Switch-disconnector, 3 p, 100A, frame size 1

Part no. LN1-100-I Catalog No. 111995



Similar to illustration

Delivery program

Standard (Approved)	Product range			Switch-disconnectors
Interal also one you	Protective function			Disconnectors/main switches
Constructions size INTERPRESENTATION (CONTRICTION SIZE) Minimisant the mancresistes in clicking positive rinve in ECEN 80204 and VDE 0103. Size sharing characteristes in ECEN 80243 and VDE 6000. Number of poises 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 —	Standard/Approval			IEC
Description Part	Installation type			Fixed
	Construction size			LN1
	Description			Isolating characteristics to IEC/EN 60947-3 and VDE 0660.
Switch positions In a III A D 100 Rated current in roted uninterrupted current In a III A Q 100 Technical data Switch-disconnectors Switch-disconnectors Based surge voltage invariability Ump V 6000 Main contacts V De 6000 Audiliary contacts In a III V AC 690 Rated operational voltage Up V AC 690 Rated current rated uninterrupted current In a III III III Rated current rated uninterrupted current In a III III III III Rated short-directuri making capacity III V 690 III	Number of poles			3 pole
Rated corrent and uninterrupted current Face of Correct Correct protection max. fuse glcharacteristic Face of Correct Correct protection max. fuse glcharacteristic Face of Correct Correct Protection max. fuse glcharacteristic Face of Correct Protection Face o	Standard equipment			Box terminal
	Switch positions			l, +, 0
Name	Rated current = rated uninterrupted current	$I_n = I_u$	Α	100
Switch-disconnectors Uping Image: Company workings (mariability) Uping Image: Company workings (mariability) Vocant (mariability) Vocant (mariability) Vocant (mariability) VAC 600 Account (mariability) VAC 600 Account (mariability) VAC 600 Account (mariability)	Short-circuit protection max. fuse gL-characteristic		A gL	125
Switch-disconnectors Uping Image: Company workings (mariability) Uping Image: Company workings (mariability) Vocant (mariability) Vocant (mariability) Vocant (mariability) VAC 600 Account (mariability) VAC 600 Account (mariability) VAC 600 Account (mariability)	Technical data			
Main contacts V 6000 Auxiliary contacts V 6000 Rated operational voltage V 600 Rated operationing frequency f VZ 600 Rated operationing frequency f HZ 500 Rated operationing frequency f HZ 100 Rated operationing frequency U V 600 Rated current - rated uninterrupted current U V 800 Use in unearthed supply systems V 900 900 Rated short-circuit making capacity V 800 800 Rated short-time withstand current I V 2 2 Rated short-time withstand current I V 2	Switch-disconnectors			
Auxiliary contacts V 6000 Rated operational voltage Ue V AC 690 Rated operating frequency f Hz 50460 Rated operating frequency In = I _u A 100 Overvoltage category/pollution degree III/3 III/3 Rated insulation voltage U V 690 Use in unearthed supply systems V 690 Rated short-circuit making capacity V 690 Rated short-time withstand current V 2 I = 1 s I _c KA 2 Rated short-circuit current I _c KA 2 Rated conditional short-circuit current I _c KA 2 Rated conditional short-circuit current I _c KA 8 400 415 V KA 2 PNI(NT)-63125.125 501 V KA 2 PNI(NT)-63125.125 400 415 V KA 10 1 400 415 V KA 10 1 400 V	Rated surge voltage invariability	U_{imp}		
Rated operational voltage Ue V AC 890 Rated operating frequency f Hz 5000 Rated current = rated uninterrupted current n = lu A 1000 Overvoltage category/pollution degree u V V 0 690 Rated insulation voltage y E 890 690 Rated short-circuit making capacity v E 800 Rated short-time withstand current v X X X X X X X X X	Main contacts		٧	6000
Rated operating frequency f Hz 50/00 Rated current = rated uninterrupted current In = Iµ A 100 Overvoltage category/pollution degree III/3 800 Rated insulation voltage Up 890 890 Use in unearthed supply systems V 690 100 Rated short-circuit making capacity Ic KA 2 Rated short-time withstand current Icw KA 2 I = 1 s Icw KA 2 Rated conditional short-circuit current V 800/2 PMININI-83125: 125 With back-up fuse A GG/g PNININI-80160 PNININI-80160 400 415 V KA 100 PNININI-180: 160 400 415 V A GG/g PNININI-180: 160 PNININI-180: 160 400 415 V B Q PNININI-180: 160 PNININI-180: 160 400 415 V B Q PNININI-180: 160 PNININI-180: 160 400 V B Q A GG/g PNININI-180: 160 400 V B Q B Q<	Auxiliary contacts		٧	6000
Rated current = rated uninterrupted current In = Iu A 100 Overvoltage category/pollution degree Ui V 690 Rated insulation voltage V 690 Use in unearthed supply systems V 690 Rated Short-circuit making capacity Ic K 2 Rated Short-time withstand current Ic K 2 t = 1s Ic K 2 Rated Conditional short-circuit current V Y 2 With back-up fuse A GG/S NININI-83125: 125 PNI(NI)-180: 160 NININI-180: 160 With downstream fuse A GG/S NININI-180: 160 NINI	Rated operational voltage	Ue	V AC	690
Overvoltage category/pollution degree u	Rated operating frequency	f	Hz	50/60
Rated insulation voltage U _i V 690 Use in unearthed supply systems V 590 Rated Short-circuit making capacity V 590 800 V 5060 H Ic kA 2 Rated Short-time withstand current Ic kA 2 t= 0.3 s Icw kA 2 Rated conditional short-circuit current Icw kA 2 With back-up fuse A 9 G/gL PNI/(N1)-160: 160 PNI/(N1)-160: 160 890 V kA 10 PNI/(N1)-160: 160 990 V kA 10 PNI/(N1)-160: 160 890 V kA 10 PNI/(N1)-160: 160 890 V kA 10 PNI/(N1)-160: 160 890 V kA 10 PNI/(N1)-160: 160 815 V kB 10 PNI/(N1)-160: 160 815 V kB 10 PNI/(N1)-160: 160 816 V kB 10 PNI/(N1)-160: 160 817 V kB 10 PNI/(N1)-160: 160 <	Rated current = rated uninterrupted current	$I_n = I_u$	Α	100
Second S	Overvoltage category/pollution degree			III/3
Rated short-circuit making capacity	Rated insulation voltage	Ui	V	690
690 V 50/60 H Ic kA 2.8 Rated short-time withstand current t = 1 s Icw kA 2 Rated conditional short-circuit current With back-up fuse A 96/9 PN1(N1)-63125: 125 PN1(N1)-160: 160 690 V kA 100 800 V kA 100 Rated operational current kA 100 815 V kA 100 Rated operational current Ic A 160 690 V A 160 600 415 V A 160 600	Use in unearthed supply systems		V	≦ 690
Rated short-time withstand current t = 0.3 s I _{cw} kA 2 t = 1 s I _{cw} kA 2 Rated conditional short-circuit current With back-up fuse A 96/9t PN1(N1)-63125: 125 PN1(N1)-160: 160 400415 V KA 100 890 V KA 80 With downstream fuse KA 100 400415 V KA 100 690 V KA 10 Rated making and breaking capacity Rated making and breaking capacity V 415 V I _e A 690 V I _e A 415 V I _e A 690 V I _e A 415 V I _e A 690 V I _e A 690 V I _e A 690 V I _e A 160 I _e A 690 V I _e A 160 I _e A	Rated short-circuit making capacity			
t = 1.3 s I _{cw} kA 2 Rated conditional short-circuit current I _{cw} kA 2 Rated conditional short-circuit current Virib back-up fuse A 9 6/9L PN1(N1)-63125: 125 PN1(N1)-160: 160 400 415 V kA 100 690 V kA 26/9L PN1(N1)-160: 160 400 415 V kA 100 690 V kA 100 Rated making and breaking capacity kA 100 Rated operational current I _e A 160 690 V I _e A 160 415 V I _e A 160 415 V I _e A 160 415 V I _e A 160 690 V I _e A 160 690 V I _e A 160 Lifespan, mechanical Operations 20000	690 V 50/60 H	Ic	kA	2.8
Table 1			I. A	
Rated conditional short-circuit current With back-up fuse A gG/gL with back-up fuse PN1(N1)-63125: 125 PN1(N1)-160: 160 400 415 V kA 100 690 V kA 80 With downstream fuse A gG/gL PN1(N1)-63125: 125 PN1(N1)-160: 160 400 415 V kA 100 690 V kA 10 Rated making and breaking capacity kA 10 415 V le A 415 V le A 690 V le A 415 V le A 690 V le A 415 V le A 690 V le A 100 C le				
With back-up fuse A gG/gL PN1(N1)-63125: 125 PN1(N1)-160: 160 400 415 V kA 100 690 V kA 80 400 415 V kA PN1(N1)-63125: 125 PN1(N1)-160: 160 400 415 V kA 10 690 V kA 10 Rated making and breaking capacity kA 10 415 V le A 415 V le A 690 V le A 415 V le A 415 V le A 690 V le A 415 V le A 690 V le A <t< td=""><td></td><td>I_{cw}</td><td>kA</td><td>2</td></t<>		I _{cw}	kA	2
690 V kA 80 With downstream fuse A gG/gL PN1(N1)-63125: 125 PN1(N1)-160: 160 400 415 V kA 100 690 V kA 10 Rated making and breaking capacity Rated operational current Ie A 415 V Ie A 690 V Ie A 415 V Ie A 690 V Ie A 415 V Ie A 690 V Ie A 690 V Ie A 690 V Ie A 690 V Ie A 160 Ie 690 V Ie A 160 Ie A 160 <td>With back-up fuse</td> <td></td> <td>A gG/gL</td> <td></td>	With back-up fuse		A gG/gL	
With downstream fuse A gG/gL PN1(N1)-63125: 125 PN1(N1)-160: 160 400 415 V kA 100 690 V kA 10 Rated making and breaking capacity Rated operational current Ie A 415 V Ie A 160 690 V Ie A 160 415 V Ie A 160 690 V Ie A 160 690 V Ie A 160 690 V Ie A 160 1690 V Ie	400 415 V		kA	100
PN1(N1)-160: 160 PN1(N1)-160	690 V		kA	80
690 V kA 10 Rated making and breaking capacity Rated operational current I _e A I60 415 V I _e A I60 690 V I _e A I60 415 V I _e A I60 690 V I _e A I60 Lifespan, mechanical Operations 20000	With downstream fuse		A gG/gL	PN1(N1)-63125: 125 PN1(N1)-160: 160
Rated making and breaking capacity Rated operational current Ie A 160 690 V Ie A 160 415 V Ie A 160 690 V Ie A 160 Lifespan, mechanical	400 415 V		kA	100
Rated operational current I _e A 415 V I _e A 160 690 V I _e A 160 415 V I _e A 160 690 V I _e A 160 Lifespan, mechanical Operations 2000	690 V		kA	10
415 V I _e A 160 690 V I _e A 160 415 V I _e A 160 690 V I _e A 160 Lifespan, mechanical Operations 20000				
690 V I _e A 160 415 V I _e A 160 690 V I _e A 160 Lifespan, mechanical Operations 20000	Rated operational current	I _e	Α	
415 V I _e A 160 690 V I _e A 160 Lifespan, mechanical Operations 20000	415 V	l _e	Α	160
690 V I _e A 160 Lifespan, mechanical Operations 20000	690 V	I _e	Α	160
Lifespan, mechanical Operations 20000	415 V	I _e	Α	160
	690 V	le	Α	160
Max. operating frequency Ops/h 120	Lifespan, mechanical	Operations		20000
	Max. operating frequency		Ops/h	120

Lifespan, electrical

Stranded

Direct on the switch
Solid

Stranded

Al conductors, Cu cable
Tunnel terminal
Solid

Stranded

Box terminal

Control cables

Stranded

Copper busbar (width x thickness)

Screw connection

Direct on the switch

Bolt terminal and rear-side connection

Cu strip (number of segments x width x segment thickness)

Bolt terminal and rear-side connection

400 V 50/60 Hz	Operations		10000
415 V 50/60 Hz	Operations		10000
690 V 50/60 Hz	Operations		7500
400 V 50/60 Hz	Operations		7500
415 V 50/60 Hz	Operations		7500
690 V 50/60 Hz	Operations		5000
Total break time at short-circuit		ms	< 10
Terminal capacity			
Standard equipment			Box terminal
Round copper conductor			
Box terminal			
Solid		mm ²	1 x (10 - 16) 2 x (6 - 16)
Stranded		mm ²	1 x (25 - 70) Up to 95 mm 2 can be connected depending on the cable manufacturer. 2 x 25 $$
Tunnel terminal			
Solid		mm^2	1 x 16
Stranded			

 $\,\mathrm{mm}^2$

 mm^2

 mm^2

 mm^2

mm²

mm

mm

mm

 $\,\mathrm{mm}^2$

min.

max.

mm

min.

max.

1 x (25 - 95)

1 x (10 - 16)

2 x (6 - 16)

1 x (25 - 70)

1 x 16

1 x (25 - 95)

 $2 \times 9 \times 0.8$

9 x 9 x 0.8

M6

12 x 5

16 x 5

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	In	Α	100
Equipment heat dissipation, current-dependent	P _{vid}	W	11.4
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 observed.
10.12 Electromagnetic compatibility	Is the panel builder's responsibility. The specifications for the switchgear must observed.
10.13 Mechanical function	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 6.0

lechnical data ETIM 6.0		
Low-voltage industrial components (EG000017) / Switch disconnector (EC000216)		
Electric engineering, automation, process control engineering / Low-voltage switc [AKF060010])	h technology / Off-load	switch, circuit breaker, control switch / Switch disconnector (ecl@ss8.1-27-37-14-03
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
Max. rated operation voltage Ue AC	V	400
Rated operating voltage	V	690 - 690
Rated permanent current lu	Α	100
Rated permanent current at AC-21, 400 V	Α	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	100
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		Yes
Motor drive integrated		No
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 center		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		Frame clamp

IP20