DATASHEET - LN2-4-200-I



Switch-disconnector, 4 p, 200A, frame size 2

Part no. LN2-4-200-I Catalog No. 112006



Similar to illustration

Delivery program			
Product range			Switch-disconnectors
Protective function			Disconnectors/main switches
Standard/Approval			IEC
Installation type			Fixed
Construction size			LN2
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.
Standard equipment			Screw connection
Switch positions			l, +, 0
Rated current = rated uninterrupted current	$I_n = I_u$	Α	200
Short-circuit protection max. fuse gL-characteristic		A gL	250

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Technical data			
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	$\boldsymbol{I}_n = \boldsymbol{I}_u$	Α	200
Overvoltage category/pollution degree			III/3
Rated insulation voltage	U_{i}	V	690
Use in unearthed supply systems		V	≦ 690
Rated short-circuit making capacity			
690 V 50/60 H	Ic	kA	5.5
Rated short-time withstand current			
t = 0.3 s	I _{cw}	kA	3.5
t = 1 s	I _{cw}	kA	3.5
Rated conditional short-circuit current			
With back-up fuse			PN2(N2)-160250: 250
400 415 V		kA	100
690 V		kA	80
With downstream fuse		A gG/gL	PN2(N2)-160250: 250
400 415 V		kA	100
690 V		kA	80
Rated making and breaking capacity			
Rated operational current	I _e	A	
415 V	I _e	Α	250
690 V	I _e	Α	250
415 V	l _e	Α	250
690 V	I _e	Α	250
Lifespan, mechanical	Operations		20000
Max. operating frequency		Ops/h	120
Lifespan, electrical			
400 V 50/60 Hz	Operations		7500

690 V 50/60 Hz	Operations		5000
400 V 50/60 Hz	Operations		6000
415 V 50/60 Hz	Operations		6000
690 V 50/60 Hz	Operations		4000
Total break time at short-circuit		ms	<10
Terminal capacity			
Standard equipment			Screw connection
Round copper conductor			
Box terminal			
Solid		mm ²	1 x (4 - 16) 2 x (4 - 16)
Stranded		mm ²	1 x (25 - 185) 2 x (25 - 70)
Tunnel terminal			
Solid		mm^2	1 x (16 - 185)
Stranded			
Stranded		mm ²	1 x (25 - 185)
Bolt terminal and rear-side connection			
Direct on the switch			
Solid		mm ²	1 x (4 - 16)
Stranded		mm ²	2 x (4 - 16) 1 x (25 - 185)
			2 x (25 - 70)
Al conductors, Cu cable			
Tunnel terminal			
Solid		mm ²	1 x 16
Stranded			
Stranded		mm^2	1 x (25 - 185)
Bolt terminal and rear-side connection			
Flat copper strip, with holes	min.	mm	2 x 16 x 0.8
Flat copper strip, with holes	max.	mm	10 x 16 x 0.8
Cu strip (number of segments x width x segment thickness)			
Box terminal			
	min.	mm	2 x 9 x 0.8
	max.	mm	10 x 16 x 0.8
Bolt terminal and rear-side connection			
Flat copper strip, with holes	min.	mm	2 x 16 x 0.8
Flat copper strip, with holes	max.	mm	10 x 16 x 0.8
Copper busbar (width x thickness)	mm		
Bolt terminal and rear-side connection			
Screw connection			M8
Direct on the switch			
	min.	mm	16 x 5
	max.	mm	20 x 5
Control cables			
		mm ²	1 x (0.75 - 2.5)
			2 x (0.75 - 1.5)

Operations

7500

Design verification as per IEC/EN 61439

415 V 50/60 Hz

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	200
Equipment heat dissipation, current-dependent	P _{vid}	W	30.72
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

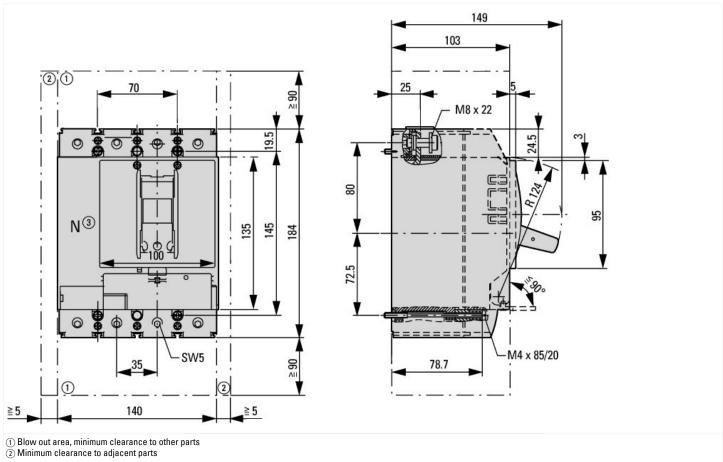
Low-voltage industrial components (EG000017) / Switch disconnector (EC000216)

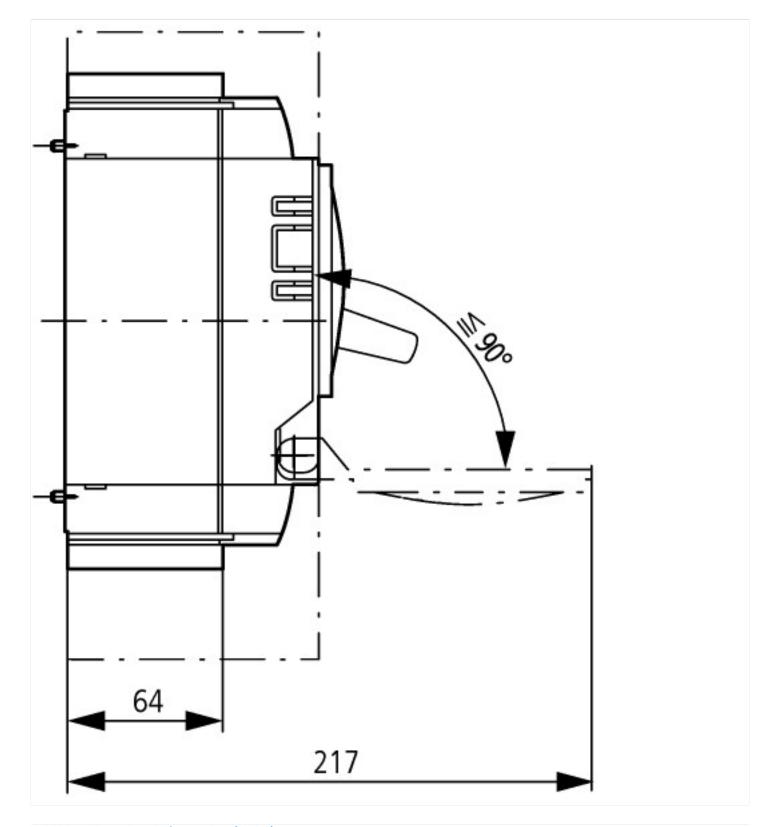
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnector (ecl@ss10.0.1-27-37-14-03 [AKF060013])

Version as safety switch Version as safety switch Version as safety switch Version as a reversing switch Number of switches Max. rated operation voltage Ue AC Rated operation voltage Ue AC Rated permanent current tu Rated permanent current at AC-23, 400 V Rated permanent current at AC-23, 400 V Rated permanent current at AC-24, 400 V Rated permanent current at AC-23, 400 V Rated permanent current at AC-23, 400 V Rated permanent current at AC-23, 400 V Rated operation power at AC-34, 400 V Rated operation power at AC-34, 400 V Rated operation power at AC-30, 400 V Rated operation power at AC-23, 400 V Rated permanent current te Rated operation power at AC-23, 400 V Rated permanent current te Rated operation power at AC-23, 400 V Rated permanent current te Rated operation power at AC-23, 400 V Rated permanent current te Rated operation power at AC-23, 400 V Rated permanent current te Rated operation power at AC-23, 400 V Rated permanent current te Rated operation power at AC-23, 400 V Rated permanent current te Rated operation power at AC-23, 400 V Rated permanent current te Rated operation power at AC-23, 400 V Rated permanent current te Rated operation power at AC-23, 400 V Rated permanent c	[AKF000013])		
Version as safety switch Version as emergency stop installation Version as reversing switch Number of poles Name and operation voltage Ue AC No 400 Rated operation voltage Ue AC No 400 Rated operation voltage Rated operation opwar at AC-23, 400 V Rated short-time withstand current tow Rated operation power at AC-3, 400 V Rated operation power at AC-23, 400 V Rated operation power at AC-23, 400 V Rated short-time withstand current low Rated operation power at AC-23, 400 V Row 0 Conditioned rated short-circuit current Iq Rated operation power at AC-23, 400 V Row 0 Conditioned rated short-circuit current Iq Rated operation power at AC-23, 400 V Row 0 Conditioned rated short-circuit current Iq Rated operation power at AC-23, 400 V Row 0 Conditioned rated short-circuit current Iq Rated operation power at AC-23, 400 V Row 0 Conditioned rated short-circuit current Iq Rated operation power at AC-23, 400 V Row 0 Conditioned rated short-circuit current Iq Rated operation power at AC-23, 400 V Row 0 Conditioned rated short-circuit current Iq Rated operation power at AC-23, 400 V Row 0 Conditioned rated short-circuit current Iq Rated operation power at AC-23, 400 V Row 0 Conditioned rated short-circuit current Iq Rated operation power at AC-23, 400 V Row 0 Conditioned rated short-circuit current Iq Rated operation power at AC-23, 400 V Row 0 Conditioned rated short-circuit current Iq Rated operation power at AC-23, 400 V Row 0 Conditioned rated short-circuit current Iq Rated oper	Version as main switch		Yes
Version as emergency stop installation Version as reversing switch Number of switches Max. rated operation voltage Ue AC Rated operation voltage Rated operation voltage Rated permanent current at AC-23, 400 V Rated permanent current at AC-21, 400 V Rated operation power at AC-3, 400 V Rated operation power at AC-23, 400 V Routhing power at 400 V Routhing power a	Version as maintenance-/service switch		Yes
Version as reversing switch Number of switches Max. rated operation voltage Ue AC Rated operating voltage Rated operating voltage Rated permanent current u Rated permanent current at AC-23, 400 V Rated permanent current at AC-21, 400 V Rated permanent current at AC-21, 400 V Rated permanent current at AC-21, 400 V Rated operation power at AC-3, 400 V Rated operation power at AC-3, 400 V Rated short-time withstand current low Rated operation power at AC-23, 400 V Rated operation power at AC-24, 400 V Rated operation power at AC-23, 400 V Rated operation power at AC-24, 400 V Rated operation power at AC-23, 400 V Rated operation power at AC-24, 400 V Rated	Version as safety switch		No
Number of switches Max. rated operation voltage Ue AC Rated operating voltage Rated permanent current lu Rated permanent current at AC-23, 400 V Rated permanent current at AC-23, 400 V Rated operation power at AC-3, 400 V Rated operation power at AC-3, 400 V Rated operation power at AC-3, 400 V Rated short-time withstand current lcw Rated short-time withstand current lcw Rated short-time vinthand current lcw Rated operation power at AC-23, 400 V Rated short-time vinthand current lcw Rated operation power at AG-3, 400 V Rated short-time vinthand current lcw Rated operation power at AG-3, 400 V Rated permanent current lcw Rated operation power at AG-3, 400 V Rated permanent current lcw Rated operation power at AG-3, 400 V Rated operation power at AG-3, 4	Version as emergency stop installation		Yes
Max. rated operation voltage Ue AC V 400 Rated operating voltage V 690 - 690 Rated permanent current Iu A 200 Rated permanent current at AC-23, 400 V A 0 Rated operation power at AC-3, 400 V kW 0 Rated operation power at AC-23, 400 V kW 110 Rated operation power at AC-23, 400 V kW 100 Switching power at 400 V kW 0 Conditioned rated short-circuit current Iq kA 100 Number of poles KW 100 Number of auxiliary contacts as normally closed contact V 0 Number of auxiliary contacts as normally open contact V 0 Number of auxiliary contacts as change-over contact V 0 Motor drive optional Yes Motor drive integrated V Ves Voltage release optional Yes Built-in device fixed built-in technique Suitable for ground mounting Yes No Suitable for front mounting 4-hole No No Suitable for fro	Version as reversing switch		No
Rated operating voltage V 690 - 690 Rated permanent current lu A 200 Rated permanent current at AC-23, 400 V A 0 Rated operation power at AC-31, 400 V kW 0 Rated short-time withstand current lcw kA 3.5 Rated operation power at AC-23, 400 V kW 110 Switching power at 400 V kW 100 Conditioned rated short-circuit current lq kA 100 Number of poles 4 100 Number of auxiliary contacts as normally closed contact 0 0 Number of auxiliary contacts as change-over contact Yes 0 Motor drive optional Yes Yes Motor drive integrated Yes No Voltage release optional Yes Suitable for ground mounting Yes Suitable for front mounting 4-hole No No Suitable for front mounting centre No No Suitable for front mounting centre No No	Number of switches		
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Rated permanent current at AC-23, 400 V Rated permanent current at AC-21, 400 V Rated peration power at AC-3, 400 V Rated short-time withstand current Icw Rated short-time withstand current Icw Rated short-dime withstand current Icw Rated short-dime withstand current Icw Rated short-dime withstand current Icw Rated operation power at AC-23, 400 V RW Rotiching power at 400 V Conditioned rated short-circuit current Iq RW	Rated operating voltage	V	690 - 690
Rated permanent current at AC-21, 400 V Rated operation power at AC-3, 400 V Rated short-time withstand current lcw Rated operation power at AC-23, 400 V Rated operation power at 400 V Conditioned rated short-circuit current lq Rated operation power at 400 V Rounder of poles Rated operation power at 400 V Rated operation power at AC-23, 400 V Rated operation power at AC-3, 400 V Rated operation power at AC-23, 400	Rated permanent current lu	Α	200
Rated operation power at AC-3, 400 V Rated short-time withstand current lcw Rated operation power at AC-23, 400 V RW 110 Switching power at 400 V Conditioned rated short-circuit current lq Number of poles Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as normally closed contact Number of aux	Rated permanent current at AC-23, 400 V	Α	
Rated short-time withstand current Icw Rated operation power at AC-23, 400 V KW 110 Switching power at 400 V Conditioned rated short-circuit current Iq KA 100 Number of poles Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Motor drive optional Motor drive integrated Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre	Rated permanent current at AC-21, 400 V	Α	0
Rated operation power at AC-23,400 V Switching power at 400 V Conditioned rated short-circuit current Iq kA 100 Number of poles Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Notor drive optional Motor drive integrated Voltage release optional Device construction Suitable for front mounting 4-hole Suitable for front mounting 4-hole Suitable for front mounting centre	Rated operation power at AC-3, 400 V	kW	0
Switching power at 400 V Conditioned rated short-circuit current Iq kA 100 Number of poles Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Notor drive integrated Notor drive integrated Notor drive integrated Voltage release optional Voltage release optional Suitable for ground mounting Suitable for ground mounting Suitable for front mounting 4-hole No Suitable for front mounting centre No	Rated short-time withstand current lcw	kA	3.5
Conditioned rated short-circuit current Iq kA 100 Number of poles Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Number of integrated Notor drive integrated Notor drive integrated Notor drive integrated Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre No No	Rated operation power at AC-23, 400 V	kW	110
Number of poles Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact O No Notage release optional Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contacts Number of auxiliary contacts as normally open contacts Number of auxiliary contacts as normally open contacts Number	Switching power at 400 V	kW	0
Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as normally open contact No Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact No Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact No Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact No Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact No No No No No No No No No N	Conditioned rated short-circuit current Iq	kA	100
Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Notor drive optional Motor drive integrated No Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre No O O O O O O O O O O O O O	Number of poles		4
Number of auxiliary contacts as change-over contact Motor drive optional Motor drive integrated No Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for front mounting centre No O O O O O O O O O O O O O	Number of auxiliary contacts as normally closed contact		0
Motor drive optional Motor drive integrated Motor drive integrated No Voltage release optional Ves Device construction Built-in device fixed built-in technique Suitable for ground mounting Yes Suitable for front mounting 4-hole No Suitable for front mounting centre No	Number of auxiliary contacts as normally open contact		0
Motor drive integrated No Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre No No No No No No No No No N	Number of auxiliary contacts as change-over contact		0
Voltage release optional Yes Device construction Built-in device fixed built-in technique Suitable for ground mounting Yes Suitable for front mounting 4-hole No Suitable for front mounting centre No	Motor drive optional		Yes
Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre No No	Motor drive integrated		No
Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre No No	Voltage release optional		Yes
Suitable for front mounting 4-hole No Suitable for front mounting centre No	Device construction		Built-in device fixed built-in technique
Suitable for front mounting centre No	Suitable for ground mounting		Yes
	Suitable for front mounting 4-hole		No
Suitable for distribution board installation Yes	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	Screw connection
Degree of protection (IP), front side	IP20
Degree of protection (NEMA)	

Dimensions





Additional product information (links)

IL01206012Z circuit-breaker LZMB2, switch-disconnector LN2

IL01206012Z circuit-breaker LZMB2, switch-disconnector LN2

 $ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL01206012Z2017_05.pdf$