

SPECIFICATIONS

CONTACT RATING: Dependent upon contact material See Page 56.

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

CONTACT RESISTANCE: 10 mΩ max. initial @ 2-4VDC

100mA for both silver and gold plated contacts.

INSULATION RESISTANCE: 1,000 M Ω 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: Brass,tin plated.

TERMINAL/CONTACT: Brass, with silver or gold plated.

(See Page 56)

HOW TO ORDER

MODEL NO.	ACTUATOR	FRAME COLOR	ACTUATOR COLOR	CAP MARKING	TERMINATIONS	TERMINAL PLATING	SEAL	RoHS SOLDERING
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See below

The diagram shows a 12-pin connector with the following pin functions and markings:







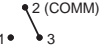
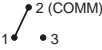
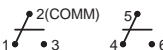

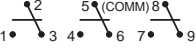
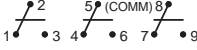
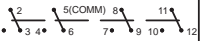
- Model NO.**
 - 3MS1 SP On-None-On
 - 3MS2 SP On-None-Mom.
 - 3MS3 SP On-Off-On
 - 3MS4 SP Mom.-Off-Mom.
 - 3MS5 SP On-Off-Mom.
 - 3MD1 DP On-None-On
 - 3MD2 DP On-None-Mom.
 - 3MD3 DP On-Off-On
 - 3MD4 DP Mom.-Off-Mom.
 - 3MD5 DP On-Off-Mom.
 - 3MD6 DP On-On-On
 - 3MD7 DP Mom.-On-Mom.
 - 3MD8 DP On-On-Mom.
 - 3M31 3P On-None-On
 - 3M32 3P On-None-Mom.
 - 3M33 3P On-Off-On
 - 3M34 3P Mom.-Off-Mom.
 - 3M35 3P On-Off-Mom.
 - 3M41 4P On-None-On
 - 3M42 4P On-None-Mom.
 - 3M43 4P On-Off-On
 - 3M44 4P Mom.-Off-Mom.
 - 3M45 4P On-Off-Mom.
 - 3M46 4P On-On-On
 - 3M47 4P Mom.-On-Mom.
 - 3M48 4P On-On-Mom.
- Actuator**
 - R1 13.49 long rocker - support
 - R2 Lever - support
 - R3 23.01 long rocker - support
 - R4 Lever - support
 - R5 33.48 long rocker - support
 - R6 Rocker with frame
 - R6K Rocker with frame,snap-in
 - R7 Lever with frame
 - R7K Lever with frame,snap-in
 - R8 Lever with frame
 - R9 Lever with frame
 - R11 9.19 long rocker - support
 - R12 Lever - support
 - R13 Lever - support
 - R16 Lever - support
 - R17 Rocker with frame for LED,snap-in
 - R18 Lever with frame for LED,snap-in
 - RB 17.75 long rocker - support
- Cap marking**

1	○ —
2	○
5	← →
6	○
7	— •
8	⊗
L	⊗ ⊗
J	⊗ —
- Terminal plating**
 - Q Silver
 - R Gold
 - G Gold,tin-lead
 - S Silver,tin-lead
 - C Gold over silver
 - K Gold over silver,tin-lead
- Seal**
 - E EPOXY (std)
 - N NO EPOXY
- Terminations**
 - M1 Solder Lug
 - M2 PC thru-hole
 - M3 Quick Connect
 - M51 18.70 high, wire wrap
 - M52 24.20 high, wire wrap
 - M53 10.55 high, wire wrap
 - M54 26.97 high, wire wrap
 - M6 Right angle, PC thru-hole
 - M6N Right angle, snap-in, PC thru-hole
 - M7 Vertical right angle, PC thru-hole
 - VS2 11.68 high, V-bracket
 - V2N 11.68 high, snap-in V-bracket
 - VS3 16.00 high, V-bracket
 - VS4 11.68 high, V-bracket
 - VS5 16.00 high, V-bracket
- RoHS soldering**
 - RoHS Compliant
 - S RoHS & Lead Free
- P.C. Mount only**
 - J1 13.49 long rocker
 - J2 Lever
 - J3 23.01 long rocker
 - J4 Lever
 - J5 9.19 long rocker
 - J6 Lever
 - J7 Lever
 - J8 Lever
 - JB 17.75 long rocker
- Frame/Actuator Color**

ITEM NO	COLOR
1	White
2	Black (Std)
3	Red
4	Orange
5	Yellow
6	Green
7	Blue
8	Brown
9	Gray

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

SWITCH FUNCTION

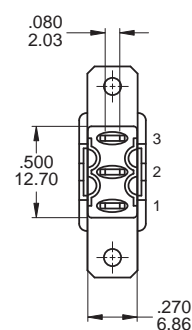
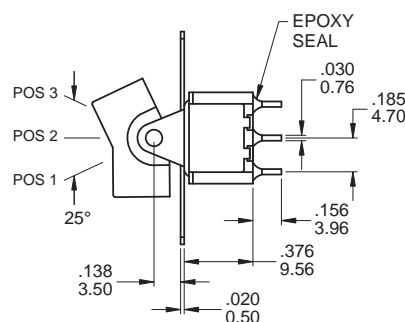
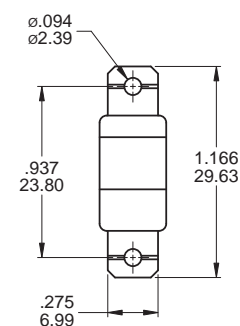
NO. POLES	UL/CSA MODEL NO.	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS / SCHEMATIC		
			POS.1	POS.2	POS.3	POS.1	POS.2	POS.3
								
SP	Q1311	3MS1	ON	NONE	ON	<div>2-3</div> 	N/A	2-1
	Q1312	3MS2	ON	NONE	MOM			
	Q1313	3MS3	ON	OFF	ON		OPEN	
	Q1314	3MS4	MOM	OFF	MOM			
	Q1315	3MS5	ON	OFF	MOM			
DP	Q1321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

MOM=MOMENTARY

▲ Please check the availability in advance before order

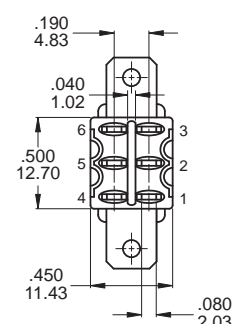
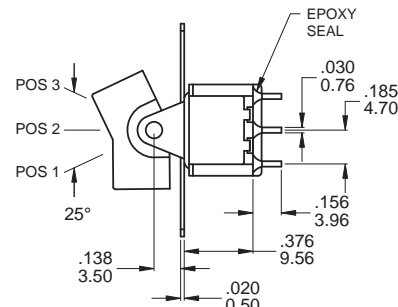
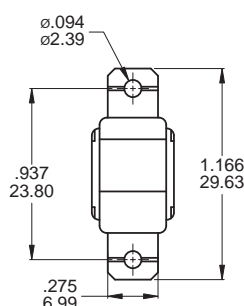


POLE OPTIONS



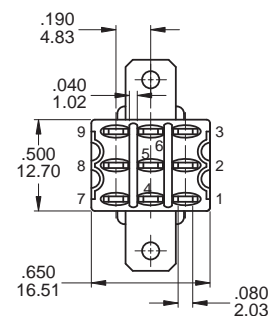
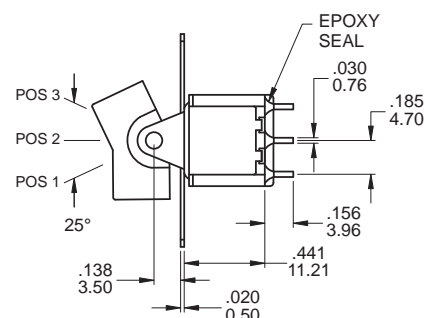
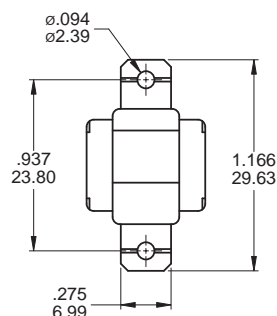
SPDT

Part No. Shown : 3MS1R102M1QE



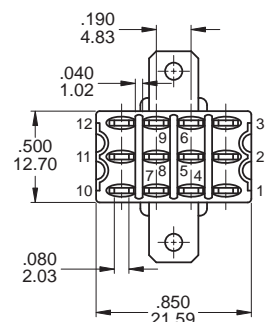
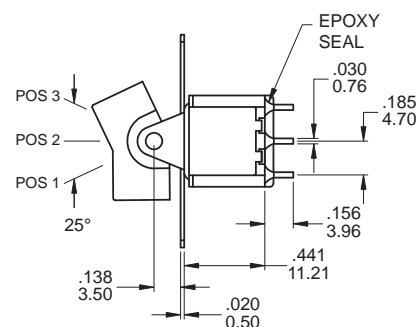
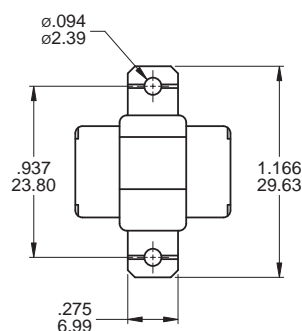
DPDT

Part No. Shown : 3MD1R102M1QE



3PDT

Part No. Shown : 3M31R102M1QE



4PDT

Part No. Shown : 3M41R102M1QE



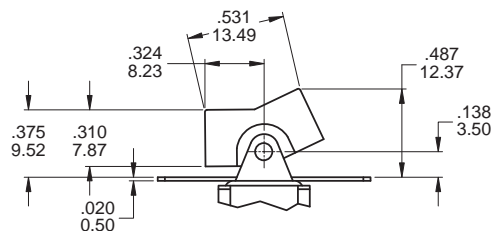
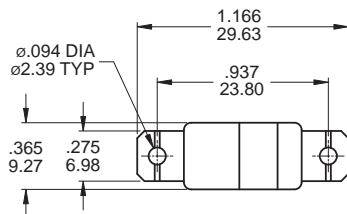
3M
Rocker Switches

3M Series

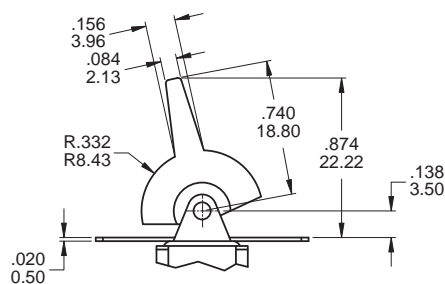
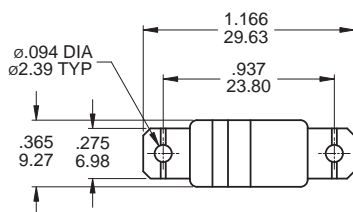
Miniature Rocker & Paddle Switches

ACTUATOR OPTIONS FOR PANEL MOUNT ONLY

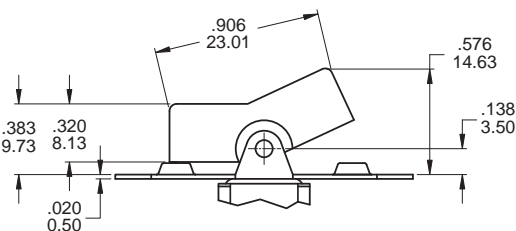
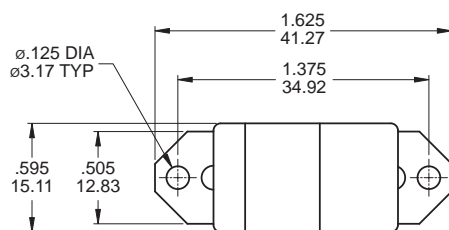
R1



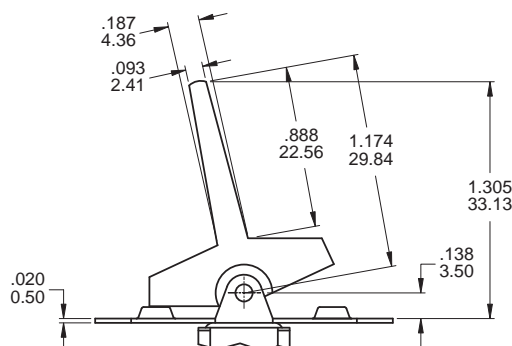
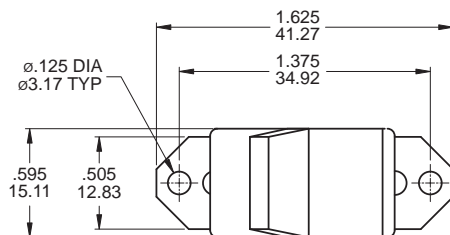
R2



R3

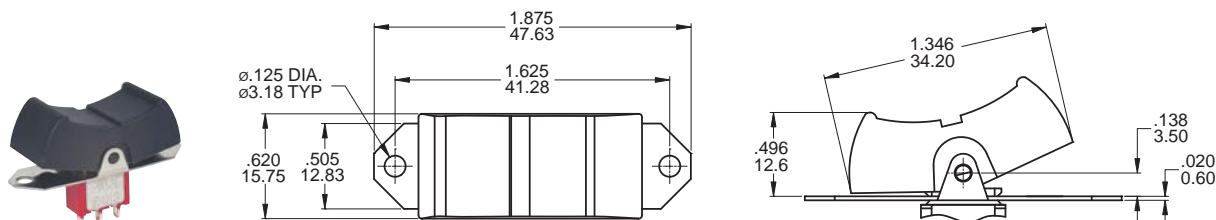


R4

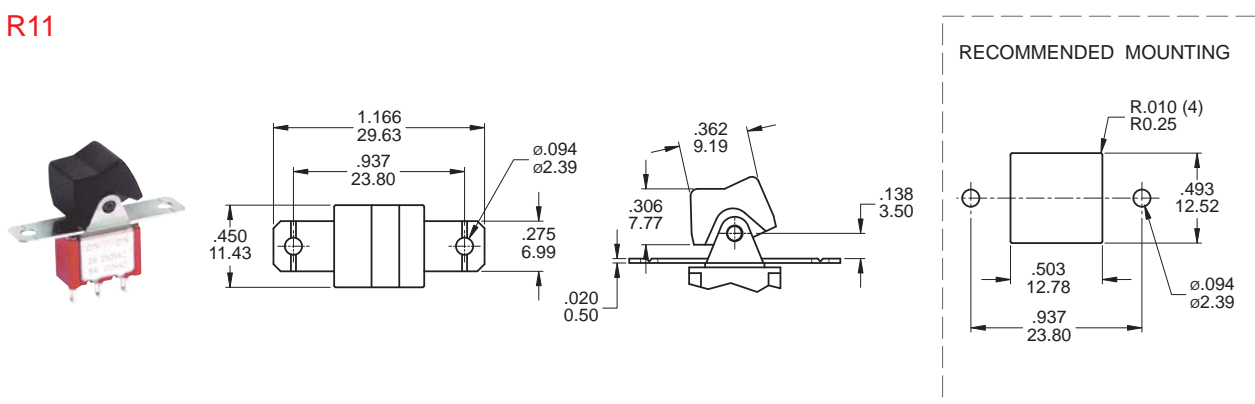


ACTUATOR OPTIONS SNAP-IN FRONT MOUNT

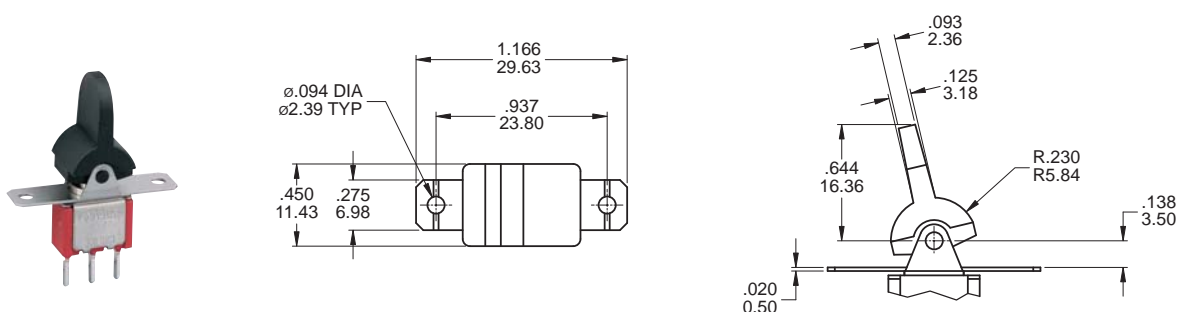
R5



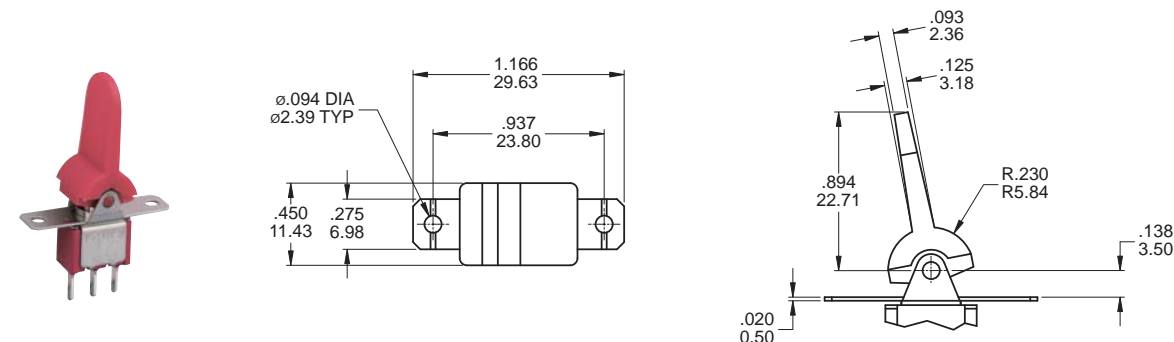
R11



R12



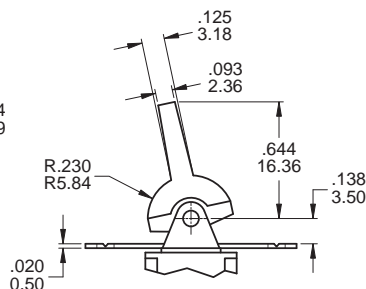
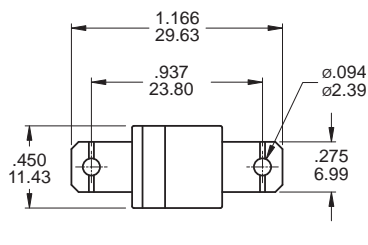
R13



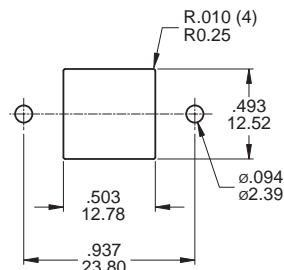
3M Series

Miniature Rocker & Paddle Switches

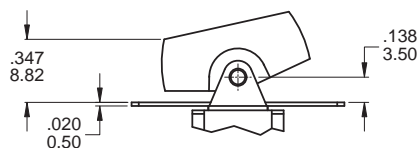
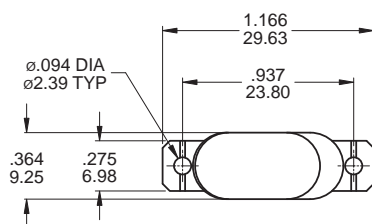
R16



RECOMMENDED MOUNTING

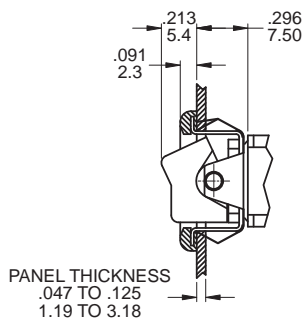
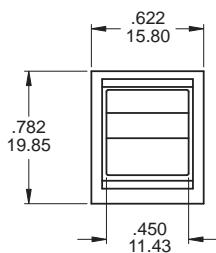


RB

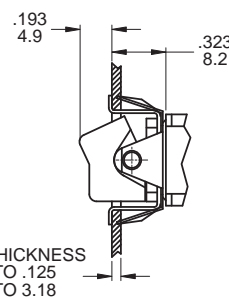


ACTUATOR OPTIONS SNAP-IN FRONT MOUNT

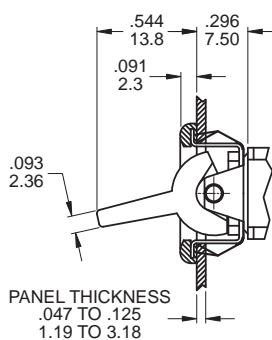
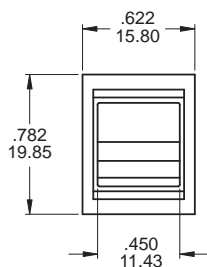
R6



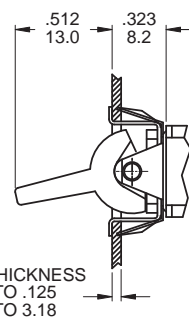
R6K Snap-in



R7

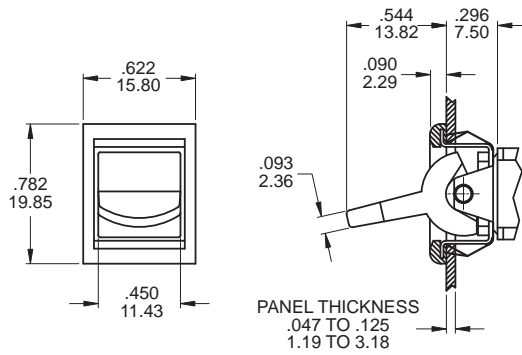


R7K Snap-in

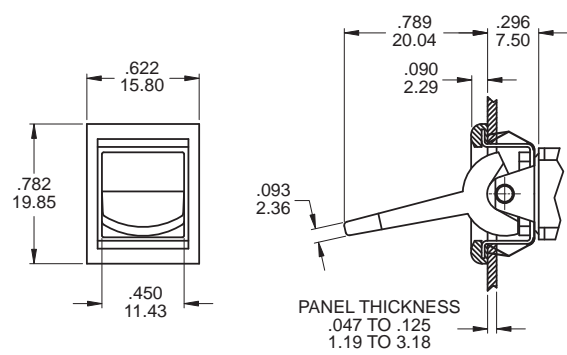




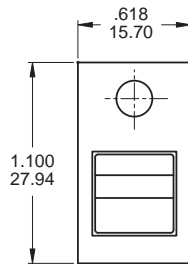
R8



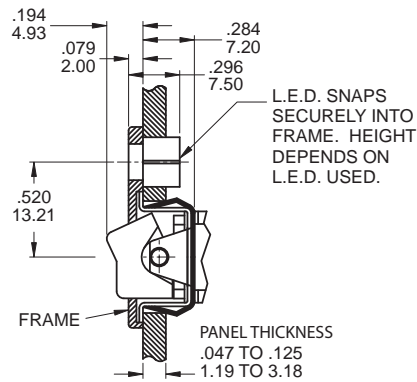
R9



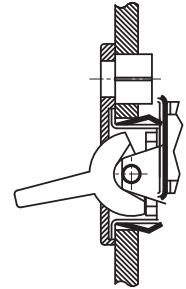
R18



▲R17



▲R18



CAP and FRAME colors

OPTION CODE	COLOR
1	WHITE
2	BLACK (std)
3	RED

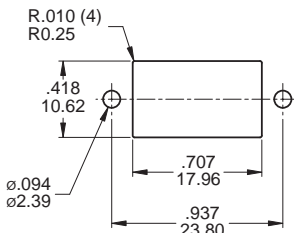
LED colors

OPTION CODE	COLOR
R	RED (std)
O	ORANGE
G	GREEN

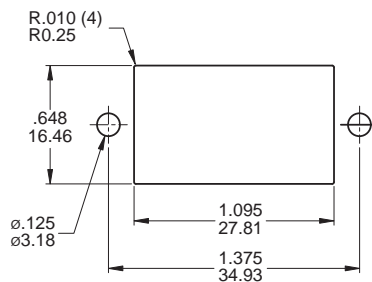
* Besides standard color, other colors need to check stocks available.

PANEL MOUNTING

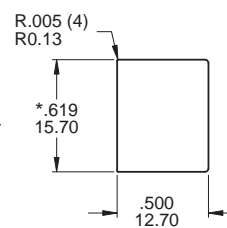
For R1-R2



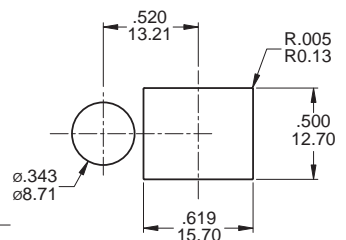
For R3-R4



For R6-R9



For R17-R18

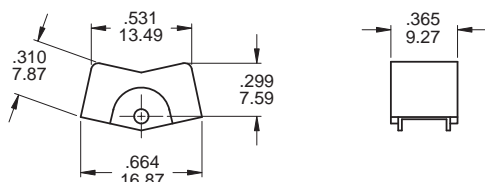


* For R6 and R7: Increase this dim. to .620/.625 (15,75/15,88) for .060/.125 (1,52/3,18) thk. panels.

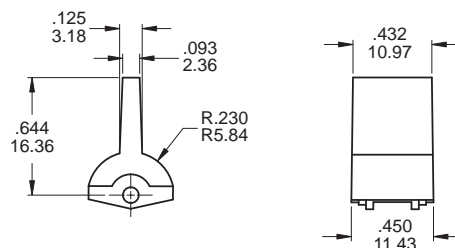
* For R8 and R9: Increase this dim. to .620/.625 (15,75/15,88) for .091/.125 (2,31/3,18) thk. panels.

ACTUATOR OPTIONS FOR P.C. MOUNT ONLY

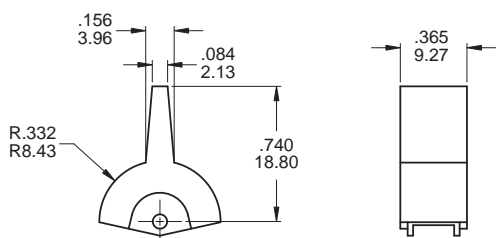
J1



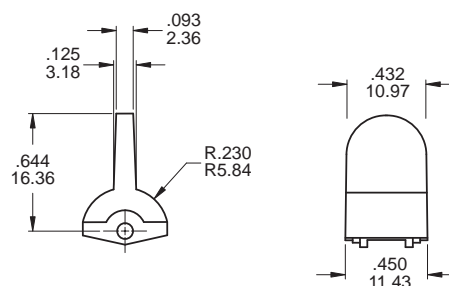
J6



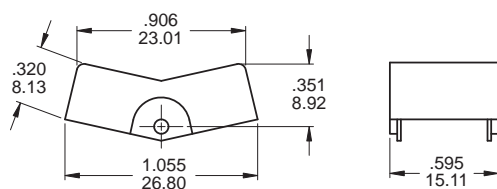
J2



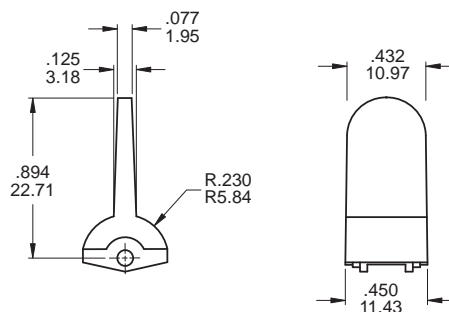
J7



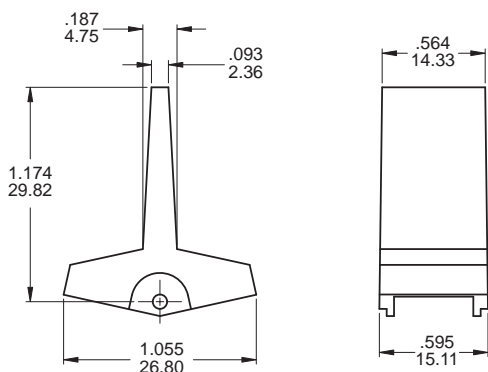
J3



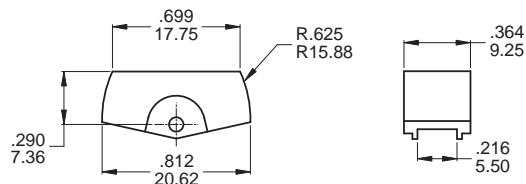
J8



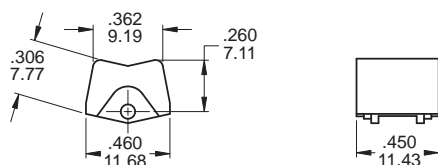
J4



JB



J5



Actuator colors:

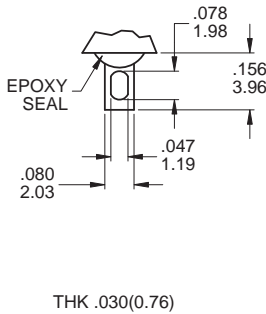
ITEM NO	COLOR
1	White
2	Black (Std)
3	Red
4	Orange
5	Yellow
6	Green
7	Blue
8	Brown
9	Gray

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

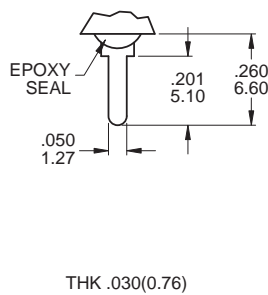


TERMINATION OPTIONS

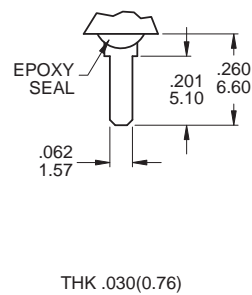
M1 Solder lug



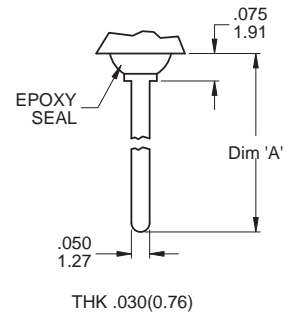
M2 PC Thru-hole



M3 Quick connect



M5 Wire Wrap



OTHER TERMINATION 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

M6N Right angle P.C. Mount

Snap-in bracket

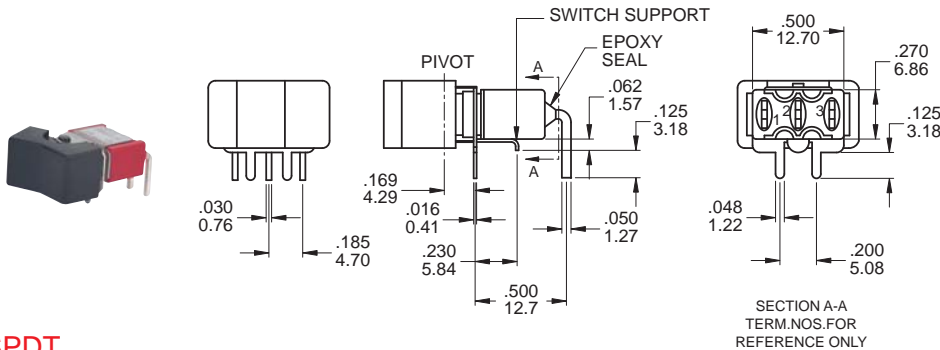
V2N Vertical bracket P.C. Mount

Snap-in bracket

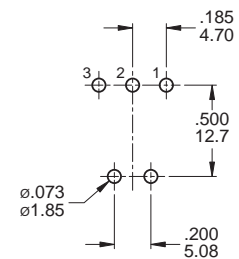
OPTION CODE	DIM. 'A'
M51	.736 (18.70)
M52	.953 (24.20)
M53	.415 (10.55)
M54	1.062 (26.97)

* Shown with J1 Actuator

M6



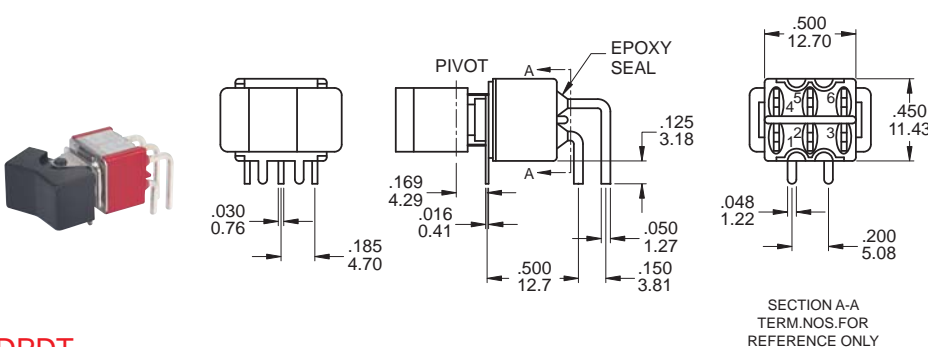
P.C. MOUNTING



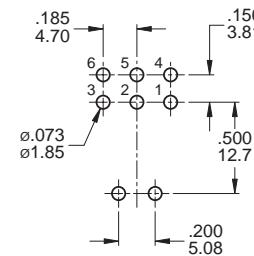
SPDT

Part No. Shown : 3MS1J102M6QE

M7



P.C. MOUNTING



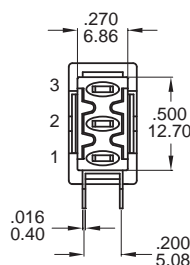
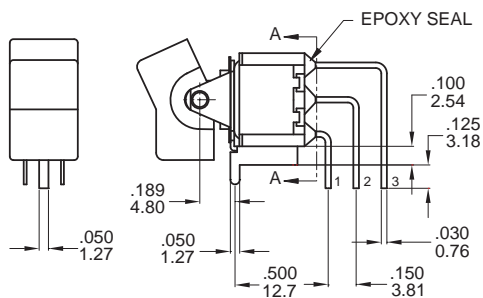
DPDT

Part No. Shown : 3MD1J102M6QE

3M Series

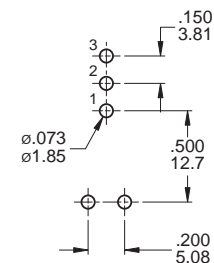
Miniature Rocker & Paddle Switches

M7



SECTION A-A
TERM.NOS.FOR
REFERENCE ONLY

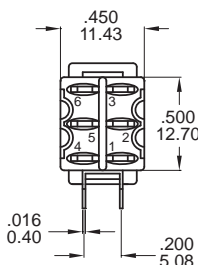
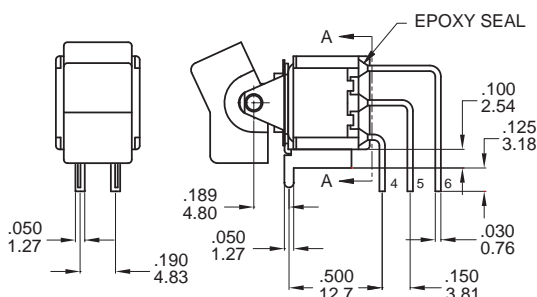
P.C. MOUNTING



SPDT

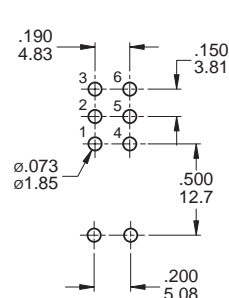
Part No. Shown : 3MS1J102M7QE

M7



SECTION A-A
TERM.NOS.FOR
REFERENCE ONLY

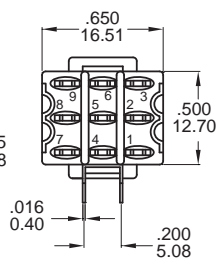
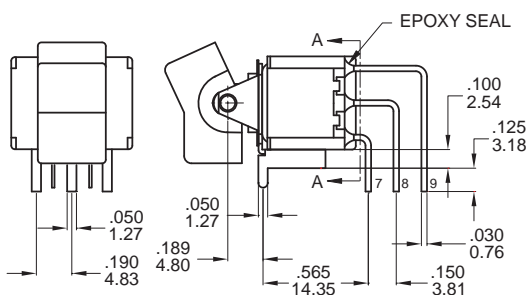
P.C. MOUNTING



DPDT

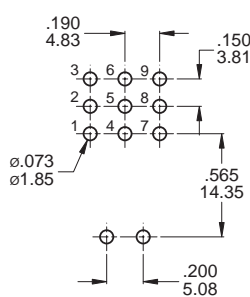
Part No. Shown : 3MD1J102M7QE

M7



SECTION A-A
TERM.NOS.FOR
REFERENCE ONLY

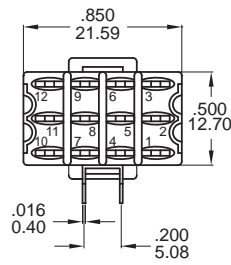
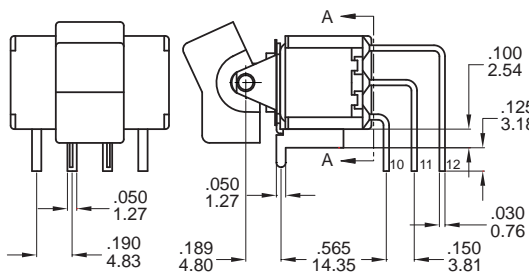
P.C. MOUNTING



3PDT

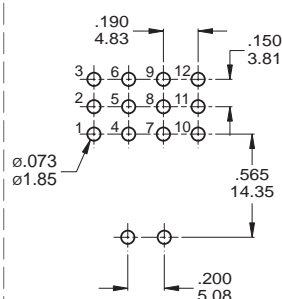
Part No. Shown : 3M31J102M7QE

M7



SECTION A-A
TERM.NOS.FOR
REFERENCE ONLY

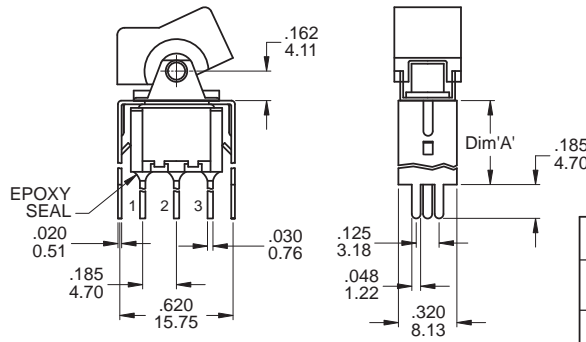
P.C. MOUNTING



4PDT

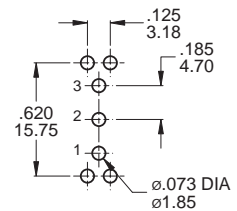
Part No. Shown : 3M41J102M7RE

VS2 - VS3



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

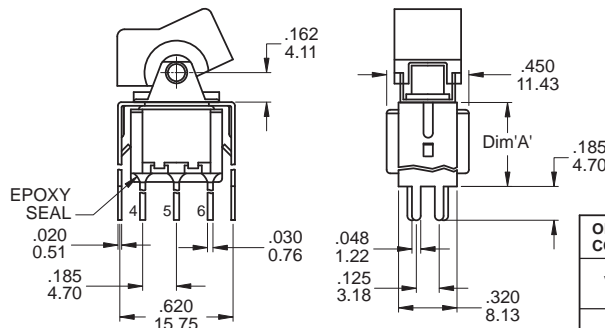
P.C. MOUNTING



SPDT

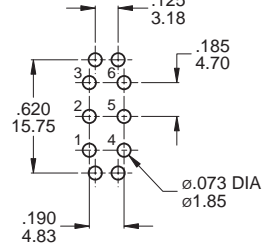
Part No. Shown : 3MS1J102VS2QE

VS2 - VS3



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

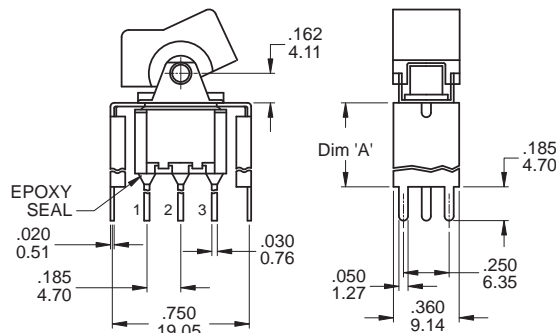
P.C. MOUNTING



DPDT

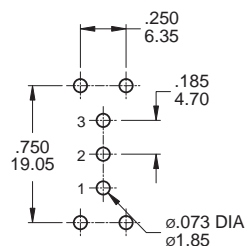
Part No. Shown : 3MD1J102VS2QE

VS4 - VS5



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

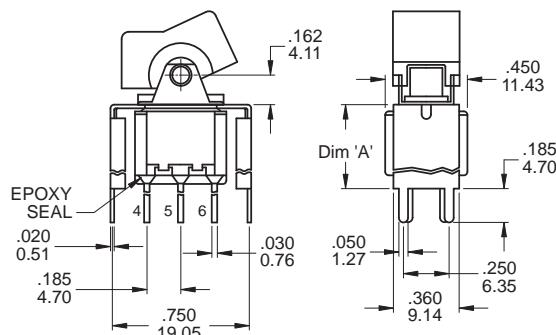
P.C. MOUNTING



SPDT

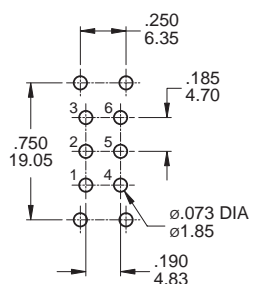
Part No. Shown : 3MS1J102VS4QE

VS4 - VS5



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

P.C. MOUNTING



DPDT

Part No. Shown : 3MD1J102VS5QE



3M
Rocker Switches

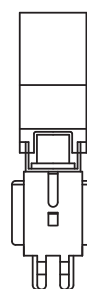
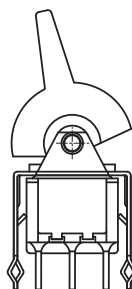
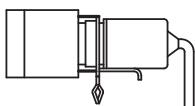
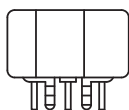
3M Series

Miniature Rocker & Paddle Switches

SNAP-IN TERMINATION OPTIONS

M6N

V2N



CONTACT MATERIAL OPTIONS

	CONTACT PLATING	TERMINAL PLATING	RATINGS
Q	Silver	Q = Silver	5 Amps with resistant load @ 120VAC or 28VDC 2 Amps with resistant load @ 250VAC
S		S = Silver,pure - tin	
C	Gold over Silver	C = Gold over silver	
K		K = Gold over silver,pure - tin	
R	Gold	R = Gold	0.4 Volt - Amps (VA) max. @ 20V max. (AC or DC)
G		G = Gold,pure - tin	

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: 260 ± 5°C
Duration of Solder Immersion: Max 5 sec. (PCB is 1.6mm in thickness)



3M
Rocker Switches