DATASHEET - LN4-4-800-I

Switch-disconnector, 4 p, 800A, frame size 4



Part no. Catalog No. LN4-4-800-I 112016



Similar to illustration

Delivery program

Product range			Switch-disconnectors
Protective function			Disconnectors/main switches
Standard/Approval			IEC
Installation type			Fixed
Construction size			LN4
Description			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.
Number of poles			4 pole
Standard equipment			Screw connection
Switch positions			I, +, 0
Rated current = rated uninterrupted current	$I_n = I_u$	А	800
Short-circuit protection max. fuse gL-characteristic		A gL	1600

Technical data

Switch-disconnectors

Switch-disconnectors			
Rated surge voltage invariability	U _{imp}		
Main contacts		V	8000
Auxiliary contacts		V	6000
Rated operational voltage	Ue	V AC	690
Rated operating frequency	f	Hz	50/60
Rated current = rated uninterrupted current	$I_n = I_u$	А	800
Overvoltage category/pollution degree			111/3
Rated insulation voltage	Ui	V	1000
Use in unearthed supply systems		V	≦ 525
Rated short-circuit making capacity			
690 V 50/60 H	lc	kA	53
Rated short-time withstand current			
t = 0.3 s	I _{cw}	kA	25
t = 1 s	I _{cw}	kA	25
Rated conditional short-circuit current			
With back-up fuse		A gG/gL	N4-6301600: 2 x 800
400 415 V		kA	100
690 V		kA	80
With downstream fuse		A gG/gL	N4-6301600: 2 x 800
400 415 V		kA	100
690 V		kA	80
Rated making and breaking capacity			
Rated operational current	l _e	А	
415 V	le	А	1600
690 V	le	А	1600
415 V	le	А	1600
690 V	le	А	1600
Lifespan, mechanical	Operations		10000
Max. operating frequency		Ops/h	60

Lifespan, electrical			
400 V 50/60 Hz	Operations		3000
415 V 50/60 Hz	Operations		3000
690 V 50/60 Hz	Operations		2000
400 V 50/60 Hz	Operations		2000
415 V 50/60 Hz	Operations		2000
690 V 50/60 Hz	Operations		1000
Total break time at short-circuit		ms	< 10
Terminal capacity			
Standard equipment			Screw connection
Round copper conductor			
Tunnel terminal			
Stranded			
4-hole		mm ²	4 x (50 - 240)
Bolt terminal and rear-side connection			
Direct on the switch			
Stranded		mm ²	1 x (120 - 185) 4 x (50 - 185)
Module plate			
Single hole	min.	mm ²	1 x (120 - 300)
Single hole	max.	mm ²	2 x (95 - 300)
Module plate			
Double hole	min.	mm ²	2 x (95 - 185)
Double hole	max.		4 x (35 - 185)
	max.	mm ²	+ x (55 - 165)
Connection width extension		mm ²	
Connection width extension		mm ²	4 x 300 6 x (95 - 240)
Al conductors, Cu cable			
Tunnel terminal			
Stranded			
4-hole		mm ²	4 x (50 - 240)
Bolt terminal and rear-side connection			
Flat copper strip, with holes	min.	mm	(2 x) 10 x 50 x 1.0
Flat copper strip, with holes	max.	mm	(2 x) 10 x 50 x 1.0
Connection width extension		mm	(2 x) 10 x 80 x 1.0
Cu strip (number of segments x width x segment thickness)			
Flat conductor terminal			
	min.	mm	6 x 16 x 0.8
	max.	mm	(2 x) 10 x 32 x 1.0
Module plate			
Single hole		mm	(2 x) 10 x 50 x 1.0
Bolt terminal and rear-side connection			
Flat copper strip, with holes	min.	mm	(2 x) 10 x 50 x 1.0
Flat copper strip, with holes	max.	mm	(2 x) 10 x 50 x 1.0
Connection width extension		mm	(2 x) 10 x 80 x 1.0
Copper busbar (width x thickness)	mm		
Bolt terminal and rear-side connection			
Screw connection			M10
Direct on the switch			
	min. max.	mm mm	25 x 5 2 x (50 x 10)
			2 x (80 x 10)
Module plate			
	min	mm	25 x 5
Single hole	min.		23 % 3
Single hole Single hole Module plate	max.	mm	2 x (50 x 10)

Double hole		mm	2 × (50 × 10)
Connection width extension		mm	
Connection width extension	min.	mm	60 x 10
Connection width extension	max.	mm	2 x (80 x 10)
Control cables			
		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 1.5)

Design verification as per IEC/EN 61439			
Technical data for design verification			
Rated operational current for specified heat dissipation	I _n	А	800
Equipment heat dissipation, current-dependent	P _{vid}	W	71.04
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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 Insulation properties			
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.

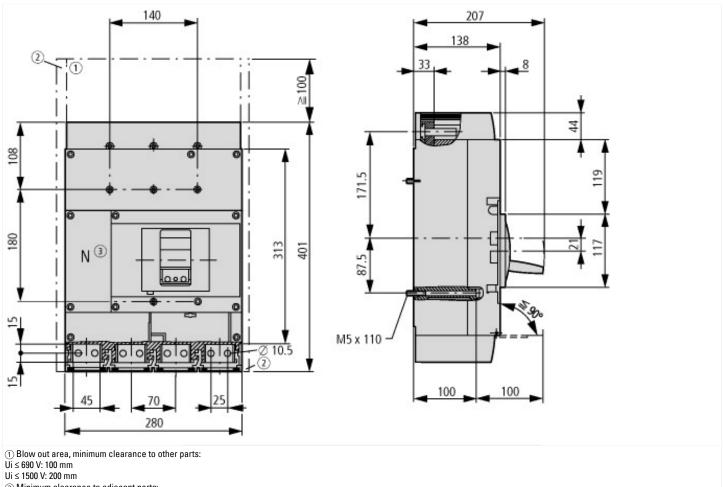
Technical data ETIM 7.0

Low-voltage industrial components (EG000017) / Switch disconnector (EC000216)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnector (ecl@ss10.0.1-27-37-14-0 [AKF060013])			
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			
Max. rated operation voltage Ue AC	V	400	
Rated operating voltage	V	690 - 690	
Rated permanent current lu	А	800	
Rated permanent current at AC-23, 400 V	А		
Rated permanent current at AC-21, 400 V	А	0	
Rated operation power at AC-3, 400 V	kW	0	

Rade operat AC-23, 400 V RM RM Solution power at AC-23, 400 V Solution power po			
Withing power at 400 V Image: Market of the second se	Rated short-time withstand current Icw	kA	25
KA KA 100 Number of poles 4 4 Number of auxiliary contacts as normally closed contact 6 6 Number of auxiliary contacts as normally closed contact 6 6 Number of auxiliary contacts as change-over contact 6 6 Number of auxiliary contacts as change-over contact 6 6 Number of auxiliary contacts as change-over contact 6 6 Number of auxiliary contacts as change-over contact 6 6 Number of auxiliary contacts as change-over contact 6 6 Number of auxiliary contacts as change-over contact 6 6 Number of auxiliary contacts as change-over contact 6 6 Number of auxiliary contacts as change-over contact 6 6 Number of auxiliary contacts as change-over contact 6 6 Number of auxiliary contacts as change-over contact 6 6 Number of auxiliary contacts as change-over contact 6 6 Suitable for fort mounting centre 6 6 6 Suitable for intermediate mounting 6 6	Rated operation power at AC-23, 400 V	kW	450
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 vs Motor drive integrated No Notage release optional vs Device construction Sol Suitable for ground mounting No Suitable for front mounting 4-hole No Suitable for intermediate mounting No Suitable for intermediate mounting Yes Suitable for intermediate mountin	Switching power at 400 V	kW	0
Aux advisory 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 Yes Device construction Yes Suitable for ground mounting Yes Suitable for front mounting 4-hole Yes Suitable for drive integrated Yes Suitable for first mounting centre Yes Suitable for first mounting 4-hole Yes Suitable for intermediate mounting Yes Colour control element Yes Type of control element Yes Suitable for intermediate mounting Yes Suitable for intermediate mounting Yes Suitable for intermediate mounting Yes Suitable for intermediate moun	Conditioned rated short-circuit current Iq	kA	100
Number of auxiliary contacts as normally open contact 0 Number of auxiliary contacts as normally open contact 0 Motor drive optional 0 Motor drive optional Yes Notage release optional Yes Device construction Yes Suitable for ground mounting Yes Suitable for front mounting 4-hole Yes Suitable for intermediate mounting Yes Suitable for interm	Number of poles		4
Number of auxiliary contacts as change-over contact Image: sea prior of an	Number of auxiliary contacts as normally closed contact		0
Motor drive optional Yes Motor drive integrated No Voltage release optional Yes Device construction Suitable for ground mounting Suitable for ground mounting 4-hole Suitable for front mounting 4-hole Suitable for front mounting centre Yes Suitable for front mounting centre Yes Suitable for intermediate mounting Yes Suitable for intermediate mounting Yes Colour control element Yes Type of control element Yes Type of electrical connection of main circuit Yes Built-in device fixed built-in technique Yes Suitable for intermediate mounting Yes Colour control element Yes Interlockable Yes Type of electrical connection of main circuit Yes Built connection Sector intermediate mounting Built connection Sector intermediate mounting Suitable for intermediate mounting Yes Suitable for intermediate mounting Yes Suitable for intermediate mounting Yes Suitable	Number of auxiliary contacts as normally open contact		0
Motor drive integrated Motor drive integrated No Wotage release optional Yes Device construction Yes Device construction Yes Suitable for ground 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 Yes Type of control element Yes Type of electrical connection of main circuit Yes Bugree of protection (IP), front side Yes	Number of auxiliary contacts as change-over contact		0
Voltage release optional Yes Device construction Kes Built-in device fixed built-in technique Suitable for ground mounting Yes No Suitable for front mounting 4-hole No No Suitable for front mounting centre No No Suitable for distribution board installation Yes No Suitable for intermediate mounting Yes No Colour control element Yes No Type of control element Sector Rocker lever Type of electrical connection of main circuit Yes Bolt connection But op of the control (IP), front side Yes No	Motor drive optional		Yes
Device constructionBills-in device fixed built-in techniqueSuitable for ground mountingYesSuitable for front mounting 4-holeNoSuitable for front mounting centreYesSuitable for fixed built-in techniqueYesSuitable for distribution board installationYesSuitable for intermediate mountingYesColour control elementYesType of control elementSector Protection of main circuitType of electrical connection of main circuitYesBuilt- indevice fixed built-in techniqueYesType of protection (IP), front sideYesBuilt- indevice fixed built-in techniqueYesBuilt- indevice fixed built-in techniqueYesType of electrical connection of main circuitYesBuilt- indevice fixed built-in techniqueYesBuilt- indevic	Motor drive integrated		No
Suitable for ground 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 Yes Type of control element Source lever Type of electrical connection of main circuit Yes Burger of protection (IP), front side Internoction	Voltage release optional		Yes
Suitable for front mounting 4-hole No Suitable for front mounting centre No Suitable for distribution board installation Yes Suitable for intermediate mounting Fes Colour control element Grey Type of control element Yes Interlockable Yes Type of electrical connection of main circuit Set element Begree of protection (IP), front side Set element	Device construction		Built-in device fixed built-in technique
Suitable for front mounting centre No Suitable for distribution board installation Yes Suitable for intermediate mounting Yes Colour control element Grey Type of control element Rocker lever Interlockable Yes Type of electrical connection of main circuit Sol to connection Degree of protection (IP), front side Sol to connection	Suitable for ground mounting		Yes
Suitable for distribution board installationYesSuitable for intermediate mountingYesColour control elementGreyType of control elementRocker leverInterlockableYesType of electrical connection of main circuitSol to an elementDegree of protection (IP), front sideSol to an element	Suitable for front mounting 4-hole		No
Suitable for intermediate mounting Yes Colour control element Grey Type of control element Rocker lever Interlockable Yes Type of electrical connection of main circuit Sol connection Degree of protection (IP), front side Sol connection	Suitable for front mounting centre		No
Colour control element Grey Type of control element Rocker lever Interlockable Yes Type of electrical connection of main circuit Bolt connection Degree of protection (IP), front side Image: State	Suitable for distribution board installation		Yes
Type of control element Rocker lever Interlockable Yes Type of electrical connection of main circuit Solt connection Degree of protection (IP), front side Image: Solt connection control contro control control cont	Suitable for intermediate mounting		Yes
Interlockable Yes Type of electrical connection of main circuit Model Degree of protection (IP), front side Image: Alexandre State	Colour control element		Grey
Type of electrical connection of main circuit Bolt connection Degree of protection (IP), front side IP20	Type of control element		Rocker lever
Degree of protection (IP), front side	Interlockable		Yes
	Type of electrical connection of main circuit		Bolt connection
Degree of protection (NEMA)	Degree of protection (IP), front side		IP20
	Degree of protection (NEMA)		

Dimensions



② Minimum clearance to adjacent parts: Ui ≤ 1500 V: 70 mm

Additional product information (links)

IL01210018Z circuit-breaker LZM4, switch-disconnector LN4

IL01210018Z circuit-breaker LZM4, switchdisconnector LN4 https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL01210018Z2017_05.pdf