DATASHEET - NZMH3-PMX250-NA

NZM3 PXR25 circuit breaker, 250A, 3p, Screw terminal, UL/CSA

Part no. NZMH3-PMX250-NA
193353

Powering Business Worldwide™

Product name	Eaton Moeller series NZM molded case circuit breaker electronic
Part no.	NZMH3-PMX250-NA
EAN	9010238016989
Product Length/Depth	166 millimetre
Product height	275 millimetre
Product width	140 millimetre
Product weight	7.054 kilogram
Compliances	RoHS conform
Certifications	UL listed CE marking UL508 UL (File No. E31593) CSA certified IEC Specially designed for North America IEC 60947-2 UL/CSA CSA-C22.2 No. 5-09 UL (Category Control Number DIVQ) CSA (Class No. 1432-01) UL 489 IEC/EN 60947 CSA (File No. 22086)
Product Tradename	NZM
Product Type	Molded case circuit breaker
Product Sub Type	Electronic
Application	Branch circuits, feeder circuits
Type	Circuit breaker
Circuit breaker frame type	NZM3
Number of poles	Three-pole
Amperage Rating	250 A
Release system	Electronic release
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 Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. Rated current = rated uninterrupted current: 250 A
Fitted with:	Thermal protection
Voltage rating	690 V - 690 V
Rated operating voltage Ue (UL) - max	600 V
Rated insulation voltage (Ui)	690 V
Rated impulse withstand voltage (Uimp) at auxiliary contacts	6000 V
Rated impulse withstand voltage (Uimp) at main contacts	8000 V
Rated operational current	500 A (415 V AC-1, making and breaking capacity) 630 A (400 V AC-1, making and breaking capacity) 630 A (690 V AC-1, making and breaking capacity) 450 A (660-690 V AC-3, making and breaking capacity)
Rated short-time withstand current (t = 0.3 s)	3.3 kA
Rated short-time withstand current (t = 1 s)	3.3 kA
Instantaneous current setting (Ii) - min	500 A
Instantaneous current setting (Ii) - max	4500 A
Overload current setting (Ir) - min	175 A

Overload current setting (Ir) - max	350 A
Short-circuit release non-delayed setting - min	500 A
Short-circuit release non-delayed setting - max	4500 A
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 230 V, 50/60 Hz	150 kA
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
Rated short-circuit making capacity Icm at 240 V, 50/60 Hz	330 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 operating power at AC-3, 230 V	110 kW
Rated operating power at AC-3, 400 V	200 kW
Short-circuit total breaktime	< 10 ms
Electrical connection type of main circuit	Screw connection
Isolation	300 V AC (between the auxiliary contacts) 500 V AC (between auxiliary contacts and main contacts)
Number of operations per hour - max	60
Handle type	Rocker lever
Utilization category	A (IEC/EN 60947-2)
Overvoltage category	III
Pollution degree	3
Lifespan, electrical	2000 operations at 400 V AC-3 2000 operations at 415 V AC-3 2000 operations at 690 V AC-3 5000 operations at 400 V AC-1 3000 operations at 690 V AC-1
Direction of incoming supply	As required
Mounting Method	Fixed Built-in device fixed built-in technique
Degree of protection	IP20 (basic degree of protection, in the operating controls area) IP20
Degree of protection (IP), front side	IP40 (with insulating surround) IP66 (with door coupling rotary handle)
Degree of protection (terminations)	IP00 (terminations, phase isolator and strip terminal) IP10 (tunnel terminal)
Protection against direct contact	Finger and back-of-hand proof to VDE 0106 part 100
Shock resistance	20 g (half-sinusoidal shock 20 ms)
Switch off technique	Electronic
Climatic proofing	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
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 Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. Rated current = rated uninterrupted current: 250 A
Lifespan, mechanical	15000 operations
Standard terminals	Screw terminal
Terminal capacity (copper busbar)	M10 at rear-side screw connection
Rated operational current for specified heat dissipation (In)	250 A
Equipment heat dissipation, current-dependent	18.75 W
Ambient operating temperature - min	-25 °C
Ambient operating temperature - max	70 °C

Ambient storage temperature - min			40 °C
Ambient storage temperature - max			70 °C
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 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.
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.
Functions			Phase failure sensitive Motor protection Current limiting circuit breaker

Technical data ETIM 8.0

Low-voltage industrial components (EG000017) / Motor protection circuit-breaker (EC000074)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Motor protection circuit-breaker (ecl@ss10.0.1-27-37-04-01 [AGZ529016])

Overload release current setting		A	175 - 350
Adjustment range undelayed short-circuit release		A	500 - 4,500
With thermal protection			Yes
Phase failure sensitive			Yes
Switch off technique			Electronic
Rated operating voltage		V	690 - 690
Rated permanent current Iu		A	250
Rated operation power at AC-3, 230 V		kW	110
Rated operation power at AC-3, 400 V		kW	200
Type of electrical connection of main circuit			Screw connection
Type of control element			Rocker lever
Device construction			Built-in device fixed built-in technique
With integrated auxiliary switch			No
With integrated under voltage release			No
Number of poles			3
Rated short-circuit breaking capacity Icu at 400 V, AC		kA	130
Degree of protection (IP)			IP20
Height		mm	275
Width		mm	140
Depth		mm	166