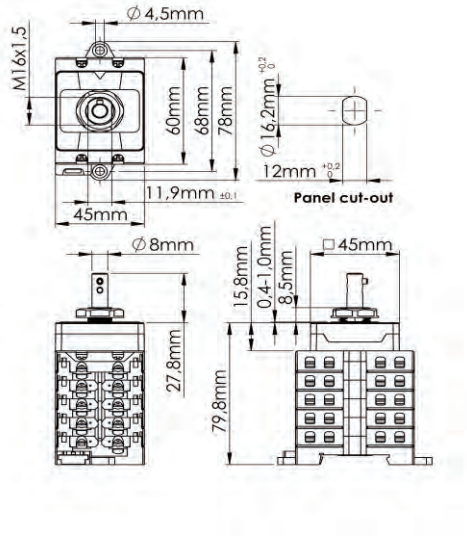
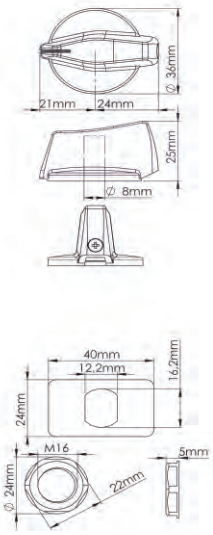
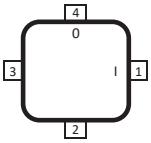
Data Sheet XBC+0410/2

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

santon







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	Unit
Rated operational voltage	Ue		1000	800	V dc
Rated operational current	Ie		50	60	A dc
Required fine wire cross-section (minimal)*:			10	16	mm²
*IEC60947-1, table 9					
Number of DC poles				4	
Pollution degree				2	
Utilization category DC				DC-PV1	
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			
				–	
Rated impulse withstand voltage	Uimp			8	kV
Insulation voltage	Ui			1000	V
Rated thermal current uninterrupted duty	Iu			60	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	81	mm
* see the drawing for the height of the switch. The number of layers N is:				4	
Weight				ca. 198	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									
7									
6									
5	+2			+2		I			0
4		-2			-2	I			0
3	-1			-1		I			0
2		+1			+1	I			0
1			Empty						

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

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.In case mounting the switch with a rear bracket using the optional four screw holes in the bottom plate, please take into account the required air&creeping distances with respect to the live parts according to the applicable standard (IEC/UL).
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
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)

Warning
Verify that all connections (including bridging link connections) are suitable for the rated current, prepared to ensure only conductive parts are clamped and tightend to the manufacturer's required torque before energization.

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	3654c / 3655c	AWG 12 - AWG 10	3,0 - 6,0 mm²	Yellow
Santon (JST)	54A1256.35	AWG 8 - AWG 10	10,5mm²-16mm² *1	*2

*1 16mm² only with fine stranded wire (or two times 6mm²)
*2 To insulate the cable lugs, you can use the insulating spouts of the ES series from CEMBRE with the type designation ES3 ....