

Specifications



Photo is representative



Eaton 265772

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 1600A, N, frame 4, VE1600

General specifications

PRODUCT NAME	Eaton Moeller series NZM molded case circuit breaker electronic
CATALOG NUMBER	265772
MODEL CODE	NZMN4-VE1600
EAN	4015082657727
PRODUCT LENGTH/DEPTH	401 mm
PRODUCT HEIGHT	207 mm
PRODUCT WIDTH	210 mm
PRODUCT WEIGHT	17.28 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC/EN 60947 IEC
GLOBAL CATALOG	265772

Product specifications

AMPERAGE RATING	1600 A
VOLTAGE RATING	690 V - 690 V
CIRCUIT BREAKER FRAME TYPE	NZM4
FEATURES	Protection unit Motor drive optional
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.

Resources

BROCHURES	eaton-digital-nzm-brochure-br013003en-en-us.pdf
CATALOGS	eaton-digital-nzm-catalog-ca013003en-en-us.pdf
CHARACTERISTIC CURVE	eaton-circuit-breaker-nzm-mccb-characteristic-curve-049.eps
	eaton-circuit-breaker-nzm-mccb-characteristic-curve-048.eps
DECLARATIONS OF CONFORMITY	eaton-molded-case-circuit-breaker-declaration-of-conformity-eu250294en.pdf
DRAWINGS	eaton-circuit-breaker-nzm-mccb-dimensions-022.eps
ECAD MODEL	ETN.265772.edz
INSTALLATION INSTRUCTIONS	eaton-circuit-breaker-basic-unit-nzmn4-il01210010z.pdf
INSTALLATION VIDEOS	The new digital NZM Range
	Introduction of the new digital circuit breaker NZM
MCAD MODEL	DA-CS-nzm4_3p
	DA-CD-nzm4_3p
PEP ECO-PASSPORT	eaton-molded-case-switches-pep-eato-00221-v0101-en.pdf
TECHNICAL DATA SHEETS	eaton-nzm-technical-information-sheet

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	284 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
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	10000 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 1-hole module plate 10 segments of 80 mm x 1 mm (2x) at rear-side width extension Max. 10 segments of 50 mm x 1 mm (2x) at rear-side connection (punched) 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 Max. 10 segments of 32 mm x 1 mm (2x) at flat conductor terminal
LIFESPAN, ELECTRICAL	3000 operations at 415 V AC-1 2000 operations at 415 V AC-3 2000 operations at 690 V AC-1 3000 operations at 400 V

AC-1 1000 operations at 690 V	
AC-3 2000 operations at 400 V	
AC-3	
FUNCTIONS	Systems, cable, selectivity and generator 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" • Adjustable time delay setting to overcome current peaks t_r at $6 \times I_r$ also infinity (without overload releases) • Adjustable delay time t_{sd} • i^2t constant function: switchable • Rated current = rated uninterrupted current: 1600 A
APPLICATION	Use in unearthing supply systems at 525 V
SHOCK RESISTANCE	15 g (half-sinusoidal shock 11 ms)
POSITION OF CONNECTION FOR MAIN CURRENT CIRCUIT	Front side
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	1600 A
RELEASE SYSTEM	Electronic release
SHORT-CIRCUIT TOTAL BREAKTIME	< 25 ms (≤ 415 V); < 35 ms (> 415 V)
RATED SHORT-TIME WITHSTAND CURRENT (T_W)	19.2 kA

= 0.3 S)

RATED SHORT-TIME

WITHSTAND CURRENT (T = 1 S) 19.2 kA

**SHORT-CIRCUIT RELEASE
DELAYED SETTING - MAX**

16000 A

**SHORT-CIRCUIT RELEASE
DELAYED SETTING - MIN**

1600 A

SHORT-CIRCUIT RELEASE

NON-DELAYED SETTING - MAX 19200 A

SHORT-CIRCUIT RELEASE

NON-DELAYED SETTING - MIN 3200 A

**TERMINAL CAPACITY
(CONTROL CABLE)**

0.75 mm² - 1.5 mm² (2x)
0.75 mm² - 2.5 mm² (1x)

Min. 25 mm x 5 mm at
rear-side 1-hole module
plate
M10 at rear-side screw
connection
Max. 50 mm x 10 mm (2x)
at rear-side 1-hole module
plate
Max. 50 mm x 10 mm (2x)
direct at switch rear-side
connection
Min. 60 mm x 10 mm at
rear-side width extension
50 mm x 10 mm (2x) at
rear-side 2-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

**TERMINAL CAPACITY
(COPPER BUSBAR)**

120 mm² - 300 mm² (1x) at
rear-side 1-hole module
plate

95 mm² - 185 mm² (2x) at
rear-side 2-hole module
plate

35 mm² - 185 mm² (4x) at
rear-side 2-hole module
plate

50 mm² - 240 mm² (4x) at
4-hole tunnel terminal

300 mm² (4x) at rear-side
width extension

95 mm² - 240 mm² (6x) at
rear-side width extension

95 mm² - 300 mm² (2x) at
rear-side 1-hole module
plate

**TERMINAL CAPACITY
(COPPER SOLID
CONDUCTOR/CABLE)**

TERMINAL CAPACITY (ALUMINUM SOLID CONDUCTOR/CABLE)	240 mm ² (2x) at rear-side width extension 50 mm ² (4x) at rear-side 2-hole module plate 70 mm ² - 185 mm ² (2x) at rear-side 1-hole module plate 70 mm ² - 240 mm ² (6x) at rear-side width extension 185 mm ² - 240 mm ² (1x) at rear-side 1-hole module plate
TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)	120 mm ² - 185 mm ² (1x) direct at switch rear-side connection 50 mm ² - 185 mm ² (4x) direct at switch rear-side connection
TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)	50 mm ² - 240 mm ² (4x) at 4-hole tunnel terminal
HANDLE TYPE	Rocker lever
SHORT DELAY CURRENT SETTING (ISD) - MAX	16000 A
SHORT DELAY CURRENT SETTING (ISD) - MIN	1600 A
INSTANTANEOUS CURRENT SETTING (II) - MAX	19200 A
INSTANTANEOUS CURRENT SETTING (II) - MIN	3200 A
NUMBER OF OPERATIONS PER HOUR - MAX	60
OVERLOAD CURRENT SETTING (IR) - MAX	1600 A
OVERLOAD CURRENT SETTING (IR) - MIN	800 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	37 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,	19 kA

50/60 Hz

**RATED SHORT-CIRCUIT
BREAKING CAPACITY ICS
(IEC/EN 60947) AT 690 V,
50/60 Hz**

15 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

STANDARD TERMINALS

Screw terminal

OPTIONAL TERMINALS

Connection on rear. Strip
terminal. Tunnel terminal

**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

**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 230 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 INSULATION
VOLTAGE (UI)**

1000 V AC

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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