

Specifications



Eaton 265797

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 220A, L3-ME220

General specifications

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| PRODUCT NAME | Eaton Moeller series NZM molded case circuit breaker electronic |
| CATALOG NUMBER | 265797 |
| MODEL CODE | NZML3-ME220 |
| EAN | 4015082657970 |
| PRODUCT LENGTH/DEPTH | 166 mm |
| PRODUCT HEIGHT | 275 mm |
| PRODUCT WIDTH | 140 mm |
| PRODUCT WEIGHT | 6.34 kg |
| COMPLIANCES | RoHS conform |
| CERTIFICATIONS | IEC IEC/EN 60947 |
| GLOBAL CATALOG | 265797 |



Powering Business Worldwide

Product specifications

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| AMPERAGE RATING | 220 A |
| VOLTAGE RATING | 690 V - 690 V |
| CIRCUIT BREAKER FRAME TYPE | NZM3 |
| 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 be evaluated. |
| 10.2.7 INSCRIPTIONS | Meets the product standard's requirements. |
| 10.3 DEGREE OF PROTECTION OF | Does not apply, since the entire switchgear needs to |

Resources

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| BROCHURES | eaton-feerum-the-whole-grain-solution-success-story-en-us.pdf eaton-digital-nzm-brochure-br013003en-en-us.pdf |
| CATALOGS | eaton-digital-nzm-catalog-ca013003en-en-us.pdf eaton-circuit-breaker-nzm-mccb-characteristic-curve-056.eps eaton-circuit-breaker-nzm-mccb-characteristic-curve-008.eps eaton-circuit-breaker-nzm-mccb-characteristic-curve-009.eps |
| CHARACTERISTIC CURVE | eaton-molded-case-circuit-breaker-declaration-of-conformity-eu250293en.pdf |
| DECLARATIONS OF CONFORMITY | eaton-circuit-breaker-switch-nzm-mccb-dimensions-016.eps |
| DRAWINGS | eaton-circuit-breaker-nzm-mccb-dimensions-020.eps eaton-general-ie-ready-dilm-contactor-standards.eps |
| ECAD MODEL | DA-CE-ETN.NZML3-ME220 |
| INSTALLATION INSTRUCTIONS | eaton-circuit-breaker-basic-device-nzmn-b-il01208009z.pdf |
| INSTALLATION VIDEOS | The new digital NZM Range Introduction of the new digital circuit breaker NZM |
| MCAD MODEL | nzml3_me220.dwg nzml3_me220.stp |
| PEP ECO-PASSPORT | eaton-molded-case-switches-pep-eato-00202-v0101-en.pdf |
| TECHNICAL DATA SHEETS | eaton-nzm-technical-information-sheet |

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| ASSEMBLIES | 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. |
| FITTED WITH: | Thermal protection |
| POLLUTION DEGREE | 3 |
| MOUNTING METHOD | Built-in device fixed built-in technique Fixed |
| CLIMATIC PROOFING | Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30 |
| EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT | 14.52 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 TEMPERATURE - MIN | -25 °C |
| AMBIENT STORAGE TEMPERATURE - MAX | 70 °C |
| AMBIENT STORAGE TEMPERATURE - MIN | -40 °C |
| PROTECTION AGAINST DIRECT CONTACT | Finger and back-of-hand proof to VDE 0106 part 100 |

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| RATED INSULATION VOLTAGE (UI) | 1000 V |
| RATED OPERATING POWER AT AC-3, 230 V | 55 kW |
| RATED OPERATING POWER AT AC-3, 400 V | 110 kW |
| SWITCH OFF TECHNIQUE | Electronic |
| DEGREE OF PROTECTION | IP20 IP20 (basic degree of protection, in the operating controls area) |
| DIRECTION OF INCOMING SUPPLY | As required |
| ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT | Screw connection |
| LIFESPAN, MECHANICAL | 10000 operations |
| OVERVOLTAGE CATEGORY | III |
| RATED OPERATIONAL CURRENT | 202 A (690 V AC-3) 196 A (400 V AC-3) |
| DEGREE OF PROTECTION (IP), FRONT SIDE | IP66 (with door coupling rotary handle) IP40 (with insulating surround) |
| DEGREE OF PROTECTION (TERMINATIONS) | IP10 (tunnel terminal) IP00 (terminations, phase isolator and strip terminal) |
| NUMBER OF POLES | Three-pole |
| TERMINAL CAPACITY (COPPER STRIP) | Max. 10 segments of 32 mm x 1 mm + 5 segments of 32 mm x 1 mm at rear-side connection (punched) Min. 6 segments of 16 mm x 0.8 mm at box terminal Max. 8 segments of 24 mm x 1 mm (2x) at box terminal Max. 10 segments of 24 mm x 1 mm + 5 segments of 24 mm x 1 mm at box terminal 10 segments of 50 mm x 1 mm (2x) at rear-side width extension Min. 6 segments of 16 mm x 0.8 mm at rear-side connection (punched) |
| LIFESPAN, ELECTRICAL | 2000 operations at 415 V AC-3 5000 operations at 415 V AC-1 2000 operations at 400 V |

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| | AC-3 3000 operations at 690 V AC-1 5000 operations at 400 V AC-1 2000 operations at 690 V AC-3 |
| FUNCTIONS | Motor protection Phase failure sensitive |
| TYPE | Circuit breaker |
| SPECIAL FEATURES | <ul style="list-style-type: none"> • IEC/EN 60947-4-1, IEC/EN 60947-2 • The circuit-breaker fulfills all requirements for AC-3 switching category. • R.m.s. value measurement and "thermal memory" • Adjustable time delay setting to overcome current peaks I_r at $6 \times I_r$ also infinity (without overload releases) • All AC-3 rating data applies to direct switching by the circuit-breaker under normal operating conditions. If, for example, a contactor takes over AC-3 switching under normal operating conditions, the full rated uninterrupted current applies to the circuit-breaker, $I_n = I_u$. • 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}) |

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| | <ul style="list-style-type: none"> Rated current = rated uninterrupted current: 220 A Terminal capacity hint: Up to 240 mm² can be connected depending on the cable manufacturer. |
| 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) | 220 A |
| RATED SHORT-TIME WITHSTAND CURRENT (T = 0.3 S) | 2.8 kA |
| RATED SHORT-TIME WITHSTAND CURRENT (T = 1 S) | 2.8 kA |
| SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MAX | 3080 A |
| SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MIN | 440 A |
| HANDLE TYPE | Rocker lever |
| INSTANTANEOUS CURRENT SETTING (II) - MAX | 3080 A |
| INSTANTANEOUS CURRENT SETTING (II) - MIN | 440 A |
| NUMBER OF OPERATIONS PER HOUR - MAX | 60 |
| OVERLOAD CURRENT SETTING (IR) - MAX | 220 A |
| OVERLOAD CURRENT SETTING (IR) - MIN | 110 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 | 130 kA |

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| 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 | 50 kA |
| RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 690 V, 50/60 HZ | 20 kA |
| STANDARD TERMINALS | Screw terminal |
| OPTIONAL TERMINALS | Box terminal. Connection on rear. Tunnel terminal |
| RELEASE SYSTEM | Electronic release |
| SHORT-CIRCUIT TOTAL BREAKTIME | < 10 ms |
| TERMINAL CAPACITY (ALUMINUM SOLID CONDUCTOR/CABLE) | 16 mm ² (1x) direct at switch rear-side connection 10 mm ² - 16 mm ² (2x) direct at switch rear-side connection 16 mm ² (1x) at tunnel terminal |
| TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE) | 50 mm ² - 240 mm ² (2x) at 2-hole tunnel terminal 25 mm ² - 120 mm ² (1x) direct at switch rear-side connection 50 mm ² - 240 mm ² (1x) at 2-hole tunnel terminal 25 mm ² - 120 mm ² (2x) direct at switch rear-side connection 25 mm ² - 185 mm ² (1x) at tunnel terminal |
| TERMINAL CAPACITY (CONTROL CABLE) | 0.75 mm ² - 1.5 mm ² (2x) 0.75 mm ² - 2.5 mm ² (1x) |
| TERMINAL CAPACITY (COPPER BUSBAR) | Max. 30 mm x 10 mm + 30 mm x 5 mm direct at switch rear-side connection Min. 20 mm x 5 mm direct at switch rear-side connection M10 at rear-side screw connection Max. 10 mm x 50 mm (2x) at rear-side width extension |
| TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE) | 16 mm ² (1x) direct at switch rear-side connection |

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| | 16 mm ² (1x) at tunnel terminal 300 mm ² (2x) at rear-side width extension 16 mm ² (2x) at box terminal 16 mm ² (2x) direct at switch rear-side connection |
| TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE) | 25 mm ² - 240 mm ² (2x) direct at switch rear-side connection 50 mm ² - 240 mm ² (2x) at 2-hole tunnel terminal 25 mm ² - 120 mm ² (2x) at box terminal 35 mm ² - 240 mm ² (1x) at box terminal 16 mm ² - 185 mm ² (1x) at 1-hole tunnel terminal 25 mm ² - 240 mm ² (1x) direct at switch rear-side connection |
| RATED SHORT-CIRCUIT BREAKING CAPACITY ICU (IEC/EN 60947) AT 400/415 V, 50/60 HZ | 130 kA |
| RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 400/415 V, 50/60 HZ | 330 kA |
| RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 440 V, 50/60 HZ | 286 kA |
| RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 525 V, 50/60 HZ | 220 kA |
| RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 690 V, 50/60 HZ | 176 kA |
| RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 240 V, 50/60 HZ | 330 kA |
| RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT AUXILIARY CONTACTS | 6000 V |
| RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT MAIN CONTACTS | 8000 V |

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



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