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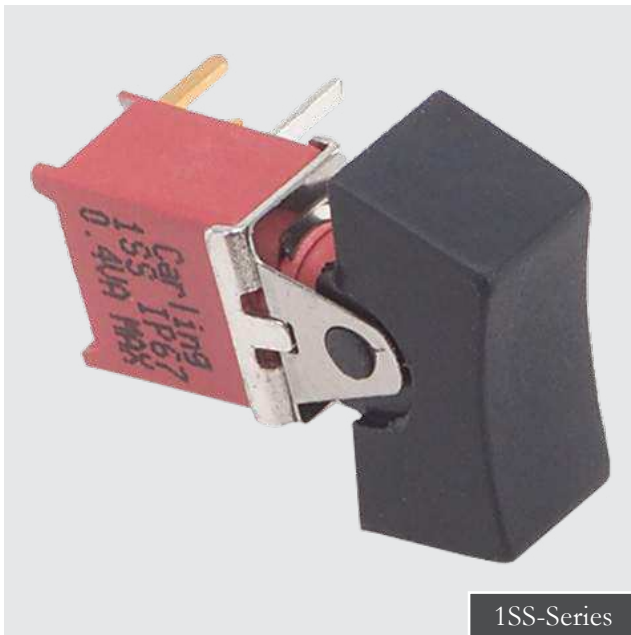


1SS/1S1/1SM

1S-Series

SUB-MINIATURE ROCKERS

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.



Product Highlights:

- IP67 Sealing
- 5 Circuit Configurations
- 3 Rocker Styles to choose from
- Dry-Circuit thru 3A 125VAC Rating
- Snap-in, Solder Lug or PC Terminations

Typical Applications:

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

Resources:

Download 3D CAD Files

[IGS >](#) [STP >](#)



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1SS-Series
Sealed
Sub-Miniature
Rocker Switch



1S1-Series
Sub-Miniature
Rocker Switch



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

Electrical

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

Material

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

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°

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

1 Series 2 Poles 3 Circuit 4 Actuator Style 5 Actuator Color 6 Termination 7 Contacts 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
Position:

1	2-3, 5-6	2	Connected Terminals	3	2-1, 5-4
1	ON	NONE		ON	(ON)
2	ON	NONE		ON	(ON)
3	ON	OFF		ON	(ON)
4	(ON)	OFF		(ON)	(ON)
5	ON	OFF		(ON)	(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 page 6-7 for 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.
 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

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

1S1 - MSP 1 - R2 / 2 M6 Q E

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

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:

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
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	M61 Snap-In, U bracket, 90° horizontal
M2 PCB	M71 Snap-In, U bracket, 90° vertical
M6 PC Mount, 90° horizontal	VS2 PC Mount, U bracket
M7 PC Mount, 90° vertical	VS3 PC Mount, U bracket
VS2 PC Mount, U bracket	
VS3 PC Mount, U bracket	

See page 8-9 for dimensional specifications.

7 CONTACTS / TERMINALS

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

1SM - WMSP 1 - R2 - M2 G E

1 Series 2 Poles 3 Circuit 4 Actuator Style 5 Termination 6 Contacts 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
Position:

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)

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 page 10 for dimensional specifications.

6 CONTACTS / TERMINALS

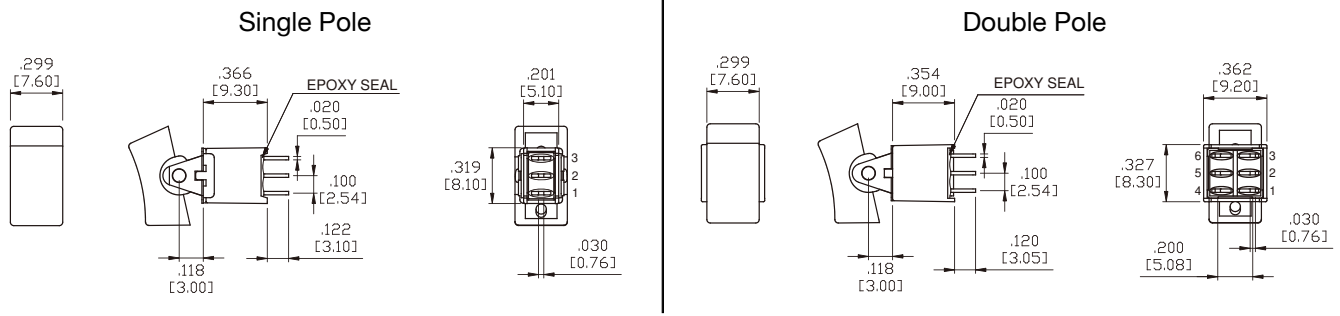
Contact Material	Terminal Plating	Rating	Approvals
G silver ¹	gold over silver	3A 125VAC or 28VDC, 1.5A 250VAC	IP67
K gold ^{2,5}	tin ⁴	0.4VA max 20V max (AC/DC)	IP67
P silver ^{1,6}	tin ⁴	3A 125VAC or 28VDC, 1.5A 250VAC	IP67
Q silver ¹	silver ¹	3A 125VAC or 28VDC, 1.5A 250VAC	IP67
R gold ²	gold ³	0.4VA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

7 EPOXY SEAL
E Epoxy Seal **0** without Epoxy Seal

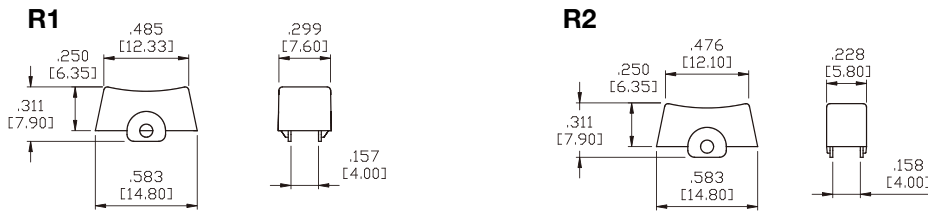
8 PACKAGING
T/R tape reel - 500 pieces per reel
 Switches are bulk packed, unless T/R is specified at the end of the part number.

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

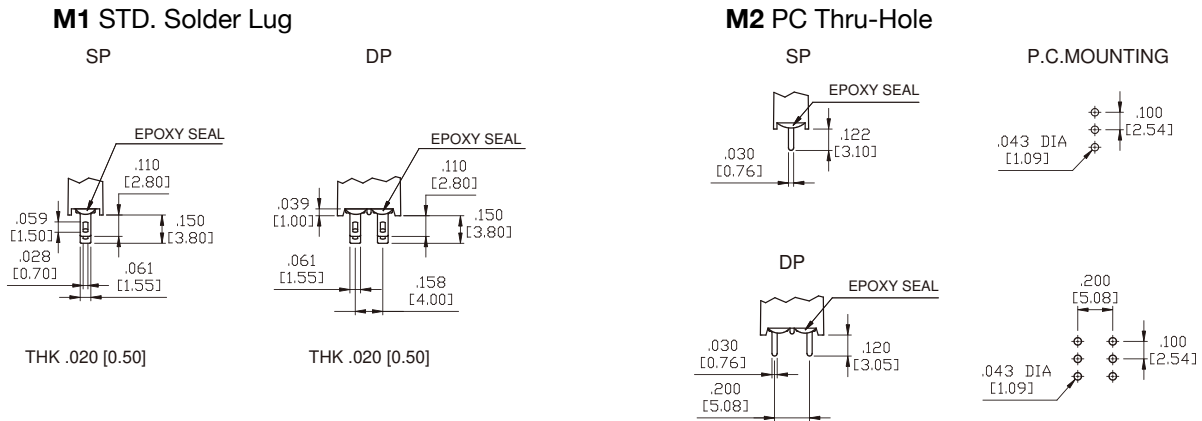
1SS-Series Dimensional Specifications: in. [mm]



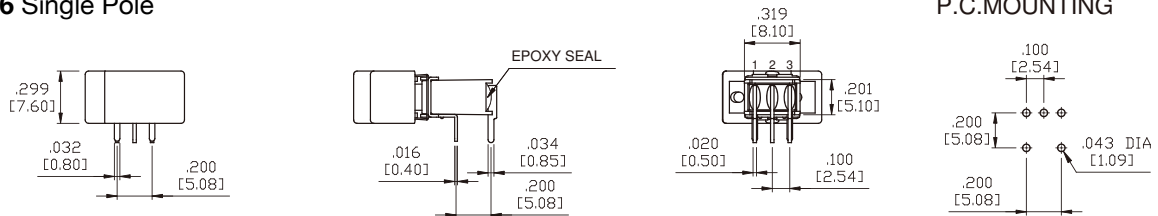
Actuator Options



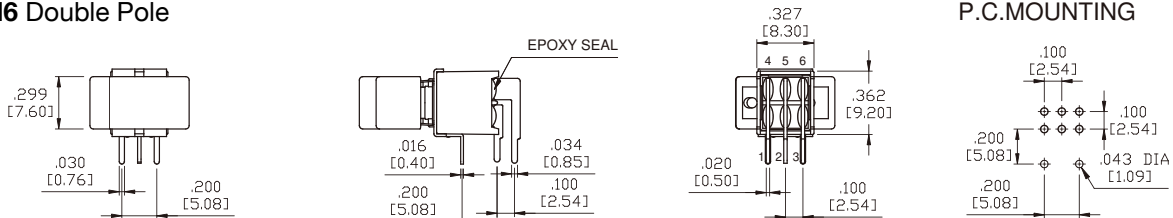
Termination Options



M6 Single Pole



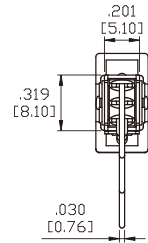
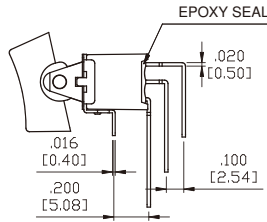
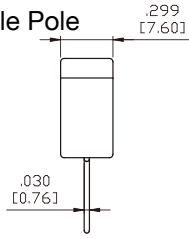
M6 Double Pole



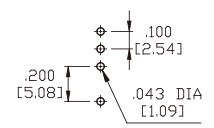
1SS-Series Dimensional Specifications: in. [mm]

Termination Options

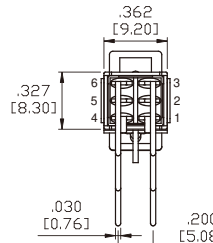
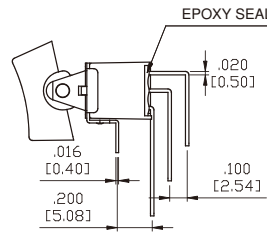
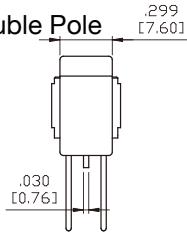
M7 Single Pole



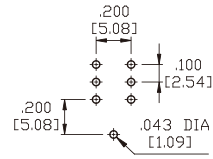
P.C.MOUNTING



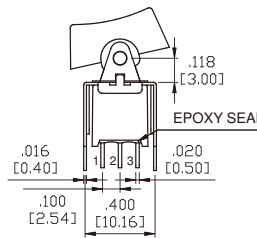
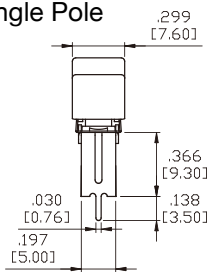
M7 Double Pole



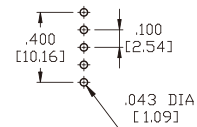
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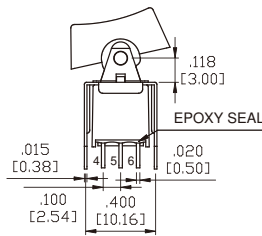
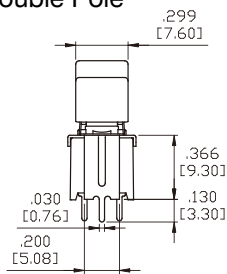
VS2 Single Pole



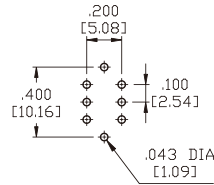
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VS2 Double Pole

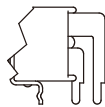
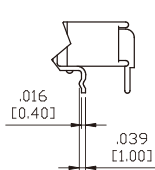


P.C.MOUNTING

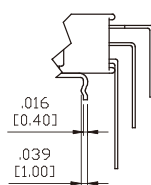


Snap-In Termination Options

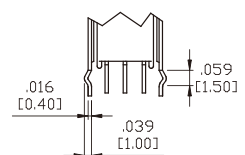
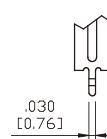
M61



M71

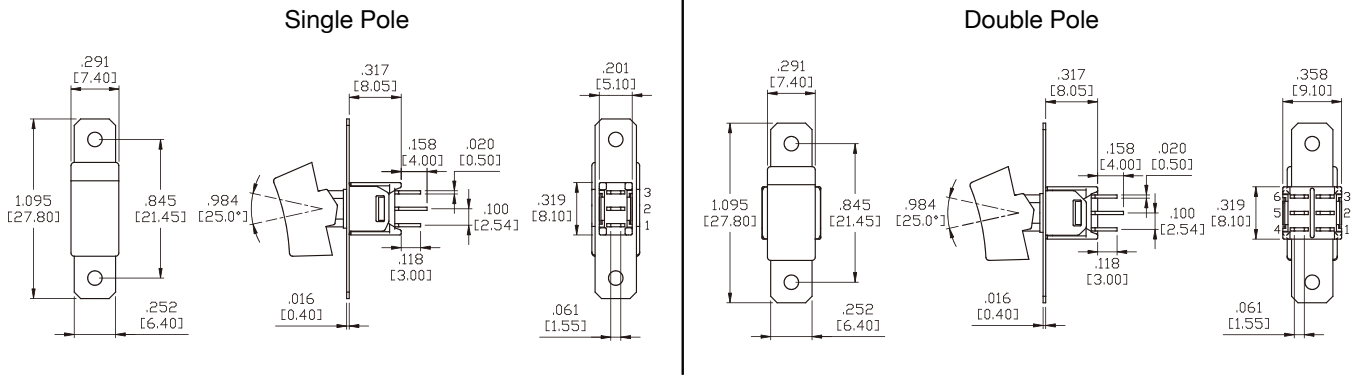


VS21

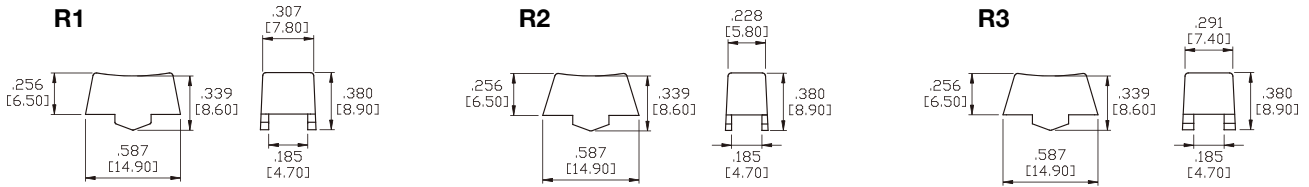


* PC Mounting for M61, M71, VS21 refer to M6, M7, VS2 respectively.

1S1-Series Dimensional Specifications: in. [mm]

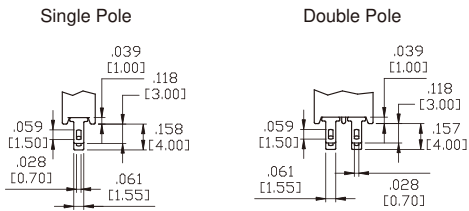


Actuator Options

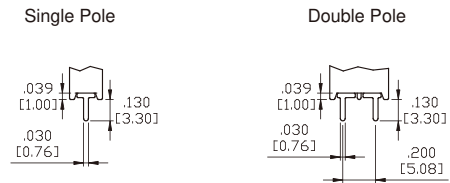


Termination Options

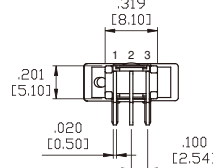
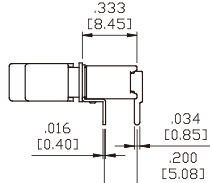
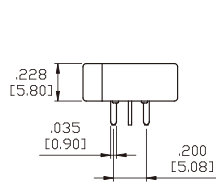
M1 STD. Solder Lug



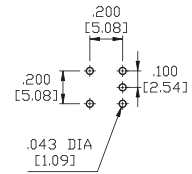
M2 PC Thru-Hole



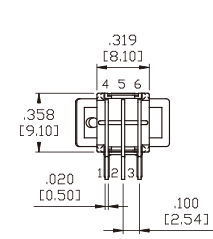
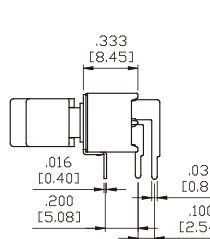
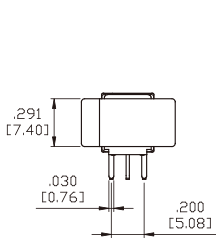
M6 Single Pole



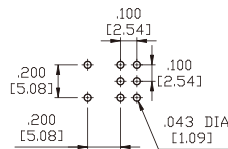
P.C.MOUNTING



M6 Double Pole



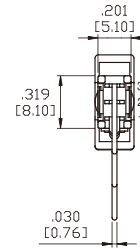
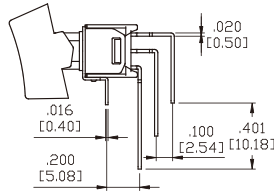
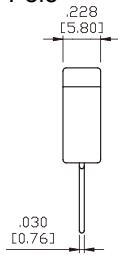
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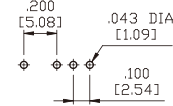
1S1-Series Dimensional Specifications: in. [mm]

Termination Options

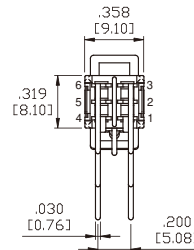
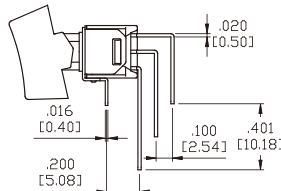
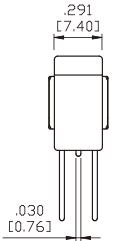
M7 Single Pole



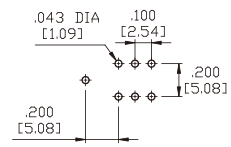
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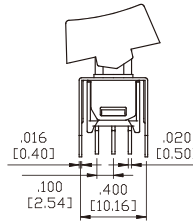
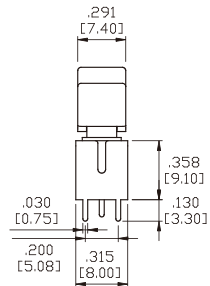
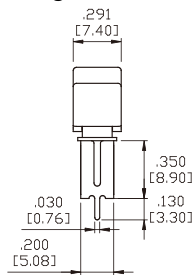
M7 Double Pole



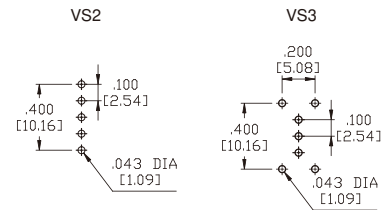
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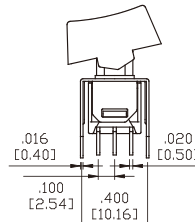
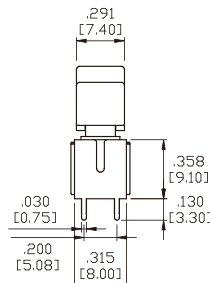
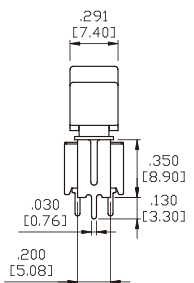
VS2-VS3 Single Pole



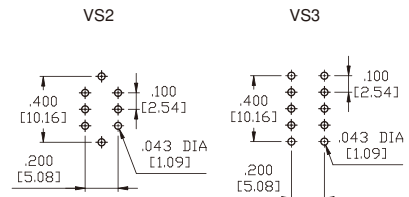
P.C.MOUNTING



VS2-VS3 Double Pole

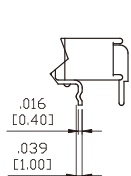


P.C.MOUNTING

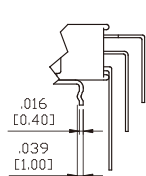


Snap-In Termination Options

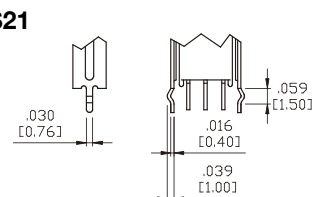
M61



M71

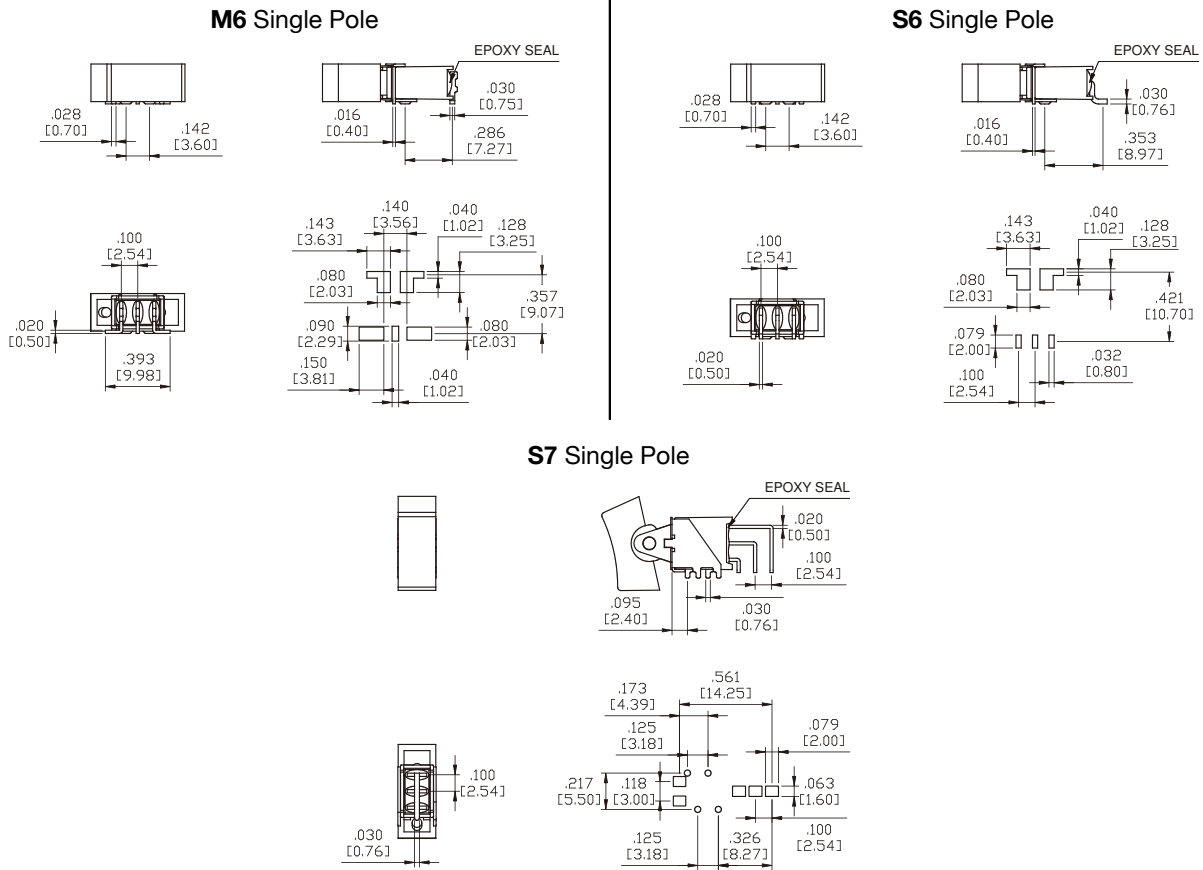


VS21

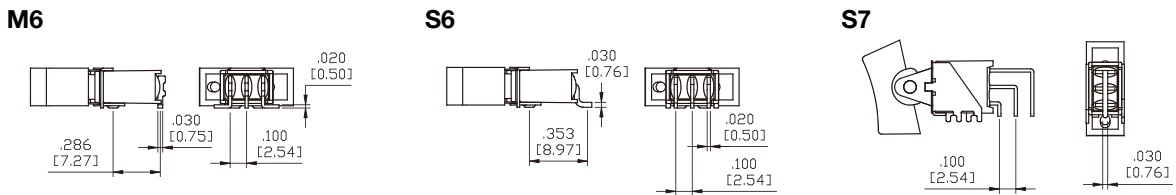


* PC Mounting for M61, M71, VS21 refer to M6, M7, VS2 respectively.

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



Termination Options



Authorized Sales Representatives and Distributors

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About Carling

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