

# Eaton 265996

Catalog Number: 265996

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 4p, 1600A, H4-4-VE1600



General specifications

Product Name	Catalog Number
Eaton Moeller series NZM molded case circuit breaker electronic	265996
	EAN
	4015082659967
Product Length/Depth	Product Height
401 mm	207 mm
Product Width	Product Weight
280 mm	27 kg
Compliances	Certifications
RoHS conform	IEC
	IEC/EN 60947

## 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  $I_{cn}$ )

R.m.s. value measurement and “thermal memory”

Adjustable time delay setting to overcome current peaks  $I_R$  at  $6 \times I_R$  also infinity (without overload releases)

Adjustable delay time  $t_{sd}$

$i^2t$  constant function: switchable

Set value in neutral conductor is synchronous with set value  $I_R$  of main pole.

Rated current = rated uninterrupted current: 1600 A

### Application

Use in unearthed supply systems at 525 V

### Amperage Rating

1600 A

### Voltage rating

690 V - 690 V

### Circuit breaker frame type

NZM4

### 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.

## 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-048.eps](#)

[eaton-circuit-breaker-nzm-mccb-characteristic-curve-049.eps](#)

### Drawings

[eaton-circuit-breaker-nzm-mccb-dimensions-023.eps](#)

### eCAD model

[ETN.265996.edz](#)

### 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-CD-nzm4\\_4p](#)

[DA-CS-nzm4\\_4p](#)

### 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

Fixed

Built-in device fixed built-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

284 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

#### 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

10000 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)

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

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

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

Max. 10 segments of 32 mm x 1 mm (2x) 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

Lifespan, electrical

2000 operations at 400 V AC-3

3000 operations at 415 V AC-1

2000 operations at 690 V AC-1

1000 operations at 690 V AC-3

2000 operations at 415 V AC-3

3000 operations at 400 V AC-1

#### Functions

Systems, cable, selectivity and generator protection

#### Shock resistance

15 g (half-sinusoidal shock 11 ms)

#### Position of connection for main current circuit

Front side

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

1600 A

#### Release system

Electronic release

#### Short-circuit total breaktime

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

#### 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 delayed setting - max

16000 A

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

1600 A

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

19200 A

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

3200 A

#### Terminal capacity (control cable)

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

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

#### Terminal capacity (copper busbar)

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

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

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 direct at switch rear-side connection

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

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

M10 at rear-side screw connection

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

300 mm<sup>2</sup> (4x) at rear-side width extension  
95 mm<sup>2</sup> - 240 mm<sup>2</sup> (6x) at rear-side width extension  
95 mm<sup>2</sup> - 300 mm<sup>2</sup> (2x) at rear-side 1-hole module plate  
95 mm<sup>2</sup> - 185 mm<sup>2</sup> (2x) at rear-side 2-hole module plate  
120 mm<sup>2</sup> - 300 mm<sup>2</sup> (1x) at rear-side 1-hole module plate  
35 mm<sup>2</sup> - 185 mm<sup>2</sup> (4x) at rear-side 2-hole module plate  
50 mm<sup>2</sup> - 240 mm<sup>2</sup> (4x) at 4-hole tunnel terminal

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

50 mm<sup>2</sup> (4x) at rear-side 2-hole module plate  
70 mm<sup>2</sup> - 185 mm<sup>2</sup> (2x) at rear-side 1-hole module plate  
240 mm<sup>2</sup> (2x) at rear-side width extension  
185 mm<sup>2</sup> - 240 mm<sup>2</sup> (1x) at rear-side 1-hole module plate  
70 mm<sup>2</sup> - 240 mm<sup>2</sup> (6x) at rear-side width extension

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

120 mm<sup>2</sup> - 185 mm<sup>2</sup> (1x) direct at switch rear-side connection  
50 mm<sup>2</sup> - 185 mm<sup>2</sup> (4x) direct at switch rear-side connection

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

50 mm<sup>2</sup> - 240 mm<sup>2</sup> (4x) at 4-hole tunnel terminal

#### Handle type

Rocker lever

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

16000 A

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

1600 A

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

19200 A

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

3200 A

#### Number of operations per hour - max

60

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

1600 A

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

800 A

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

800 A - 1600 A

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

63 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  $I_{cs}$  (IEC/EN 60947) at 440 V, 50/60 Hz

50 kA

Rated short-circuit breaking capacity  $I_{cs}$  (IEC/EN 60947) at 525 V, 50/60 Hz

50 kA

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

37 kA

Rated short-circuit making capacity  $I_{cm}$  at 400/415 V, 50/60 Hz

187 kA

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

187 kA

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

143 kA

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

100 kA

Standard terminals

Screw terminal

Optional terminals

Connection on rear. Strip terminal. Tunnel terminal

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

275 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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