

Specifications



Photo is representative



Eaton 191450

NZMH4-AX1250. NZM4 PXR10 circuit breaker, 1250A, 3p, screw terminal

General specifications

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| PRODUCT NAME | Eaton Moeller series NZM molded case circuit breaker electronic |
| CATALOG NUMBER | 191450 |
| MODEL CODE | NZMH4-AX1250 |
| EAN | 4015081919628 |
| PRODUCT LENGTH/DEPTH | 375 mm |
| PRODUCT HEIGHT | 170 mm |
| PRODUCT WIDTH | 210 mm |
| PRODUCT WEIGHT | 19 kg |
| CERTIFICATIONS | IEC/EN 60947 IEC |
| GLOBAL CATALOG | 191450 |

Product specifications

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| AMPERAGE RATING | 1250 A |
| VOLTAGE RATING | 690 V - 690 V |
| CIRCUIT BREAKER FRAME TYPE | NZM4 |
| FEATURES | Motor drive optional 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 be evaluated. |
| 10.2.7 INSCRIPTIONS | Meets the product standard's requirements. |

Resources

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](#)

DECLARATIONS OF CONFORMITY

[eaton-molded-case-circuit-breaker-declaration-of-conformity-eu250294en.pdf](#)

DRAWINGS

[eaton-circuit-breaker-nzm-mccb-dimensions-022.eps](#)

INSTALLATION INSTRUCTIONS

[eaton-circuit-breaker-basic-unit-bg4-il012101zu.pdf](#)

INSTALLATION VIDEOS

[The new digital NZM Range](#)

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

MCAD MODEL

[DA-CS-nzm4_3p](#)

[DA-CD-nzm4_3p](#)

PEP ECO-PASSPORT

[eaton-molded-case-switches-pep-eato-00230-v0101-en.pdf](#)

TECHNICAL DATA SHEETS

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

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| 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 | Fixed Built-in device fixed built-in technique |
| CLIMATIC PROOFING | Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30 |
| EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT | 173.44 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 |
| NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS) | 0 |

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| 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 | 10000 operations |
| OVERVOLTAGE CATEGORY | III |
| 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 |
| TERMINAL CAPACITY (COPPER STRIP) | Max. 10 segments of 50 mm x 1 mm (2x) at rear-side connection (punched) Min. 5 segments of 25 mm x 1 mm at rear-side connection (punched) Min. 6 segments of 16 mm x 0.8 mm at flat conductor terminal 10 segments of 50 mm x 1 mm (2x) at 1-hole module plate Max. 10 segments of 32 mm x 1 mm (2x) at flat conductor terminal 10 segments of 80 mm x 1 mm (2x) at rear-side width extension |
| LIFESPAN, ELECTRICAL | 20000 operations at 690 V AC-1 3000 operations at 400 V AC-1 3000 operations at 415 V AC-1 |

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| FUNCTIONS | System and cable protection |
| 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}) • Overload and short-circuit protection L1 • R.m.s. value measurement and "thermal memory" • USB interface for configuration and test function with Power Xpert Protection Manager software • Rated current = rated uninterrupted current: 1250 A |
| APPLICATION | Use in unearthing supply systems at 525 V |
| SHOCK RESISTANCE | 15 g (half-sinusoidal shock 11 ms) |
| POSITION OF CONNECTION FOR MAIN CURRENT CIRCUIT | Front side |
| RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN) | 1250 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 | 15000 A |

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| SHORT-CIRCUIT RELEASE | |
| NON-DELAYED SETTING - MIN | 2500 A |
| 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) | Min. 25 mm x 5 mm direct at switch rear-side connection Min. 60 mm x 10 mm at rear-side width extension Max. 80 mm x 10 mm (2x) at rear-side width extension Max. 50 mm x 10 mm (2x) direct at switch rear-side connection Max. 50 mm x 10 mm (2x) at rear-side 1-hole module plate Min. 25 mm x 5 mm at rear-side 1-hole module plate M10 at rear-side screw connection 50 mm x 10 mm (2x) at rear-side 2-hole module plate |
| TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE) | 120 mm ² - 300 mm ² (1x) at rear-side 1-hole module plate 50 mm ² - 240 mm ² (4x) at 4-hole tunnel terminal 95 mm ² - 185 mm ² (2x) at rear-side 2-hole module plate 35 mm ² - 185 mm ² (4x) at rear-side 2-hole module plate 300 mm ² (4x) at rear-side width extension 95 mm ² - 240 mm ² (6x) at rear-side width extension 95 mm ² - 300 mm ² (2x) at rear-side 1-hole module plate |
| TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE) | 50 mm ² - 185 mm ² (4x) direct at switch rear-side connection 120 mm ² - 185 mm ² (1x) direct at switch rear-side connection |
| TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE) | 50 mm ² - 240 mm ² (4x) at 4-hole tunnel terminal |
| HANDLE TYPE | Rocker lever |
| SHORT DELAY CURRENT SETTING (ISD) - MAX | 0 A |

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| SHORT DELAY CURRENT SETTING (ISD) - MIN | 0 A |
| INSTANTANEOUS CURRENT SETTING (II) - MAX | 30000 A |
| INSTANTANEOUS CURRENT SETTING (II) - MIN | 2500 A |
| NUMBER OF OPERATIONS PER HOUR - MAX | 60 |
| OVERLOAD CURRENT SETTING (IR) - MAX | 1250 A |
| OVERLOAD CURRENT SETTING (IR) - MIN | 500 A |
| RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 230 V, 50/60 HZ | 63 kA |
| RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 400/415 V, 50/60 HZ | 50 kA |
| RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 440 V, 50/60 HZ | 50 kA |
| RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 525 V, 50/60 HZ | 37 kA |
| RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 690 V, 50/60 HZ | 37 kA |
| RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 400/415 V, 50/60 HZ | 187 kA |
| RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 440 V, 50/60 HZ | 187 kA |
| RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 525 V, 50/60 HZ | 143 kA |
| RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 690 V, 50/60 HZ | 100 kA |
| STANDARD TERMINALS | Screw terminal |
| OPTIONAL TERMINALS | Connection on rear. Strip terminal. Tunnel terminal |
| RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 240 V, 50/60 HZ | 275 kA |

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| RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT AUXILIARY CONTACTS | 6000 V |
| RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT MAIN CONTACTS | 8000 V |
| RATED INSULATION VOLTAGE (UI) | 690 V AC |

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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