

# Specifications

## Eaton 189812



Eaton Moeller series NZM - Molded Case Circuit Breaker. Shunt release for NZM2/3, 1 early-make auxiliary contact, 2NO, 48AC/DC, Push-in terminals

Photo is representative



### General specifications

|                             |                                                        |
|-----------------------------|--------------------------------------------------------|
| <b>PRODUCT NAME</b>         | Eaton Moeller series NZM - Molded case circuit breaker |
| <b>CATALOG NUMBER</b>       | 189812                                                 |
| <b>MODEL CODE</b>           | NZM2/3-XAHIV48AC/DC-PI                                 |
| <b>EAN</b>                  | 4015081878079                                          |
| <b>PRODUCT LENGTH/DEPTH</b> | 115 mm                                                 |
| <b>PRODUCT HEIGHT</b>       | 65 mm                                                  |
| <b>PRODUCT WIDTH</b>        | 75 mm                                                  |
| <b>PRODUCT WEIGHT</b>       | 0.08 kg                                                |
| <b>COMPLIANCES</b>          | UL/CSA<br>IEC<br>RoHS conform                          |

## Delivery programme

**FITTED WITH:** Early-make auxiliary contact

**FRAME** NZM2/3

### SPECIAL FEATURES

- When the shunt release is live, contact with the circuit-breaker's main contacts on switching on is reliably prevented.
- Early-make of auxiliary contacts on switching on and off (manual operation): approx. 20 ms (NZM2/3) and 90 ms (NZM4).
- Shunt release modules cannot be installed simultaneously with early-make contact NZM...-XHIV, undervoltage release NZM...-XU..., relais modules NZM...-X2A..., or remote operator NZM...-XR...

### SUITABLE FOR

Motor safety switch  
Off-load switch

### TYPE

- Accessory
- Shunt release

### USED WITH

NZM2(-4), N(S)2(-4)  
NZM3(-4), N(S)3(-4)

## Design verification to IEC/EN 61439

### 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 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

Does not apply, since the

|                                                                 |                                                                    |
|-----------------------------------------------------------------|--------------------------------------------------------------------|
| <b>AGAINST ELECTRIC SHOCK</b>                                   | entire switchgear needs to be evaluated.                           |
| <b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>   | Does not apply, since the entire switchgear needs to be evaluated. |
| <b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>        | Is the panel builder's responsibility.                             |
| <b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>                 | Is the panel builder's responsibility.                             |
| <b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>                 | Is the panel builder's responsibility.                             |
| <b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>                         | Is the panel builder's responsibility.                             |
| <b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b> | Is the panel builder's responsibility.                             |

## Technical data - electrical

|                                                             |                         |
|-------------------------------------------------------------|-------------------------|
| <b>ELECTRIC CONNECTION TYPE</b>                             | Spring clamp connection |
| <b>RATED CONTROL SUPPLY VOLTAGE</b>                         | 48 V AC/DC              |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX</b> | 48 V                    |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN</b> | 48 V                    |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX</b> | 48 V                    |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN</b> | 48 V                    |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX</b>        | 48 V                    |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN</b>        | 48 V                    |
| <b>VOLTAGE TYPE</b>                                         | AC/DC                   |

## Technical data - mechanical

|                                                      |                       |
|------------------------------------------------------|-----------------------|
| <b>CONNECTION TYPE</b>                               | With push in terminal |
| <b>NUMBER OF CONTACTS (CHANGE-OVER CONTACTS)</b>     | 0                     |
| <b>NUMBER OF CONTACTS (NORMALLY CLOSED CONTACTS)</b> | 0                     |
| <b>NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS)</b>   | 1                     |

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XU..., relais  
modules NZM...-  
X2A..., or remote  
operator NZM...-  
XR...

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## Resources

BROCHURES [eaton-feerum-the-whole-grain-solution-success-story-en-us.pdf](#)

[eaton-digital-nzm-brochure-br013003en-en-us.pdf](#)

CATALOGUES [eaton-digital-nzm-catalog-ca013003en-en-us.pdf](#)

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](#)

MCAD MODEL [eaton-int-tripping-acc-mcad-drawings-nzm2-3-xua.dwg](#)

[eaton-int-tripping-acc-mcad-3d-models-nzm2-3-xua.stp](#)

TECHNICAL DATA SHEETS [eaton-nzm-technical-information-sheet](#)

WIRING DIAGRAMS [eaton-circuit-breaker-shunt-release-nzm-shunt-release-wiring-diagram.eps](#)

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**PROJECT NAME:**

**PROJECT NUMBER:**

**PREPARED BY:**

**DATE:**

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