

# Eaton 265894

Catalog Number: 265894

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 4p, 630A, NZMN3-4-AE630



General specifications

| Product Name                                                    | Catalog Number |
|-----------------------------------------------------------------|----------------|
| Eaton Moeller series NZM molded case circuit breaker electronic | 265894         |
|                                                                 | EAN            |
|                                                                 | 4015082658946  |
| Product Length/Depth                                            | Product Height |
| 166 mm                                                          | 275 mm         |
| Product Width                                                   | Product Weight |
| 185 mm                                                          | 8.767 kg       |
| Compliances                                                     | Certifications |
| RoHS conform                                                    | IEC/EN 60947   |
|                                                                 | IEC            |

## 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: 630 A  
Set value in neutral conductor is synchronous with set value  $I_r$  of main pole.  
R.m.s. value measurement and "thermal memory"  
Terminal capacity hint: Up to 240 mm<sup>2</sup> can be connected depending on the cable manufacturer.

### Application

Use in unearthed supply systems at 690 V

### Amperage Rating

630 A

### Voltage rating

690 V - 690 V

### Circuit breaker frame type

NZM3

### Features

Motor drive optional  
Protection unit

### 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](#)

### Characteristic curve

[eaton-circuit-breaker-nzm-mccb-characteristic-curve-034.eps](#)

[eaton-circuit-breaker-nzm-mccb-characteristic-curve-045.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-021.eps](#)

### eCAD model

[ETN.265894.edz](#)

### Installation instructions

[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

[DA-CS-nzm3\\_4p](#)

[DA-CD-nzm3\\_4p](#)

### 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.

#### 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

178.61 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

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

#### Direction of incoming supply

As required

#### Electrical connection type of main circuit

Screw connection

#### Current rating of neutral conductor

200% of phase conductor

#### 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)

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

#### Number of poles

Four-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  
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)  
Max. 10 segments of 32 mm x 1 mm + 5 segments of 32 mm x 1 mm at rear-side connection (punched)

#### Lifespan, electrical

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

## Functions

System and cable protection

## 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 ( $I_n$ )

630 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

5040 A

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

1260 A

## Terminal capacity (control cable)

0.75 mm<sup>2</sup> - 2.5 mm<sup>2</sup> (1x)

0.75 mm<sup>2</sup> - 1.5 mm<sup>2</sup> (2x)

## Terminal capacity (copper busbar)

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

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

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

M10 at rear-side screw connection

## Terminal capacity (copper solid conductor/cable)

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

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

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

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

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

## Terminal capacity (aluminum solid conductor/cable)

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

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

10 mm<sup>2</sup> - 16 mm<sup>2</sup> (2x) direct at switch rear-side connection

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

25 mm<sup>2</sup> - 120 mm<sup>2</sup> (2x) at box terminal  
25 mm<sup>2</sup> - 240 mm<sup>2</sup> (2x) direct at switch rear-side connection  
35 mm<sup>2</sup> - 240 mm<sup>2</sup> (1x) at box terminal  
25 mm<sup>2</sup> - 240 mm<sup>2</sup> (1x) direct at switch rear-side connection  
50 mm<sup>2</sup> - 240 mm<sup>2</sup> (2x) at 2-hole tunnel terminal  
16 mm<sup>2</sup> - 185 mm<sup>2</sup> (1x) at 1-hole tunnel terminal

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

25 mm<sup>2</sup> - 120 mm<sup>2</sup> (1x) direct at switch rear-side connection  
25 mm<sup>2</sup> - 120 mm<sup>2</sup> (2x) direct at switch rear-side connection  
50 mm<sup>2</sup> - 240 mm<sup>2</sup> (2x) at 2-hole tunnel terminal  
25 mm<sup>2</sup> - 185 mm<sup>2</sup> (1x) at tunnel terminal  
50 mm<sup>2</sup> - 240 mm<sup>2</sup> (1x) 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

5040 A

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

1260 A

#### Number of operations per hour - max

60

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

630 A

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

315 A

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

315 A - 630 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  $I_{cs}$  (IEC/EN 60947) at 525 V, 50/60 Hz

13 kA

Rated short-circuit breaking capacity  $I_{cs}$  (IEC/EN 60947) at 690 V, 50/60 Hz

5 kA

Rated short-circuit making capacity  $I_{cm}$  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

Optional terminals

Box terminal. Connection on rear. Tunnel terminal

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