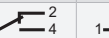
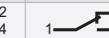
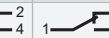
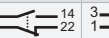
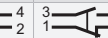


MICROSWITCHES SELECTION GUIDE

10/2019

SNAP-ACTION SWITCHES			SUB-SUBMINIATURE				SUBMINIATURE					MINIATURE								SPECIAL						
																										
Approx. body size (mm)			15x8x5	Ø 8x8	13x10x5	13x10x5	20x10x6	20x10x6	20x10x6	20x10x6	Ø 11x15	28x16x10	28x16x10	28x16x10	28x16x10	29x16x10	31x23x10	33x16x10	24x31x9	30x18x12	50x30x12	32x19x13	40x19x13	49x10x20	43x18x17	
SERIES			V5S 8320	83228 83229	83141	V5D 83194	V4 83170	V4D 8327	V4S 8318	83132 83133 83134	83151 83560	V3 83161	V3D 8326	83160	831607 832607	831606 SP3697	V3S 83169	V3DS 8329	83139	83137	PBX 8324	83106 83109 83111/112	83154	83123	83118 83120	
TYPE			Sealed	Cylindric adjustable	High accuracy	Standard	Premium	Standard	Sealed	Double break	Hermetic Inox housing	Premium	Standard	Heavy duty	Positive break	High DC rating	Sealed	Sealed Compact	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	5 A	12 A	12 A	10 A	6 A	5 A	20 A	25 A	16 A	6 A	16 A	8 A	10 A	6 A	6 A	10 A	16 A	16 A	10 A	10 A	
		@ 24V ~	4 A	5 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	10 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	0.15 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	0.5 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 → 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 → 3 A	1 mA → 5 A		1 mA → 10 A	10 mA → 5 A					
	Low current version						1 → 20 mA					1 → 20 mA							1 → 100 mA							
	Circuit diagram																									
	Contact configuration (for 1 pole changeover/SPDT)																									
	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	μ	μ or Full	μ	μ or Full	μ	Full	μ	μ	μ	μ	Full	μ	μ	μ	μ	
Insulation voltage	Ui	250 V	250 V	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	250 V	400 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	Class I	Class I	
Degree of protection		IP67 IP69	IP40	IP40	IP40	IP40	IP40	IP67 IP69	IP40	Hermetic Qk test 10-3 Pa.cm³/s		IP40	IP40	IP40	IP40	IP40	IP67 IP69	IP67	IP66 IP67	IP40	IP40 IP65 IP67	IP40	IP40	IP66 IP67 IP69	IP40	
Operating temperature		-40 °C +90 °C	-55 °C +140 °C	-55 °C +150 °C	-40 °C +110 °C	-40 °C +150 °C	-25 °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 +85 °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										Ex**																
Irradiated environment				☢**					☢**	☢**				☢	☢	☢			IIG2Exd						☢**	
MECHANICAL	Max. Operating Force	1.5 N	1.7 N	2 N	1.4 N	0.6 → 2.2 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	0.5 → 4.5N	3 N;4.5 N	1.2 → 2 mN.m	4.5 N;6.5 N	0.45 → 7.5 N	4 N	7.5 N	0.35 → 2.7 N	
	Min. Overtravel	2 mm	0.15;1.5 mm	0.1 mm	0.25 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	1 mm	0.25 mm	12°	3 mm	0.7 mm	0.7 mm	0.25 mm	0.2 → 0.8 mm	
	Max. Differential Travel	0.06 mm ; 0.10 mm	0.12 mm ; 0.19 mm	0.06 mm	0.13 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	0.5 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	10 M	30 M	0.1 M	2 M	10 M	0.2 M		50 M	1 M	10 M	10 M	1 M	5 M	1 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	0.1 mm/s	0.001 mm/s	0.1 mm/s	0.01 mm/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	0.1 → 3mm/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	Plunger	Plunger	Plunger	Inox wire	Plunger	Plunger	Plunger	Plunger	Plunger
	Lateral actuation on plunger	✓	Ball (opt)			✓	✓	✓	Ball (opt)		✓	✓	✓	✓	✓	✓	**	**				Ball (opt)	Ball (opt)			
	Auxiliary levers (flat, bended, roller...)	Hinged Flexible Adjustable	✓		✓ ✓ ✓	✓	✓	✓	✓ ✓ ✓	✓	✓	✓ ✓ **	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ **	✓ ✓ ✓	✓ ✓ **			✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓
	Telescopic plunger (option)		✓			✓	✓		See 8354	See 8377		✓	**	✓		✓	(SP4978/4988)		(SP4257)			See 83513/522	See 83513/522	See 8373	✓	
	Fixing means	Plain holes Tapped holes Pins Threaded barrel Others	Ø 3 (opt)		Ø 2.1 Ø 2.25	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 3.2	Ø 3.1	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	
Connections	Solder Quick-connect Printed board Screw Wires Cable	✓ ✓ ✓ ✓	✓ ✓ ✓	✓ ** **	✓ ** **	✓ ✓ ✓ **	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	
Approvals	ENEC /NF/CE/IECEX UL CCC EAC	CE C UL CCC EAC	CE C UL CCC EAC	CE C UL CCC EAC	NF CE C UL CCC EAC	NF CE C UL CCC EAC	NF CE C UL CCC EAC	CE C UL CCC EAC	CE C UL CCC EAC	NF CE C UL CCC EAC	NF CE C UL CCC EAC	NF CE C UL CCC EAC	CE C UL CCC EAC	CE C UL CCC EAC	CE C UL CCC EAC	CE CE C UL CCC EAC	CE CE C UL CCC EAC	CE CE C UL CCC EAC	CE CE C UL CCC EAC	CE CE C UL CCC EAC	CE CE C UL CCC EAC	CE CE C UL CCC EAC	CE CE C UL CCC EAC	CE CE C UL CCC EAC		



* Pending ** Consult us
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