

Type coding X-type switch

The type coding of the X-type switches is build up by the answers to the following questions in the same order. If the answer to a question is not applicable it is left out of the code. By using separators and alphabetic and numeric codes in turn the code stays clear.

The questions are:

1. What is the required nominal **voltage** for the DC poles?
2. What is the required nominal DC **current**?
3. What kind of **mounting** is preferred?
4. For panel mounting, what is the **thickness of the panel**?
5. According to which **standard** must the switch been certified?
6. How many **DC poles** are required?
7. Are the poles intended for single pole switching? (One pole in one circuit)
8. What **auxiliary contact(s)** is required?
9. What are the **positions** of the switch required?

So far the standard switches are defined. After a “-”, the code of the accessories follows:

1. Which type of **knob** or drive is needed?
2. For bottom mounting switches, what **length of shaft** is required?
3. Which **indicator plate** is required?

So far the accessories are defined. After a “-”, the code for optional AC contacts follows:

1. What is the required nominal **voltage for the optional AC** poles?
2. What is the required nominal **current of the AC** poles?
3. How many **AC poles** are required?

After another “-” a sequential number may follow for all switches with more than 16 digits in the code.

As soon as the code contains more than 16 digits the type number becomes the type description and the Sequential number is the type code. Specific assemblies rise when customers need for instance more than one rating on the switch.

The type code is than built up as follows:

Example 1,

(The most complicated combination): **X100.25PLKS9CE-A35E-30.32.2-X0001**

		description	Options
The switch	X	X-type	X
	100	DC nominal Voltage divided by ten	100, 85, 75, 60, 55
	.	Separator	.
	25	Nominal Current	16, 25, 32, 40, 50
	P	Mounting possibility, Panel mounting	B, D, P, R, DX, PX, RX
	L	Long gland panel mounting, the thickness of the panel is between 3 and 6,5mm	L, or nothing
	K	cCSAus certified	K, or nothing
	S	Poles meant for single pole switching	S, or nothing
	9	DC poles	0,1,2,3,4,5,6,7,8,9
	C	Auxiliary contact C - 1 normally open	C, D, O, P, Q, R, S, W or nothing
	E	Positions and blockings, 0 at 12h, 1 at 3h,	E, F, G, H, J, K, L, M, N, T, U, or nothing
	-	Separator	-
Access.	A	Knob type	A, B, C, D, O, P, Q, R, S. For switches to be supplied without a knob it is needed to specify the shaft. This is done by mentioning the knob type between brackets, for instance (A) means: shaft suitable for knob type A.
	35	Shaft length from top plate to top shaft in mm. The maximum shaft length is limited also by the number of contacts: 12 contacts -> 50 mm, 11 contacts -> 60 mm, 10 contacts -> 70 mm, etc. up to max. 99 mm.	Any length in mm up to 99 mm. The standard length is 19 mm, does not have to be mentioned.
	E	Position indication plate	E,F,G,H,J,K,L,M,N,T,U,V,W, X, Y, Z, or nothing
	-	Separator	-
Specials	30	AC nominal voltage divided by ten	25, 30, 40 , or nothing
	.	Separator	.
	32	AC nominal current	32, 25, or nothing
	.	Separator	.
	2	AC poles	2, 3, 4, or nothing
	-	Separator	-
	X0001	Sequential number for customer specific assemblies	X0001 to XZZZZ, or nothing XS is reserved for Short switches with cut off terminals in the bottom level

As soon as the code includes more than 16 digits, before the last hyphen, the type number becomes the type description and the Sequential number is the type code. In this case the type code for ordering the switch therefore will be: **X0001**

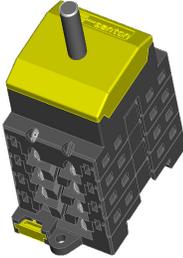
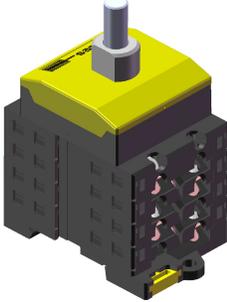
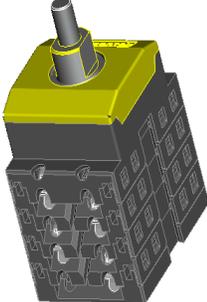
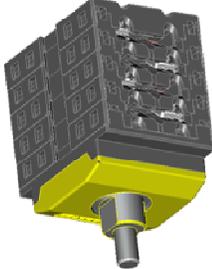
And the description: **X100.25PLKS9CE-A35E-30.32.2-X0001**

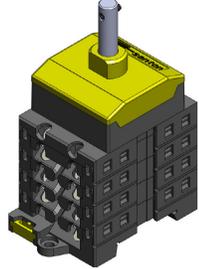
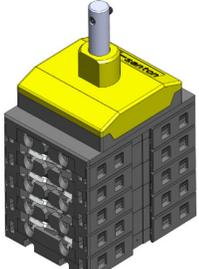
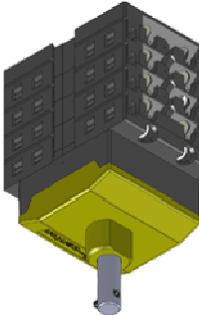
The marking on the switch will contain at least the digits up to the first hyphen:

X100.25PLKS9CE

Mounting possibilities

There are seven different mounting possibilities:

Code	Description	Picture
B	Bottom mounting and DIN rail mounting	
D	Double mounting, Bottom and Panel side	
P	Panel mounting	
R	Reverse panel mounting. The screws in the terminals are accessible from the bottom side.	
DX	Double mounting, Bottom and Panel side but the gland for the panel	Not available yet

	mounting is turned 90 dgr	
PX	Panel mounting but the gland for the panel mounting is turned 90 dgr	Not available yet 
RX	Reverse panel mounting but the gland for the panel mounting is turned 90 dgr. The screws in the terminals are accessible from the bottom side.	Not available yet 

Auxiliary contacts

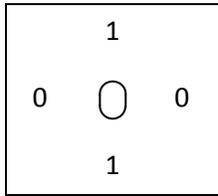
There are 8 different auxiliary contacts possible:

Code	Description with main contacts	Terminal marking
C	1 normally open	13 – 14
D	2 normally open	13 – 14, 23 - 24
O	1 normally closed	11 – 12
P	2 normally closed	11 – 12, 21 - 22
Q	2 normally open and 2 normally closed	13 – 14, 23 – 24, 11 – 12, 21 - 22
R	Both normally open and closed in one chamber	13 – 14, 11 - 12
S	1 normally closed and 1 normally open	11 – 12, 13 - 14
W	2 normally open and 1 normally closed	13 – 14, 23 – 24, 11 - 12

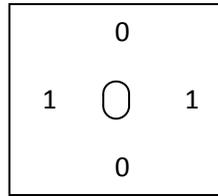
Switch positions and blockings

Standard ON-OFF

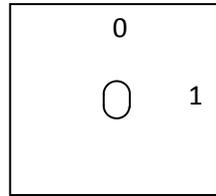
No code



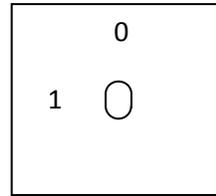
Type U



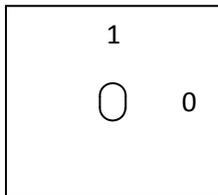
Type E



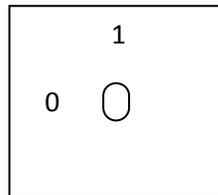
Type F



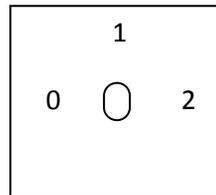
Type G



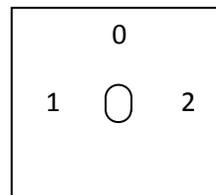
Type H



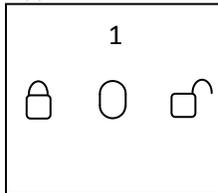
Type J



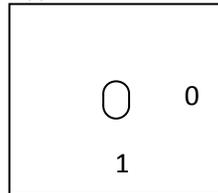
Type K



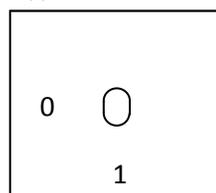
Type L



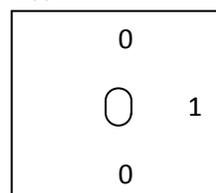
Type M



Type N



Type T



Knob types

A = standard black knob

B = pad lockable knob grey/grey

C = pad lockable knob black/grey

D = standard black, with thread through the shaft

O = pad lockable knob, for single hole mounting

P = motor driven switch without a knob

Q = motor driven switch with black knob

R = new pad lockable knob in red

S = special new lockable knob in black

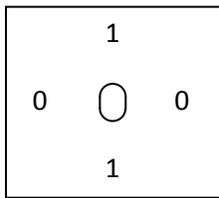
Shaft lengths available for the B mounting types

Length measured from the top plate

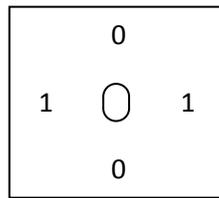
19mm, 35mm, 56mm, 67mm

Position indication plates

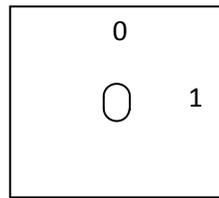
Type Z



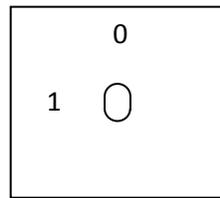
Type U



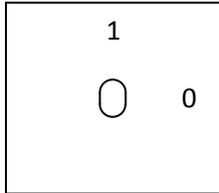
Type E



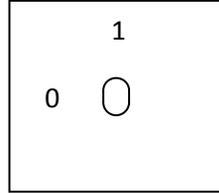
Type F



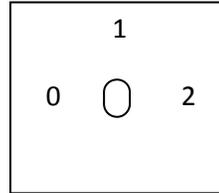
Type G



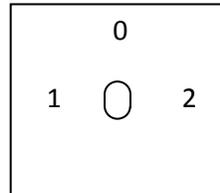
Type H



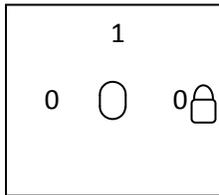
Type J



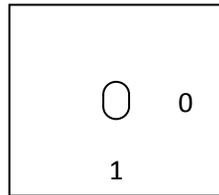
Type K



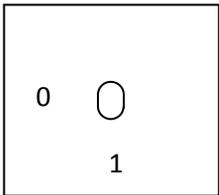
Type L



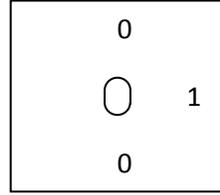
Type M



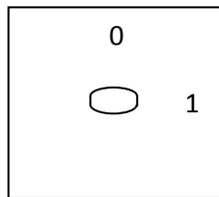
Type N



Type T



Type V



Marking on the switch

The label for a switch with the specifications is shown in the production order. For the Reversed switches the labels are a little different from the rest because of the space available. Two samples:

IEC labels

<p>labels R typen</p> <p>type: X75.25RL4C-A-30.25.3-X0030</p> <p>serial nr: 2009-01-00320  made in Europe </p>	<p>EN-IEC60947-3</p> <table border="0"> <tr> <td>Poles 1 to 4:</td> <td>Ie= 25 A, 750 V DC21</td> </tr> <tr> <td>Poles 1 to 4:</td> <td>Ie= 32 A, 600 V DC21</td> </tr> <tr> <td>Poles A and B:</td> <td>Ie= 25 A, 300 V AC23</td> </tr> <tr> <td>auxilliary:</td> <td>16 250 AC15 / DC15</td> </tr> </table> 	Poles 1 to 4:	Ie= 25 A, 750 V DC21	Poles 1 to 4:	Ie= 32 A, 600 V DC21	Poles A and B:	Ie= 25 A, 300 V AC23	auxilliary:	16 250 AC15 / DC15
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Poles A and B:	Ie= 25 A, 300 V AC23								
auxilliary:	16 250 AC15 / DC15								

labels B, P en D typen

   <p>type: X75.25RL4C-A-30.25.3-X0030</p> <p>serial nr: 2009-01-00320 made in Europe</p>	<p>EN-IEC60947-3</p> <table border="0"> <tr> <td>poles:</td> <td>Ie [A]</td> <td>Ue [V]</td> <td>category</td> </tr> <tr> <td>1-4</td> <td>25</td> <td>750</td> <td>DC21</td> </tr> <tr> <td>1-4</td> <td>32</td> <td>600</td> <td>DC21</td> </tr> <tr> <td>A - B</td> <td>25</td> <td>300</td> <td>AC23</td> </tr> <tr> <td>auxilliary:</td> <td>16</td> <td>250</td> <td>AC15 / DC15</td> </tr> </table>	poles:	Ie [A]	Ue [V]	category	1-4	25	750	DC21	1-4	32	600	DC21	A - B	25	300	AC23	auxilliary:	16	250	AC15 / DC15
poles:	Ie [A]	Ue [V]	category																		
1-4	25	750	DC21																		
1-4	32	600	DC21																		
A - B	25	300	AC23																		
auxilliary:	16	250	AC15 / DC15																		

cCSAus labels

<p>labels R typen</p> <p>type: X60.25RLKS4C-A-30.25.3-X0030</p> <p>serial nr: 2009-01-00320  Santon made in Europe </p>	<p>CSA C22.2 No.14</p> <p>UL 508</p> <p>PV disconnect</p> <p>SCCR 5kA</p> <table border="0"> <tr> <td>Poles 1 to 4:</td> <td>I= 25 A, 600 V DC</td> </tr> <tr> <td>Poles 1 to 4:</td> <td>Ie= 32 A, 500 V DC21</td> </tr> <tr> <td>Poles A and B:</td> <td>I= 25 A, 300 V AC</td> </tr> <tr> <td>auxilliary:</td> <td>16 A, A300</td> </tr> </table>	Poles 1 to 4:	I= 25 A, 600 V DC	Poles 1 to 4:	Ie= 32 A, 500 V DC21	Poles A and B:	I= 25 A, 300 V AC	auxilliary:	16 A, A300
Poles 1 to 4:	I= 25 A, 600 V DC								
Poles 1 to 4:	Ie= 32 A, 500 V DC21								
Poles A and B:	I= 25 A, 300 V AC								
auxilliary:	16 A, A300								

labels B, P en D typen

  <p>type: X60.25RLKS4C-A-30.25.3-X0030</p> <p>serial nr: 2009-01-00320 made in Europe</p>	<p>CSA C22.2 No.14</p> <p>UL 508</p> <p>PV disconnect</p> <p>auxilliary: 16 A, A300</p> <table border="0"> <tr> <td>poles:</td> <td>Ie [A]</td> <td>Ue [V]</td> <td>SCCR 5kA</td> </tr> <tr> <td>1-4</td> <td>25</td> <td>600</td> <td>DC single pole switching</td> </tr> <tr> <td>1-4</td> <td>32</td> <td>500</td> <td>DC single pole switching</td> </tr> <tr> <td>A - B</td> <td>25</td> <td>300</td> <td>AC23</td> </tr> </table>	poles:	Ie [A]	Ue [V]	SCCR 5kA	1-4	25	600	DC single pole switching	1-4	32	500	DC single pole switching	A - B	25	300	AC23
poles:	Ie [A]	Ue [V]	SCCR 5kA														
1-4	25	600	DC single pole switching														
1-4	32	500	DC single pole switching														
A - B	25	300	AC23														

The terminal marking will be:

DC contacts	+1	/	+1
	-1	/	-1
	+2	/	+2
	-2	/	-2
	+3	/	+3
	-3	/	-3
	+4	/	+4
	-4	/	-4
Single pole DC	1	/	1
	2	/	2
	etcetera		
AC contacts	A	/	B
	C	/	D
	etcetera		
Auxiliary contacts normally closed	11	/	12
	21	/	22
Auxiliary contacts normally open	13	/	14
	23	/	24

The terminals for each string the plus and the minus are numeric character indicated,

AC contacts are indicated with alphabetic character indicated,

Auxiliary contacts Normally Closed are numeric character indicated, starting with 11 - 12, 21 - 22

Auxiliary contacts Normally Open are numeric character indicated, starting with 13 - 14, 23 - 24

Delivery of the switch

- The switch is always delivered in the off position
- The terminals are always in the open position, the screws are wind back, except for the ones with a interconnection
- All switches are delivered with a manual.
- Switches for USA are being delivered with a **Warning sheet**
- The switches are normally packed in boxes containing 20 pieces
- When knobs are ordered they are included the box

Example 2: X100.16BK2CE-A50-60.25.2-X0002

- X - X-type
- 100 - Voltage divided by ten
- .
- 16 - Current
- B - Mounting type B = Bottom and DIN rail mounting
- K - cCSAus certified (this digit is left out in the standard IEC version)
- 2 - two DC poles
- C - Auxiliary contact - 1 normally open
- E - Position blocking, O on 12 hr, 1 on 3 hr
-
- A - Standard black knob
- 50 - Special shaft, shaft length from flat part top plate to top shaft
-
- 60 - Voltage divided by ten
- .
- 25 - Current
- .
- 2 - 2 AC poles
-
- X0002 - Sequential number for customer specific assemblies such as special engraving

Example 3: X85.16B6

- X - X-type
 - 85 - Voltage divided by ten
 - .
 - 16 - Current
 - B - Mounting type B = Bottom and DIN rail mounting
 - 6 - Six poles
- No auxiliary contacts, no blocking, no knob, standard shaft length 19 mm, no indicator plate etc.