Switch-disconnector 3p, 100A

Part no. PN1-100 259141

EL Number 4358713

(Norway)



(Norway)	
General specifications	
Product name	Eaton Moeller series NZM switch-disconnector
Part no.	PN1-100
EAN	4015082591410
Product Length/Depth	88 millimetre
Product height	145 millimetre
Product width	90 millimetre
Product weight	0.849 kilogram
Compliances	RoHS conform
Certifications	IEC/EN 60947 IEC
Product Tradename	NZM
Product Type	Switch-disconnector
Product Sub Type	None
Delivery program	
Application	Use in unearthed supply systems at 690 V
Туре	Switch-disconnector
Circuit breaker frame type	PN1
Number of poles	Three-pole
Amperage Rating	100 A
Features	Version as emergency stop installation Version as maintenance-/service switch 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: 100 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 (415 V AC-22/23A, making and breaking capacity) 160 A (690 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 100 gG/gL 100 kA at 400/415 V
Rated conditional short-circuit current with downstream fuse	100 kA at 400/415 V 10 kA at 690 V 100 gG/gL
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	500 V AC (between auxiliary contacts and main contacts) 300 V AC (between the auxiliary contacts)
Number of operations per hour - max	120
Handle type	Rocker lever
Overvoltage category	III
Pollution degree	3
Lifespan, electrical	1000 operations at 400 V AC-23A 7500 operations at 690 V AC-1 10000 operations at 400 V AC-1 10000 operations at 415 V AC-1 1000 operations at 415 V AC-23A 1000 operations at 690 V AC-23A
Direction of incoming supply	As required
Technical Data - Mechanical	
Mounting Method	Built-in device fixed built-in technique Distribution board installation Fixed Intermediate mounting Ground mounting
Degree of protection	IP20 (basic protection type, in the area of the HMI devices) Other
Degree of protection (IP), front side	IP20 IP40 (with insulating surround) 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	1, 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: 100 A
Lifespan, mechanical	20000 operations
Fechnical 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 (2x) direct at switch rear-side connection 10 mm 2 - 16 mm 2 (1x) direct at switch rear-side connection 16 mm 2 (1x) at tunnel terminal
Terminal capacity (aluminum stranded conductor/cable)	25 mm² - 95 mm² (1x) at 1-hole tunnel terminal
Terminal capacity (copper busbar)	Min. 12 mm x 5 mm direct at switch rear-side connection Max. 16 mm x 5 mm direct at switch rear-side connection M6 at rear-side screw connection
Terminal capacity (copper solid conductor/cable)	10 mm² - 16 mm² (1x) at box terminal 10 mm² - 16 mm² (1x) direct at switch rear-side connection 6 mm² - 16 mm² (2x) at box terminal 6 mm² - 16 mm² (2x) direct at switch rear-side connection 16 mm² (1x) at tunnel terminal
Terminal capacity (copper stranded conductor/cable)	25 mm² (2x) direct at switch rear-side connection 25 mm² - 70 mm² (1x) direct at switch rear-side connection 6 mm² - 25 mm² (2x) at box terminal 10 mm² - 70 mm² (1x) at box terminal Terminal capacity hint: Up to 95 mm² can be connected depending on the cable manufacturer 25 mm² - 95 mm² (1x) at 1-hole tunnel terminal
Terminal capacity (copper strip)	Max. 9 segments of 9 mm x 0.8 mm at box terminal Min. 2 segments of 9 mm x 0.8 mm at box terminal
Design verification as per IEC/EN 61439 - technical data	

observed.	Rated operational current for specified heat dissipation (In)	100 A	
Ambient operating temperature - mix Ambient storage temperature - mix 70 °C Design verification as per IEC/EN 61439 10.2.2 Corrosion resistance 10.2.3.1 Verification of thermal stability of enclosures 10.2.3.2 Verification of resistance of insulating materials to normal heat 10.2.3.2 Verification of resistance of insulating materials to normal heat 10.2.3.3 Resist, of insul, mat, to abnormal heat/life by internal elect, effects 10.2.4 Resistance to ultra-violet (UV) radiation 10.2.5 Lifting 10.2.6 Mechanical impact 10.2.7 Inscriptions 10.3.0 Egree of protection of assemblies 10.3.1 Degree of protection of assemblies 10.3.1 Degree of protection of assemblies 10.4 Clearances and creapage distances 10.5 Protection against electric shock 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9 Power-frequency electric strength 10.9 Internal electrical circuits and connections 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Lepane builder's responsibility. 10.14 Electromagnetic compatibility 10.15 Electromagnetic compatibility 10.16 Electromagnetic compatibility 10.17 Electromagnetic compatibility 10.18 Lepane builder's responsibility. 10.19 Electromagnetic compatibility 10.19 Electromagnetic compatibility 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.14 Electromagnetic compatibility 10.15 Degree of the compatibility 10.16 Electromagnetic compatibility 10.17 Electromagnetic compatibility 10.18 Degree of the compatibility 10.19 Electromagnetic compatibility 10.19 Electromagnetic compatibility 10.19 Electromagnetic compatibility 10.19 Electromagnetic compa	Equipment heat dissipation, current-dependent	11.4 W	
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10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.13 Mechanical function Functions 10.15 the panel builder's responsibility. The specifications for the switchgear must be observed. 10.16 the panel builder's responsibility. The specifications for the switchgear must be observed. 10.15 the panel builder's responsibility. The specifications for the switchgear must be observed. 10.16 the panel builder's responsibility. The specifications for the switchgear must be observed. 10.19 Electromagnetic compatibility 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.14 Electromagnetic compatibility 10.15 Electromagnetic compatibility 10.16 Electromagnetic compatibility 10.17 Electromagnetic compatibility 10.18 Electromagnetic compatibility 10.19 Electromagnetic compatibility 10.19 Electromagnetic compatibility 10.10 Electromagnetic compatibility 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.15 Electromagnetic compatibility 10.16 Electromagnetic compatibility 10.17 Electromagnetic compatibility 10.18 Electromagnetic compatibility 10.19 Electromagnetic compatibility 10.10 Electromagnetic compatibility 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.14 Electromagnetic compatibility 10.15 Electromagnetic compatibility 10.16 Electromagnetic compatibility 10.17 Electromagnetic compatibility 10.18 Electromagnetic compatibility 10.19 Electromagnetic compatibility 10.10 Electromagnetic compatibility 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Electromagnetic compatibility 10.14 Electromagnetic compatibility 10.15 Electromagnetic compatibility 10.16 Electromagnetic compatibility 10.17 Electromagnetic compatibility	10.7 Internal electrical circuits and connections	Is the panel builder's responsibility.	
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observed. 10.13 Mechanical function Additional information Functions observed. The device meets the requirements, provided the information in the instruction leaflet (IL) is observed. Disconnectors/main switches	10.11 Short-circuit rating	Is the panel builder's responsibility. The specifications for the switchgear must be observed.	
Additional information Functions Disconnectors/main switches	10.12 Electromagnetic compatibility	Is the panel builder's responsibility. The specifications for the switchgear must be observed.	
Functions Disconnectors/main switches	10.13 Mechanical function		
	Additional information		
	Functions		

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 (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 Ue AC	V	690
Rated operating voltage	V	690 - 690
Rated permanent current lu	Α	
Rated permanent current at AC-23, 400 V	А	0
Rated permanent current at AC-21, 400 V	А	0
Rated operation power at AC-3, 400 V	kW	0
Rated short-time withstand current lcw	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	No	
Device construction	Built-in device fixed built-in te	echnique
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	90	
Height	145	
Depth	88	
Width in number of modular spacings		