

Specifications



Photo is representative



Eaton 113011

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 4p, 125A, box terminals, B, 2

General specifications

PRODUCT NAME	Eaton Moeller series NZM molded case circuit breaker thermo-magnetic
CATALOG NUMBER	113011
MODEL CODE	NZMB2-4-AF125-BT-NA
EAN	4015081125517
PRODUCT LENGTH/DEPTH	149 mm
PRODUCT HEIGHT	206 mm
PRODUCT WIDTH	140 mm
PRODUCT WEIGHT	3.755 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	UL/CSA IEC/EN 60947 IEC IEC 60947-2 Specially designed for North America CSA-C22.2 No. 5-09 UL (Category Control Number DIVQ) CE marking UL listed UL 489 UL (File No. E31593)
GLOBAL CATALOG	113011

Product specifications

AMPERAGE RATING	125 A
VOLTAGE RATING	440 V - 440 V
CIRCUIT BREAKER FRAME TYPE	NZM2
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-050.eps](#)

CHARACTERISTIC CURVE

[eaton-circuit-breaker-current-nzm-mccb-characteristic-curve-003.eps](#)

[eaton-circuit-breaker-nzm-mccb-characteristic-curve-038.eps](#)

DECLARATIONS OF CONFORMITY

[eaton-molded-case-circuit-breaker-declaration-of-conformity-eu250290en.pdf](#)

[eaton-circuit-breaker-switch-nzm-mccb-dimensions-017.eps](#)

DRAWINGS

[eaton-circuit-breaker-nzm-mccb-dimensions-035.eps](#)

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

ECAD MODEL

[ETN.113011.edz](#)

INSTALLATION INSTRUCTIONS

[eaton-circuit-breakers-basic-device-nzm2-il01206006z.pdf](#)

INSTALLATION VIDEOS

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

[The new digital NZM Range](#)

MCAD MODEL

[DA-CS-nzm2_4p](#)

[DA-CD-nzm2_4p](#)

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 DIN rail (top hat rail) mounting optional
CLIMATIC PROOFING	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	27.61 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	-25 °C

TEMPERATURE - MIN	
AMBIENT STORAGE TEMPERATURE - MAX	70 °C
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
LOW-VOLTAGE HBC FUSE - MAX	355 A gG/gL
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 (basic degree of protection, in the operating controls area) IP20
DIRECTION OF INCOMING SUPPLY	As required
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Frame clamp
CURRENT RATING OF NEUTRAL CONDUCTOR	200% of phase conductor
LIFESPAN, MECHANICAL	20000 operations
OVERVOLTAGE CATEGORY	III
RATED OPERATIONAL CURRENT	125 A (660-690 V AC-3, making and breaking capacity) 300 A (415 V AC-1, making and breaking capacity) 300 A (380/400 V AC-1, making and breaking capacity)
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	Four-pole

TERMINAL CAPACITY (COPPER STRIP)	<p>Min. 2 segments of 16 mm x 0.8 mm at rear-side connection (punched)</p> <p>Min. 2 segments of 9 mm x 0.8 mm at box terminal</p> <p>Max. 10 segments of 16 mm x 0.8 mm at rear-side connection (punched)</p> <p>Max. 10 segments of 16 mm x 0.8 mm at box terminal</p>
LIFESPAN, ELECTRICAL	<p>10000 operations at 415 V AC-1</p> <p>7500 operations at 400 V AC-1</p> <p>6500 operations at 415 V AC-3</p>
FUNCTIONS	<p>Current limiting circuit breaker</p> <p>System and cable protection</p>
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}) • Rated current = rated uninterrupted current: 125 A • Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. • Fixed overload releases I_r
APPLICATION	<ul style="list-style-type: none"> • Branch circuits, feeder circuits • Use in unearthing

	supply systems at 440 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)	125 A
POWER LOSS	27.6 W
RELEASE SYSTEM	Thermomagnetic release
SHORT-CIRCUIT TOTAL BREAKTIME	< 10 ms
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MAX	1250 A
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MIN	750 A
TERMINAL CAPACITY (CONTROL CABLE)	14 mm ² - 18 mm ² (1x) 16 mm ² - 18 mm ² (2x)
	Min. 16 mm x 5 mm direct at switch rear-side connection
TERMINAL CAPACITY (COPPER BUSBAR)	M8 at rear-side screw connection Max. 20 mm x 5 mm direct at switch rear-side connection
TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE)	6 mm ² - 11 mm ² (1x) direct at switch rear-side connection 16 mm ² (1x) at tunnel terminal 6 mm ² - 12 mm ² (1x) at box terminal
TERMINAL CAPACITY (ALUMINUM SOLID CONDUCTOR/CABLE)	16 mm ² (1x) at tunnel terminal
TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)	4 mm ² - 350 mm ² (1x) at box terminal 4 mm ² - 3/0 mm ² (1x) direct at switch rear-side connection 4 mm ² - 350 mm ² (1x) at tunnel terminal
HANDLE TYPE	Rocker lever
SHORT DELAY CURRENT	1250 A

SETTING (ISD) - MAX

SHORT DELAY CURRENT 750 A
SETTING (ISD) - MIN

INSTANTANEOUS

CURRENT SETTING (II) - MAX 10 A

INSTANTANEOUS

CURRENT SETTING (II) - MIN 6 A

NUMBER OF

OPERATIONS PER HOUR - MAX 120

OVERLOAD CURRENT 125 A
SETTING (IR) - MAX

OVERLOAD CURRENT 125 A
SETTING (IR) - MIN

OVERLOAD CURRENT 125 A - 125 A
SETTING (IR)

RATED SHORT-CIRCUIT

BREAKING CAPACITY ICS 30 kA
(IEC/EN 60947) AT 230 V,
50/60 Hz

RATED SHORT-CIRCUIT

BREAKING CAPACITY ICS 25 kA
(IEC/EN 60947) AT
400/415 V, 50/60 Hz

RATED SHORT-CIRCUIT

BREAKING CAPACITY ICS 18.5 kA
(IEC/EN 60947) AT 440 V,
50/60 Hz

RATED SHORT-CIRCUIT

MAKING CAPACITY ICM 53 kA
AT 400/415 V, 50/60 Hz

MAKING CAPACITY ICM 53 kA
AT 440 V, 50/60 Hz

STANDARD TERMINALS Box terminal

RATED OPERATING 480 V
VOLTAGE UE (UL) - MAX

RATED SHORT-CIRCUIT
MAKING CAPACITY ICM 63 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 690 V AC
VOLTAGE (UI)

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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