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Eaton 111651

Eaton Moeller series NZM - Molded Case Circuit Breaker. Switch-disconnector 4p 400A terminals

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PRODUCT NAME	Eaton Moeller series NZM switch-disconnector
CATALOG NUMBER	111651
PRODUCT LENGTH/DEPTH	166 mm
PRODUCT HEIGHT	275 mm
PRODUCT WIDTH	185 mm
PRODUCT WEIGHT	6.781 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC/EN 60947 IEC

AMPERAGE RATING	400 A
VOLTAGE RATING	690 V - 690 V
CIRCUIT BREAKER FRAME TYPE	N3
FEATURES	Version as emergency stop installation Version as main switch Version as maintenance-/service switch 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	Does not apply, since the

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[eaton-circuit-breaker-switch-nzm-mccb-dimensions-016.eps](#)

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IMPACT	entire switchgear needs to 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
LIFESPAN, MECHANICAL	15000 operations
MOUNTING METHOD	Ground mounting Fixed Distribution board installation Intermediate mounting Built-in device fixed built-in technique
CLIMATIC PROOFING	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	43.2 W
ISOLATION	300 V AC (between the auxiliary contacts) 500 V AC (between auxiliary contacts and main contacts)
RATED SHORT-TIME WITHSTAND CURRENT (ICW)	12 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)	1000 V
RATED OPERATING FREQUENCY	50 Hz
RATED OPERATING POWER AT AC-23, 400 V	200 kW
RATED OPERATING POWER AT AC-3, 400 V	0 kW
SWITCH POSITIONS	I, +, 0
OVERVOLTAGE CATEGORY	III
RATED OPERATIONAL CURRENT	630 A (690 V AC-22/23A, making and breaking capacity) 630 A (415 V AC-22/23A, making and breaking capacity)
DEGREE OF PROTECTION (IP), FRONT SIDE	IP20 IP66 (with door coupling rotary handle) IP40 (with insulating surround)
DEGREE OF PROTECTION	IP10 (tunnel terminal)

(TERMINATIONS)	IP00 (terminations, phase isolator and band terminal)
NUMBER OF POLES	Four-pole
TERMINAL CAPACITY (COPPER STRIP)	Max. 10 segments of 24 mm x 1 mm + 5 segments of 24 mm x 1 mm Max. 8 segments of 24 mm x 1 mm (2x) at box terminal Min. 6 segments of 16 mm x 0.8 mm at box terminal Min. 6 segments of 16 mm x 0.8 mm at rear-side connection (punched) 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)
HANDLE COLOR	Black
LIFESPAN, ELECTRICAL	3000 operations at 415 V AC-3 3000 operations at 690 V AC-1 5000 operations at 400 V AC-1 5000 operations at 415 V AC-1 3000 operations at 400 V AC-3 2000 operations at 690 V AC-3
FUNCTIONS	Voltage release optional Disconnectors/main switches Interlockable
TYPE	Switch-disconnector

SPECIAL FEATURES	• 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
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uninterrupted
current: 400 A

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 kA at 400/415 V PN3(N3)-400...630: 630 AgGgL
RATED CONDITIONAL SHORT-CIRCUIT CURRENT WITH DOWNSTREAM FUSE	80 kA at 690 V PN3(N3)-400...630: 630 AgGgL 100 kA at 400/415 V
RATED OPERATING VOLTAGE (UE) AT AC - MAX	690 V
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	400 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)	12 kA
RATED SHORT-TIME WITHSTAND CURRENT (T = 1 S)	12 kA
SWITCHING POWER AT 400 V	0 kW
HANDLE TYPE	Rocker lever
NUMBER OF OPERATIONS PER HOUR - MAX	60
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 690 V, 50/60 HZ	25 kA
RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT AUXILIARY CONTACTS	6000 V
RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT MAIN CONTACTS	8000 V

STANDARD TERMINALS	Box terminal
OPTIONAL TERMINALS	Connection on rear. Screw terminal. Tunnel terminal
SHORT-CIRCUIT PROTECTIVE DEVICE FUSES - MAX	630 A gL
TERMINAL CAPACITY (COPPER BUSBAR)	Min. 20 mm x 5 mm direct at switch rear-side connection M10 at rear-side screw connection Max. 10 mm x 50 mm (2x) at rear-side width extension
TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE)	16 mm ² (2x) at box terminal 16 mm ² (2x) direct at switch rear-side connection 300 mm ² (2x) at rear-side width extension 16 mm ² (1x) direct at switch rear-side connection
TERMINAL CAPACITY (ALUMINUM SOLID CONDUCTOR/CABLE)	16 mm ² (1x) at tunnel terminal 10 mm ² - 16 mm ² (2x) direct at switch rear-side connection 16 mm ² (1x) direct at switch rear-side connection
TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)	35 mm ² - 240 mm ² (1x) at box terminal 50 mm ² - 240 mm ² (1x) at 2-hole tunnel terminal 25 mm ² - 120 mm ² (1x) direct at switch rear-side connection 50 mm ² - 240 mm ² (2x) at 2-hole tunnel terminal 25 mm ² - 120 mm ² (2x) at box terminal 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
TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)	25 mm ² - 185 mm ² (1x) at 1-hole tunnel terminal up to 240 mm ² depending on the cable manufacturer.

