## **SIEMENS**

## **Data sheet**

## 3LD2164-0TB51-0US2



SENTRON, Switch disconnector 3LD, main switch, 3-pole, lu: 25 A, Operating power / at AC-23 A at 400 V: 9.5 kW, molded-plastic encapsulation for inch cable gland, rotary operating mechanism, black

Model			
product brand name	SENTRON		
product designation	3LD Switch disconnector		
design of the product	Main switch		
display version / for switch position indicator manual operation	1 ON - 0 OFF		
design of the actuating element	Short rotary knob		
design of handle	rotary operating mechanism, black		
type of the driving mechanism / motor drive	No		
General technical data	<u>,                                      </u>		
number of poles	3		
number of poles / note	N + PE		
type of device	fixed mounting		
type of switch	Molded-plastic enclosure for inch threaded joint		
size of switch disconnector	2		
mechanical service life (switching cycles) / typical	100 000		
electrical endurance (switching cycles)			
• at AC-23 A / at 690 V	6 000		
I2t value / with closed switch / at 690 V / for combination switch + gG fuse / maximum	4 kA2.s		
let-through I2t value / with closed switch / at 440 V / for combination switch + gG fuse / maximum	4 kA2.s		
operating frequency / maximum	50 1/h		
Voltage			
insulation voltage / rated value	690 V		
surge voltage resistance / rated value	6 kV		
operational current / at AC / rated value	25 A		
Protection class			
protection class IP	IP65		
degree of protection NEMA rating	1, 4X, 12		
protection class IP / on the front	IP65		
Dissipation			
power loss [W]			
<ul> <li>for rated value of the current / at AC / in hot operating state / per pole</li> </ul>	1.1 W		
<ul><li>per conductor / typical</li></ul>	1.1 W		
Current			
operational current			

<ul><li>at AC-23 A / at 400 V / rated value</li></ul>	20 A	
<ul> <li>at AC-21 / at 690 V / rated value</li> </ul>	25 A	
<ul><li>at AC-21 A / at 240 V / rated value</li></ul>	25 A	
at AC-21 A / at 440 V / rated value	25 A	
operational current / of upstream fuse / rated value	25 A	
let-through current / with closed switch		
<ul> <li>at 440 V / for combination switch + gG fuse / maximum</li> </ul>	3.5 kA	
<ul> <li>at 690 V / for combination switch + gG fuse / maximum permissible</li> </ul>	3.5 kA	
Main circuit		
operating power		
at AC-23 A / at 240 V / rated value	5 kW	
<ul><li>at AC-23 A / at 400 V / rated value</li></ul>	9.5 kW	
<ul> <li>at AC-23 A / at 440 V / rated value</li> </ul>	9.5 kW	
<ul> <li>at AC-23 A / at 690 V / rated value</li> </ul>	9.5 kW	
<ul><li>at AC-3 / at 240 V / rated value</li></ul>	4 kW	
<ul><li>at AC-3 / at 400 V / rated value</li></ul>	7.5 kW	
<ul><li>at AC-3 / at 690 V / rated value</li></ul>	7.5 kW	
operational current / rated value	25 A	
Auxiliary circuit		
number of CO contacts / for auxiliary contacts	0	
number of NC contacts / for auxiliary contacts	0	
number of NO contacts / for auxiliary contacts	0	
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	
	163	
<ul> <li>switch disconnector</li> </ul>	Vac	
switch disconnector     EMERGENCY OFF switch	Yes No	
EMERGENCY OFF switch	No	
<ul><li>EMERGENCY OFF switch</li><li>safety switch</li></ul>	No Yes	
<ul><li>EMERGENCY OFF switch</li><li>safety switch</li><li>maintenance/repair switch</li></ul>	No	
<ul> <li>EMERGENCY OFF switch</li> <li>safety switch</li> <li>maintenance/repair switch</li> </ul> Appearance	No Yes Yes	
EMERGENCY OFF switch     safety switch     maintenance/repair switch  Appearance color / of the actuating element	No Yes	
EMERGENCY OFF switch     safety switch     maintenance/repair switch  Appearance color / of the actuating element  Product details	No Yes Yes black	
EMERGENCY OFF switch     safety switch     maintenance/repair switch  Appearance color / of the actuating element  Product details     product function / can be locked into OFF position	No Yes Yes black Yes	
EMERGENCY OFF switch     safety switch     maintenance/repair switch  Appearance color / of the actuating element  Product details     product function / can be locked into OFF position number of bracket locks / maximum	No Yes Yes  black  Yes 3	
EMERGENCY OFF switch     safety switch     maintenance/repair switch  Appearance color / of the actuating element  Product details     product function / can be locked into OFF position number of bracket locks / maximum hasp thickness / of the bracket locks / minimum	No Yes Yes Yes  black  Yes 3 4 mm	
EMERGENCY OFF switch     safety switch     maintenance/repair switch  Appearance     color / of the actuating element  Product details     product function / can be locked into OFF position     number of bracket locks / maximum     hasp thickness / of the bracket locks / maximum  hasp thickness / of the bracket locks / maximum	No Yes Yes  black  Yes 3	
EMERGENCY OFF switch     safety switch     maintenance/repair switch  Appearance color / of the actuating element  Product details     product function / can be locked into OFF position number of bracket locks / maximum hasp thickness / of the bracket locks / minimum hasp thickness / of the bracket locks / maximum product extension / optional	No Yes Yes  black  Yes  3 4 mm 8 mm	
EMERGENCY OFF switch     safety switch     maintenance/repair switch  Appearance color / of the actuating element  Product details     product function / can be locked into OFF position number of bracket locks / maximum hasp thickness / of the bracket locks / minimum hasp thickness / of the bracket locks / maximum product extension / optional     motor drive	No Yes Yes  black  Yes 3 4 mm 8 mm	
EMERGENCY OFF switch     safety switch     maintenance/repair switch  Appearance     color / of the actuating element  Product details     product function / can be locked into OFF position     number of bracket locks / maximum     hasp thickness / of the bracket locks / minimum     hasp thickness / of the bracket locks / maximum     product extension / optional     motor drive     voltage trigger	No Yes Yes  black  Yes  3 4 mm 8 mm	
EMERGENCY OFF switch     safety switch     maintenance/repair switch  Appearance     color / of the actuating element  Product details     product function / can be locked into OFF position     number of bracket locks / maximum     hasp thickness / of the bracket locks / minimum     hasp thickness / of the bracket locks / maximum     product extension / optional     motor drive     voltage trigger  Short circuit	No Yes Yes  black  Yes 3 4 mm 8 mm	
EMERGENCY OFF switch     safety switch     maintenance/repair switch  Appearance     color / of the actuating element  Product details     product function / can be locked into OFF position     number of bracket locks / maximum     hasp thickness / of the bracket locks / minimum     hasp thickness / of the bracket locks / maximum  product extension / optional     motor drive     voltage trigger  Short circuit     conditional short-circuit current / with line-side fuse protection	No Yes Yes  black  Yes 3 4 mm 8 mm	
EMERGENCY OFF switch     safety switch     maintenance/repair switch  Appearance     color / of the actuating element  Product details     product function / can be locked into OFF position     number of bracket locks / maximum     hasp thickness / of the bracket locks / minimum     hasp thickness / of the bracket locks / maximum     product extension / optional          motor drive          voltage trigger  Short circuit     conditional short-circuit current / with line-side fuse protection          at 690 V / by gG fuse / rated value	No Yes Yes  black  Yes 3 4 mm 8 mm	
EMERGENCY OFF switch     safety switch     maintenance/repair switch  Appearance     color / of the actuating element  Product details     product function / can be locked into OFF position     number of bracket locks / maximum     hasp thickness / of the bracket locks / minimum     hasp thickness / of the bracket locks / maximum  product extension / optional     motor drive     voltage trigger  Short circuit     conditional short-circuit current / with line-side fuse protection	No Yes Yes  black  Yes 3 4 mm 8 mm  No No	
EMERGENCY OFF switch     safety switch     maintenance/repair switch  Appearance     color / of the actuating element  Product details     product function / can be locked into OFF position     number of bracket locks / maximum     hasp thickness / of the bracket locks / minimum     hasp thickness / of the bracket locks / maximum     product extension / optional          motor drive          voltage trigger  Short circuit     conditional short-circuit current / with line-side fuse protection          at 690 V / by gG fuse / rated value	No Yes Yes  black  Yes 3 4 mm 8 mm  No No	
EMERGENCY OFF switch     safety switch     maintenance/repair switch  Appearance     color / of the actuating element  Product details     product function / can be locked into OFF position     number of bracket locks / maximum     hasp thickness / of the bracket locks / minimum     hasp thickness / of the bracket locks / maximum     product extension / optional          motor drive          voltage trigger  Short circuit     conditional short-circuit current / with line-side fuse protection          at 690 V / by gG fuse / rated value  according UL     operational current / at AC / according to UL 508/UL	No Yes Yes  black  Yes 3 4 mm 8 mm  No No	
EMERGENCY OFF switch     safety switch     maintenance/repair switch  Appearance     color / of the actuating element  Product details     product function / can be locked into OFF position     number of bracket locks / maximum     hasp thickness / of the bracket locks / minimum     hasp thickness / of the bracket locks / maximum     product extension / optional          motor drive          voltage trigger  Short circuit     conditional short-circuit current / with line-side fuse protection          at 690 V / by gG fuse / rated value  according UL     operational current / at AC / according to UL 508/UL 60947-4-1 / rated value     operating voltage / at AC / at 50/60 Hz / according to UL	No Yes Yes  black  Yes 3 4 mm 8 mm  No No No	
EMERGENCY OFF switch     safety switch     maintenance/repair switch  Appearance     color / of the actuating element  Product details     product function / can be locked into OFF position     number of bracket locks / maximum     hasp thickness / of the bracket locks / minimum     hasp thickness / of the bracket locks / maximum  product extension / optional     motor drive     voltage trigger  Short circuit  conditional short-circuit current / with line-side fuse protection     at 690 V / by gG fuse / rated value  according UL     operational current / at AC / according to UL 508/UL 60947-4-1 / rated value  operating voltage / at AC / at 50/60 Hz / according to UL 508/UL 60947-4-1 / rated value  active power [hp] / at AC / at 480 V / according to UL	No Yes Yes  black  Yes 3 4 mm 8 mm  No No No  50 kA	
EMERGENCY OFF switch     safety switch     maintenance/repair switch  Appearance     color / of the actuating element  Product details     product function / can be locked into OFF position     number of bracket locks / maximum     hasp thickness / of the bracket locks / minimum     hasp thickness / of the bracket locks / maximum     product extension / optional          motor drive          voltage trigger  Short circuit  conditional short-circuit current / with line-side fuse protection          at 690 V / by gG fuse / rated value  according UL     operational current / at AC / according to UL 508/UL 60947-4-1 / rated value  operating voltage / at AC / at 50/60 Hz / according to UL 508/UL 60947-4-1 / rated value  active power [hp] / at AC / at 480 V / according to UL 508/UL 60947-4-1 / rated value  active power [hp] / at AC / at 600 V / according to UL	No Yes Yes  black  Yes 3 4 mm 8 mm  No No No 10	

continuous current / of upstream fuse / according to UL / rated value	50 A
type of fuse / according to UL	RK5
Number	
number of connectable NC contacts / for auxiliary contacts / attachable / maximum	3
number of connectable NO contacts / for auxiliary contacts / attachable / maximum	5
number of connectable CO contacts / for auxiliary contacts / attachable / maximum	0
Connections	
AWG number / as coded connectable conductor cross section / solid	
• maximum	8
• minimum	14
type of connectable conductor cross-sections / for copper conductor	
• solid	1x (1,516mm²)
<ul> <li>finely stranded / with core end processing</li> </ul>	1x (1,510mm²)
stranded	1x (1,516mm²)
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 1,5mm $^2$ ), 1x 2,5mm $^2$ ; front auxiliary switch 1x 2,5mm $^2$
• stranded	lateral auxiliary switch 2x (0,75 $\dots$ 2,5mm²), 1x 4mm²; front auxiliary switch 1x (0,75 $\dots$ 2,5mm²)
type of electrical connection	
<ul> <li>for main current circuit</li> </ul>	box terminal
<ul> <li>for auxiliary contacts</li> </ul>	connection terminals
Requirements	
design of the fuse link	
<ul> <li>for short-circuit protection of the main circuit / required</li> </ul>	fuse gL/gG: 25 A
<ul> <li>for short-circuit protection of the auxiliary switch / required</li> </ul>	fuse gL/gG: 10 A
Mechanical Design	
height	164 mm
width	100 mm
depth	118 mm
fastening method	Complete unit in enclosure
fastening method	
<ul> <li>4-hole front mounting</li> </ul>	No
<ul> <li>front mounting with central attachment</li> </ul>	Yes
• rail mounting	No
net weight	475 g
Environmental conditions	
ambient temperature / during operation	
• minimum	-25 °C
• maximum	55 °C
ambient temperature / during storage / minimum	-25 °C
Certificates	
reference code	
• acc. to DIN EN 61346-2	S
• acc. to IEC 81346-2	SF













Declaration of Conformity	Test Certificates		Marine / Shipping	other
C€	Miscellaneous	<u>Miscellaneous</u>	Lloyd's Register	Environmental Confirmations
EG-Konf.			register	

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=3LD2164-0TB51-0US2

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

https://support.industry.siemens.com/cs/ww/en/ps/3LD2164-0TB51-0US2

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) <a href="http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3LD2164-0TB51-0US2">http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3LD2164-0TB51-0US2</a>

**Tender specifications** 

http://www.siemens.com/specifications











