

Specifications

Photo is representative

Eaton 110894

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 250A, H3-AE250-T

General specifications

PRODUCT NAME	Eaton Moeller series NZM molded case circuit breaker electronic
CATALOG NUMBER	110894
MODEL CODE	NZMH3-AE250-T
EAN	4015081104239
PRODUCT LENGTH/DEPTH	166 mm
PRODUCT HEIGHT	275 mm
PRODUCT WIDTH	140 mm
PRODUCT WEIGHT	6.92 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC IEC/EN 60947
GLOBAL CATALOG	110894

Product specifications

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

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](#)

[eaton-circuit-breaker-nzm-mccb-characteristic-curve-030.eps](#)

CHARACTERISTIC CURVE

[eaton-circuit-breaker-tripping-characteristic-nzm-mccb-characteristic-curve.eps](#)

[eaton-circuit-breaker-nzm-mccb-characteristic-curve-034.eps](#)

DECLARATIONS OF CONFORMITY

[eaton-molded-case-circuit-breaker-declaration-of-conformity-eu250293en.pdf](#)

[eaton-circuit-breaker-nzm-mccb-dimensions-020.eps](#)

DRAWINGS

[eaton-circuit-breaker-switch-nzm-mccb-dimensions-016.eps](#)

[eaton-circuit-breaker-switch-nzm-mccb-3d-drawing-002.eps](#)

INSTALLATION VIDEOS

[Introduction of the new digital circuit breaker NZM](#)

[The new digital NZM Range](#)

MCAD MODEL

[DA-CD-nzm3_3p](#)

[DA-CS-nzm3_3p](#)

PEP ECO-PASSPORT

[eaton-molded-case-switches-pep-eato-00202-v0101-en.pdf](#)

TECHNICAL DATA SHEETS

[eaton-nzm-technical-information-sheet](#)

	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.
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	18.75 W
UTILIZATION CATEGORY	A (IEC/EN 60947-2)
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	70 °C

TEMPERATURE - MAX	
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)	0
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 IP20 (basic degree of protection, in the operating controls area)
DIRECTION OF INCOMING SUPPLY	As required
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
LIFESPAN, MECHANICAL	15000 operations
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)	10 segments of 50 mm x 1 mm (2x) at rear-side width extension 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 Max. 10 segments of 24 mm x 1 mm + 5 segments of 24 mm x 1 mm

	Min. 6 segments of 16 mm x 0.8 mm at rear-side connection (punched)
LIFESPAN, ELECTRICAL	2000 operations at 415 V AC-3 5000 operations at 415 V AC-1 2000 operations at 400 V AC-3 2000 operations at 690 V AC-3 3000 operations at 690 V AC-1 5000 operations at 400 V AC-1
FUNCTIONS	System and cable protection Integrated earth fault protection
TYPE	Circuit breaker
SPECIAL FEATURES	<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}) • R.m.s. value measurement and "thermal memory" • Earth-fault release: Not dependent on mains and control voltages • $I_g = 0.35 - 0.4 - 0.5 - 0.6 - 0.7 - 0.8 - 0.9 - 1.0 \times I_n$ • $t_g = 0 - 20 - 60 - 100 - 200 - 300 - 500 - 750 - 1000 \text{ ms}$ • Rated current = rated uninterrupted current: 250 A • Terminal capacity hint: Up to 240 mm^2 can be connected depending on the

cable manufacturer.	
APPLICATION	Use in unearthing 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 = 1 S)	3.3 kA
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MAX	2750 A
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MIN	500 A
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 Min. 20 mm x 5 mm direct at switch rear-side connection Max. 10 mm x 50 mm (2x) at rear-side width extension M10 at rear-side screw connection
TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE)	16 mm ² (1x) at tunnel terminal 16 mm ² (1x) direct at switch rear-side connection 300 mm ² (2x) at rear-side width extension 16 mm ² (2x) at box terminal

	16 mm ² (2x) direct at switch rear-side connection
TERMINAL CAPACITY (ALUMINUM SOLID CONDUCTOR/CABLE)	16 mm ² (1x) at tunnel terminal
TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)	<p>35 mm² - 240 mm² (1x) at box terminal</p> <p>16 mm² - 185 mm² (1x) at 1-hole tunnel terminal</p> <p>25 mm² - 240 mm² (2x) direct at switch rear-side connection</p> <p>25 mm² - 120 mm² (2x) at box terminal</p> <p>25 mm² - 240 mm² (1x) direct at switch rear-side connection</p>
TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)	<p>50 mm² - 240 mm² (2x) at 2-hole tunnel terminal</p> <p>25 mm² - 185 mm² (1x) at tunnel terminal</p> <p>50 mm² - 240 mm² (1x) at 2-hole tunnel terminal</p>
HANDLE TYPE	Rocker lever
SHORT DELAY CURRENT SETTING (ISD) - MAX	0 A
SHORT DELAY CURRENT SETTING (ISD) - MIN	0 A
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	150 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 400/415 V, 50/60 HZ	150 kA
RATED SHORT-CIRCUIT	130 kA

BREAKING CAPACITY ICS**(IEC/EN 60947) AT 440 V,****50/60 HZ****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**

330 kA

AT 400/415 V, 50/60 HZ**RATED SHORT-CIRCUIT****MAKING CAPACITY ICM**

286 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**

74 kA

AT 690 V, 50/60 HZ**STANDARD TERMINALS**

Screw terminal

OPTIONAL TERMINALSBox terminal. Connection
on rear. Tunnel terminal**RATED SHORT-CIRCUIT****MAKING CAPACITY ICM**

330 kA

AT 240 V, 50/60 HZ**RATED IMPULSE****WITHSTAND VOLTAGE**

6000 V

(UIMP) AT AUXILIARY**CONTACTS****RATED IMPULSE****WITHSTAND VOLTAGE**

8000 V

(UIMP) AT MAIN**CONTACTS****RATED INSULATION**

1000 V AC

VOLTAGE (UI)

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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