2S-Series SUB-MINIATURE TOGGLES

The 2S family of sub-miniature toggle switches is composed of three switch series; the **2S1-Series** toggle switch, the **2SS-Series** sealed toggle switch, and the **2SM-Series** surface mount sealed sub-miniature toggle switch. All of these series offer a variety of ratings, circuits, contact materials, terminal platings, and actuator types.



Product Highlights:

- · IP67 Sealing
- 6 Actuator Options
- Surface, Thru Hole or Snap-in Mounting
- Dry-Circuit thru 3A 125VAC Ratings
- UL, CSA Approvals

Typical Applications:

- Telecommunications
- Instrumentation
- Networking
- Medical Equipment



lechna





2SS-Series Sealed Sub-Miniature **Toggle Switch**



2S1-Series Sub-Miniature Toggle Switch



2SM-Series Sealed Surface Mount

Sub-Miniature **Toggle Switch**

Electrical

Contact Rating **Electrical Life**

Contact Resistance

Insulation Resistance

Dielectric Strength

refer to ordering scheme 30,000 make & break cycles @ full load 20 mΩ max. initial @ 2-4 VDC 100mA for both silver & gold plated contacts 1000 MQ min. 1500 Volts RMS @ sea level

Physical

Operating Temperature -30°C to +85°C Index of Protection Actuator Travel

2SS & 2SM-Series: IP67 Solder Heat Resistance MIL-STD-202, Method 210 25°

Material Case

Rocker

Bushing

Housing

all UL94 V-0

2S1-Series: Dially phthalate (DAP) 2SS-Series: Glass filled nylon 6/6, flame retardant, heat stabilized 2SM-Series: Glass filled nylon 4/6, flame retardant, heat stabilized 2S1-Series: Brass, chrome plated. 2SS & 2SM-Series: Brass, chrome plated or nylon, internal o-ring sealed 2S1-Series: Brass, nickel plated 2SS-Series: Glass filled nylon 6/6, flame retardant, heat stabilized (UL 94V-0) 2SM-Series: Glass filled nylon 4/6, flame retardant, heat stabilized

(UL 94V-0) Stainless Steel Switch Support Brass, tin plated Terminal Seal Ероху

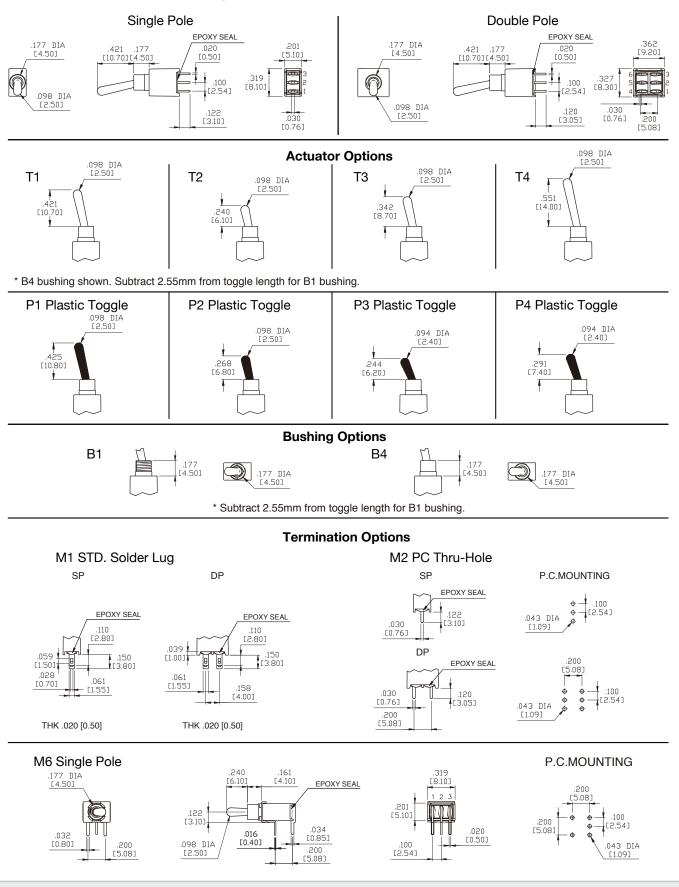
MSP M6 З Series Poles Circuit Actuator Style Bushing Termination Contacts Sea 1 SERIES **6 TERMINATION 2SS** Sealed Sub-Miniature Toggle Switch M1 Solder Lua PCB M2 M6 PC Mount. 90° horizontal 2 POLES Snap-In, U bracket, 90° horizontal M61 MSP Single pole - uses terminals 1, 2 & 3 M7 PC Mount, 90° vertical MDP Double pole - uses terminals 1, 2, 3, 4, 5 & 6 M71 Snap-In, U bracket, 90° horizontal VS2 PC Mount, U bracket VS21 Snap-In, U bracket **3 CIRCUIT** See page 27-28 for dimensional specifications. () - momentary **Position: 1 3** 2-1, 5-4 2-3, 5-6 **Connected Terminals** 7 CONTACTS / TERMINALS ON ON NONE Contact Material Terminal Plating Rating Approvals 2 ON NONE (ON) G silver 1 gold over silver 3A 125VAC or 28VDC, 3 ON OFF ÔN 1.5A 250VAC IP67 4 5 (ON) ON (ON) (ON) OFF gold² κ tin 3 0.4VA max 20V max (AC/DC) IP67 OFF P silver¹ tin 3 3A 125VAC or 28VDC, IP67 1.5A 250VAC gold² R aold² 0.4VA max 20V max (AC/DC) IP67 **4 ACTUATOR STYLE / LENGTH** T1 Round toggle .421" [10.70 mm] Round toggle .242" [6.10 mm] Round toggle .242" [6.10 mm] Round toggle .342" [8.70 mm] Round toggle .551" [14.00 mm] ESD resistant toggle .425" [10.80 mm] T2 8 EPOXY SEAL тз E Epoxy Seal without Epoxy Seal 0 **T4** P1 ESD resistant toggle .268" [6.80 mm] Notes P2 Tin option not available with M1 terminal P3 ESD resistant toggle .244" [6.20 mm] Movable contact & terminal platings: silver over copper alloy Movable contact & terminal platings: gold over nickel over copper alloy Terminal platings: tin over nickel over copper alloy 1 2 3 P4 ESD resistant toggle .291" [7.40 mm] **5 BUSHING** B1 Threaded **B**4 Unthreaded

*Manufacturer reserves the right to change product specification without prior notice.



2S1 - MSP 1 - T	1 - B4 - M6 QE
Series Poles Circuit Actuato 1 SERIES 2S1 Sub-Miniature Toggle Switch 2 POLES MSP Single pole - uses terminals 1, 2 & 3 MDP MDP	Bushing Termination Contacts Seal 6 TERMINATION M1 Solder Lug M71 Right Angle PC Thru Hole, vertical M2 PCB VS2 PC Mount, U bracket M6 PC Mount, 90° horizontal VS21 Snap-In, U bracket M61 Snap-In, Right Angle M77 PC Mount, 90° vertical See page 29-30 for dimensional specifications. Seal Seal
3 CIRCUIT () - momentary Position: 1 2 3 2-3, 5-6 Connected Terminals 2-1, 5-4 1 ON NONE ON 2 ON NONE (ON) 3 ON OFF ON 4 (ON) OFF (ON) 5 ON OFF (ON) 4 ACTUATOR STYLE / LENGTH 9 9	7 CONTACTS / TERMINALS Contact Material Terminal Plating Rating Approvals G silver 2 gold over silver 3A 125VAC or 28VDC, NJ, (*) K 8 gold 3.6 tin 5 0.4VA max 20V max (AC/DC) N/A P 8 silver 2.7 tin 5 3A 125VAC or 28VDC, NJ, (*) Q silver 2 silver 2 3A 125VAC or 28VDC, NJ, (*) I 1.5A 250VAC 1.5A 250VAC Q silver 2 silver 2 3A 125VAC or 28VDC, NJ, (*) I 1.5A 250VAC 1.5A 250VAC N/A R gold 3 gold 4 0.4VA max 20V max (AC/DC) N/A
T1 Round toggle .374" [9.50 mm] T3 Round toggle .311" [7.90 mm] T2 Round toggle .236" [6.00 mm] T4 Round toggle .449" [11.40 mm] 5 BUSHING 1 B1 Threaded Standard, keyway B2 Non-Threaded Standard, keyway B3 Threaded Short, keyway B4 Non-Threaded Short, keyway B4 Non-Threaded Short, keyway B5 High Torque, flat, .276" B6 High Torque, keyway, .276" B7 Long threaded Long, keyway	B EPOXY SEAL 0 without Epoxy Seal Notes: Tin option available with PC type terminations only. 1 All Switches come with standard nut, washer and locking ring shipped bulk. B5 & B7 bushing styles use small locking ring. See page 76-77° 2 Movable contact and terminal platings: silver over copper alloy 3 Movable contact and terminal platings: gold over nickel over copper alloy 4 Terminal platings: gold over nickel alloy 5 Terminal contact platings: gold over nickel alloy 6 Terminal contact platings: gold over nickel alloy 7 Terminal contact platings: gold over nickel alloy 8 Not available with M1 terminal 9 Lengths shown are with B1 - B4 bushings. For B5 & B6 subtract .108°, for B7 & B8 subtract .043°
$2SM - MSP 1 - T$ $\frac{1}{Series} Poles Circuit + Actuator$	1 - M6 G E or Style ⁵ Termination ⁶ Contacts ⁷ Seal ⁸ Packaging
1 SERIES 2SM Sealed Surface Mount Sub-Miniature Toggle Switch 2 POLES MSP Single pole - uses terminals 1, 2 & 3	5 TERMINATION K6 Surface Mount, .433" [11.00 mm] L6 Surface Mount, .354" [9.00 mm] M6 Surface Mount, 90° flat, .286" [7.26 mm] M7 Surface Mount, 90° vertical S6 Surface Mount, 90°, .353" [8.96 mm] See page 31 for dimensional specifications.
3 CIRCUIT () - momentary Position: 1 2 3 2-3 Connected Terminals 2-1 1 ON NONE ON 2 ON NONE (ON) 3 ON OFF ON 4 (ON) OFF (ON) 5 ON OFF (ON)	6 CONTACTS / TERMINALS Contact Material Terminal Plating Rating Approvals G silver ² gold over silver 3A 125VAC or 28VDC, 1.5A 250VAC IP67 K gold ³ tin ⁴ 0.4VA max 20V max (AC/DC) IP67 P silver ² tin ⁴ 0.4VA max 20V max (AC/DC) IP67 Q silver ² silver ² silver ² silver ² 1.5A 250VAC IP67 Q silver ² silver ² silver ² Silver ² Silver ² IP67 Q silver ² silver ² silver ² Silver ² Silver ² IP67
 4 ACTUATOR STYLE / LENGTH ¹ T1 Round toggle .425" [10.80 mm] T2 Round toggle .240" [6.10 mm] P1 ESD resistant plastic toggle .425" [10.80 mm] P2 ESD resistant plastic toggle .268" [6.80 mm] P3 ESD resistant plastic toggle .244" [6.20 mm] P4 ESD resistant plastic toggle .291" [7.40 mm] 	R gold ³ 0.4VA max 20V max (AC/DC) IP67 7 EPOXY SEAL 0 without Epoxy Seal 8 PACKAGING T/R tape reel - 500 pieces per reel
Notes: Tin option available with PC type terminations only. Bushing is unthreaded .177" [4.50 mm] height Movable contact & terminal platings: silver over copper alloy Movable contact & terminal platings: gold over nickel over copper alloy Terminal platings: tin over nickel over copper alloy	Switches are bulk packed, unless T/R is specified at the end of the part number.

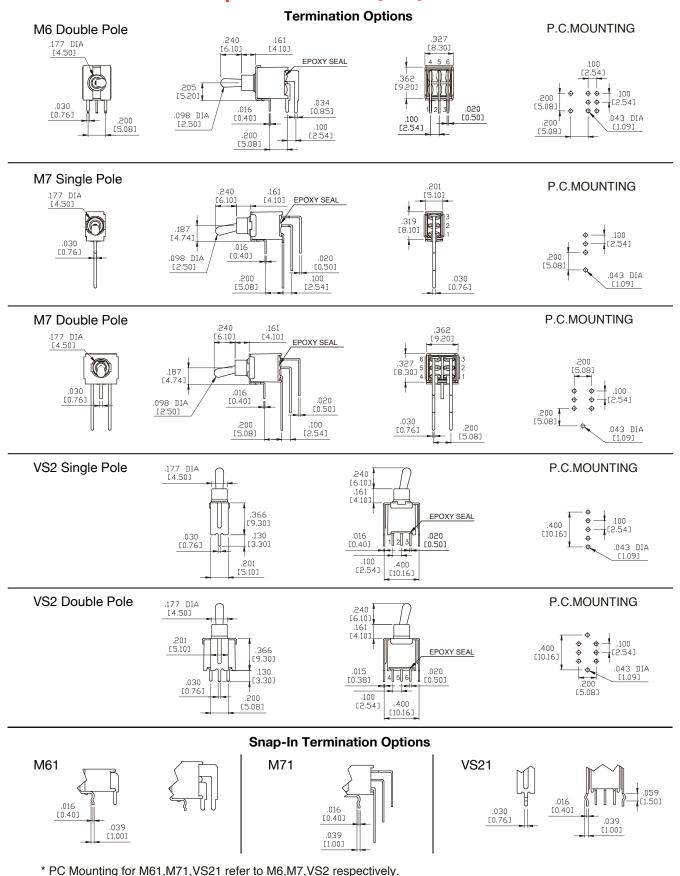




2SS-Series Dimensional Specifications: in. [mm]

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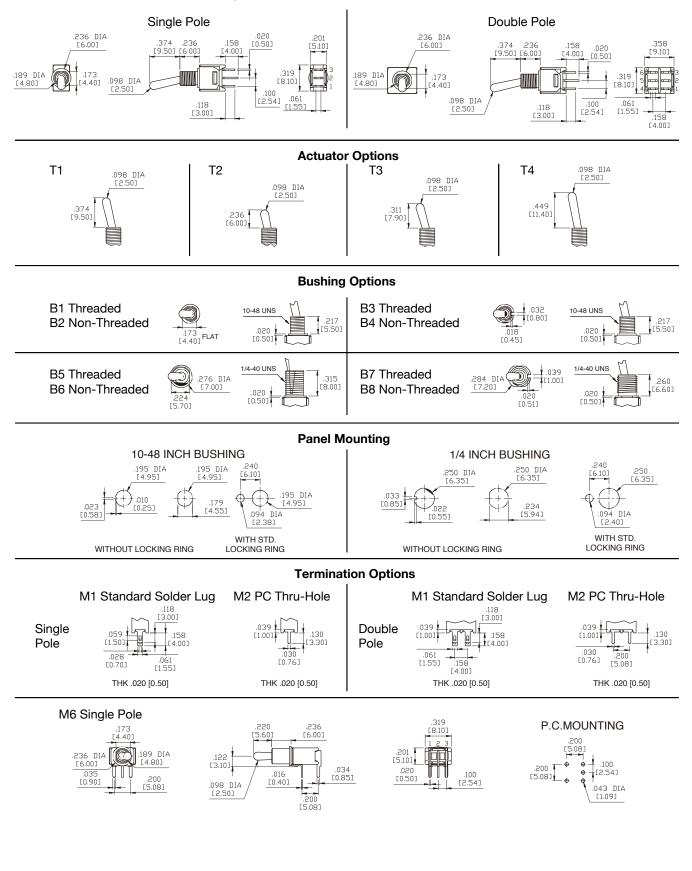
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2SS-Series Dimensional Specifications: in. [mm]

www.techna.co.uk

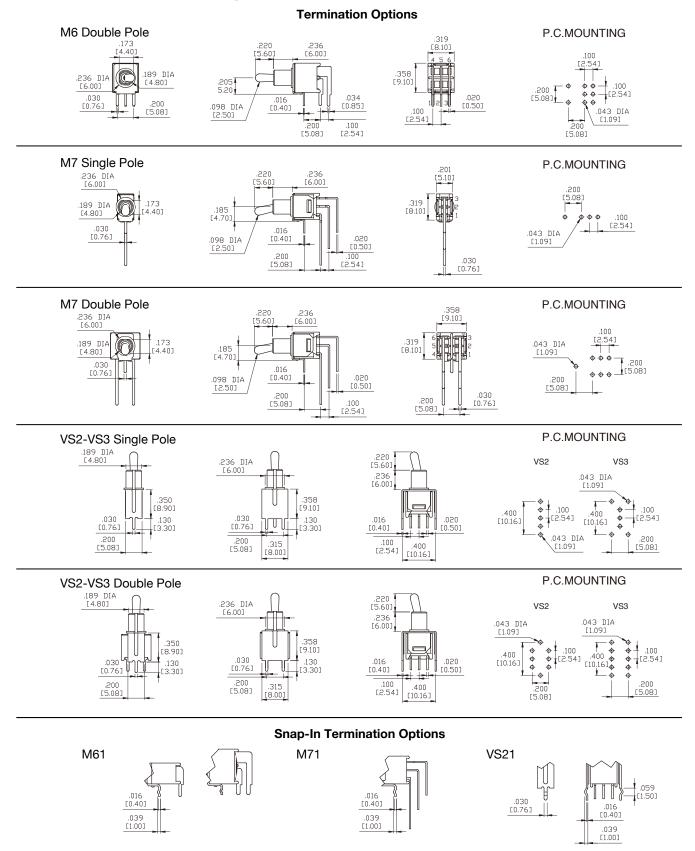
29



2S1-Series Dimensional Specifications: in. [mm]

www.techna.co.uk

PC

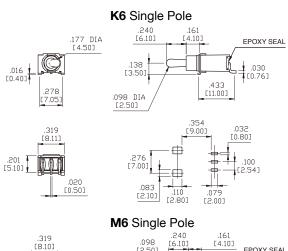


2S1-Series Dimensional Specifications: in. [mm]

* PC Mounting for M61,M71,VS21 refer to M6,M7,VS2 respectively.



2.9



.098 [2.50]

.016

[0.40]

.080

[2.03]

.090

[2.29]

150

[3.81]

.143 [3.63]

.128

[3.25]

C

.280

[7.10]

.100

[2.54]

.226

.020 [0.50]

.142 [3.60]

.177 DIA

393

[9.98]

.161 [4.10]

[4.50]



EPOXY SEAL

030

[0.75]

.128 [3.25]

.357 [9.07]

.286 7.271

.040

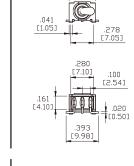
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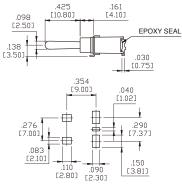
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[2.03]

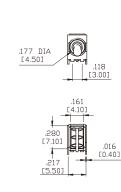


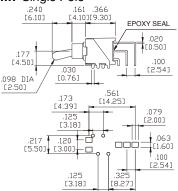
.319 [8.10]



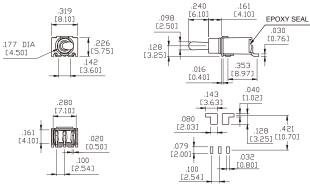
M7 Single Pole

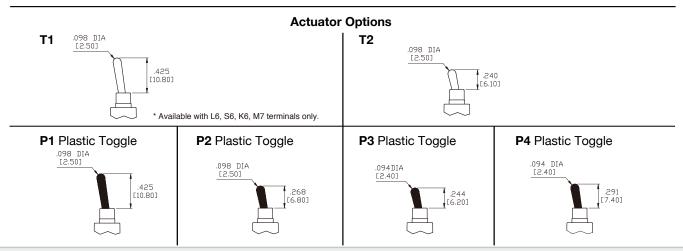
L6 Single Pole





S6 Single Pole







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