

# Specifications



Photo is representative



## Eaton 115792

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 63A, plug-in module, H1-M63-SVE

### General specifications

|                                 |                                                                            |
|---------------------------------|----------------------------------------------------------------------------|
| <b>PRODUCT NAME</b>             | Eaton Moeller series NZM<br>molded case circuit<br>breaker thermo-magnetic |
| <b>CATALOG NUMBER</b>           | 115792                                                                     |
| <b>MODEL CODE</b>               | NZMH1-M63-SVE                                                              |
| <b>EAN</b>                      | 4015081155323                                                              |
| <b>PRODUCT<br/>LENGTH/DEPTH</b> | 90 mm                                                                      |
| <b>PRODUCT HEIGHT</b>           | 201 mm                                                                     |
| <b>PRODUCT WIDTH</b>            | 95 mm                                                                      |
| <b>PRODUCT WEIGHT</b>           | 1.218 kg                                                                   |
| <b>COMPLIANCES</b>              | RoHS conform                                                               |
| <b>CERTIFICATIONS</b>           | IEC<br>IEC/EN 60947                                                        |
| <b>GLOBAL CATALOG</b>           | 115792                                                                     |



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## Product specifications

|                                                                                         |                                                                                                                                  |
|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>AMPERAGE RATING</b>                                                                  | 63 A                                                                                                                             |
| <b>VOLTAGE RATING</b>                                                                   | 690 V - 690 V                                                                                                                    |
| <b>CIRCUIT BREAKER FRAME TYPE</b>                                                       | NZM1                                                                                                                             |
| <b>ACCESSORIES REQUIRED</b>                                                             | NZM1-XSVS                                                                                                                        |
| <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><br><a href="#">eaton-circuit-breaker-nzm-mccb-characteristic-curve-058.eps</a>                                                                                                   |
| <b>CHARACTERISTIC CURVE</b>       | <a href="#">eaton-circuit-breaker-let-through-current-nzm-mccb-characteristic-curve-003.eps</a>                                                                                                                                                 |
| <b>DECLARATIONS OF CONFORMITY</b> | <a href="#">eaton-molded-case-circuit-breaker-declaration-of-conformity-eu250289en.pdf</a><br><a href="#">eaton-circuit-breaker-adapter-nzm-mccb-dimensions.eps</a><br><a href="#">eaton-circuit-breaker-switch-nzm-mccb-dimensions-014.eps</a> |
| <b>DRAWINGS</b>                   | <a href="#">eaton-circuit-breaker-nzm-mccb-dimensions-017.eps</a><br><a href="#">eaton-circuit-breaker-socket-nzm-mccb-3d-drawing.eps</a><br><a href="#">eaton-general-ie-ready-dilm-contactor-standards.eps</a>                                |
| <b>INSTALLATION INSTRUCTIONS</b>  | <a href="#">eaton-circuit-breaker-switch-disconnector-nzmb-il01203004z.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="#">eaton-molded-case-switches-mcad-drawings-nzm1-xsve.dwg</a><br><a href="#">DA-CS-nzm1_xsve</a><br><a href="#">DA-CD-nzm1_xsve</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>FITTED WITH:</b>                                             | Thermal protection                                                                                   |
| <b>POLLUTION DEGREE</b>                                         | 3                                                                                                    |
| <b>MOUNTING METHOD</b>                                          | Plug-in unit<br>Built-in device plug-in technique                                                    |
| <b>CLIMATIC PROOFING</b>                                        | Damp heat, constant, to IEC 60068-2-78<br>Damp heat, cyclic, to IEC 60068-2-30                       |
| <b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT</b>            | 14.88 W                                                                                              |
| <b>UTILIZATION CATEGORY</b>                                     | A (IEC/EN 60947-2)                                                                                   |
| <b>ISOLATION</b>                                                | 500 V AC (between auxiliary contacts and main contacts)<br>300 V AC (between the auxiliary contacts) |
| <b>AMBIENT OPERATING TEMPERATURE - MAX</b>                      | 70 °C                                                                                                |
| <b>AMBIENT OPERATING TEMPERATURE - MIN</b>                      | -25 °C                                                                                               |
| <b>AMBIENT STORAGE TEMPERATURE - MAX</b>                        | 70 °C                                                                                                |
| <b>AMBIENT STORAGE TEMPERATURE - MIN</b>                        | 40 °C                                                                                                |
| <b>PROTECTION AGAINST</b>                                       | Finger and back-of-hand                                                                              |

|                       |                                                                         |
|-----------------------|-------------------------------------------------------------------------|
|                       | <a href="#">eaton-molded-case-switches-mcad-3d-models-nzm1-xsve.stp</a> |
| TECHNICAL DATA SHEETS | <a href="#">eaton-nzm-technical-information-sheet</a>                   |

|                                                   |                                                                                                                                                                                                      |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DIRECT CONTACT</b>                             | proof to VDE 0106 part 100                                                                                                                                                                           |
| <b>RATED INSULATION VOLTAGE (UI)</b>              | 690 V                                                                                                                                                                                                |
| <b>RATED OPERATING POWER AT AC-3, 230 V</b>       | 18.5 kW                                                                                                                                                                                              |
| <b>RATED OPERATING POWER AT AC-3, 400 V</b>       | 30 kW                                                                                                                                                                                                |
| <b>SWITCH OFF TECHNIQUE</b>                       | Thermomagnetic                                                                                                                                                                                       |
| <b>DEGREE OF PROTECTION</b>                       | IP20 (basic degree of protection, in the operating controls area)<br>IP20                                                                                                                            |
| <b>DIRECTION OF INCOMING SUPPLY</b>               | As required                                                                                                                                                                                          |
| <b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b> | Other                                                                                                                                                                                                |
| <b>LIFESPAN, MECHANICAL</b>                       | 20000 operations                                                                                                                                                                                     |
| <b>OVERVOLTAGE CATEGORY</b>                       | III                                                                                                                                                                                                  |
| <b>RATED OPERATIONAL CURRENT</b>                  | 55 A (400 V AC-3)                                                                                                                                                                                    |
| <b>DEGREE OF PROTECTION (IP), FRONT SIDE</b>      | IP40 (with insulating surround)<br>IP66 (with door coupling rotary handle)                                                                                                                           |
| <b>DEGREE OF PROTECTION (TERMINATIONS)</b>        | IP00 (terminations, phase isolator and strip terminal)<br>IP10 (tunnel terminal)                                                                                                                     |
| <b>NUMBER OF POLES</b>                            | Three-pole                                                                                                                                                                                           |
| <b>TERMINAL CAPACITY (COPPER STRIP)</b>           | Min. 2 segments of 9 mm x 0.8 mm at box terminal<br>Max. 9 segments of 9 mm x 0.8 mm at box terminal                                                                                                 |
| <b>LIFESPAN, ELECTRICAL</b>                       | 10000 operations at 415 V AC-1<br>5000 operations at 690 V AC-3<br>7500 operations at 415 V AC-3<br>7500 operations at 690 V AC-1<br>10000 operations at 400 V AC-1<br>7500 operations at 400 V AC-3 |
| <b>FUNCTIONS</b>                                  | Phase failure sensitive<br>Motor protection                                                                                                                                                          |
| <b>TYPE</b>                                       | Circuit breaker                                                                                                                                                                                      |

## SPECIAL FEATURES

- Maximum back-up fuse, if the expected short-circuit currents at the installation location exceed the switching capacity of the circuit breaker (Rated short-circuit breaking capacity  $I_{cn}$ )
- Rated current = rated uninterrupted current: 63 A
- Terminal capacity hint: Up to 95 mm<sup>2</sup> can be connected depending on the cable manufacturer.
- With phase-failure sensitivity
- Tripping class 10 A
- IEC/EN 60947-4-1, IEC/EN 60947-2
- The circuit-breaker fulfills all requirements for AC-3 switching category.

|                                                               |                                          |
|---------------------------------------------------------------|------------------------------------------|
| APPLICATION                                                   | Use in unearthed supply systems at 690 V |
| SHOCK RESISTANCE                                              | 20 g (half-sinusoidal shock 20 ms)       |
| RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN) | 63 A                                     |
| SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MAX               | 882 A                                    |
| SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MIN               | 504 A                                    |
| HANDLE TYPE                                                   | Rocker lever                             |
| INSTANTANEOUS CURRENT SETTING (II) - MAX                      | 882 A                                    |
| INSTANTANEOUS CURRENT SETTING (II) - MIN                      | 504 A                                    |
| NUMBER OF OPERATIONS PER HOUR - MAX                           | 120                                      |

|                                                                                        |                                                                                                                                                                                                                                             |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>OVERLOAD CURRENT SETTING (IR) - MAX</b>                                             | 63 A                                                                                                                                                                                                                                        |
| <b>OVERLOAD CURRENT SETTING (IR) - MIN</b>                                             | 50 A                                                                                                                                                                                                                                        |
| <b>RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 230 V, 50/60 HZ</b>     | 100 kA                                                                                                                                                                                                                                      |
| <b>RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 400/415 V, 50/60 HZ</b> | 35 kA                                                                                                                                                                                                                                       |
| <b>RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 440 V, 50/60 HZ</b>     | 35 kA                                                                                                                                                                                                                                       |
| <b>RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 525 V, 50/60 HZ</b>     | 10 kA                                                                                                                                                                                                                                       |
| <b>RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 690 V, 50/60 HZ</b>     | 7.5 kA                                                                                                                                                                                                                                      |
| <b>STANDARD TERMINALS</b>                                                              | Box terminal                                                                                                                                                                                                                                |
| <b>OPTIONAL TERMINALS</b>                                                              | Connection on rear. Screw terminal. Tunnel terminal                                                                                                                                                                                         |
| <b>RELEASE SYSTEM</b>                                                                  | Thermomagnetic release                                                                                                                                                                                                                      |
| <b>SHORT-CIRCUIT TOTAL BREAKTIME</b>                                                   | < 10 ms                                                                                                                                                                                                                                     |
| <b>TERMINAL CAPACITY (ALUMINUM SOLID CONDUCTOR/CABLE)</b>                              | 16 mm <sup>2</sup> (1x) at tunnel terminal<br>10 mm <sup>2</sup> - 16 mm <sup>2</sup> (1x) direct at switch rear-side connection<br>10 mm <sup>2</sup> - 16 mm <sup>2</sup> (2x) direct at switch rear-side connection                      |
| <b>TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)</b>                           | 25 mm <sup>2</sup> - 35 mm <sup>2</sup> (1x) direct at switch rear-side connection<br>25 mm <sup>2</sup> - 95 mm <sup>2</sup> (1x) at tunnel terminal<br>25 mm <sup>2</sup> - 35 mm <sup>2</sup> (2x) direct at switch rear-side connection |
| <b>TERMINAL CAPACITY (CONTROL CABLE)</b>                                               | 0.75 mm <sup>2</sup> - 2.5 mm <sup>2</sup> (1x)<br>0.75 mm <sup>2</sup> - 1.5 mm <sup>2</sup> (2x)                                                                                                                                          |
| <b>TERMINAL CAPACITY (COPPER BUSBAR)</b>                                               | M6 at rear-side screw connection<br>Max. 16 mm x 5 mm direct at switch rear-side connection<br>Min. 12 mm x 5 mm direct                                                                                                                     |

|                                                                                                    |                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                    | at switch rear-side connection                                                                                                                                                                                                                                                                                                                               |
| <b>TERMINAL CAPACITY<br/>(COPPER SOLID<br/>CONDUCTOR/CABLE)</b>                                    | 10 mm <sup>2</sup> - 16 mm <sup>2</sup> (1x) at box terminal<br>6 mm <sup>2</sup> - 16 mm <sup>2</sup> (2x) at box terminal<br>16 mm <sup>2</sup> (1x) at tunnel terminal<br>6 mm <sup>2</sup> - 16 mm <sup>2</sup> (2x) direct at switch rear-side connection<br>10 mm <sup>2</sup> - 16 mm <sup>2</sup> (1x) direct at switch rear-side connection         |
| <b>TERMINAL CAPACITY<br/>(COPPER STRANDED<br/>CONDUCTOR/CABLE)</b>                                 | 10 mm <sup>2</sup> - 70 mm <sup>2</sup> (1x) at box terminal<br>6 mm <sup>2</sup> - 25 mm <sup>2</sup> (2x) at box terminal<br>10 mm <sup>2</sup> - 70 mm <sup>2</sup> (1x) direct at switch rear-side connection<br>25 mm <sup>2</sup> (2x) direct at switch rear-side connection<br>25 mm <sup>2</sup> - 95 mm <sup>2</sup> (1x) at 1-hole tunnel terminal |
| <b>RATED SHORT-CIRCUIT<br/>BREAKING CAPACITY ICU<br/>(IEC/EN 60947) AT<br/>400/415 V, 50/60 HZ</b> | 35 kA                                                                                                                                                                                                                                                                                                                                                        |
| <b>RATED SHORT-CIRCUIT<br/>MAKING CAPACITY ICM<br/>AT 400/415 V, 50/60 HZ</b>                      | 220 kA                                                                                                                                                                                                                                                                                                                                                       |
| <b>RATED SHORT-CIRCUIT<br/>MAKING CAPACITY ICM<br/>AT 440 V, 50/60 HZ</b>                          | 154 kA                                                                                                                                                                                                                                                                                                                                                       |
| <b>RATED SHORT-CIRCUIT<br/>MAKING CAPACITY ICM<br/>AT 525 V, 50/60 HZ</b>                          | 40 kA                                                                                                                                                                                                                                                                                                                                                        |
| <b>RATED SHORT-CIRCUIT<br/>MAKING CAPACITY ICM<br/>AT 690 V, 50/60 HZ</b>                          | 17 kA                                                                                                                                                                                                                                                                                                                                                        |
| <b>RATED SHORT-CIRCUIT<br/>MAKING CAPACITY ICM<br/>AT 240 V, 50/60 HZ</b>                          | 220 kA                                                                                                                                                                                                                                                                                                                                                       |
| <b>RATED IMPULSE<br/>WITHSTAND VOLTAGE<br/>(UIMP) AT AUXILIARY<br/>CONTACTS</b>                    | 6000 V                                                                                                                                                                                                                                                                                                                                                       |
| <b>RATED IMPULSE<br/>WITHSTAND VOLTAGE<br/>(UIMP) AT MAIN<br/>CONTACTS</b>                         | 6000 V                                                                                                                                                                                                                                                                                                                                                       |
| <b>POWER LOSS</b>                                                                                  | 14.9 W                                                                                                                                                                                                                                                                                                                                                       |

|                 |
|-----------------|
| PROJECT NAME:   |
| PROJECT NUMBER: |
| PREPARED BY:    |
| DATE:           |



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