Specifications

Eaton 168484



Catalog Number: 168484

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, N, 3p, 350A, plug-in module

General specifications

Product Name
Eaton Moeller series NZM molded case circuit breaker electronic

Catalog Number
168484

EAN
4015081649648

Product Length/Depth
335 mm

Product Height
215.2 mm

Product Width
140 mm

Product Weight
7.72 kg

Compliances
RoHS conform

Certifications
IEC
IEC/EN 60947

Powering Business Worldwide

Product specifications

Type

Circuit breaker

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)
Rated current = rated uninterrupted current: 350 A
Terminal capacity hint: Up to 240 mm² can be connected depending on the cable manufacturer.
Tripping class 10 A
IEC/EN 60947-4-1, IEC/EN 60947-2
The circuit-breaker fulfills all requirements for AC-3 switching category.

Application

Use in unearthed supply systems at 690 V

Amperage Rating

350 A

Voltage rating

690 V - 690 V

Circuit breaker frame type

NZM3

Accessories required

NZM3-XSVS

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.

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

Declarations of conformity

DA-DC-03_N3

Drawings

eaton-circuit-breaker-nzm-mccb-dimensions-020.eps

eaton-circuit-breaker-switch-nzm-mccb-dimensions-016.eps

eaton-general-ie-ready-dilm-contactor-standards.eps

eCAD model

DA-CE-ETN.NZMN3-ME350-SVE

Installation instructions

eaton-circuit-breaker-plug-in-adapter-nzm2-il01219023z.pdf

eaton-circuit-breaker-basic-device-nzmn-b-il01208009z.pdf

Installation videos

Introduction of the new digital circuit breaker NZM

The new digital NZM Range

mCAD model

nzmh3_me220_sve.stp

nzmh3_me220_sve.dwg

Technical data sheets

eaton-nzm-technical-information-sheet

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.

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:

Thermal protection

Pollution degree

3

Mounting Method

Plug-in unit

Built-in device plug-in technique

Climatic proofing

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

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

Equipment heat dissipation, current-dependent

36.75 W

Utilization category

A (IEC/EN 60947-2)

Isolation

300 V AC (between the auxiliary contacts)

500 V AC (between auxiliary contacts and main contacts)

Ambient operating temperature - max

70 °C

Ambient operating temperature - min

-25 °C

Ambient storage temperature - max

70 °C

Ambient storage temperature - min

40 °C

Protection against direct contact

Finger and back-of-hand proof to VDE 0106 part 100

Rated insulation voltage (Ui)

1000 V

Rated operating power at AC-3, 230 V

110 kW

Rated operating power at AC-3, 400 V

200 kW

Switch off technique

Electronic

Degree of protection

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

Direction of incoming supply

As required

Electrical connection type of main circuit

Screw connection

Lifespan, mechanical

15000 operations

Overvoltage category

III

Degree of protection (IP), front side

IP66 (with door coupling rotary handle)
IP40 (with insulating surround)

Degree of protection (terminations)

IP00 (terminations, phase isolator and strip terminal)
IP10 (tunnel terminal)

Number of poles

Three-pole

Terminal capacity (copper strip)

Max. 10 segments of 24 mm x 1 mm + 5 segments of 24 mm x 1 mm at box terminal
Min. 6 segments of 16 mm x 0.8 mm at box terminal
10 segments of 50 mm x 1 mm (2x) at rear-side width extension
Max. 8 segments of 24 mm x 1 mm (2x) at box terminal
Max. 10 segments of 32 mm x 1 mm + 5 segments of 32 mm x 1 mm at rear-side connection (punched)
Min. 6 segments of 16 mm x 0.8 mm at rear-side connection (punched)

Lifespan, electrical

2000 operations at 400 V AC-3
5000 operations at 415 V AC-1
2000 operations at 415 V AC-3
5000 operations at 400 V AC-1
3000 operations at 690 V AC-1

2000 operations at 690 V AC-3

Functions

Phase failure sensitive

Motor protection

Shock resistance

20 g (half-sinusoidal shock 20 ms)

Rated operational current for specified heat dissipation (In)

350 A

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

3.3 kA

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

3.3 kA

Handle type

Rocker lever

Instantaneous current setting (Ii) - max

4900 A

Instantaneous current setting (Ii) - min

700 A

Number of operations per hour - max

60

Overload current setting (Ir) - max

350 A

Overload current setting (Ir) - min

175 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

35 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

13 kA

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

5 kA

Standard terminals

Screw terminal

Optional terminals

Box terminal. Connection on rear. Tunnel terminal

Release system

Electronic release

Short-circuit total breaktime

< 10 ms

Terminal capacity (aluminum solid conductor/cable)

16 mm² (1x) at tunnel terminal

Terminal capacity (aluminum stranded conductor/cable)

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

50 mm² - 240 mm² (1x) at 2-hole tunnel terminal

50 mm² - 240 mm² (2x) at 2-hole tunnel terminal

Terminal capacity (control cable)

0.75 mm² - 2.5 mm² (1x)

0.75 mm² - 1.5 mm² (2x)

Terminal capacity (copper busbar)

Max. 30 mm x 10 mm + 30 mm x 5 mm direct at switch rear-side connection

M10 at rear-side screw connection

Max. 10 mm x 50 mm (2x) at rear-side width extension

Min. 20 mm x 5 mm direct at switch rear-side connection

Terminal capacity (copper solid conductor/cable)

300 mm² (2x) at rear-side width extension

16 mm² (2x) at box terminal

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

16 mm² (1x) at tunnel terminal

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

Terminal capacity (copper stranded conductor/cable)

35 mm² - 240 mm² (1x) at box terminal

25 mm² - 240 mm² (1x) direct at switch rear-side connection

25 mm² - 120 mm² (2x) at box terminal

16 mm² - 185 mm² (1x) at 1-hole tunnel terminal

25 mm² - 240 mm² (2x) direct at switch rear-side connection

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

35 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

40 kA

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

8000 V

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