

Eaton 102688

Eaton Moeller series NZM - Molded Case Circuit Breaker. Molded Case Switch, 3p, 600A

PRODUCT NAME	Eaton Moeller series NZM molded case switch
CATALOG NUMBER	102688
PRODUCT LENGTH/DEPTH	159 mm
PRODUCT HEIGHT	275 mm
PRODUCT WIDTH	140 mm
PRODUCT WEIGHT	6.34 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	Specially designed for North America UL (Category Control Number WJAZ) CSA certified UL 489 CSA (File No. 22086) UL/CSA IEC 60947-2 CSA-C22.2 No. 5-09 UL listed CE marking UL (File No. E148671) IEC CSA (Class No. 4652-06)

AMPERAGE RATING	600 A
VOLTAGE RATING	690 V - 690 V
CIRCUIT BREAKER FRAME TYPE	N3
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

CHARACTERISTIC CURVE	eaton-circuit-breaker-nzm-mccb-characteristic-curve-028.eps eaton-circuit-breaker-let-through-current-nzm-mccb-characteristic-curve.eps
	eaton-circuit-breaker-basic-device-nzmn-b-il01208009z.pdf eaton-circuit-breaker-nzm-mccb-dimensions-020.eps eaton-circuit-breaker-switch-nzm-mccb-dimensions-016.eps eaton-circuit-breaker-switch-nzm-mccb-3d-drawing-002.eps

	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
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	108 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)	600 A
CURRENT RATING (IU) (UL 489 CSA 22.2 NO. 5.1)	600 A
NUMBER OF AUXILIARY	0

CONTACTS (CHANGE-OVER CONTACTS)	
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	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 band terminal)
NUMBER OF POLES	Three-pole
TERMINAL CAPACITY (COPPER STRIP)	NA: 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. 10 segments of 24 mm x 1 mm + 5 segments of 24 mm x 1 mm NA: max. 10 segments of 32 mm x 1 mm + 5 segments of 32 mm x 1 mm at rear-side connection (punched) 10 segments of 50 mm x 1 mm (2x) at rear-side width extension Min. 6 segments of 16 mm x 0.8 mm at rear-side connection (punched)

	<p>Max. 8 segments of 24 mm x 1 mm (2x) at box terminal</p> <p>Min. 6 segments of 16 mm x 0.8 mm at box terminal</p> <p>NA: min. 6 segments of 16 mm x 0.8 mm at rear-side connection (punched)</p>
LIFESPAN, ELECTRICAL	<p>5000 operations at 400 V AC-1</p> <p>2000 operations at 415 V AC-3</p> <p>2000 operations at 690 V AC-3</p> <p>3000 operations at 415 V AC-1</p> <p>3000 operations at 690 V AC-1</p> <p>2000 operations at 400 V AC-3</p>
FUNCTIONS	Disconnectors/main switches
TYPE	Switch-disconnector
SPECIAL FEATURES	<ul style="list-style-type: none"> • 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: 600 A • Terminal capacity hint: Up to 240 mm² 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)	600 A
SHORT-CIRCUIT TOTAL	< 10 ms

BREAKTIME	
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MAX	6600 A
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MIN	6600 A
TERMINAL CAPACITY (COPPER BUSBAR)	<p>NA: max. 30 mm x 10 mm + 30 mm x 5 mm direct at switch rear-side connection</p> <p>Max. 10 mm x 50 mm (2x) at rear-side width extension</p> <p>NA: min. 20 mm x 5 mm direct at switch rear-side connection</p> <p>Max. 30 mm x 10 mm + 30 mm x 5 mm direct at switch rear-side connection</p> <p>Min. 20 mm x 5 mm direct at switch rear-side connection</p> <p>M10 at rear-side screw connection</p> <p>NA: max. 10 mm x 50 mm (2x) at rear-side width extension</p> <p>NA: M10 at rear-side screw connection</p>
TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE)	<p>300 mm² (2x) at rear-side width extension</p> <p>NA: 500 AWG/kcmil (2x) at rear-side width extension</p> <p>NA: 6 AWG (1x) at tunnel terminal</p> <p>16 mm² (2x) direct at switch rear-side connection</p> <p>16 mm² (2x) at box terminal</p> <p>16 mm² (1x) direct at switch rear-side connection</p>
TERMINAL CAPACITY (ALUMINUM SOLID CONDUCTOR/CABLE)	<p>16 mm² (1x) at tunnel terminal</p> <p>10 mm² - 16 mm² (2x) direct at switch rear-side connection</p> <p>16 mm² (1x) direct at switch rear-side connection</p>
TERMINAL CAPACITY	25 mm ² - 120 mm ² (2x) at

(COPPER STRANDED CONDUCTOR/CABLE)	box terminal NA: 2 - 500 AWG/kcmil (1x) at box terminal 25 mm ² - 240 mm ² (2x) direct at switch rear-side connection 35 mm ² - 240 mm ² (1x) at box terminal 25 mm ² - 185 mm ² (1x) at 1-hole tunnel terminal NA: Max. 500 AWG/kcmil (2x) at 2-hole tunnel terminal 25 mm ² - 240 mm ² (1x) direct at switch rear-side connection NA: Max. 500 AWG/kcmil (1x) at 2-hole tunnel terminal
TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)	25 mm ² - 120 mm ² (2x) direct at switch rear-side connection 25 mm ² - 185 mm ² (1x) at 1-hole tunnel terminal up to 240 mm ² depending on the cable manufacturer. 25 mm ² - 120 mm ² (1x) direct at switch rear-side connection 50 mm ² - 240 mm ² (1x) at 2-hole tunnel terminal 50 mm ² - 240 mm ² (2x) at 2-hole tunnel 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	6600 A
INSTANTANEOUS CURRENT SETTING (II) - MIN	6600 A
NUMBER OF OPERATIONS PER HOUR - MAX	60
OVERLOAD CURRENT SETTING (IR) - MAX	0 A
OVERLOAD CURRENT SETTING (IR) - MIN	0 A
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS	150 kA

(IEC/EN 60947) AT 230 V, 50/60 HZ	
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 400/415 V, 50/60 HZ	150 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 440 V, 50/60 HZ	130 kA
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 AT 400/415 V, 50/60 HZ	330 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 440 V, 50/60 HZ	286 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 525 V, 50/60 HZ	143 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 690 V, 50/60 HZ	74 kA
STANDARD TERMINALS	Screw terminal
OPTIONAL TERMINALS	Box terminal. Connection on rear. Tunnel terminal
RATED OPERATING VOLTAGE UE (UL) - MAX	600 V
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 240 V, 50/60 HZ	330 kA
RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT AUXILIARY CONTACTS	6000 V
RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT MAIN CONTACTS	8000 V
RATED INSULATION VOLTAGE (UI)	1000 V AC

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
:



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