Specifications

Photo is representative

Eaton 102681

Eaton Moeller series NZM - Molded Case Circuit Breaker. Molded Case Switch, 3p, 63A

General specifications

PRODUCT NAME	Eaton Moeller series NZM molded case switch
CATALOG NUMBER	102681
MODEL CODE	NS1-63-NA
EAN	4015081025411
PRODUCT LENGTH/DEPTH	88 mm
PRODUCT HEIGHT	145 mm
PRODUCT WIDTH	90 mm
PRODUCT WEIGHT	1.046 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC CE marking UL listed UL/CSA UL (Category Control Number WJAZ) CSA (File No. 22086) UL (File No. E148671) IEC 60947-2 UL 489 CSA-C22.2 No. 5-09 CSA (Class No. 4652-06) CSA certified Specially designed for North America

Powering Business Worldwide

Product specifications

AMPERAGE RATING	63 A
VOLTAGE RATING	690 V - 690 V
CIRCUIT BREAKER FRAME TYPE	N1
FEATURES	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.

Resources

BROCHURES	eaton-feerum-the-whole-grain-solution-success-story-en-us.pdf eaton-digital-nzm-brochure-br013003en-en-us.pdf
CATALOGUES	eaton-digital-nzm-catalog-ca013003en-en-us.pdf
CHARACTERISTIC CURVE	eaton-circuit-breaker-let-through-current-nzm-mccb-characteristic-curve-002.eps eaton-circuit-breaker-nzm-mccb-characteristic-curve.eps
DECLARATIONS OF CONFORMITY	eaton-molded-case-switch-declaration-of-conformity-eu250132en.pdf
DRAWINGS	eaton-circuit-breaker-switch-nzm-mccb-dimensions-014.eps eaton-circuit-breaker-nzm-mccb-dimensions-017.eps eaton-circuit-breaker-switch-nzm-mccb-3d-drawing-006.eps
ECAD MODEL	DA-CE-ETN.NS1-63-NA
INSTALLATION INSTRUCTIONS	eaton-cirucit-breaker-switch-disconnector-nzmb-il01203004z.pdf
INSTALLATION VIDEOS	The new digital NZM Range Introduction of the new digital circuit breaker NZM
MCAD MODEL	DA-CS-nzm1_xsve DA-CD-nzm1_xsve
TECHNICAL DATA SHEETS	eaton-nzm-technical-information-sheet

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 DIN rail (top hat rail) mounting optional Built-in device fixed built-in technique
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	6.69 W
AMBIENT OPERATING TEMPERATURE - MAX	70 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT STORAGE TEMPERATURE - MAX	70 °C
AMBIENT STORAGE TEMPERATURE - MIN	40 °C
RATED CURRENT (IU)	125 A
CURRENT RATING (IU) (UL 489 CSA 22.2 NO. 5.1)	125 A
NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)	0

NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
SWITCH POSITIONS	I, +, 0
DEGREE OF PROTECTION	IP20 In the area of the HMI devices: IP20 (basic protection type)
DIRECTION OF INCOMING SUPPLY	As required
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Frame clamp
LIFESPAN, MECHANICAL	20000 operations
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 band terminal) IP10 (tunnel terminal)
NUMBER OF POLES	Three-pole
TERMINAL CAPACITY (COPPER STRIP)	Min. 2 segments of 9 mm x 0.8 mm at box terminal Max. 9 segments of 9 mm x 0.8 mm at box terminal
LIFESPAN, ELECTRICAL	10000 operations at 415 V AC-1 7500 operations at 690 V AC-1 10000 operations at 400 V AC-1
FUNCTIONS	Disconnectors/main switches
TYPE	Switch-disconnector
SPECIAL FEATURES	• IEC/EN 60947-2: circuit breakers without overcurrent (CBI-X) with main switch characteristics and isolating characteristics to

	IEC/EN 60204. • Rated current = rated uninterrupted current: 63 A • Terminal capacity hint: Up to 95 mm^2 can be connected depending on the cable manufacturer.
APPLICATION	Branch circuits, feeder circuits
POSITION OF CONNECTION FOR MAIN CURRENT CIRCUIT	Front side
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	63 A
POWER LOSS	6.7 W
SHORT-CIRCUIT TOTAL BREAKTIME	< 10 ms
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MAX	1250 A
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MIN	1250 A
TERMINAL CAPACITY (COPPER BUSBAR)	Min. 12 mm x 5 mm direct at switch rear-side connection NA: min. 12 mm x 5 mm direct at switch rear-side connection Max. 16 mm x 5 mm direct at switch rear-side connection M6 at rear-side screw connection NA: max. 16 mm x 5 mm direct at switch rear-side connection NA: M6 at rear-side screw connection
TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE)	10 mm^2 - 16 mm^2 (1x) at box terminal 6 mm^2 - 16 mm^2 (2x) at box terminal NA: 9 - 6 AWG (2x) direct at switch rear-side connection 16 mm^2 (1x) at tunnel

	terminal NA: 12 - 6 AWG (1x) at box terminal NA: 6 AWG (1x) at tunnel terminal NA: 12 - 6 AWG (1x) direct at switch rear-side connection 10 mm^2 - 16 mm^2 (1x) direct at switch rear-side connection 6 mm^2 - 16 mm^2 (2x) direct at switch rear-side connection
TERMINAL CAPACITY (ALUMINUM SOLID CONDUCTOR/CABLE)	10 mm^2 - 16 mm^2 (1x) direct at switch rear-side connection 16 mm^2 (1x) at tunnel terminal 10 mm^2 - 16 mm^2 (2x) direct at switch rear-side connection
TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)	NA: 4 - 2/0 AWG/kcmil (1x) at box terminal 10 mm^2 - 70 mm^2 (1x) at box terminal NA: 4 - 3/0 AWG/kcmil (1x) at 1-hole tunnel terminal 6 mm^2 - 25 mm^2 (2x) at box terminal 25 mm^2 - 95 mm^2 (1x) at 1-hole tunnel terminal 25 mm^2 (2x) direct at switch rear-side connection 25 mm^2 - 70 mm^2 (1x) direct at switch rear-side connection
TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)	25 mm^2 - 35 mm^2 (1x) direct at switch rear-side connection 25 mm^2 - 95 mm^2 (1x) at 1-hole tunnel terminal 25 mm^2 - 35 mm^2 (2x) direct at switch rear-side connection
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	1250 A

INSTANTANEOUS CURRENT SETTING (II) - MIN	1250 A
NUMBER OF OPERATIONS PER HOUR - MAX	120
OVERLOAD CURRENT SETTING (IR) - MAX	0 A
OVERLOAD CURRENT SETTING (IR) - MIN	0 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	10 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 690 V, 50/60 HZ	7.5 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 MAKING CAPACITY ICM AT 690 V, 50/60 HZ	17 kA
STANDARD TERMINALS	Box terminal
OPTIONAL TERMINALS	Connection on rear. Screw terminal. Tunnel terminal
RATED OPERATING VOLTAGE UE (UL) - MAX	480 Y / 277 V
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	6000 V
RATED INSULATION VOLTAGE (UI)	690 V AC

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

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