

Specifications



Eaton 115450

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 40A, motor protection

General specifications

PRODUCT NAME	Eaton Moeller series NZM molded case circuit breaker thermo-magnetic
CATALOG NUMBER	115450
MODEL CODE	NZMH1-M40
EAN	4015081151905
PRODUCT LENGTH/DEPTH	88 mm
PRODUCT HEIGHT	145 mm
PRODUCT WIDTH	90 mm
PRODUCT WEIGHT	1.032 kg
WARRANTY	
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC/EN 60947 IEC
GLOBAL CATALOG	115450



Powering Business Worldwide

Product specifications

AMPERAGE RATING	40 A
VOLTAGE RATING	690 V - 690 V
CIRCUIT BREAKER FRAME TYPE	NZM1
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.
10.3 DEGREE OF PROTECTION OF	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
CHARACTERISTIC CURVE	eaton-circuit-breaker-let-through-current-nzm-mccb-characteristic-curve-003.eps eaton-circuit-breaker-nzm-mccb-characteristic-curve-058.eps
DECLARATIONS OF CONFORMITY	eaton-molded-case-circuit-breaker-declaration-of-conformity-eu250289en.pdf
DRAWINGS	eaton-circuit-breaker-nzm-mccb-dimensions-017.eps eaton-circuit-breaker-switch-nzm-mccb-dimensions-014.eps eaton-circuit-breaker-socket-nzm-mccb-3d-drawing.eps eaton-general-ie-ready-dilm-contactor-standards.eps
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-molded-case-switches-pep-eato-00225-v0101-en.pdf
TECHNICAL DATA SHEETS	eaton-nzm-technical-information-sheet

ASSEMBLIES	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.
FITTED WITH:	Thermal protection
POLLUTION DEGREE	3
MOUNTING METHOD	Built-in device fixed built-in technique Fixed
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	13.49 W
UTILIZATION CATEGORY	A (IEC/EN 60947-2)
ISOLATION	500 V AC (between auxiliary contacts and main contacts) 300 V AC (between the auxiliary 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)	690 V
RATED OPERATING POWER AT AC-3, 230 V	11 kW
RATED OPERATING POWER AT AC-3, 400 V	18.5 kW
SWITCH OFF TECHNIQUE	Thermomagnetic
CONNECTION	Front frame clamp
DEGREE OF PROTECTION	IP20 IP20 (basic degree of protection, in the operating controls area)
DIRECTION OF INCOMING SUPPLY	As required
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Other
LIFESPAN, MECHANICAL	20000 operations
OVERVOLTAGE CATEGORY	III
RATED OPERATIONAL CURRENT	36 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)	Min. 2 segments of 9 mm x 0.8 mm at box terminal Max. 9 segments of 9 mm x 0.8 mm at box terminal
LIFESPAN, ELECTRICAL	7500 operations at 415 V AC-3 7500 operations at 690 V AC-1 10000 operations at 400 V AC-1 7500 operations at 400 V AC-3 10000 operations at 415 V AC-1 5000 operations at 690 V AC-3
FUNCTIONS	Motor protection Phase failure sensitive
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})

- Rated current = rated uninterrupted current: 40 A
- Terminal capacity hint: Up to 95 mm² can be connected depending on the cable manufacturer.
- With phase-failure sensitivity
- Tripping class 10 A
- IEC/EN 60947-4-1, IEC/EN 60947-2
- The circuit-breaker fulfills all requirements for AC-3 switching category.

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)	40 A
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MAX	560 A
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MIN	320 A
HANDLE TYPE	Rocker lever
INSTANTANEOUS CURRENT SETTING (II) - MAX	560 A
INSTANTANEOUS CURRENT SETTING (II) - MIN	320 A
NUMBER OF OPERATIONS PER HOUR - MAX	120
OVERLOAD CURRENT	40 A

SETTING (IR) - MAX	
OVERLOAD CURRENT SETTING (IR) - MIN	32 A
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 230 V, 50/60 HZ	100 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 400/415 V, 50/60 HZ	35 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 440 V, 50/60 HZ	35 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 525 V, 50/60 HZ	10 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 690 V, 50/60 HZ	7.5 kA
STANDARD TERMINALS	Box terminal
OPTIONAL TERMINALS	Connection on rear. Screw terminal. Tunnel terminal
RELEASE SYSTEM	Thermomagnetic release
SHORT-CIRCUIT TOTAL BREAKTIME	< 10 ms
TERMINAL CAPACITY (ALUMINUM SOLID CONDUCTOR/CABLE)	16 mm ² (1x) at tunnel terminal
TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)	25 mm ² - 95 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)	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) direct at switch rear-side connection 6 mm ² - 16 mm ² (2x) at box terminal 6 mm ² - 16 mm ² (2x) direct at switch rear-side connection 10 mm ² - 16 mm ² (1x) at

	box terminal 16 mm ² (1x) at tunnel terminal
TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)	10 mm ² - 70 mm ² (1x) at box terminal 6 mm ² - 25 mm ² (2x) at box terminal 25 mm ² (2x) direct at switch rear-side connection 10 mm ² - 70 mm ² (1x) direct at switch rear-side connection 25 mm ² - 95 mm ² (1x) at 1- hole tunnel terminal
RATED SHORT-CIRCUIT BREAKING CAPACITY ICU (IEC/EN 60947) AT 400/415 V, 50/60 HZ	35 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 400/415 V, 50/60 HZ	220 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 440 V, 50/60 HZ	154 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 525 V, 50/60 HZ	40 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 690 V, 50/60 HZ	17 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 240 V, 50/60 HZ	220 kA
RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT AUXILIARY CONTACTS	6000 V
RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT MAIN CONTACTS	6000 V
POWER LOSS	13.5 W

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



Eaton Corporation plc
Eaton House
30 Pembroke Road
Dublin 4, Ireland
Eaton.com

© 2025 Eaton. All Rights Reserved.

Follow us on social media to get the latest product and support information.

