# Eaton 271122

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 1200A, N4-AE1200-NA

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| **PRODUCT NAME** | Eaton Moeller series NZM molded case circuit breaker electronic |
| **CATALOG NUMBER** | 271122 |
| **PRODUCT LENGTH/DEPTH** | 401 mm |
| **PRODUCT HEIGHT** | 207 mm |
| **PRODUCT WIDTH** | 210 mm |
| **PRODUCT WEIGHT** | 21 kg |
| **COMPLIANCES** | RoHS conform |
| **CERTIFICATIONS** | IEC 60947-2<br>UL listed<br>CSA-C22.2 No. 5-09<br>UL (File No. E31593)<br>IEC/EN 60947<br>CE marking<br>UL/CSA<br>UL (Category Control Number DIVQ)<br>CSA (File No. 22086)<br>IEC<br>CSA certified<br>UL 489<br>Specially designed for North America<br>CSA (Class No. 1432-01) |

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| **AMPERAGE RATING** | 1200 A |
| **VOLTAGE RATING** | 690 V - 690 V |
| **CIRCUIT BREAKER FRAME TYPE** | NZM4 |
| **FEATURES** | Motor drive optional<br>Protection unit |
| **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 |

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| **CHARACTERISTIC CURVE** | eaton-circuit-breaker-nzm-mccb-characteristic-curve-047.eps |
| **DECLARATIONS OF CONFORMITY** | DA-DC-03_N4 |
| | eaton-circuit-breaker-basic-unit-nzmn4-il01210010z.pdf |
| | eaton-circuit-breaker-nzm-mccb-dimensions-022.eps<br><br>eaton-circuit-breaker-switch-nzm-mccb-3d-drawing-003.eps |

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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. |
| **FRAME** | NZM4 |
| **POLLUTION DEGREE** | 3 |
| **CLASS** | Distribution circuit protection |
| **MOUNTING METHOD** | Built-in device fixed built-in technique<br>Fixed |
| **CLIMATIC PROOFING** | Damp heat, constant, to IEC 60068-2-78<br>Damp heat, cyclic, to IEC 60068-2-30 |
| **EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT** | 160 W |
| **UTILIZATION CATEGORY** | A (IEC/EN 60947-2) |
| **INTERRUPT RATING** | 50 kAIC at 400 Vac |
| **ISOLATION** | 500 V AC (between auxiliary contacts and main contacts)<br>300 V AC (between the auxiliary contacts) |

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| **AMBIENT OPERATING TEMPERATURE - MAX** | 70 °C |
| **AMBIENT OPERATING TEMPERATURE - MIN** | -25 °C |
| **AMBIENT STORAGE TEMPERATURE - MAX** | 70 °C |
| **AMBIENT STORAGE TEMPERATURE - MIN** | -40 °C |
| **LOW-VOLTAGE HBC FUSE - MAX** | 2 x 630 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 |
| **CONNECTION** | Front screw |
| **DEGREE OF PROTECTION** | IP20<br>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** | 1600 A (415 V AC-1, making and breaking capacity)<br>1200 A (690 V AC -1, making and breaking capacity)<br>1200 A (660-690 V AC-3, making and breaking capacity)<br>2000 A (380/400 V AC-1, making and breaking capacity) |
| **DEGREE OF PROTECTION (IP), FRONT SIDE** | IP66 (with door coupling rotary handle)<br>IP40 (with insulating surround) |
| **DEGREE OF PROTECTION** | IP10 (tunnel terminal) |

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| **(TERMINATIONS)** | IP00 (terminations, phase isolator and strip terminal) |
| **NUMBER OF POLES** | Three-pole |
| **TERMINAL CAPACITY (COPPER STRIP)** | Min. 6 segments of 16 mm x 0.8 mm at flat conductor terminal<br>Max. 10 segments of 32 mm x 1 mm (2x) at flat conductor terminal<br>10 segments of 50 mm x 1 mm (2x) at 1-hole module plate<br>Min. 10 segments of 50 mm x 1 mm (2x) at rear-side connection (punched)<br>Max. 10 segments of 50 mm x 1 mm (2x) at rear-side connection (punched)<br>10 segments of 80 mm x 1 mm (2x) at rear-side width extension<br>NA: same as for IEC |
| **LIFESPAN, ELECTRICAL** | 1000 operations at 690 V AC-3<br>2000 operations at 400 V AC-3<br>2000 operations at 415 V AC-3<br>2000 operations at 690 V AC-1<br>3000 operations at 400 V AC-1 |
| **FUNCTIONS** | System and cable protection |
| **TYPE** | Circuit breaker |
| **SPECIAL FEATURES** | • For AC-3 rated operational current with NZM4 the following applies: 400 V: max. 650 kW; 690 V: max. 600 kW (switching capacity, rated making and breaking capacity)<br>• Maximum back-up fuse, if the expected short-circuit currents at the installation location exceed the switching capacity of the circuit breaker (Rated |

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| | short-circuit breaking capacity Icn)<br>• Rated current = rated uninterrupted current: 1200 A<br>• Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate.<br>• Adjustable overload releases Ir<br>• R.m.s. value measurement and “thermal memory” |
| **APPLICATION** | • Branch circuits, feeder circuits<br>• Use in unearthed supply systems at 525 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)** | 1200 A |
| **RELEASE SYSTEM** | Electronic release |
| **SHORT-CIRCUIT TOTAL BREAKTIME** | < 25 ms ( 415 V); < 35 ms (> 415 V) |
| **RATED SHORT-TIME WITHSTAND CURRENT (T = 0.3 S)** | 19.2 kA |
| **RATED SHORT-TIME WITHSTAND CURRENT (T = 1 S)** | 19.2 kA |
| **SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MAX** | 14400 A |
| **SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MIN** | 2400 A |
| **TERMINAL CAPACITY (CONTROL CABLE)** | 14 $mm^2$ - 18 $mm^2$ (1x)<br>16 $mm^2$ - 18 $mm^2$ (2x) |
| **TERMINAL CAPACITY** | M10 at rear-side screw |

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| **(COPPER BUSBAR)** | connection<br>Min. 25 mm x 5 mm direct at switch rear-side connection<br>Max. 50 mm x 10 mm (2x) direct at switch rear-side connection<br>Min. 25 mm x 5 mm at rear-side 1-hole module plate<br>Max. 50 mm x 10 mm (2x) at rear-side 1-hole module plate<br>50 mm x 10 mm (2x) at rear-side 2-hole module plate<br>Min. 60 mm x 10 mm at rear-side width extension<br>Max. 80 mm x 10 mm (2x) at rear-side width extension<br>NA: same as for IEC |
| **TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)** | 50 $mm^2$ - 240 $mm^2$ (4x) at 4-hole tunnel terminal<br>120 $mm^2$ - 185 $mm^2$ (1x) direct at switch rear-side connection<br>50 $mm^2$ - 185 $mm^2$ (4x) direct at switch rear-side connection<br>Min. 120 $mm^2$ - 300 $mm^2$ (1x) at rear-side 1-hole module plate<br>Max. 95 $mm^2$ - 300 $mm^2$ (2x) at rear-side 1-hole module plate<br>Min. 95 $mm^2$ - 185 $mm^2$ (2x) at rear-side 2-hole module plate<br>Max. 35 $mm^2$ - 185 $mm^2$ (4x) at rear-side 2-hole module plate<br>300 $mm^2$ (4x) at rear-side width extension<br>95 $mm^2$ - 240 $mm^2$ (6x) at rear-side width extension<br>NA: AWG 0- kcmil 500 (4x) at 4-hole tunnel terminal<br>NA: kcmil 250 - kcmil 350 (1x) direct at switch rear-side connection<br>NA: AWG 0 - kcmil 350 (4x) direct at switch rear-side connection<br>NA: min. kcmil 250 - kcmil 600 (1x) at rear-side 1-hole |

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| | module plate<br>NA: max. AWG 3/0 - kcmil 600 (2x) at rear-side 1-hole module plate<br>NA: min. AWG 3/0 - kcmil 350 (2x) at rear-side 2-hole module plate<br>NA: max. AWG 2 - kcmil 350 (4x) at rear-side 2-hole module plate<br>NA: kcmil 600 (4x) at rear-side width extension<br>NA: AWG 3/0 - kcmil 500 (6x) at rear-side width extension |
| **TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)** | Min. 185 $mm^2$ - 240 $mm^2$ (1x) at rear-side 1-hole module plate<br>Max. 70 $mm^2$ - 185 $mm^2$ (2x) at rear-side 1-hole module plate<br>50 $mm^2$ (4x) at rear-side 2-hole module plate<br>240 $mm^2$ (2x) at rear-side width extension<br>70 $mm^2$ - 240 $mm^2$ (6x) at rear-side width extension<br>NA: aluminum conductor not applicable |
| **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** | 14400 A |
| **INSTANTANEOUS CURRENT SETTING (II) - MIN** | 2400 A |
| **NUMBER OF OPERATIONS PER HOUR - MAX** | 60 |
| **OVERLOAD CURRENT SETTING (IR) - MAX** | 1200 A |
| **OVERLOAD CURRENT SETTING (IR) - MIN** | 600 A |
| **RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 230 V, 50/60 HZ** | 37 kA |
| **RATED SHORT-CIRCUIT** | 37 kA |

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| **BREAKING CAPACITY ICS (IEC/EN 60947) AT 400/415 V, 50/60 HZ** | |
| **RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 440 V, 50/60 HZ** | 26 kA |
| **RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 525 V, 50/60 HZ** | 19 kA |
| **RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 690 V, 50/60 HZ** | 15 kA |
| **RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 400/415 V, 50/60 HZ** | 105 kA |
| **RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 440 V, 50/60 HZ** | 74 kA |
| **RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 525 V, 50/60 HZ** | 53 kA |
| **RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 690 V, 50/60 HZ** | 40 kA |
| **STANDARD TERMINALS** | Screw connection,Optional:Tunnel terminal,Rear-side connection,Strip connection |
| **RATED OPERATING VOLTAGE UE (UL) - MAX** | 600 V |
| **RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 240 V, 50/60 HZ** | 105 kA |
| **RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT AUXILIARY CONTACTS** | 6000 V |
| **RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT MAIN CONTACTS** | 8000 V |
| **RATED SHORT-CIRCUIT BREAKING CAPACITY ICU (IEC/EN 60947) AT 525 V, 50/60 HZ** | 25 kA |
| **RATED SHORT-CIRCUIT BREAKING CAPACITY** | 50 kA |

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| **ICU (IEC/EN 60947) AT 400/415 V, 50/60 HZ** | |
| **RATED SHORT-CIRCUIT BREAKING CAPACITY ICU (IEC/EN 60947) AT 230 V, 50/60 HZ** | 50 kA |
| **RATED SHORT-CIRCUIT BREAKING CAPACITY ICU (IEC/EN 60947) AT 690 V, 50/60 HZ** | 20 kA |
| **RATED SHORT-CIRCUIT BREAKING CAPACITY ICU (IEC/EN 60947) AT 440 V, 50/60 HZ** | 35 kA |
| **RATED INSULATION VOLTAGE (UI)** | 1000 V AC |

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| **PROJECT NAME:** |
| **PROJECT NUMBER:** |
| **PREPARED BY:** |
| : |

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