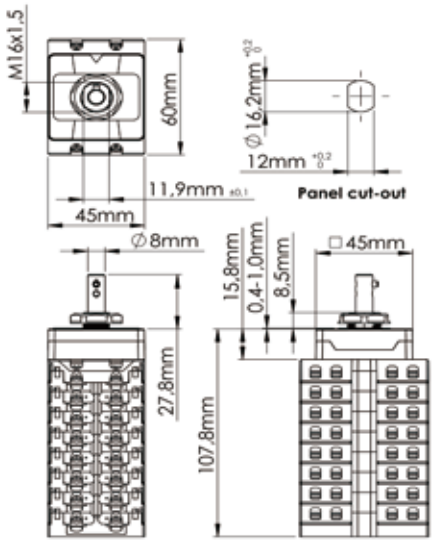
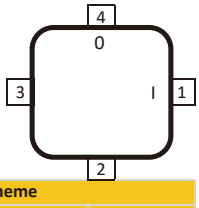
Data Sheet **XBHP+3810/2**

Certified for IEC 60947 1&3
DC-PV1 and CCC (CQC) and DC-PV2

Attention! This switch may only be mounted with a support at the end of the switch.





General tolerances on linear dimensions:	For the height of a switch is the tolerance always ± 1%				
Dimensions (mm)	0,5 - 3	> 3 - 6	> 6 - 30	> 30 - 120	> 120 - 400
Tolerances unless Otherwise mentioned (mm)	± 0,1	± 0,1	± 0,2	± 0,3	± 0,5
The tolerances for the Santon datasheet are according to ISO 1101, ISO 8015, ISO 2768 1 class m, unless stated otherwise.					

Technical data	Symbol	Ratings:	I	II	III	IV	Unit
Rated operational voltage	Ue	DC-PV1	1200	1000	800	600	V dc
Rated operational current	Ie	DC-PV1	20	30	40	50	A dc
Required fine wire cross-section (minimal)*:			4	6	10	10	mm²
Rated operational voltage	Ue	DC-PV2	1200	1000	800	600	V dc
Rated operational current	Ie	DC-PV2	7,5	12,5	20	30	A dc
Required fine wire cross-section (minimal)*:			2,5	2,5	4	6	mm²
Number of DC poles						8	
Utilization category DC					DC-PV1 and DC-PV2		
Pollution degree						2	
IP rating terminals						IP20	
Tightening torque terminal screws M4 (min. - max.)					1,5 –	1,7	Nm
Method of mounting							
IP rating of the shaft in case of single hole mounting						IP65	
Tightening torque panel mounting nut (min. - max.)					2,0 –	2,5	Nm
Panel thickness between					1 –	4	mm
Positions		12 (OFF) and 3 o'clock (ON)					
Actuator		Standard A knob with long screw to fix in shaft					
Method of operation		Independent manual operation					
Actuator operation force (max.)						1,4	Nm
Tightening torque M3 screw in the actuator (min. - max.)					0,50 –	0,70	Nm
Rated impulse withstand voltage		Uimp				8	kV
Insulation voltage		Ui				1200	V
Rated thermal current uninterrupted duty		Iu				50	A
Rated short-time withstand current (1s)		Icw				700	A
Rated short-circuit making capacity		Icm				1	kA
Rated conditional short-circuit current		Isc				5	kA
Minimum required dimensions of enclosures L x W x D* {space envelope}			124 x	47 x		118	mm
* see the drawing for the height of the switch. The number of layers N is:						8	
Weight						ca. 296	g
Allowed ambient temperature (min. - max.)		Tambient			-40 –	70	˚C
Allowed storage temperature (min. - max.)		Tstorage			-40 –	85	˚C
Relative humidity (max.), without condensation at 20˚C		RH				90	%

Terminals Scheme									
Layer No.	Front Side Left	Front Side Right	Symbol	Rear Side Left	Rear Side Right	Positions 1	2	3	4
9									
8	+4			+4		I			0
7		-4			-4	I			0
6	-3			-3		I			0
5		+3			+3	I			0
4	+2			+2		I			0
3		-2			-2	I			0
2	-1			-1		I			0
1		+1			+1	I			0

(I = Contact is closed, O = Contact is open)

Recommend Manufacturer	Type number	Wire size (AWG)	Wire size (mm²)	Color
JST		AWG 16 – AWG 14	1,0 – 2,5 mm²	Blue
TE connectivity	C-165012	AWG 16 – AWG 14	1,0 – 2,5 mm²	Blue
Vogt	3635c	AWG 16 – AWG 14	1,5 – 2,5 mm²	Blue
TE connectivity	C-165015	AWG 12 - AWG 10	3,0 - 6,0 mm²	Yellow
Vogt	3652c / 3653c	AWG 12 - AWG 10	3,0 - 6,0 mm²	Yellow
Santon (JST)	52A1256.35	AWG 8 - AWG 10	10,5mm²-16mm² *1	

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 85oC 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
The terminals, can take copper wires up to 6 mm2.
The recommended Spade Tongue Terminals may have a maximum width of 9 mm (see table for recommendations)

*1 16mm² only with fine stranded wire (or two times 6mm²)