

Switch-disconnector 3p 125A BG1

Part no. **N1-125**
 259145
EL Number **4358717**
(Norway)

General specifications		
Product name		Eaton Moeller series NZM switch-disconnector
Part no.		N1-125
EAN		4015082591458
Product Length/Depth		88 millimetre
Product height		145 millimetre
Product width		90 millimetre
Product weight		0.843 kilogram
Compliances		RoHS conform
Certifications		IEC IEC/EN 60947
Product Tradename		NZM
Product Type		Switch-disconnector
Product Sub Type		None
Delivery program		
Application		Use in unearthed supply systems at 690 V
Type		Switch-disconnector
Circuit breaker frame type		N1
Number of poles		Three-pole
Amperage Rating		125 A
Features		Version as maintenance-/service switch Version as emergency stop installation Version as main switch
Special features		Main switch characteristics including positive drive to IEC/EN 60204 and VDE 0113. Isolating characteristics to IEC/EN 60947-3 and VDE 0660. Busbar tag shroud to VDE 0160 Part 100. Rated current = rated uninterrupted current: 125 A
Technical Data - Electrical		
Voltage rating		690 V - 690 V
Rated operating voltage (Ue) at AC - max		690 V
Rated insulation voltage (Ui)		690 V
Rated impulse withstand voltage (Uimp) at auxiliary contacts		6000 V
Rated impulse withstand voltage (Uimp) at main contacts		6000 V
Rated conditional short-circuit current (Iq)		0 kA
Rated operational current		160 A (690 V AC-22/23A, making and breaking capacity) 160 A (415 V AC-22/23A, making and breaking capacity)
Rated permanent current at AC-21, 400 V		0 A
Rated permanent current at AC-23, 400 V		0 A
Rated conditional short-circuit current with back-up fuse		80 kA at 690 V 125 gG/gL 100 kA at 400/415 V
Rated conditional short-circuit current with downstream fuse		10 kA at 690 V 125 gG/gL 100 kA at 400/415 V
Rated short-time withstand current (Icw)		2 kA
Rated short-time withstand current (t = 0.3 s)		2 kA
Rated short-time withstand current (t = 1 s)		2 kA
Rated operating frequency		50 Hz
Rated short-circuit making capacity Icm at 690 V, 50/60 Hz		2.8 kA
Rated operating power at AC-3, 400 V		0 kW
Rated operating power at AC-23, 400 V		55 kW
Switching power at 400 V		0 kW

Short-circuit protective device fuses - max		125 A gL
Electrical connection type of main circuit		Frame clamp
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
Overvoltage category		III
Pollution degree		3
Lifespan, electrical		7500 operations at 690 V AC-1 1000 operations at 415 V AC-23A 1000 operations at 400 V AC-23A 10000 operations at 400 V AC-1 1000 operations at 690 V AC-23A 10000 operations at 415 V AC-1
Direction of incoming supply		As required
Technical Data - Mechanical		
Mounting Method		Fixed Built-in device fixed built-in technique Ground mounting Intermediate mounting Distribution board installation
Degree of protection		IP20 (basic protection type, in the area of the HMI devices) Other
Degree of protection (IP), front side		IP40 (with insulating surround) IP20 IP66 (with door coupling rotary handle)
Degree of protection (terminations)		IP10 (tunnel terminal) IP00 (terminations, phase isolator and band 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
Number of switches		1
Handle color		Black
Switch positions		I, +, 0
Climatic proofing		Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
Special features		Main switch characteristics including positive drive to IEC/EN 60204 and VDE 0113. Isolating characteristics to IEC/EN 60947-3 and VDE 0660. Busbar tag shroud to VDE 0160 Part 100. Rated current = rated uninterrupted current: 125 A
Lifespan, mechanical		20000 operations
Technical Data - Mechanical - Terminals		
Standard terminals		Box terminal
Optional terminals		Connection on rear. Screw terminal. Tunnel terminal
Terminal capacity (aluminum solid conductor/cable)		10 mm ² - 16 mm ² (1x) direct at switch rear-side connection 10 mm ² - 16 mm ² (2x) direct at switch rear-side connection 16 mm ² (1x) at tunnel terminal
Terminal capacity (aluminum stranded conductor/cable)		25 mm ² - 95 mm ² (1x) at 1-hole tunnel terminal
Terminal capacity (copper busbar)		Min. 12 mm x 5 mm direct at switch rear-side connection M6 at rear-side screw connection Max. 16 mm x 5 mm direct at switch rear-side connection
Terminal capacity (copper solid conductor/cable)		6 mm ² - 16 mm ² (2x) direct at switch rear-side connection 16 mm ² (1x) at tunnel terminal 10 mm ² - 16 mm ² (1x) at box terminal 10 mm ² - 16 mm ² (1x) direct at switch rear-side connection 6 mm ² - 16 mm ² (2x) at box terminal
Terminal capacity (copper stranded conductor/cable)		6 mm ² - 25 mm ² (2x) at box terminal Terminal capacity hint: Up to 95 mm ² can be connected depending on the cable manufacturer 25 mm ² - 70 mm ² (1x) direct at switch rear-side connection 10 mm ² - 70 mm ² (1x) at box terminal 25 mm ² - 95 mm ² (1x) at 1-hole tunnel terminal 25 mm ² (2x) direct at switch rear-side connection
Terminal capacity (copper strip)		Min. 2 segments of 9 mm x 0.8 mm at box terminal Max. 9 segments of 9 mm x 0.8 mm at box terminal
Design verification as per IEC/EN 61439 - technical data		

Rated operational current for specified heat dissipation (In)			125 A
Equipment heat dissipation, current-dependent			17.81 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

Technical data ETIM 9.0

Low-voltage industrial components (EG000017) / Switch disconnector (low voltage) (EC000216)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnector (ecI@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 Ue AC		V	690
Rated operating voltage		V	690 - 690
Rated permanent current Iu		A	125
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 Icw		kA	2
Rated operation power at AC-23, 400 V		kW	55
Switching power at 400 V		kW	0
Conditioned rated short-circuit current Iq		kA	0
Number of poles			3

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			No
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			Frame clamp
With pre-assembled cabling			No
Degree of protection (IP), front side			IP20
Degree of protection (NEMA)			Other
Width		mm	90
Height		mm	145
Depth		mm	88
Width in number of modular spacings			