

Specifications



Photo is representative



Eaton 269290

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 3p, 600A, H3-AEF600-NA

General specifications

PRODUCT NAME	Eaton Moeller series NZM molded case circuit breaker electronic
CATALOG NUMBER	269290
MODEL CODE	NZMH3-AEF600-NA
EAN	4015082692902
PRODUCT LENGTH/DEPTH	166 mm
PRODUCT HEIGHT	297 mm
PRODUCT WIDTH	140 mm
PRODUCT WEIGHT	6.34 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	CSA (File No. 22086) UL/CSA UL (File No. E31593) UL (Category Control Number DIVQ) IEC/EN 60947 UL 489 CSA-C22.2 No. 5-09 CSA (Class No. 1432-01) CE marking IEC UL listed IEC 60947-2 Specially designed for North America CSA certified

Product specifications

AMPERAGE RATING	600 A
VOLTAGE RATING	690 V - 690 V
CIRCUIT BREAKER FRAME TYPE	NZM3
FEATURES	Protection unit Motor drive optional
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-digital-nzm-brochure-br013003en-en-us.pdf
CATALOGUES	eaton-digital-nzm-catalog-ca013003en-en-us.pdf
CHARACTERISTIC CURVE	eaton-circuit-breaker-tripping-characteristic-nzm-mccb-characteristic-curve.eps
DECLARATIONS OF CONFORMITY	eaton-circuit-breaker-nzm-mccb-characteristic-curve-030.eps
DRAWINGS	eaton-circuit-breaker-nzm-mccb-characteristic-curve-033.eps
ECAD MODEL	eaton-molded-case-circuit-breaker-declaration-of-conformity-eu250293en.pdf
INSTALLATION INSTRUCTIONS	eaton-circuit-breaker-basic-device-nzmn-bl01208009z.pdf
INSTALLATION VIDEOS	Introduction of the new digital circuit breaker NZM The new digital NZM Range
MCAD MODEL	DA-CS-nzm3_3p DA-CD-nzm3_3p
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	Built-in device fixed built-in technique Fixed
CLIMATIC PROOFING	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	108 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
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
LIFESPAN, MECHANICAL	15000 operations
OVERVOLTAGE CATEGORY	III
RATED OPERATIONAL CURRENT	600 A (690 V AC-1, making and breaking capacity) 630 A (380/400 V AC-1, making and breaking capacity) 450 A (660-690 V AC-3, making and breaking capacity) 500 A (415 V AC-1, making and breaking capacity)
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)	Min. 6 segments of 16 mm x 0.8 mm at box terminal Min. 6 segments of 16 mm x 0.8 mm at rear-side connection (punched) 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 Max. 8 segments of 24 mm x 1 mm (2x) at box terminal

	Max. 10 segments of 24 mm x 1 mm + 5 segments of 24 mm x 1 mm
LIFESPAN, ELECTRICAL	3000 operations at 690 V AC-1 2000 operations at 400 V AC-3 2000 operations at 690 V AC-3 2000 operations at 415 V AC-3 5000 operations at 400 V AC-1
FUNCTIONS	System and cable protection Current limiting circuit breaker
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}) • Rated current = rated uninterrupted current: 600 A • Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. • Fixed overload releases I_r • R.m.s. value measurement and "thermal memory"
APPLICATION	<ul style="list-style-type: none"> • Branch circuits, feeder circuits • 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)	600 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 NON-DELAYED SETTING - MAX	4800 A
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MIN	1200 A
TERMINAL CAPACITY (CONTROL CABLE)	16 mm ² - 18 mm ² (2x) 14 mm ² - 18 mm ² (1x)
TERMINAL CAPACITY (COPPER BUSBAR)	M10 at rear-side screw connection Max. 10 mm x 50 mm (2x) at rear-side width extension Min. 20 mm x 5 mm direct at switch rear-side connection
TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE)	500 mm ² (2x) at rear-side width extension 16 mm ² - 185 mm ² (1x) at tunnel terminal
TERMINAL CAPACITY (ALUMINUM SOLID CONDUCTOR/CABLE)	16 mm ² (1x) at tunnel terminal
TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)	4 mm ² - 350 mm ² (1x) direct at switch rear-side connection 350 mm ² (2x) direct at switch rear-side connection 2 mm ² - 500 mm ² (1x) at box terminal 4 mm ² - 350 mm ² (1x) at tunnel terminal
HANDLE TYPE	Rocker lever
SHORT DELAY CURRENT SETTING (ISD) - MAX	0 A
SHORT DELAY CURRENT	0 A

SETTING (ISD) - MIN**INSTANTANEOUS**

CURRENT SETTING (II) - 4800 A
MAX

INSTANTANEOUS

CURRENT SETTING (II) - 1200 A
MIN

NUMBER OF

OPERATIONS PER HOUR - 60
MAX

**OVERLOAD CURRENT
SETTING (IR) - MAX**

600 A

**OVERLOAD CURRENT
SETTING (IR) - MIN**

600 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

RATED OPERATING

VOLTAGE UE (UL) - MAX

600 V

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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