



SPECIFICATIONS

CONTACT RATING: Dependent upon contact material, see page 58.

MECHANICAL LIFE: 40,000 make-and-break cycles.

CONTACT RESISTANCE: 10 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: Brass, tin plated or stainless steel.

TERMINAL/CONTACT: Copper with silver or gold plated.

(See page 58)

HOW TO ORDER

MODEL NO.	ACTUATOR	ACTUATOR COLOR	ACTUATOR MARKING	TERMINAL TYPE	TERMINAL PLATING	SEAL	RoHS SOLDERING
SP							
3MS1 ON-NONE-ON	R1 13.49 long rocker-support				Q Silver		
3MS2 ON-NONE-(ON)	R2 Lever-support *				R Gold		
3MS3 ON-OFF-ON	R3 23.01 long rocker-support				C Gold over silver		
3MS4 (ON)-OFF-(ON)	R4 Lever-support *						
3MS5 ON-OFF-(ON)	R5 34.20 long rocker-support *						
	R11 9.19 long rocker-support						
	R12 Lever-support *						
	R13 Lever-support *						
	R16 Lever-support *						
	RB 17.75 long rocker-support						
DP							
3MD1 ON-NONE-ON							
3MD2 DP ON-NONE-(ON)							
3MD3 ON-OFF-ON							
3MD4 (ON)-OFF-(ON)							
3MD5 ON-OFF-(ON)							
3MD6 ON-ON-ON							
3MD7 (ON)-ON-(ON) ▲							
3MD8 ON-ON-(ON) ▲							
3P							
3M31 ON-NONE-ON							
3M32 ON-NONE-(ON)							
3M33 ON-OFF-ON							
3M34 (ON)-OFF-(ON)							
3M35 ON-OFF-(ON)							
4P							
3M41 ON-NONE-ON							
3M42 ON-NONE-(ON)							
3M43 ON-OFF-ON							
3M44 (ON)-OFF-(ON)							
3M45 ON-OFF-(ON)							
3M46 ON-ON-ON							
3M47 (ON)-ON-(ON) ▲							
3M48 ON-ON-(ON) ▲							

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

※ For actuator R and J type only

ITEM NO	COLOR
0	Without
1	White
2	Black (Std)
3	Red
4	Orange
5	Yellow
6	Green
7	Blue
9	Gray

※ For actuator frame type only

ITEM NO	COLOR
0	Without
1	White
2	Black (Std)
3	Red
4	Orange
5	Yellow
6	Green
7	Blue
9	Gray

※ For actuator frame type only

FRAME COLOR

ACTUATOR COLOR

TERMINAL TYPE

TERMINAL PLATING

SEAL

RoHS SOLDERING

EXAMPLE:

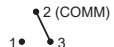
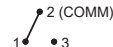
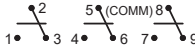
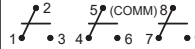
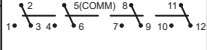
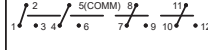
3MS1R102M1QES (STD)

3MS1R1□□M1QES

3MS1R6□□M1QES (FRAME TYPE)

▲ Please confirm the availability before order.

▼ SWITCH FUNCTION

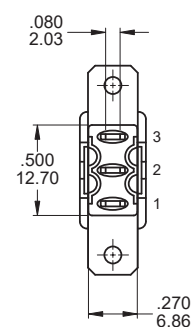
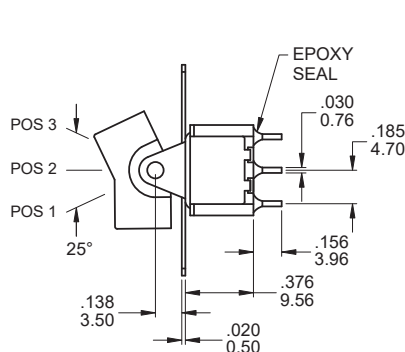
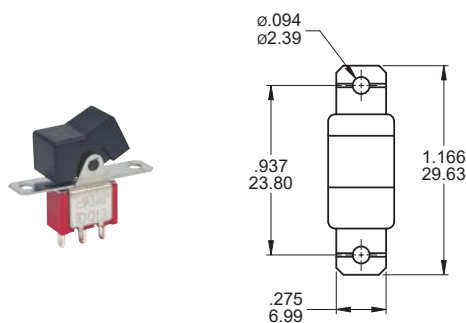
NO. POLES	UL/CSA MODEL NO.	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS / SCHEMATIC		
			POS.1	POS.2	POS.3	POS.1	POS.2	POS.3
								
SP	Q1311	3MS1	ON	NONE	ON	2-3 	N/A	2-1 
	Q1312	3MS2	ON	NONE	(ON)		OPEN	
	Q1313	3MS3	ON	OFF	ON			
	Q1314	3MS4	(ON)	OFF	(ON)			
	Q1315	3MS5	ON	OFF	(ON)			
DP	Q1321	3MD1	ON	NONE	ON	2-3,5-6 	N/A	2-1,5-4 
	Q1322	3MD2	ON	NONE	(ON)		OPEN	
	Q1323	3MD3	ON	OFF	ON			
	Q1324	3MD4	(ON)	OFF	(ON)			
	Q1325	3MD5	ON	OFF	(ON)			
	Q1326	3MD6	ON	ON	ON			
	▲ Q1327	3MD7	(ON)	ON	(ON)			
	▲ Q1328	3MD8	ON	ON	(ON)			
3P	Q1331	3M31	ON	NONE	ON	2-3,5-6,8-9 	N/A	2-1,5-4,8-7 
	Q1332	3M32	ON	NONE	(ON)		OPEN	
	Q1333	3M33	ON	OFF	ON			
	Q1334	3M34	(ON)	OFF	(ON)			
	Q1335	3M35	ON	OFF	(ON)			
4P	Q1341	3M41	ON	NONE	ON	2-3,5-6,8-9,11-12 	N/A	2-1,5-4,8-7,11-10 
	Q1342	3M42	ON	NONE	(ON)		OPEN	
	Q1343	3M43	ON	OFF	ON			
	Q1344	3M44	(ON)	OFF	(ON)			
	Q1345	3M45	ON	OFF	(ON)			
	Q1346	3M46	ON	ON	ON			
	▲ Q1347	3M47	(ON)	ON	(ON)			
	▲ Q1348	3M48	ON	ON	(ON)			

()=MOMENTARY

▲ Please confirm the availability before order.

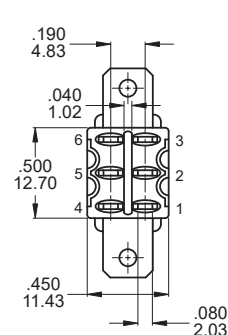
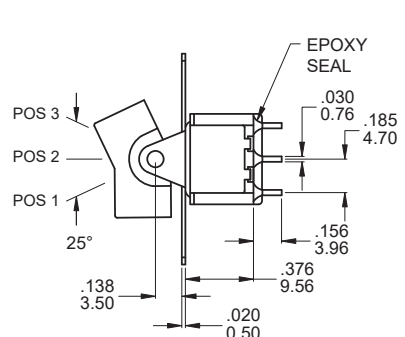
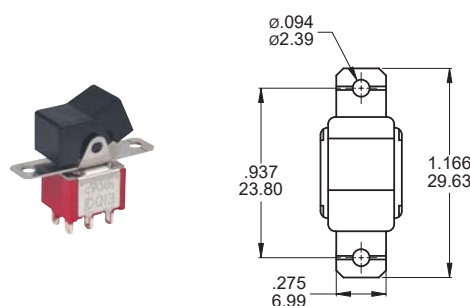


POLE OPTIONS



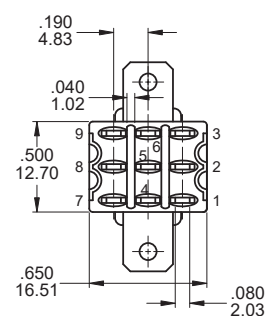
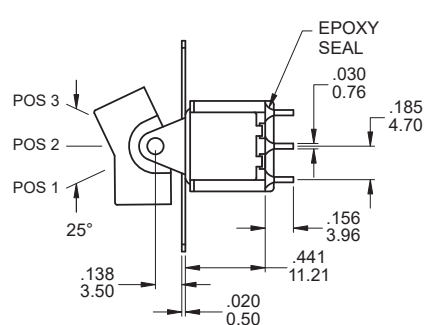
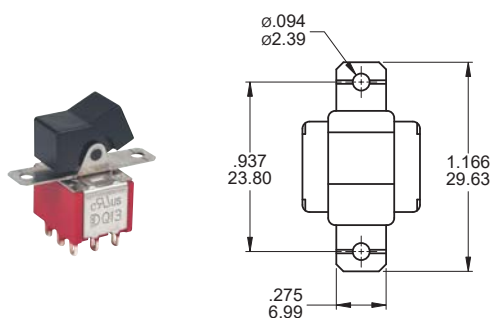
SPDT

Model name. 3MS1R102M1QES



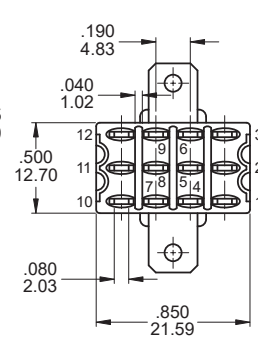
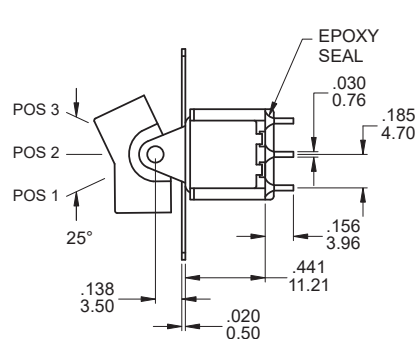
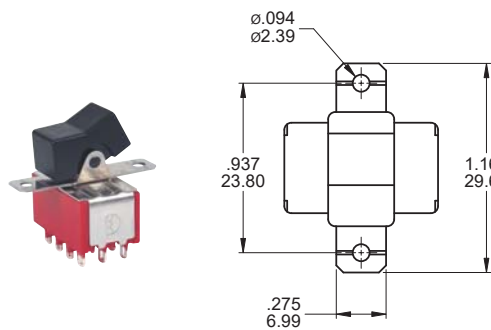
DPDT

Model name. 3MD1R102M1QES



3PDT

Model name. 3M31R102M1QES

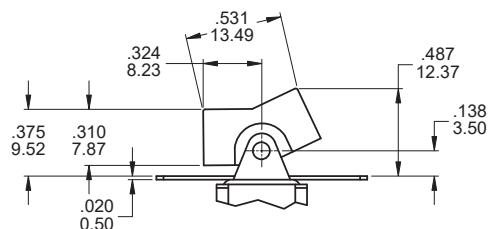
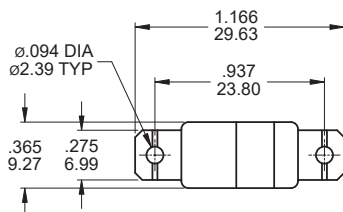


4PDT

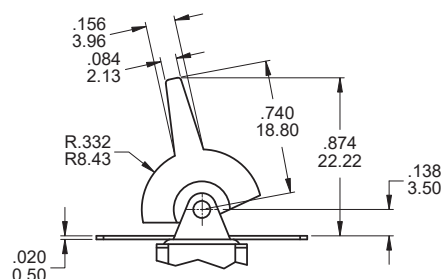
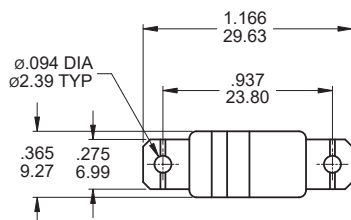
Model name. 3M41R102M1QES

▼ ACTUATOR OPTIONS FOR PANEL MOUNT ONLY

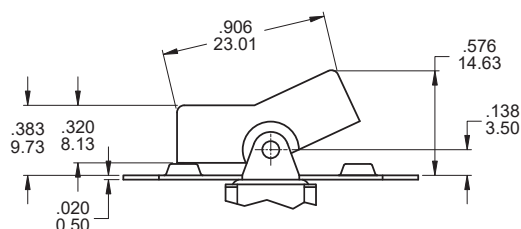
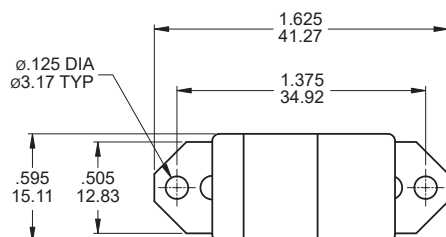
R1



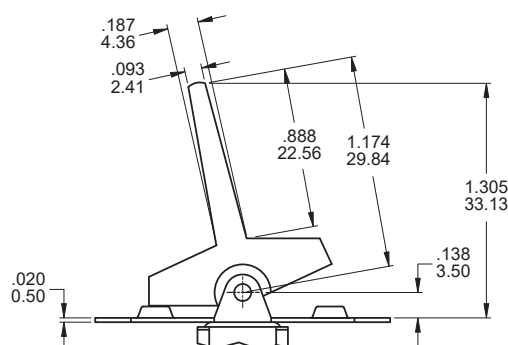
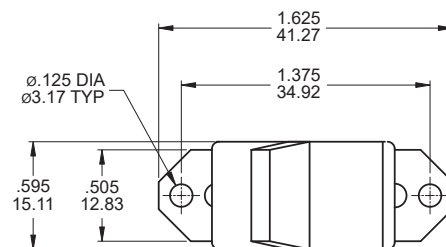
R2



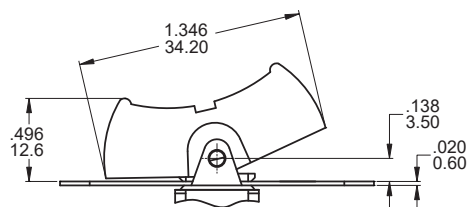
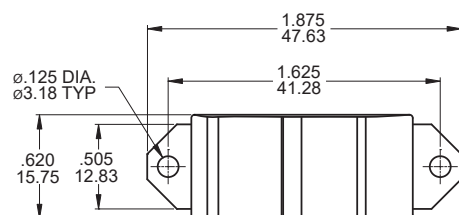
R3



R4



R5





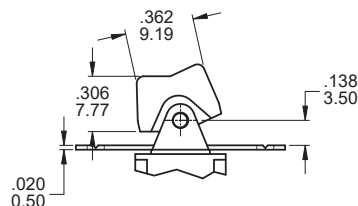
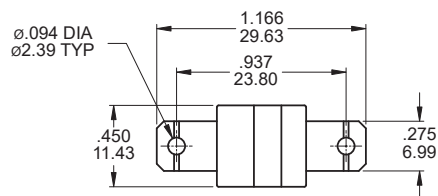
3M Series

Miniature Rocker & Paddle Switches

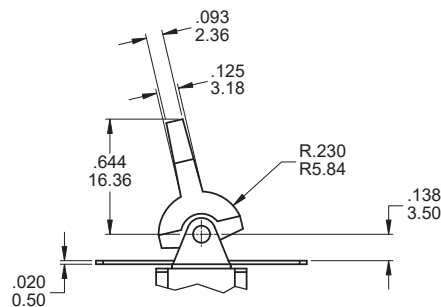
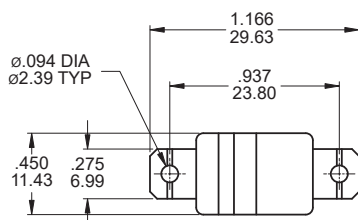


3M Rocker Switches

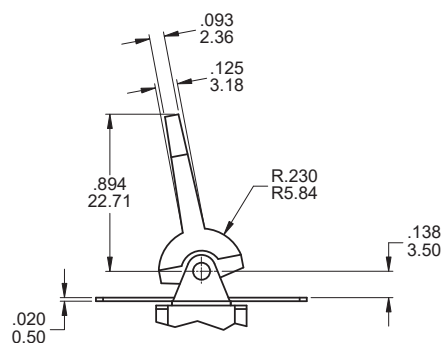
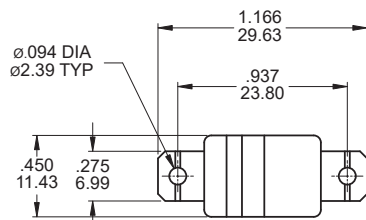
R11



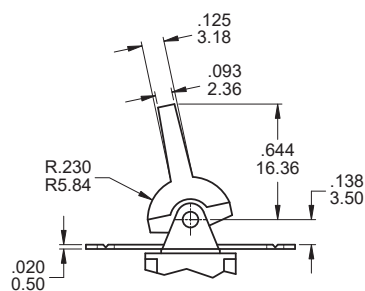
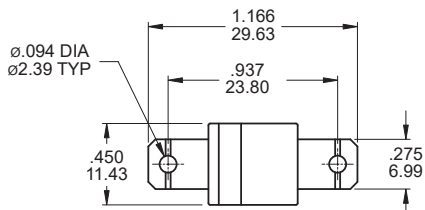
R12



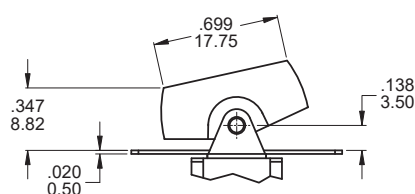
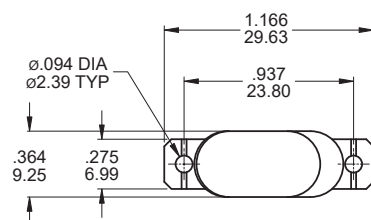
R13



R16

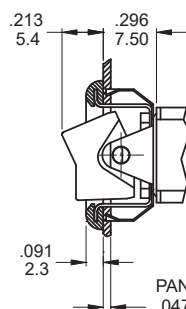
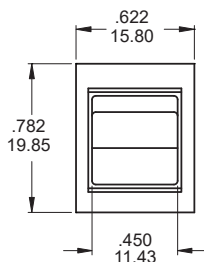


RB

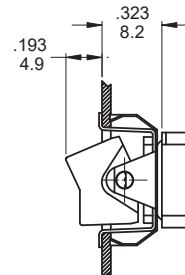


▼ ACTUATOR OPTIONS SNAP-IN

R6

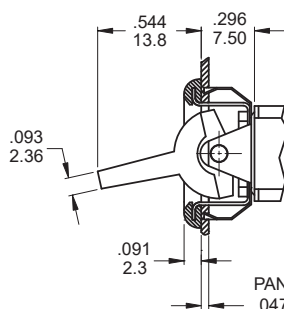
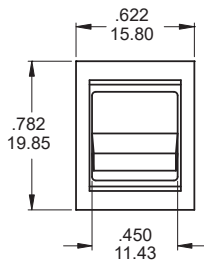


PANEL THICKNESS
.047 TO .125
1.19 TO 3.18

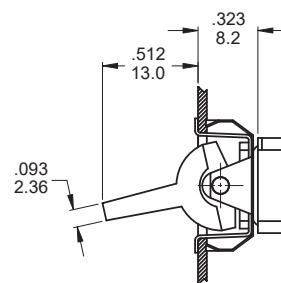


Without frame

R7

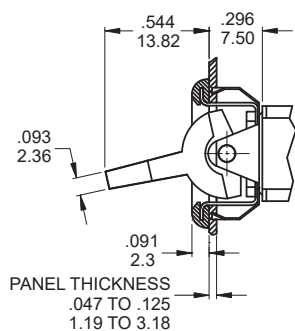
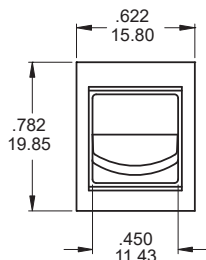


PANEL THICKNESS
.047 TO .125
1.19 TO 3.18



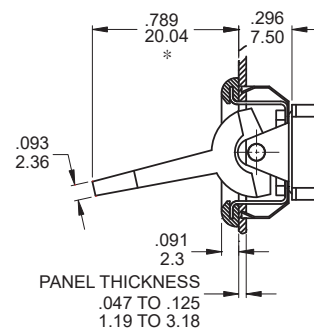
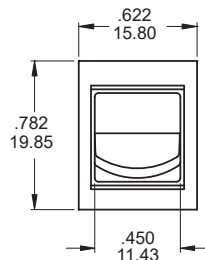
Without frame

R8



PANEL THICKNESS
.047 TO .125
1.19 TO 3.18

R9

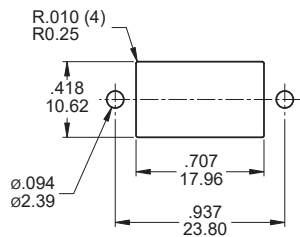


PANEL THICKNESS
.047 TO .125
1.19 TO 3.18

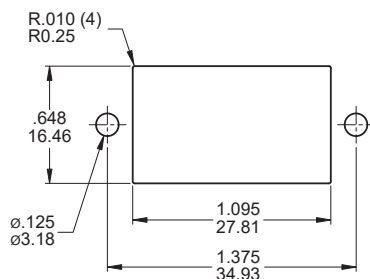
* Dimension without frame: .744inch(18.9mm).

▼ PANEL MOUNT ONLY

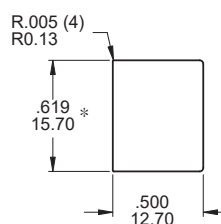
For R1 -R2



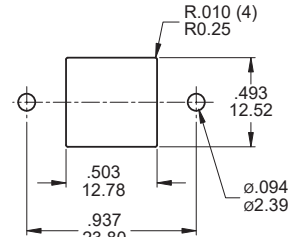
For R3-R4



For R6-R9



For R11 and R16



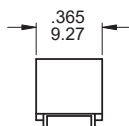
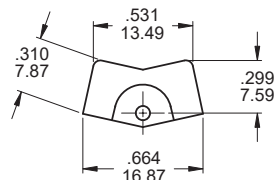
* For R6 and R7: Increase this dim. to .620/.625(15,75/15,88) for .060/.125 (1,52/3,18) thk. panels.

* For R8 and R9: Increase this dim. to .620/.625(15,75/15,88) for .091/.125 (2,31/3,18) thk. panels.

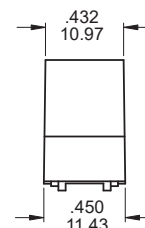
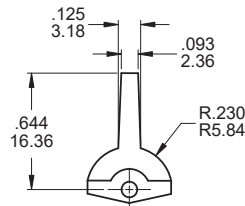


▼ ACTUATOR OPTIONS FOR P.C. MOUNT ONLY

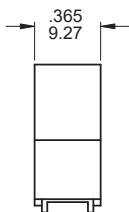
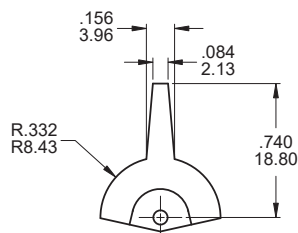
J1



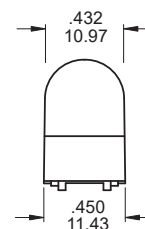
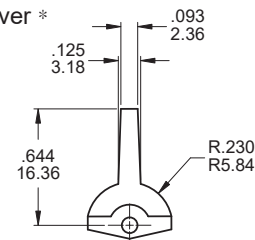
J6 Lever *



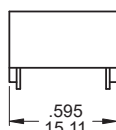
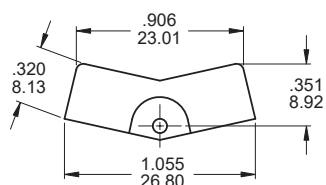
J2 Lever *



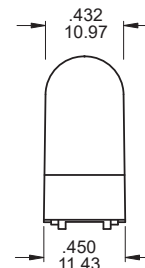
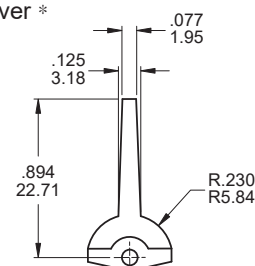
J7 Lever *



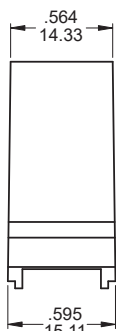
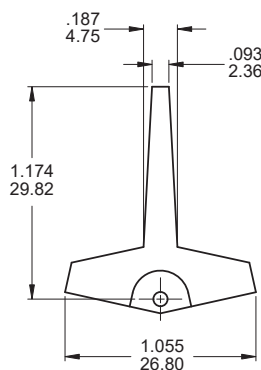
J3



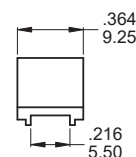
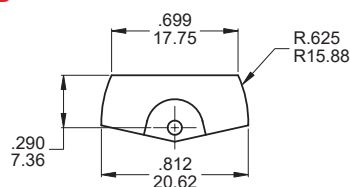
J8 Lever *



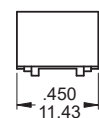
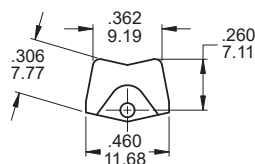
J4 Lever *



JB



J5



ACTUATOR COLORS:

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

**

* The actuator mark cannot be printed

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

EXAMPLE:

3MS1J1□□QES

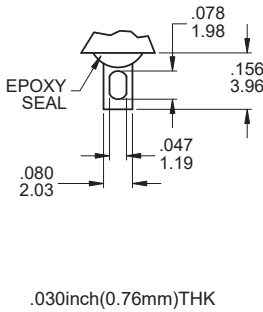
Terminal type
Actuator color

3MS1J1□□□QES

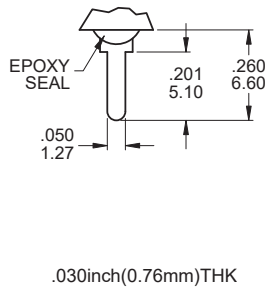
Terminal type
Actuator marking
Actuator color

▼ TERMINAL OPTIONS

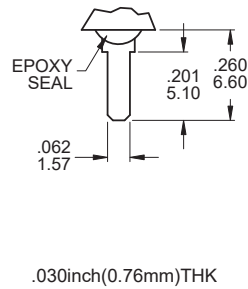
M1 Solder lug



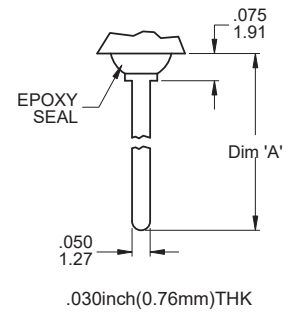
M2 PC Thru-hole



M3 Quick connect



M5 Wire Wrap



▼ OTHER TERMINAL OPTIONS

M6 Right angle P.C. Mount

M7 Right angle P.C. Mount

VS2 Vertical bracket P.C. Mount

VS3 Vertical bracket P.C. Mount

VS4 Vertical bracket P.C. Mount

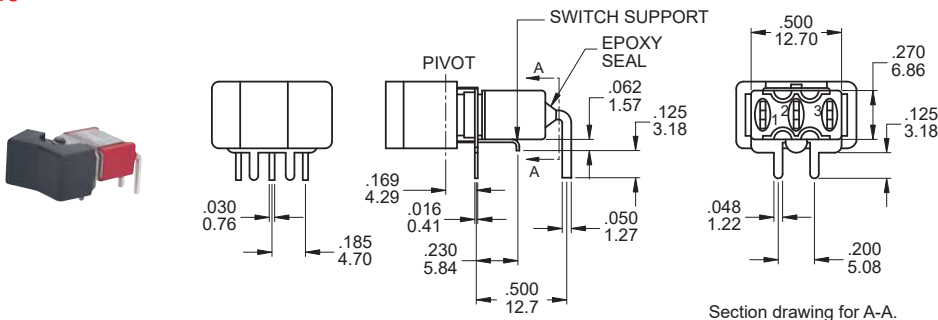
VS5 Vertical bracket P.C. Mount

V2N Vertical bracket P.C. Mount with snap-in bracket

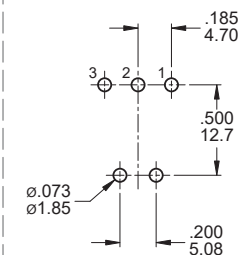
OPTION CODE	DIM. 'A'
M51	.736 (18.70)
M52	.953 (24.20)
M53	.415 (10.55)
M54	1.062 (26.97)

Shown with rocker J1

M6



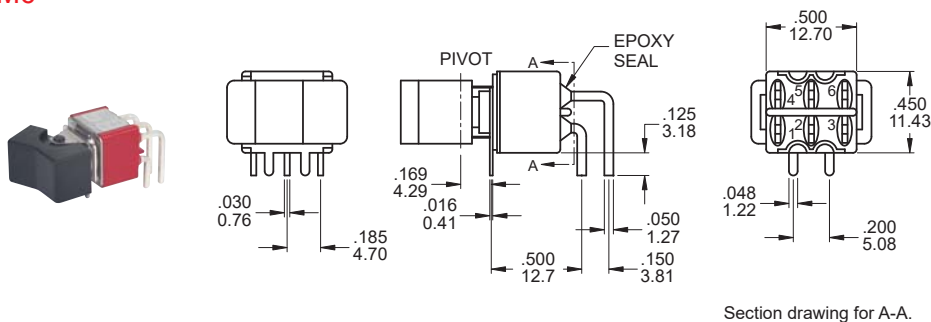
PCB MOUNTING



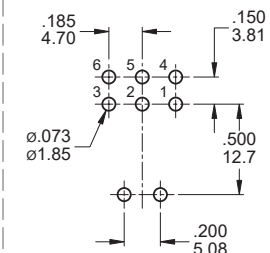
SPDT

Model name. 3MS1J102M6QES

M6



PCB MOUNTING

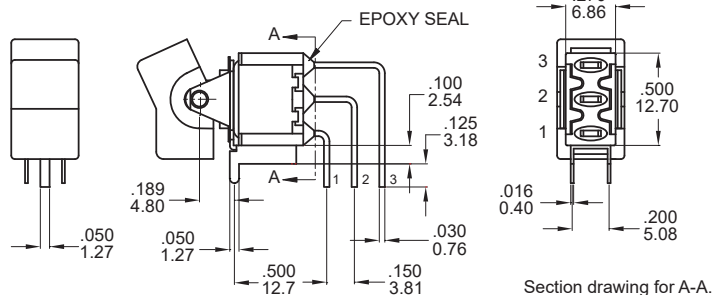


DPDT

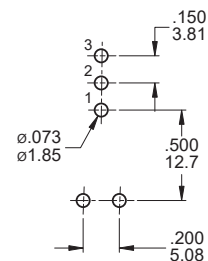
Model name. 3MD1J102M6QES



M7



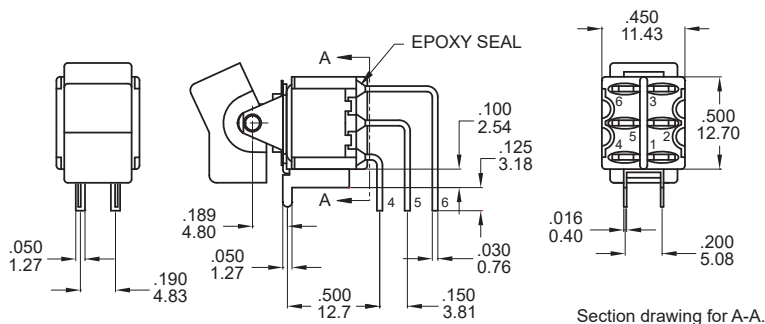
PCB MOUNTING



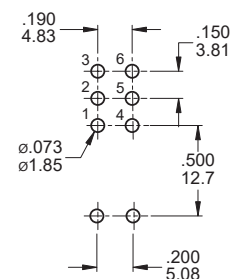
SPDT

Model name. 3MS1J102M7QES

M7



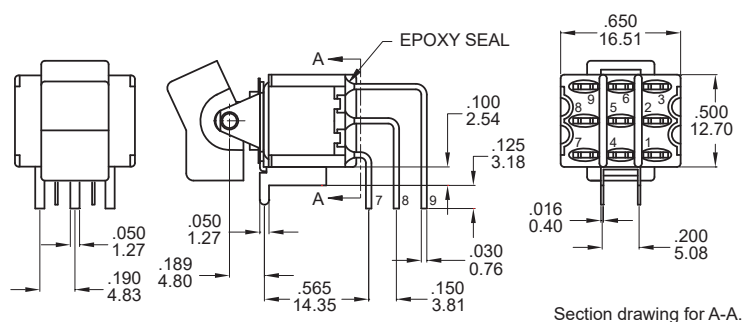
PCB MOUNTING



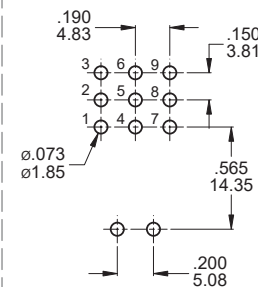
DPDT

Model name. 3MD1J102M7QES

M7



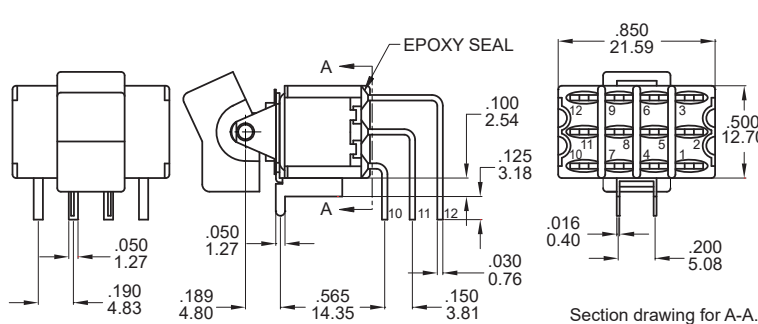
PCB MOUNTING



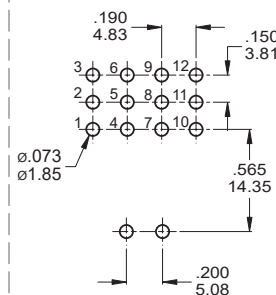
3PDT

Model name. 3M31J102M7QES

M7

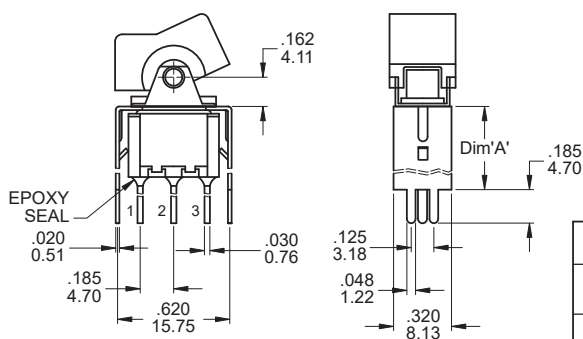


PCB MOUNTING



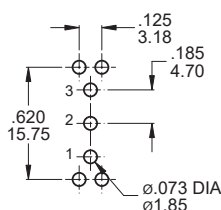
4PDT

Model name. 3M41J102M7RES

VS2 / VS3
(V2N - Snap-in)

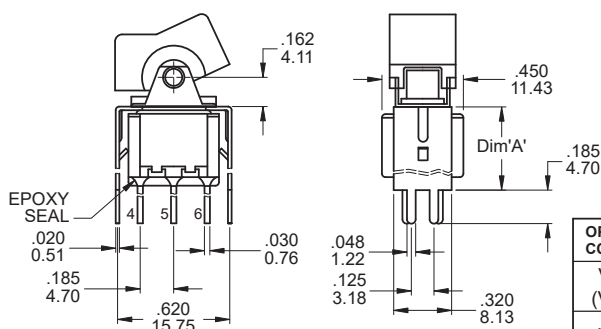
OPTION CODE	DIM. 'A'
VS2 (V2N)	.460 11.68
VS3	.630 16.00

PCB MOUNTING



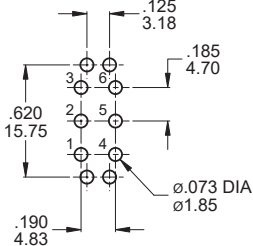
SPDT

Model name. 3MS1J102VS2QES

VS2 / VS3
(V2N - Snap-in)

OPTION CODE	DIM. 'A'
VS2 (V2N)	.460 11.68
VS3	.630 16.00

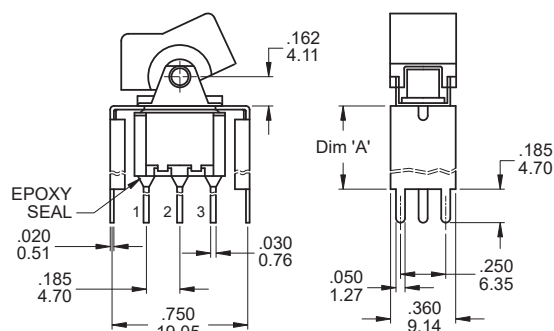
PCB MOUNTING



DPDT

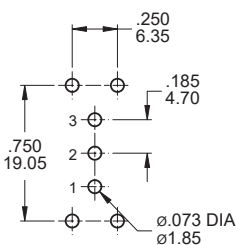
Model name. 3MD1J102VS2QES

VS4 / VS5



OPTION CODE	DIM. 'A'
VS4	.460 11.68
VS5	.630 16.00

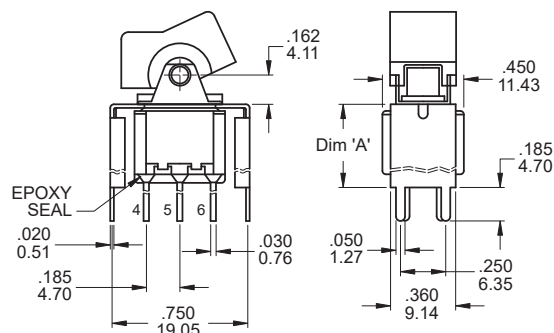
PCB MOUNTING



SPDT

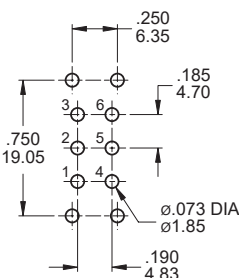
Model name. 3MS1J102VS4QES

VS4 / VS5



OPTION CODE	DIM. 'A'
VS4	.460 11.68
VS5	.630 16.00

PCB MOUNTING



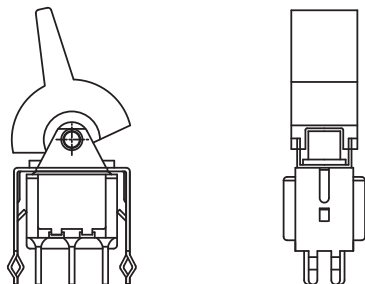
DPDT

Model name. 3MD1J102VS4QES



▼ SNAP-IN TERMINAL TYPE

V2N



▼ CONTACT & TERMINAL PLATING OPTIONS

	CONTACT PLATING	TERMINAL PLATING	RATINGS
Q	Silver	Silver	5 Amps with resistant load @ 120VAC or 28VDC
C	Gold over Silver	Gold over silver	2 Amps with resistant load @ 250VAC
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)