

# Eaton 102685

Catalog Number: 102685

Eaton Moeller series NZM - Molded Case Circuit Breaker. Molded Case Switch, 3p, 200A



General specifications

Product Name	Catalog Number
Eaton Moeller series NZM molded case switch	102685
	EAN
	4015081025459
Product Length/Depth	Product Height
142 mm	185 mm
Product Width	Product Weight
105 mm	2.423 kg
Compliances	Certifications
RoHS conform	CSA (File No. 22086)
	UL/CSA
	IEC
	CSA (Class No. 4652-06)
	UL (File No. E148671)
	UL 489
	Specially designed for North America
	UL listed
	CSA-C22.2 No. 5-09
	IEC 60947-2
	CE marking
	UL (Category Control Number WJAZ)
	CSA certified

## Product specifications

### Type

Switch-disconnector

### Special features

IEC/EN 60947-2: circuit breakers without overcurrent (CBI-X) with main switch characteristics and isolating characteristics to IEC/EN 60204.

Rated current = rated uninterrupted current: 200 A

### Application

Branch circuits, feeder circuits

### Amperage Rating

200 A

### Voltage rating

690 V - 690 V

### Circuit breaker frame type

N2

### 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.

#### 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.

## 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-let-through-current-nzm-mccb-characteristic-curve-005.eps](#)

[eaton-circuit-breaker-characteristic-power-defense-mccb-characteristic-curve-037.eps](#)

### Declarations of conformity

[DA-DC-03\\_NS2](#)

### Drawings

[eaton-circuit-breaker-switch-nzm-mccb-dimensions-017.eps](#)

[eaton-circuit-breaker-nzm-mccb-dimensions-019.eps](#)

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

### eCAD model

[ETN.NS2-200-NA](#)

### Installation videos

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

[The new digital NZM Range](#)

### mCAD model

[DA-CS-nzm2\\_3p](#)

[DA-CD-nzm2\\_3p](#)

### Technical data sheets

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

#### 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

DIN rail (top hat rail) mounting optional

Fixed

#### Equipment heat dissipation, current-dependent

38.04 W

#### 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 current (Iu)

250 A

#### Current rating (Iu) (UL 489 csa 22.2 no. 5.1)

250 A

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

0

#### Number of auxiliary contacts (normally closed contacts)

0

#### Number of auxiliary contacts (normally open contacts)

0

#### Switch positions

I, +, 0

#### Degree of protection

IP20

In the area of the HMI devices: IP20 (basic protection type)

#### Direction of incoming supply

As required

#### Electrical connection type of main circuit

Screw connection

#### Lifespan, mechanical

20000 operations

#### Overvoltage category

III

#### Degree of protection (IP), front side

IP40 (with insulating surround)

IP66 (with door coupling rotary handle)

#### Degree of protection (terminations)

IP00 (terminations, phase isolator and band terminal)

IP10 (tunnel terminal)

#### Number of poles

Three-pole

#### Terminal capacity (copper strip)

Max. 8 segments of 15.5 mm x 0.8 mm (2x) at terminal box

Max. 10 segments of 16 mm x 0.8 mm at box terminal

Max. 10 segments of 24 mm x 0.8 mm at rear-side connection  
(punched)

NA: min. 2 segments of 16 mm x 0.8 mm at rear-side connection  
(punched)

Min. 2 segments of 9 mm x 0.8 mm at box terminal

Min. 2 segments of 16 mm x 0.8 mm at rear-side connection  
(punched)

NA: max. 10 segments of 16 mm x 0.8 mm at rear-side  
connection (punched)

#### Lifespan, electrical

10000 operations at 400 V AC-1

6500 operations at 400 V AC-3

10000 operations at 415 V AC-1

6500 operations at 415 V AC-3

5000 operations at 690 V AC-3

7500 operations at 690 V AC-1

#### Functions

Disconnectors/main switches

#### Position of connection for main current circuit

Front side

#### Rated operational current for specified heat dissipation (I<sub>n</sub>)

200 A

#### Power loss

30.7 W

#### Short-circuit total breaktime

< 10 ms

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

2500 A

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

2500 A

#### Terminal capacity (copper busbar)

Max. 24 mm x 8 mm direct at switch rear-side connection

NA: max. 20 mm x 5 mm direct at switch rear-side connection

NA: min. 16 mm x 5 mm direct at switch rear-side connection

M8 at rear-side screw connection

NA: M8 at rear-side screw connection

Min. 16 mm x 5 mm direct at switch rear-side connection

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

10 mm<sup>2</sup> - 16 mm<sup>2</sup> (1x) at box terminal

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

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

NA: 12 - 6 AWG (1x) direct at switch rear-side connection

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

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

NA: 12 - 6 AWG (1x) at box terminal

NA: 6 AWG (1x) at tunnel terminal

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

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

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

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

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

25 mm<sup>2</sup> - 185 mm<sup>2</sup> (1x) at box terminal

25 mm<sup>2</sup> - 70 mm<sup>2</sup> (2x) at box terminal

25 mm<sup>2</sup> - 70 mm<sup>2</sup> (2x) direct at switch rear-side connection

NA: 4 - 350 AWG/kcmil (1x) at 1-hole tunnel terminal

NA: 4 - 350 AWG/kcmil (1x) at box terminal

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

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

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

25 mm<sup>2</sup> - 35 mm<sup>2</sup> (2x) direct at switch rear-side connection

25 mm<sup>2</sup> - 35 mm<sup>2</sup> (1x) direct at switch rear-side connection

25 mm<sup>2</sup> - 185 mm<sup>2</sup> (1x) at 1-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

2500 A

Instantaneous current setting (Ii) - min

2500 A

Number of operations per hour - max

120

Overload current setting (Ir) - max

0 A

Overload current setting (Ir) - min

0 A

Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 230 V, 50/60 Hz

150 kA

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

150 kA

Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 440 V, 50/60 Hz

130 kA

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

37.5 kA

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

5 kA

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

330 kA

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

286 kA

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

105 kA

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

53 kA

Standard terminals

Screw terminal

Optional terminals

Box terminal. Connection on rear. Tunnel terminal

Rated operating voltage Ue (UL) - max

600 Y / 347 V

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

330 kA

Rated impulse withstand voltage (Uimp) at auxiliary contacts

6000 V

Rated impulse withstand voltage (Uimp) at main contacts

8000 V

Rated insulation voltage (Ui)

1000 V AC



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