

# Eaton 259600

Catalog Number: 259600

Eaton Moeller series NZM - Molded Case Circuit Breaker.  
Undervoltage release, 12 V DC, +2early N/O, 2/3

General specifications



Product Name

Eaton Moeller series NZM - Molded case circuit breaker

Catalog Number

EAN  
4015082596002

Product Length/Depth

42 mm

Product Height

90 mm

Product Width

30 mm

Product Weight

0.074 kg

Compliances

UL/CSA  
IEC  
RoHS conform

Certifications

CSA (Class No. 1437-01)  
UL489  
UL (File No. E140305)  
CSA-C22.2 No. 5-09  
CSA (File No. 22086)  
CE marking  
UL (Category Control Number DIHS)  
IEC60947  
UL listed  
CSA certified

## Product specifications

### Used with

NZM3(-4), N(S)3(-4)

NZM2(-4), N(S)2(-4)

### Type

Accessory Undervoltage release Undervoltage release with early-make auxiliary contact

### Special features

Undervoltage release with 2 early-make auxiliary contacts, e.g., for early-make connection of undervoltage release in main switch applications, as well as for interlock and load shedding circuits.

For use with emergency-stop devices in connection with an emergency-stop button. When the under-voltage trip is switched off, accidental contact with the circuit breaker's primary contacts is prevented when switched on. Early make of auxiliary contacts on switching on and off (manual operation): approx. 20 ms  
Undervoltage releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release. Cannot be used in conjunction with NZM...-XR... remote operator.

### 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.

### 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

## 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](#)

### Declarations of conformity

[DA-DC-03\\_NZM2](#)

### eCAD model

[DA-CE-ETN.NZM2\\_3-XUHIV12DC](#)

### Installation instructions

[eaton-circuit-breaker-voltage-release-nzm2-3-il012141zu.pdf](#)

### Installation videos

[The new digital NZM Range](#)

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

### Technical data sheets

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

#### 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.

#### Electric connection type

Screw connection

#### Fitted with:

Two early-make auxiliary contacts

#### Frame

NZM2/3

Minimum command time - max

15 ms

Minimum command time - min

10 ms

Number of contacts (normally open contacts)

2

Reaction time

19 ms

Pick-up power consumption at AC (undervoltage release)

1.5 VA

Pick-up power consumption at DC (undervoltage release)

0.8 W

Voltage tolerance - max

1.1

Voltage tolerance - min

.85

Rated control supply voltage

12 V DC

Rated control supply voltage (Us) at AC, 50 Hz - max

0 V

Rated control supply voltage (Us) at AC, 50 Hz - min

0 V

Rated control supply voltage (Us) at AC, 60 Hz - max

0 V

Rated control supply voltage (Us) at AC, 60 Hz - min

0 V

Suitable for

Off-load switch

Connection type

With bolt connection

Voltage type

DC

Drop-out voltage of undervoltage release AC/DC - max

0.7 x Us

Drop-out voltage of undervoltage release AC/DC - min

0.35 x Us

#### Terminal capacity (solid/flexible conductor)

0.75 mm<sup>2</sup> - 2.5 mm<sup>2</sup> (2x) at shunt release with ferrule  
0.75 mm<sup>2</sup> - 2.5 mm<sup>2</sup> (1x) for undervoltage releases, off-delayed  
with ferrule  
18 - 14 AWG (2x) for undervoltage releases, off-delayed  
0.75 mm<sup>2</sup> - 2.5 mm<sup>2</sup> (1x) at shunt release with ferrule  
18 - 14 AWG (1x) at shunt release  
0.75 mm<sup>2</sup> - 2.5 mm<sup>2</sup> (2x) for undervoltage releases, off-delayed  
with ferrule  
18 - 14 AWG (1x) for undervoltage releases, off-delayed  
18 - 14 AWG (2x) at shunt release

#### Power consumption

1.5 VA (sealing AC)  
0.8 W (sealing DC)

#### Rated control supply voltage (Us) at DC - max

12 V

#### Rated control supply voltage (Us) at DC - min

12 V

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

0

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

0

#### Undelayed short-circuit release - min

0 A

#### Undelayed short-circuit release - max

0 A

#### Rated control voltage (relay contacts)

12 V DC