Product specifications

Eaton 265941

Catalog Number: 265941

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 4p, 100A, H, 2

General specifications

Product Name
Eaton Moeller series NZM molded case circuit breaker electronic

Catalog Number
265941

Model Code
NZMH2-4-VE100

EAN
4015082659417

Product Length/Depth
149 mm

Product Height
184 mm

Product Width
140 mm

Product Weight
3 kg

Compliances
RoHS conform

Certifications
IEC
IEC/EN 60947

Powering Business Worldwide

Product specifications

Rated operational current for specified heat dissipation (In)

100 A

10.11 Short-circuit rating

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

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

5 kA

10.4 Clearances and creepage distances

Meets the product standard's requirements.

10.12 Electromagnetic compatibility

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

Mounting Method

DIN rail (top hat rail) mounting optional
Built-in device fixed built-in technique
Fixed

Amperage Rating

100 A

10.2.5 Lifting

Does not apply, since the entire switchgear needs to be evaluated.

Terminal capacity (copper strip)

Min. 2 segements of 16 mm x 0.8 mm at rear-side connection (punched)
Min. 2 segments of 9 mm x 0.8 mm at box terminal
Max. 10 segments of 16 mm x 0.8 mm at box terminal
Max. 10 segments of 24 mm x 0.8 mm at rear-side connection (punched)
Max. 8 segments of 24 mm x 1 mm (2x) at box terminal

Handle type

Rocker lever

10.2.3.1 Verification of thermal stability of enclosures

Meets the product standard's requirements.

Ambient storage temperature - min

40 °C

Protection against direct contact

Finger and back-of-hand proof to DIN EN 50274/VDE 0106 part 110

Resources

Brochures

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

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

Catalogs

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

Characteristic curve

eaton-circuit-breaker-characteristic-power-defense-mccb-characteristic-curve-037.eps

eaton-circuit-breaker-nzm-mccb-characteristic-curve-054.eps

eaton-circuit-breaker-let-through-current-nzm-mccb-characteristic-curve-005.eps

Drawings

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

eaton-circuit-breaker-nzm-mccb-dimensions-035.eps

eCAD model

DA-CE-ETN.NZMH2-4-VE100

Installation instructions

il01206006z2015_11.pdf

Installation videos

Introduction of the new digital circuit breaker NZM

The new digital NZM Range

mCAD model

DA-CS-nzm2_4p

DA-CD-nzm2_4p

Technical data sheets

eaton-nzm-technical-information-sheet

Terminal capacity (copper busbar)

Max. 24 mm x 8 mm direct at switch rear-side connection
Min. 16 mm x 5 mm direct at switch rear-side connection
M8 at rear-side screw connection

10.8 Connections for external conductors

Is the panel builder's responsibility.

Special features

Maximum back-up fuse, if the expected short-circuit currents at the installation location exceed the switching capacity of the circuit breaker (Rated short-circuit breaking capacity Icn) R.m.s. value measurement and “thermal memory” Adjustable time delay setting to overcome current peaks tr at 6 x Ir also infinity (without overload releases) Adjustable delay time tsd i^2t constant function: fixed OFF Set value in neutral conductor is synchronous with set value Ir of main pole. Rated current = rated uninterrupted current: 100 A

Ambient operating temperature - max

70 °C

Position of connection for main current circuit

Front side

Current rating of neutral conductor

200% of phase conductor

Rated insulation voltage (Ui)

1000 V AC

Climatic proofing

Damp heat, cyclic, to IEC 60068-2-30
Damp heat, constant, to IEC 60068-2-78

Terminal capacity (copper stranded conductor/cable)

25 mm^2 - 70 mm^2 (2x) direct at switch rear-side connection
25 mm^2 - 185 mm^2 (1x) at 1-hole tunnel terminal
25 mm^2 - 70 mm^2 (2x) at box terminal
25 mm^2 - 185 mm^2 (1x) direct at switch rear-side connection
25 mm^2 - 185 mm^2 (1x) at box terminal

Features

Protection unit
Motor drive optional

Lifespan, electrical

10000 operations at 415 V AC-1
6500 operations at 400 V AC-3
10000 operations at 400 V AC-1
5000 operations at 690 V AC-3
6500 operations at 415 V AC-3

7500 operations at 690 V AC-1

Electrical connection type of main circuit

Screw connection

Short-circuit total breaktime

< 10 ms

Rated impulse withstand voltage (Uimp) at main contacts

8000 V

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

150 kA

10.9.3 Impulse withstand voltage

Is the panel builder's responsibility.

Utilization category

A (IEC/EN 60947-2)

Number of poles

Four-pole

Ambient operating temperature - min

-25 °C

10.6 Incorporation of switching devices and components

Does not apply, since the entire switchgear needs to be evaluated.

Overload current setting (Ir)

50 A - 100 A

10.5 Protection against electric shock

Does not apply, since the entire switchgear needs to be evaluated.

Terminal capacity (control cable)

0.75 mm² - 1.5 mm² (2x)
0.75 mm² - 2.5 mm² (1x)

Equipment heat dissipation, current-dependent

8.25 W

Instantaneous current setting (Ii) - min

1200 A

10.13 Mechanical function

The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

10.2.6 Mechanical impact

Does not apply, since the entire switchgear needs to be evaluated.

10.9.4 Testing of enclosures made of insulating material

Is the panel builder's responsibility.

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

150 kA

Application

Use in unearthed supply systems at 690 V

10.3 Degree of protection of assemblies

Does not apply, since the entire switchgear needs to be evaluated.

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

330 kA

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

130 kA

Short-circuit release delayed setting - max

1000 A

Degree of protection (IP), front side

IP66 (with door coupling rotary handle)

IP40 (with insulating surround)

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

105 kA

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

40 kA

Instantaneous current setting (Ii) - max

1200 A

Overload current setting (Ir) - min

50 A

Short delay current setting (Isd) - min

100 A

Number of auxiliary contacts (normally closed contacts)

0

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.

Lifespan, mechanical

20000 operations

Overload current setting (Ir) - max

100 A

Voltage rating

690 V - 690 V

Terminal capacity (copper solid conductor/cable)

6 mm² - 16 mm² (2x) at box terminal

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

10 mm² - 16 mm² (1x) at box terminal

6 mm² - 16 mm² (2x) direct at switch rear-side connection

16 mm² (1x) at tunnel terminal

Degree of protection (terminations)

IP10 (tunnel terminal)

IP00 (terminations, phase isolator and strip terminal)

Short-circuit release delayed setting - min

100 A

Terminal capacity (aluminum stranded conductor/cable)

25 mm² - 185 mm² (1x) at tunnel terminal

25 mm² - 50 mm² (1x) direct at switch rear-side connection

25 mm² - 50 mm² (2x) direct at switch rear-side connection

10.9.2 Power-frequency electric strength

Is the panel builder's responsibility.

Short-circuit release non-delayed setting - min

1200 A

Degree of protection

IP20 (basic degree of protection, in the operating controls area)

IP20

Overvoltage category

III

Rated short-time withstand current (t = 1 s)

1.9 kA

Short delay current setting (Isd) - max

1000 A

Rated impulse withstand voltage (Uimp) at auxiliary contacts

6000 V

Number of auxiliary contacts (change-over contacts)

0

Rated short-time withstand current (t = 0.3 s)

1.9 kA

Ambient storage temperature - max

70 °C

Release system

Electronic release

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

37.5 kA

Optional terminals

Box terminal. Connection on rear. Tunnel terminal

Pollution degree

3

10.7 Internal electrical circuits and connections

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.

Functions

Systems, cable, selectivity and generator protection

Short-circuit release non-delayed setting - max

1200 A

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

330 kA

Standard terminals

Screw terminal

Type

Circuit breaker

10.2.2 Corrosion resistance

Meets the product standard's requirements.

10.2.4 Resistance to ultra-violet (UV) radiation

Meets the product standard's requirements.

10.2.7 Inscriptions

Meets the product standard's requirements.

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

286 kA

Number of auxiliary contacts (normally open contacts)

0

Isolation

300 V AC (between the auxiliary contacts)

500 V AC (between auxiliary contacts and main contacts)

Number of operations per hour - max

120

Circuit breaker frame type

NZM2

Direction of incoming supply

As required

Shock resistance

20 g (half-sinusoidal shock 20 ms)

Terminal capacity (aluminum solid conductor/cable)

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

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

16 mm² (1x) at tunnel terminal

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