

# Specifications



Photo is representative

## Eaton 259477

Eaton Moeller series NZM Undervoltage release, 600VAC, for NZM1, L

### General specifications

|                      |                                                                                                                                                                                                      |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PRODUCT NAME         | Eaton Moeller series NZM Undervoltage release                                                                                                                                                        |
| CATALOG NUMBER       | 259477                                                                                                                                                                                               |
| MODEL CODE           | NZM1-XUL600AC                                                                                                                                                                                        |
| EAN                  | 4015082594770                                                                                                                                                                                        |
| PRODUCT LENGTH/DEPTH | 37 mm                                                                                                                                                                                                |
| PRODUCT HEIGHT       | 66 mm                                                                                                                                                                                                |
| PRODUCT WIDTH        | 32 mm                                                                                                                                                                                                |
| PRODUCT WEIGHT       | 0.044 kg                                                                                                                                                                                             |
| COMPLIANCES          | UL/CSA<br>IEC<br>RoHS conform                                                                                                                                                                        |
| CERTIFICATIONS       | CSA certified<br>UL (File No. E140305)<br>CSA (Class No. 1437-01)<br>UL489<br>CSA (File No. 22086)<br>CE marking<br>UL listed<br>UL (Category Control Number DIHS)<br>IEC60947<br>CSA-C22.2 No. 5-09 |
| GLOBAL CATALOG       | 259477                                                                                                                                                                                               |



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## Product specifications

|                                                                                         |                                                                                                                                  |
|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>USED WITH</b>                                                                        | NZM1(-4), N(S)1(-4)                                                                                                              |
| <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</b>                                                     | Does not apply, since the entire switchgear needs to                                                                             |

## Resources

|                                  |                                                                                                                                                         |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>BROCHURES</b>                 | <a href="#">eaton-digital-nzm-brochure-br013003en-en-us.pdf</a><br><a href="#">eaton-feerum-the-whole-grain-solution-success-story-en-us.pdf</a>        |
| <b>CATALOGS</b>                  | <a href="#">eaton-digital-nzm-catalog-ca013003en-en-us.pdf</a>                                                                                          |
| <b>DRAWINGS</b>                  | <a href="#">eaton-circuit-breaker-release-nzm-mccb-dimensions.eps</a><br><a href="#">eaton-circuit-breaker-undervoltage-nzm-mccb-3d-drawing-003.eps</a> |
| <b>ECAD MODEL</b>                | <a href="#">DA-CE-ETN.NZM1-XUL600AC</a>                                                                                                                 |
| <b>INSTALLATION INSTRUCTIONS</b> | <a href="#">eaton-circuit-breaker-nzm1-xa-xahiv-xhiv-xu-xuhiv-il01203002z.pdf</a>                                                                       |
| <b>INSTALLATION VIDEOS</b>       | <a href="#">Introduction of the new digital circuit breaker NZM</a><br><a href="#">The new digital NZM Range</a>                                        |
| <b>TECHNICAL DATA SHEETS</b>     | <a href="#">eaton-nzm-technical-information-sheet</a>                                                                                                   |

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| <b>ASSEMBLIES</b>                                               | be evaluated.                                                      |
| <b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>                   | Meets the product standard's requirements.                         |
| <b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>                   | Does not apply, since the 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.                             |
| <b>ELECTRIC CONNECTION TYPE</b>                                 | Screw connection                                                   |
| <b>FRAME</b>                                                    | NZM1                                                               |
| <b>MINIMUM COMMAND TIME - MAX</b>                               | 15 ms                                                              |
| <b>MINIMUM COMMAND TIME - MIN</b>                               | 10 ms                                                              |
| <b>NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS)</b>              | 0                                                                  |
| <b>REACTION TIME</b>                                            | 19 ms                                                              |
| <b>PICK-UP POWER CONSUMPTION AT AC (UNDervOLTAGE RELEASE)</b>   | 1.5 VA                                                             |
| <b>PICK-UP POWER CONSUMPTION AT DC (UNDervOLTAGE RELEASE)</b>   | 0.8 W                                                              |
| <b>VOLTAGE TOLERANCE - MAX</b>                                  | 1.1                                                                |
| <b>VOLTAGE TOLERANCE - MIN</b>                                  | .85                                                                |
| <b>RATED CONTROL SUPPLY VOLTAGE</b>                             | 600 V 50/60 Hz                                                     |
| <b>RATED CONTROL SUPPLY</b>                                     | 600 V                                                              |

|                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>VOLTAGE (US) AT AC, 50 HZ - MAX</b>                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN</b> | 600 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX</b> | 600 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN</b> | 600 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>SUITABLE FOR</b>                                         | Off-load switch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>CONNECTION TYPE</b>                                      | With 3 m connection cable instead of screw termination                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>VOLTAGE TYPE</b>                                         | AC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>DROP-OUT VOLTAGE OF UNDERVOLTAGE RELEASE AC/DC - MAX</b> | 0.7 x Us                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>DROP-OUT VOLTAGE OF UNDERVOLTAGE RELEASE AC/DC - MIN</b> | 0.35 x Us                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>TERMINAL CAPACITY (SOLID/FLEXIBLE CONDUCTOR)</b>         | <p>0.75 mm<sup>2</sup> - 2.5 mm<sup>2</sup> (1x) at shunt release with ferrule</p> <p>0.75 mm<sup>2</sup> - 2.5 mm<sup>2</sup> (2x) at shunt release with ferrule</p> <p>18 - 14 AWG (2x) for undervoltage releases, off-delayed</p> <p>0.75 mm<sup>2</sup> - 2.5 mm<sup>2</sup> (2x) for undervoltage releases, off-delayed with ferrule</p> <p>18 - 14 AWG (1x) for undervoltage releases, off-delayed</p> <p>18 - 14 AWG (1x) at shunt release</p> <p>0.75 mm<sup>2</sup> - 2.5 mm<sup>2</sup> (1x) for undervoltage releases, off-delayed with ferrule</p> <p>18 - 14 AWG (2x) at shunt release</p> |
| <b>TYPE</b>                                                 | Accessory Undervoltage release                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>SPECIAL FEATURES</b>                                     | Non-delayed disconnection of NZM circuit-breaker or N switch-disconnector when the control voltage sinks below 35 – 70% US. For use with emergency-stop devices in connection with                                                                                                                                                                                                                                                                                                                                                                                                                      |

|                                                      |                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                      | <p>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. Undervoltage releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release.</p> |
| <b>POWER CONSUMPTION</b>                             | <p>0.8 W (sealing DC)<br/>1.5 VA (sealing AC)</p>                                                                                                                                                                                                                                                                    |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX</b> | 0 V                                                                                                                                                                                                                                                                                                                  |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN</b> | 0 V                                                                                                                                                                                                                                                                                                                  |
| <b>NUMBER OF CONTACTS (NORMALLY CLOSED CONTACTS)</b> | 0                                                                                                                                                                                                                                                                                                                    |
| <b>NUMBER OF CONTACTS (CHANGE-OVER CONTACTS)</b>     | 0                                                                                                                                                                                                                                                                                                                    |
| <b>UNDELAYED SHORT-CIRCUIT RELEASE - MIN</b>         | 0 A                                                                                                                                                                                                                                                                                                                  |
| <b>UNDELAYED SHORT-CIRCUIT RELEASE - MAX</b>         | 0 A                                                                                                                                                                                                                                                                                                                  |
| <b>RATED CONTROL VOLTAGE (RELAY CONTACTS)</b>        | 600 V AC                                                                                                                                                                                                                                                                                                             |

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE: