

Specifications



Photo is representative



Eaton 109678

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 400A, S400

General specifications

PRODUCT NAME	Eaton Moeller series NZM molded case circuit breaker magnetic
CATALOG NUMBER	109678
MODEL CODE	NZMC3-S400
EAN	4015081092642
PRODUCT LENGTH/DEPTH	166 mm
PRODUCT HEIGHT	275 mm
PRODUCT WIDTH	140 mm
PRODUCT WEIGHT	5.8 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC IEC/EN 60947



Powering Business Worldwide

Product specifications

AMPERAGE RATING	400 A
VOLTAGE RATING	690 V - 690 V
CIRCUIT BREAKER FRAME TYPE	NZM3
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.
10.2.7 INSCRIPTIONS	Meets the product

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-nzm-mccb-characteristic-curve-035.eps
DECLARATIONS OF CONFORMITY	eaton-molded-case-circuit-breaker-declaration-of-conformity-eu250292en.pdf
DRAWINGS	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
INSTALLATION VIDEOS	Introduction of the new digital circuit breaker NZM The new digital NZM Range
MCAD MODEL	DA-CS-nzm3_3p DA-CD-nzm3_3p
PEP ECO-PASSPORT	eaton-molded-case-switches-pep-eato-00184-v0101-en.pdf
TECHNICAL DATA SHEETS	eaton-nzm-technical-information-sheet

	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 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	72.48 W
UTILIZATION CATEGORY	A (IEC/EN 60947-2)
ISOLATION	300 V AC (between the auxiliary contacts) 500 V AC (between auxiliary contacts and main contacts)
DEGREE OF PROTECTION	IP20 (basic degree of protection, in the operating controls area) IP20
DIRECTION OF INCOMING SUPPLY	As required
ELECTRICAL	Screw connection

CONNECTION TYPE OF MAIN CIRCUIT	
LIFESPAN, MECHANICAL	15000 operations
OVERVOLTAGE CATEGORY	III
RATED OPERATIONAL CURRENT	349 A (400 V AC-3, making and breaking capacity)
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	Three-pole
TERMINAL CAPACITY (COPPER STRIP)	Max. 10 segments of 32 mm x 1 mm + 5 segments of 32 mm x 1 mm at rear-side connection (punched)
	Min. 6 segments of 16 mm x 0.8 mm at box terminal
	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)
	Max. 10 segments of 24 mm x 1 mm + 5 segments of 24 mm x 1 mm
LIFESPAN, ELECTRICAL	Max. 8 segments of 24 mm x 1 mm (2x) at box terminal
	2000 operations at 400 V AC-3
	2000 operations at 415 V AC-3
	3000 operations at 690 V AC-1
	5000 operations at 400 V AC-1
FUNCTIONS	2000 operations at 690 V AC-3
	Short-circuit protection
TYPE	Circuit breaker
SPECIAL FEATURES	<ul style="list-style-type: none"> Maximum back-up fuse, if the expected short-circuit currents at the installation

	<p>location exceed the switching capacity of the circuit breaker (Rated short-circuit breaking capacity I_{cn})</p> <ul style="list-style-type: none"> • Motor protection in conjunction with overload relay • With short-circuit release • Without overload release I_r • IEC/EN 60947-4-1, IEC/EN 60947-2 • The circuit-breaker fulfills all requirements for AC-3 switching category. • Rated current = rated uninterrupted current: 400 A • Terminal capacity hint: Up to 240 mm² can be connected depending on the cable manufacturer.
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APPLICATION	Use in unearthed supply systems at 690 V
SHOCK RESISTANCE	20 g (half-sinusoidal shock 20 ms)
RELEASE SYSTEM	Thermomagnetic release
SHORT-CIRCUIT TOTAL BREAKTIME	< 10 ms
TERMINAL CAPACITY (CONTROL CABLE)	0.75 mm ² - 1.5 mm ² (2x) 0.75 mm ² - 2.5 mm ² (1x)
TERMINAL CAPACITY (COPPER BUSBAR)	Min. 20 mm x 5 mm direct at switch rear-side connection Max. 10 mm x 50 mm (2x) at rear-side width extension Max. 30 mm x 10 mm + 30 mm x 5 mm direct at switch rear-side connection M10 at rear-side screw connection

**TERMINAL CAPACITY
(COPPER SOLID
CONDUCTOR/CABLE)**

16 mm² (2x) at box
terminal
300 mm² (2x) at rear-side
width extension
16 mm² (1x) at tunnel
terminal
16 mm² (2x) direct at
switch rear-side
connection
16 mm² (1x) direct at
switch rear-side
connection

**TERMINAL CAPACITY
(COPPER STRANDED
CONDUCTOR/CABLE)**

16 mm² - 185 mm² (1x) at
1-hole tunnel terminal
25 mm² - 240 mm² (2x)
direct at switch rear-side
connection
35 mm² - 240 mm² (1x) at
box terminal
25 mm² - 120 mm² (2x) at
box terminal
25 mm² - 240 mm² (1x)
direct at switch rear-side
connection

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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