

SPECIFICATIONS

CONTACT RATING: Dependent upon contact material

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

CONTACT RESISTANCE: 20 mΩ max. initial @ 2-4VDC

100mA for both silver and gold plated contacts.

INSULATION RESISTANCE: 1,000 MΩ min.

DIELECTRIC STRENGTH: 1,000 Vrms min. @sea level.

OPERATING TEMPERATURE: -30°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.

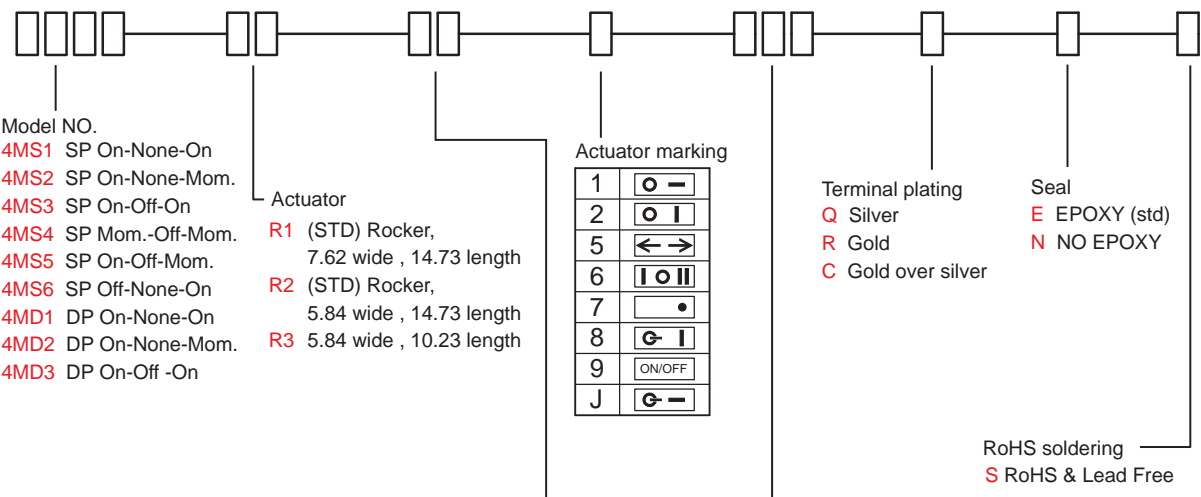
TERMINAL/CONTACT: Copper alloy or Brass,with silver or gold



4M
Rocker Switches

HOW TO ORDER

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



- Model NO.
- 4MS1 SP On-None-On
 - 4MS2 SP On-None-Mom.
 - 4MS3 SP On-Off-On
 - 4MS4 SP Mom.-Off-Mom.
 - 4MS5 SP On-Off-Mom.
 - 4MS6 SP Off-None-On
 - 4MD1 DP On-None-On
 - 4MD2 DP On-None-Mom.
 - 4MD3 DP On-Off -On

- Actuator
- 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

Actuator marking

1	
2	
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J	

Actuator color

ITEM NO	COLOR
01	White
02	Black (Std)
03	Red
04	Orange
05	Yellow
06	Green
07	Blue
08	Brown
09	Gray

* Besides standard color, other colors need to check stocks available.

- Terminal plating
- Q Silver
 - R Gold
 - C Gold over silver

- Seal
- E EPOXY (std)
 - N NO EPOXY

- RoHS soldering
- S RoHS & Lead Free







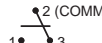
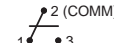
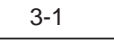
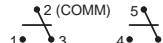
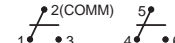
- Terminations
- M1 Solder Lug
 - M2 PC thru-hole
 - M5 wire wrap
 - M6 Right angle, PC thru-hole
 - M6N Right angle, snap-in, PC thru-hole
 - M7 Vertical right angle, PC thru-hole
 - M7N Vertical right angle, snap-in, PC thru-hole
 - VS2 8.94 high, V-bracket
 - V2N 8.94 high, snap-in V-bracket
 - VS3 8.94 high, V-bracket
 - V3N 8.94 high, snap-in V-bracket

* 4MS6 model type not applicable to M6/M6N/M7/M7N terminations

4M Series

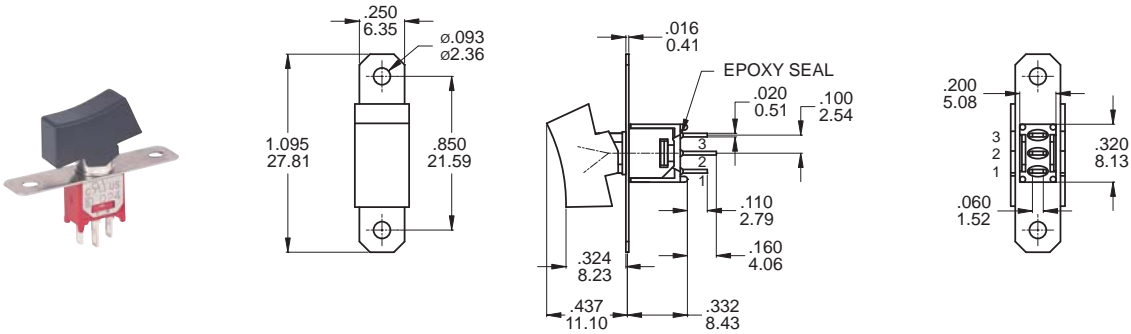
Sub-Miniature Rocker Switches

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	MOM		OPEN		
	Q2413	4MS3	ON	OFF	ON				
	Q2414	4MS4	MOM	OFF	MOM	OPEN	N/A	3-1 	
	Q2415	4MS5	ON	OFF	MOM				
	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	MOM		OPEN		
	Q2423	4MD3	ON	OFF	ON				

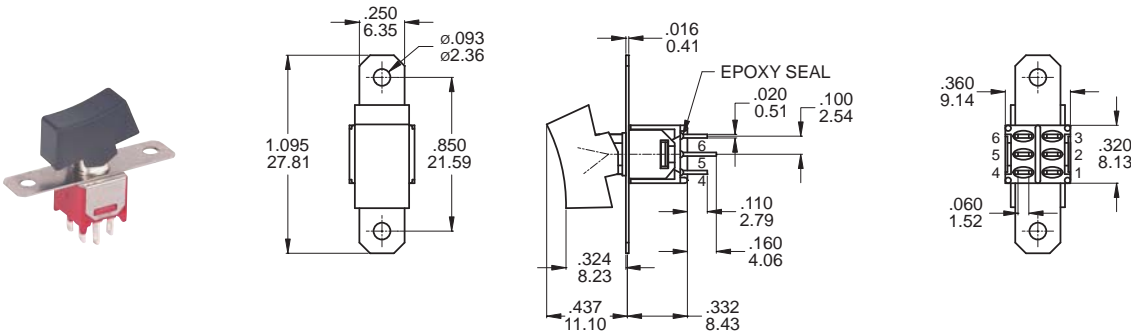
MOM=MOMENTARY

POLE OPTIONS



SPDT

Part No. Shown : 4MS1R102M1QES

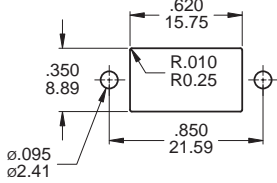


DPDT

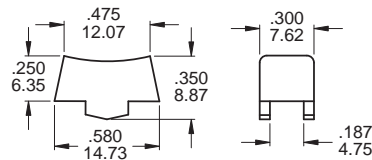
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ACTUATOR OPTIONS - PANEL MOUNT

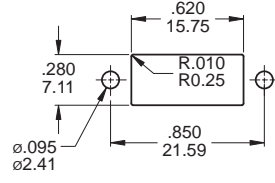
R1



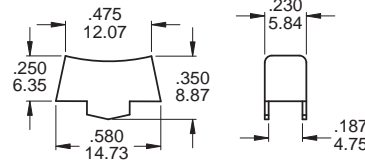
PANEL MOUNTING-R1



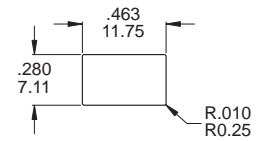
R2



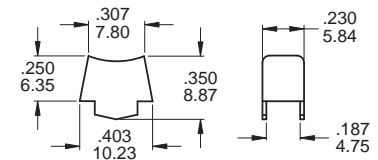
PANEL MOUNTING-R2



R3



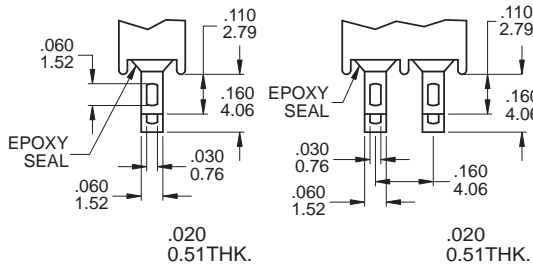
PANEL MOUNTING-R3



4M
Rocker Switches

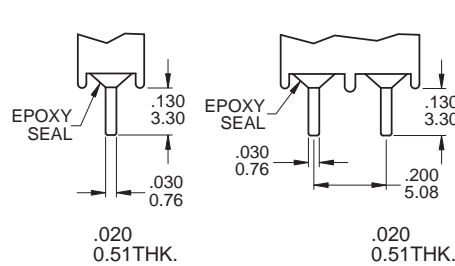
TERMINATION OPTIONS

M1 Solder lug



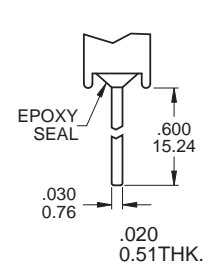
Double Pole

M2 PC Thru-hole

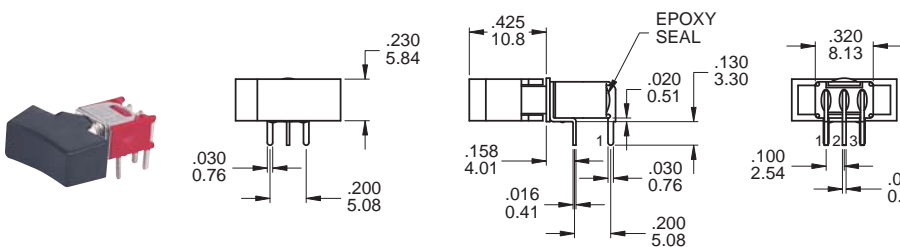


Double Pole

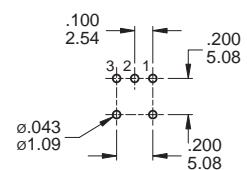
M5 Wire Wrap



M6



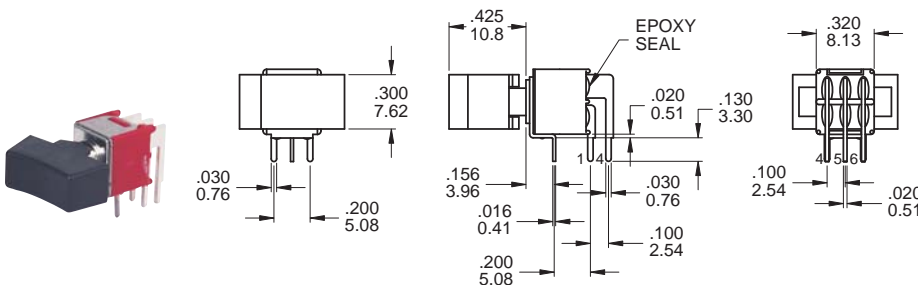
P.C. MOUNTING



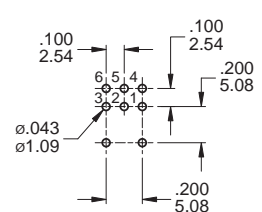
SPDT

Part No. Shown : 4MS1R202M6QES

M6



P.C. MOUNTING



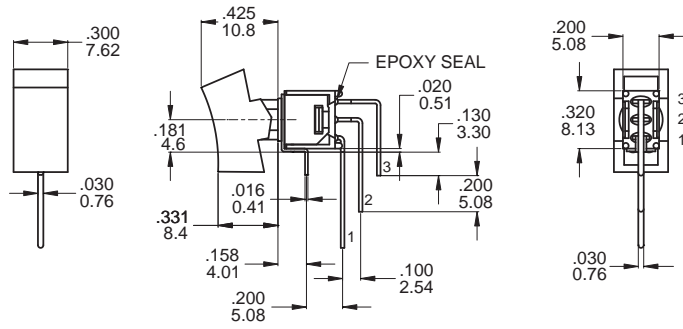
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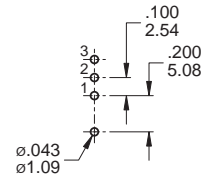
4M Series

Sub-Miniature Rocker Switches

M7



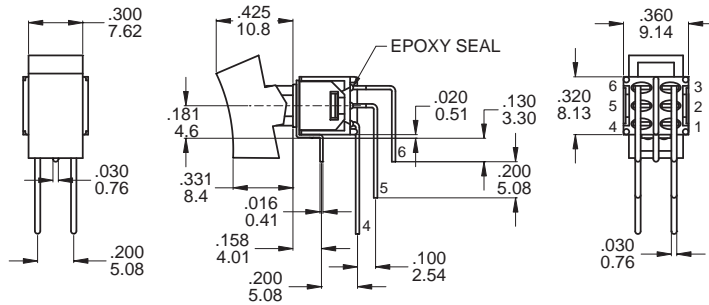
P.C. MOUNTING



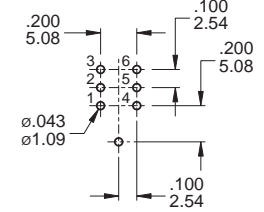
SPDT

Part No. Shown : 4MS1R102M7QES

M7



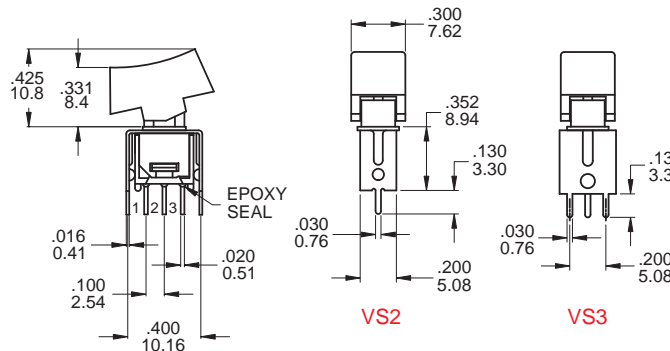
P.C. MOUNTING



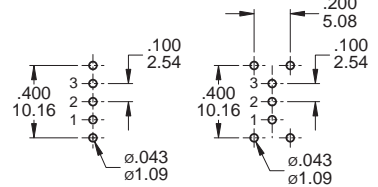
DPDT

Part No. Shown : 4MD1R102M7QES

VS2 - VS3



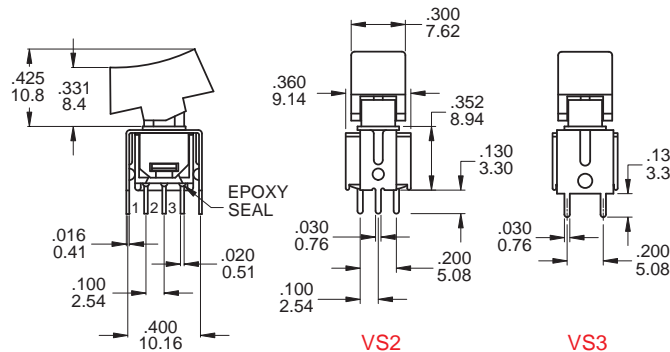
P.C. MOUNTING



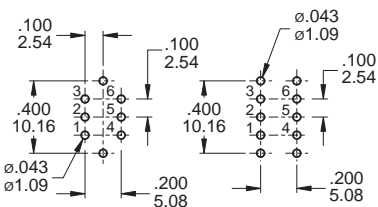
SPDT

Part No. Shown : 4MS1R102VS2QES

VS2 - VS3



P.C. MOUNTING



DPDT

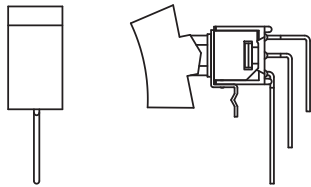
Part No. Shown : 4MD1R102VS2QES

SNAP-IN TERMINATION OPTIONS

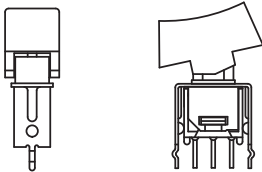
M6N



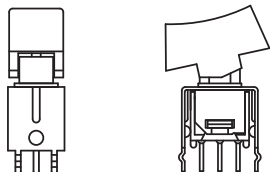
M7N



V2N



V3N



CONTACT MATERIAL OPTIONS

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

SOLDERING PROCESSES

MANUAL SOLDERING: Use soldering iron of 30 watts, controlled at 350°C
approximately 5 seconds while applying solder.

WAVE SOLDERING: Recommended Soldering Temperature: 270 ± 5°C
Duration of Solder Immersion: Max 5 sec. (PCB is 1.6mm in thickness)

