



Carling Technologies®
/// NOW PART OF



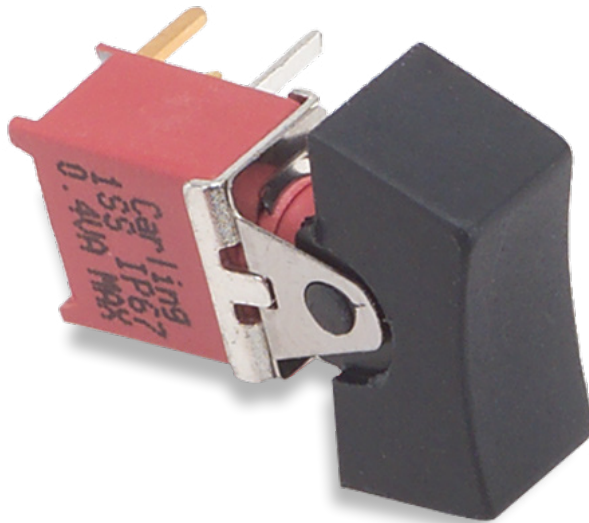
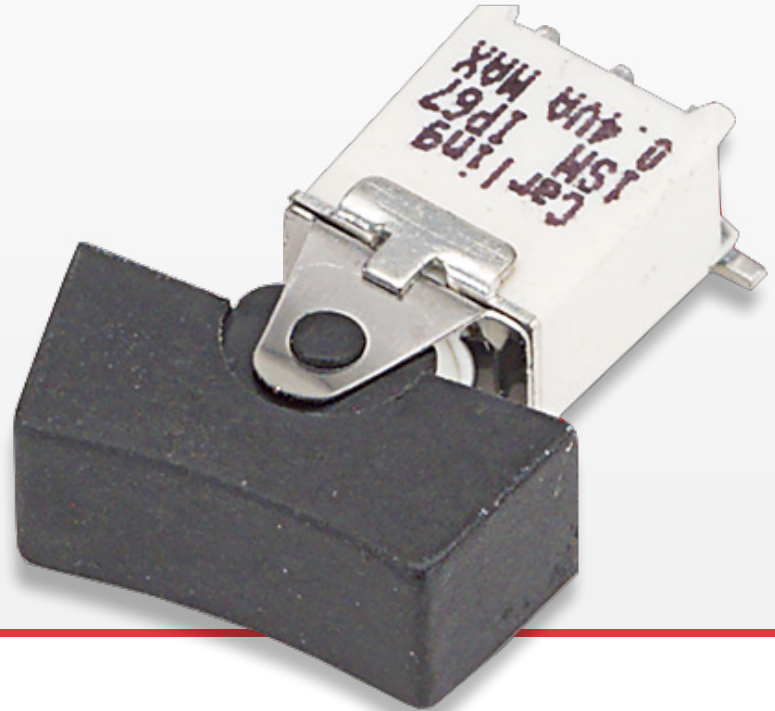
Littelfuse®

1S-Series

Miniature Rockers & Paddles

PRODUCT WEBPAGE

request sample, configure part



The 1S family of sub-miniature rocker switches is composed of three switch series; the 1S1-Series sub-miniature rocker switch, the 1SS-Series sealed sub-miniature rocker switch, and the 1SM-Series surface mount sealed sub-miniature rocker switch. All of these series offer a variety of ratings, circuits, contact materials, terminal platings, and actuator colors.

1-2

Poles

.4-3

Amps

125, 250

VAC

28

VDC

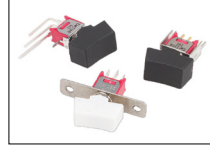
Typical Applications

- Instrumentation
- Test Equipment
- Telecommunications
- Networking
- Handheld Appliances

Tech Specs



ISS-Series
Sealed
Sub-Miniature
Rocker Switch



ISI-Series
Sub-Miniature
Rocker Switch



ISM-Series
Sealed Surface Mount
Sub-Miniature
Rocker Switch

Electrical

Contact Rating	refer to ordering scheme
Electrical Life	ISI-Series: 30,000 make & break cycles @ full load ISS & ISM-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

Physical

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°

Material

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

Ordering Scheme

Sample Part Number: **1SS** - **WMSP** **1** - **R2** / **2** **M2** **G** **E**

Selection: 1 2 3 4 5 6 7 8

1. SERIES

ISS 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
Position: **1** 2 3
1 2-3, 5-6 ON Connected Terminals 2-1, 5-4
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 COLOR

1 White
2 Black
3 Red
Other colors available, consult factory.

6. TERMINATION

M1 Solder Lug	M61 Snap-In, U bracket, 90° horizontal
M2 PCB	M71 Snap-In, U bracket, 90° horizontal
M6 PC Mount, 90° horizontal	VS21 Snap-In, U bracket
M7 PC Mount, 90° vertical	
VS2 PC Mount, U bracket	

See dimensional specifications.

7. CONTACTS / TERMINALS

Contact Material	Terminal Plating	Rating	Approvals
G silver ¹	gold over silver	3A 125VAC or 28VDC, 1.5A 250VAC	IP67
K gold ^{2,5}	tin ⁴	0.4VA max 20V max (AC/DC)	IP67
P silver ^{1,6}	tin ⁴	3A 125VAC or 28VDC, 1.5A 250VAC	IP67
R gold ²	gold ^{2,3}	0.4VA max 20V max (AC/DC)	IP67

8. EPOXY SEAL

E Epoxy Seal **0** without Epoxy Seal

Notes: Tin option not available with M1 terminal.

- Movable contact and terminal platings: silver over copper alloy
- Movable contact platings: gold over nickel over copper alloy
- Terminal platings: gold over nickel over copper alloy
- Terminal platings: tin over copper alloy
- Terminal contact platings: gold over nickel alloy
- Terminal contact platings: silver over nickel alloy

[Configure Complete Part Number >](#)

[Browse Standard Parts >](#)

Ordering Scheme

Sample Part Number **1S1 - MSP 1 - R2 / 2 M6 Q E**

Selection 1 2 3 4 5 6 7 8

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
Position: **1** **2** **3**
 1 2-3, 5-6 Connected Terminals 2-1, 5-4
 2 ON NONE ON
 3 ON NONE (ON)
 4 ON OFF ON
 5 (ON) OFF (ON)
 6 ON OFF (ON)

4. ACTUATOR STYLE

R1 Small Rocker
R2 Narrow Black Rocker
R3 Medium Rocker

5. ACTUATOR COLOR

1 White
2 Black
3 Red
 Other colors available, consult factory.

6. TERMINATION

M1 Solder Lug
M2 PCB
M6 PC Mount, 90° horizontal
M7 PC Mount, 90° vertical
VS2 PC Mount, U bracket
VS3 PC Mount, U bracket
M61 Snap-In, U bracket, 90° horizontal
M71 Snap-In, U bracket, 90° horizontal
VS21 Snap-In, U bracket
 See dimensional specifications.

7. CONTACTS / TERMINALS

Contact Material	Terminal Plating	Rating	Approvals
G silver ¹	gold over silver 1.5A 250VAC	3A 125VAC or 28VDC,	UL, C
K gold ²	tin ³	0.4VA max 20V max (AC/DC) N/A	
P silver ¹	tin ³ 1.5A 250VAC	3A 125VAC or 28VDC,	UL, C
Q silver ¹	silver ¹ 1.5A 250VAC	3A 125VAC or 28VDC,	UL, C
R gold ²	gold ²	0.4VA max 20V max (AC/DC) N/A	

8. EPOXY SEAL

E Epoxy Seal **0** without Epoxy Seal

Notes:
 Tin option available with M1 termination.
 1 Movable contact and terminal platings: silver over copper alloy
 2 Movable contact and terminal platings: gold over nickel over copper alloy
 3 Terminal platings: tin over nickel over copper alloy

[Configure Complete Part Number >](#)

[Browse Standard Parts >](#)

Ordering Scheme

Sample Part Number **1SM - WMSP 1 - R2 - M2 G E**

Selection 1 2 3 4 5 6 7

1. SERIES

1SM Sealed Surface Mount Sub-Miniature Rocker Switch

2. POLES

WMSP Single pole - uses terminals 1, 2 & 3

3. CIRCUIT

() - momentary
Position: **1** **2** **3**
 1 2-3 Connected Terminals 2-1
 2 ON NONE ON
 3 ON NONE (ON)
 4 ON OFF ON
 5 (ON) OFF (ON)
 6 ON OFF (ON)

4. ACTUATOR STYLE

R2 Narrow Black Rocker

5. TERMINATION

M6 Surface Mount, 90° flat - horizontal / side
S6 Surface Mount, 90° horizontal / back
S7 Surface Mount, 90° vertical
 See dimensional specifications.

6. CONTACTS / TERMINALS

Contact Material	Terminal Plating	Rating	Approvals
G silver ¹	gold over silver	3A 125VAC or 28VDC,	IP67
K gold ^{2,5}	tin ⁴	0.4VA max 20V max (AC/DC)	1.5A 250VAC IP67
P silver ^{1,6}	tin 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 ³	0.4VA max 20V max (AC/DC)	IP67

7. EPOXY SEAL

E Epoxy Seal **0** without Epoxy Seal

8. PACKAGING

T/R tape reel - 500 pieces per reel
 Switches are bulk packed, unless T/R is specified at the end of the part number.

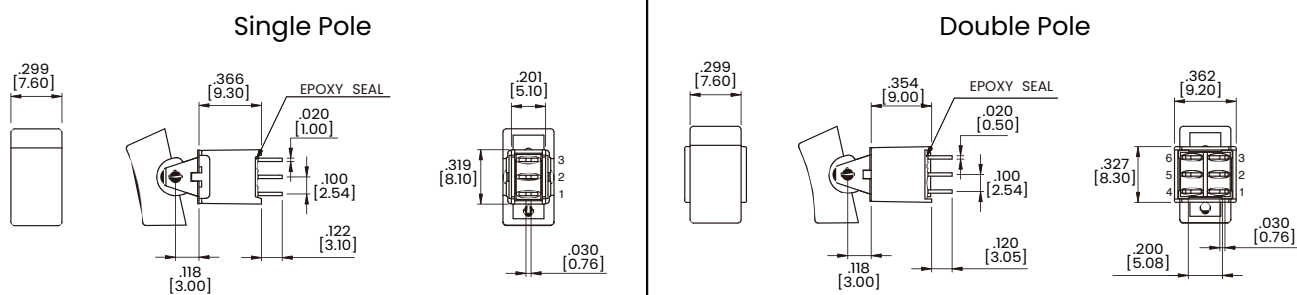
Notes:
 Tin option not available with M1 termination.
 1 Movable contact and terminal platings: silver over copper alloy
 2 Movable contact platings: gold over nickel over copper alloy
 3 Terminal platings: gold over nickel over copper alloy
 4 Terminal platings: tin over copper alloy
 5 Terminal contact platings: gold over nickel alloy
 6 Terminal contact platings: silver over nickel alloy

[Configure Complete Part Number >](#)

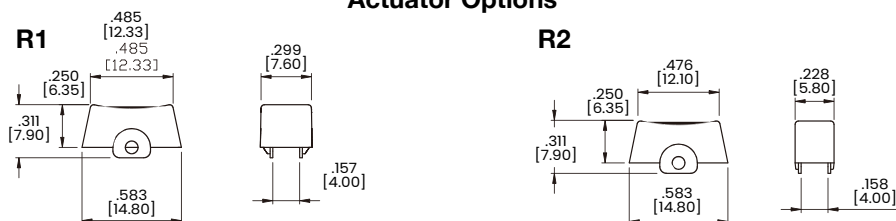
[Browse Standard Parts >](#)

Dimensional Specs

inches [millimeters]

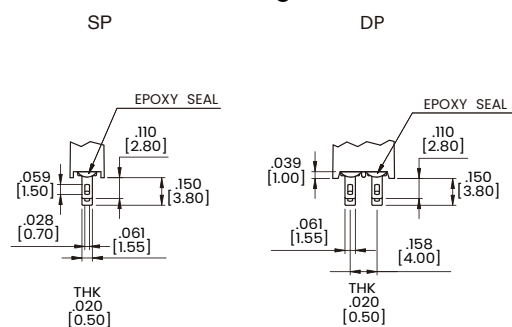


Actuator Options

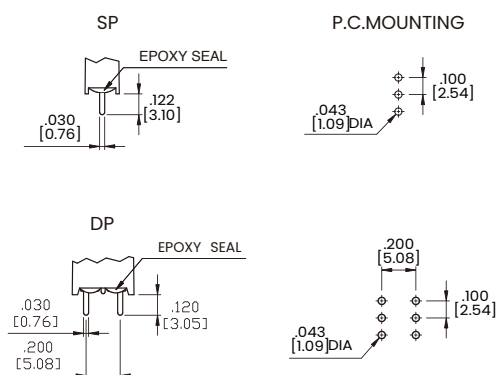


Termination Options

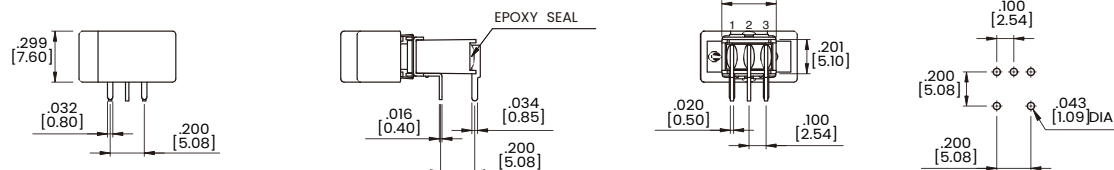
M1 STD. Solder Lug



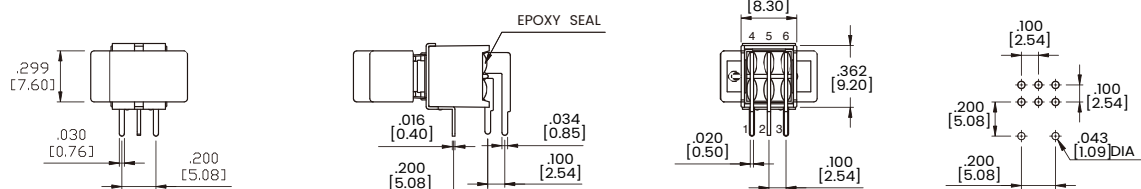
M2 PC Thru-Hole



M6 Single Pole



M6 Double Pole

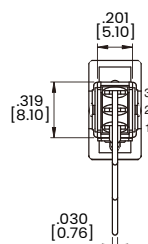
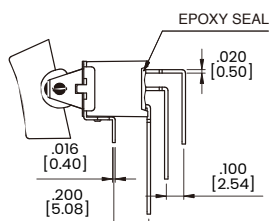
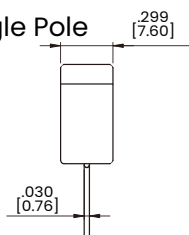


Dimensional Specs

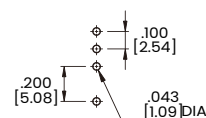
inches [millimeters]

Termination Options

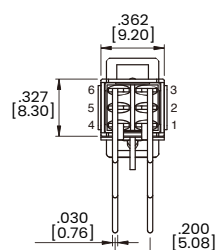
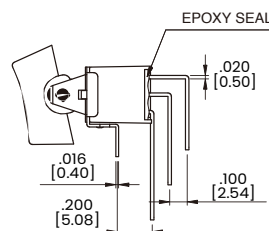
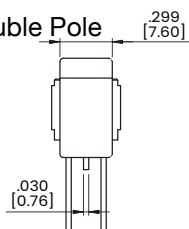
M7 Single Pole



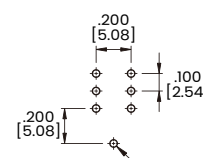
P.C.MOUNTING



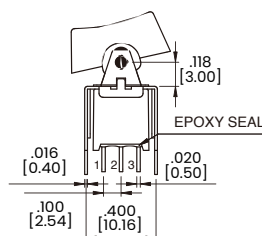
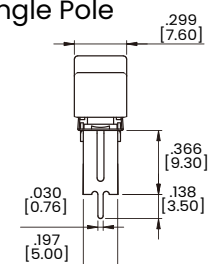
M7 Double Pole



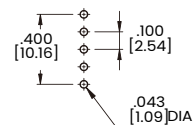
P.C.MOUNTING



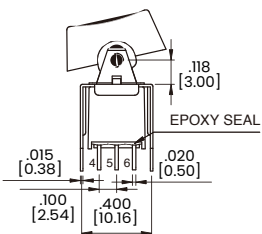
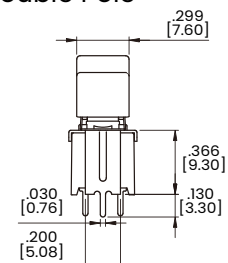
VS2 Single Pole



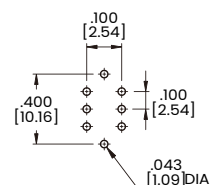
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VS2 Double Pole

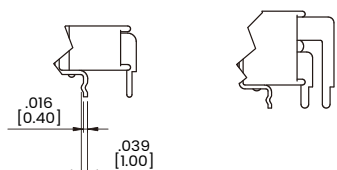


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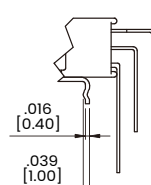


Snap-In Termination Options

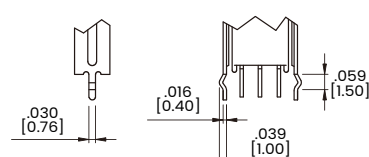
M61



M71



VS21

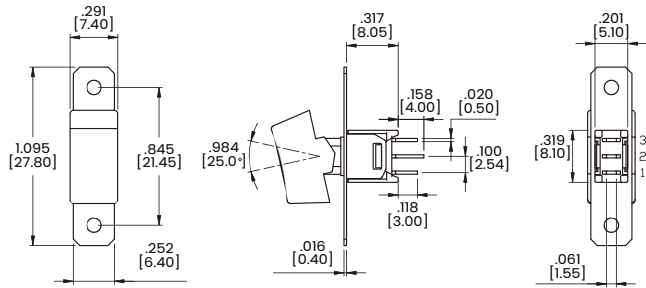


* PC Mounting for M61, M71, VS21 refer to M6, M7, VS2 respectively.

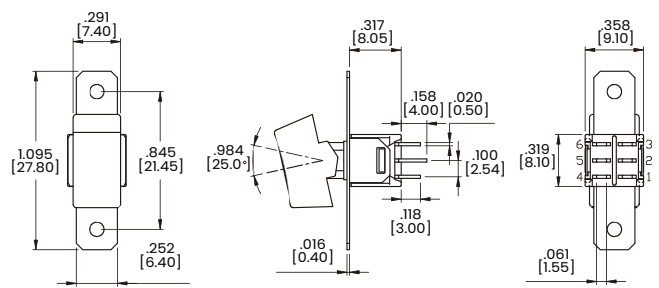
Dimensional Specs

inches [millimeters]

Single Pole

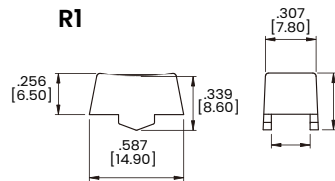


Double Pole

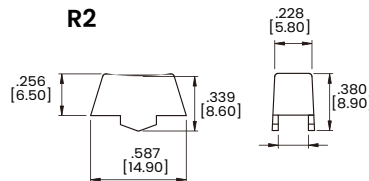


Actuator Options

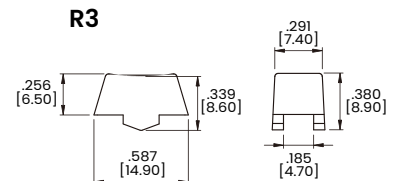
R1



R2



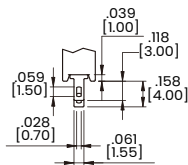
R3



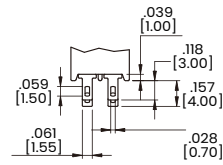
Termination Options

M1 STD. Solder Lug

Single Pole

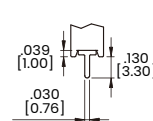


Double Pole

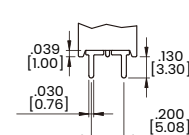


M2 PC Thru-Hole

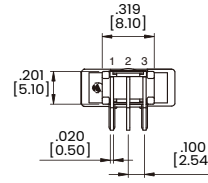
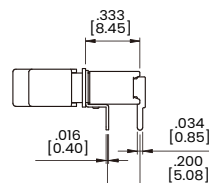
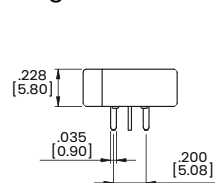
Single Pole



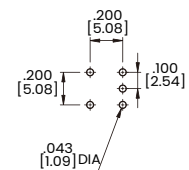
Double Pole



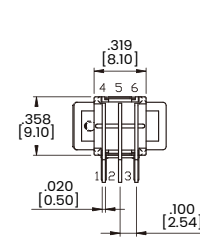
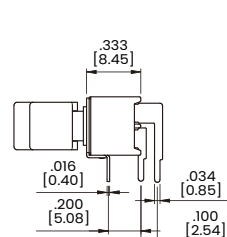
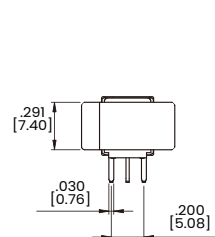
M6 Single Pole



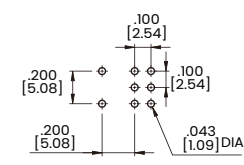
P.C.MOUNTING



M6 Double Pole



P.C.MOUNTING

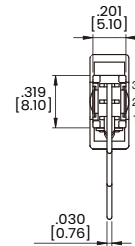
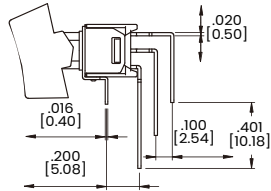
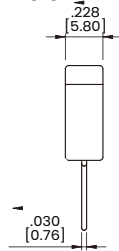


Dimensional Specs

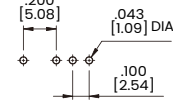
inches [millimeters]

Termination Options

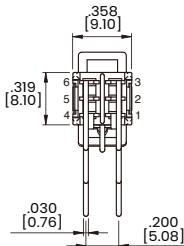
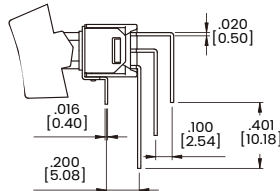
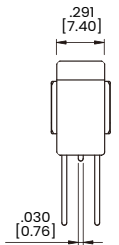
M7 Single Pole



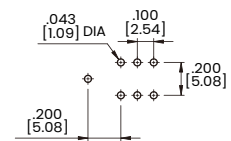
P.C.MOUNTING



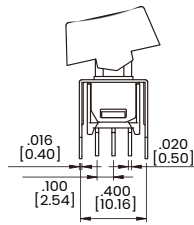
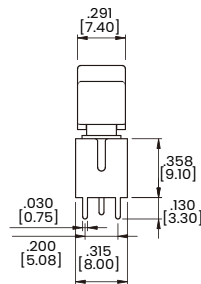
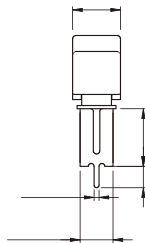
M7 Double Pole



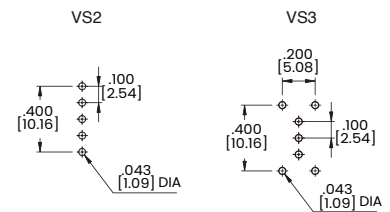
P.C.MOUNTING



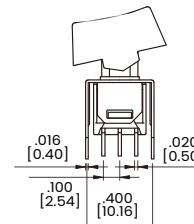
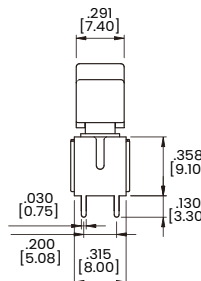
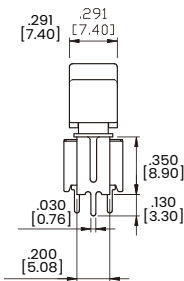
VS2-VS3 Single Pole



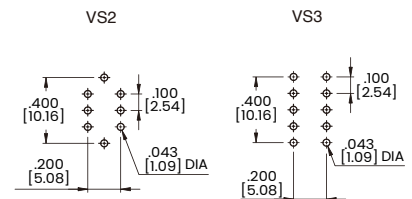
P.C.MOUNTING



VS2-VS3 Double Pole

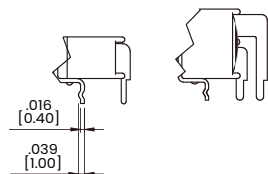


P.C.MOUNTING

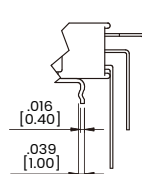


Snap-In Termination Options

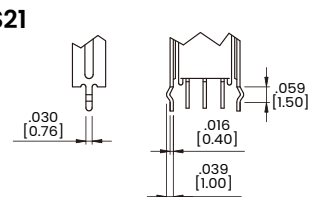
M61



M71



VS21

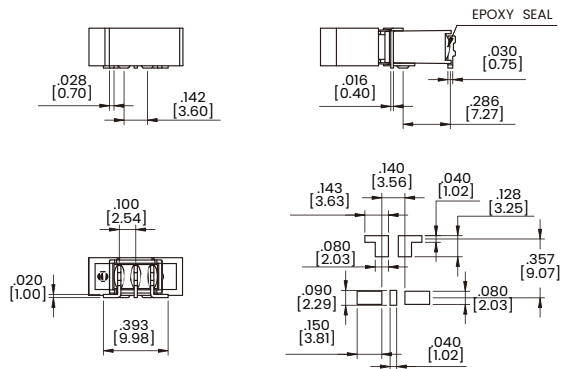


* PC Mounting for M61, M71, VS21 refer to M6, M7, VS2 respectively.

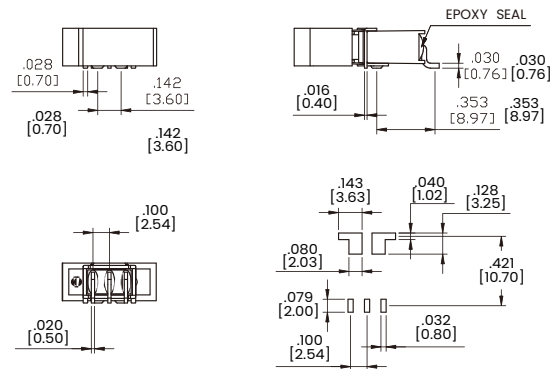
Dimensional Specs

inches [millimeters]

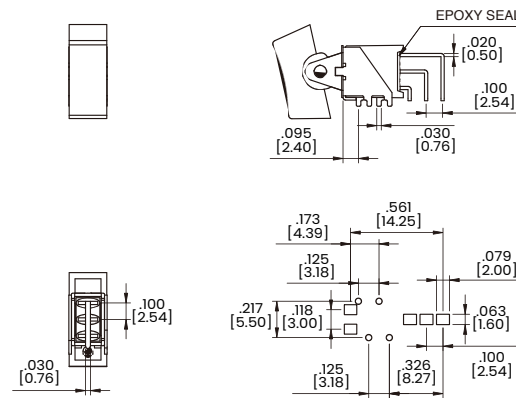
M6 Single Pole



S6 Single Pole

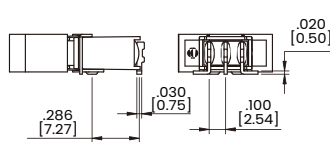


S7 Single Pole

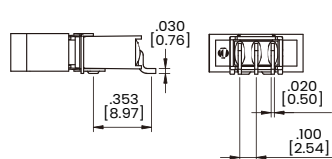


Termination Options

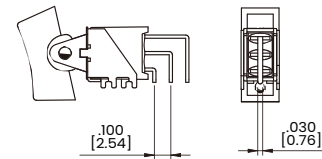
M6



S6



S7



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