

# Specifications



## Eaton 168480

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 250A, plug-in module, NZMN3-VE250-SVE

### General specifications

|                                 |                                                                       |
|---------------------------------|-----------------------------------------------------------------------|
| <b>PRODUCT NAME</b>             | Eaton Moeller series NZM<br>molded case circuit<br>breaker electronic |
| <b>CATALOG NUMBER</b>           | 168480                                                                |
| <b>MODEL CODE</b>               | NZMN3-VE250-SVE                                                       |
| <b>EAN</b>                      | 4015081649617                                                         |
| <b>PRODUCT<br/>LENGTH/DEPTH</b> | 335 mm                                                                |
| <b>PRODUCT HEIGHT</b>           | 215.2 mm                                                              |
| <b>PRODUCT WIDTH</b>            | 140 mm                                                                |
| <b>PRODUCT WEIGHT</b>           | 7.72 kg                                                               |
| <b>COMPLIANCES</b>              | RoHS conform                                                          |



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## Delivery programme

|                        |                                         |
|------------------------|-----------------------------------------|
| <b>AMPERAGE RATING</b> | 250 A                                   |
| <b>FEATURES</b>        | Protection unit<br>Motor drive optional |
| <b>NUMBER OF POLES</b> | Three-pole                              |

## Design verification to IEC/EN 61439

|                                                                                         |                                                                                                                                  |
|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>10.10 TEMPERATURE RISE</b>                                                           | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| <b>10.11 SHORT-CIRCUIT RATING</b>                                                       | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| <b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>                                              | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| <b>10.13 MECHANICAL FUNCTION</b>                                                        | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.                         |
| <b>10.2.2 CORROSION RESISTANCE</b>                                                      | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>                         | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>       | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b> | Meets the product standard's requirements.                                                                                       |
| <b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>                                 | Meets the product standard's requirements.                                                                                       |
| <b>10.2.5 LIFTING</b>                                                                   | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| <b>10.2.6 MECHANICAL IMPACT</b>                                                         | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| <b>10.2.7 INSCRIPTIONS</b>                                                              | Meets the product standard's requirements.                                                                                       |
| <b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>                                          | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| <b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>                                           | Meets the product standard's requirements.                                                                                       |
| <b>10.5 PROTECTION</b>                                                                  | Does not apply, since the                                                                                                        |

## Design verification to IEC/EN 61439 - technical data

**EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT** 18.75 W

**RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)** 250 A

|                                                                 |                                                                    |
|-----------------------------------------------------------------|--------------------------------------------------------------------|
| <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>AMPERAGE RATING</b>                                                                 | 250 A            |
| <b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b>                                      | Screw connection |
| <b>HANDLE TYPE</b>                                                                     | Rocker lever     |
| <b>INSTANTANEOUS CURRENT SETTING (II) - MAX</b>                                        | 2750 A           |
| <b>INSTANTANEOUS CURRENT SETTING (II) - MIN</b>                                        | 500 A            |
| <b>OVERLOAD CURRENT SETTING (IR) - MAX</b>                                             | 250 A            |
| <b>OVERLOAD CURRENT SETTING (IR) - MIN</b>                                             | 125 A            |
| <b>RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 400/415 V, 50/60 HZ</b> | 50 kA            |
| <b>SHORT DELAY CURRENT SETTING (ISD) - MAX</b>                                         | 2500 A           |
| <b>SHORT DELAY CURRENT SETTING (ISD) - MIN</b>                                         | 250 A            |
| <b>VOLTAGE RATING</b>                                                                  | 690 V - 690 V    |

## Technical data - mechanical

**DEGREE OF PROTECTION** IP20

**MOUNTING METHOD** Built-in device plug-in technique

**NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)** 0

**NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)** 0

**NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)** 0

**POSITION OF CONNECTION FOR MAIN CURRENT CIRCUIT** Front side

## 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](#)

**DECLARATIONS OF CONFORMITY** [eaton-molded-case-circuit-breaker-declaration-of-conformity-eu250293en.pdf](#)

**ECAD MODEL** [DA-CE-ETN.NZMN3-VE250-SVE](#)

**INSTALLATION INSTRUCTIONS** [eaton-circuit-breaker-plug-in-adapter-nzm2-il01219023z.pdf](#)

**INSTALLATION VIDEOS** [The new digital NZM Range](#)  
[Introduction of the new digital circuit breaker NZM](#)  
[nzmh3\\_me220\\_sve.stp](#)

**MCAD MODEL** [eaton-motor-protector-mcad-drawings-nzmh3-me220-sve.dwg](#)

**PEP ECO-PASSPORT** [eaton-molded-case-switches-pep-eato-00219-v0101-en.pdf](#)

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

**PROJECT NAME:**

**PROJECT NUMBER:**

**PREPARED BY:**

**DATE:**



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