

# Eaton 113731

Catalog Number: 113731

Eaton Moeller series NZM - Molded Case Circuit Breaker. Switch-disconnector 3p 125A +pull out



## General specifications

Product Name	Catalog Number
Eaton Moeller series NZM switch-disconnector	113731
EAN	Model Code
4015081132713	N1-125-SVE
Product Height	Product Length/Depth
201 mm	90 mm
Product Weight	Product Width
1.024 kg	95 mm
Certifications	Compliances
IEC	RoHS conform
IEC/EN 60947	

## defaultTaxonomyAttributeLabel

### Type

Switch-disconnector

### Special features

#### Main switch characteristics

including positive drive to  
IEC/EN 60204 and VDE  
0113.

Isolating characteristics to  
IEC/EN 60947-3 and VDE  
0660.

Busbar tag shroud to VDE  
0160 Part 100.

Rated current = rated  
uninterrupted current: 125 A

### Application

Use in unearthing supply systems at 690 V

### Amperage Rating

125 A

### Voltage rating

690 V - 690 V

### Circuit breaker frame type

N1

### Features

Version as maintenance-/service switch

Version as main switch

Version as emergency stop installation

### Accessories required

NZM2-XSVS socket base

### 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](#)

### Certification reports

[DA-DC-03\\_N1](#)

### Drawings

[eaton-circuit-breaker-switch-nzm-mccb-dimensions-014.eps](#)

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

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

### eCAD model

[DA-CE-ETN.N1-125-SVE](#)

### Installation videos

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

[The new digital NZM Range](#)

### mCAD model

[DA-CS-nzm1\\_xsve](#)

[DA-CD-nzm1\\_xsve](#)

### 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.

#### Pollution degree

3

#### Mounting Method

Ground mounting

Built-in device plug-in technique

Intermediate mounting

Plug-in unit

Distribution board installation

#### Climatic proofing

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

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

#### Equipment heat dissipation, current-dependent

17.81 W

#### Isolation

500 V AC (between auxiliary contacts and main contacts)

300 V AC (between the auxiliary contacts)

#### Rated short-time withstand current (Icw)

2 kA

#### Degree of protection

IP20 (basic protection type, in the area of the HMI devices)

Other

#### Direction of incoming supply

As required

#### Electrical connection type of main circuit

Frame clamp

#### 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

Rated insulation voltage (Ui)

690 V

Rated operating frequency

50 Hz

Rated operating power at AC-23, 400 V

55 kW

Rated operating power at AC-3, 400 V

0 kW

Switch positions

I, +, 0

Lifespan, mechanical

20000 operations

Overvoltage category

III

Rated operational current

160 A (415 V AC-22/23A, making and breaking capacity)

160 A (690 V AC-22/23A, making and breaking capacity)

Degree of protection (IP), front side

IP20

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)

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

Max. 9 segments of 9 mm x 0.8 mm at box terminal

**Handle color**

Black

**Lifespan, electrical**

1000 operations at 400 V AC-23A

1000 operations at 415 V AC-23A

7500 operations at 690 V AC-1

10000 operations at 415 V AC-1

1000 operations at 690 V AC-23A

10000 operations at 400 V AC-1

**Functions**

Disconnectors/main switches

Interlockable

Voltage release optional

**Shock resistance**

20 g (half-sinusoidal shock 20 ms)

**Number of switches**

1

**Rated conditional short-circuit current (Iq)**

0 kA

**Rated conditional short-circuit current with back-up fuse**

125 gG/gL

100 kA at 400/415 V

80 kA at 690 V

**Rated conditional short-circuit current with downstream fuse**

100 kA at 400/415 V

10 kA at 690 V

125 gG/gL

**Rated operating voltage (Ue) at AC - max**

690 V

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

125 A

**Rated permanent current at AC-21, 400 V**

0 A

**Rated permanent current at AC-23, 400 V**

0 A

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

2 kA

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

2 kA

Switching power at 400 V

0 kW

Handle type

Rocker lever

Number of operations per hour - max

120

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

2.8 kA

Rated impulse withstand voltage (U<sub>imp</sub>) at auxiliary contacts

6000 V

Rated impulse withstand voltage (U<sub>imp</sub>) at main contacts

6000 V

Short-circuit protective device fuses - max

125 A gL

Terminal capacity (copper busbar)

Min. 12 mm x 5 mm direct at switch rear-side connection

M6 at rear-side screw connection

Max. 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) direct at switch rear-side connection

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

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

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

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

Terminal capacity (aluminum solid conductor/cable)

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

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> - 70 mm<sup>2</sup> (1x) direct at switch rear-side connection

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

25 mm<sup>2</sup> - 95 mm<sup>2</sup> (1x) at 1-hole tunnel terminal

Terminal capacity hint: Up to 95 mm<sup>2</sup> can be connected

depending on the cable manufacturer

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

10 mm<sup>2</sup> - 70 mm<sup>2</sup> (1x) at box terminal

Terminal capacity (aluminum stranded conductor/cable)

25 mm<sup>2</sup> - 95 mm<sup>2</sup> (1x) at 1-hole tunnel terminal



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