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Eaton 113535

Eaton Moeller series NZM - Molded Case Circuit Breaker. Circuit-breaker, 4p, 400A, 250A in 4th pole, withdrawable unit, NZMN3-4-A400/250-AVE

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PRODUCT NAME	Eaton Moeller series NZM molded case circuit breaker thermo-magnetic
CATALOG NUMBER	113535
PRODUCT LENGTH/DEPTH	346 mm
PRODUCT HEIGHT	260 mm
PRODUCT WIDTH	230 mm
PRODUCT WEIGHT	12.9 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC/EN 60947 IEC



Powering Business Worldwide

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AMPERAGE RATING	400 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 IMPACT	Does not apply, since the entire switchgear needs to be evaluated.

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	eaton-circuit-breaker-nzm-mccb-characteristic-curve-031.eps
CHARACTERISTIC CURVE	eaton-circuit-breaker-nzm-mccb-characteristic-curve-034.eps
	eaton-circuit-breaker-tripping-characteristic-nzm-mccb-characteristic-curve.eps
□□□□□	eaton-circuit-breaker-basic-device-nzmn-b-il01208009z.pdf
	eaton-circuit-breaker-withdrawable-unit-nzm-mccb-dimensions-002.eps
□□	eaton-circuit-breaker-nzm-mccb-dimensions-021.eps
	eaton-circuit-breaker-switch-nzm-mccb-dimensions-016.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	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
LIFESPAN, MECHANICAL	15000 operations
UTILIZATION CATEGORY	A (IEC/EN 60947-2)
MOUNTING METHOD	Withdrawable Built-in device slide-in technique (withdrawable)
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	96.48 W
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	40 °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	250 A 60% of phase conductor
OVERVOLTAGE CATEGORY	III
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	Four-pole
TERMINAL CAPACITY (COPPER STRIP)	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 Min. 6 segments of 16 mm x 0.8 mm at box terminal 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. 10 segments of 24 mm x 1 mm + 5 segments of 24 mm x 1 mm
LIFESPAN, ELECTRICAL	2000 operations at 690 V

	AC-3 3000 operations at 690 V AC-1 2000 operations at 400 V AC-3 5000 operations at 400 V AC-1 5000 operations at 415 V AC-1 2000 operations at 415 V AC-3
FUNCTIONS	System and cable 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 I_{cn}) • Rated current = rated uninterrupted current: 400 A • Reduced neutral conductor protection • Set value in neutral conductor is synchronous with set value I_r of main pole. • Terminal capacity hint: Up to 240 mm² 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)	400 A

RELEASE SYSTEM	Thermomagnetic 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	4000 A
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MIN	2400 A
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)	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 Max. 30 mm x 10 mm + 30 mm x 5 mm direct at switch rear-side connection
TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE)	16 mm ² (1x) at tunnel terminal 16 mm ² (1x) direct at switch rear-side connection 16 mm ² (2x) direct at switch rear-side connection 300 mm ² (2x) at rear-side width extension 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 - 120 mm ² (2x) at box terminal 25 mm ² - 240 mm ² (2x) direct at switch rear-side connection 16 mm ² - 185 mm ² (1x) at 1-hole tunnel terminal 25 mm ² - 240 mm ² (1x) direct at switch rear-side connection

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
INSTANTANEOUS CURRENT SETTING (II) - MAX	10 A
INSTANTANEOUS CURRENT SETTING (II) - MIN	6 A
NUMBER OF OPERATIONS PER HOUR - MAX	60
OVERLOAD CURRENT SETTING (IR) - MAX	400 A
OVERLOAD CURRENT SETTING (IR) - MIN	320 A
OVERLOAD CURRENT SETTING (IR)	200 A - 250 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	13 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	40 kA

AT 690 V, 50/60 HZ	
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
