

Molded Case Switch, 3p, 800A



Part no. **NS4-800-NA**
102689

General specifications		
Product name		Eaton Moeller series NZM molded case switch
Part no.		NS4-800-NA
EAN		4015081025497
Product Length/Depth		401 millimetre
Product height		207 millimetre
Product width		210 millimetre
Product weight		21 kilogram
Compliances		RoHS conform
Certifications		IEC UL (File No. E148671) CSA (Class No. 4652-06) UL listed UL (Category Control Number WJAZ) CSA certified CSA (File No. 22086) CSA-C22.2 No. 5-09 IEC 60947-2 Specially designed for North America CE marking UL 489 UL/CSA
Product Tradename		NZM
Product Type		Molded case switch
Product Sub Type		None
Delivery program		
Application		Branch circuits, feeder circuits
Type		Switch-disconnector
Circuit breaker frame type		N4
Number of poles		Three-pole
Amperage Rating		800 A
Features		Motor drive optional Protection unit
Special features		IEC/EN 60947-2: circuit breakers without overcurrent (CBI-X) with main switch characteristics and isolating characteristics to IEC/EN 60204. Rated current = rated uninterrupted current: 800 A
Technical Data - Electrical		
Voltage rating		690 V - 690 V
Rated operating voltage Ue (UL) - max		600 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
Current rating (Iu) (UL 489 csa 22.2 no. 5.1)		1200 A
Rated current (Iu)		1200 A
Instantaneous current setting (Ii) - min		25000 A
Instantaneous current setting (Ii) - max		25000 A
Overload current setting (Ir) - min		0 A
Overload current setting (Ir) - max		0 A
Short delay current setting (Isd) - min		0 A
Short delay current setting (Isd) - max		0 A
Short-circuit release non-delayed setting - min		25000 A
Short-circuit release non-delayed setting - max		25000 A
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 230 V, 50/60 Hz		43 kA
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 400/415 V, 50/60 Hz		35 kA
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 440 V, 50/60 Hz		33 kA

Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 525 V, 50/60 Hz		20 kA
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 690 V, 50/60 Hz		18 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		154 kA
Rated short-circuit making capacity Icm at 440 V, 50/60 Hz		143 kA
Rated short-circuit making capacity Icm at 525 V, 50/60 Hz		84 kA
Rated short-circuit making capacity Icm at 690 V, 50/60 Hz		74 kA
Short-circuit total breaktime		< 25 ms (\leq 415 V); < 35 ms (> 415 V)
Electrical connection type of main circuit		Screw connection
Number of operations per hour - max		60
Handle type		Rocker lever
Overvoltage category		III
Pollution degree		3
Lifespan, electrical		2000 operations at 690 V AC-1 2000 operations at 415 V AC-3 3000 operations at 400 V AC-1 1000 operations at 690 V AC-3 2000 operations at 415 V AC-1 2000 operations at 400 V AC-3
Direction of incoming supply		As required
Technical Data - Mechanical		
Mounting Method		DIN rail (top hat rail) mounting optional Fixed Built-in device fixed built-in technique
Degree of protection		IP20 In the area of the HMI devices: IP20 (basic protection type)
Degree of protection (IP), front side		IP40 (with insulating surround) IP66 (with door coupling rotary handle)
Degree of protection (terminations)		IP00 (terminations, phase isolator and band terminal) IP10 (tunnel terminal)
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
Switch positions		I, +, 0
Special features		IEC/EN 60947-2: circuit breakers without overcurrent (CBI-X) with main switch characteristics and isolating characteristics to IEC/EN 60204. Rated current = rated uninterrupted current: 800 A
Lifespan, mechanical		10000 operations
Technical Data - Mechanical - Terminals		
Standard terminals		Screw connection,Optional:Tunnel terminal,Rear-side connection,Strip connection
Optional terminals		Connection on rear. Strip terminal. Tunnel terminal
Terminal capacity (aluminum stranded conductor/cable)		Min. 185 mm ² - 240 mm ² (1x) at rear-side 1-hole module plate Max. 70 mm ² - 185 mm ² (2x) at rear-side 1-hole module plate 50 mm ² (4x) at rear-side 2-hole module plate 240 mm ² (2x) at rear-side width extension 70 mm ² - 240 mm ² (6x) at rear-side width extension NA: aluminum conductor not applicable
Terminal capacity (copper busbar)		M10 at rear-side screw connection Min. 25 mm x 5 mm direct at switch rear-side connection Max. 50 mm x 10 mm (2x) direct at switch rear-side connection Min. 25 mm x 5 mm at rear-side 1-hole module plate Max. 50 mm x 10 mm (2x) at rear-side 1-hole module plate 50 mm x 10 mm (2x) at rear-side 2-hole module plate Min. 60 mm x 10 mm at rear-side width extension Max. 80 mm x 10 mm (2x) at rear-side width extension NA: same as for IEC
Terminal capacity (copper stranded conductor/cable)		50 mm ² - 240 mm ² (4x) at 4-hole tunnel terminal 120 mm ² - 185 mm ² (1x) direct at switch rear-side connection 50 mm ² - 185 mm ² (4x) direct at switch rear-side connection Min. 120 mm ² - 300 mm ² (1x) at rear-side 1-hole module plate Max. 95 mm ² - 300 mm ² (2x) at rear-side 1-hole module plate Min. 95 mm ² - 185 mm ² (2x) at rear-side 2-hole module plate Max. 35 mm ² - 185 mm ² (4x) at rear-side 2-hole module plate 300 mm ² (4x) at rear-side width extension 95 mm ² - 240 mm ² (6x) at rear-side width extension NA: AWG 0- kcmil 500 (4x) at 4-hole tunnel terminal NA: kcmil 250 - kcmil 350 (1x) direct at switch rear-side connection NA: AWG 0 - kcmil 350 (4x) direct at switch rear-side connection NA: min. kcmil 250 - kcmil 600 (1x) at rear-side 1-hole module plate NA: max. AWG 3/0 - kcmil 600 (2x) at rear-side 1-hole module plate

		NA: min. AWG 3/0 - kcmil 350 (2x) at rear-side 2-hole module plate NA: max. AWG 2 - kcmil 350 (4x) at rear-side 2-hole module plate NA: kcmil 600 (4x) at rear-side width extension NA: AWG 3/0 - kcmil 500 (6x) at rear-side width extension
Terminal capacity (copper strip)		Min. 6 segments of 16 mm x 0.8 mm at flat conductor terminal Max. 10 segments of 32 mm x 1 mm (2x) at flat conductor terminal 10 segments of 50 mm x 1 mm (2x) at 1-hole module plate Min. 10 segments of 50 mm x 1 mm (2x) at rear-side connection (punched) Max. 10 segments of 50 mm x 1 mm (2x) at rear-side connection (punched) 10 segments of 80 mm x 1 mm (2x) at rear-side width extension NA: same as for IEC
Design verification as per IEC/EN 61439 - technical data		
Rated operational current for specified heat dissipation (In)		800 A
Equipment heat dissipation, current-dependent		71.04 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
Design verification as per IEC/EN 61439		
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.
Additional information		
Functions		Disconnectors/main switches

Technical data ETIM 9.0

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@ss13-27-37-04-09 [AJZ716018])		
Rated permanent current Iu	A	800
Rated voltage	V	690 - 690
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	35
Overload release current setting	A	0 - 0
Adjustment range short-term delayed short-circuit release	A	0 - 0
Adjustment range undelayed short-circuit release	A	25000 - 25000
Power loss	W	
Device construction		Built-in device fixed built-in technique
Integrated earth fault protection		No
Type of electrical connection of main circuit		Screw connection

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