

Specifications



Photo is representative

Eaton 269237

Eaton Moeller series NZM - Molded Case Circuit Breaker. NZM2, 3 pole, Switching capacity high, Fixed, Screw connection, UL/CSA, IEC

General specifications

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| PRODUCT NAME | Eaton Moeller series NZM molded case circuit breaker thermo-magnetic |
| CATALOG NUMBER | 269237 |
| MODEL CODE | NZMH2-A160-NA |
| EAN | 4015082692377 |
| PRODUCT LENGTH/DEPTH | 149 mm |
| PRODUCT HEIGHT | 195 mm |
| PRODUCT WIDTH | 105 mm |
| PRODUCT WEIGHT | 2.386 kg |
| COMPLIANCES | RoHS conform |
| CERTIFICATIONS | IEC/EN 60947 UL (File No. E31593) UL/CSA IEC 60947-2 CSA (Class No. 1432-01) CSA certified CSA (File No. 22086) UL listed UL (Category Control Number DIVQ) CE marking Specially designed for North America UL 489 CSA-C22.2 No. 5-09 IEC |

Product specifications

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| AMPERAGE RATING | 160 A |
| VOLTAGE RATING | 690 V - 690 V |
| CIRCUIT BREAKER FRAME TYPE | NZM2 |
| FEATURES | Protection unit Motor drive optional |
| 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 |

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](#)

[eaton-circuit-breaker-nzm-mccb-characteristic-curve-050.eps](#)

CHARACTERISTIC CURVE

[eaton-circuit-breaker-current-nzm-mccb-characteristic-curve-005.eps](#)

[eaton-circuit-breaker-nzm-mccb-characteristic-curve-040.eps](#)

DECLARATIONS OF CONFORMITY

[eaton-molded-case-circuit-breaker-declaration-of-conformity-eu250290en.pdf](#)

[eaton-circuit-breaker-switch-nzm-mccb-dimensions-017.eps](#)

DRAWINGS

[eaton-circuit-breaker-nzm-mccb-dimensions-019.eps](#)

[eaton-circuit-breaker-switch-nzm-mccb-3d-drawing.eps](#)

ECAD MODEL

[ETN.269237.edz](#)

INSTALLATION INSTRUCTIONS

[eaton-circuit-breakers-basic-device-nzm2-il01206006z.pdf](#)

INSTALLATION VIDEOS

[Introduction of the new digital circuit breaker NZM](#)

[The new digital NZM Range](#)

MCAD MODEL

[DA-CS-nzm2_3p](#)

[DA-CD-nzm2_3p](#)

TECHNICAL DATA SHEETS

[eaton-nzm-technical-information-sheet](#)

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| | 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 AGAINST ELECTRIC SHOCK | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS | Is the panel builder's responsibility. |
| 10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS | Is the panel builder's responsibility. |
| 10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH | Is the panel builder's responsibility. |
| 10.9.3 IMPULSE WITHSTAND VOLTAGE | Is the panel builder's responsibility. |
| 10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL | Is the panel builder's responsibility. |
| POLLUTION DEGREE | 3 |
| MOUNTING METHOD | DIN rail (top hat rail) mounting optional Fixed Built-in device fixed built-in technique |
| CLIMATIC PROOFING | Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78 |
| EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT | 38.4 W |
| UTILIZATION CATEGORY | A (IEC/EN 60947-2) |
| ISOLATION | 300 V AC (between the auxiliary contacts) 500 V AC (between auxiliary contacts and main contacts) |
| AMBIENT OPERATING TEMPERATURE - MAX | 70 °C |
| AMBIENT OPERATING | -25 °C |

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| TEMPERATURE - MIN | |
| AMBIENT STORAGE TEMPERATURE - MAX | 70 °C |
| AMBIENT STORAGE TEMPERATURE - MIN | 40 °C |
| LOW-VOLTAGE HBC FUSE - MAX | 355 A gG/gL |
| NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS) | 0 |
| NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS) | 0 |
| NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS) | 0 |
| PROTECTION AGAINST DIRECT CONTACT | Finger and back-of-hand proof to DIN EN 50274/VDE 0106 part 110 |
| DEGREE OF PROTECTION | IP20 (basic degree of protection, in the operating controls area) IP20 |
| DIRECTION OF INCOMING SUPPLY | As required |
| ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT | Screw connection |
| LIFESPAN, MECHANICAL | 20000 operations |
| OVERVOLTAGE CATEGORY | III |
| RATED OPERATIONAL CURRENT | 160 A (660-690 V AC-3, making and breaking capacity) 300 A (380/400 V AC-1, making and breaking capacity) 160 A (690 V AC-1, making and breaking capacity) 300 A (415 V AC-1, making and breaking capacity) |
| DEGREE OF PROTECTION (IP), FRONT SIDE | IP66 (with door coupling rotary handle) IP40 (with insulating surround) |
| DEGREE OF PROTECTION (TERMINATIONS) | IP00 (terminations, phase isolator and strip terminal) IP10 (tunnel terminal) |
| NUMBER OF POLES | Three-pole |

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| TERMINAL CAPACITY (COPPER STRIP) | <p>Max. 10 segments of 16 mm x 0.8 mm at box terminal</p> <p>Max. 10 segments of 16 mm x 0.8 mm at rear-side connection (punched)</p> <p>Min. 2 segments of 9 mm x 0.8 mm at box terminal</p> <p>Min. 2 segments of 16 mm x 0.8 mm at rear-side connection (punched)</p> |
| LIFESPAN, ELECTRICAL | <p>6500 operations at 400 V AC-3</p> <p>7500 operations at 690 V AC-1</p> <p>10000 operations at 400 V AC-1</p> <p>6500 operations at 415 V AC-3</p> <p>5000 operations at 690 V AC-3</p> |
| FUNCTIONS | <p>Current limiting circuit breaker</p> <p>System and cable protection</p> |
| TYPE | Circuit breaker |
| SPECIAL FEATURES | <ul style="list-style-type: none"> • 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: 160 A • Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. • Adjustable overload releases I_r |

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| APPLICATION | <ul style="list-style-type: none"> • Branch circuits, feeder circuits • Use in unearthed supply systems at 690 V |
| SHOCK RESISTANCE | 20 g (half-sinusoidal shock 20 ms) |
| POSITION OF CONNECTION FOR MAIN CURRENT CIRCUIT | Front side |
| RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN) | 160 A |
| POWER LOSS | 38.4 W |
| RELEASE SYSTEM | Thermomagnetic release |
| SHORT-CIRCUIT TOTAL BREAKTIME | < 10 ms |
| RATED SHORT-TIME WITHSTAND CURRENT (T = 0.3 S) | 1.9 kA |
| RATED SHORT-TIME WITHSTAND CURRENT (T = 1 S) | 1.9 kA |
| SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MAX | 1600 A |
| SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MIN | 960 A |
| TERMINAL CAPACITY (CONTROL CABLE) | 14 mm ² - 18 mm ² (1x) 16 mm ² - 18 mm ² (2x) |
| TERMINAL CAPACITY (COPPER BUSBAR) | Min. 16 mm x 5 mm direct at switch rear-side connection M8 at rear-side screw connection Max. 20 mm x 5 mm direct at switch rear-side connection |
| TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE) | 16 mm ² (1x) at tunnel terminal 6 mm ² - 12 mm ² (1x) at box terminal 6 mm ² - 11 mm ² (1x) direct at switch rear-side connection |
| TERMINAL CAPACITY (ALUMINUM SOLID CONDUCTOR/CABLE) | 16 mm ² (1x) at tunnel terminal |

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| TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE) | 4 mm ² - 350 mm ² (1x) at box terminal 4 mm ² - 3/0 mm ² (1x) direct at switch rear-side connection 4 mm ² - 350 mm ² (1x) at tunnel terminal |
| HANDLE TYPE | Rocker lever |
| SHORT DELAY CURRENT SETTING (ISD) - MAX | 0 A |
| SHORT DELAY CURRENT SETTING (ISD) - MIN | 0 A |
| INSTANTANEOUS CURRENT SETTING (II) - MAX | 1600 A |
| INSTANTANEOUS CURRENT SETTING (II) - MIN | 960 A |
| NUMBER OF OPERATIONS PER HOUR - MAX | 120 |
| OVERLOAD CURRENT SETTING (IR) - MAX | 160 A |
| OVERLOAD CURRENT SETTING (IR) - MIN | 125 A |
| RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 230 V, 50/60 Hz | 150 kA |
| RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 400/415 V, 50/60 Hz | 150 kA |
| RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 440 V, 50/60 Hz | 130 kA |
| RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 525 V, 50/60 Hz | 37.5 kA |
| RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 690 V, 50/60 Hz | 5 kA |
| RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 400/415 V, 50/60 Hz | 330 kA |
| RATED SHORT-CIRCUIT MAKING CAPACITY ICM | 286 kA |

AT 440 V, 50/60 HZ

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| RATED SHORT-CIRCUIT | |
| MAKING CAPACITY ICM | 105 kA |
| AT 525 V, 50/60 HZ | |

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| RATED SHORT-CIRCUIT | |
| MAKING CAPACITY ICM | 40 kA |
| AT 690 V, 50/60 HZ | |

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| STANDARD TERMINALS | Screw terminal |
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| RATED OPERATING | |
| VOLTAGE UE (UL) - MAX | 600Y/347 V, 480 V |

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| RATED SHORT-CIRCUIT | |
| MAKING CAPACITY ICM | 330 kA |
| AT 240 V, 50/60 HZ | |

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| RATED IMPULSE | |
| WITHSTAND VOLTAGE | |
| (UIMP) AT AUXILIARY | 6000 V |
| CONTACTS | |

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| RATED IMPULSE | |
| WITHSTAND VOLTAGE | |
| (UIMP) AT MAIN | 8000 V |
| CONTACTS | |

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| RATED INSULATION | |
| VOLTAGE (UI) | 1000 V AC |

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:**Eaton Corporation plc**

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