Specifications

Eaton 265791



Catalog Number: 265791

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 550A, H, 4

General specifications

Product Name
Eaton Moeller series NZM molded case circuit breaker electronic

Catalog Number
265791

EAN
4015082657918

Product Length/Depth
401 mm

Product Height
207 mm

Product Width
210 mm

Product Weight
21 kg

Compliances
RoHS conform

Certifications
IEC/EN 60947
IEC

Powering Business Worldwide

Product specifications

Type

Circuit breaker

Special features

IEC/EN 60947-4-1, IEC/EN 60947-2
The circuit-breaker fulfills all requirements for AC-3 switching category.
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)
All AC-3 rating data applies to direct switching by the circuit-breaker under normal operating conditions. If, for example, a contactor takes over AC-3 switching under normal operating conditions, the full rated uninterrupted current applies to the circuit-breaker, In = Iu.
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: 550 A

Application

Use in unearthed supply systems at 690 V

Amperage Rating

550 A

Voltage rating

690 V - 690 V

Circuit breaker frame type

NZM4

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-nzm-mccb-characteristic-curve-055.eps

Drawings

eaton-circuit-breaker-nzm-mccb-dimensions-022.eps

eaton-circuit-breaker-switch-nzm-mccb-3d-drawing-003.eps

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

eCAD model

ETN.265791.edz

Installation instructions

eaton-circuit-breaker-basic-unit-nzmn4-il01210010z.pdf

Installation videos

The new digital NZM Range

Introduction of the new digital circuit breaker NZM

mCAD model

DA-CS-nzm4_3p

DA-CD-nzm4_3p

Technical data sheets

eaton-nzm-technical-information-sheet

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.

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

Built-in device fixed built-in technique

Fixed

Climatic proofing

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

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

Equipment heat dissipation, current-dependent

33.58 W

Utilization category

B (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

160 kW

Rated operating power at AC-3, 400 V

315 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

10000 operations

Overvoltage category

III

Rated operational current

550 A (690 V AC-3)

544 A (400 V AC-3)

Degree of protection (IP), front side

IP66 (with door coupling rotary handle)

IP40 (with insulating surround)

Degree of protection (terminations)

IP10 (tunnel terminal)

IP00 (terminations, phase isolator and strip terminal)

Number of poles

Three-pole

Terminal capacity (copper strip)

Max. 10 segments of 32 mm x 1 mm (2x) at flat conductor terminal

Min. 6 segments of 16 mm x 0.8 mm at flat conductor terminal

10 segments of 50 mm x 1 mm (2x) at 1-hole module plate

Max. 10 segments of 50 mm x 1 mm (2x) at rear-side connection

(punched)

10 segments of 80 mm x 1 mm (2x) at rear-side width extension

Min. 5 segments of 25 mm x 1 mm at rear-side connection

(punched)

Lifespan, electrical

2000 operations at 690 V AC-1

1000 operations at 690 V AC-3

2000 operations at 400 V AC-3

3000 operations at 415 V AC-1

2000 operations at 415 V AC-3

3000 operations at 400 V AC-1

Functions

Motor protection

Phase failure sensitive

Shock resistance

15 g (half-sinusoidal shock 11 ms)

Rated operational current for specified heat dissipation (In)

550 A

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

19.2 kA

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

19.2 kA

Short-circuit release non-delayed setting - max

7700 A

Short-circuit release non-delayed setting - min

1100 A

Handle type

Rocker lever

Instantaneous current setting (Ii) - max

7700 A

Instantaneous current setting (Ii) - min

550 A

Number of operations per hour - max

60

Overload current setting (Ir) - max

550 A

Overload current setting (Ir) - min

275 A

Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 230

V, 50/60 Hz

63 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

50 kA

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

50 kA

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

37 kA

Standard terminals

Screw terminal

Optional terminals

Connection on rear. Strip terminal. Tunnel terminal

Release system

Electronic release

Short-circuit total breaktime

< 25 ms (415 V); < 35 ms (> 415 V)

Terminal capacity (aluminum solid conductor/cable)

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

185 mm² - 240 mm² (1x) at rear-side 1-hole module plate

70 mm² - 240 mm² (6x) at rear-side width extension

50 mm² (4x) at rear-side 2-hole module plate

70 mm² - 185 mm² (2x) at rear-side 1-hole module plate

Terminal capacity (aluminum stranded conductor/cable)

50 mm² - 240 mm² (4x) at 4-hole tunnel terminal

Terminal capacity (control cable)

0.75 mm² - 1.5 mm² (2x)

0.75 mm² - 2.5 mm² (1x)

Terminal capacity (copper busbar)

Min. 60 mm x 10 mm at rear-side width extension

Max. 50 mm x 10 mm (2x) at rear-side 1-hole module plate

Max. 80 mm x 10 mm (2x) at rear-side width extension

Min. 25 mm x 5 mm at rear-side 1-hole module plate

50 mm x 10 mm (2x) at rear-side 2-hole module plate

Min. 25 mm x 5 mm direct at switch rear-side connection

M10 at rear-side screw connection

Max. 50 mm x 10 mm (2x) direct at switch rear-side connection

Terminal capacity (copper solid conductor/cable)

95 mm² - 240 mm² (6x) at rear-side width extension

120 mm² - 300 mm² (1x) at rear-side 1-hole module plate

300 mm² (4x) at rear-side width extension

35 mm² - 185 mm² (4x) at rear-side 2-hole module plate

95 mm² - 300 mm² (2x) at rear-side 1-hole module plate

95 mm² - 185 mm² (2x) at rear-side 2-hole module plate

50 mm² - 240 mm² (4x) at 4-hole tunnel terminal

Terminal capacity (copper stranded conductor/cable)

120 mm² - 185 mm² (1x) direct at switch rear-side connection

50 mm² - 185 mm² (4x) direct at switch rear-side connection

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

50 kA

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

187 kA

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

187 kA

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

143 kA

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

100 kA

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

275 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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