Specifications

Photo is representative

Eaton 191372

Eaton Moeller series NZM - Molded Case Circuit Breaker. NZM3 PXR20 circuit breaker, 220A, 3p, plug-in technology, H, 3

General specifications	
PRODUCT NAME	Eaton Moeller series NZM molded case circuit breaker electronic
CATALOG NUMBER	191372
MODEL CODE	NZMH3-MX220-SVE
EAN	4015081918843
PRODUCT LENGTH/DEPTH	335 mm
PRODUCT HEIGHT	215.2 mm
PRODUCT WIDTH	140 mm
PRODUCT WEIGHT	7.72 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC IEC/EN 60947
GLOBAL CATALOG	191372

Powering Business Worldwide

Product specifications

AMPERAGE RATING	220 A
VOLTAGE RATING	690 V - 690 V
CIRCUIT BREAKER FRAME TYPE	NZM3
ACCESSORIES REQUIRED	NZM3-XSVS
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-digital-nzm-brochure-br013003en-en-us.pdf eaton-feerum-the-whole-grain-solution-success-story-en-us.pdf
CATALOGS	eaton-digital-nzm-catalog-ca013003en-en-us.pdf
CHARACTERISTIC CURVE	eaton-circuit-breaker-nzm-mccb-characteristic-curve-016.eps eaton-circuit-breaker-nzm-mccb-characteristic-curve-012.eps
DECLARATIONS OF CONFORMITY	eaton-molded-case-circuit-breaker-declaration-of-conformity-eu250293en.pdf
DRAWINGS	eaton-circuit-breaker-switch-nzm-mccb-dimensions-016.eps eaton-circuit-breaker-nzm-mccb-dimensions-020.eps eaton-general-ie-ready-dilm-contactor-standards.eps
INSTALLATION INSTRUCTIONS	eaton-circuit-breaker-plug-in-adapter-nzm2-il01219023z.pdf eaton-circuit-breaker-basic-unit-bg3-il012100zu.pdf
INSTALLATION VIDEOS	Introduction of the new digital circuit breaker NZM The new digital NZM Range
PEP ECO-PASSPORT	eaton-molded-case-switches-pep-eato-00227-v0101-en.pdf
TECHNICAL DATA SHEETS	eaton-nzm-technical-information-sheet

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.
FITTED WITH:	Thermal protection
POLLUTION DEGREE	3
MOUNTING METHOD	Built-in device plug-in technique Plug-in unit
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	14.52 W
UTILIZATION CATEGORY	A (IEC/EN 60947-2)
ISOLATION	500 V AC (between auxiliary contacts and main contacts) 300 V AC (between the auxiliary 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	Finger and back-of-hand

DIRECT CONTACT	proof to VDE 0106 part 100
RATED INSULATION VOLTAGE (UI)	690 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	Other
LIFESPAN, MECHANICAL	15000 operations
OVERVOLTAGE CATEGORY	III
RATED OPERATIONAL CURRENT	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)	10 segments of 50 mm x 1 mm (2x) at rear-side width extension Max. 10 segments of 24 mm x 1 mm + 5 segments of 24 mm x 1 mm at box terminal Min. 6 segments of 16 mm x 0.8 mm at rear-side connection (punched) Max. 10 segments of 32 mm x 1 mm + 5 segments of 32 mm x 1 mm at rear-side connection (punched) Max. 8 segments of 24 mm x 1 mm (2x) at box terminal Min. 6 segments of 16 mm x 0.8 mm at box terminal
LIFESPAN, ELECTRICAL	5000 operations at 400 V AC-1 5000 operations at 415 V

	AC-1 2000 operations at 690 V AC-3 3000 operations at 690 V AC-1 2000 operations at 415 V AC-3 2000 operations at 400 V AC-3
FUNCTIONS	Motor protection Phase failure sensitive
TYPE	Circuit breaker
SPECIAL FEATURES	• IEC/EN 60947-2 with characteristic conforming to IEC/EN 60947-4-1 with phase failure sensitivity • 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 tr at 6 x Ir 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, In = Iu. • 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 Icn) • 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)	3.3 kA
RATED SHORT-TIME WITHSTAND CURRENT (T = 1 S)	3.3 kA
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MAX	3960 A
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MIN	440 A
HANDLE TYPE	Rocker lever
INSTANTANEOUS CURRENT SETTING (II) - MAX	18 A
INSTANTANEOUS CURRENT SETTING (II) - MIN	2 A
NUMBER OF OPERATIONS PER HOUR - MAX	60
OVERLOAD CURRENT SETTING (IR) - MAX	220 A
OVERLOAD CURRENT SETTING (IR) - MIN	88 A
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS	150 kA

(IEC/EN 60947) AT 230 V, 50/60 HZ	
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 400/415 V, 50/60 HZ	130 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	33 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 690 V, 50/60 HZ	9 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) at tunnel terminal
TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)	50 mm^2 - 240 mm^2 (2x) at 2-hole tunnel terminal 25 mm^2 - 185 mm^2 (1x) at tunnel terminal 50 mm^2 - 240 mm^2 (1x) at 2-hole 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 M10 at rear-side screw connection Min. 20 mm x 5 mm direct at switch rear-side connection Max. 10 mm x 50 mm (2x) at rear-side width extension
TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE)	16 mm^2 (2x) at box terminal 16 mm^2 (1x) at tunnel terminal 16 mm^2 (2x) direct at switch rear-side connection

	16 mm² (1x) direct at switch rear-side connection 300 mm² (2x) at rear-side width extension
TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)	35 mm² - 240 mm² (1x) at box terminal 25 mm² - 120 mm² (2x) at box terminal 25 mm² - 240 mm² (1x) direct at switch rear-side connection 16 mm² - 185 mm² (1x) at 1-hole tunnel terminal 25 mm² - 240 mm² (2x) 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	143 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 690 V, 50/60 HZ	74 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

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

Eaton Corporation plc
Eaton House
30 Pembroke Road
Dublin 4, Ireland
Eaton.com

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