

Circuit-breaker, 3p, 80A

Part no. **NZMN2-A80-NA**
269223

Product name	Eaton Moeller series NZM molded case circuit breaker thermo-magnetic
Part no.	NZMN2-A80-NA
EAN	4015082692230
Product Length/Depth	149 millimetre
Product height	195 millimetre
Product width	105 millimetre
Product weight	2.421 kilogram
Compliances	RoHS conform
Certifications	Specially designed for North America CE marking UL 489 UL (File No. E31593) CSA-C22.2 No. 5-09 IEC/EN 60947 CSA (File No. 22086) CSA certified UL/CSA CSA (Class No. 1432-01) UL (Category Control Number DIVQ) IEC IEC 60947-2 UL listed
Product Tradename	NZM
Product Type	Molded case circuit breaker
Product Sub Type	Thermo-magnetic
Application	Branch circuits, feeder circuits Use in unearthed supply systems at 690 V
Type	Circuit breaker
Circuit breaker frame type	NZM2
Number of poles	Three-pole
Amperage Rating	80 A
Release system	Thermomagnetic release
Features	Motor drive optional Protection unit
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 Icn) Rated current = rated uninterrupted current: 80 A Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. Adjustable overload releases Ir
Voltage rating	690 V - 690 V
Rated operating voltage Ue (UL) - max	600Y/347 V, 480 V
Rated insulation voltage (Ui)	1000 V AC
Rated impulse withstand voltage (Uimp) at auxiliary contacts	6000 V
Rated impulse withstand voltage (Uimp) at main contacts	8000 V
Rated operational current	300 A (415 V AC-1, making and breaking capacity) 300 A (380/400 V AC-1, making and breaking capacity) 80 A (690 V AC-1, making and breaking capacity) 80 A (660-690 V AC-3, making and breaking capacity)
Rated short-time withstand current (t = 0.3 s)	1.9 kA
Rated short-time withstand current (t = 1 s)	1.9 kA
Instantaneous current setting (Ii) - min	480 A
Instantaneous current setting (Ii) - max	800 A
Overload current setting (Ir) - min	63 A
Overload current setting (Ir) - max	80 A
Short delay current setting (Isd) - min	0 A
Short delay current setting (Isd) - max	0 A

Short-circuit release non-delayed setting - min		480 A
Short-circuit release non-delayed setting - max		800 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 240 V, 50/60 Hz		187 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
Short-circuit total breaktime		< 10 ms
Low-voltage HBC fuse - max		355 A gG/gL
Electrical connection type of main circuit		Screw connection
Isolation		300 V AC (between the auxiliary contacts) 500 V AC (between auxiliary contacts and main contacts)
Number of operations per hour - max		120
Handle type		Rocker lever
Utilization category		A (IEC/EN 60947-2)
Overvoltage category		III
Pollution degree		3
Lifespan, electrical		10000 operations at 400 V AC-1 6500 operations at 400 V AC-3 7500 operations at 690 V AC-1 5000 operations at 690 V AC-3 6500 operations at 415 V AC-3
Direction of incoming supply		As required
Mounting Method		Fixed DIN rail (top hat rail) mounting optional Built-in device fixed built-in technique
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)
Protection against direct contact		Finger and back-of-hand proof to DIN EN 50274/VDE 0106 part 110
Shock resistance		20 g (half-sinusoidal shock 20 ms)
Number of auxiliary contacts (change-over contacts)		0
Number of auxiliary contacts (normally closed contacts)		0
Number of auxiliary contacts (normally open contacts)		0
Position of connection for main current circuit		Front side
Climatic proofing		Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
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 Icn) Rated current = rated uninterrupted current: 80 A Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. Adjustable overload releases Ir
Lifespan, mechanical		20000 operations
Standard terminals		Screw terminal
Terminal capacity (control cable)		16 mm ² - 18 mm ² (2x) 14 mm ² - 18 mm ² (1x)
Terminal capacity (aluminum solid conductor/cable)		16 mm ² (1x) at tunnel terminal
Terminal capacity (copper busbar)		Max. 20 mm x 5 mm direct at switch rear-side connection M8 at rear-side screw connection Min. 16 mm x 5 mm direct at switch rear-side connection
Terminal capacity (copper solid conductor/cable)		6 mm ² - 11 mm ² (1x) direct at switch rear-side connection 16 mm ² (1x) at tunnel terminal 6 mm ² - 12 mm ² (1x) at box terminal
Terminal capacity (copper stranded conductor/cable)		4 mm ² - 350 mm ² (1x) at tunnel terminal

		4 mm ² - 350 mm ² (1x) at box terminal 4 mm ² - 3/0 mm ² (1x) direct at switch rear-side connection
Terminal capacity (copper strip)		Min. 2 segments of 9 mm x 0.8 mm at box terminal Max. 10 segments 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 Min. 2 segments of 16 mm x 0.8 mm at rear-side connection (punched)
Rated operational current for specified heat dissipation (In)		80 A
Equipment heat dissipation, current-dependent		20.54 W
Ambient operating temperature - min		-25 °C
Ambient operating temperature - max		70 °C
Ambient storage temperature - min		40 °C
Ambient storage temperature - max		70 °C
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 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.
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.
Functions		System and cable protection Current limiting circuit breaker

Technical data ETIM 8.0

Low-voltage industrial components (EG000017) / Power circuit-breaker for trafo/generator/installation protection (EC000228)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Circuit breaker for power transformer, generator and system protection (ecl@ss10.0.1-27-37-04-09 [AJZ716013])

Rated permanent current I _u	A	80
Rated voltage	V	690 - 690
Rated short-circuit breaking capacity I _{cu} at 400 V, 50 Hz	kA	50
Overload release current setting	A	63 - 80
Adjustment range short-term delayed short-circuit release	A	0 - 0
Adjustment range undelayed short-circuit release	A	480 - 800
Integrated earth fault protection		No
Type of electrical connection of main circuit		Screw connection
Device construction		Built-in device fixed built-in technique
Suitable for DIN rail (top hat rail) mounting		No
DIN rail (top hat rail) mounting optional		Yes
Number of auxiliary contacts as normally closed contact		0

Number of auxiliary contacts as normally open contact			0
Number of auxiliary contacts as change-over contact			0
With switched-off indicator			No
With integrated under voltage release			No
Number of poles			3
Position of connection for main current circuit			Front side
Type of control element			Rocker lever
Complete device with protection unit			Yes
Motor drive integrated			No
Motor drive optional			Yes
Degree of protection (IP)			IP20