



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 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: 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

See below

Model NO.	Actuator	Frame/Actuator Color	Cap marking	Terminations	Terminal plating	Seal	RoHS soldering																																																																																						
3MS1 SP On-None-On	R1 13.49 long rocker - support	<table border="1"> <thead> <tr> <th>ITEM NO</th> <th>COLOR</th> </tr> </thead> <tbody> <tr><td>1</td><td>White</td></tr> <tr><td>2</td><td>Black (Std)</td></tr> <tr><td>3</td><td>Red</td></tr> <tr><td>4</td><td>Orange</td></tr> <tr><td>5</td><td>Yellow</td></tr> <tr><td>6</td><td>Green</td></tr> <tr><td>7</td><td>Blue</td></tr> <tr><td>8</td><td>Brown</td></tr> <tr><td>9</td><td>Gray</td></tr> </tbody> </table>	ITEM NO	COLOR	1	White	2	Black (Std)	3	Red	4	Orange	5	Yellow	6	Green	7	Blue	8	Brown	9	Gray	<table border="1"> <tbody> <tr><td>1</td><td>○ —</td></tr> <tr><td>2</td><td>○ </td></tr> <tr><td>5</td><td>← →</td></tr> <tr><td>6</td><td> ○ </td></tr> <tr><td>7</td><td>□ •</td></tr> <tr><td>8</td><td>⊕ </td></tr> <tr><td>L</td><td>⊕ ⊖</td></tr> <tr><td>J</td><td>⊕ —</td></tr> </tbody> </table>	1	○ —	2	○	5	← →	6	○	7	□ •	8	⊕	L	⊕ ⊖	J	⊕ —	<table border="1"> <tbody> <tr><td>M1</td><td>Solder Lug</td></tr> <tr><td>M2</td><td>PC thru-hole</td></tr> <tr><td>M3</td><td>Quick Connect</td></tr> <tr><td>M51</td><td>18.70 high, wire wrap</td></tr> <tr><td>M52</td><td>24.20 high, wire wrap</td></tr> <tr><td>M53</td><td>10.55 high, wire wrap</td></tr> <tr><td>M54</td><td>26.97 high, wire wrap</td></tr> <tr><td>M6</td><td>Right angle, PC thru-hole</td></tr> <tr><td>M6N</td><td>Right angle, snap-in, PC thru-hole</td></tr> <tr><td>M7</td><td>Vertical right angle, PC thru-hole</td></tr> <tr><td>VS2</td><td>11.68 high, V-bracket</td></tr> <tr><td>V2N</td><td>11.68 high, snap-in V-bracket</td></tr> <tr><td>VS3</td><td>16.00 high, V-bracket</td></tr> <tr><td>VS4</td><td>11.68 high, V-bracket</td></tr> <tr><td>VS5</td><td>16.00 high, V-bracket</td></tr> </tbody> </table>	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	<table border="1"> <tbody> <tr><td>Q</td><td>Silver</td></tr> <tr><td>R</td><td>Gold</td></tr> <tr><td>G</td><td>Gold, tin-lead</td></tr> <tr><td>S</td><td>Silver, tin-lead</td></tr> <tr><td>C</td><td>Gold over silver</td></tr> <tr><td>K</td><td>Gold over silver, tin-lead</td></tr> </tbody> </table>	Q	Silver	R	Gold	G	Gold, tin-lead	S	Silver, tin-lead	C	Gold over silver	K	Gold over silver, tin-lead	<table border="1"> <tbody> <tr><td>E</td><td>EPOXY (std)</td></tr> <tr><td>N</td><td>NO EPOXY</td></tr> </tbody> </table>	E	EPOXY (std)	N	NO EPOXY	<table border="1"> <tbody> <tr><td>□</td><td>RoHS Compliant</td></tr> <tr><td>S</td><td>RoHS & Lead Free</td></tr> </tbody> </table>	□	RoHS Compliant	S	RoHS & Lead Free
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3MS3 SP On-Off-On	R3 23.01 long rocker - support																																																																																												
3MS4 SP Mom.-Off-Mom.	R4 Lever - support																																																																																												
3MS5 SP On-Off-Mom.	R5 33.48 long rocker - support																																																																																												
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3MD6 DP On-On-On	R9 Lever with frame																																																																																												
3MD7 DP Mom.-On-Mom.	R11 9.19 long rocker - support																																																																																												
3MD8 DP On-On-Mom.	R12 Lever - support																																																																																												
3M31 3P On-None-On	R13 Lever - support																																																																																												
3M32 3P On-None-Mom.	R16 Lever - support																																																																																												
3M33 3P On-Off-On	R17 Rocker with frame for LED, snap-in																																																																																												
3M34 3P Mom.-Off-Mom.	R18 Lever with frame for LED, snap-in																																																																																												
3M35 3P On-Off-Mom.	RB 17.75 long rocker - support																																																																																												
3M41 4P On-None-On																																																																																													
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* Besides standard color, other colors need to check stocks available.

3M Series

Miniature Rocker & Paddle 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	Q1311	3MS1	ON	NONE	ON		N/A	2-1
	Q1312	3MS2	ON	NONE	MOM			
	Q1313	3MS3	ON	OFF	ON			
	Q1314	3MS4	MOM	OFF	MOM			
	Q1315	3MS5	ON	OFF	MOM			
DP ▲ ▲	Q1321	3MD1	ON	NONE	ON		N/A	2-1,5-4
	Q1322	3MD2	ON	NONE	MOM			
	Q1323	3MD3	ON	OFF	ON			
	Q1324	3MD4	MOM	OFF	MOM			
	Q1325	3MD5	ON	OFF	MOM			
	Q1326	3MD6	ON	ON	ON			
	Q1327	3MD7	MOM	ON	MOM			
	Q1328	3MD8	ON	ON	MOM			
3P	Q1331	3M31	ON	NONE	ON		N/A	2-1,5-4,8-7
	Q1332	3M32	ON	NONE	MOM			
	Q1333	3M33	ON	OFF	ON			
	Q1334	3M34	MOM	OFF	MOM			
	Q1335	3M35	ON	OFF	MOM			
4P ▲ ▲	Q1341	3M41	ON	NONE	ON		N/A	2-1,5-4,8-7,11-10
	Q1342	3M42	ON	NONE	MOM			
	Q1343	3M43	ON	OFF	ON			
	Q1344	3M44	MOM	OFF	MOM			
	Q1345	3M45	ON	OFF	MOM			
	Q1346	3M46	ON	ON	ON			
	Q1347	3M47	MOM	ON	MOM			
	Q1348	3M48	ON	ON	MOM			

MOM=MOMENTARY

▲ Please check the availability in advance before order

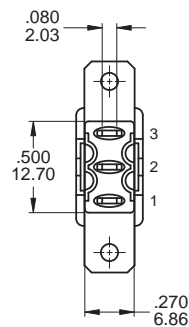
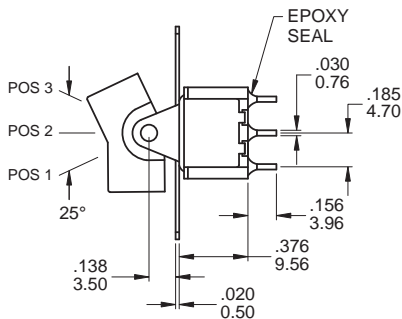
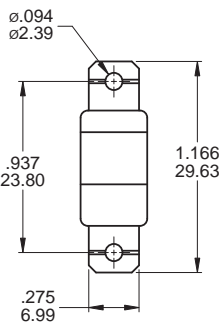


3M
Rocker Switches

POLE OPTIONS

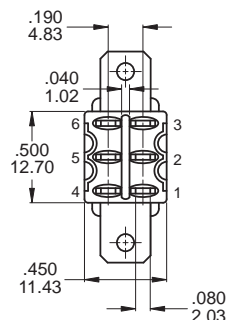
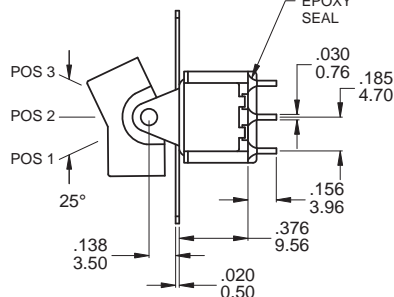
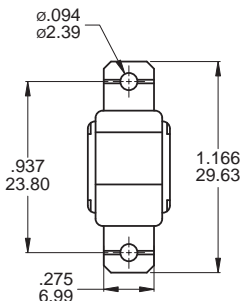


3M
Rocker Switches



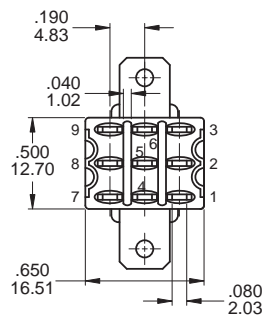
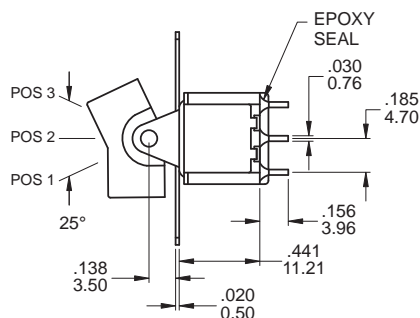
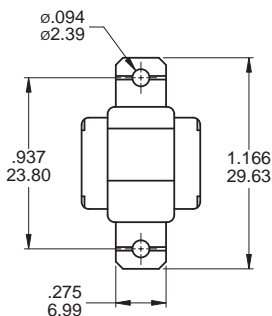
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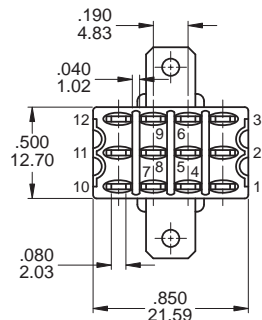
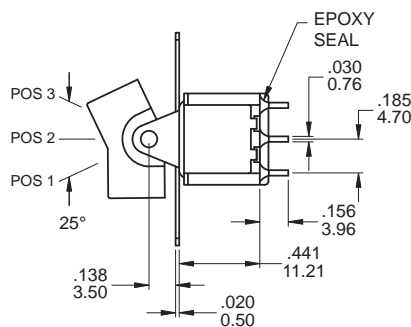
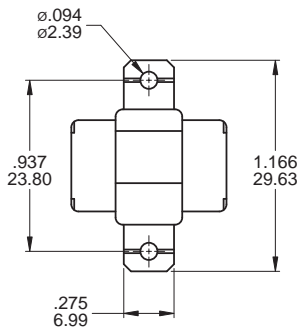
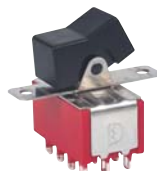
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Part No. Shown : 3MD1R102M1QE



3PDT

Part No. Shown : 3M31R102M1QE



4PDT

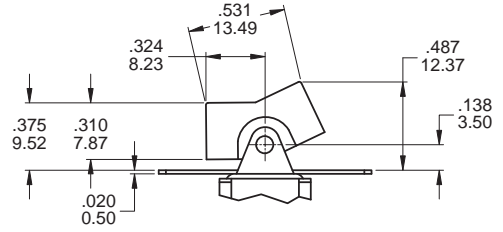
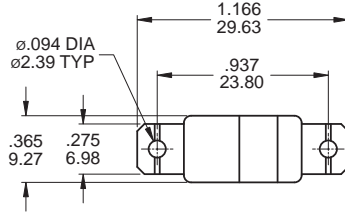
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3M Series

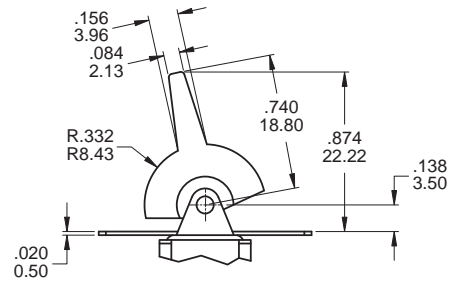
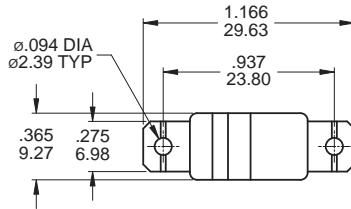
Miniature Rocker & Paddle Switches

ACTUATOR OPTIONS FOR PANEL MOUNT ONLY

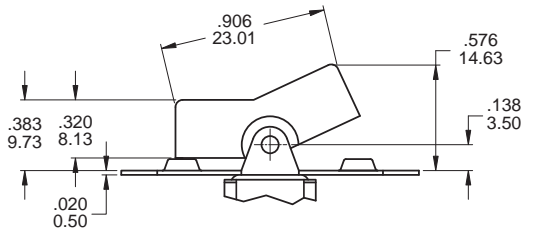
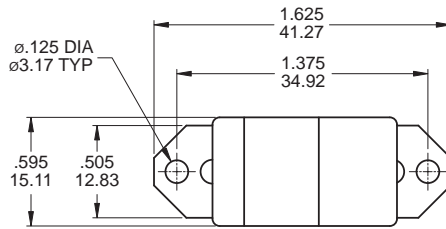
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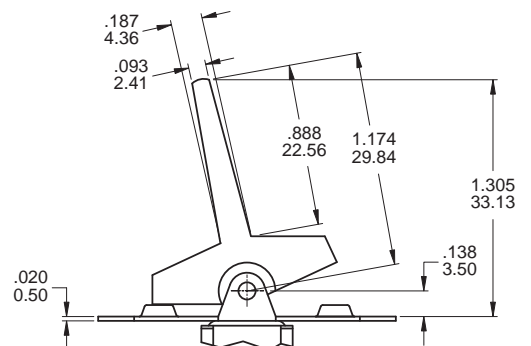
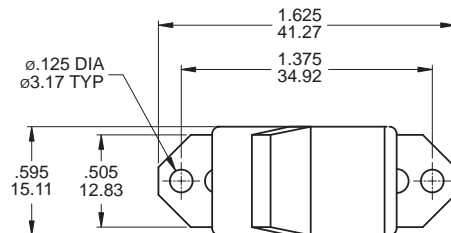
R2



R3



R4

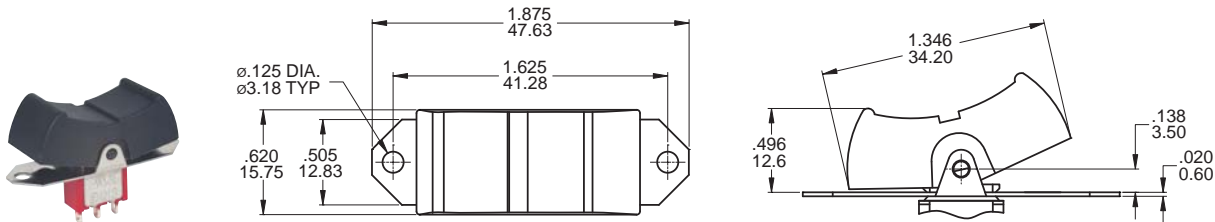


3M
Rocker Switches

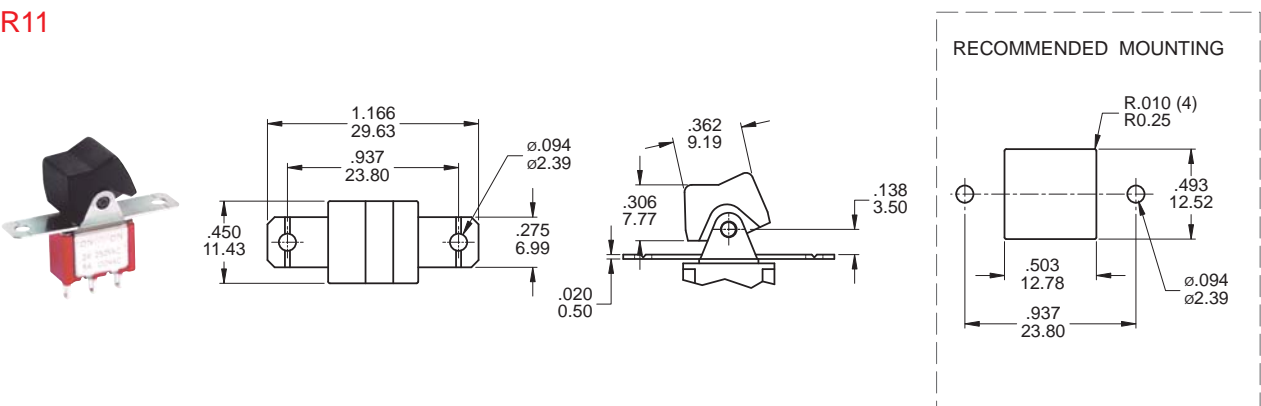
ACTUATOR OPTIONS SNAP-IN FRONT MOUNT



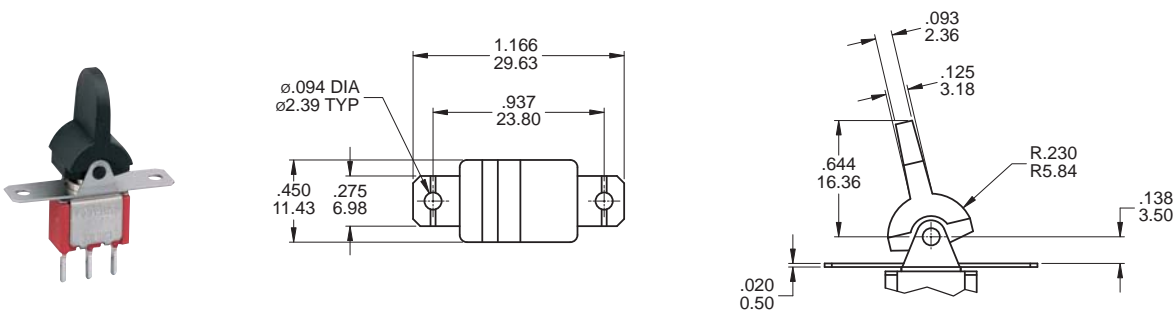
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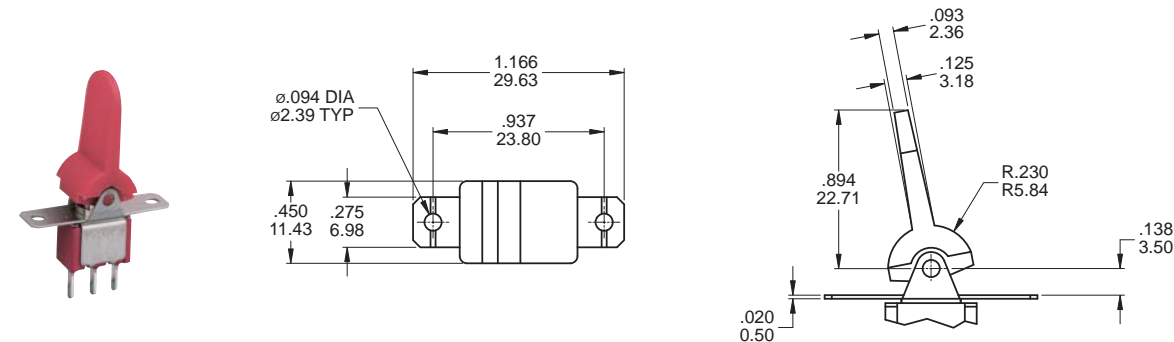
R11



R12



R13



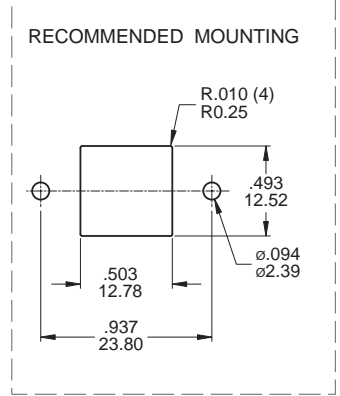
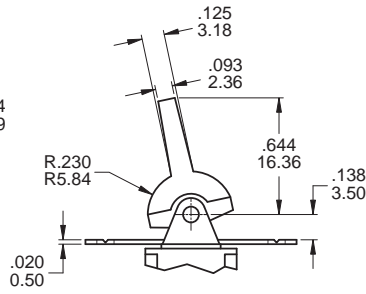
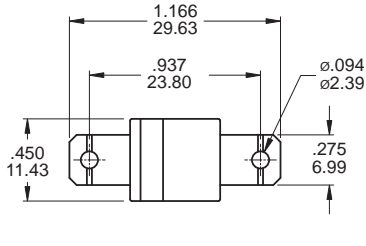
3M Series

Miniature Rocker & Paddle Switches

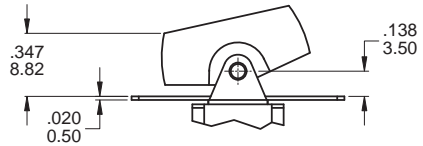
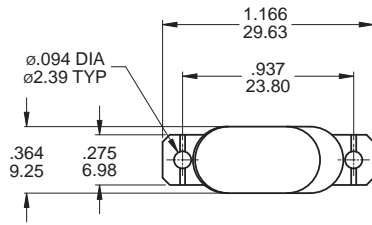


3M
Rocker Switches

R16

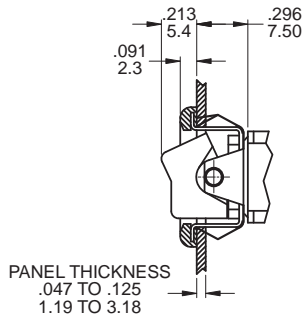
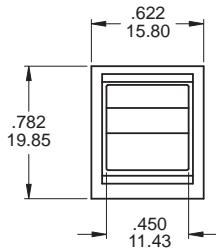


RB

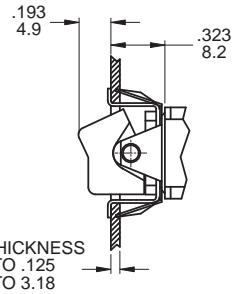


ACTUATOR OPTIONS SNAP-IN FRONT MOUNT

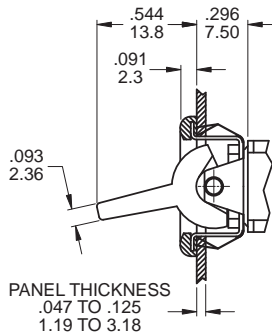
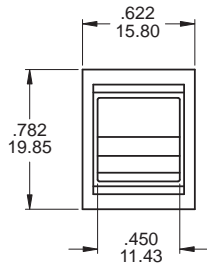
R6



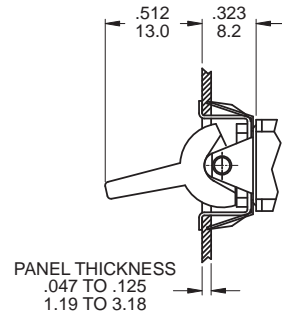
R6K Snap-in



R7

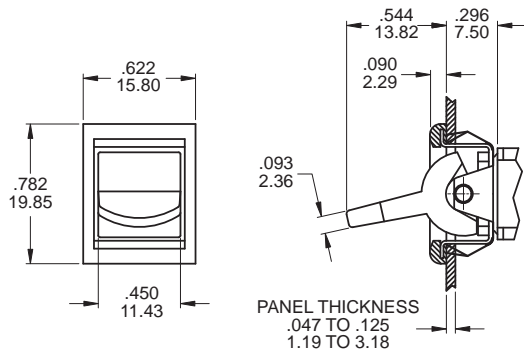


R7K Snap-in

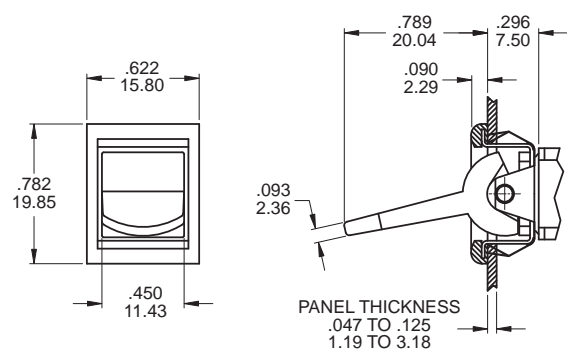




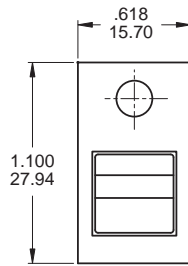
R8



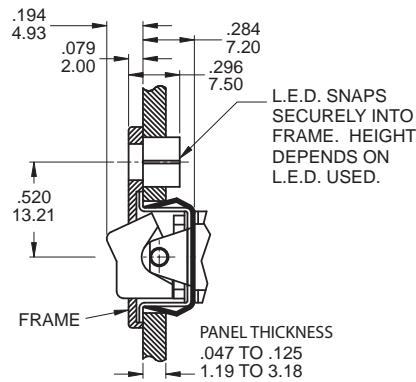
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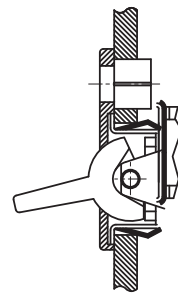
R18



▲R17



▲R18



CAP and FRAME colors

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

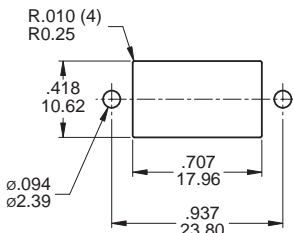
LED colors

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

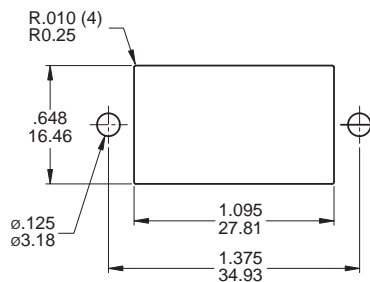
* Besides standard color, other colors need to check stocks available.

PANEL MOUNTING

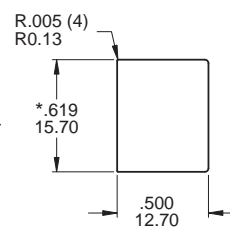
For R1-R2



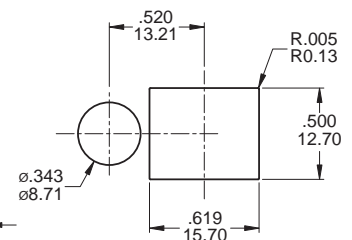
For R3-R4



For R6-R9



For R17-R18



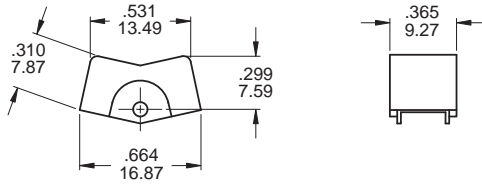
* For R6 and R7: Increase this dim. to .620/.625(15,75/15,88) for .060/.125 (1,52/3,18) thk. panels.
 * For R8 and R9: Increase this dim. to .620/.625(15,75/15,88) for .091/.125 (2,31/3,18) thk. panels.

3M Series

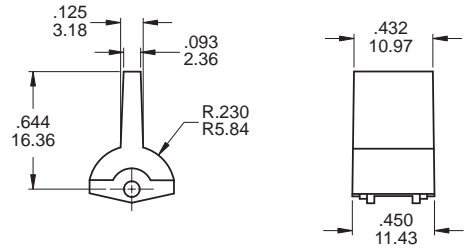
Miniature Rocker & Paddle Switches

ACTUATOR OPTIONS FOR P.C. MOUNT ONLY

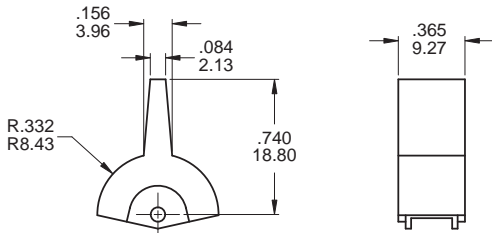
J1



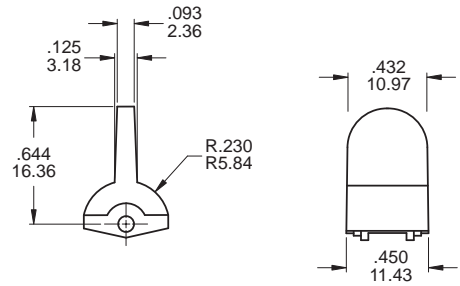
J6



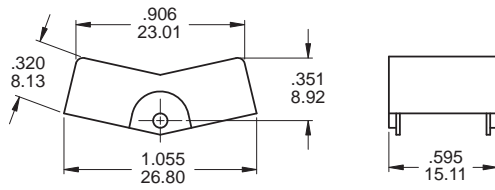
J2



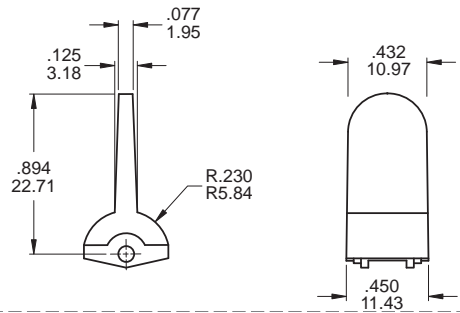
J7



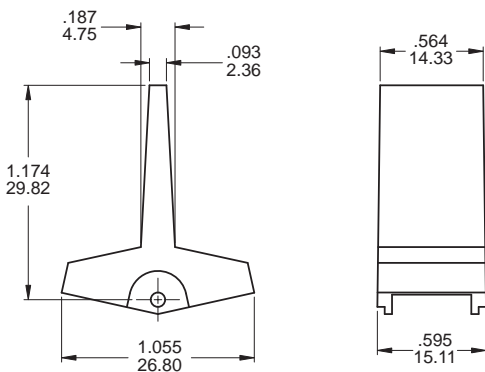
J3



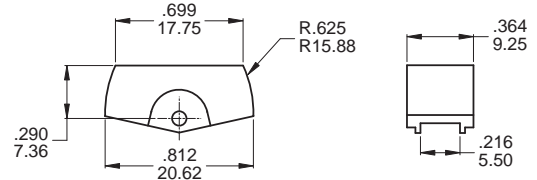
J8



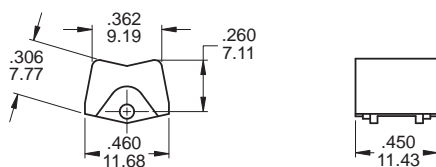
J4



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.

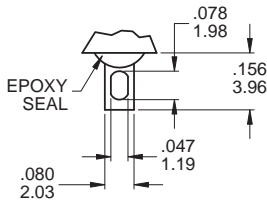


3M
Rocker Switches



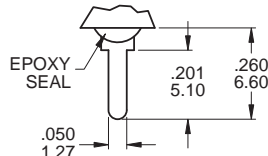
TERMINATION OPTIONS

M1 Solder lug



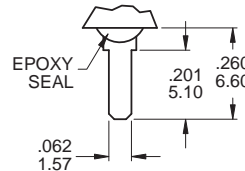
THK .030(0.76)

M2 PC Thru-hole



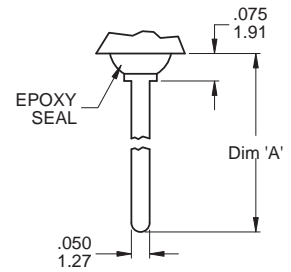
THK .030(0.76)

M3 Quick connect



THK .030(0.76)

M5 Wire Wrap



THK .030(0.76)

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

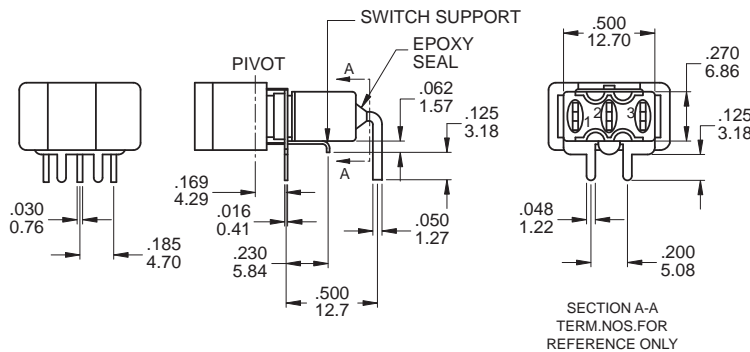
V2N Vertical bracket P.C. Mount

Snap-in bracket

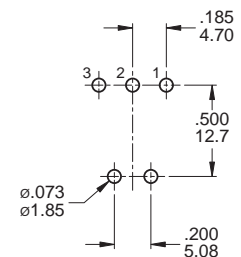
OPTION CODE	DIM. 'A'
M51	.736 (18.70)
M52	.953 (24.20)
M53	.415 (10.55)
M54	1.062 (26.97)

* Shown with J1 Actuator

M6



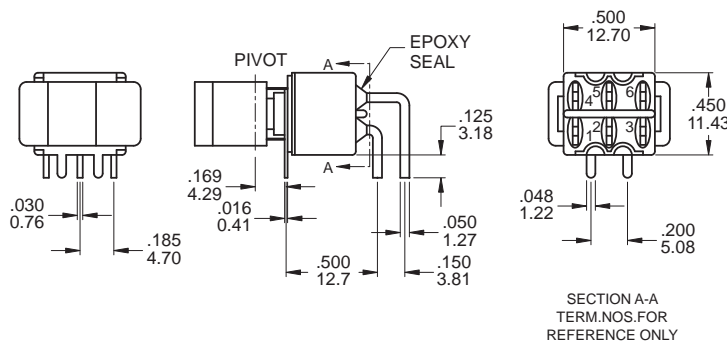
P.C. MOUNTING



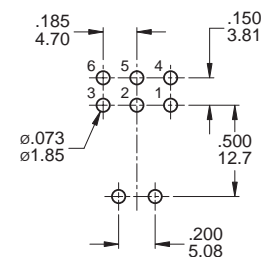
SPDT

Part No. Shown : 3MS1J102M6QE

M7



P.C. MOUNTING



DPDT

Part No. Shown : 3MD1J102M6QE

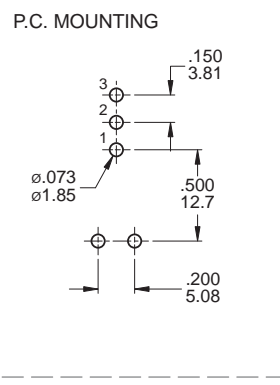
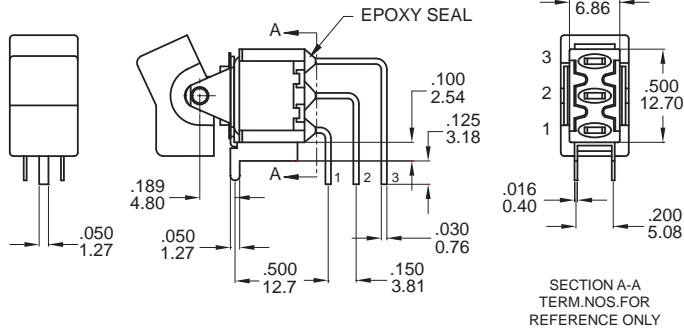
3M Series

Miniature Rocker & Paddle Switches



3M
Rocker Switches

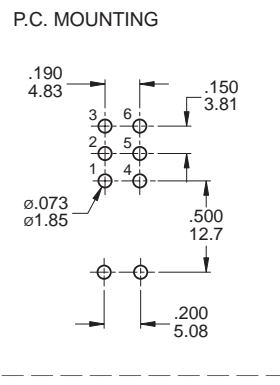
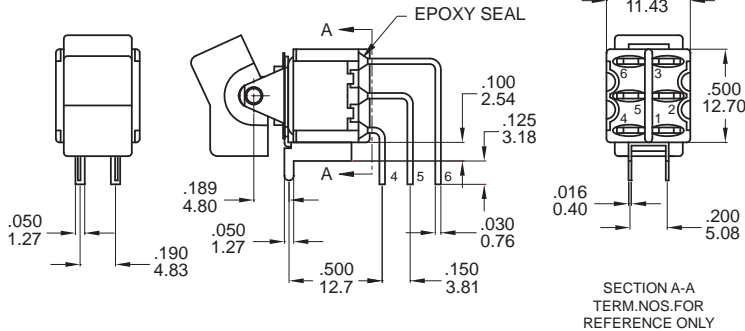
M7



SPDT

Part No. Shown : 3MS1J102M7QE

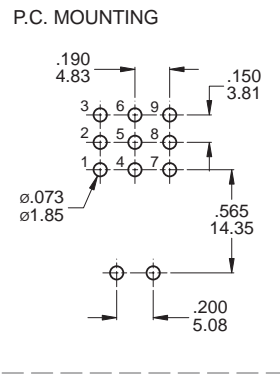
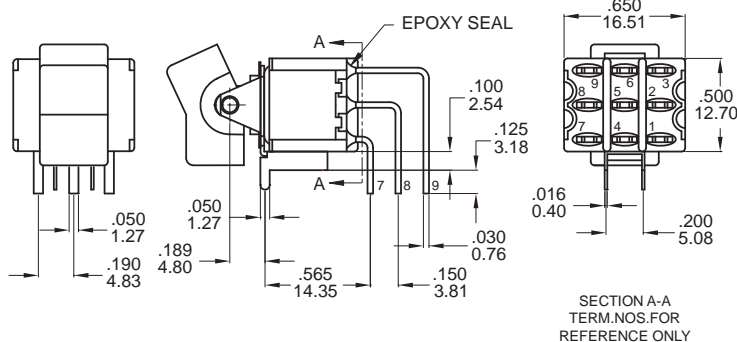
M7



DPDT

Part No. Shown : 3MD1J102M7QE

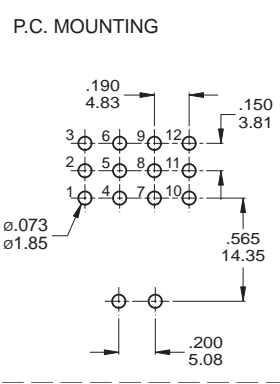
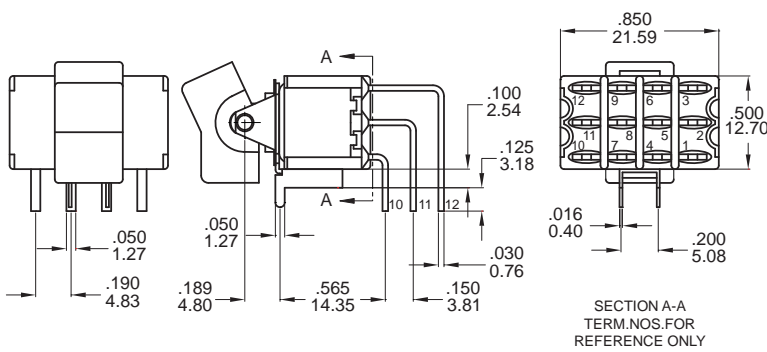
M7



3PDT

Part No. Shown : 3M31J102M7QE

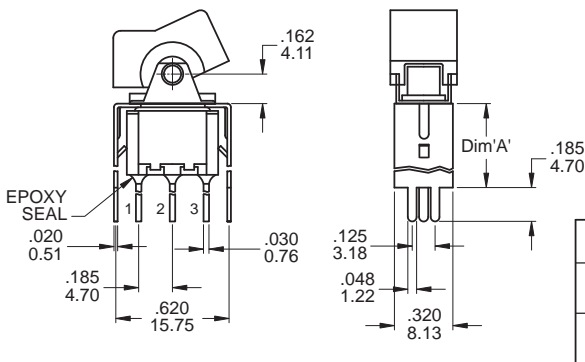
M7



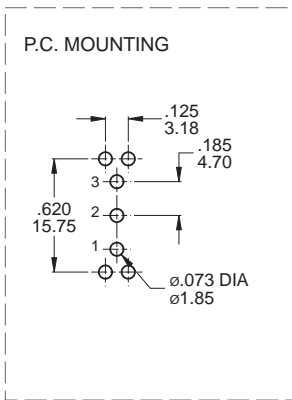
4PDT

Part No. Shown : 3M41J102M7RE

VS2 - VS3



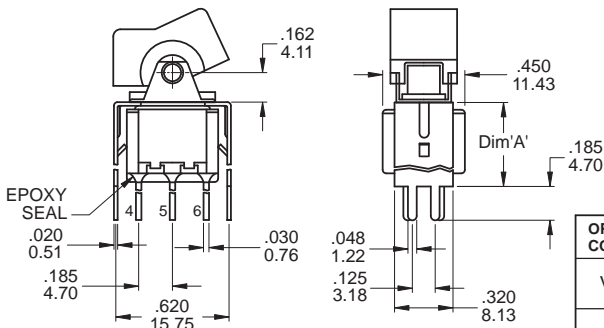
OPTION CODE	DIM. 'A'
VS2	.460 / 11.68
VS3	.630 / 16.00



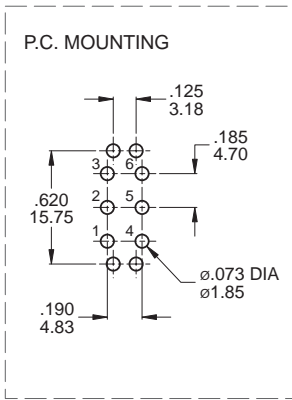
SPDT

Part No. Shown : 3MS1J102VS2QE

VS2 - VS3



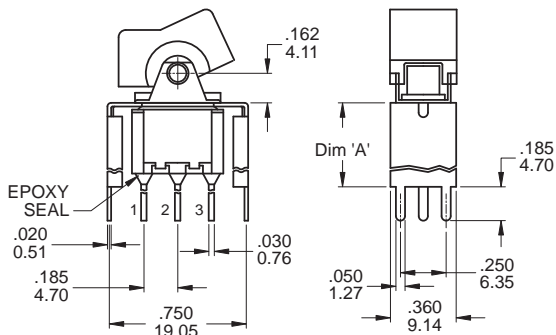
OPTION CODE	DIM. 'A'
VS2	.460 / 11.68
VS3	.630 / 16.00



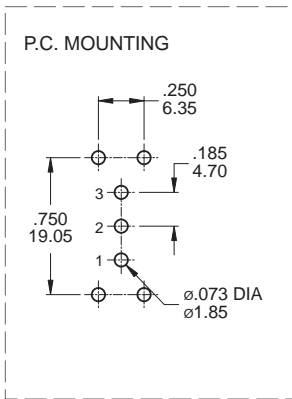
DPDT

Part No. Shown : 3MD1J102VS2QE

VS4 - VS5



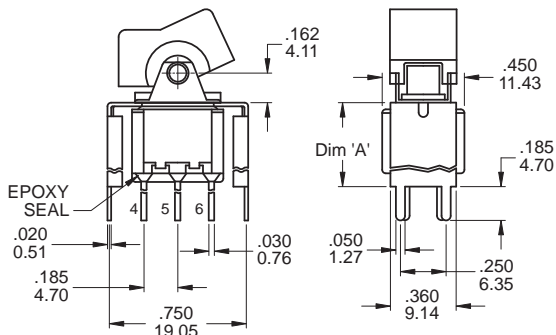
OPTION CODE	DIM. 'A'
VS4	.460 / 11.68
VS5	.630 / 16.00



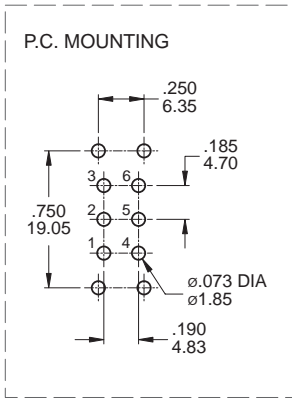
SPDT

Part No. Shown : 3MS1J102VS4QE

VS4 - VS5



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



DPDT

Part No. Shown : 3MD1J102VS5QE

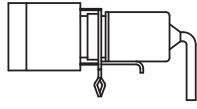
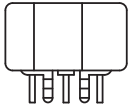


3M Series

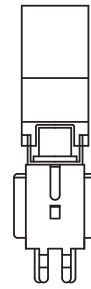
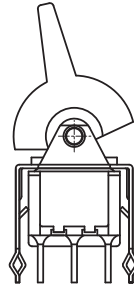
Miniature Rocker & Paddle Switches

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	0.4 Volt - Amps (VA) max. @ 20V max. (AC or DC)
K		K = Gold over silver,pure - tin	
R	Gold	R = Gold	
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