

Specifications



Photo is representative



Eaton 189684

NZMH4-PMX550. NZM4 PXR25 circuit breaker - integrated energy measurement class 1, 550A, 3p, Screw terminal

General specifications

PRODUCT NAME	Eaton Moeller series NZM molded case circuit breaker electronic
CATALOG NUMBER	189684
MODEL CODE	NZMH4-PMX550
EAN	4015081876310
PRODUCT LENGTH/DEPTH	375 mm
PRODUCT HEIGHT	170 mm
PRODUCT WIDTH	210 mm
PRODUCT WEIGHT	19 kg
CERTIFICATIONS	IEC IEC/EN 60947
GLOBAL CATALOG	189684

Product specifications

AMPERAGE RATING	550 A
VOLTAGE RATING	690 V - 690 V
CIRCUIT BREAKER FRAME TYPE	NZM4
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

BROCHURES	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	Introduction of the new digital circuit breaker NZM The new digital NZM Range
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

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	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	33.58 W
UTILIZATION CATEGORY	B (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 DIRECT CONTACT	Finger and back-of-hand proof to VDE 0106 part 100

RATED INSULATION VOLTAGE (UI)	690 V
RATED OPERATING POWER AT AC-3, 230 V	160 kW
RATED OPERATING POWER AT AC-3, 400 V	315 kW
SWITCH OFF TECHNIQUE	Electronic
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
OVERTVOLTAGE CATEGORY	III
DEGREE OF PROTECTION (IP), FRONT SIDE	IP40 (with insulating surround) IP66 (with door coupling rotary handle)
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 80 mm x 1 mm (2x) at rear-side width extension 10 segments of 50 mm x 1 mm (2x) at 1-hole module plate Max. 10 segments of 50 mm x 1 mm (2x) at rear-side connection (punched) Max. 10 segments of 32 mm x 1 mm (2x) at flat conductor terminal 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
LIFESPAN, ELECTRICAL	1000 operations at 690 V AC-3 2000 operations at 400 V AC-3 3000 operations at 400 V AC-1 2000 operations at 690 V AC-1

3000 operations at 415 V AC-1 2000 operations at 415 V AC-3
FUNCTIONS
Phase failure sensitive Motor protection

TYPE	Circuit breaker
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<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}) • Motor protection - overload- and short-circuit protective device L1 Motor • Class 1 energy measurement, phase loss protection, r.m.s. value measurement, and "thermal memory"
<p>SPECIAL FEATURES</p> <ul style="list-style-type: none"> • USB interface for configuration and test function with Power Xpert Protection Manager software • Interface module in equipment supplied. • Optionally communication-capable with interface module and internal Modbus RTU module or CAM • Rated current = rated uninterrupted current: 550 A

SHOCK RESISTANCE	15 g (half-sinusoidal shock 11 ms)
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RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	550 A
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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	9900 A
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MIN	1100 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	550 A
OVERLOAD CURRENT SETTING (IR) - MIN	220 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
STANDARD TERMINALS	Screw terminal
OPTIONAL TERMINALS	Connection on rear. Strip terminal. Tunnel terminal
RELEASE SYSTEM	Electronic release
SHORT-CIRCUIT TOTAL BREAKTIME	< 25 ms (≤ 415 V); < 35 ms (> 415 V)

TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)	50 mm ² - 240 mm ² (4x) at 4-hole tunnel terminal
TERMINAL CAPACITY (CONTROL CABLE)	0.75 mm ² - 2.5 mm ² (1x) 0.75 mm ² - 1.5 mm ² (2x)
TERMINAL CAPACITY (COPPER BUSBAR)	50 mm x 10 mm (2x) at rear-side 2-hole module plate Max. 50 mm x 10 mm (2x) at rear-side 1-hole module plate Max. 80 mm x 10 mm (2x) at rear-side width extension Min. 25 mm x 5 mm direct at switch rear-side connection Min. 60 mm x 10 mm at rear-side width extension Max. 50 mm x 10 mm (2x) direct at switch rear-side connection M10 at rear-side screw connection Min. 25 mm x 5 mm at rear-side 1-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 - 300 mm ² (2x) at rear-side 1-hole module plate 95 mm ² - 240 mm ² (6x) at rear-side width extension 300 mm ² (4x) at rear-side width extension 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
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
RATED SHORT-CIRCUIT BREAKING CAPACITY ICU (IEC/EN 60947) AT 400/415 V, 50/60 Hz	50 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM	187 kA

AT 400/415 V, 50/60 HZ

RATED SHORT-CIRCUIT

MAKING CAPACITY ICM

187 kA

AT 440 V, 50/60 HZ

RATED SHORT-CIRCUIT

MAKING CAPACITY ICM

143 kA

AT 525 V, 50/60 HZ

RATED SHORT-CIRCUIT

MAKING CAPACITY ICM

100 kA

AT 690 V, 50/60 HZ

RATED SHORT-CIRCUIT

MAKING CAPACITY ICM

275 kA

AT 240 V, 50/60 HZ

RATED IMPULSE

WITHSTAND VOLTAGE

(UIMP) AT AUXILIARY

6000 V

CONTACTS

RATED IMPULSE

WITHSTAND VOLTAGE

(UIMP) AT MAIN

8000 V

CONTACTS

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



Eaton Corporation plc

Eaton House

30 Pembroke Road

Dublin 4, Ireland

Eaton.com

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