Product specifications

Eaton 120683

Catalog Number: 120683

Eaton Moeller series xPole - mRB4/6 RCBO - residual-current circuit breaker with overcurrent protection. RCD/MCB, 20A, 30mA, D-LS-Char, 3N pole, FI-Char: A



General specifications

Product Name
Eaton Moeller series xPole - mRB4/6 RCBO - residual-current circuit breaker with overcurrent protection

Catalog Number
120683

Model Code
mRB4-20/3N/D/003-A

EAN
4015081185139

Product Length/Depth
80 mm

Product Height
75.5 mm

Product Width
70 mm

Product Weight
0.445 kg

Compliances
CE Marked
RoHS conform

Certifications
CE

Powering Business Worldwide

defaultTaxonomyAttributeLabel

Type

RCBO

Application

Switchgear for residential and commercial applications

Amperage Rating

20 A

Voltage rating

400 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.

Device height

80 mm

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

Resources

Catalogs

eaton-xpole-mrb6-rcbo-catalog-ca019057en-en-us.pdf

eaton-xpole-mrb4-rcbo-catalog-ca019058en-en-us.pdf

Certification reports

03_mRB-3N_281118

DA-DC-03_mRB-3N

03_mRB-2_160616

03_mRB-3p_200416

03_mRB4-PT_180517

Characteristic curve

eaton-mcb-xpole-mrb4-6-characteristic-curve.eps

Drawings

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

Dimensions xPole mRB4/mRB6 3N

eaton-mcb-xpole-mrb4-6-dimensions.eps

eaton-xeffect-frbm6m-dimensions-004.jpg

3D Drawing xPole mRB4/mRB6 3N

eCAD model

ETN.mRB4-20_3N_D_003-A

Installation instructions

eaton-xpole-combined-mcb-rcd-device-rcbo-packaging-manual-multilingual.pdf

IL019140ZU

mCAD model

faz_3pn_4p.stp

DA-CD-faz_3pn_4p

Time/current curves

Characteristics xPole mRB4/mRB6 3N

Wiring diagrams

mRB

eaton-mcb-xpole-mrb4-6-wiring-diagram.eps

Contact Sequence xPole mRB4/mRB6 3N

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.

Mounting style

Tri-stable slide catch - enables removal from existing busbar combination

Operating ambient temperature - max

40 °C

Operating ambient temperature - min

-25 °C

Product application

Switchgear for industrial and advanced commercial applications

Product range

mRB4

Rated current

20 A

Rated current of product range

6 - 25 Ampere

Rated fault currents of product range

30, 100, 300 MilliAmpere

Rated operational current for specified heat dissipation (In)

20 A

Rated switching capacity (IEC/EN 60947-2)

4.5 kA

Rated switching capacity (IEC/EN 61009)

4.5 kA

Static heat dissipation, non-current-dependent

0 W

Tripping characteristic

D

Built-in depth

70 mm

Current limiting class

3

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

4.5 kA

Frame

45 mm

Terminal protection

Busbar tag shroud to VBG4

Terminals (top and bottom)

Twin-purpose

Ambient operating temperature - max

40 °C

Ambient operating temperature - min

-25 °C

Fault current rating

0.03 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

400 V

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

4.5 kA

Rated switching capacity

4.5 kA

Back-up fuse

100 Ampere gL

Basic function

Combined RCD/MCB devices

Climatic proofing

IEC 68-2: 25 °C - 55 °C at 90 % - 95 % humidity

Equipment heat dissipation, current-dependent

12 W

Rated impulse withstand voltage (Uimp)

4 kV

Degree of protection (built in)

IP40

Degree of protection

IP20

Operating ambient temperature hint

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

Solid terminal capacities

1 - 25 Square Millimeter

Standards

IEC/EN 61009

Tripping

Non-delayed

Overvoltage category

III

Pollution degree

2

Material thickness

2 mm

Rated non-tripping current

0.5 x I Δn

Impulse withstand current

Partly surge-proof, 250 A

Leakage current type

A

Release characteristic

D

Sensitivity type

Type A, 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)

4.5 kA

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

4.5 kA

Voltage rating at AC

230 V / 400 V

Number of poles

Three-pole + N

Disconnection characteristic

Undelayed

Selectivity class

3

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