

# Specifications



Photo is representative

## Eaton 259838

Eaton Moeller series NZM - Molded Case Circuit Breaker. Remote operator, 48-60VDC, for size 2

### General specifications

|                      |                                                                                                                                                                                                      |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PRODUCT NAME         | Eaton Moeller series NZM remote operator                                                                                                                                                             |
| CATALOG NUMBER       | 259838                                                                                                                                                                                               |
| MODEL CODE           | NZM2-XR48-60DC                                                                                                                                                                                       |
| EAN                  | 4015082598389                                                                                                                                                                                        |
| PRODUCT LENGTH/DEPTH | 150 mm                                                                                                                                                                                               |
| PRODUCT HEIGHT       | 105 mm                                                                                                                                                                                               |
| PRODUCT WIDTH        | 105 mm                                                                                                                                                                                               |
| PRODUCT WEIGHT       | 1.728 kg                                                                                                                                                                                             |
| COMPLIANCES          | UL/CSA<br>IEC<br>RoHS conform                                                                                                                                                                        |
| CERTIFICATIONS       | UL (File No. E140305)<br>IEC60947<br>CSA (Class No. 1437-01)<br>CE marking<br>UL listed<br>CSA certified<br>UL489<br>CSA-C22.2 No. 5-09<br>CSA (File No. 22086)<br>UL (Category Control Number DIHS) |
| GLOBAL CATALOG       | 259838                                                                                                                                                                                               |

## Product specifications

|                                                                                         |                                                                                                                                  |
|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>USED WITH</b>                                                                        | NZM2(-4)<br>N(S)2(-4)                                                                                                            |
| <b>VOLTAGE RATING</b>                                                                   | 48 - 60 V DC                                                                                                                     |
| <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.                                                                                       |

## 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>DECLARATIONS OF CONFORMITY</b> | <a href="#">eaton-accessories-declaration-of-conformity-eu250143en.pdf</a>                                                                                                                                                                                                 |
| <b>DRAWINGS</b>                   | <a href="#">eaton-circuit-breaker-padlock-nzm-rotary-handle-dimensions.eps</a><br><a href="#">eaton-circuit-breaker-remote-operator-nzm-remote-operator-dimensions-002.eps</a><br><a href="#">eaton-circuit-breaker-remote-operator-nzm-remote-operator-3d-drawing.eps</a> |
| <b>ECAD MODEL</b>                 | <a href="#">ETN.259838.edz</a>                                                                                                                                                                                                                                             |
| <b>INSTALLATION INSTRUCTIONS</b>  | <a href="#">eaton-circuit-breakers-remote-operator-nzm2-xr-il01206002z.pdf</a>                                                                                                                                                                                             |
| <b>INSTALLATION VIDEOS</b>        | <a href="#">The new digital NZM Range</a><br><a href="#">Introduction of the new digital circuit breaker NZM</a>                                                                                                                                                           |
| <b>MCAD MODEL</b>                 | <a href="#">DA-CD-nzm2_xr</a><br><a href="#">DA-CS-nzm2_xr</a>                                                                                                                                                                                                             |
| <b>TECHNICAL DATA SHEETS</b>      | <a href="#">eaton-nzm-technical-information-sheet</a>                                                                                                                                                                                                                      |

|                                                                 |                                                                    |
|-----------------------------------------------------------------|--------------------------------------------------------------------|
| <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 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>FRAME</b>                                                    | NZM2                                                               |
| <b>BREAKING TIME</b>                                            | 300 ms                                                             |
| <b>CLOSING DELAY</b>                                            | 60 ms                                                              |
| <b>VOLTAGE TYPE</b>                                             | AC                                                                 |
| <b>LIFESPAN, MECHANICAL</b>                                     | 20000 operations                                                   |
| <b>NUMBER OF POLES</b>                                          | Three-pole/Four-pole                                               |
| <b>NUMBER OF OPERATIONS PER HOUR - MAX</b>                      | 120                                                                |
| <b>VOLTAGE TOLERANCE - MAX</b>                                  | 1.1                                                                |
| <b>VOLTAGE TOLERANCE - MIN</b>                                  | .85                                                                |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX</b>     | 0 V                                                                |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN</b>     | 0 V                                                                |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX</b>     | 0 V                                                                |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60</b>              | 0 V                                                                |

|                                                               |                                                                                                                                                              |
|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HZ - MIN</b>                                               |                                                                                                                                                              |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX</b>          | 60 V                                                                                                                                                         |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN</b>          | 48 V                                                                                                                                                         |
| <b>SIGNAL DURATION OF REMOTE OPERATOR AT SWITCH OFF - MIN</b> | 150 ms                                                                                                                                                       |
| <b>SIGNAL DURATION OF REMOTE OPERATOR AT SWITCH ON - MIN</b>  | 30 ms                                                                                                                                                        |
| <b>SWITCH DRIVE TYPE</b>                                      | Motor drive                                                                                                                                                  |
| <b>TERMINAL CAPACITY (SOLID/FLEXIBLE CONDUCTOR)</b>           | 0.75 mm <sup>2</sup> - 2.5 mm <sup>2</sup> with ferrule<br>18 - 14 AWG                                                                                       |
| <b>TYPE</b>                                                   | Accessory Remote operator, can be synchronized                                                                                                               |
| <b>SPECIAL FEATURES</b>                                       | Cannot be combined with switch-disconnector PN...<br>Do not install M22-CK11(20/02) dual auxiliary contacts in the center auxiliary contact slot in NZM2-XRD |
| <b>OPERATING VOLTAGE - MAX</b>                                | 1.1 x Us                                                                                                                                                     |
| <b>OPERATING VOLTAGE - MIN</b>                                | 0.85 x Us                                                                                                                                                    |
| <b>POWER CONSUMPTION</b>                                      | 250 W (24 - 30 V DC)                                                                                                                                         |

|                        |
|------------------------|
| <b>PROJECT NAME:</b>   |
| <b>PROJECT NUMBER:</b> |
| <b>PREPARED BY:</b>    |
| <b>DATE:</b>           |



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