Specifications

# Eaton 290385

## Catalog Number: 290385

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 1400A 1000V




### General specifications

| | |
|---|---|
| **Product Name**<br>Eaton Moeller series NZM molded case circuit breaker electronic | **Catalog Number**<br>290385 |
| | **EAN**<br>4015082903855 |
| **Product Length/Depth**<br>401 mm | **Product Height**<br>207 mm |
| **Product Width**<br>210 mm | **Product Weight**<br>21 kg |
| **Compliances**<br>RoHS conform | **Certifications**<br>IEC |

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## Product specifications

### Type

Circuit breaker

### Special features

Lifespan, mechanical: of which max. 50% trip by shunt/undervoltage release
Phase-failure sensitivity
IEC/EN 60947-4-1, IEC/EN 60947-2
R.m.s. value measurement and “thermal memory”
adjustable time delay setting to overcome current peaks
tr: 2 – 20 s at 6 x Ir also infinity (without overload releases)
NZM...S1 terminal type: NZM...XKSA cover required
NZM4...S1 terminal type: Insulated busbar connection (NZM4-XKS screw connection)
Rated current = rated uninterrupted current: 1400 A

### Amperage Rating

1400 A

### Voltage rating

1000 V - 1000 V

### Circuit breaker frame type

NZM4

### 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.

## 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-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

### Installation instructions

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

### Installation videos

Introduction of the new digital circuit breaker NZM

The new digital NZM Range

### mCAD model

DA-CS-nzm4_3p

DA-CD-nzm4_3p

### Technical data sheets

eaton-nzm-technical-information-sheet

### 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

Equipment heat dissipation, current-dependent

217.56 W

Utilization category

B

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 insulation voltage (Ui)

1000 V

Rated operating power at AC-3, 230 V

450 kW

Rated operating power at AC-3, 400 V

800 kW

Switch off technique

Electronic

Degree of protection

IP20

Direction of incoming supply

As required

Electrical connection type of main circuit

Screw connection

### Lifespan, mechanical

10000 operations

### Overvoltage category

III

### Number of poles

Three-pole

### Terminal capacity (copper strip)

Max. 10 segments of 32 mm x 1 mm (2x) at flat conductor terminal
Min. 10 segments of 50 mm x 1 mm (2x) at rear-side connection (punched)
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
10 segments of 80 mm x 1 mm (2x) at rear-side width extension
Max. 10 segments of 50 mm x 1 mm (2x) at rear-side connection (punched)

### Lifespan, electrical

500 operations at 1000 V AC-1

### Functions

Motor protection
Phase failure sensitive

### Rated operational current for specified heat dissipation (In)

1400 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

19600 A

### Short-circuit release non-delayed setting - min

1400 A

### Handle type

Rocker lever

### Instantaneous current setting (Ii) - max

19600 A

### Instantaneous current setting (Ii) - min

1400 A

### Number of operations per hour - max

60

### Overload current setting (Ir) - max

1400 A

### Overload current setting (Ir) - min

700 A

### Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 1000 V, 50/60 Hz

15 kA

### 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

### Release system

Electronic release

### 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)

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

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) direct at switch rear-side connection

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

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

Terminal capacity (copper solid conductor/cable)

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

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

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

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

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

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

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

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 1000 V, 50/60 Hz

40 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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