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Eaton 259113

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 250A, NZMN3-AE250

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PRODUCT NAME	Eaton Moeller series NZM molded case circuit breaker electronic
CATALOG NUMBER	259113
PRODUCT LENGTH/DEPTH	166 mm
PRODUCT HEIGHT	275 mm
PRODUCT WIDTH	140 mm
PRODUCT WEIGHT	6.911 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC/EN 60947 IEC

AMPERAGE RATING	250 A
VOLTAGE RATING	690 V - 690 V
CIRCUIT BREAKER FRAME TYPE	NZM3
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.

	eaton-circuit-breaker-nzm-mccb-characteristic-curve-034.eps
CHARACTERISTIC CURVE	eaton-circuit-breaker-nzm-mccb-characteristic-curve-031.eps
	eaton-circuit-breaker-tripping-characteristic-nzm-mccb-characteristic-curve.eps
□□□□□	eaton-circuit-breaker-basic-device-nzmn-b-il01208009z.pdf
□□	eaton-circuit-breaker-switch-nzm-mccb-dimensions-016.eps
	eaton-circuit-breaker-nzm-mccb-dimensions-020.eps

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
LIFESPAN, MECHANICAL	15000 operations
UTILIZATION CATEGORY	A (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	18.75 W
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
NUMBER OF AUXILIARY	0

CONTACTS (CHANGE-OVER CONTACTS)	
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
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)	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 Max. 10 segments of 32 mm x 1 mm + 5 segments of 32 mm x 1 mm at rear-side connection (punched) Min. 6 segments of 16 mm x 0.8 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	2000 operations at 690 V AC-3 5000 operations at 415 V AC-1 3000 operations at 690 V

	AC-1 5000 operations at 400 V AC-1 2000 operations at 415 V AC-3 2000 operations at 400 V AC-3
FUNCTIONS	System and cable protection
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 I_{cn}) • R.m.s. value measurement and "thermal memory" • Rated current = rated uninterrupted current: 250 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)
POSITION OF CONNECTION FOR MAIN CURRENT CIRCUIT	Front side
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	250 A
RELEASE SYSTEM	Electronic release
SHORT-CIRCUIT TOTAL BREAKTIME	< 10 ms
RATED SHORT-TIME WITHSTAND CURRENT (T = 0.3 S)	3.3 kA
RATED SHORT-TIME WITHSTAND CURRENT (T	3.3 kA

= 1 S)

**SHORT-CIRCUIT RELEASE
NON-DELAYED SETTING -
MAX** 2750 A

**SHORT-CIRCUIT RELEASE
NON-DELAYED SETTING -
MIN** 500 A

**TERMINAL CAPACITY
(CONTROL CABLE)** 0.75 mm² - 1.5 mm² (2x)
0.75 mm² - 2.5 mm² (1x)

**TERMINAL CAPACITY
(COPPER BUSBAR)** M10 at rear-side screw
connection
Min. 20 mm x 5 mm direct
at switch rear-side
connection
Max. 30 mm x 10 mm + 30
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)** 300 mm² (2x) at rear-side
width extension
16 mm² (2x) direct at
switch rear-side
connection
16 mm² (1x) at tunnel
terminal
16 mm² (1x) direct at
switch rear-side
connection
16 mm² (2x) at box
terminal

**TERMINAL CAPACITY
(ALUMINUM SOLID
CONDUCTOR/CABLE)** 16 mm² (1x) at tunnel
terminal
10 mm² - 16 mm² (2x)
direct at switch rear-side
connection
16 mm² (1x) direct at
switch rear-side
connection

**TERMINAL CAPACITY
(COPPER STRANDED
CONDUCTOR/CABLE)** 16 mm² - 185 mm² (1x) at
1-hole tunnel terminal
35 mm² - 240 mm² (1x) at
box terminal
25 mm² - 240 mm² (1x)
direct at switch rear-side
connection
25 mm² - 120 mm² (2x) at
box terminal
25 mm² - 240 mm² (2x)
direct at switch rear-side
connection
50 mm² - 240 mm² (2x) at
2-hole tunnel terminal

**TERMINAL CAPACITY
(ALUMINUM STRANDED)** 25 mm² - 120 mm² (1x)
direct at switch rear-side

CONDUCTOR/CABLE)	connection 50 mm ² - 240 mm ² (2x) at 2-hole tunnel terminal 25 mm ² - 120 mm ² (2x) direct at switch rear-side connection 50 mm ² - 240 mm ² (1x) at 2-hole tunnel terminal 25 mm ² - 185 mm ² (1x) at tunnel terminal
HANDLE TYPE	Rocker lever
INSTANTANEOUS CURRENT SETTING (II) - MAX	2750 A
INSTANTANEOUS CURRENT SETTING (II) - MIN	500 A
NUMBER OF OPERATIONS PER HOUR - MAX	60
OVERLOAD CURRENT SETTING (IR) - MAX	250 A
OVERLOAD CURRENT SETTING (IR) - MIN	125 A
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 230 V, 50/60 HZ	85 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	35 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 525 V, 50/60 HZ	13 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 690 V, 50/60 HZ	5 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	40 kA

MAKING CAPACITY ICM AT 690 V, 50/60 HZ	
STANDARD TERMINALS	Screw terminal
OPTIONAL TERMINALS	Box terminal. Connection on rear. Tunnel terminal
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 240 V, 50/60 HZ	187 kA
RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT AUXILIARY CONTACTS	6000 V
RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT MAIN CONTACTS	8000 V
RATED INSULATION VOLTAGE (UI)	1000 V AC

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