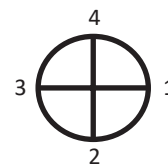
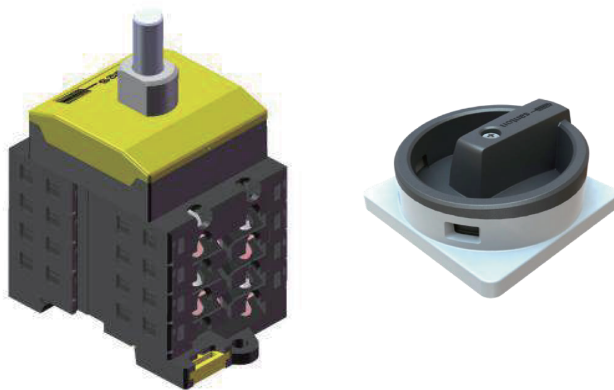




Data Sheet Santon X-Type switch XC150.13DC.U8-G-D

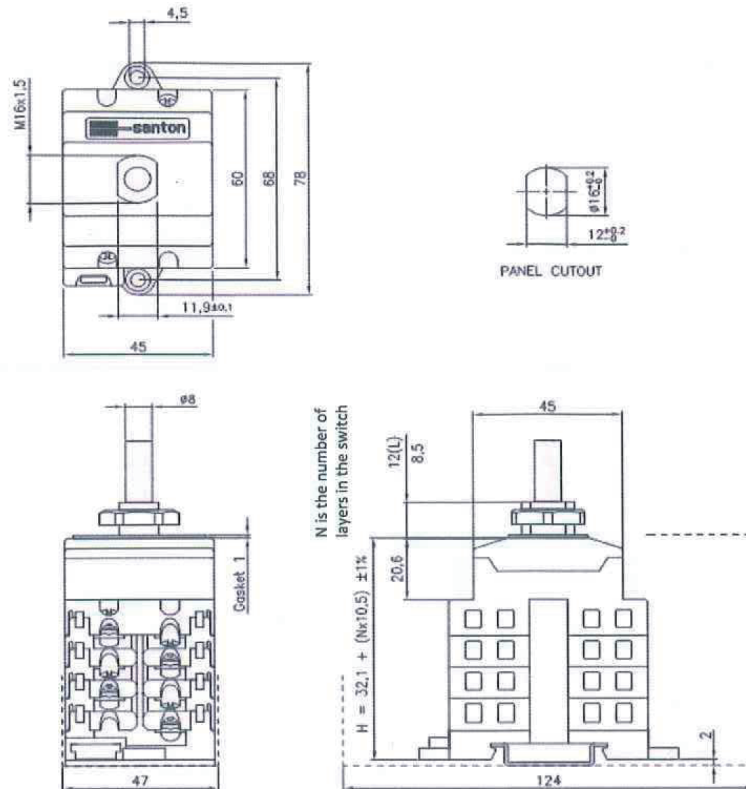
Suitable as photovoltaic disconnect switch in accordance with Article 690 of NFPA 70 (NEC) UL 508i, (including the requirements for PV application)



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

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

Technical data	Symbol	Merit	Unit
nominal voltage (DC poles)	U		1500 V dc
nominal current (DC poles)	I		13 A dc
nominal voltage (DC poles)	U		1250 V dc
nominal current (DC poles)	I		21 A dc
nominal voltage (DC poles)	U		1000 V dc
nominal current (DC poles)	I		30 A dc
nominal voltage (DC poles)	U		750 V dc
nominal current (DC poles)	I		50 A dc
method of mounting	both bottom and single hole mounting [D]		
number of poles, double pole switching	8		
utilization category DC	Photovoltaic disconnect switch		
actuator	knob with padlock and top screw, black/grey [G]		
IP rating base mounting with G-,H- or R-knob	IP65		
method of operation	independent manual operation		
positions	OFF at 3 hr, ON at 6 hr, OFF at 9 hr, ON at 12 hr		
rated impulse withstand voltage	Uimp	8	kV
insulation voltage	Ui	1500	V
rated thermal current uninterrupted duty	Iu	50	A
rated short-time withstand current (1s)	Icw	750	A
suitable for use on a circuit capable of delivery not more than 5.000 rms symmetrical Amperes, 1500 Vdc max, when protected by fuses			
rated conditional short-circuit current	5 kA		
minimum required dimensions of enclosures L x W x H* (on DIN-rail H = +2mm) {space envelope}	124 x 47 x 126,6 mm		
* see the drawing for the height of the switch. The number of layers N is:			
Shaft length	25 mm		
tightening torque terminal screws M4 , min. - max.	1,5	1,7	Nm
tightening torque M3 screw in the standard black knob, min. - max.	13	15	Lb.In
		0,4	Nm
tightening torque for the nut on the single hole mounting knob, min. - max.		3,5	Lb.In
	2,0	2,5	Nm
	18	22	Lb.In
ambient temperature allowed between	- 40 to + 70 °C		
storage temperature allowed between	- 40 to + 80 °C		
maximum relative humidity, without condensation at 20°C	90 %		
nominal voltage (AC poles)	U		V dc
nominal current (AC poles)	I		A dc
number of AC poles (for general use)			
wire size, 'Use 75°C Copper Wire Only', minimum required fine wire cross-section:	mm²		
auxiliary contact	No auxiliary contact		
weight	384 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)	Ie	13	21	30	50	A dc
Required fine wire cross-section (minimal): IEC60947-1, table 9	A	1,5	4	6	2x6	mm ²
max power dissipation	P	0,6	1,6	3,2	9,0	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