Specifications

Photo is representative

Eaton 119901

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 4p, 630A, withdrawable unit, H3-4-VE630-T-AVE

General specifications	
PRODUCT NAME	Eaton Moeller series NZM molded case circuit breaker electronic
CATALOG NUMBER	119901
MODEL CODE	NZMH3-4-VE630-T-AVE
EAN	4015081177431
PRODUCT LENGTH/DEPTH	260 mm
PRODUCT HEIGHT	346 mm
PRODUCT WIDTH	230 mm
PRODUCT WEIGHT	22.425 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC/EN 60947 IEC
GLOBAL CATALOG	119901

Powering Business Worldwide

Product specifications

AMPERAGE RATING	630 A
VOLTAGE RATING	690 V - 690 V
CIRCUIT BREAKER FRAME TYPE	NZM3
FEATURES	Protection unit Motor drive optional
ACCESSORIES REQUIRED	NZM3-4-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	Does not apply, since the

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.eps eaton-circuit-breaker-nzm-mccb-characteristic-curve-046.eps eaton-circuit-breaker-nzm-mccb-characteristic-curve-057.eps eaton-circuit-breaker-nzm-mccb-characteristic-curve-028.eps
DECLARATIONS OF CONFORMITY	eaton-molded-case-circuit-breaker-declaration-of-conformity-eu250293en.pdf
DRAWINGS	eaton-circuit-breaker-switch-nzm-mccb-dimensions-016.eps eaton-circuit-breaker-nzm-mccb-dimensions-021.eps eaton-circuit-breaker-withdrawable-unit-nzm-mccb-dimensions-002.eps eaton-circuit-breaker-cable-nzm-mccb-3d-drawing-003.eps
INSTALLATION VIDEOS	Introduction of the new digital circuit breaker NZM The new digital NZM Range
MCAD MODEL	DA-CS-nzm3_4_xave DA-CD-nzm3_4_xave
PEP ECO-PASSPORT	eaton-molded-case-switches-pep-eato-00244-v0101-en.pdf

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
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	178.61 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

TECHNICAL DATA SHEETS	eaton-nzm-technical-information-sheet

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
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
CURRENT RATING OF NEUTRAL CONDUCTOR	200% of phase conductor
LIFESPAN, MECHANICAL	15000 operations
OVERVOLTAGE CATEGORY	III
DEGREE OF PROTECTION (IP), FRONT SIDE	IP66 (with door coupling rotary handle) IP40 (with insulating surround)
DEGREE OF PROTECTION (TERMINATIONS)	IP00 (terminations, phase isolator and strip terminal) IP10 (tunnel terminal)
NUMBER OF POLES	Four-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) 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 box terminal Max. 10 segments of 24

	mm x 1 mm + 5 segments of 24 mm x 1 mm Min. 6 segments of 16 mm x 0.8 mm at rear-side connection (punched) Max. 8 segments of 24 mm x 1 mm (2x) at box terminal
LIFESPAN, ELECTRICAL	5000 operations at 400 V AC-1 2000 operations at 415 V AC-3 2000 operations at 690 V AC-3 3000 operations at 690 V AC-1 5000 operations at 415 V AC-1 2000 operations at 400 V AC-3
FUNCTIONS	Earth-fault protection Systems, cable, selectivity and generator protection Integrated earth fault 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 Icn) • R.m.s. value measurement and “thermal memory” • adjustable time delay setting to overcome current peaks tr: 2 – 14 s at 6 x Ir also infinity (without overload releases) • Adjustable delay time tsd: Steps: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms • i^2t constant

	function: switchable • Earth-fault release: Not dependent on mains and control voltages • Ig = 0.35 - 0.4 - 0.5 - 0.6 - 0.7 - 0.8 - 0.9 - 1.0 x In • tg = 0 - 20 - 60 - 100 - 200 - 300 - 500 - 750 - 1000 ms • Rated current = rated uninterrupted current: 630 A • Terminal capacity hint: Up to 240 mm^2 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)
POSITION OF CONNECTION FOR MAIN CURRENT CIRCUIT	Front side
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	630 A
RELEASE SYSTEM	Electronic release
SHORT-CIRCUIT TOTAL BREAKTIME	< 10 ms
RATED SHORT-TIME WITHSTAND CURRENT (T = 0.3 S)	3.3 kA
RATED SHORT-TIME WITHSTAND CURRENT (T = 1 S)	3.3 kA
SHORT-CIRCUIT RELEASE DELAYED SETTING - MAX	4410 A
SHORT-CIRCUIT RELEASE DELAYED SETTING - MIN	472.5 A
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MAX	5040 A
SHORT-CIRCUIT RELEASE	1260 A

NON-DELAYED SETTING - MIN	
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 Min. 20 mm x 5 mm direct at switch rear-side connection 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)	300 mm^2 (2x) at rear-side width extension 16 mm^2 (1x) at tunnel terminal 16 mm^2 (2x) direct at switch rear-side connection 16 mm^2 (1x) direct at switch rear-side connection 16 mm^2 (2x) at box terminal
TERMINAL CAPACITY (ALUMINUM SOLID CONDUCTOR/CABLE)	16 mm^2 (1x) at tunnel terminal
TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)	35 mm^2 - 240 mm^2 (1x) at box terminal 25 mm^2 - 240 mm^2 (1x) direct at switch rear-side connection 16 mm^2 - 185 mm^2 (1x) at 1-hole tunnel terminal 25 mm^2 - 240 mm^2 (2x) direct at switch rear-side connection 25 mm^2 - 120 mm^2 (2x) at box terminal
TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)	50 mm^2 - 240 mm^2 (1x) at 2-hole tunnel terminal 50 mm^2 - 240 mm^2 (2x) at 2-hole tunnel terminal 25 mm^2 - 185 mm^2 (1x) at tunnel terminal
HANDLE TYPE	Rocker lever
SHORT DELAY CURRENT SETTING (ISD) - MAX	4410 A
SHORT DELAY CURRENT	472 A

SETTING (ISD) - MIN	
INSTANTANEOUS CURRENT SETTING (II) - MAX	5040 A
INSTANTANEOUS CURRENT SETTING (II) - MIN	1260 A
NUMBER OF OPERATIONS PER HOUR - MAX	60
OVERLOAD CURRENT SETTING (IR) - MAX	630 A
OVERLOAD CURRENT SETTING (IR) - MIN	315 A
OVERLOAD CURRENT SETTING (IR)	315 A - 630 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	150 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
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 MAKING CAPACITY ICM AT 525 V, 50/60 HZ	143 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 690 V, 50/60 HZ	74 kA
STANDARD TERMINALS	Screw terminal
OPTIONAL TERMINALS	Box terminal. Connection

	on rear. Tunnel terminal
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
RATED INSULATION VOLTAGE (UI)	1000 V AC

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

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