Specifications

Eaton 102682

Catalog Number: 102682

Eaton Moeller series NZM - Molded Case Circuit Breaker. Molded Case Switch, 3p, 100A



General specifications

Product Name
Eaton Moeller series NZM molded case switch

Catalog Number
102682

EAN
4015081025428

Product Length/Depth
88 mm

Product Height
145 mm

Product Width
90 mm

Product Weight
1.046 kg

Compliances
RoHS conform

Certifications
UL (Category Control Number WJAZ)
Specially designed for North America
IEC
IEC 60947-2
CSA-C22.2 No. 5-09
CSA certified
UL listed
CSA (File No. 22086)
UL 489
UL/CSA
CE marking
CSA (Class No. 4652-06)
UL (File No. E148671)

Powering Business Worldwide

Product specifications

Type

Switch-disconnector

Special features

IEC/EN 60947-2: circuit breakers without overcurrent (CBI-X) with main switch characteristics and isolating characteristics to IEC/EN 60204.
Rated current = rated uninterrupted current: 100 A
Terminal capacity hint: Up to 95 mm² can be connected depending on the cable manufacturer.

Application

Branch circuits, feeder circuits

Amperage Rating

100 A

Voltage rating

690 V - 690 V

Circuit breaker frame type

N1

Features

Protection unit

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.

Resources

Brochures

eaton-feerum-the-whole-grain-solution-success-story-en-us.pdf

eaton-digital-nzm-brochure-br013003en-en-us.pdf

Catalogs

eaton-digital-nzm-catalog-ca013003en-en-us.pdf

Characteristic curve

eaton-circuit-breaker-let-through-current-nzm-mccb-characteristic-curve-002.eps

eaton-circuit-breaker-nzm-mccb-characteristic-curve.eps

Declarations of conformity

DA-DC-03_NS1

Drawings

eaton-circuit-breaker-switch-nzm-mccb-dimensions-014.eps

eaton-circuit-breaker-nzm-mccb-dimensions-017.eps

eaton-circuit-breaker-switch-nzm-mccb-3d-drawing-006.eps

eCAD model

ETN.NS1-100-NA

Installation instructions

eaton-cirucit-breaker-switch-disconnector-nzmb-il01203004z.pdf

Installation videos

The new digital NZM Range

Introduction of the new digital circuit breaker NZM

mCAD model

DA-CD-nzm1_xsve

DA-CS-nzm1_xsve

Technical data sheets

eaton-nzm-technical-information-sheet

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.

Pollution degree

3

Mounting Method

DIN rail (top hat rail) mounting optional

Fixed

Built-in device fixed built-in technique

Equipment heat dissipation, current-dependent

16.86 W

Ambient operating temperature - max

70 °C

Ambient operating temperature - min

-25 °C

Ambient storage temperature - max

70 °C

Ambient storage temperature - min

40 °C

Rated current (Iu)

125 A

Current rating (Iu) (UL 489 csa 22.2 no. 5.1)

125 A

Number of auxiliary contacts (change-over contacts)

0

Number of auxiliary contacts (normally closed contacts)

0

Number of auxiliary contacts (normally open contacts)

0

Switch positions

I, +, 0

Degree of protection

IP20

In the area of the HMI devices: IP20 (basic protection type)

Direction of incoming supply

As required

Electrical connection type of main circuit

Frame clamp

Lifespan, mechanical

20000 operations

Overvoltage category

III

Degree of protection (IP), front side

IP40 (with insulating surround)

IP66 (with door coupling rotary handle)

Degree of protection (terminations)

IP00 (terminations, phase isolator and band terminal)

IP10 (tunnel terminal)

Number of poles

Three-pole

Terminal capacity (copper strip)

Min. 2 segments of 9 mm x 0.8 mm at box terminal

Max. 9 segments of 9 mm x 0.8 mm at box terminal

Lifespan, electrical

7500 operations at 690 V AC-1

10000 operations at 415 V AC-1

10000 operations at 400 V AC-1

Functions

Disconnectors/main switches

Position of connection for main current circuit

Front side

Rated operational current for specified heat dissipation (In)

100 A

Power loss

16.9 W

Short-circuit total breaktime

< 10 ms

Short-circuit release non-delayed setting - max

1250 A

Short-circuit release non-delayed setting - min

1250 A

Terminal capacity (copper busbar)

Max. 16 mm x 5 mm direct at switch rear-side connection

M6 at rear-side screw connection

NA: max. 16 mm x 5 mm direct at switch rear-side connection

NA: min. 12 mm x 5 mm direct at switch rear-side connection

NA: M6 at rear-side screw connection

Min. 12 mm x 5 mm direct at switch rear-side connection

Terminal capacity (copper solid conductor/cable)

10 mm² - 16 mm² (1x) at box terminal
10 mm² - 16 mm² (1x) direct at switch rear-side connection
6 mm² - 16 mm² (2x) at box terminal
6 mm² - 16 mm² (2x) direct at switch rear-side connection
NA: 12 - 6 AWG (1x) at box terminal
NA: 12 - 6 AWG (1x) direct at switch rear-side connection
NA: 9 - 6 AWG (2x) direct at switch rear-side connection
NA: 6 AWG (1x) at tunnel terminal
16 mm² (1x) at tunnel terminal

Terminal capacity (aluminum solid conductor/cable)

10 mm² - 16 mm² (1x) direct at switch rear-side connection
16 mm² (1x) at tunnel terminal
10 mm² - 16 mm² (2x) direct at switch rear-side connection

Terminal capacity (copper stranded conductor/cable)

10 mm² - 70 mm² (1x) at box terminal
NA: 4 - 3/0 AWG/kcmil (1x) at 1-hole tunnel terminal
25 mm² (2x) direct at switch rear-side connection
25 mm² - 70 mm² (1x) direct at switch rear-side connection
NA: 4 - 2/0 AWG/kcmil (1x) at box terminal
25 mm² - 95 mm² (1x) at 1-hole tunnel terminal
6 mm² - 25 mm² (2x) at box terminal

Terminal capacity (aluminum stranded conductor/cable)

25 mm² - 95 mm² (1x) at 1-hole tunnel terminal
25 mm² - 35 mm² (1x) direct at switch rear-side connection
25 mm² - 35 mm² (2x) direct at switch rear-side connection

Handle type

Rocker lever

Short delay current setting (Isd) - max

0 A

Short delay current setting (Isd) - min

0 A

Instantaneous current setting (Ii) - max

1250 A

Instantaneous current setting (Ii) - min

1250 A

Number of operations per hour - max

120

Overload current setting (Ir) - max

0 A

Overload current setting (Ir) - min

0 A

Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 230 V, 50/60 Hz

85 kA

Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 400/415 V, 50/60 Hz

50 kA

Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 440 V, 50/60 Hz

35 kA

Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 525 V, 50/60 Hz

10 kA

Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 690 V, 50/60 Hz

7.5 kA

Rated short-circuit making capacity Icm at 400/415 V, 50/60 Hz

105 kA

Rated short-circuit making capacity Icm at 440 V, 50/60 Hz

74 kA

Rated short-circuit making capacity Icm at 525 V, 50/60 Hz

53 kA

Rated short-circuit making capacity Icm at 690 V, 50/60 Hz

17 kA

Standard terminals

Box terminal

Optional terminals

Connection on rear. Screw terminal. Tunnel terminal

Rated operating voltage Ue (UL) - max

480 Y / 277 V

Rated short-circuit making capacity Icm at 240 V, 50/60 Hz

187 kA

Rated impulse withstand voltage (Uimp) at auxiliary contacts

6000 V

Rated impulse withstand voltage (Uimp) at main contacts

6000 V

Rated insulation voltage (Ui)

690 V AC



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