SIEMENS

Data sheet 3LD2164-1TC53



SENTRON, Switch disconnector 3LD, emergency switching-off switch, 4- pole, 25 A, operating power at AC-23 A at 400 V: 9.5 kW, molded-plastic encapsulation for metric cable gland, rotary operating mechanism, red/yellow

Model		
Product brand name	SENTRON	
Product designation	3LD Switch disconnector	
Design of the product	EMERGENCY-STOP switch	
Display version / for switch position indicator manual operation	1 ON - 0 OFF	
Design of the operating mechanism	Short rotary knob	
Design of handle	rotary operating mechanism, red/yellow	
Type of the driving mechanism / motor drive	No	

General technical data	
Number of poles	4
Number of poles / Note	PE
Type of device	fixed mounting
Type of switch	Molded-plastic enclosure for metric threaded joint
Size of switch disconnector	2
Electrical endurance (switching cycles)	
• at AC-23 A / at 690 V	6 000
I2t value / with closed switch / at 690 V / for	4 kA2.s
combination switch + gG fuse / maximum	

Let-through I2t value / with closed switch / at 440 V / for combination switch + gG fuse / maximum	4 kA2.s
Mechanical service life (switching cycles) / typical	100 000
Operating frequency / maximum	50 1/h
Type of fuse / according to UL	RK5
Voltage	
Insulation voltage / rated value	690 V
Surge voltage resistance / rated value	6 kV
Current / at AC / rated value	25 A
Operating voltage	
• at AC / at 50/60 Hz / rated value	690 V
 at AC / at 50/60 Hz / acc. to UL 508 / rated value 	600 V
Active power [hp] / at AC	
• at 480 V / acc. to UL 508 / rated value	10
• at 600 V / acc. to UL 508 / rated value	15
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]	
 for rated value of the current / at AC / in hot operating state / per pole 	1.1 W
• per conductor / typical	1.1 W
Current Operating current	
at AC-23 A / at 690 V / rated value	11 A
• at AC-23 A / at 400 V / rated value	20 A
• at AC-22 A / at 690 V / rated value	25 A
• at AC-21 / at 690 V / rated value	25 A
• at AC-21 / at 690 V / rated value • at AC-21 A / at 240 V / rated value	25 A
	25 A
• at AC-21 A / at 440 V / rated value	25 A
• at AC-22 A / at 240 V / rated value	25 A
• at AC-22 A / at 440 V / rated value	
• at AC-23 A / at 240 V / rated value	20 A
• at AC-23 A / at 440 V / rated value	20 A
at AC / acc. to UL 508 / rated value	25 A
Operating current / of upstream fuse / rated value	A= A
Continuous current / of upstream fuse / according to	25 A 50 A

at 440 V / for combination switch + gG fuse / maximum at 450 V / for combination switch + gG fuse / maximum permissible Short-time withstand current (lcw) ilimited to 1 s / rated value at 690 V / limited to 1 s / rated value 640 A Main circuit Operating frequency initial value 50 Hz Full-scale value 600 Hz Operating power at AC-23 A / at 440 V / rated value 5 kW at AC-23 A / at 400 V / rated value 9.5 kW at AC-23 A / at 400 V / rated value 9.5 kW at AC-23 A / at 400 V / rated value 9.5 kW at AC-23 A / at 400 V / rated value 9.5 kW at AC-30 A / at 400 V / rated value 4 kW at AC-31 A to 400 V / rated value 7.5 kW at AC-31 A to 400 V / rated value 7.5 kW at AC-31 A to 400 V / rated value 7.5 kW at AC-31 A to 400 V / rated value 7.5 kW at AC-31 A to 400 V / rated value 7.5 kW at AC-31 A to 500 V rated value 7.5 kW at AC-31 A to 500 V rated value 7.5 kW at AC-31 A to 500 V rated value 7.5 kW 3 at AC-31 A to 500 V rated value 9.5 kW 5 at AC-31 A to 500 V rated value 9.5 kW 5 at AC-31 A to 500 V rated value 9.5 kW	Let-through current / with closed switch		
at 690 V / for combination switch + gG fuse / maximum permissible Short-time withstand current (lcw) ilmited to 1 s / rated value at 690 V / limited to 1 s / rated value 640 A Main circuit Operating frequency initial value 50 Hz Full-scale value 60 Hz Operating power at AC-23 A / at 240 V / rated value 5 kW at AC-23 A / at 400 V / at 50/60 Hz / rated value 5 kW at AC-23 A / at 400 V / rated value 5 kW at AC-23 A / at 400 V / rated value 5 kW 4 AC-23 A / at 440 V / rated value 5 kW 5 kW 4 AC-23 A / at 440 V / rated value 5 kW 6 AC-23 A / at 400 V / rated value 7 kW 6 AC-23 A / at 400 V / rated value 7 kW 6 AC-3 / at 240 V / rated value 6 AC-3 / at 240 V / rated value 7 kW 8 at AC-3 / at 240 V / rated value 7 kW 8 at AC-3 / at 240 V / rated value 7 kW 8 at AC-3 / at 240 V / rated value 7 kW 9 at AC-3 / at 240 V / rated value 10 at AC-3 / at 240 V / rated value 11 kW 12 kW 13 kW 14 kW 15 kW 16 kW 17 kW 17 kW 17 kW 18 kW 19 kW 19 kW 10	-	3.5 kA	
Iminited to 1 s / rated value In the total total s / rated value In the total total s / rated value In the total total s / rated value In the total s / rated value value In the total s / rated value value value In the total s / rated value value value value In the total s / rated value value value value value value In the total s / rated value	_	3.5 kA	
## at 690 V / limited to 1 s / rated value	Short-time withstand current (Icw)		
Main circuit Operating frequency initial value 50 Hz 60 Hz Operating power at AC-23 A / at 240 V / rated value at AC-23 A / at 400 V / rated value 5 kW at AC-23 A / at 400 V / rated value 5 kW at AC-23 A / at 400 V / rated value 5 kW at AC-23 A / at 400 V / rated value 5 kW at AC-23 A / at 400 V / rated value 5 kW at AC-23 A / at 400 V / rated value 5 kW at AC-23 A / at 400 V / rated value 5 kW at AC-3 / at 240 V / rated value 7 kW at AC-3 / at 240 V / rated value 7 kW at AC-3 / at 240 V / rated value 7 kW AC-3 / at 690 V / rated value 7 kW Operating current / rated value 25 A Auxiliary circuit Number of CO contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Onumber of NC contacts / for auxiliary contacts Continuous current / of the auxiliary contacts Continuous current / of the auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Main switch Suitability Suitab	limited to 1 s / rated value	640 A	
Operating frequency initial value Full-scale value Operating power at AC-23 A / at 240 V / rated value at AC-23 A / at 240 V / rated value at AC-23 A / at 400 V / at 50/60 Hz / rated value at AC-23 A / at 400 V / rated value at AC-23 A / at 400 V / rated value at AC-23 A / at 400 V / rated value at AC-23 A / at 690 V / rated value at AC-3 / at 240 V / rated value at AC-3 / at 240 V / rated value at AC-3 / at 240 V / rated value at AC-3 / at 400 V / rated value at AC-3 / at 400 V / rated value at AC-3 / at 400 V / rated value 7.5 kW Operating current / rated value 25 A Auxiliary circuit Number of CO contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Operating voltage / of auxiliary contacts Operating voltage / of auxiliary contacts / at AC / maximum Continuous current / of the auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Main switch wall Suitability Suitability Suitability Suitability Suitability EMERGENCY OFF switch safety switch residence Yes maintenance/repair switch Yes maintenance/repair switch Yes maintenance/repair switch	• at 690 V / limited to 1 s / rated value	640 A	
initial value Full-scale value Operating power at AC-23 A / at 240 V / rated value at AC-23 A / at 240 V / rated value at AC-23 A / at 400 V / rated value at AC-23 A / at 400 V / rated value at AC-23 A / at 440 V / rated value 5 kW at AC-23 A / at 440 V / rated value 9.5 kW at AC-23 A / at 440 V / rated value 9.5 kW at AC-3 / at 240 V / rated value 4 kW at AC-3 / at 240 V / rated value 7.5 kW at AC-3 / at 690 V / rated value 7.5 kW operating current / rated value 7.5 kW Operating current / rated value 55 A Auxiliary circuit Number of Co contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts Operating valtage / of auxiliary contacts Operating valtage / of auxiliary contacts / at AC / maximum Continuous current / of the auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Main switch switch disconnector Yes EMERGENCY OFF switch Yes maintenance/repair switch Yes maintenance/repair switch Yes maintenance/repair switch Yes maintenance/repair switch	Main circuit		
Full-scale value Operating power at AC-23 A / at 240 V / rated value at AC-23 A / at 400 V / at 50/60 Hz / rated value at AC-23 A / at 400 V / rated value at AC-23 A / at 400 V / rated value at AC-23 A / at 440 V / rated value at AC-23 A / at 440 V / rated value at AC-23 A / at 400 V / rated value at AC-3 A / at 400 V / rated value at AC-3 / at 240 V / rated value at AC-3 / at 240 V / rated value at AC-3 / at 400 V / rated value at AC-3 / at 400 V / rated value 7.5 kW Operating current / rated value 25 A Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Operating voltage / of auxiliary contacts / at AC / maximum Continuous current / of the auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Suitability Suitability Suitability Suitability Suitability EMERGENCY OFF switch Safety switch Tended value Appearance	Operating frequency		
Operating power • at AC-23 A / at 240 V / rated value • at AC-23 A / at 400 V / at 50/60 Hz / rated value • at AC-23 A / at 400 V / rated value • at AC-23 A / at 440 V / rated value • at AC-23 A / at 440 V / rated value • at AC-23 A / at 469 V / rated value • at AC-23 A / at 690 V / rated value • at AC-3 / at 400 V / rated value • at AC-3 / at 400 V / rated value • at AC-3 / at 400 V / rated value • at AC-3 / at 400 V / rated value • at AC-3 / at 400 V / rated value • at AC-3 / at 400 V / rated value • at AC-3 / at 400 V / rated value Operating current / rated value 7.5 kW Operating current / rated value Operating current / rated value Operating voltage / of auxiliary contacts Operating voltage / of auxiliary contacts / at AC / maximum Continuous current / of the auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Insulation voltage / of the auxiliary switch / rated value • Main switch • switch disconnector • EMERGENCY OFF switch • safety switch • maintenance/repair switch Appearance	• initial value	50 Hz	
at AC-23 A / at 240 V / rated value at AC-23 A / at 400 V / at 50/60 Hz / rated value at AC-23 A / at 400 V / rated value at AC-23 A / at 440 V / rated value at AC-23 A / at 440 V / rated value at AC-23 A / at 440 V / rated value at AC-3 / at 490 V / rated value at AC-3 / at 490 V / rated value at AC-3 / at 400 V / rated value at AC-3 / at 400 V / rated value at AC-3 / at 690 V / rated value 7.5 kW Operating current / rated value 25 A Auxiliary circuit Number of CO contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Operating voltage / of auxiliary contacts Operating voltage / of auxiliary contacts / at AC / maximum Continuous current / of the auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Suitability Appearance	• Full-scale value	60 Hz	
at AC-23 A / at 400 V / at 50/60 Hz / rated value at AC-23 A / at 400 V / rated value at AC-23 A / at 440 V / rated value at AC-23 A / at 440 V / rated value at AC-3 / at 240 V / rated value at AC-3 / at 240 V / rated value at AC-3 / at 240 V / rated value at AC-3 / at 260 V / rated value at AC-3 / at 690 V / rated value 7.5 kW Operating current / rated value 25 A Auxiliary circuit Number of CO contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Operating voltage / of auxiliary contacts Operating voltage / of auxiliary contacts / at AC / maximum Continuous current / of the auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Suitability	Operating power		
at AC-23 A / at 400 V / rated value at AC-23 A / at 440 V / rated value at AC-23 A / at 690 V / rated value at AC-3 / at 240 V / rated value at AC-3 / at 240 V / rated value at AC-3 / at 2690 V / rated value at AC-3 / at 690 V / rated value at AC-3 / at 690 V / rated value 7.5 kW Operating current / rated value 25 A Auxiliary circuit Number of CO contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts Operating voltage / of auxiliary contacts Operating voltage / of auxiliary contacts 10 A value Insulation voltage / of the auxiliary switch / rated value Suitability Appearance	• at AC-23 A / at 240 V / rated value	5 kW	
at AC-23 A / at 440 V / rated value at AC-23 A / at 690 V / rated value at AC-3 A / at 690 V / rated value at AC-3 / at 240 V / rated value at AC-3 / at 240 V / rated value at AC-3 / at 400 V / rated value at AC-3 / at 690 V / rated value 7.5 kW Operating current / rated value 25 A Auxiliary circuit Number of CO contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Operating voltage / of auxiliary contacts / at AC / maximum Continuous current / of the auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Suitability Suitability Suitability Suitability Suitability Suitability for use Main switch switch disconnector EMERGENCY OFF switch safety switch maintenance/repair switch Yes maintenance/repair switch Yes Appearance	• at AC-23 A / at 400 V / at 50/60 Hz / rated value	9.5 kW	
at AC-23 A / at 690 V / rated value at AC-3 / at 240 V / rated value at AC-3 / at 240 V / rated value at AC-3 / at 400 V / rated value at AC-3 / at 690 V / rated value at AC-3 / at 690 V / rated value 7.5 kW Operating current / rated value 25 A Auxiliary circuit Number of CO contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Ournating voltage / of auxiliary contacts Operating voltage / of auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Suitability Suitability Suitability Suitability Suitability for use Main switch switch disconnector switch disconnector EMERGENCY OFF switch safety switch maintenance/repair switch Yes maintenance/repair switch Yes Appearance	• at AC-23 A / at 400 V / rated value	9.5 kW	
at AC-3 / at 240 V / rated value at AC-3 / at 400 V / rated value at AC-3 / at 400 V / rated value 7.5 kW Operating current / rated value Z5 A Auxiliary circuit Number of CO contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts Operating voltage / of auxiliary contacts Operating voltage / of auxiliary contacts / at AC / maximum Continuous current / of the auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Suitability Suitability Suitability Suitability for use Main switch switch disconnector EMERGENCY OFF switch safety switch maintenance/repair switch Yes maintenance/repair switch Yes Appearance	• at AC-23 A / at 440 V / rated value	9.5 kW	
at AC-3 / at 400 V / rated value at AC-3 / at 690 V / rated value 7.5 kW Operating current / rated value 25 A Auxiliary circuit Number of CO contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts Operating voltage / of auxiliary contacts / at AC / maximum Continuous current / of the auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Suitability Suitability Suitability Suitability for use Main switch switch disconnector EMERGENCY OFF switch safety switch maintenance/repair switch Yes maintenance/repair switch Yes Appearance	• at AC-23 A / at 690 V / rated value		
at AC-3 / at 690 V / rated value Operating current / rated value 25 A Auxiliary circuit Number of CO contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Oumber of NO contacts / for auxiliary contacts Operating voltage / of auxiliary contacts / at AC / maximum Continuous current / of the auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Suitability Suitability Suitability for use Main switch switch disconnector EMERGENCY OFF switch safety switch maintenance/repair switch Appearance	• at AC-3 / at 240 V / rated value	4 kW	
at AC-3 / at 690 V / rated value Operating current / rated value 25 A Auxiliary circuit Number of CO contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts Operating voltage / of auxiliary contacts / at AC / maximum Continuous current / of the auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Suitability Suitability Suitability Suitability for use Main switch switch disconnector EMERGENCY OFF switch safety switch maintenance/repair switch Appearance	• at AC-3 / at 400 V / rated value	7.5 kW	
Operating current / rated value Auxiliary circuit Number of CO contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts Operating voltage / of auxiliary contacts / at AC / maximum Continuous current / of the auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Suitability Suitability Suitability for use Main switch switch disconnector EMERGENCY OFF switch safety switch maintenance/repair switch Appearance			
Number of CO contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts Operating voltage / of auxiliary contacts / at AC / maximum Continuous current / of the auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Suitability Suitability Suitability for use Main switch switch disconnector EMERGENCY OFF switch safety switch maintenance/repair switch Appearance		25 A	
Number of CO contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts Operating voltage / of auxiliary contacts / at AC / maximum Continuous current / of the auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Suitability Suitability Suitability for use Main switch switch disconnector EMERGENCY OFF switch safety switch maintenance/repair switch Appearance	Auxiliary circuit		
Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts Operating voltage / of auxiliary contacts / at AC / maximum Continuous current / of the auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Suitability Suitability Suitability for use • Main switch • switch disconnector • EMERGENCY OFF switch • safety switch • maintenance/repair switch Appearance		0	
Number of NO contacts / for auxiliary contacts Operating voltage / of auxiliary contacts / at AC / maximum Continuous current / of the auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Suitability Suitability for use • Main switch • switch disconnector • EMERGENCY OFF switch • safety switch • maintenance/repair switch Appearance		0	
Operating voltage / of auxiliary contacts / at AC / maximum Continuous current / of the auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Suitability Suitability Suitability for use • Main switch • switch disconnector • EMERGENCY OFF switch • safety switch • maintenance/repair switch Appearance		0	
Continuous current / of the auxiliary contact / rated value Insulation voltage / of the auxiliary switch / rated value Suitability Suitability Suitability for use • Main switch • switch disconnector • switch disconnector • EMERGENCY OFF switch • safety switch • maintenance/repair switch Appearance	Operating voltage / of auxiliary contacts / at AC /	500 V	
Insulation voltage / of the auxiliary switch / rated value Suitability Suitability for use Main switch switch disconnector Suitability for use Main switch switch disconnector Suitability for use Main switch Suitability for use Main switch Suitability for use Suitability for use Suitability for use Suitability for use Suitability Suitab		40.4	
Suitability Suitability for use • Main switch • switch disconnector • EMERGENCY OFF switch • safety switch • maintenance/repair switch Appearance		10 A	
Suitability Suitability for use • Main switch • switch disconnector • EMERGENCY OFF switch • safety switch • maintenance/repair switch Appearance	Insulation voltage / of the auxiliary switch / rated	500 V	
Suitability for use • Main switch • switch disconnector • switch disconnector • EMERGENCY OFF switch • safety switch • maintenance/repair switch Appearance Yes Yes Yes Yes Yes Yes	value		
Suitability for use • Main switch • switch disconnector • switch disconnector • EMERGENCY OFF switch • safety switch • maintenance/repair switch Appearance Yes Yes Yes Yes Yes Yes	Suitability		
 switch disconnector EMERGENCY OFF switch safety switch maintenance/repair switch Yes Yes Yes Yes Appearance			
 EMERGENCY OFF switch safety switch maintenance/repair switch Yes Yes Yes Appearance	Main switch	Yes	
 safety switch maintenance/repair switch Appearance 	• switch disconnector	Yes	
• maintenance/repair switch Yes Appearance	 EMERGENCY OFF switch 	Yes	
Appearance	• safety switch	Yes	
	• maintenance/repair switch	Yes	
Color / of the actuating element red	Appearance		
	Color / of the actuating element	red	

Product details		
Product function / can be locked into OFF	Yes	
position		
Number of bracket locks / maximum	3	
Hasp thickness / of the bracket locks / minimum	4 mm	
Hasp thickness / of the bracket locks / maximum	8 mm	
Short circuit		
Short-time withstand current (SCCR) / at 600 V / acc.	5 kA	
to UL 508		
Conditional short-circuit current / with line-side fuse protection		
• at 690 V / by gG fuse / rated value	50 kA	
Number of connectable NC contacts / for auxiliary contacts / attachable / maximum	2	
Number of connectable NO contacts / for auxiliary contacts / attachable / maximum	3	
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 electrical connection		
• for main current circuit	box terminal	
• for auxiliary contacts	connection terminals	
Requirements		
Design of the fuse link		
 for short-circuit protection of the main circuit / required 	fuse gL/gG: 25 A	
• for short-circuit protection of the auxiliary switch / required	fuse gL/gG: 10 A	
Mechanical Design		
Height	152 mm	
Width	100 mm	
Depth	117 mm	
Mounting type	Complete unit in enclosure	
Mounting type		
• front mounting with 4-hole attachment	No	
 front mounting with central attachment 	Yes	
• rail mounting	No	
Net weight	481 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
 acc. to DIN EN 81346-2
 SF

General Product Approval

Declaration of Conformity











Test Certific- ates	Shipping Ap- proval	other
Miscellaneous	Lloyd's Register	Environmental Con- firmations
	LRS	

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=3LD2164-1TC53

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

https://support.industry.siemens.com/cs/ww/en/ps/3LD2164-1TC53

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3LD2164-1TC53

CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications

http://www.siemens.com/specifications











