Eaton 189681

NZMN4-PMX550. NZM4 PXR25 circuit breaker - integrated energy measurement class 1, 550A, 3p, Screw terminal

PRODUCT NAME	Eaton Moeller series NZM - Molded case circuit breaker
CATALOG NUMBER	189681
PRODUCT LENGTH/DEPTH	375 mm
PRODUCT HEIGHT	170 mm
PRODUCT WIDTH	210 mm
PRODUCT WEIGHT	19 kg
CERTIFICATIONS	IEC/EN 60947 IEC

Powering Business Worldwide

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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

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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
LIFESPAN, MECHANICAL	10000 operations
UTILIZATION CATEGORY	B (IEC/EN 60947-2)
MOUNTING METHOD	Built-in device fixed built-in technique Fixed
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
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

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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 IP20 (basic degree of protection, in the operating controls area)
DIRECTION OF INCOMING SUPPLY	As required
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
OVERVOLTAGE 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)	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 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) Min. 6 segments of 16 mm x 0.8 mm at flat conductor terminal Min. 5 segments of 25 mm x 1 mm at rear-side connection (punched)
LIFESPAN, ELECTRICAL	2000 operations at 415 V AC-3 2000 operations at 690 V AC-1 1000 operations at 690 V AC-3 3000 operations at 400 V AC-1

	3000 operations at 415 V AC-1 2000 operations at 400 V AC-3
FUNCTIONS	Motor protection Phase failure sensitive
TYPE	Circuit breaker
SPECIAL FEATURES	• 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) • Motor protection - overload- and short-circuit protective device LI Motor • Class 1 energy measurement, phase loss protection, r.m.s. value measurement, and "thermal memory" • 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
APPLICATION	Use in unearthed supply systems at 525 V
SHOCK RESISTANCE	15 g (half-sinusoidal shock 11 ms)
RATED OPERATIONAL	550 A

CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	
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	37 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 400/415 V, 50/60 HZ	26 kA
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
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 mm² - 240 mm² (4x) at 4-hole tunnel terminal
TERMINAL CAPACITY (CONTROL CABLE)	0.75 mm² - 2.5 mm² (1x) 0.75 mm² - 1.5 mm² (2x)
TERMINAL CAPACITY (COPPER BUSBAR)	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 50 mm x 10 mm (2x) at rear-side 2-hole module plate Min. 25 mm x 5 mm direct at switch rear-side connection Min. 25 mm x 5 mm at rear-side 1-hole module plate Max. 80 mm x 10 mm (2x) at rear-side width extension Min. 60 mm x 10 mm at rear-side width extension M10 at rear-side screw connection
TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE)	35 mm² - 185 mm² (4x) at rear-side 2-hole module plate 95 mm² - 300 mm² (2x) at rear-side 1-hole module plate 50 mm² - 240 mm² (4x) at 4-hole tunnel terminal 95 mm² - 185 mm² (2x) at rear-side 2-hole module plate 300 mm² (4x) at rear-side width extension 95 mm² - 240 mm² (6x) at rear-side width extension 120 mm² - 300 mm² (1x) at rear-side 1-hole module plate
TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)	50 mm² - 185 mm² (4x) direct at switch rear-side connection 120 mm² - 185 mm² (1x) direct at switch rear-side connection
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 400/415 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 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
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

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