

Specifications



Photo is representative

Eaton 265727

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 50A, B1-S50

General specifications

PRODUCT NAME	Eaton Moeller series NZM molded case circuit breaker magnetic
CATALOG NUMBER	265727
MODEL CODE	NZMB1-S50
EAN	4015082657277
PRODUCT LENGTH/DEPTH	88 mm
PRODUCT HEIGHT	145 mm
PRODUCT WIDTH	90 mm
PRODUCT WEIGHT	1.046 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC IEC/EN 60947
GLOBAL CATALOG	265727

Product specifications

USED WITH	Door coupling handle PKZ0
AMPERAGE RATING	50 A
VOLTAGE RATING	440 V - 440 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

Resources

BROCHURES

[eaton-digital-nzm-brochure-br013003en-en-us.pdf](#)

[eaton-feerum-the-whole-grain-solution-success-story-en-us.pdf](#)

CATALOGS

[eaton-digital-nzm-catalog-ca013003en-en-us.pdf](#)

[eaton-circuit-breaker-nzm-mccb-characteristic-curve-058.eps](#)

CHARACTERISTIC CURVE

[eaton-circuit-breaker-characteristic-power-defense-mccb-characteristic-curve-038.eps](#)

[eaton-circuit-breaker-characteristic-power-defense-mccb-characteristic-curve-032.eps](#)

DECLARATIONS OF CONFORMITY

[eaton-molded-case-circuit-breaker-declaration-of-conformity-eu250289en.pdf](#)

[eaton-circuit-breaker-switch-nzm-mccb-dimensions-014.eps](#)

DRAWINGS

[eaton-circuit-breaker-nzm-mccb-dimensions-017.eps](#)

[xEffect - Industrial Switchgear Range](#)

ECAD MODEL

[ETN.265727.edz](#)

[Introduction of the new digital circuit breaker NZM](#)

INSTALLATION VIDEOS

[The new digital NZM Range](#)

[DA-CS-nzm1_3p](#)

[eaton-molded-case-switches-mcad-drawings-nzm1-3p.dwg](#)

MCAD MODEL

[eaton-molded-case-switches-mcad-3d-models-nzm1-3p.stp](#)

[DA-CD-nzm1_3p](#)

	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	Fixed Built-in device fixed built-in technique
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	13.2 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	70 °C

PEP ECO-PASSPORT	eaton-molded-case-switches-pep-eato-00225-v0101-en.pdf
TECHNICAL DATA SHEETS	eaton-nzm-technical-information-sheet

TEMPERATURE - MAX	
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	15 kW
RATED OPERATING POWER AT AC-3, 400 V	22 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	Other
LIFESPAN, MECHANICAL	20000 operations
OVERVOLTAGE CATEGORY	III
RATED OPERATIONAL CURRENT	41 A (400 V AC-3)
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. 9 segments of 9 mm x 0.8 mm at box terminal Min. 2 segments of 9 mm x 0.8 mm at box terminal
LIFESPAN, ELECTRICAL	7500 operations at 415 V AC-1 7500 operations at 400 V AC-1
FUNCTIONS	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 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: 50 A
- Terminal capacity hint: Up to 95 mm² can be connected depending on the cable manufacturer.

APPLICATION	Use in unearthed supply systems at 440 V
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SHOCK RESISTANCE	20 g (half-sinusoidal shock 20 ms)
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RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	50 A
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SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MAX	700 A
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SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MIN	400 A
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HANDLE TYPE	Rocker lever
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INSTANTANEOUS CURRENT SETTING (II) - MAX	14 A
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INSTANTANEOUS	8 A
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CURRENT SETTING (II) - MIN	
NUMBER OF OPERATIONS PER HOUR - 120 MAX	
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	30 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 400/415 V, 50/60 HZ	18.5 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 440 V, 50/60 HZ	18.5 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 10 mm ² - 16 mm ² (1x) direct at switch rear-side connection 10 mm ² - 16 mm ² (2x) direct at switch rear-side connection
TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)	25 mm ² - 35 mm ² (1x) direct at switch rear-side connection 25 mm ² - 35 mm ² (2x) direct at switch rear-side connection 25 mm ² - 95 mm ² (1x) at tunnel terminal
TERMINAL CAPACITY (CONTROL CABLE)	0.75 mm ² - 2.5 mm ² (1x) 0.75 mm ² - 1.5 mm ² (2x)
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)	<p>10 mm² - 16 mm² (1x) at box terminal</p> <p>6 mm² - 16 mm² (2x) at box terminal</p> <p>10 mm² - 16 mm² (1x) direct at switch rear-side connection</p> <p>6 mm² - 16 mm² (2x) direct at switch rear-side connection</p> <p>16 mm² (1x) at tunnel terminal</p>
TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)	<p>25 mm² (2x) direct at switch rear-side connection</p> <p>10 mm² - 70 mm² (1x) at box terminal</p> <p>10 mm² - 70 mm² (1x) direct at switch rear-side connection</p> <p>6 mm² - 25 mm² (2x) at box terminal</p> <p>25 mm² - 95 mm² (1x) at 1-hole tunnel terminal</p>
RATED SHORT-CIRCUIT BREAKING CAPACITY ICU (IEC/EN 60947) AT 400/415 V, 50/60 HZ	18.5 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 400/415 V, 50/60 HZ	53 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 440 V, 50/60 HZ	53 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 240 V, 50/60 HZ	63 kA
RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT AUXILIARY CONTACTS	6000 V
RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT MAIN CONTACTS	6000 V
POWER LOSS	4.2 W

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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