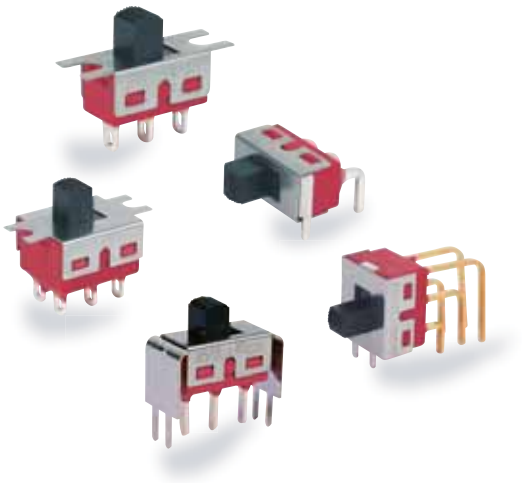


SPECIFICATIONS

CONTACT RATING: Dependent upon contact material.
MECHANICAL LIFE: 30,000 make-and-break cycles.
CONTACT RESISTANCE: 10mΩmax. initial @ 2-4VDC
100mA for both silver and gold plated contacts.
INSULATION RESISTANCE: 1,000MΩmin.
DIELECTRIC STRENGTH: 1,000 V RMS@sea level.
OPERATING TEMPERATURE: -30°C to 85°C.

MATERIALS

CASE: Diallyl phthalate (DAP) (UL94v-0).
HOUSING: Stainless Steel.
ACTUATOR: Nylon,black std.
CONTACT: Silver or gold plated.
TERMINAL SEAL: Epoxy. (See Page 92)

HOW TO ORDER

MODEL NO. | ACTUATOR | ACTUATOR COLOR **See below** | MOUNTING EARS | TERMINATIONS | CONTACT MATERIAL | SEAL | ROHS SOLDERING

MODEL NO.
5MS1 SP On-None-On
5MS2 SP On-None-Mom
5MS3 SP On-Off-On
5MD1 DP On-None-On
5MD3 DP On-Off -On

ACTUATOR
S0 1.30 high
S1 5.08 high
S2 7.24 high
S3 9.40 high
S4 3.56 high
S5 5.08 high
S7 12.32 high

ACTUATOR COLOR
See below

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

MOUNTING EARS
A NO Mounting Ears
B Mounting Ears

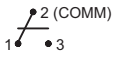
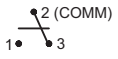
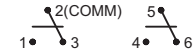
TERMINATIONS
M1 Solder Lug
M2 PC thru-hole
M3 Quick Connect
M5-1 18.70 high, wire wrap
M5-2 24.20 high, wire wrap
M5-3 10.55 high, wire wrap
M5-4 26.97 high, wire wrap
M6 Right angle, PC thru-hole
M7 Vertical right angle, PC thru-hole
VS2 V-bracket

CONTACT MATERIAL
Q Silver
R Gold
G Gold,pure-tin
S Silver,pure-tin
C Gold over silver
K Gold over silver,pure-tin

SEAL
E EPOXY (std)
N NO EPOXY

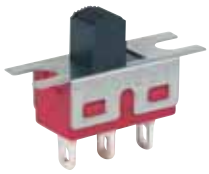
ROHS SOLDERING
☐ Rohs Compliant
S Rohs & Lead Free

SWITCH FUNCTION

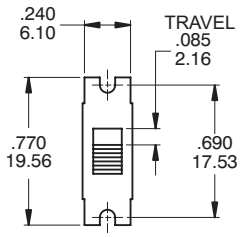
NO. POLES	UL/CSA MODEL NO.	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS / SCHEMATIC		
			POS.1	POS.2	POS.3	POS.1	POS.2	POS.3
SP	Q1511	5MS1	ON	NONE	ON	2-1 	N/A	2-3 
	Q1512	5MS2	ON	NONE	MOM			
	Q1513	5MS3	ON	OFF	ON		OPEN	
DP	Q1521	5MD1	ON	NONE	ON	2-1,5-4 	N/A	2-3,5-6 
	Q1523	5MD3	ON	OFF	ON		OPEN	

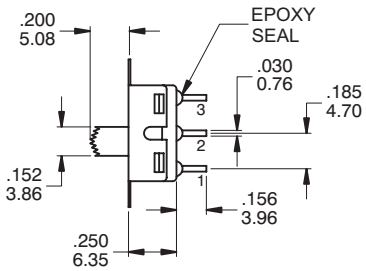
MOM=MOMENTARY

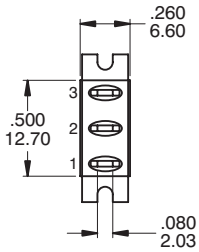
POLE OPTIONS



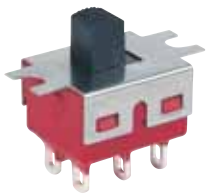
SPDT



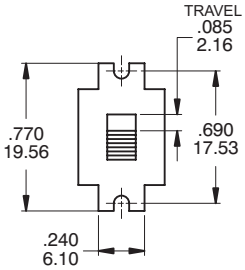


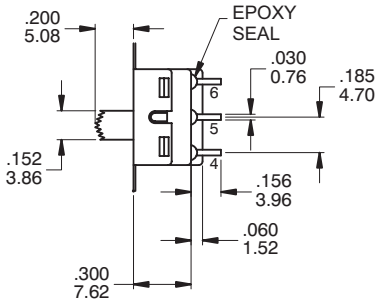


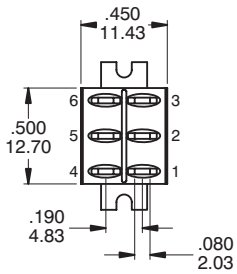
Part No. Shown : 5MS1S12BM1QE



DPDT



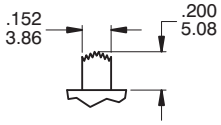




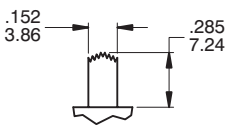
Part No. Shown : 5MD1S12BM1QE

ACTUATOR OPTIONS

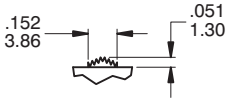
S1 STD



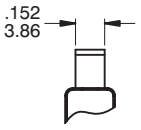
S2



S0

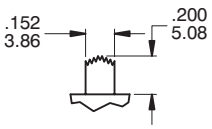


FRONT

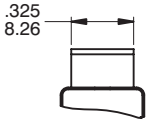


For S0,S1,S2,S3,S4

▲S5

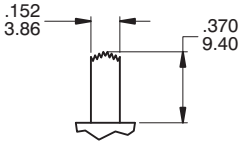


FRONT

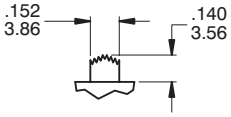


FOR DPDT ONLY

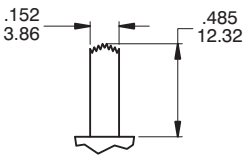
S3



S4



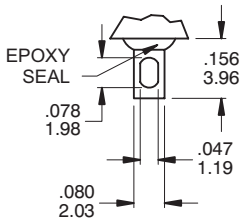
S7



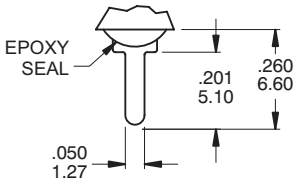
* Subtract .014(0.36) from Actuator height for M6, M7 P.C. MOUNTING OPTION.

TERMINATION OPTIONS

M1 SOLDER LUG

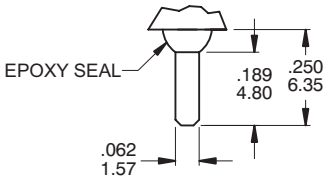


M2 PC THRU-HOLE



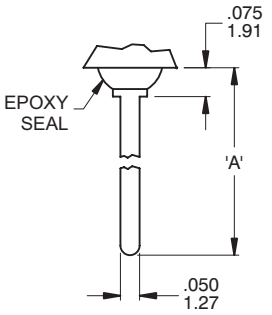
.030(0.76) THK.

M3 QUICK CONNECT



THK .030(0.76)

M5 WIRE WRAP



THK .030(0.76)

OTHER TERMINATION OPTIONS

M6 RIGHT ANGLE P.C. MOUNT

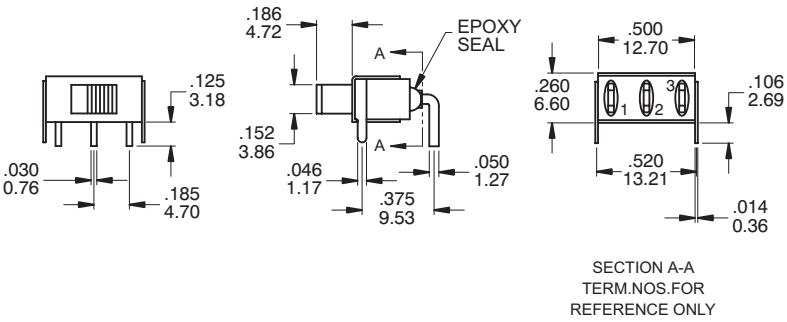
M7 RIGHT ANGLE P.C. MOUNT

VS2 VERTICAL BRACKET P.C. MOUNT

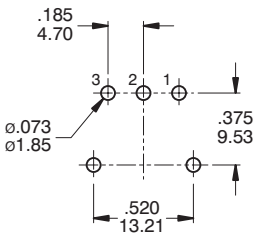
RE Mating Quick Connector
Amp P/N 60900-1

OPTION CODE	DIM. 'A'
M5-1	.736 (18.70)
M5-2	.953 (24.20)
M5-3	.415 (10.55)
M5-4	1.062 (26.97)

M6



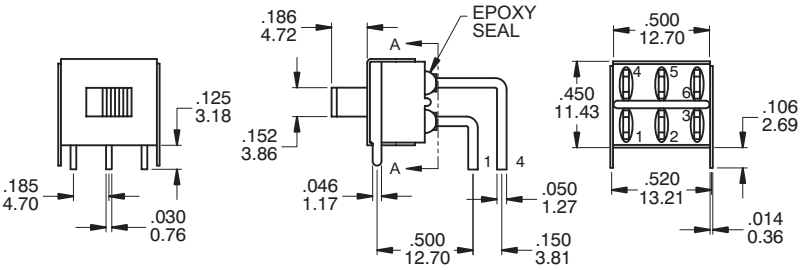
P.C. MOUNTING



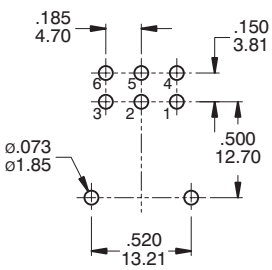
SPDT

Part No. Shown : 5MS1S12AM6QE

M6



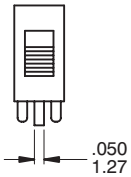
P.C. MOUNTING

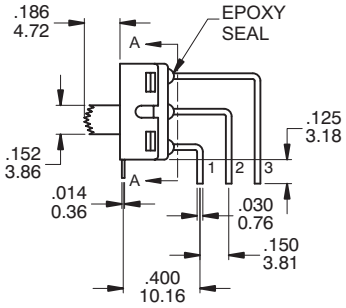


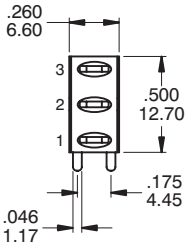
DPDT

Part No. Shown : 5MD1S12AM6QE

M7





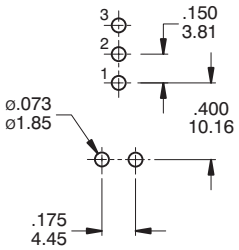


SECTION A-A
TERM.NOS.FOR
REFERENCE ONLY

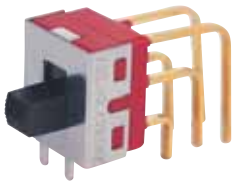
SPDT

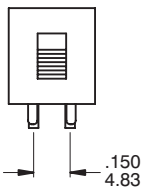
Part No. Shown : 5MS1S12AM7QE

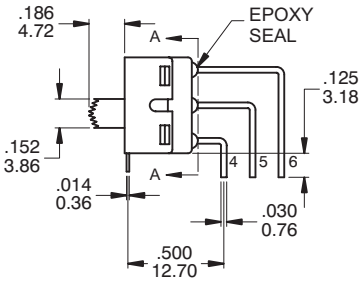
P.C. MOUNTING

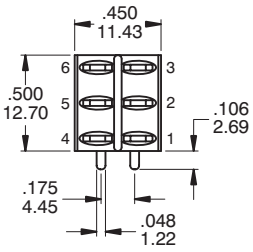


M7







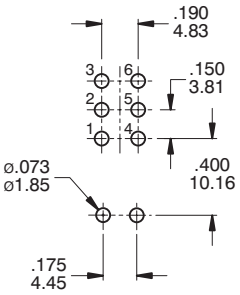


SECTION A-A
TERM.NOS.FOR
REFERENCE ONLY

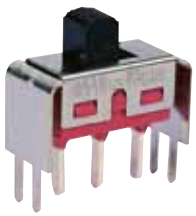
DPDT

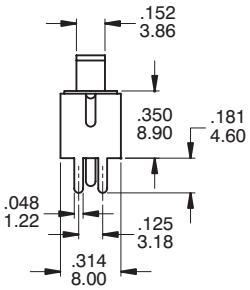
Part No. Shown : 5MD1S12AM7RE

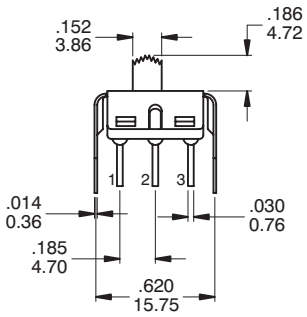
P.C. MOUNTING



VS2



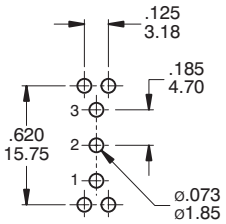




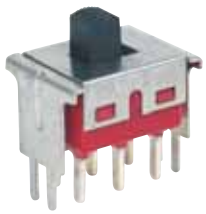
SPDT

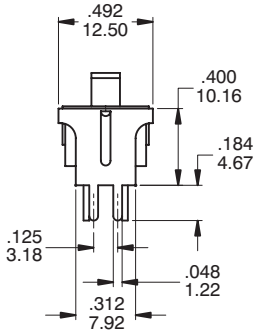
Part No. Shown : 5MS1S12AVS2QE

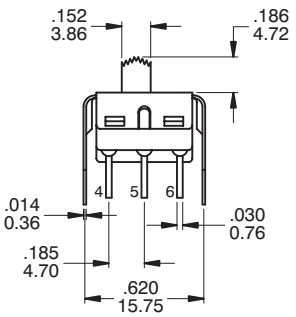
P.C. MOUNTING



VS2



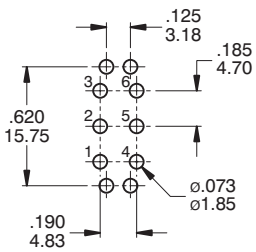




DPDT

Part No. Shown : 5MD1S12AVS2QE

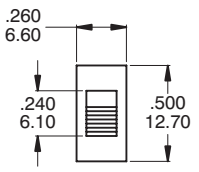
P.C. MOUNTING



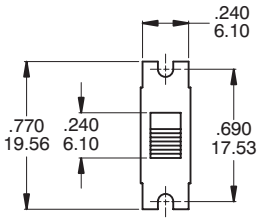
MOUNTING EARS / PANEL MOUNTIING

MOUNTING EARS

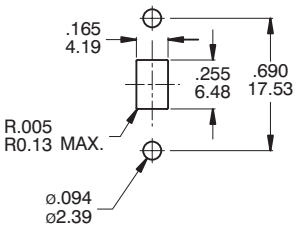
"A" WITHOUT MOUNTING EARS



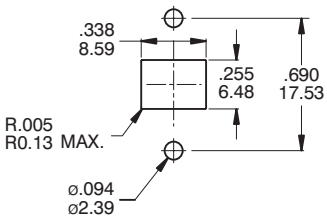
"B" WITH MOUNTING EARS



PANEL MOUNTING

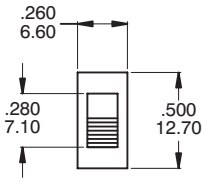


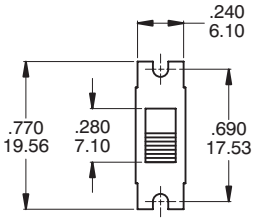
For S0,S1,S2,S3,S4



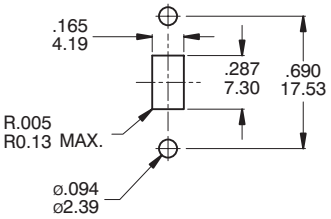
For S5 ONLY

THREE POSITIONS ONLY





THREE POSITIONS ONLY



For S0,S1,S2,S3,S4

CONTACT MATERIAL OPTIONS

	CONTACT MATERIAL	TERMINAL PLATING	RATINGS
Q	Silver	Q = Silver	5 Amps with resistant load @ 120VAC or 28VDC 2 Amps with resistant load @ 250VA
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 st 350°C approximately 5 seconds while applying solder.

WAVE SOLDERING : Recommended Soldering Temperature : 260 ± 5°C
Duration of Solder Immersion : 5 ± 1 seconds
(PCB is 1.6mm in thickness)

SOLDERING : Vapor phase

Temperature Profile

Zone	Room Temperature	Time (Sec)
Pre-heat (A)	150°C	Min 120s
Soak (B)	180°C ~ 200°C	Min 150s
Peak (C)	200°C ~ 235°C	Min 30s
Peak (D)	235°C ~ 260°C	Min 40s
Peak (E)	260°C	Max 10s