

Cam switches

s-series



 **santon**
WWW.SANTONSWITCHGEAR.COM

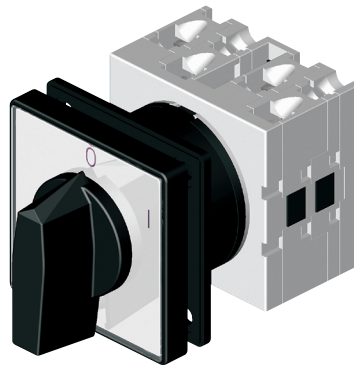
• nokkenschakelaars S-serie

De S-serie is de meest recente uitbreiding op het assortiment aanraakveilige nokkenschakelaars (IP20 volgens IEC 60529) en bestaat uit vier typen: de S1 t/m S4. Ze zijn ontworpen volgens moderne principes, rekening houdend met de laatste ontwikkelingen op het gebied van nokkenschakelaars. Hierbij worden alleen de beste isolatie- en contactmaterialen gebruikt. Ze onderscheiden zich door hun hoge schakelvermogen, elektrische- en mechanische duurzaamheid en hun kleine afmetingen. De nokkenschakelaars worden toegepast in hoofd- en hulp-circuits als: motorschakelaars (voor het starten en stoppen van 3-fase en 1-fase motoren) in de gebruikscategorieën AC3 of AC23 of als aan/uit schakelaars (om ohm'se belastingen of gering inductieve stromen te schakelen) in de gebruikscategorieën AC1 of AC21. De nokkenschakelaars kunnen maximaal 12 standen hebben en zijn beschikbaar met schakelhoeken van: 30°, 45°, 60° of 90°. Voor het schakelen van lage spanningen, bijvoorbeeld 24V en stromen in mA, in een stoffige en agressieve omgeving, zijn vergulde contacten leverbaar.

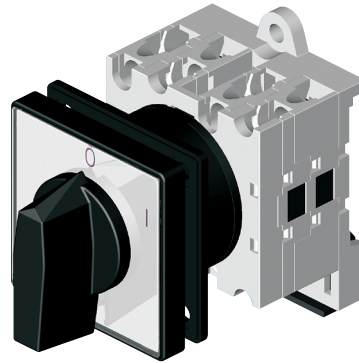
De Santon nokkenschakelaars voldoen aan vele inter-nationale en nationale standaards zoals **IEC 60947, IEC 60204, DIN EN 61058, UL 508, C22.2 No. 14 etc.**

The S-series is the latest addition to our range of finger proof cam switches (IP20 according to IEC 60529). They have been designed using modern principles and taking into consideration the latest standards in the field of switching devices and using the best insulation and contact materials available. They are distinguishable for their high breaking capacity, electrical and mechanical durability and small dimensions. Used in main and auxiliary circuits as a motor switch (switching of three-phase and single-phase motors) in the utilisation categories AC3 or AC23; as a load break switch (for switching of resistive loads including moderate overloads) in the utilisation categories AC1 or AC21. Rotary cam switches can have a maximum of 12 control positions, with switching angles of 30°, 45°, 60° or 90°. For switches used at lower voltages such as 24V and currents of mA and in dusty or aggressive environments; gold plated contacts can be provided. The Santon rotary cam switches comply with many international and national standards such as: **IEC 60947, IEC 60204, DIN EN 61058, UL 508, C22.2 No. 14 and many others.**

Paneelmontage
Panel mounting **P**



Bodemmontage
Base mounting **B**

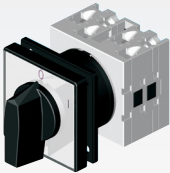
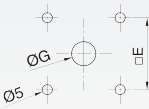
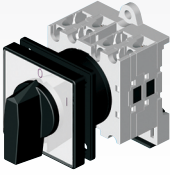
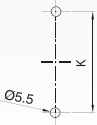

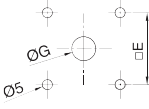
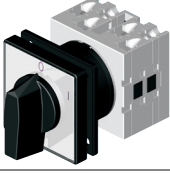
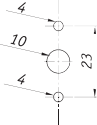
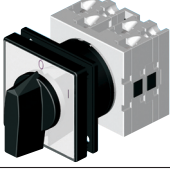
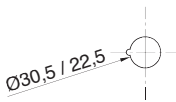
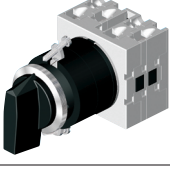
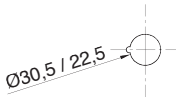
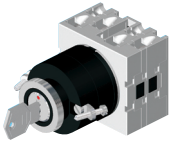
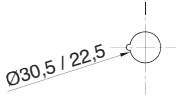


Type Type	Max. aantal elementen Max number of elements	Bevestiging Mounting form	Bevestigingsmaten Mounting size	Gegevens Main data Ith, Ui-
S1	12	Paneel/Panel - P Bodem/Base - B	(□ 48 mm)	16A, 690V
S2	12	Paneel/Panel - P Bodem/Base - B	(□ 48 mm)	20A, 690V
S3	12	Paneel/Panel - P Bodem/Base - B	(□ 65 mm)	32A, 690V
S4	12	Paneel/Panel - P Bodem/Base - B	(□ 65 mm)	40A, 690V

Schakelaar type Switch type		S1	S2	S3	S4	
Isolatiespanning Rated insulation voltage	U_i V	690	690	690	690	
Impulsspanning Rated impulse withstand voltage	U_{imp} kV	6	6	6	6	
Thermische duurstroom Rated thermal current	I_{th} A	16	20	32	40	
Hoofdschakelaar - max. nominaalspanning Main switch - max. value of rated operational voltage	V	690	690	690	690	
	V	440	440	440	440	
Kortduurzaam Rated short-time withstand current	I_{cw} 1sec. A	250	250	800	800	
Nominaalstroom Rated operational current	I_b AC1/AC21A A	16	20	32	40	
Motorschakelaar in gebruikscategorie: Motor switch in utilization category:	220/240V 380/440V 500/690V	3,5 4,5 5,5	3,7 5,5 5,5	7,5 11 11	7,5 15 15	
	220/240V 380/440V 500/690V	3,7 6,5 7,5	4 7,5 7,5	8 15 15	9 18,5 15	
Max. zekering t.b.v. kortsluitbeveiliging: Max. fuse size for short circuit:	5 kA	A	16	20	35	40
	10 kA	A	16	20	35	40
	25 kA	A	16	16	35	35
Aansluiting Conductor size	max. r/f	$2 \times \frac{mm^2}{AWG}$	2,5/2,5 14/14	2,5/2,5 14/14	10/6 8/10	10/6 8/10
	r = harde/rigid f = flexibele/flexible	min. r/f	$2 \times \frac{mm^2}{AWG}$	0,5/0,5 20/20	0,5/0,5 20/20	1,5/1,5 16/16

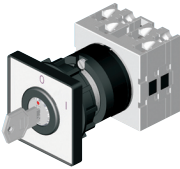
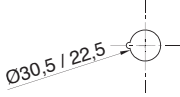
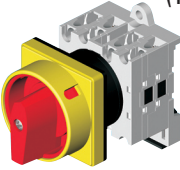
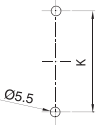
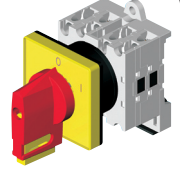
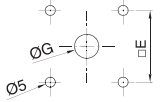
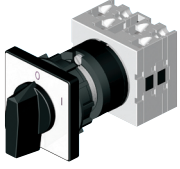
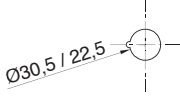
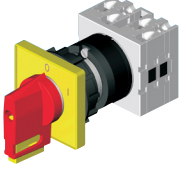
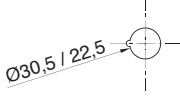
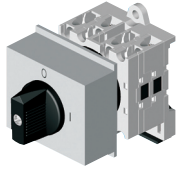
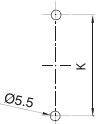
STANDAARD UITVOERING EN ACCESSOIRES

STANDARD DESIGN AND ACCESSORIES

ACCESSOIRES ACCESSORIES	UITVOERING FORM	BOORPATROON DRILLING TEMPLATE	CODE CODE	OMSCHRIJVING DESCRIPTION
Standaard uitvoering Standard design Paneelmontage Panel mounting P	 (1)(2)		S1P-___ S2P-___ S3P-___ S4P-___	<input type="checkbox"/> 48 frontplaat / escutcheon plate <input type="checkbox"/> 48 frontplaat / escutcheon plate <input type="checkbox"/> 65 frontplaat / escutcheon plate <input type="checkbox"/> 65 frontplaat / escutcheon plate
Standaard uitvoering Standard design Bodem- en DIN rail montage Base and DIN rail mounting B	 (1)(2)		S1B-___ S2B-___ S3B-___ S4B-___	<input type="checkbox"/> 48 frontplaat / escutcheon plate <input type="checkbox"/> 48 frontplaat / escutcheon plate <input type="checkbox"/> 65 frontplaat / escutcheon plate <input type="checkbox"/> 65 frontplaat / escutcheon plate
Met asdoorvoer IP 54 With shaft gland IP 54 L01	 (1)(2)		S1P-___-L01 S2P-___-L01 S3P-___-L01 S4P-___-L01	Asdoorvoer IP54 - afmetingen blijven gelijk aan standaard schakelaar. Protection IP54 - dimensions remain same as standard switch.
Driegatsmontage met frontplaat en knop Panel mounting three holes with escutcheon plate and knob L10	 (1)(2)		S1P-___-L10 S2P-___-L10	Driegatsmontage met frontplaat en knop Panel mounting, three holes, with escutcheon plate and knob
Ééngatsmontage met frontplaat en knop Single hole mounting with escutcheon plate and knob L11			S1P-___-L11 S2P-___-L11	Ééngatsmontage Ø 22,5 en Ø 30,5 mm met frontplaat en knop Single hole mounting suitable both Ø 22,5 and for Ø 30,5 mm with escut- cheon plate and knob
Ééngatsmontage zonder frontplaat met knop Single hole mounting without escutcheon plate with knob L12 (Ø30,5mm) L15 (Ø22,5mm)			S1P-___-L12 S2P-___-L12 S1P-___-L15 S2P-___-L15	Ééngatsmontage Ø 30,5 mm zonder frontplaat met knop Single hole mounting Ø 30,5 mm without escutcheon plate with knob Ééngatsmontage Ø 22,5 mm zonder frontplaat met knop Single hole mounting Ø 22,5 mm without escutcheon plate with knob
Ééngatsmontage zonder frontplaat, sleutel bediend Single hole mounting key operated, without escutcheon plate L13 (Ø30,5mm) L16 (Ø22,5mm)			S1P-___-L13 S2P-___-L13 S1P-___-L16 S2P-___-L16	Ééngatsmontage Ø 30,5 mm zonder frontplaat, sleutel bediend Single hole mounting Ø 30,5 mm key operated, without escutcheon plate Ééngatsmontage Ø 22,5 mm zonder frontplaat, sleutel bediend Single hole mounting Ø 22,5 mm key operated, without escutcheon plate

(1) Mogelijkheid tot frontplaat met titelbovenstuk L50 / Possibility of escutcheon plate with title block L50.

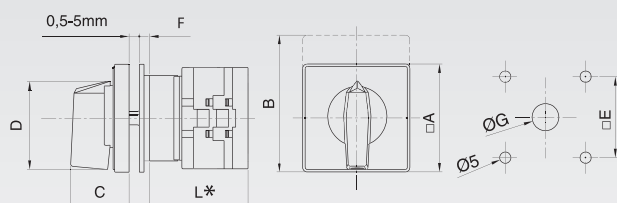
(2) Mogelijkheid tot grotere frontplaat L60 (□65 mm) / Possibility of bigger escutcheon plate L60 (□65 mm).

ACCESSOIRES ACCESSORIES	UITVOERING FORM	BOORPATROON DRILLING TEMPLATE	CODE CODE	OMSCHRIJVING DESCRIPTION
Ééngatsmontage met frontplaat, sleutel bediend Single hole mounting key operated, with escutcheon plate L14 (Ø30,5mm) L17 (Ø22,5mm)			S1P-__-L14 S2P-__-L14 S1P-__-L17 S2P-__-L17	Ééngatsmontage Ø 30,5 mm met frontplaat, sleutel bediend Single hole mounting Ø 30,5 mm key operated, with escutcheon plate Ééngatsmontage Ø 22,5 mm met frontplaat, sleutel bediend Single hole mounting Ø 22,5 mm key operated, with escutcheon plate
Hangslotvergrendeling Padlocking L23K tweevoudig / double □48 L23 drievoudig / tripple □65	 (1)(3)		S1B-__-L23K S2B-__-L23K S1B-__-L23 S2B-__-L23 S3B-__-L23 S4B-__-L23	Hangslotvergrendeling kunststof rood/geel Padlocking plastic red/yellow Hangslotvergrendeling kunststof rood/geel Padlocking plastic red/yellow
Hangslotvergrendeling in knop Padlocking in knob L27/L28/L29/L30	 (1)		S1B-__-L27 S2B-__-L27 S1B-__-L28 S2B-__-L28 S1B-__-L29 S2B-__-L29 S1B-__-L30 S2B-__-L30	rood/geel, red/yellow grijs/grijs, grey/grey rood/rood, red/red zwart/zwart, black/black
Snel montage Quick mounting L36 (Ø22,5mm) L37 (Ø30,5mm)			S1P-__-L36 S2P-__-L36 S1P-__-L37 S2P-__-L37	Ééngatsmontage Ø 22,5 mm met frontplaat en knop Single hole mounting Ø 22,5 mm with escutcheon plate and knob Ééngatsmontage Ø 30,5 mm met frontplaat en knop Single hole mounting Ø 30,5 mm with escutcheon plate and knob
Combinaties van hangslotvergrendeling in knop met snel montage Combinations of padlocking in knob with quick mounting L27/L28/L29/L30-L36/L37			S1P-__-L27-L36 S2P-__-L27-L36 S1P-__-L28-L36 S2P-__-L28-L36 S1P-__-L29-L36 S2P-__-L29-L36 S1P-__-L30-L36 S2P-__-L30-L36	S1P-__-L27-L37 S2P-__-L27-L37 S1P-__-L28-L37 S2P-__-L28-L37 S1P-__-L29-L37 S2P-__-L29-L37 S1P-__-L30-L37 S2P-__-L30-L37
Modulaire kap, 3 modules breed Service cover, three modules wide L78			S1B-__-L78 S2B-__-L78	Met DIN rail montage voor inbouw in groepen kast With DIN rail mounting, for use in switch board

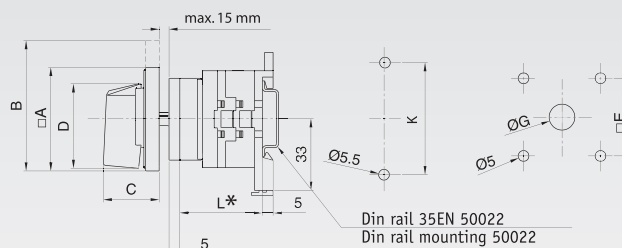
- (1) Mogelijkheid tot frontplaat met titelbovenstuk L50 / Possibility of escutcheon plate with title block L50.
(2) Mogelijkheid tot grotere frontplaat L60 (□65 mm) / Possibility of bigger escutcheon plate L60 (□65 mm).
(3) Meerdere kleur combinaties mogelijk / More colour combinations possible.

AFMETINGEN DIMENSIONS (mm)

P Paneelmontage Panel mounting

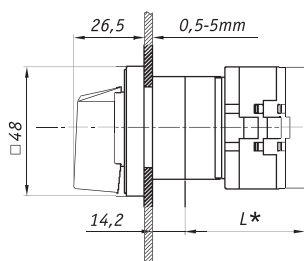


B Paneelmontage Panel mounting

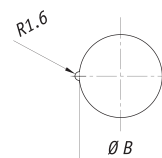
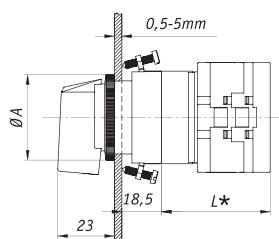


maten dimensions	□A	B	C	D	□E	F	ØG	K
S1 S2	48	60	26,5	39,5	36	5	10	52
S3 S4	65	80	34,5	53	48	5,5	12	68

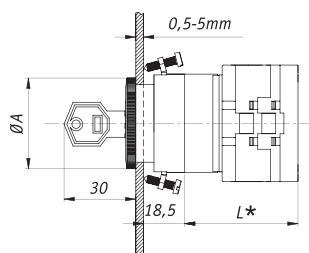
L11



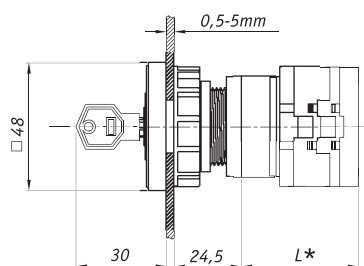
L12/L15



L13/L15



L14/L17

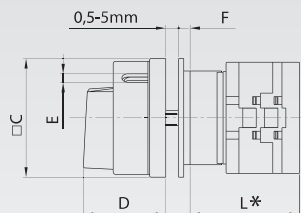


Accessoires Accessories	ØA	ØB
L11,L12,L13,L14	35	30,5
L11,L15,L16,L17	28	22,5

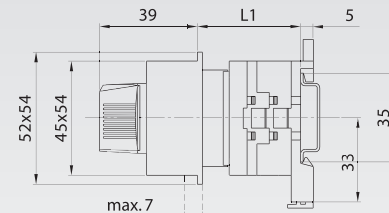
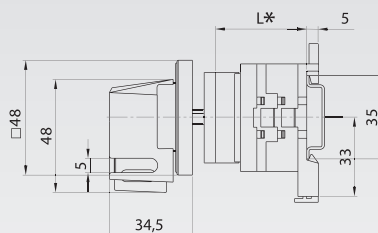
*Voor Lengte L zie volgende pagina
For Length L see next page

AFMETINGEN DIMENSIONS (mm)

L23 / L23K



L27...L30



maten dimensions	C	D	E	F
S1 L23K S2 L23K	48	34,2	5	5
S1 L23 S2 L23 S3 L23 S4 L23	65	38	5,5	5,5

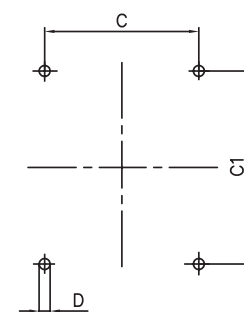
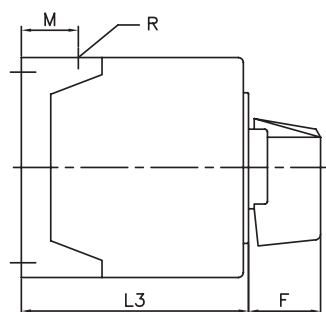
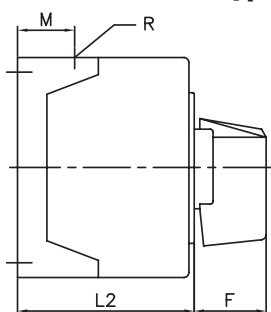
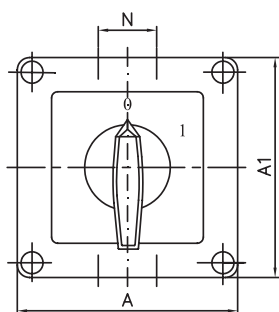
maten dimensions	L1			
	1 elem.	2 elem.	3 elem.	12 elem.
S1 L78 S2 L78	33	41,5	50	126,5

Lengte van de schakelaar / Length of the switch

Aantal elementen No. of elements		1	2	3	4	5	6	7	8	9	10	11	12
L (mm)	S1P	35	43	52	60,5	69	77,5	86	94,5	103	111,5	120	128,5
	S1B	32	40,5	49	57,5	66	74,5	83	91,5	100	108,5	117	125,5
	S2P	35	43,5	52	60,5	69	77,5	86	94,5	103	111,5	120	128,5
	S2B	32	40,5	49	57,5	66	74,5	83	91,5	100	108,5	117	125,5
	S3P	42,5	54,5	66,5	78,5	90,5	102,5	114,5	126,5	138,5	160,5	172,5	184,5
	S2B	43	55	67	79	91	103	115	127	139	161	173	185
	S4P	42,5	54,5	66,5	78,5	90,5	102,5	114,5	126,5	138,5	160,5	172,5	184,5
	S4P	43	55	67	79	91	103	115	127	139	161	173	185

M4...M7

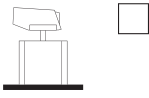
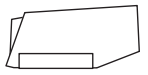
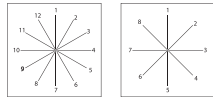
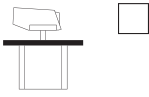

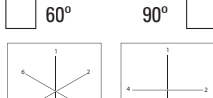
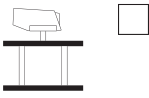
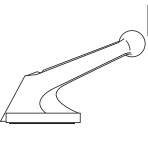

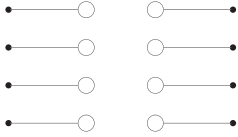
Behuizingen type Shelter Enclosures Shelter type



Type Type	Behuizing Enclosure	Aantal elementen No. of elements		A	A1	C	C1	D	F	M	N	L2	L3	Bescherming Protection	Aantal kabelingangen Conduit entries R(M...x1,5)
		L2	L3												
S1 S2	90x90	1-2 M4	3-5 M5	90	90	79	63	4,5	25	19	30	71,3	98,3	IP65	3xM20
S3 S4	110x110	1-2 M6	3-4 M7	110	110	98,4	83	4,5	32	21	39,5	85,5	119,5	IP65	4xM25

AANVRAAG FORMULIER

ENQUIRY FORM

No.		Afzender Sender:																							
d.d.		Tel.:																							
Gewenste type Preferred type		Fax:																							
		E-mail:																							
Aantal Quantity Nominale waarden Nominal ratings $U_e = \dots\dots\dots V$ $I_e = \dots\dots\dots A$ Gebruikscategorie. Utilization category. AC ..	Bevestiging. Mounting.	Knop. Knob.	Schakelhoek. Switching angle.		Stand Position	Opschriften Frontplaat Inscriptions Escutcheon plate																			
			<input type="checkbox"/> 30° <input type="checkbox"/> 45° 		1	_____																			
			<input type="checkbox"/> 60° <input type="checkbox"/> 90° 		2	_____																			
					3	_____																			
				4	_____																				
				5	_____																				
				6	_____																				
				7	_____																				
				8	_____																				
				9	_____																				
				10	_____																				
				11	_____																				
				12	_____																				
Accessoires - Accessories M...../L.....																									
Aanwijzingen - Instructions			Uitwendige verbindingen External connections																						
 <p>Terugverend naar stand Spring return to position.</p> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td></td> <td></td> <td>x</td> <td>x</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>x</td> <td>x</td> </tr> </table> <p>Gesloten in stand 3 en 4 Closed position 3 and 4.</p> <p>Idem zonder onderbreking Ditto without interruption.</p>			1	2	3	4			x	x											x	x			
1	2	3	4																						
		x	x																						
		x	x																						
Contacten - Contacts				Standen - Positions				Opmerkingen - Notes																	
1	•	○	○	•	2																				
4	•	○	○	•	3																				
5	•	○	○	•	6																				
8	•	○	○	•	7																				
9	•	○	○	•	10																				
12	•	○	○	•	11																				
13	•	○	○	•	14																				
16	•	○	○	•	15																				
17	•	○	○	•	18																				
20	•	○	○	•	19																				
21	•	○	○	•	22																				
24	•	○	○	•	23																				
25	•	○	○	•	26																				
28	•	○	○	•	27																				
29	•	○	○	•	30																				
32	•	○	○	•	31																				
33	•	○	○	•	34																				
36	•	○	○	•	35																				
37	•	○	○	•	38																				
40	•	○	○	•	39																				
41	•	○	○	•	42																				
44	•	○	○	•	43																				
45	•	○	○	•	46																				
48	•	○	○	•	47																				

18-05-2005



santon

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