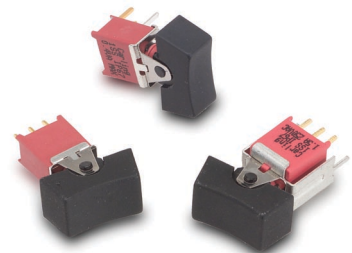


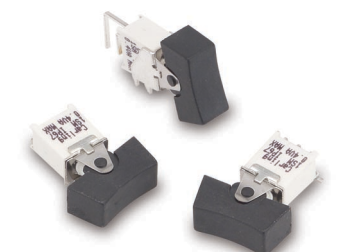
1S1-Series

Sub-Miniature Rocker Switch



1SS-Series

Sealed Sub-Miniature Rocker Switch



1SM-Series

Sealed Surface Mount Sub-Miniature Rocker Switch

Specifications

Contact Rating	refer to ordering scheme
Electrical Life	1S1-Series: 30,000 make & break cycles @ full load
	1SS & 1SM-Series: 50,000 make & break cycles @ full load
Contact Resistance.	20 mΩ max. initial @ 2-4 VDC
	100mA for both silver & gold plated contacts.
Insulation Resistance	1000 MΩ min.
Dielectric Strength	1500 Volts RMS @ sea level
Operating Temperature . . .	-30°C to +85°C
Index of Protection	1SS & 1SM-Series: IP67
Solder Heat Resistance. . . .	MIL-STD-202, Method 210
Actuator Travel	25°

Materials

Case	all UL94 V-0 <i>1S1-Series:</i> Diallyl phthalate (DAP) <i>1SS-Series:</i> Glass filled nylon 6/6, flame retardant, heat stabilized <i>1SM-Series:</i> Glass filled nylon 4/6, flame retardant, heat stabilized
Rocker.	<i>1S1-Series:</i> Nylon (UL 94V-0) <i>1SS & 1SM-Series:</i> Nylon, black standard, internal o-ring sealed
Bushing	<i>1S1-Series:</i> Brass, nickel plated <i>1SS-Series:</i> Glass filled nylon 6/6, flame retardant, heat stabilized (UL 94V-0) <i>1SM-Series:</i> Glass filled nylon 4/6, flame retardant, heat stabilized (UL 94V-0)
Housing.	<i>1S1-Series:</i> Stainless Steel
Switch Support	<i>1S1 & 1SM-Series:</i> Brass, tin plated
Terminal Seal	Epoxy

1S1-Series Ordering Scheme



1 SERIES

1S1 Sub-Miniature Rocker Switch

2 POLES

MSP single pole - uses terminals 1, 2 & 3.
MDP double pole uses terminals 1.2. 3. 4. 5 & 6.

3 CIRCUIT

() - momentary

Switching Position:

Switching Position.			
	2-3, 5-6	OPEN	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

R1	Small rocker
R2	Narrow black rocker

5 ACTUATOR COLOR¹

1 white	4 orange	7 blue
2 black	5 yellow	8 brown
3 red	6 green	9 gray

1 Black, white and red are standard. Other colors available, consult factory.

6 TERMINATION

M1	Solder Lug	V33	PC Mount, U bracket, .620 mounting x .630 high
M2	PCB	M61	Snap-In, U bracket, 90° horizontal
M6	PC Mount, 90° horizontal	M71	Snap-In, U bracket, 90° vertical
M7	PC Mount, 90° vertical	VS21	Snap-In, U bracket
VS2	PC Mount, U bracket, .620 mounting x .460 high		

7 CONTACT

	Material	Terminal Plating	Rating	Approvals
G	silver ¹	gold over silver ³	3A @ 125VAC or 28VDC, 1.5A @ 250VAC	UL CSA
K	gold ²	tin-lead ⁴	0.4VA max. @ 20V max (AC/DC)	—
P	silver ¹	tin-lead ⁴	3A @ 125VAC or 28VDC, 1.5A @ 250VAC	UL CSA
Q	silver ¹	silver ¹	3A @ 125VAC or 28VDC, 1.5A @ 250VAC	UL CSA
R	gold ²	gold ²	0.4VA max. @ 20V max (AC/DC)	—

NOTE:

Tin-lead option available with PC type terminations only.

- 1 Moveable contact & terminals: copper alloy, silver plated
- 2 Moveable contact & terminals: copper alloy with gold plate over nickel plate
- 3 Terminals: silver plated with outer layer in gold plating
- 4 Outer terminals: copper alloy with tin-lead over nickel plate

8 EPOXY SEAL

E epoxy seal

1SS-Series Ordering Scheme

1SS - **WMSP** **1** - **R2** / **2** - **M2** **G** **E**

1 Series 2 Poles 3 Circuit 4 Actuator Style 5 Actuator Color 6 Termination 7 Contact 8 Seal

1 SERIES
1SS Sealed Sub-Miniature Rocker Switch

2 POLES
WMSP single pole - uses terminals 1, 2 & 3.
WMDP double pole uses terminals 1, 2, 3, 4, 5 & 6.

3 CIRCUIT

() - momentary

Switching Position:			
	2-3, 5-6	OPEN	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
R1 Small rocker **R2** Narrow rocker

5 ACTUATOR COLOR¹

1 white	4 orange	7 blue
2 black	5 yellow	8 brown
3 red	6 green	9 gray

1 White, black & red are standard. Other colors available for quantities of 5K or more.

6 TERMINATION

M1	Solder Lug
M2	PCB
M6	PC Mount, 90° horizontal
M7	PC Mount, 90° vertical
VS2	PC Mount, U bracket, .620 mounting x .460 high
M61	Snap-In, U bracket, 90° horizontal
M71	Snap-In, U bracket, 90° vertical
VS21	Snap-In, U bracket, .620 mounting x .460 high

7 CONTACT

Material	Terminal Plating	Rating	
G silver ¹	gold over silver ³	3A@125VAC or 28VDC, 1.5A @ 250VAC	IP67
K gold ²	tin-lead ⁴	0.4VA max. @20V max (AC/DC)	IP67
P silver ¹	tin-lead ⁴	3A@125VAC or 28VDC, 1.5A @ 250VAC	IP67
R gold ²	gold ²	0.4VA max. @20V max (AC/DC)	IP67

NOTE:

Standard G plating for sealed product.

Tin-lead option available with PC type terminations only.

- 1 Moveable contact & terminals: copper alloy, silver plate
- 2 Moveable contact & terminals: copper alloy with gold plated over nickel plate
- 3 Terminals: silver plated with outer layer in gold plating
- 4 Outer terminals: copper alloy with tin-lead over nickel plate

8 EPOXY SEAL
E epoxy seal

1SM-Series Ordering Scheme

1SM - **WMSP** **1** - **R2** - **M6** **G** **E**

1 Series 2 Poles 3 Circuit 4 Actuator Style 5 Termination 6 Contact 7 Seal 8 Packaging

1 SERIES
1SM Sealed Surface Mount Sub-Miniature Rocker Switch

2 POLES
WMSP single pole - uses terminals 1, 2 & 3.

3 CIRCUIT

() - momentary

Switching Position:			
	2-3	OPEN	2-1
1	ON	NONE	ON
2	ON	NONE	(ON)
3	ON	OFF	ON
4	(ON)	OFF	(ON)
5	ON	OFF	(ON)

4 ACTUATOR STYLE
R2 Narrow black rocker

5 TERMINATION

M6	Surface Mount, 90° flat - horizontal/side terms
S6	Surface Mount, 90° horizontal/back terms
S7	Surface Mount, 90° vertical

6 CONTACT

Material	Terminal Plating	Rating	
G silver ¹	gold over silver ³	3A@125VAC or 28VDC, 1.5A @ 250VAC	IP67
K gold ²	tin-lead ⁴	0.4VA max. @20V max (AC/DC)	IP67
P silver ¹	tin-lead ⁴	3A@125VAC or 28VDC, 1.5A @ 250VAC	IP67
Q silver ¹	silver ¹	3A@125VAC or 28VDC, 1.5A @ 250VAC	IP67
R gold ²	gold ²	0.4VA max. @20V max (AC/DC)	IP67

NOTE:

Standard G plating for sealed product. P&K for PC mount only.

Tin-lead option available with PC type terminations only.

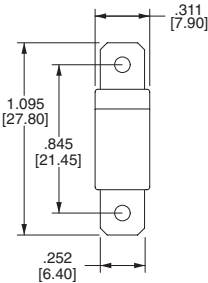
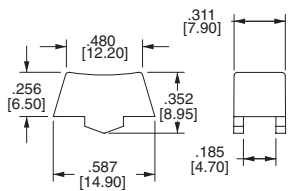
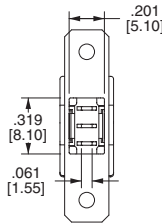
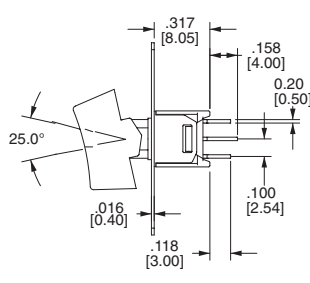
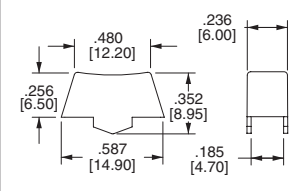
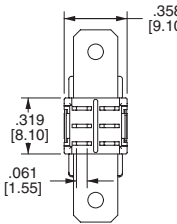
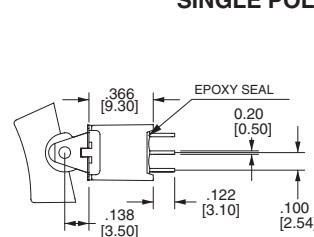
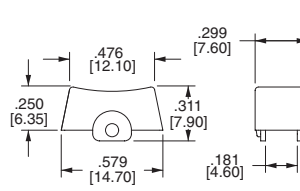
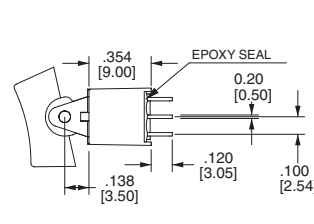
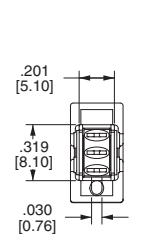
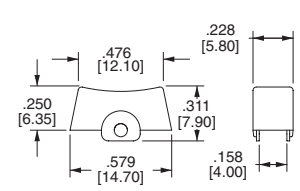
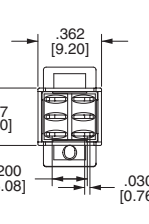
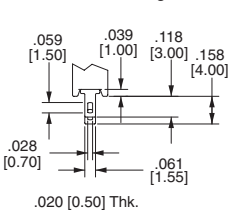
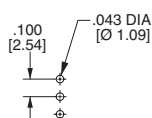
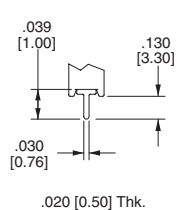
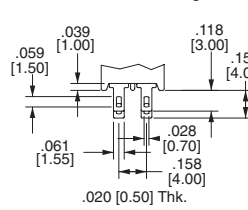
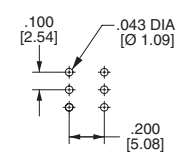
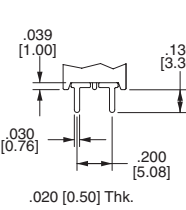
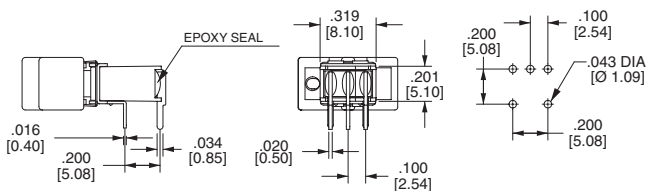
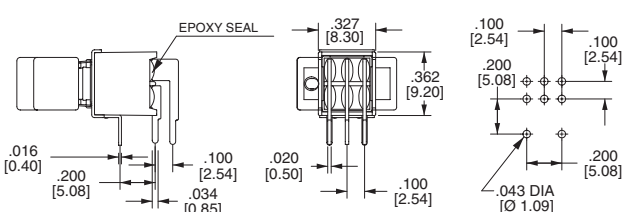
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- 3 Terminals: silver plated with outer layer in gold plating
- 4 Outer terminals: copper alloy with tin-lead over nickel plate

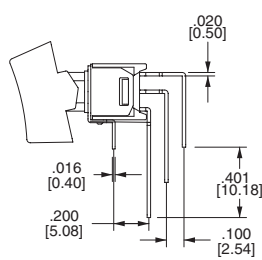
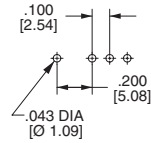
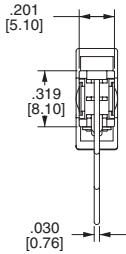
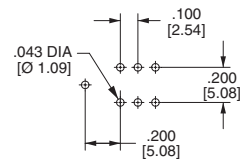
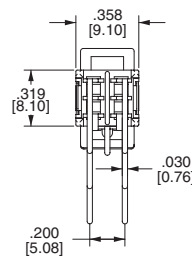
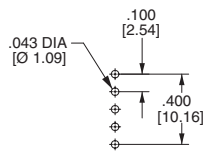
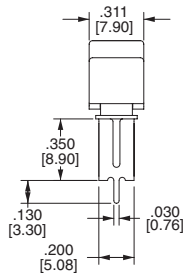
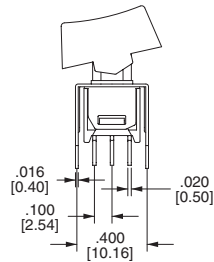
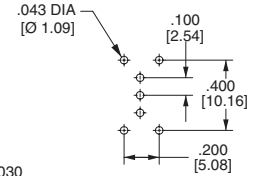
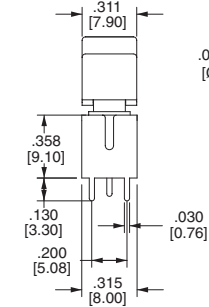
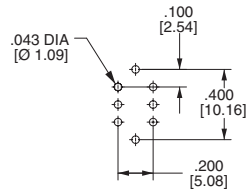
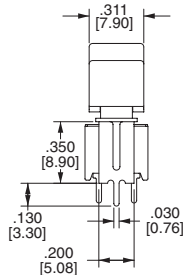
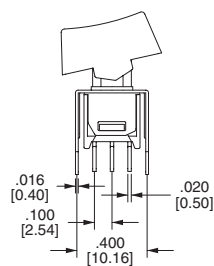
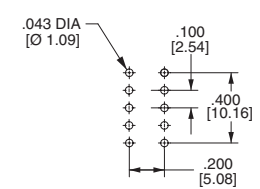
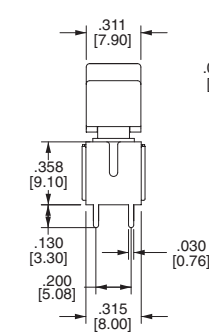
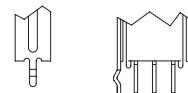
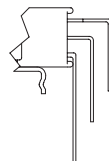
7 EPOXY SEAL
E epoxy seal

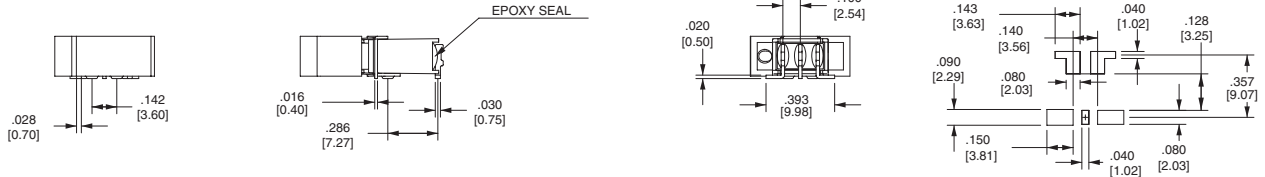
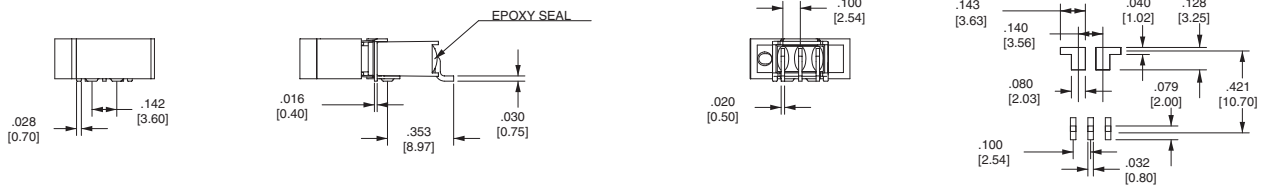
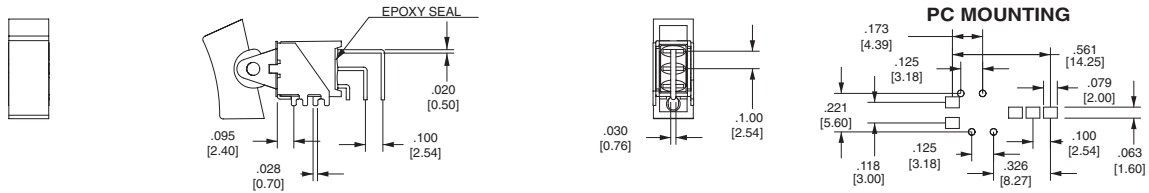
8 PACKAGING

 Switches are bulk packed, unless **T/R** is specified at the end of the part number.

T/R tape reel - 500 pieces per reel

1S-Series Dimensional Specifications: in. [mm]
ACTUATOR
1S1
R1
Rocker

SINGLE POLE

R2
Narrow Rocker

DOUBLE POLE

1SS
R1
Rocker

SINGLE POLE
DOUBLE POLE

1SS & 1SM
R2
Narrow Rocker

DOUBLE POLE

TERMINATION
SINGLE POLE
PC MOUNTING
M1
Standard Solder Lug

M2
PCB

DOUBLE POLE
PC MOUNTING
M1
Standard Solder Lug

M2
PCB

M6
SINGLE POLE
PC MOUNTING

DOUBLE POLE
PC MOUNTING


1S-Series Dimensional Specifications: in. [mm]
TERMINATION
M7 SINGLE POLE
PC MOUNTING

DOUBLE POLE
PC MOUNTING

VS2
PC MOUNTING

SINGLE POLE

VS3
PC MOUNTING

VS2
PC MOUNTING

DOUBLE POLE

VS3
PC MOUNTING

SNAP-IN TERMINATION
M61
M71
VS21


1SM-Series Dimensional Specifications: in. [mm]
TERMINATION
M6

S6

S7

REEL TAPING
