

# Eaton 259608

Catalog Number: 259608

Eaton Moeller series NZM - Molded Case Circuit Breaker.  
Undervoltage release, 110-130VDC, +2early N/O, 2/3

General specifications



Product Name

Eaton Moeller series NZM - Molded case  
circuit breaker

Catalog Number

EAN  
4015082596088

Product Length/Depth

42 mm

Product Height

90 mm

Product Width

30 mm

Product Weight

0.074 kg

Compliances

IEC  
UL/CSA  
RoHS conform

Certifications

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

## Product specifications

### Used with

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

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

### Type

Accessory

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.

## 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](#)

### Declarations of conformity

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

### eCAD model

[ETN.NZM2\\_3-XUHIV110-130DC](#)

### 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](#)

### Specifications and datasheets

[Eaton Specification Sheet - 259608](#)

### 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.

#### 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

110 - 130 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

Power circuit breaker

Connection type

With bolt connection

Voltage type

DC

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

$0.7 \times U_s$

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

$0.35 \times U_s$

Terminal capacity (solid/flexible conductor)

0.75 mm<sup>2</sup> - 2.5 mm<sup>2</sup> (1x) for undervoltage releases, off-delayed  
with ferrule

18 - 14 AWG (1x) for undervoltage releases, off-delayed

18 - 14 AWG (2x) at shunt release

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

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> (2x) for undervoltage releases, off-delayed  
with ferrule

18 - 14 AWG (1x) at shunt release

Power consumption

1.5 VA (sealing AC)

0.8 W (sealing DC)

Rated control supply voltage (Us) at DC - max

130 V

Rated control supply voltage (Us) at DC - min

110 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)

110 V DC

130 V DC



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