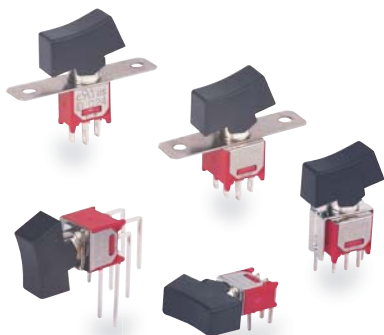




SPECIFICATIONS

CONTACT RATING: Dependent upon contact material, see page 71.

MECHANICAL LIFE: 30,000 make-and-break cycles.

CONTACT RESISTANCE: 20 mΩ max. (initial value) @ 2-4VDC
100mA for both silver and gold plated contacts.

INSULATION RESISTANCE: 1,000 MΩ min./1000VDC

DIELECTRIC STRENGTH: 1,000 Vrms min.@sea level. (initial value)

OPERATING TEMPERATURE: -40°C to 85°C.

MATERIALS

CASE: Diallyl phthalate (DAP) (UL94v-0).

ACTUATOR: Nylon, black std.

BUSHING: Brass or zinc, nickel plated.

HOUSING: Stainless Steel.

SWITCH SUPPORT: SUS or brass, tin plated.

TERMINAL/CONTACT: Copper or brass with silver or gold plated.

(See page 71)

HOW TO ORDER

MODEL NO. ACTUATOR ACTUATOR COLOR ACTUATOR MARKING TERMINAL TYPE TERMINAL PLATING SEAL RoHS SOLDERING

SP
4MS1 ON-NONE-ON
4MS2 ON-NONE-(ON)
4MS3 ON-OFF-ON
4MS4 (ON)-OFF-(ON)
4MS5 ON-OFF-(ON)
4MS6 OFF-NONE-ON

DP
4MD1 ON-NONE-ON
4MD2 ON-NONE-(ON)
4MD3 ON-OFF-ON

R1 (STD) Rocker,
7.62 wide, 14.73 length
R2 (STD) Rocker,
5.84 wide, 14.73 length
R3 5.84 wide, 10.23 length

1	○ —
2	○
5	← →
6	○
7	— •
8	⊗
9	ON/OFF
J	⊗ —

Note: Actuator markings are only available for R1/R2 standard type.

ITEM NO	COLOR
00	Without
01	White
02	Black (Std)
03	Red
04	Orange
05	Yellow
06	Green
07	Blue
09	Gray

**

Q Silver
R Gold
C Gold over silver

M1 Solder Lug
M2 PC thru-hole
M50 wire wrap
M6 Right angle, PC thru-hole *
M6N Right angle, snap-in, PC thru-hole *
M7 Vertical right angle, PC thru-hole *
M7N Vertical right angle, snap-in, PC thru-hole *

V-bracket
VS2 8.94 high
V2N 8.94 high, snap-in
VS3 8.94 high
V3N 8.94 high, snap-in

* The terminal type of M6, M6N, M7, M7N are not suitable for 4MS6.

** Except standard color, for other colors information please consult sales representative.

EXAMPLE:

4MS1R1□M1QES (STD)

□ Actuator color

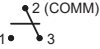
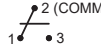
4MS1R1□□M1QES

□ Actuator marking

□ Actuator color

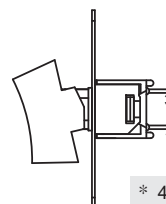
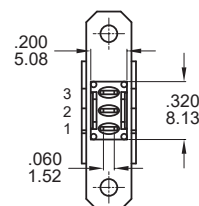
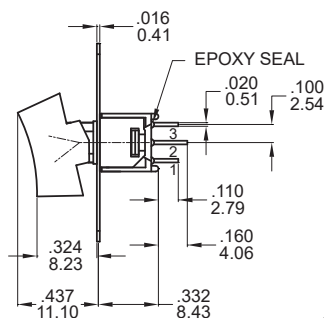
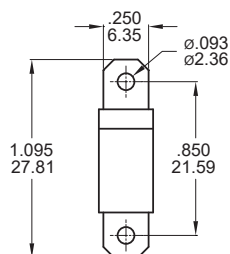


▼ SWITCH FUNCTION

NO. POLES	UL/CSA MODEL NO.	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS / SCHEMATIC		
			POS.1	POS.2	POS.3	POS.1	POS.2	POS.3
								
SP	Q2411	4MS1	ON	NONE	ON	2-3 	N/A	2-1 
	Q2412	4MS2	ON	NONE	(ON)		OPEN	
	Q2413	4MS3	ON	OFF	ON			
	Q2414	4MS4	(ON)	OFF	(ON)			
	Q2415	4MS5	ON	OFF	(ON)			
	Q2416	4MS6 _*	OFF	NONE	ON			
DP	Q2421	4MD1	ON	NONE	ON	2-3,5-6 	N/A	2-1,5-4 
	Q2422	4MD2	ON	NONE	(ON)		OPEN	
	Q2423	4MD3	ON	OFF	ON			

()=MOMENTARY

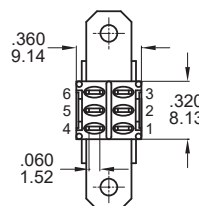
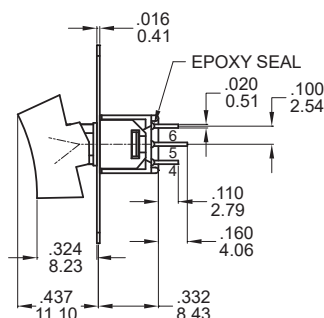
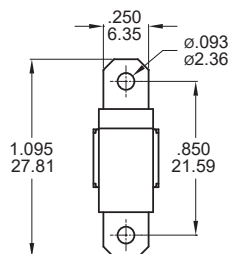
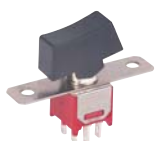
▼ POLE OPTIONS



SPDT

Model name. 4MS1R102M1QES

* 4MS6 Models: Omit terminal 2

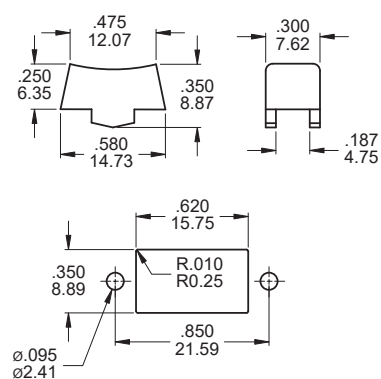


DPDT

Model name. 4MD1R102M1QES

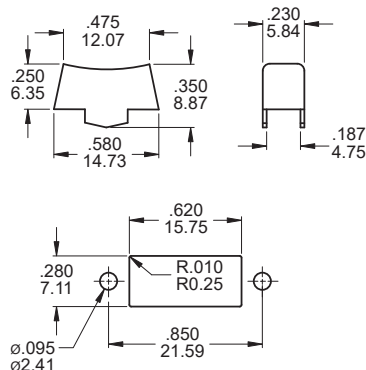
▼ TERMINAL OPTIONS

R1 STD



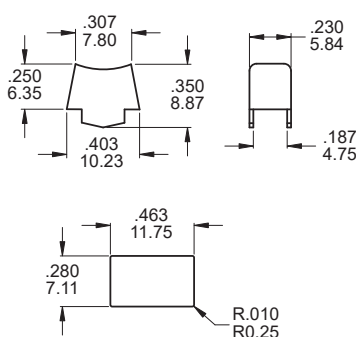
PANEL MOUNTING

R2 STD



PANEL MOUNTING

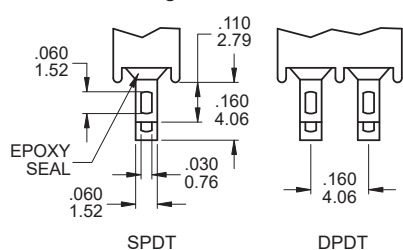
R3



PANEL MOUNTING

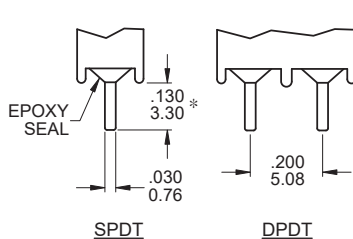
▼ TERMINAL OPTIONS

M1 Solder lug



.020inch(0.51mm) THK.

M2 PC Thru-hole



.020inch(0.51mm) THK.

* The wire wrap terminal M50 is .600inch(15.24mm), only for SPDT

OTHER TERMINAL OPTIONS

M6 Right angle P.C. Mount

M6N Right angle P.C. Mount
Snap-in bracket

M7 Vertical right angle P.C. Mount

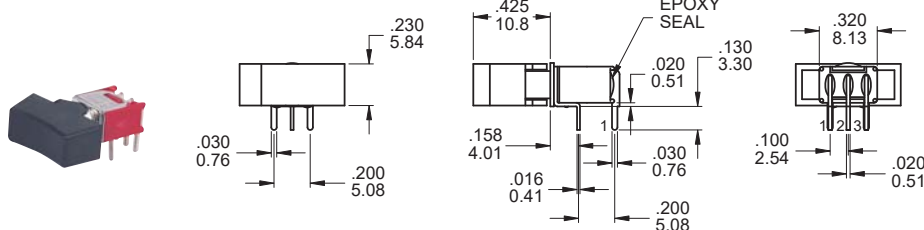
M7N Vertical right angle P.C. Mount
Snap-in bracket

VS2-VS3 Vertical bracket P.C. Mount

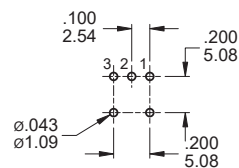
V2N-V3N Vertical bracket P.C. Mount
Snap-in bracket

M6

(M6N - Snap-in)



PCB MOUNTING



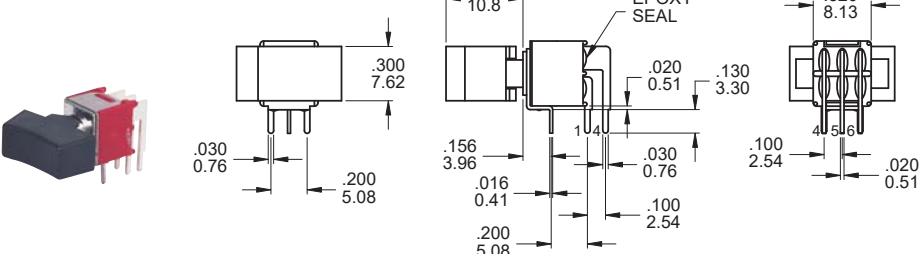
Note: Not available for 4MS6.

SPDT

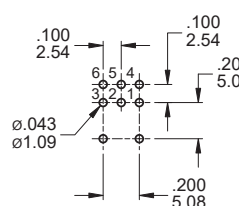
Model name. 4MS1R202M6QES

M6

(M6N - Snap-in)



PCB MOUNTING



Note: Not available for 4MS6.

DPDT

Model name. 4MD1R102M6QES



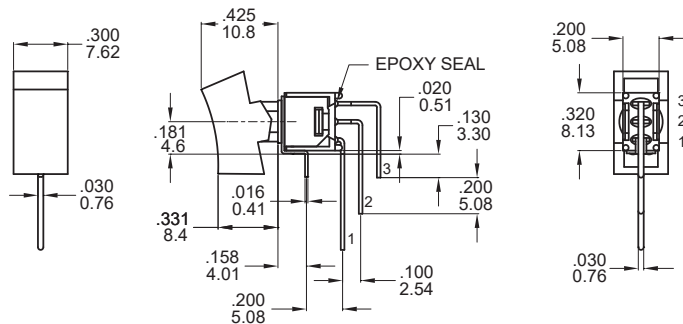
4M Series

Sub-Miniature Rocker Switches



4M
Rocker Switches

M7 (M7N - Snap-in)



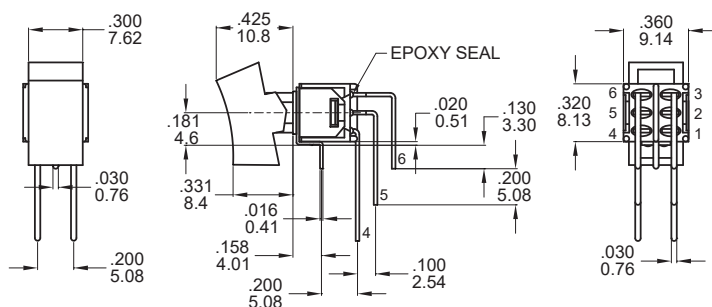
PCB MOUNTING

Note: Not available for 4MS6.

SPDT

Model name. 4MS1R102M7QES

M7 (M7N - Snap-in)



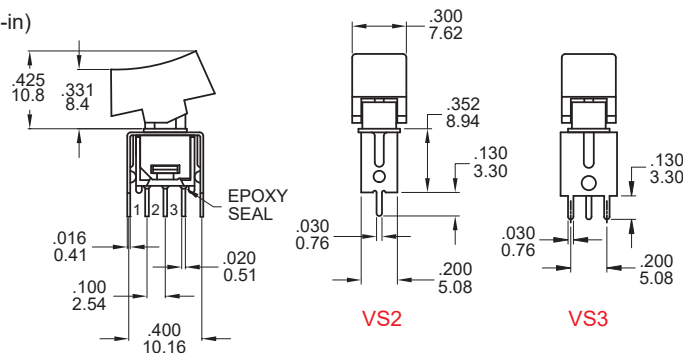
PCB MOUNTING

Note: Not available for 4MS6.

DPDT

Model name. 4MD1R102M7QES

VS2 - VS3 (V2N-V3N - Snap-in)



PCB MOUNTING

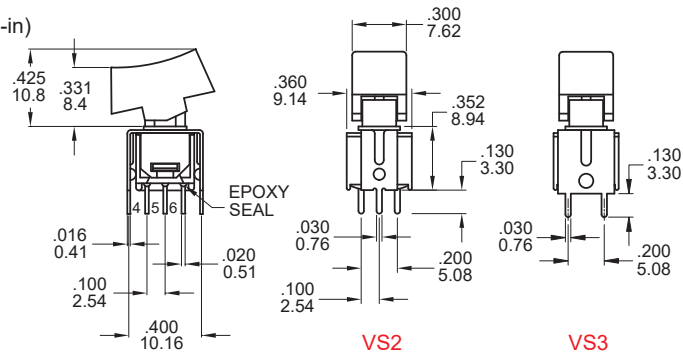
VS2

VS3

SPDT

Model name. 4MS1R102VS2QES

VS2 - VS3 (V2N-V3N - Snap-in)



PCB MOUNTING

VS2

VS3

DPDT

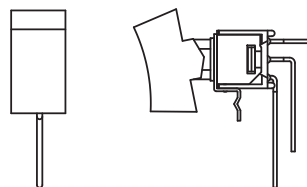
Model name. 4MD1R102VS2QES

▼ SNAP-IN TERMINAL OPTIONS

M6N

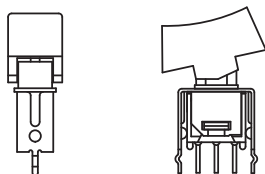


M7N

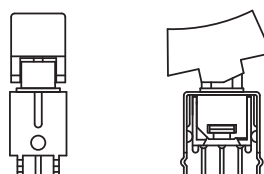


Note: The terminal type of M6N, M7N are not suitable for 4MS6.

V2N



V3N



▼ CONTACT & TERMINAL PLATING OPTIONS

	CONTACT PLATING	TERMINAL PLATING	RATINGS
Q	Silver	Silver	3 Amps with resistant load @ 120VAC or 28VDC 1 Amps with resistant load @ 250VAC
C	Gold over Silver	Gold over silver	
R	Gold	Gold	0.4 Volt - Amps (VA) max. @ 20V max. (AC or DC)

▼ SOLDERING PROCESS

MANUAL SOLDERING: Use 30 watts soldering iron and controlled the temperature at 350°.

Duration of solder immersion: Max. 5 sec.

WAVE SOLDERING: Recommend soldering temperature: 260 ± 5°C

Duration of solder immersion: Max. 5 sec. (PCB thickness is 1.6mm)