Product specifications

Eaton 170939

Catalog Number: 170939

Eaton Moeller series xEffect - FRBm6/M RCBO - residual-current circuit breaker with overcurrent protection. RCD/MCB, 10A, 100mA, MCB trip type D, 3-phase+N, RCCB trip type: A



Photo is representative

General specifications

Product Name
Eaton Moeller series xEffect - FRBm6/M RCBO - residual-current circuit breaker with overcurrent protection

Catalog Number
170939

Model Code
FRBM6-D10/3N/01-A

EAN
4015081670697

Product Length/Depth
80 mm

Product Height
75.5 mm

Product Width
70 mm

Product Weight
0.446 kg

Compliances
RoHS conform

Certifications
CE
EN45545-2
IEC 61373

Powering Business Worldwide

defaultTaxonomyAttributeLabel

Type

RCBO

Application

Switchgear for industrial and advanced commercial applications

Voltage rating

415 V - 415 V

Surge current capacity

0.25 kA

Voltage type

AC

Width in number of modular spacings

4

Features

Concurrently switching N-neutral

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

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.

Resources

Brochures

xEffect_FR_RCCB_FAZ%20MCB.pdf

Catalogs

eaton-xeffect-frbm6-rcbo-catalog-ca003015en-en-us.pdf

Certification reports

DA-DC-03_FRBM-3

03_FRBM-3_191119

DA-DC-03_FRBm-3N

Drawings

Dimension xEffect FRBm4/FRBm6 3N

eaton-xeffect-frbm6m-dimensions-004.jpg

eaton-xeffect-frbm6m-characteristic-curve-002.jpg

eaton-xeffect-frbm6m-wiring-diagram-002.jpg

Installation instructions

IL019140ZU

Installation videos

xeffect-FRBm6/M-installation-video

mCAD model

eaton-cadenas-side_view-frbm_3n_rcbo_side.pra

eaton-cadenas-front_view-frbm_3n_rcbo_front.pra

eaton-cadenas-path-rail_digital_2-frbm_3n_rcbo.prj

Wiring diagrams

Contact Sequence xEffect FRBm4/FRBm6 3N

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.

Operating ambient temperature - max

40 °C

Operating ambient temperature - min

-25 °C

Product range

FRBm6

Rated current

10 A

Rated fault currents of product range

30, 100, 300 MilliAmpere

Rated operational current for specified heat dissipation (In)

10 A

Rated switching capacity (IEC/EN 61009)

6 kA

Static heat dissipation, non-current-dependent

0 W

Tripping characteristic

D

Built-in depth

75.5 mm

Current limiting class

3

Rated short-circuit breaking capacity (EN 60947-2)

0 kA

Ambient operating temperature - max

40 °C

Ambient operating temperature - min

-25 °C

Fault current rating

0.1 A

Heat dissipation capacity

0 W

Heat dissipation per pole, current-dependent

0 W

Number of poles (protected)

4

Number of poles (total)

4

Rated operational voltage (Ue) - max

415 V

Rated short-circuit breaking capacity (IEC 60947-2)

0 kA

Rated switching capacity

6 kA

Basic function

Combined RCD/MCB devices

Equipment heat dissipation, current-dependent

7.8 W

Rated impulse withstand voltage (Uimp)

4 kV

Degree of protection

IP20

Operating ambient temperature hint

Keep in mind the derating at temperatures higher than 40 °C

Tripping

Non-delayed

Overvoltage category

III

Pollution degree

2

Impulse withstand current

Partly surge-proof, 250 A

Leakage current type

A

Release characteristic

D

Sensitivity type

Pulse-current sensitive

Frequency rating

50 Hz

Rated insulation voltage (Ui)

500 V

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

Rated short-circuit breaking capacity (EN 61009)

6 kA

Rated short-circuit breaking capacity (EN 61009-1)

6 kA

Number of poles

Three-pole + N

Disconnection characteristic

Undelayed

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