

Specifications



Photo is representative

Eaton 265784

Eaton Moeller series Molded case circuit breaker, Electronic, NZMN4, 875 A, Three-pole, 690 V, Screw connection

General specifications

PRODUCT NAME	Eaton Moeller series NZM molded case circuit breaker electronic
CATALOG NUMBER	265784
MODEL CODE	NZMN4-ME875
EAN	4015082657840
PRODUCT LENGTH/DEPTH	401 mm
PRODUCT HEIGHT	207 mm
PRODUCT WIDTH	210 mm
PRODUCT WEIGHT	21 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC/EN 60947 IEC



Powering Business Worldwide

Additional information

FUNCTIONS

Phase failure sensitive
Motor protection

Delivery programme

AMPERAGE RATING 875 A

APPLICATION Use in unearthed supply systems at 525 V

CIRCUIT BREAKER FRAME TYPE NZM4

CONNECTION Front screw

FITTED WITH: Thermal protection

FRAME NZM4

NUMBER OF POLES Three-pole

RELEASE SYSTEM Electronic release

SPECIAL FEATURES

- IEC/EN 60947-4-1, IEC/EN 60947-2
- The circuit-breaker fulfills all requirements for AC-3 switching category.
- R.m.s. value measurement and "thermal memory"
- Adjustable time delay setting to overcome current peaks I_r at $6 \times I_r$ also infinity (without overload releases)
- All AC-3 rating data applies to direct switching by the circuit-breaker under normal operating conditions. If, for example, a contactor takes over AC-3 switching under normal operating conditions, the full rated uninterrupted current applies to the circuit-breaker, $I_n = I_u$.
- 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)
 - Rated current = rated uninterrupted current: 875 A

TYPE

Circuit breaker

Design verification to IEC/EN 61439

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 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	Does not apply, since the

Design verification to IEC/EN 61439 - technical data

AMBIENT OPERATING TEMPERATURE - MAX	70 °C
AMBIENT STORAGE TEMPERATURE - MAX	70 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT STORAGE TEMPERATURE - MIN	40 °C
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	84.98 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	875 A

AGAINST ELECTRIC SHOCK	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.

Technical data - electrical

AMPERAGE RATING	875 A
DIRECTION OF INCOMING SUPPLY	As required
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
HANDLE TYPE	Rocker lever
INSTANTANEOUS CURRENT SETTING (II) - MAX	12250 A
INSTANTANEOUS CURRENT SETTING (II) - MIN	875 A
ISOLATION	300 V AC (between the auxiliary contacts) 500 V AC (between auxiliary contacts and main contacts)
LIFESPAN, ELECTRICAL	3000 operations at 415 V AC-1 2000 operations at 400 V AC-3 2000 operations at 415 V AC-3 3000 operations at 400 V AC-1 1000 operations at 690 V AC-3 2000 operations at 690 V AC-1
NUMBER OF OPERATIONS PER HOUR - MAX	60
OVERLOAD CURRENT SETTING (IR) - MAX	875 A
OVERLOAD CURRENT SETTING (IR) - MIN	438 A
OVERVOLTAGE CATEGORY	III
POLLUTION DEGREE	3
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
RATED OPERATING	250 kW

Technical data - mechanical

CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
DEGREE OF PROTECTION	IP20 (basic degree of protection, in the operating controls area) IP20
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)
LIFESPAN, MECHANICAL	10000 operations
MOUNTING METHOD	Fixed Built-in device fixed built-in technique
PROTECTION AGAINST DIRECT CONTACT	Finger and back-of-hand proof to VDE 0106 part 100
SHOCK RESISTANCE	15 g (half-sinusoidal shock 11 ms)

SPECIAL FEATURES

- IEC/EN 60947-4-1, IEC/EN 60947-2
- The circuit-breaker fulfills all requirements for AC-3 switching category.
- R.m.s. value measurement and "thermal memory"
- Adjustable time delay setting to overcome current peaks I_{tr} at $6 \times I_r$ also infinity (without overload releases)
- All AC-3 rating data applies to direct switching by the circuit-breaker under normal operating conditions. If, for example, a contactor takes over AC-3 switching

POWER AT AC-3, 230 V	
RATED OPERATING POWER AT AC-3, 400 V	500 kW
RATED OPERATIONAL CURRENT	588 A (690 V AC-3) 820 A (400 V AC-3)
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 230 V, 50/60 HZ	37 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 400/415 V, 50/60 HZ	26 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 440 V, 50/60 HZ	26 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 525 V, 50/60 HZ	19 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 690 V, 50/60 HZ	15 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 240 V, 50/60 HZ	105 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 400/415 V, 50/60 HZ	105 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 440 V, 50/60 HZ	74 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 525 V, 50/60 HZ	53 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 690 V, 50/60 HZ	40 kA
RATED SHORT-TIME WITHSTAND CURRENT (T = 0.3 S)	19.2 kA
RATED SHORT-TIME WITHSTAND CURRENT (T = 1 S)	19.2 kA
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MAX	12250 A
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MIN	1750 A
SHORT-CIRCUIT TOTAL	< 25 ms ($\square$ 415 V); < 35 ms

under normal operating conditions, the full rated uninterrupted current applies to the circuit-breaker, $I_n = I_u$.

- 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: 875 A

SWITCH OFF TECHNIQUE	Electronic
-----------------------------	------------

BREAKTIME	(> 415 V)
UTILIZATION CATEGORY	B (IEC/EN 60947-2)
VOLTAGE RATING	690 V - 690 V

Technical data - mechanical - terminals

OPTIONAL TERMINALS	Connection on rear. Strip terminal. Tunnel terminal
STANDARD TERMINALS	Screw terminal
TERMINAL CAPACITY (ALUMINUM SOLID CONDUCTOR/CABLE)	240 mm ² (2x) at rear-side width extension 50 mm ² (4x) at rear-side 2-hole module plate 70 mm ² - 185 mm ² (2x) at rear-side 1-hole module plate 70 mm ² - 240 mm ² (6x) at rear-side width extension 185 mm ² - 240 mm ² (1x) at rear-side 1-hole module plate
TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)	50 mm ² - 240 mm ² (4x) at 4-hole 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. 80 mm x 10 mm (2x) at rear-side width extension 50 mm x 10 mm (2x) at rear-side 2-hole module plate Min. 60 mm x 10 mm at rear-side width extension M10 at rear-side screw connection Min. 25 mm x 5 mm at rear-side 1-hole module plate Min. 25 mm x 5 mm direct at switch rear-side connection Max. 50 mm x 10 mm (2x) direct at switch rear-side connection Max. 50 mm x 10 mm (2x) at rear-side 1-hole module plate
TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE)	50 mm ² - 240 mm ² (4x) at 4-hole tunnel terminal 95 mm ² - 185 mm ² (2x) at rear-side 2-hole module plate 35 mm ² - 185 mm ² (4x) at rear-side 2-hole module plate 300 mm ² (4x) at rear-side width extension 120 mm ² - 300 mm ² (1x) at rear-side 1-hole module plate

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-055.eps
DECLARATIONS OF CONFORMITY	eaton-molded-case-circuit-breaker-declaration-of-conformity-eu250294en.pdf eaton-circuit-breaker-nzm-mccb-dimensions-022.eps
DRAWINGS	eaton-general-ie-ready-dilm-contactor-standards.eps eaton-circuit-breaker-switch-nzm-mccb-3d-drawing-003.eps
ECAD MODEL	ETN.265784.edz
INSTALLATION INSTRUCTIONS	eaton-circuit-breaker-basic-unit-nzmn4-il01210010z.pdf
INSTALLATION VIDEOS	Introduction of the new digital circuit breaker NZM The new digital NZM Range
MCAD MODEL	eaton-molded-case-switches-mcad-drawings-nzm4-3p.dwg DA-CS-nzm4_3p
PEP ECO-PASSPORT	eaton-molded-case-switches-pep-eato-00221-v0101-en.pdf
TECHNICAL DATA SHEETS	eaton-nzm-technical-information-sheet
WIRING DIAGRAMS	eaton-manual-motor-starters-starter-msc-r-reversing-starter-wiring-diagram.eps eaton-manual-motor-starters-starter-nzm-mccb-wiring-diagram.eps

	95 mm ² - 240 mm ² (6x) at rear-side width extension 95 mm ² - 300 mm ² (2x) at rear-side 1-hole module plate
TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)	120 mm ² - 185 mm ² (1x) direct at switch rear-side connection 50 mm ² - 185 mm ² (4x) direct at switch rear-side connection
TERMINAL CAPACITY (COPPER STRIP)	10 segments of 80 mm x 1 mm (2x) at rear-side width extension Max. 10 segments of 32 mm x 1 mm (2x) at flat conductor terminal 10 segments of 50 mm x 1 mm (2x) at 1-hole module plate Min. 5 segments of 25 mm x 1 mm at rear-side connection (punched) Max. 10 segments of 50 mm x 1 mm (2x) at rear-side connection (punched) Min. 6 segments of 16 mm x 0.8 mm at flat conductor terminal

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE: