

MICROSWITCHES SELECTION GUIDE

| SNAP-ACTION SWITCHES | | SUB-SUBMINIATURE | | | | SUBMINIATURE | | | | | MINIATURE | | | | | | | | SPECIAL | | | | | | | |
|---|---|--|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-------------------------|--|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|---------------------------|-----------------------------|------------------------|------------------------|-------------------------|-----------------------|---|
| | | 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 ~ @ 24V ~ @ 250 V ~ | 4 A 4 A 0.2 A | 5 A 5 A 0.2 A | 5 A 5 A 0.15 A | 5 A 5 A 0.15 A | 12 A 10 A 0.3 A | 12 A 10 A 0.2 A | 10 A 10 A 0.3 A | 6 A 6 A 0.5 A | 5 A 7 A 0.3 A | 20 A 16 A 0.8 A | 25 A 16 A 0.2 A | 16 A 16 A 0.8 A | 6 A 6 A 0.5 A | 16 A 16 A 5 A | 8 A 8 A 0.3 A | 10 A 10 A 0.5 A | 6 A 6 A 0.5 A | 6 A 6 A 0.4 A | 10 A 10 A 0.8 A | 16 A 16 A 0.6 A | 16 A 16 A 5 A | 10 A 10 A 0.3 A | 10 A 10 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 → 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) | | Form C | 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 C | Form C | Form C | 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 | 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 | 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 | | |
| ENVIRONMENT | Degree of protection | IP67 IP69 | IP40 | IP40 | IP40 | IP40 | IP40 | IP67 IP69 | IP40 | Hermetic Qk test 10-3 Pa.cm ³ /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 | -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 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Irradiated environment | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 → 4.5 N | 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 | 0.3 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 | 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 | 0.001 mm/s | 0.1 → 3 mm/s | 0.1 mm/s | 0.1 mm/s | 0.1 mm/s | 0.1 mm/s | 0.001 mm/s | 0.1 → 3 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 | Plunger | Plunger | Inox wire | Plunger | Plunger | Plunger | Plunger | Plunger | |
| | Lateral actuation on plunger | ✓ | Ball (opt) | | | ✓ | ✓ | ✓ | 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 3.1 | 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 UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | CE UL CCC EAC | | |



* Pending ** Consult us
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