35 mm²

Connectable conductor cross section (solid-core) - min

1.5 mm²

Fault current rating

30 mA

Heat dissipation per pole, current-dependent

3.275 W

Overvoltage tested - max

530 V

Permitted storage and transport temperature - max

60 °C

Permitted storage and transport temperature - min

-35 °C

Contact position indicator color

Red / green

Mounting position

As required

Lifespan, mechanical

10000 operations

Degree of protection

IP20, IP40 with suitable enclosure

IP20

Impulse withstand current

3 kA (8/20 µs) surge-proof

Number of poles

Four-pole

Leakage current type

A

Lifespan, electrical

4000 operations

Functions

Short-time delayed tripping

Pick-up current

22 mA

Sensitivity type

Pulse-current sensitive

Terminal capacity (cable)

M5 (with cross-recessed screw as defined in EN ISO 4757-Z2, PZ2)

Rated fault current - max

0.03 A

Rated fault current - min

0.03 A

Rated insulation voltage (Ui)

440 V

Rated operational current for specified heat dissipation (In)

40 A

Rated operational voltage (Ue) - max

190 V

Rated residual making and breaking capacity

500 A

Surge current capacity

3 kA

Width in number of modular spacings

4

Voltage rating (IEC/EN 60947-2)

110/190 V

Voltage rating (UL)

208/120 V, 60 Hz

Voltage type

AC

Terminal capacity (solid wire)

1.5 mm² - 35 mm²

Tripping time

Short time-delayed

8 ms delay at 60 Hz

10 ms delay at 50 Hz

Rated short-circuit strength

5 kA (UL, as per CSA)

10 kA with back-up fuse

Terminal capacity (stranded cable)

16 mm² (2x)

RAL-number

7035

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