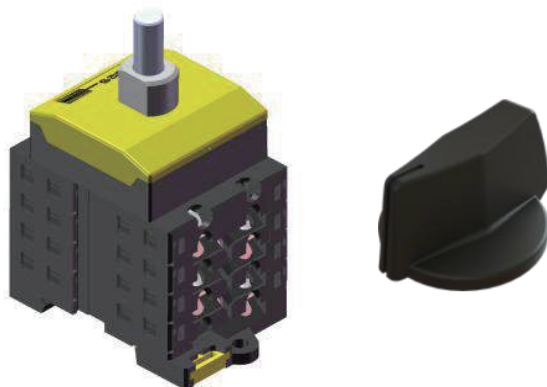




Data Sheet Santon X-Type switch X150.40D4E-D

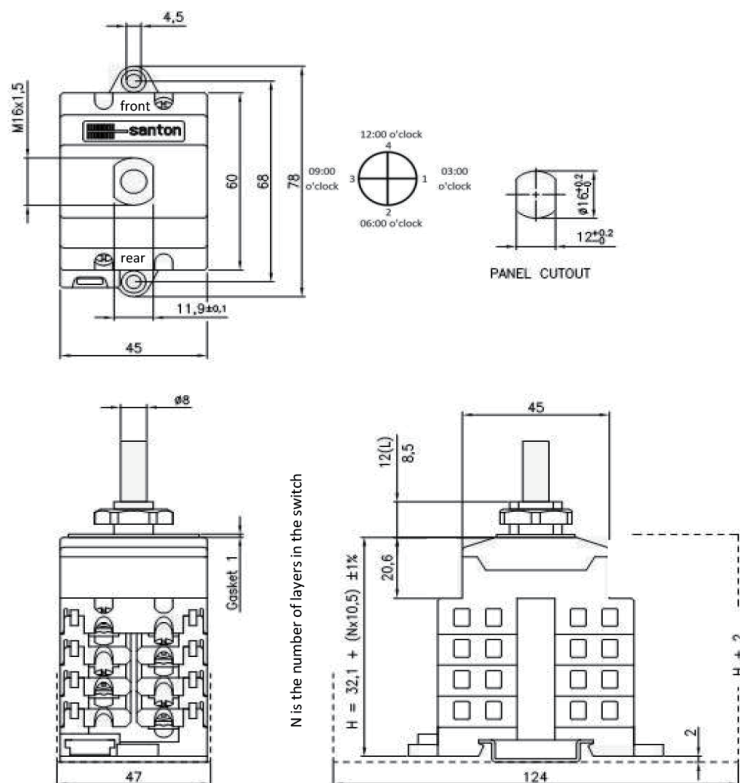
Switch disconnecter for solar application according to IEC 60947-1&3 by Dekra (KEMA)



Layer No.	Front Side		Symbol	Rear Side		On Positions						
	Left	Right		Left	Right	1	2	3	4			
16		+2						X				
15								X				
14					+2			X				
13			empty									
12		-2						X				
11								X				
10					-2			X				
9			empty									
8		-1						X				
7								X				
6					-1			X				
5			empty									
4		+1						X				
3								X				
2					+1			X				
1			empty									

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

Technical data	Symbol	Merit	Unit
rated operational voltage (DC poles)	Ue		1500 V dc
rated operational current (DC poles)	Ie		40 A dc
rated operational voltage (second rating DC poles, if requested)	Ue		V dc
rated operational current (second rating DC poles, if requested)	Ie		A dc
rated operational voltage (third rating DC poles, if requested)	Ue		V dc
rated operational current (third rating DC poles, if requested)	Ie		A dc
rated operational voltage (fourth rating DC poles, if requested)	Ue		V dc
rated operational current (fourth rating DC poles, if requested)	Ie		A dc
method of mounting	both bottom and single hole mounting [D]		
number of DC poles	4		
utilization category DC	DC-21B		
actuator	standard black, with thread through the shaft [D]		
positions	OFF at 12 hr, ON at 3 hr [E]		
rated impulse withstand voltage	Uimp		8 kV
insulation voltage	Ui		1000 V
rated thermal current uninterrupted duty	Iu		40 A
rated short-time withstand current (1s)	Icw		750 A
rated short-circuit making capacity	Icm		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) {space envelope}			124 x 47 x 147,6 mm
* see the drawing for the height of the switch. The number of layers N is:	11		
knob operation force		max.	1,4 Nm
tightening torque terminal screws M4 , min. - max.		1,5	1,7 Nm
tightening torque panel mounting nut, min. - max.		2,0	2,5 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 gland of the shaft in case of single hole panel mounting	IP65		
rated operational voltage (AC poles)	Ue		V ac
rated operational current (AC poles)	Ie		A ac
number of AC poles (for general use)			
minimum required fine wire cross-section: IEC60947-1, table 9			mm²
auxiliary contact(s), AC15	No auxiliary contact		
auxiliary contact ratings			
weight			453 g
accessories:	-		



Mounting instructions

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

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 _e	40	A dc
Required fine wire cross-section (minimal): IEC60947-1, table 9	A	2x6	mm ²
max power dissipation	P	6,7	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).

Registered Spade Tongue Terminals

Recommend Manufacturer	Type number	Wire size (AWG)	Wire size (mm ²)	Color
JST	FVD2-YS4A	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
Vogt	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
Vogt	3652c / 3653c	AWG 12 - AWG 10	3,0 - 6,0 mm ²	Yellow
Santon (JST)	52A1256.35	AWG 8 - AWG 10	10,5mm ² -16mm ² *1	*2

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

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