

MICROSWITCHES SELECTION GUIDE

SNAP-ACTION SWITCHES			SUB-SUBMINIATURE			SUBMINIATURE					MINIATURE							SPECIAL					
																							
Approx. body size (mm)			15x8x5	Ø 8x8	13x10x5	20x10x6	20x10x6	20x10x6	20x10x6	Ø 11x15	28x16x10	28x16x10	28x16x10	28x16x10	29x16x10	31x23x10	24x31x9	30x18x12	50x30x12	32x19x13	40x19x13	49x10x20	43x18x17
SERIES			V5S 8320	83228 83229	83141	V4 83170	V4D 8327	V4S 8318	83132 83133 83134	83151 83560	V3 83161	V3D 8326	83160	831607 832607	831606 SP3697	V3S 83169	83139	83137	PBX 8324	83106 83109 83111/112	83154	83123	83118 83119 83120
TYPE			Sealed	Cylindric adjustable	High accuracy	Premium	Standard **	Sealed	Double break	Hermetic Inox housing	Premium	Standard	Heavy duty	Positive break	High DC rating	Sealed	Sealed Double break	Ultra sensitive Rotary	Sealed Separated circuits	Double break	High DC rating	Sealed Rubber housing	High accuracy Sensitive
ELECTRICAL	Max. ratings	@ 250 V ~	4 A	5 A	5 A	12 A	12 A	10 A	6 A	5 A	20 A	25 A	16 A	6 A	16 A	8 A	6 A	6 A	10 A	16 A	16 A	10 A	10 A
		@ 24V ~	4 A	5 A	5 A	10 A	10 A	10 A	6 A	7 A	16 A	16 A	16 A	6 A	16 A	8 A	6 A	6 A	10 A	16 A	16 A	10 A	10 A
		@ 250 V ~	0.2 A	0.2 A	0.15 A	0.3 A	0.2 A	0.3 A	0.5 A	0.3 A	0.8 A	0.2 A	0.8 A	0.5 A	5 A	0.3 A	0.5 A	0.4 A	0.8 A	0.6 A	5 A	0.3 A	0.3 A
	Dual-current version	1 mA → 4 A**	1 mA → 5 A	1 mA → 1 A	1 mA → 5 A		1 mA → 6 A	1 mA → 5 A	1 mA → 1 A	1 mA → 5 A		**	10 mA → 6 A		1 mA → 5 A	1 mA → 5 A		1 mA → 10 A	10 mA → 5 A				
	Low current version	1 → 50 mA				1 → 20 mA					1 → 20 mA						1 → 100 mA						
	Circuit diagram																						
	Contact configuration (for 1 pole changeover/SPDT)	Form C	Form C	Form C	Form C	Form C	Form C	Form Za	Form C	Form C	Form C	Form C	Form C	Form C	Form C	Form C	Form Za or Form C	Form C	Form Zb (separated contacts)	Form Za	Form Za	Form C	Form C
	SPST-NC / SPST-NO versions	✓			✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	
	Multipole version							2 ; 3 poles (8331**)	2 poles								2 poles		**	2 → 6 poles (8332)	2 → 6 poles (8332)		
	Bistable version (maintained action)							Push/Pull											**	Push/Pull	Push/Pull		
Positive opening operation												⊙						⊙					
Electrical disconnection	μ	μ	μ	μ	μ	μ	μ	μ	μ or Full	μ	μ or Full	μ	Full	μ	μ	μ	Full	μ	μ	μ	μ	μ	
Insulation voltage	250 V	250 V	250 V	250 V	250 V	250 V	250 V	250 V	400 V	250 V	400 V	250 V	250 V	250 V	250 V	250 V	400 V	250 V	250 V	250 V	250 V	250 V	
Protection against electric shock (without additional protection)	Class I	Class I	Class I	Class I	Class I	Class I	Class I	Class I	Class I	Class I	Class I	Class I	Class I	Class I	Class I	Class I	Class I	Class I	Class I	Class I	Class I	Class I	
ENVIRONMENT	Degree of protection	IP67 IP69	IP40	IP40	IP40	IP40	IP67 IP69	IP40	Hermetic Qk test 10-3 Pa.cm³/s	IP40	IP40	IP40	IP40	IP40	IP67 IP69	IP66 IP67	IP40	IP40 IP65 IP67	IP40	IP40	IP40	IP66 IP67 IP69	IP40
	Operating temperature	-40 °C +90 °C	-55 °C +140 °C	-55 °C +150 °C	-40 °C +150 °C	-20 °C +150 °C	-40 °C +125 °C	-40 °C +150 °C	-55 °C +250 °C	-60 °C +150 °C	-50 °C +200 °C	-40 °C +150 °C	-40 °C +125 °C	-40 °C +125 °C	-40 °C +105 °C	-40 °C +105 °C	-20 °C +125 °C	-50 °C +85 °C	-40 °C +125 °C	-40 °C +125 °C	-40 °C +85 °C	-40 °C +125 °C	
	Explosive atmospheres								⊙**								II2G⊙d						
	Irradiated environment			☢**				☢**	☢**			☢	☢	☢									☢**
MECHANICAL	Max. Operating Force	1.5 N	1.7 N	2 N	0.6 → 2.2 N	0.75 N ; 1.5 N	2.5 N	1.6 N ; 2.6 N	5 → 47 N	0.15 → 5 N	0.25 → 4 N	1 → 5 N	4 N	5 N	4.5 N	3 N	0.0012 Nm	4.5 N; 6.5 N	0.45 → 7.5 N	4 N	7.5 N	0.35 → 3 N	
	Min. Overtravel	2 mm	0.15 mm	0.1 mm	0.5 mm	0.5 mm	0.6 mm	0.27 mm	0.08 mm	1.2 mm	1.1 mm	1.3 mm	1.3 mm	1 mm	1 mm	0.25 mm	12°	3 mm	0.7 mm	0.7 mm	0.25 mm	0.2 → 1.7 mm	
	Max. Differential Travel	0.06 → 0.20 mm	0.12 mm ; 0.19 mm	0.06 mm	0.08 mm ; 0.15 mm	0.15 mm	0.10 mm ; 0.15 mm	0.45 mm	0.05 mm	0.35 mm ; 0.8 mm	0.4 mm	0.3 mm ; 0.7 mm	0.3 mm	0.7 mm	0.07 mm ; 0.35 mm	0.45 mm	14°	1.3 mm	0.7 mm	0.9 mm	0.2 mm	0.09 mm ; 0.7 mm	
	Mechanical life (cycles)	1 M	2 M	2 M	30 M	0.2 M	2 M	10 M	0.2 M	50 M	1 M	10 M	10 M	1 M	5 M	10 M	10 M	10 M	10 M	10 M	2 M	5 M	
	Min. actuating speed	0.001 mm/s	0.01 mm/s	0.01 mm/s	0.001 mm/s	0.1 → 10mm/s	0.01 mm/s	0.01 mm/s	0.01 mm/s	0.001 mm/s	0.1 → 3mm/s	0.1 mm/s	0.1 mm/s	0.1 mm/s	0.1 mm/s	0.001 mm/s	0.01 mm/s	1°/s	0.5 mm/s	0.01 mm/s	0.01 mm/s	0.03 mm/s	0.01 mm/s
	Operating device	Plunger	Plunger	Plunger	Plunger	Plunger	Plunger	Plunger	Plunger	Plunger	Plunger	Plunger	Plunger	Plunger	Plunger	Plunger	Plunger	Inox wire	Plunger	Plunger	Plunger	Plunger	Plunger
	Lateral actuation on plunger	✓	Ball (opt)		✓	✓	✓	Ball (opt)		✓	✓	✓	✓	✓	**				Ball (opt)	Ball (opt)			
	Auxiliary levers	Hinged		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	
	(flat, bended, roller...)	Flexible	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓			✓	
	Adjustable	Adjustable		✓	✓	✓	✓	✓	✓	**	✓	✓	✓	✓	**	**			✓	✓		✓	
	Telescopic plunger (option)		✓		✓	✓		See 8354	See 8377	✓	**	✓		✓	(SP4978/4988)	(SP4257)			See 83513/522	See 83513/522	See 8373	✓	
	Fixing means	Plain holes	Ø 3 (opt)		Ø 2.1	Ø 2.2	Ø 2.2 ; 2.35	Ø 2.2	Ø 2.1	Ø 3.2	Ø 3.1	Ø 3.1	Ø 3.2	Ø 3.2	Ø 3.2	Ø 3.1	Ø 2.2 ; Ø 3.1	Ø 3.2	Ø 4.1 M3	Ø 2.6 M3	Ø 2.6	Ø 3.2	Ø 4.2
		Tapped holes																					
Pins		Ø 2.2			Ø 2.6	Ø 2.6	Ø 2.6								See 83581	M10 x 0.75			(83537**)	(83537**)	See 8373	✓	
Threaded barrel		M5 x 0.5; M8 x 0.7		M6 x 0.75	M6 x 0.75		See 8354	See 8377	M10 ; M12	**	M10 ; M12	M10 x 0.75	M10 ; M12	See 83581	M10 x 0.75				(83537**)	(83537**)	See 8373	✓	
Others		Flush mount				Snap-in**													Snap-in		**	✓	
Connections	Solder	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	**	✓	
	Quick-connect				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	
	Printed board	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	
	Screw			**						✓	✓	✓	✓	✓			✓		✓	✓		✓	
	Wires	✓				✓	✓	✓	✓						✓	✓		**	✓	✓		✓	
Cable													</										