

Specifications



Photo is representative



Eaton 153381

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 4p, 70A, box terminals, B2-4-AF70-BT-NA

General specifications

PRODUCT NAME	Eaton Moeller series NZM molded case circuit breaker thermo-magnetic
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CATALOG NUMBER	153381
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MODEL CODE	NZMB2-4-AF70-BT-NA
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EAN	4015081501519
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PRODUCT LENGTH/DEPTH	149 mm
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PRODUCT HEIGHT	206 mm
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PRODUCT WIDTH	140 mm
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PRODUCT WEIGHT	3.755 kg
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COMPLIANCES	RoHS conform
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CERTIFICATIONS	IEC/EN 60947 UL listed UL (File No. E31593) UL 489 CSA-C22.2 No. 5-09 UL/CSA UL (Category Control Number DIVQ) Specially designed for North America CE marking IEC 60947-2 IEC
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GLOBAL CATALOG	153381
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Powering Business Worldwide

Product specifications

AMPERAGE RATING	70 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-038.eps eaton-circuit-breaker-nzm-mccb-characteristic-curve-050.eps eaton-circuit-breaker-current-nzm-mccb-characteristic-curve-003.eps
CHARACTERISTIC CURVE	eaton-molded-case-circuit-breaker-declaration-of-conformity-eu250290en.pdf
DECLARATIONS OF CONFORMITY	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
INSTALLATION VIDEOS	Introduction of the new digital circuit breaker NZM The new digital NZM Range
MCAD MODEL	nzmb2_4_af100_bt_na.dwg nzmb2_4_af100_bt_na.stp
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	DIN rail (top hat rail) mounting optional 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	15.73 W
UTILIZATION CATEGORY	A (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	-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
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	Four-pole
LIFESPAN, ELECTRICAL	7500 operations at 400 V AC-1
FUNCTIONS	System and cable protection Current limiting circuit breaker
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})
- Rated current = rated uninterrupted current: 70 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

- Branch circuits, feeder circuits
- Use in unearthed 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)

70 A

RELEASE SYSTEM

Thermomagnetic release

SHORT-CIRCUIT TOTAL BREAKTIME

< 10 ms

SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MAX

700 A

SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MIN

420 A

TERMINAL CAPACITY

16 mm² (1x) at tunnel

(ALUMINUM SOLID CONDUCTOR/CABLE)	terminal
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	10 A
INSTANTANEOUS CURRENT SETTING (II) - MIN	6 A
NUMBER OF OPERATIONS PER HOUR - MAX	120
OVERLOAD CURRENT SETTING (IR) - MAX	70 A
OVERLOAD CURRENT SETTING (IR) - MIN	70 A
OVERLOAD CURRENT SETTING (IR)	70 A - 70 A
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 230 V, 50/60 HZ	30 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 400/415 V, 50/60 HZ	25 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 440 V, 50/60 HZ	18.5 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 400/415 V, 50/60 HZ	53 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 440 V, 50/60 HZ	53 kA
STANDARD TERMINALS	Box terminal
RATED OPERATING VOLTAGE UE (UL) - MAX	480 V
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 240 V, 50/60 HZ	63 kA
RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT AUXILIARY	6000 V

CONTACTS	
RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT MAIN CONTACTS	8000 V
RATED INSULATION VOLTAGE (UI)	690 V AC

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



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