

Switch-disconnector 4p 1250A 1500VDC

Part no. **N4-4-1250-S15-DC**
166415

General specifications	
Product name	Eaton Moeller series NZM switch-disconnector
Part no.	N4-4-1250-S15-DC
EAN	4015081629237
Product Length/Depth	401 millimetre
Product height	207 millimetre
Product width	280 millimetre
Product weight	22 kilogram
Compliances	RoHS conform
Certifications	IEC
Product Tradename	NZM
Product Type	Switch-disconnector
Product Sub Type	None
Delivery program	
Application	Open areas Utility buildings
Type	DC switch-disconnector Switch-disconnector
Circuit breaker frame type	N4
Number of poles	Four-pole
Amperage Rating	1250 A
Features	Version as main switch Version as maintenance-/service switch Motor drive optional Version as emergency stop installation Remote operation with shunt releases / remote operator
Special features	IEC/EN 60947-3 CCC China Compulsory Certificate Main switch characteristics including positive drive to IEC/EN 60204 and VDE 0113. Isolating characteristics to IEC/EN 60947-3 and VDE 0660. N switch-disconnectors can, in addition, be combined with NZM...-XU, NZM...-XA shunt releases and auxiliary contacts as well as with NZM...-XR... remote operator. For DC switching, all 4 contacts must be connected in series. Refer to the information on jumper kit accessories. Supplied as standard: Screw connection box terminal optional. When working with ungrounded systems (e.g., IT), the installation must ensure that a double ground fault will be impossible. Switch can not be combined with plug-in/withdrawable units and/or connection on rear. Lifespan, mechanical: of which max. 50 % trip by shunt/undervoltage release Rated current = rated uninterrupted current: 1250 A Values for rated uninterrupted current at 65 °C include jumpers.
Technical Data - Electrical	
Voltage rating	1500 V - 1500 V
Rated operating voltage (Ue) at AC - max	0 V
Rated insulation voltage (Ui)	1500 V
Current rating (Iu) at 40°C with terminal jumpers	1250 A
Current rating (Iu) at 65°C with terminal jumpers	1250 A
Rated conditional short-circuit current (Iq)	0 kA
Rated operational current	1250 A (DC 22-A)
Rated permanent current at AC-21, 400 V	0 A
Rated permanent current at AC-23, 400 V	0 A
Rated short-time withstand current (Icw)	34 kA
Rated short-time withstand current (t = 0.1 s)	34 kA
Rated operating power at AC-3, 400 V	0 kW
Rated operating power at AC-23, 400 V	0 kW
Switching power at 400 V	0 kW
Electrical connection type of main circuit	Screw connection
Number of operations per hour - max	60
Handle type	Rocker lever
Utilization category	DC-22 A

Overvoltage category		III
Pollution degree		3
Technical Data - Mechanical		
Mounting Method		Intermediate mounting Ground mounting Built-in device fixed built-in technique Distribution board installation Fixed
Degree of protection		IP20
Degree of protection (IP), front side		IP20
Number of auxiliary contacts (change-over contacts)		0
Number of auxiliary contacts (normally closed contacts)		0
Number of auxiliary contacts (normally open contacts)		0
Number of switches		1
Handle color		Black
Switch positions		I, +, 0
Special features		IEC/EN 60947-3 CCC China Compulsory Certificate Main switch characteristics including positive drive to IEC/EN 60204 and VDE 0113. Isolating characteristics to IEC/EN 60947-3 and VDE 0660. N switch-disconnectors can, in addition, be combined with NZM...-XU, NZM...-XA shunt releases and auxiliary contacts as well as with NZM...-XR... remote operator. For DC switching, all 4 contacts must be connected in series. Refer to the information on jumper kit accessories. Supplied as standard: Screw connection box terminal optional. When working with ungrounded systems (e.g., IT), the installation must ensure that a double ground fault will be impossible. Switch can not be combined with plug-in/withdrawable units and/or connection on rear. Lifespan, mechanical: of which max. 50 % trip by shunt/undervoltage release Rated current = rated uninterrupted current: 1250 A Values for rated uninterrupted current at 65 °C include jumpers.
Lifespan, mechanical		10000 operations
Technical Data - Mechanical - Terminals		
Standard terminals		Screw terminal
Terminal capacity (aluminum stranded conductor/cable)		50 mm ² - 240 mm ² (4x) at 4-hole tunnel terminal
Terminal capacity (copper busbar)		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 M10 at rear-side screw connection 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) direct at switch rear-side connection Min. 25 mm x 5 mm at rear-side 1-hole module plate Max. 10 mm x 80 mm (2x) at rear-side width extension
Terminal capacity (copper solid conductor/cable)		300 mm ² (4x) at rear-side width extension 120 mm ² - 300 mm ² (1x) at rear-side 1-hole module plate 35 mm ² - 185 mm ² (4x) at rear-side 2-hole module plate 50 mm ² - 240 mm ² (4x) at 4-hole tunnel terminal 95 mm ² - 240 mm ² (6x) at rear-side width extension 95 mm ² - 300 mm ² (2x) at rear-side 1-hole module plate 95 mm ² - 185 mm ² (2x) at rear-side 2-hole module plate
Terminal capacity (copper stranded conductor/cable)		50 mm ² - 185 mm ² (4x) direct at switch rear-side connection 120 mm ² - 185 mm ² (1x) direct at switch rear-side connection
Terminal capacity (copper strip)		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) 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 80 mm x 1 mm (2x) at rear-side width extension Max. 10 segments of 50 mm x 1 mm (2x) at rear-side connection (punched)
Design verification as per IEC/EN 61439 - technical data		
Rated operational current for specified heat dissipation (I _n)		1250 A
Equipment heat dissipation, current-dependent		231 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		Voltage release optional Disconnectors/main switches Interlockable Photovoltaic applications

Technical data ETIM 9.0

Low-voltage industrial components (EG000017) / Switch disconnecter (low voltage) (EC000216)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnecter (ecl@ss13-27-37-14-03 [AKF060018])			
Version as main switch			Yes
Version as maintenance-/service switch			Yes
Version as safety switch			No
Version as emergency stop installation			Yes
Version as reversing switch			No
Number of switches			1
Max. rated operation voltage U _e AC	V		0
Rated operating voltage	V		1500 - 1500
Rated permanent current I _u	A		
Rated permanent current at AC-23, 400 V	A		0
Rated permanent current at AC-21, 400 V	A		0
Rated operation power at AC-3, 400 V	kW		0
Rated short-time withstand current I _{cw}	kA		34
Rated operation power at AC-23, 400 V	kW		0
Switching power at 400 V	kW		0
Conditioned rated short-circuit current I _q	kA		0
Number of poles			4
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
Motor drive optional			Yes
Motor drive integrated			No
Voltage release optional			Yes
Device construction			Built-in device fixed built-in technique
Suitable for floor mounting			Yes
Suitable for front mounting 4-hole			No
Suitable for front mounting centre			No
Suitable for distribution board installation			Yes

Suitable for intermediate mounting			Yes
Colour control element			Black
Type of control element			Rocker lever
Interlockable			Yes
Type of electrical connection of main circuit			Screw connection
With pre-assembled cabling			No
Degree of protection (IP), front side			IP20
Degree of protection (NEMA)			Other
Width		mm	280
Height		mm	207
Depth		mm	401
Width in number of modular spacings			