

Specifications



Photo is representative



Eaton 259141

Eaton Moeller series NZM - Molded Case Circuit Breaker. Switch-disconnector 3p, 100A

General specifications

PRODUCT NAME	Eaton Moeller series NZM switch-disconnector
CATALOG NUMBER	259141
MODEL CODE	PN1-100
EAN	4015082591410
PRODUCT LENGTH/DEPTH	88 mm
PRODUCT HEIGHT	145 mm
PRODUCT WIDTH	90 mm
PRODUCT WEIGHT	0.849 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC IEC/EN 60947
GLOBAL CATALOG	259141

Product specifications

AMPERAGE RATING	100 A
VOLTAGE RATING	690 V - 690 V
CIRCUIT BREAKER FRAME TYPE	PN1
FEATURES	Version as emergency stop installation Version as maintenance-/service switch Version as main switch
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-feerum-the-whole-grain-solution-success-story-en-us.pdf eaton-digital-nzm-brochure-br013003en-en-us.pdf
CATALOGS	eaton-digital-nzm-catalog-ca013003en-en-us.pdf
DECLARATIONS OF CONFORMITY	eaton-switch-disconnector-declaration-of-conformity-eu250121en.pdf
DRAWINGS	eaton-circuit-breaker-switch-nzm-mccb-dimensions-014.eps eaton-circuit-breaker-nzm-mccb-dimensions-017.eps
ECAD MODEL	ETN.PN1-100
INSTALLATION INSTRUCTIONS	eaton-circuit-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_3p DA-CD-nzm1_3p
PEP ECO-PASSPORT	eaton-switch-disconnectors-pep-eato-00224-v0101-en.pdf
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	Built-in device fixed built-in technique Distribution board installation Fixed Intermediate mounting Ground mounting
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	11.4 W
ISOLATION	500 V AC (between auxiliary contacts and main contacts) 300 V AC (between the auxiliary contacts)
RATED SHORT-TIME WITHSTAND CURRENT (ICW)	2 kA
DEGREE OF PROTECTION	IP20 (basic protection type, in the area of the HMI devices)

	Other
DIRECTION OF INCOMING SUPPLY	As required
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Frame clamp
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
RATED INSULATION VOLTAGE (UI)	690 V
RATED OPERATING FREQUENCY	50 Hz
RATED OPERATING POWER AT AC-23, 400 V	55 kW
RATED OPERATING POWER AT AC-3, 400 V	0 kW
SWITCH POSITIONS	I, 0
LIFESPAN, MECHANICAL	20000 operations
OVERVOLTAGE CATEGORY	III
RATED OPERATIONAL CURRENT	160 A (415 V AC-22/23A, making and breaking capacity) 160 A (690 V AC-22/23A, making and breaking capacity)
DEGREE OF PROTECTION (IP), FRONT SIDE	IP20 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)	Max. 9 segments of 9 mm x 0.8 mm at box terminal Min. 2 segments of 9 mm x 0.8 mm at box terminal
HANDLE COLOR	Black
LIFESPAN, ELECTRICAL	1000 operations at 400 V AC-23A 7500 operations at 690 V AC-1 10000 operations at 400 V AC-1 10000 operations at 415 V AC-1 1000 operations at 415 V AC-23A 1000 operations at 690 V AC-23A
FUNCTIONS	Disconnectors/main switches Interlockable
TYPE	Switch-disconnector

SPECIAL FEATURES	<ul style="list-style-type: none"> • Main switch characteristics including positive drive to IEC/EN 60204 and VDE 0113. • Isolating characteristics to IEC/EN 60947-3 and VDE 0660. • Busbar tag shroud to VDE 0160 Part 100. • Rated current = rated uninterrupted current: 100 A
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APPLICATION	Use in unearthed supply systems at 690 V
SHOCK RESISTANCE	20 g (half-sinusoidal shock 20 ms)
NUMBER OF SWITCHES	1
RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)	0 kA
RATED CONDITIONAL SHORT-CIRCUIT CURRENT WITH BACK-UP FUSE	80 kA at 690 V 100 gG/gL 100 kA at 400/415 V
RATED CONDITIONAL	100 kA at 400/415 V

SHORT-CIRCUIT CURRENT WITH DOWNSTREAM FUSE	10 kA at 690 V 100 gG/gL
RATED OPERATING VOLTAGE (UE) AT AC - MAX	690 V
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	100 A
RATED PERMANENT CURRENT AT AC-21, 400 V	0 A
RATED PERMANENT CURRENT AT AC-23, 400 V	0 A
RATED SHORT-TIME WITHSTAND CURRENT (T = 0.3 S)	2 kA
RATED SHORT-TIME WITHSTAND CURRENT (T = 1 S)	2 kA
SWITCHING POWER AT 400 V	0 kW
HANDLE TYPE	Rocker lever
NUMBER OF OPERATIONS PER HOUR - MAX	120
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 690 V, 50/60 HZ	2.8 kA
RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT AUXILIARY CONTACTS	6000 V
RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT MAIN CONTACTS	6000 V
STANDARD TERMINALS	Box terminal
OPTIONAL TERMINALS	Connection on rear. Screw terminal. Tunnel terminal
SHORT-CIRCUIT PROTECTIVE DEVICE FUSES - MAX	125 A gL
TERMINAL CAPACITY (COPPER BUSBAR)	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
TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE)	10 mm ² - 16 mm ² (1x) at box terminal 10 mm ² - 16 mm ² (1x)

	<p>direct at switch rear-side connection 6 mm² - 16 mm² (2x) at box terminal 6 mm² - 16 mm² (2x) direct at switch rear-side connection 16 mm² (1x) at tunnel terminal</p>
TERMINAL CAPACITY (ALUMINUM SOLID CONDUCTOR/CABLE)	<p>10 mm² - 16 mm² (2x) direct at switch rear-side connection 10 mm² - 16 mm² (1x) direct at switch rear-side connection 16 mm² (1x) at tunnel terminal</p>
TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)	<p>25 mm² (2x) direct at switch rear-side connection 25 mm² - 70 mm² (1x) direct at switch rear-side connection 6 mm² - 25 mm² (2x) at box terminal 10 mm² - 70 mm² (1x) at box terminal Terminal capacity hint: Up to 95 mm² can be connected depending on the cable manufacturer 25 mm² - 95 mm² (1x) at 1-hole tunnel terminal</p>
TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)	<p>25 mm² - 95 mm² (1x) at 1-hole tunnel terminal</p>

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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