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## Eaton 113275

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 4p, 100A, plug-in module, N, frame 2VE100-SVE

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PRODUCT NAME	Eaton Moeller series NZM molded case circuit breaker electronic
CATALOG NUMBER	113275
PRODUCT LENGTH/DEPTH	180 mm
PRODUCT HEIGHT	245 mm
PRODUCT WIDTH	140 mm
PRODUCT WEIGHT	3.727 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC/EN 60947 IEC



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AMPERAGE RATING	100 A
VOLTAGE RATING	690 V - 690 V
CIRCUIT BREAKER FRAME TYPE	NZM2
FEATURES	Protection unit Motor drive optional
ACCESSORIES REQUIRED	NZM2-4-XSVS
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	ls 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.

CHARACTERISTIC CURVE	eaton-circuit-breaker-let- through-current-nzm- mccb-characteristic-curve- 004.eps
	eaton-circuit-breaker- characteristic-power- defense-mccb- characteristic-curve- 036.eps
	eaton-circuit-breaker-nzm- mccb-characteristic-curve- 054.eps
00000	eaton-circuit-breaker-plug- in-adapter-nzm2- il01219023z.pdf
00	eaton-circuit-breaker-nzm- mccb-dimensions-035.eps
	eaton-circuit-breaker- adapter-nzm-mccb- dimensions-002.eps
	eaton-circuit-breaker- cable-nzm-mccb-3d- drawing-002.eps

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	ls the panel builder's responsibility.
10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS	ls the panel builder's responsibility.
10.9.2 POWER- FREQUENCY ELECTRIC STRENGTH	ls the panel builder's responsibility.
10.9.3 IMPULSE WITHSTAND VOLTAGE	ls the panel builder's responsibility.
10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL	ls the panel builder's responsibility.
POLLUTION DEGREE	3
	Built-in device plug-in
MOUNTING METHOD	technique DIN rail (top hat rail) mounting optional Plug-in unit
MOUNTING METHOD  CLIMATIC PROOFING	technique DIN rail (top hat rail) mounting optional Plug-in unit  Damp heat, constant, to IEC 60068-2-78
	technique DIN rail (top hat rail) mounting optional Plug-in unit Damp heat, constant, to
	technique DIN rail (top hat rail) mounting optional Plug-in unit  Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC
CLIMATIC PROOFING  EQUIPMENT HEAT DISSIPATION, CURRENT-	technique DIN rail (top hat rail) mounting optional Plug-in unit  Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
CLIMATIC PROOFING  EQUIPMENT HEAT DISSIPATION, CURRENT- DEPENDENT	technique DIN rail (top hat rail) mounting optional Plug-in unit  Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30  8.25 W
CLIMATIC PROOFING  EQUIPMENT HEAT DISSIPATION, CURRENT- DEPENDENT  UTILIZATION CATEGORY	technique DIN rail (top hat rail) mounting optional Plug-in unit  Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30  8.25 W  A (IEC/EN 60947-2)  500 V AC (between auxiliary contacts and main contacts) 300 V AC (between the
CLIMATIC PROOFING  EQUIPMENT HEAT DISSIPATION, CURRENT- DEPENDENT  UTILIZATION CATEGORY  ISOLATION  AMBIENT OPERATING	technique DIN rail (top hat rail) mounting optional Plug-in unit  Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30  8.25 W  A (IEC/EN 60947-2)  500 V AC (between auxiliary contacts and main contacts) 300 V AC (between the auxiliary contacts)
CLIMATIC PROOFING  EQUIPMENT HEAT DISSIPATION, CURRENT- DEPENDENT  UTILIZATION CATEGORY  ISOLATION  AMBIENT OPERATING TEMPERATURE - MAX AMBIENT OPERATING	technique DIN rail (top hat rail) mounting optional Plug-in unit  Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30  8.25 W  A (IEC/EN 60947-2)  500 V AC (between auxiliary contacts and main contacts) 300 V AC (between the auxiliary contacts)  70 °C
CLIMATIC PROOFING  EQUIPMENT HEAT DISSIPATION, CURRENT- DEPENDENT  UTILIZATION CATEGORY  ISOLATION  AMBIENT OPERATING TEMPERATURE - MAX  AMBIENT OPERATING TEMPERATURE - MIN AMBIENT STORAGE	technique DIN rail (top hat rail) mounting optional Plug-in unit  Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30  8.25 W  A (IEC/EN 60947-2)  500 V AC (between auxiliary contacts and main contacts) 300 V AC (between the auxiliary contacts)  70 °C  -25 °C

TEMPERATURE - MIN	
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 IP20 (basic degree of protection, in the operating controls area)
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	20000 operations
OVERVOLTAGE CATEGORY	Ш
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)	Min. 2 segments of 9 mm x 0.8 mm at box terminal Max. 10 segments of 24 mm x 0.8 mm at rear-side connection (punched) Max. 8 segments of 24 mm x 1 mm (2x) at box terminal Min. 2 segements of 16 mm x 0.8 mm at rear-side connection (punched) Max. 10 segments of 16 mm x 0.8 mm at box terminal
LIFESPAN, ELECTRICAL	6500 operations at 415 V AC-3 7500 operations at 690 V AC-1

FUNCTIONS	10000 operations at 400 V AC-1 5000 operations at 690 V AC-3 10000 operations at 415 V AC-1 6500 operations at 400 V AC-3 Systems, cable, selectivity and generator protection
TYPE	Circuit breaker
SPECIAL FEATURES	<ul> <li>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 lcn)</li> <li>R.m.s. value measurement and "thermal memory"</li> <li>Adjustable time delay setting to overcome current peaks tr at 6 x Ir also infinity (without overload releases)</li> <li>Adjustable delay time tsd</li> <li>i²t constant function: fixed OFF</li> <li>Set value in neutral conductor is synchronous with set value Ir of main pole.</li> <li>Rated current = rated uninterrupted current: 100 A</li> </ul>
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	100 A

HEAT DISSIPATION (IN)	
RELEASE SYSTEM	Electronic release
SHORT-CIRCUIT TOTAL BREAKTIME	< 10 ms
RATED SHORT-TIME WITHSTAND CURRENT (T = 0.3 S)	1.9 kA
RATED SHORT-TIME WITHSTAND CURRENT (T = 1 S)	1.9 kA
SHORT-CIRCUIT RELEASE DELAYED SETTING - MAX	1000 A
SHORT-CIRCUIT RELEASE DELAYED SETTING - MIN	100 A
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MAX	1200 A
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MIN	1200 A
TERMINAL CAPACITY (CONTROL CABLE)	0.75 mm <sup>2</sup> - 2.5 mm <sup>2</sup> (1x) 0.75 mm <sup>2</sup> - 1.5 mm <sup>2</sup> (2x)
TERMINAL CAPACITY (COPPER BUSBAR)	Max. 24 mm x 8 mm direct at switch rear-side connection Min. 16 mm x 5 mm direct at switch rear-side connection M8 at rear-side screw connection
TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE)	16 mm² (1x) at tunnel terminal 10 mm² - 16 mm² (1x) at box terminal 6 mm² - 16 mm² (2x) direct at switch rear-side connection 10 mm² - 16 mm² (1x) direct at switch rear-side connection 6 mm² - 16 mm² (2x) at box terminal
TERMINAL CAPACITY (ALUMINUM SOLID CONDUCTOR/CABLE)	16 mm² (1x) at tunnel terminal
TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)	25 mm² - 70 mm² (2x) at box terminal 25 mm² - 185 mm² (1x) at 1-hole tunnel terminal 25 mm² - 185 mm² (1x) direct at switch rear-side connection 25 mm² - 70 mm² (2x) direct at switch rear-side

	connection 25 mm² - 185 mm² (1x) at box terminal
TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)	25 mm² - 185 mm² (1x) at tunnel terminal
HANDLE TYPE	Rocker lever
SHORT DELAY CURRENT SETTING (ISD) - MAX	1000 A
SHORT DELAY CURRENT SETTING (ISD) - MIN	100 A
INSTANTANEOUS CURRENT SETTING (II) - MAX	1200 A
INSTANTANEOUS CURRENT SETTING (II) - MIN	1200 A
NUMBER OF OPERATIONS PER HOUR - MAX	120
OVERLOAD CURRENT SETTING (IR) - MAX	100 A
OVERLOAD CURRENT SETTING (IR) - MIN	50 A
OVERLOAD CURRENT SETTING (IR)	50 A - 100 A
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 230 V, 50/60 HZ	85 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 400/415 V, 50/60 HZ	50 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	25 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 690 V, 50/60 HZ	5 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
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	187 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:** 



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