

# Eaton 269275

Catalog Number: 269275

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 250A, NZMN3-AEF250-NA



### General specifications

#### Product Name

Eaton Moeller series NZM molded case  
circuit breaker electronic

#### Catalog Number

269275

#### EAN

4015082692759

#### Product Length/Depth

166 mm

#### Product Height

297 mm

#### Product Width

140 mm

#### Product Weight

7.007 kg

#### Compliances

RoHS conform

#### Certifications

CSA (Class No. 1432-01)

CSA certified

UL 489

IEC 60947-2

UL (Category Control Number DIVQ)

UL (File No. E31593)

UL listed

CSA-C22.2 No. 5-09

CSA (File No. 22086)

UL/CSA

IEC

IEC/EN 60947

Specially designed for North America

CE marking

## 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  $I_{cn}$ )  
Rated current = rated uninterrupted current: 250 A  
Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate.  
Fixed overload releases  $I_r$   
R.m.s. value measurement and “thermal memory”

### Application

Branch circuits, feeder circuits  
Use in unearthed supply systems at 690 V

### Amperage Rating

250 A

### Voltage rating

690 V - 690 V

### Circuit breaker frame type

NZM3

### Features

Protection unit  
Motor drive optional

### 10.10 Temperature rise

The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.

## 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-034.eps](#)

[eaton-circuit-breaker-tripping-characteristic-nzm-mccb-characteristic-curve.eps](#)

[eaton-circuit-breaker-nzm-mccb-characteristic-curve-031.eps](#)

### Declarations of conformity

[DA-DC-03\\_N3](#)

### Drawings

[eaton-circuit-breaker-switch-nzm-mccb-dimensions-016.eps](#)

[eaton-circuit-breaker-nzm-mccb-dimensions-020.eps](#)

[eaton-circuit-breaker-switch-nzm-mccb-3d-drawing-002.eps](#)

### eCAD model

[ETN.269275.edz](#)

### Installation instructions

[eaton-circuit-breaker-basic-device-nzmn-b-il01208009z.pdf](#)

### Installation videos

[The new digital NZM Range](#)

[Introduction of the new digital circuit breaker NZM](#)

### mCAD model

[DA-CS-nzm3\\_3p](#)

[DA-CD-nzm3\\_3p](#)

### Technical data sheets

[eaton-nzm-technical-information-sheet](#)

#### 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.

#### Pollution degree

3

#### Mounting Method

Built-in device fixed built-in technique

Fixed

#### Climatic proofing

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

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

#### Equipment heat dissipation, current-dependent

18.75 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

#### Low-voltage HBC fuse - max

400 A gG/gL

#### Number of auxiliary contacts (change-over contacts)

0

Number of auxiliary contacts (normally closed contacts)

0

Number of auxiliary contacts (normally open contacts)

0

Protection against direct contact

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

Degree of protection

IP20

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

Direction of incoming supply

As required

Electrical connection type of main circuit

Screw connection

Lifespan, mechanical

15000 operations

Overvoltage category

III

Rated operational current

250 A (690 V AC-1, making and breaking capacity)

500 A (415 V AC-1, making and breaking capacity)

250 A (660-690 V AC-3, making and breaking capacity)

630 A (380/400 V AC-1, making and breaking capacity)

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)

10 segments of 50 mm x 1 mm (2x) at rear-side width extension

Max. 10 segments of 24 mm x 1 mm + 5 segments of 24 mm x 1 mm

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 box terminal

Min. 6 segments of 16 mm x 0.8 mm at rear-side connection (punched)

#### Lifespan, electrical

2000 operations at 400 V AC-3

2000 operations at 415 V AC-3

3000 operations at 690 V AC-1

5000 operations at 400 V AC-1

2000 operations at 690 V AC-3

#### Functions

System and cable protection

Current limiting circuit breaker

#### Shock resistance

20 g (half-sinusoidal shock 20 ms)

#### Position of connection for main current circuit

Front side

#### Rated operational current for specified heat dissipation ( $I_n$ )

250 A

#### Release system

Electronic release

#### Short-circuit total breaktime

< 10 ms

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

3.3 kA

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

3.3 kA

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

2750 A

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

500 A

#### Terminal capacity (control cable)

16 mm<sup>2</sup> - 18 mm<sup>2</sup> (2x)

14 mm<sup>2</sup> - 18 mm<sup>2</sup> (1x)

#### Terminal capacity (copper busbar)

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

M10 at rear-side screw connection

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

#### Terminal capacity (copper solid conductor/cable)

500 mm<sup>2</sup> (2x) at rear-side width extension

16 mm<sup>2</sup> - 185 mm<sup>2</sup> (1x) at tunnel terminal

#### Terminal capacity (aluminum solid conductor/cable)

16 mm<sup>2</sup> (1x) at tunnel terminal

#### Terminal capacity (copper stranded conductor/cable)

4 mm<sup>2</sup> - 350 mm<sup>2</sup> (1x) at tunnel terminal

4 mm<sup>2</sup> - 350 mm<sup>2</sup> (1x) direct at switch rear-side connection

2 mm<sup>2</sup> - 500 mm<sup>2</sup> (1x) at box terminal

350 mm<sup>2</sup> (2x) direct at switch rear-side connection

#### Terminal capacity (aluminum stranded conductor/cable)

Max. 500 mm<sup>2</sup> (1x) at 2-hole tunnel terminal

Max. 500 mm<sup>2</sup> (2x) at 2-hole tunnel terminal

#### Handle type

Rocker lever

#### Short delay current setting (I<sub>sd</sub>) - max

0 A

#### Short delay current setting (I<sub>sd</sub>) - min

0 A

#### Instantaneous current setting (I<sub>i</sub>) - max

2750 A

#### Instantaneous current setting (I<sub>i</sub>) - min

500 A

#### Number of operations per hour - max

60

#### Overload current setting (I<sub>r</sub>) - max

250 A

#### Overload current setting (I<sub>r</sub>) - min

250 A

#### Rated short-circuit breaking capacity I<sub>cs</sub> (IEC/EN 60947) at 230 V, 50/60 Hz

85 kA

#### Rated short-circuit breaking capacity I<sub>cs</sub> (IEC/EN 60947) at 400/415 V, 50/60 Hz

50 kA

#### Rated short-circuit breaking capacity I<sub>cs</sub> (IEC/EN 60947) at 440 V, 50/60 Hz

35 kA

#### Rated short-circuit breaking capacity I<sub>cs</sub> (IEC/EN 60947) at 525 V, 50/60 Hz

13 kA

#### Rated short-circuit breaking capacity I<sub>cs</sub> (IEC/EN 60947) at 690 V, 50/60 Hz

5 kA

#### Rated short-circuit making capacity I<sub>cm</sub> at 400/415 V, 50/60 Hz

105 kA

Rated short-circuit making capacity  $I_{cm}$  at 440 V, 50/60 Hz

74 kA

Rated short-circuit making capacity  $I_{cm}$  at 525 V, 50/60 Hz

53 kA

Rated short-circuit making capacity  $I_{cm}$  at 690 V, 50/60 Hz

40 kA

Standard terminals

Screw terminal

Rated operating voltage  $U_e$  (UL) - max

600 V

Rated short-circuit making capacity  $I_{cm}$  at 240 V, 50/60 Hz

187 kA

Rated impulse withstand voltage ( $U_{imp}$ ) at auxiliary contacts

6000 V

Rated impulse withstand voltage ( $U_{imp}$ ) at main contacts

8000 V

Rated insulation voltage ( $U_i$ )

1000 V AC



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