

Specifications



Photo is representative

Eaton 113568

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 400A, withdrawable unit, H3-S400-AVE

General specifications

PRODUCT NAME	Eaton Moeller series NZM molded case circuit breaker magnetic
CATALOG NUMBER	113568
MODEL CODE	NZMH3-S400-AVE
EAN	4015081130931
PRODUCT LENGTH/DEPTH	346 mm
PRODUCT HEIGHT	260 mm
PRODUCT WIDTH	185 mm
PRODUCT WEIGHT	10 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC/EN 60947 IEC

Product specifications

AMPERAGE RATING	400 A
VOLTAGE RATING	690 V - 690 V
CIRCUIT BREAKER FRAME TYPE	NZM3
ACCESSORIES REQUIRED	NZM3-XAVS
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 standard's requirements.

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-033.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-nzm-switch-disconnector-3d-drawing-004.eps
INSTALLATION VIDEOS	Introduction of the new digital circuit breaker NZM The new digital NZM Range
MCAD MODEL	DA-CS-nzm3_xave DA-CD-nzm3_xave
PEP ECO-PASSPORT	eaton-molded-case-switches-pep-eato-00250-v0101-en.pdf
TECHNICAL DATA SHEETS	eaton-nzm-technical-information-sheet

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	Withdrawable Built-in device slide-in technique (withdrawable)
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)
AMBIENT OPERATING TEMPERATURE - MAX	70 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT STORAGE TEMPERATURE - MAX	70 °C
AMBIENT STORAGE TEMPERATURE - MIN	40 °C
PROTECTION AGAINST DIRECT CONTACT	Finger and back-of-hand proof to VDE 0106 part 100

RATED INSULATION VOLTAGE (UI)	1000 V
RATED OPERATING POWER AT AC-3, 230 V	132 kW
RATED OPERATING POWER AT AC-3, 400 V	200 kW
SWITCH OFF TECHNIQUE	Magnetic
DEGREE OF PROTECTION	IP20 (basic degree of protection, in the operating controls area) IP20
DIRECTION OF INCOMING SUPPLY	As required
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
LIFESPAN, MECHANICAL	15000 operations
OVERVOLTAGE CATEGORY	III
RATED OPERATIONAL CURRENT	349 A (400 V AC-3)
DEGREE OF PROTECTION (IP), FRONT SIDE	IP66 (with door coupling rotary handle) IP40 (with insulating surround)
DEGREE OF PROTECTION (TERMINATIONS)	IP10 (tunnel terminal) IP00 (terminations, phase isolator and strip terminal)
NUMBER OF POLES	Three-pole
TERMINAL CAPACITY (COPPER STRIP)	Max. 8 segments of 24 mm x 1 mm (2x) at box terminal 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 at box terminal 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
LIFESPAN, ELECTRICAL	5000 operations at 415 V AC-1 2000 operations at 400 V AC-3 2000 operations at 690 V

	AC-3 3000 operations at 690 V AC-1 2000 operations at 415 V AC-3 5000 operations at 400 V AC-1
FUNCTIONS	Short-circuit protection
TYPE	Circuit breaker
SPECIAL FEATURES	• Maximum back-up fuse, if the expected short-circuit currents at the installation location exceed the switching capacity of the circuit breaker (Rated short-circuit breaking capacity I_{cn}) • 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.
APPLICATION	Use in unearthed supply systems at 690 V
SHOCK RESISTANCE	20 g (half-sinusoidal shock 20 ms)
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	400 A
RATED SHORT-TIME WITHSTAND CURRENT (T	3.3 kA

= 0.3 S)	
RATED SHORT-TIME WITHSTAND CURRENT (T = 1 S)	3.3 kA
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MAX	5000 A
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MIN	2800 A
HANDLE TYPE	Rocker lever
INSTANTANEOUS CURRENT SETTING (II) - MAX	44328 A
INSTANTANEOUS CURRENT SETTING (II) - MIN	7 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 (IEC/EN 60947) AT 230 V, 50/60 HZ	150 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 400/415 V, 50/60 HZ	130 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
STANDARD TERMINALS	Screw terminal
OPTIONAL TERMINALS	Box terminal. Connection on rear. Tunnel terminal
RELEASE SYSTEM	Thermomagnetic release
SHORT-CIRCUIT TOTAL BREAKTIME	< 10 ms
TERMINAL CAPACITY (ALUMINUM SOLID)	16 mm ² (1x) at tunnel terminal

CONDUCTOR/CABLE)	
TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)	50 mm ² - 240 mm ² (2x) at 2-hole tunnel terminal 50 mm ² - 240 mm ² (1x) at 2-hole tunnel terminal 25 mm ² - 185 mm ² (1x) at tunnel terminal
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)	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 Min. 20 mm x 5 mm direct at switch rear-side connection M10 at rear-side screw connection
TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE)	16 mm ² (2x) at box terminal 300 mm ² (2x) at rear-side width extension 16 mm ² (1x) direct at switch rear-side connection 16 mm ² (1x) at tunnel terminal 16 mm ² (2x) direct at switch rear-side connection
TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)	16 mm ² - 185 mm ² (1x) at 1-hole tunnel terminal 25 mm ² - 240 mm ² (1x) direct at switch rear-side connection 25 mm ² - 120 mm ² (2x) at box terminal 35 mm ² - 240 mm ² (1x) at box terminal 25 mm ² - 240 mm ² (2x) direct at switch rear-side connection
RATED SHORT-CIRCUIT BREAKING CAPACITY ICU (IEC/EN 60947) AT 400/415 V, 50/60 HZ	130 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	143 kA

MAKING CAPACITY ICM AT 525 V, 50/60 HZ	
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 690 V, 50/60 HZ	74 kA
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

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



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