## **SIEMENS**

Data sheet 3LD2022-1TL11



SENTRON, Switch disconnector 3LD, main switch, 4-pole, lu: 16 A, Operating power / at AC-23 A at 400 V: 7.5 kW, front-mounted, knoboperated mechanism, black, 4-hole mounting of the handle

product brand name product designation design of the product display version / for switch position indicator manual operation type of switch design of the actuating element color / of the actuating element design of handle knob-operated mechanism, black type of switch design of handle type of switch design of handle knob-operated mechanism, black type of the driving mechanism / motor drive  Ceneral technical data number of poles size of switch disconnector mechanical service life (switching cycles) / typical electrical endurance (switching cycles) at AC-23 A / at 690 V operating frequency / maximum degree of pollution  Voltage insulation voltage / rated value operating voltage at AC / rated value operating frequency / rated value of the current / at AC / in hot operating slate / per pole  Current operational current / rated value	Model		
design of the product display version / for switch position indicator manual operation type of switch front mounted design of the actuating element color / of the actuating element design of handle knob-operated mechanism, black type of the driving mechanism / motor drive No  Ceneral technical data number of poles size of switch disconnector 1 mechanical service life (switching cycles) / typical electrical endurance (switching cycles) • at AC-23 A / at 690 V operating frequency / maximum degree of pollution  Voltage insulation voltage / rated value • parting voltage • at AC / rated value • minimum • maximum  Fool Hz • maximum  Fool Hz  degree of protection NEMA rating protection class IP / on the front Dissipation  Dissipation  Diversional current / rated value operating size / per pole  Current opperational current / rated value of operational current / rated value	product brand name	SENTRON	
display version / for switch position indicator manual operation  type of switch  design of the actuating element  color / of the actuating element  black design of handle type of the driving mechanism / motor drive  No  General technical data  number of poles  size of switch disconnector  mechanical service life (switching cycles) / typical electrical endurance (switching cycles)  • at AC-23 A / at 690 V  operating frequency / maximum  degree of pollution  Voltage insulation voltage / rated value operating voltage  • at AC-/ rated value  • minimum  • maximum  for hy  for yet end of the driving mechanism of the current / at AC / in hot operating state / per pole  Current operational current / rated value  operational current / rated value of the current / at AC / in hot operating state / per pole  Current operational current / rated value  operational current / rated value  operational current / rated value  operational current / rated value of the current / at AC / in hot operating state / per pole  Current operational current / rated value  operational current / rated value  operational current / rated value  operational current / rated value of the current / at AC / in hot operating state / per pole	product designation	3LD Switch disconnector	
operation type of switch design of the actuating element color / of the actuating element black design of handle knob-operated mechanism, black type of the driving mechanism / motor drive No  General technical data number of poles size of switch disconnector mechanical service life (switching cycles) / typical electrical endurance (switching cycles) / typical electrical endurance (switching cycles) • at AC-23 A / at 690 V operating frequency / maximum degree of pollution 3  Voltage insulation voltage / rated value operating voltage resistance / rated value • minimum • at AC / rated value • minimum • maximum  50 Hz  Protection class IP degree of protection NEMA rating protection class IP / on the front Dissipation  Dissipation  Overating state / per pole  Current operational current / rated value operating state / per pole  Current operational current / rated value  16 A  operational current	design of the product	Main switch	
design of the actuating element black color / of the actuating element black design of handle knob-operated mechanism, black type of the driving mechanism / motor drive No  General technical data number of poles 4 size of switch disconnector 1 mechanical service life (switching cycles) / typical 100 000 electrical endurance (switching cycles) / e at AC-23 A 1 at 690 V 600 operating frequency / maximum 50 1/h 690 V surge voltage resistance / rated value 690 V surge voltage resistance / rated value 690 V operating frequency / rated value 690 Hz  Protection class IP degree of protection NEMA rating 1, 3R, 4X, 12 protection class IP / or the front IP65 Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current operational current / rated value 16 A operational current / rated value 16 A		1 ON - 0 OFF	
color / of the actuating element design of handle type of the driving mechanism / motor drive No  Ceneral technical data number of poles size of switch disconnector mechanical service life (switching cycles) / typical electrical endurance (switching cycles) • at AC-23 A / at 690 V operating frequency / maximum degree of pollution 3  Voltage insulation voltage / rated value operating frequency / rated value • at AC / rated value • at AC / rated value • minimum • maximum  Protection class protection class IP degree of protection NEMA rating protection class IP / or the front plossipation power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current  center of the actuating dements whose value of the current / at AC / in hot operating state / per pole  Current  lessipation operational current / rated value 16 A operational current / rated value 16 A	type of switch	front mounted	
design of handle knob-operated mechanism, black type of the driving mechanism / motor drive No  General technical data  number of poles	design of the actuating element	selector switch	
type of the driving mechanism / motor drive  General technical data  number of poles  size of switch disconnector  mechanical service life (switching cycles) / typical  electrical endurance (switching cycles)  • at AC-23 A / at 690 V  operating frequency / maximum  degree of pollution  3  Voltage  insulation voltage / rated value  operating voltage  • at AC / rated value  operating frequency / rated value  • minimum  50 Hz  • maximum  60 Hz  Protection class  protection class IP  degree of protection NEMA rating  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current  operational current / rated value  operational current / rated value  operational current / rated value  operational current	color / of the actuating element	black	
number of poles size of switch disconnector mechanical service life (switching cycles) / typical electrical endurance (switching cycles) • at AC-23 A / at 690 V operating frequency / maximum degree of pollution  Voltage insulation voltage / rated value surge voltage resistance / rated value operating frequency / rated value • at AC / rated value • foo V operating voltage • at AC / rated value • minimum • maximum • maximum • foo Hz  Protection class  protection class IP degree of protection NEMA rating protection class IP / on the front  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current  operational current / rated value of the A operational current / rated value  16 A	design of handle	knob-operated mechanism, black	
number of poles size of switch disconnector 1 mechanical service life (switching cycles) / typical electrical endurance (switching cycles) • at AC-23 A / at 690 V operating frequency / maximum 50 1/h degree of pollution 3  Voltage insulation voltage / rated value 6 80 V surge voltage resistance / rated value 6 6 kV operating voltage • at AC / rated value 9 operating frequency / rated value 6 by V operating frequency / rated value 6 by V operating frequency / rated value 6 by V  operating frequency / rated value 6 by V  operating frequency / rated value 6 maximum 50 Hz  Protection class IP degree of protection NEMA rating 1, 3R, 4X, 12 protection class IP / on the front IP65  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current operational current / rated value 16 A	type of the driving mechanism / motor drive	No	
size of switch disconnector  mechanical service life (switching cycles) / typical  electrical endurance (switching cycles)  • at AC-23 A / at 690 V  operating frequency / maximum  degree of pollution  70	General technical data		
mechanical service life (switching cycles) / typical electrical endurance (switching cycles)  • at AC-23 A / at 690 V operating frequency / maximum 50 1/h degree of pollution 3  Voltage insulation voltage / rated value surge voltage resistance / rated value • at AC / rated value • at AC / rated value • minimum • maximum  50 Hz  Protection class  protection class IP degree of protection NEMA rating protection class IP / on the front Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current operational current / rated value  16 A operational current / rated value  16 A	number of poles	4	
electrical endurance (switching cycles)  • at AC-23 A / at 690 V  operating frequency / maximum  degree of pollution  3  Voltage  insulation voltage / rated value  operating voltage resistance / rated value  • at AC / rated value  • minimum  • maximum  50 Hz  • maximum  50 Hz  Protection class IP  degree of protection NEMA rating protection class IP / on the front  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current  operational current / rated value  16 A0  operational current  16 A  operational current	size of switch disconnector	1	
at AC-23 A / at 690 V operating frequency / maximum 50 1/h degree of pollution 3  Voltage insulation voltage / rated value surge voltage resistance / rated value operating voltage at AC / rated value operating frequency / rated value foo Hz  Protection class protection class IP degree of protection NEMA rating protection class IP / on the front Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current operational current / rated value 16 A operational current / rated value 16 A	mechanical service life (switching cycles) / typical	100 000	
operating frequency / maximum degree of pollution 3  Voltage insulation voltage / rated value 690 V surge voltage resistance / rated value 6 kV operating voltage • at AC / rated value 690 V  operating frequency / rated value 690 V  operating frequency / rated value • minimum • maximum 60 Hz  Protection class protection class IP degree of protection NEMA rating protection class IP / on the front  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current operational current / rated value 16 A operational current	electrical endurance (switching cycles)		
degree of pollution  Voltage  insulation voltage / rated value 690 V surge voltage resistance / rated value 6 kV operating voltage  • at AC / rated value 690 V operating frequency / rated value  • minimum 50 Hz  • maximum 60 Hz  Protection class protection class IP degree of protection NEMA rating 1, 3R, 4X, 12 protection class IP / on the front IP65  Dissipation power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current operational current / rated value 16 A operational current / rated value 5	• at AC-23 A / at 690 V	6 000	
insulation voltage / rated value  surge voltage resistance / rated value  operating voltage  • at AC / rated value  operating frequency / rated value  • minimum  • maximum  for Hz  protection class  protection class IP  degree of protection NEMA rating protection class IP / on the front  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current  operational current / rated value  insulation voltage / rated value of the current / at AC / in hot operating state / per pole  16 A	operating frequency / maximum	50 1/h	
insulation voltage / rated value 690 V surge voltage resistance / rated value 6 kV operating voltage  • at AC / rated value 690 V operating frequency / rated value • minimum 50 Hz • maximum 60 Hz  Protection class protection class IP IP65 degree of protection NEMA rating 1, 3R, 4X, 12 protection class IP / on the front IP65  Dissipation power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current operational current / rated value of A	degree of pollution	3	
surge voltage resistance / rated value  operating voltage  • at AC / rated value  operating frequency / rated value  • minimum  • maximum  foo Hz   Protection class  protection class IP  degree of protection NEMA rating protection class IP / on the front  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current  operational current / rated value  operational current / rated value  16 kV  68 kV  690 V  69	Voltage		
operating voltage	insulation voltage / rated value	690 V	
at AC / rated value operating frequency / rated value ominimum omaximum omaximum of 0 Hz  Protection class  protection class IP degree of protection NEMA rating protection class IP / on the front  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current operational current / rated value  16 A  operational current	surge voltage resistance / rated value	6 kV	
operating frequency / rated value  • minimum  • maximum  60 Hz   Protection class  protection class IP  degree of protection NEMA rating  protection class IP / on the front  IP65  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current  operational current / rated value  16 A  operational current	operating voltage		
minimum     maximum     m	at AC / rated value	690 V	
● maximum 60 Hz  Protection class  protection class IP IP65 degree of protection NEMA rating 1, 3R, 4X, 12 protection class IP / on the front IP65  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current  operational current / rated value for the current / at AC / in hot operational current / rated value for the current / at AC / in hot operational current / rated value for the current / at AC / in hot operational current / rated value for the current / at AC / in hot operational current / rated value for the current / at AC / in hot operational current / rated value for the current / at AC / in hot operational current / rated value for the current / at AC / in hot operational current / rated value for the current / at AC / in hot operational current / rated value for the current / at AC / in hot operational current / rated value for the current / at AC / in hot operational current / rated value for the current / at AC / in hot operational current / rated value for the current / at AC / in hot operational current / rated value for the current / at AC / in hot operational current / rated value for the current / at AC / in hot operational current / rated value for the current / at AC / in hot operational current / rated value for the current / at AC / in hot operational current / rated value for the current / at AC / in hot operational cu	operating frequency / rated value		
protection class IP IP65 degree of protection NEMA rating 1, 3R, 4X, 12 protection class IP / on the front IP65  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current  operational current / rated value for a current / at AC / in hot operational current / rated value for a current / at AC / in hot operational current / rated value for a current / at AC / in hot operational current / rated value for a current / at AC / in hot operational current / rated value for a current / at AC / in hot operational current / rated value for a current / at AC / in hot operational current / rated value for a current / at AC / in hot operational current / rated value for a current / at AC / in hot operational current / rated value for a current / at AC / in hot operational current / rated value for a current / at AC / in hot operational current / rated value for a current / at AC / in hot operational current / at AC / in hot operational current / rated value for a current / at AC / in hot operational current / rated value for a current / at AC / in hot operational current / rated value for a current / at AC / in hot operational current / rated value for a current / at AC / in hot operational current / rated value for a current / at AC / in hot operational current / rated value for a current / at AC / in hot operational current / at AC / in hot operationa	• minimum	50 Hz	
protection class IP  degree of protection NEMA rating 1, 3R, 4X, 12  protection class IP / on the front  IP65  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current  operational current / rated value  operational current  16 A	• maximum	60 Hz	
degree of protection NEMA rating protection class IP / on the front  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current  operational current / rated value  operational current  1, 3R, 4X, 12  IP65  0.5 W  16 A	Protection class		
protection class IP / on the front IP65  Dissipation  power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current  operational current / rated value 16 A  operational current	protection class IP	IP65	
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current  operational current / rated value operational current	degree of protection NEMA rating	1, 3R, 4X, 12	
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole  Current  operational current / rated value  operational current  16 A	protection class IP / on the front	IP65	
hot operating state / per pole  Current  operational current / rated value operational current	Dissipation		
operational current / rated value 16 A operational current		0.5 W	
operational current	Current		
	operational current / rated value	16 A	
• at 40 °C / rated value	operational current		
	<ul> <li>at 40 °C / rated value</li> </ul>	16 A	
• at 45 °C / rated value 16 A	• at 45 °C / rated value	16 A	

a at EO °C / rotad value	16 A
• at 50 °C / rated value	16 A
at 55 °C / rated value     at AC / rated value	16 A
at AC / rated value	16 A
Main circuit	
operational current	
• at AC-21 / at 690 V / rated value	16 A
• at AC-21 A / at 240 V / rated value	16 A
<ul><li>at AC-21 A / at 400 V / rated value</li></ul>	16 A
• at AC-21 A / at 440 V / rated value	16 A
at AC-23 A / at 400 V / rated value	16 A
operating power	
• at AC-23 A / at 240 V / rated value	4 kW
• at AC-23 A / at 400 V / rated value	8 kW
• at AC-23 A / at 440 V / rated value	7.5 kW
• at AC-23 A / at 690 V / rated value	8 kW
• at AC-3 / at 240 V / rated value	3 kW
• at AC-3 / at 400 V / rated value	6 kW
at AC-3 / at 690 V / rated value  Applications alreads	5.5 kW
Auxiliary circuit	0
number of CO contacts / for auxiliary contacts	0
number of NC contacts / for auxiliary contacts	0
number of NO contacts / for auxiliary contacts operating voltage / of auxiliary contacts / at AC / maximum	500 V
continuous current / of the auxiliary contact / rated value	10 A
insulation voltage / of the auxiliary switch / rated value	500 V
Suitability	
suitability for use	
main switch	Yes
switch disconnector	Yes
EMERGENCY OFF switch	No
• EMERGENCY OF SWITCH	NO
• safety switch	Vas
<ul><li>safety switch</li><li>maintenance/repair switch</li></ul>	Yes Yes
maintenance/repair switch	Yes Yes
maintenance/repair switch  Product details	Yes
maintenance/repair switch  Product details  product feature / can be locked into OFF position	
maintenance/repair switch  Product details  product feature / can be locked into OFF position accessories	Yes
maintenance/repair switch  Product details  product feature / can be locked into OFF position  accessories  product extension / optional	Yes Yes
maintenance/repair switch  Product details  product feature / can be locked into OFF position  accessories  product extension / optional      motor drive	Yes Yes No
maintenance/repair switch  Product details  product feature / can be locked into OFF position  accessories  product extension / optional     motor drive     voltage trigger	Yes Yes No No
maintenance/repair switch  Product details  product feature / can be locked into OFF position  accessories  product extension / optional      motor drive	Yes Yes No
maintenance/repair switch  Product details  product feature / can be locked into OFF position  accessories  product extension / optional     motor drive     voltage trigger  number of connectable NC contacts / for auxiliary contacts	Yes Yes No No
maintenance/repair switch  Product details  product feature / can be locked into OFF position  accessories  product extension / optional	Yes  Yes  No No 2
maintenance/repair switch  Product details  product feature / can be locked into OFF position  accessories  product extension / optional	Yes  Yes  No No 2 2
maintenance/repair switch  Product details  product feature / can be locked into OFF position  accessories  product extension / optional	Yes  No No 2 2 0
maintenance/repair switch  Product details  product feature / can be locked into OFF position  accessories  product extension / optional	Yes  No No 2 2 0 2
maintenance/repair switch  Product details  product feature / can be locked into OFF position  accessories  product extension / optional	Yes  No No 2 2 0 2
maintenance/repair switch  Product details  product feature / can be locked into OFF position  accessories  product extension / optional	Yes  No No 2 2 0 2
maintenance/repair switch  Product details  product feature / can be locked into OFF position  accessories  product extension / optional	Yes  No No No 2 2 4 6 mm
maintenance/repair switch  Product details  product feature / can be locked into OFF position  accessories  product extension / optional	Yes  No No No 2 2 4 6 mm
maintenance/repair switch  Product details  product feature / can be locked into OFF position  accessories  product extension / optional	Yes  No No No 2 2 4 6 mm
maintenance/repair switch  Product details  product feature / can be locked into OFF position  accessories  product extension / optional	Yes  No No No 2 2 4 6 mm
maintenance/repair switch  Product details  product feature / can be locked into OFF position  accessories  product extension / optional	Yes  No No No 2 2 4 6 mm  50 kA 3 kA 3 kA
maintenance/repair switch  Product details  product feature / can be locked into OFF position  accessories  product extension / optional	Yes  No No No 2 2 4 6 mm  50 kA 3 kA 3 kA

I2t value / with closed switch / at 690 V / for combination switch + gG fuse / maximum	3 kA2.s
design of the fuse link	
for short-circuit protection of the main circuit / required	fuse gL/gG: 20 A
for short-circuit protection of the auxiliary switch / required	fuse gL/gG: 10 A
operational current / of upstream fuse / rated value	20 A
according UL	
operational current / at AC / according to UL 508/UL 60947-4-1 / rated value	16 A
operating voltage / at AC / at 50/60 Hz / according to UL 508/UL 60947-4-1 / rated value	600 V
active power [hp] / at AC / at 480 V / according to UL 508/UL 60947-4-1 / rated value	7.5
active power [hp] / at AC / at 600 V / according to UL 508/UL 60947-4-1 / rated value	10
short-time withstand current (SCCR) / at 600 V / according to UL 508/UL 60947-4-1	5 kA
continuous current / of upstream fuse / according to UL / rated value	50 A
type of fuse / according to UL	RK5
Connections	
AWG number / as coded connectable conductor cross section / solid	
• maximum	10
• minimum	18
type of connectable conductor cross-sections / for copper conductor	
• solid	1x (16mm²)
<ul><li>finely stranded / with core end processing</li></ul>	1x (14mm²)
stranded	1x (16mm²)
type of connectable conductor cross-sections / for	
auxiliary contacts  ● solid	lateral auxiliary switch 2x (0,75 2,5mm²), 1x 4mm²; front auxiliary switch 1x (0,75 2,5mm²)
• finely stranded / with core end processing	lateral auxiliary switch 2x (0,75 1,5mm²), 1x 2,5mm²; front auxiliary switch 1x 2,5mm²
• stranded	lateral auxiliary switch 2x (0,75 2,5mm²), 1x 4mm²; front auxiliary switch 1x (0,75 2,5mm²)
type of electrical connection	
for main current circuit	box terminal
for auxiliary contacts	connection terminals
Mechanical Design	
height	66 mm
width	49 mm
depth	89.5 mm
type of device	fixed mounting
fastening method	Built-in unit fixed-mounted version
fastening method	
4-hole front mounting	Yes
front mounting with central attachment	No
• rail mounting	No
net weight	196 g
Environmental conditions	
ambient temperature / during operation	
• minimum	-25 °C
• maximum	55 °C
ambient temperature / during storage	
• minimum	-25 °C
• maximum	55 °C
General Product Approval	
The state of the s	





Confirmation





**Miscellaneous** 

**General Product Approval** 

**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping

other







Special Test Certificate



Environmental Confirmations

other

**Miscellaneous** 

## **Further information**

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/lowvoltage/catalogs

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3LD2022-1TL11

 $Service \& Support \ (Manuals, \ Certificates, \ Characteristics, \ FAQs, ...)$ 

https://support.industry.siemens.com/cs/ww/en/ps/3LD2022-1TL11

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3LD2022-1TL11

**CAx-Online-Generator** 

http://www.siemens.com/cax

**Tender specifications** 

http://www.siemens.com/specifications











