

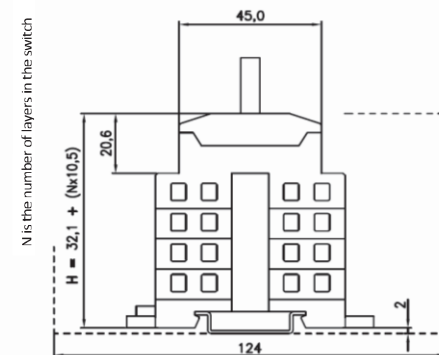
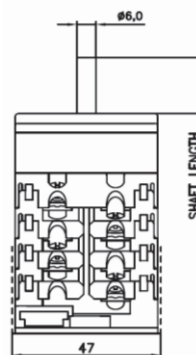
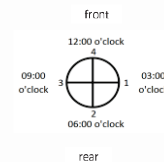
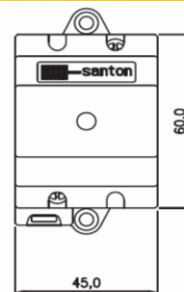
Switch disconnector for solar application according to IEC 60947-1&3 by Dekra (KEMA) and CCC (CQC)



Layer No.	Front Side		Symbol	Rear Side		On Positions			
	Left	Right		Left	Right	1	2	3	4
9	+4			+4				X	
8		-4			-4			X	
7	-3			-3				X	
6		+3			+3			X	
5	+2			+2				X	
4		-2			-2			X	
3	-1			-1				X	
2		+1			+1			X	
1			empty						

Contacts are made in "X" marked position.
Symbols for interconnection: [

Technical data	Symbol	Merit	Unit
rated operational voltage (DC poles)	U _{ie}		1000 V dc
rated operational current (DC poles)	I _{ie}		16 A dc
rated operational voltage (second rating DC poles, if requested)	U _e		850 V dc
rated operational current (second rating DC poles, if requested)	I _e		20 A dc
rated operational voltage (third rating DC poles, if requested)	U _e		800 V dc
rated operational current (third rating DC poles, if requested)	I _e		25 A dc
rated operational voltage (fourth rating DC poles, if requested)	U _e		650 V dc
rated operational current (fourth rating DC poles, if requested)	I _e		32 A dc
method of mounting	DIN rail and or Base mounting [8]		
number of DC poles			8
utilization category DC	DC-21B		
actuator	knob with padlock and top screw, black/grey [G]		
positions	OFF at 12 hr, ON at 3 hr [E]		
rated impulse withstand voltage	U _{imp}		8 kV
rated insulation voltage	U _{ii}		1000 V
rated thermal current uninterrupted duty	I _u		25 A
rated short-time withstand current (1s)	I _{cw}		750 A
rated short-circuit making capacity	I _{cm}		1,4 kA
rated conditional short-circuit current			5 kA
method of operation	independent manual operation		
minimum required dimensions of enclosures L x W x H* (on DIN-rail H = +2mm)		124 x 47 x 126,2	mm
* see the drawing for the height of the switch. The number of layers N is:		9	
Shaft length		25	mm
knob operation force	max.	1,4	Nm
tightening torque terminal screws M4, min. - max.		1,5	1,7 Nm
tightening torque M3 screw in the standard black knob, min. - max.		0,5	0,7 Nm
ambient temperature allowed between		- 25 to + 70	°C
storage temperature allowed between		- 40 to + 80	°C
maximum relative humidity, without condensation at 20°C		90	%
pollution degree		2	
IP rating terminals		IP20	
IP rating base mounting with G-, H- or R-knob		IP65	
rated operational voltage (AC poles)	U _e		V ac
rated operational current (AC poles)	I _e		A ac
number of AC poles (for general use)			
minimum required fine wire cross-section: IEC60947-1, table 9			mm ²
auxiliary contact(s), AC15		No auxiliary contact	
auxiliary contact ratings			
weight		384	g
accessories:		-	



Mounting instructions

In the application all ratings have to be respected. When building the switch in an enclosure, the space envelope must be respected according to the applicable standards. After mounting, the wiring must be checked and the switch must operate smoothly.

Maintenance

The X type switches are designed for a very long life but it is advised to do some simple yearly maintenance.
- Check the installation for signs of overload or overheating. The terminals may not exceed the limit of 85°C under full load.
- By operating the switch a few times (5x) the contacts will clean themselves and the switch will have a longer life.

Connection details

Description	Symbol	Values				Unit
Rated operational current (DC poles)	I _{ie}	16	20	25	32	A dc
Required fine wire cross-section (minimal): IEC60947-1, table 9	A	2,5	4	4	6	mm ²
max power dissipation	P	1,9	3,0	4,8	7,8	W

The terminals, without interconnection can take copper wires up to 6 mm².
The recommended Spade Tongue Terminals may have a maximum width of 9 mm.
For CSA and UL applications, registered Spade Tongue Terminals must be used.
The registration numbers are UL: E13288 and CSA: LR7189 (for instance type 165015 from Tyco).

Recommend Manufacturer	Type number	Wire size (AWG)	Wire size (mm ²)	Color
IST	FVD2-V54A	AWG 16 – AWG 14	1,0 – 2,5 mm ²	Blue
TE connectivity	C-165012	AWG 16 – AWG 14	1,0 – 2,5 mm ²	Blue
Vcgt	3635c	AWG 16 – AWG 14	1,5 – 2,5 mm ²	Blue
TE connectivity	C-165015	AWG 12 - AWG 10	3,0 - 6,0 mm ²	Yellow
Vcgt	3652c / 3653c	AWG 12 - AWG 10	3,0 - 6,0 mm ²	Yellow
Santon (IST)	52A1256.35	AWG 8 - AWG 10	10,5mm ² -16mm ² *1	*2

*1 16mm² only with fine stranded wire / two times 6mm² is also possible

*2 Optional: A yellow sleeve for the Spade Tongue Terminal (Santon 52A1256.35) can be ordered under item number 52A1564.00

Dimensions, specifications and data shown could be subject to change without notice.