

1M1-Series
Miniature Rocker &
Paddle Switch



1MS-Series
Sealed Miniature
Rocker & Paddle
Switch

Specifications

Contact Rating	refer to ordering scheme.
Electrical Life	1M1-Series: 50,000 make & break cycles @ full load
	1MS-Series: 30,000 make & break cycles @ full load
Contact Resistance.	10 mΩ max. initial @ 2-4 VDC
	100mA for both silver & gold plated contacts.
Insulation Resistance	1000 MΩ min.
Dielectric Strength	1500 Volts RMS @ sea level
Operating Temperature . . .	-30°C to +85°C
Index of Protection	1MS-Series: IP67
Solder Heat Resistance. . .	MIL-STD-202, Method 210
Actuator Travel	25°

Materials

Case	1M1-Series: Dially phthalate (DAP) (UL 94V-0)
	1MS-Series: Glass filled nylon 6/6, flame retardant, heat stabilized (UL 94V-0)
Rocker/Paddle.	1M1-Series: Nylon (UL 94V-0)
	1MS-Series: Nylon, black standard, internal o-ring sealed
Bushing	1M1-Series: Brass, nickel plated
	1MS-Series: Glass filled nylon 6/6, flame retardant, heat stabilized (UL 94V-0)
Housing.	1M1-Series: Stainless Steel
	1MS-Series: Spring Steel
Actuator Pivot & Mounting	
Bracket	1M1-Series: Stainless Steel
	1MS-Series: Nylon (UL 94V-0)
Actuator Pivot Retainer . . .	1MS-Series: Stainless Steel
Switch Support	Brass, tin plated
Terminal Seal	Epoxy

1M1-Series Ordering Scheme



1 SERIES

1M1 Miniature Rocker Switch

2 POLES

SP single pole - uses terminals 1, 2 & 3.
DP double pole uses terminals 1, 2, 3, 4, 5 & 6.
3P double pole uses terminals 1, 2, 3, 4, 5, 6, 7, 8 & 9.
4P double pole uses terminals 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12.

3 CIRCUIT

() - momentary

Switching Position:

	2-3, 5-6, 8-9, 11-12	OPEN	2-1, 5-4, 8-7, 11-10
1	ON	NONE	ON
2	ON	NONE	(ON)
3	ON	OFF	ON
4	(ON)	OFF	(ON)
5	ON	OFF	(ON)

4 ACTUATOR STYLE

R1	Small rocker	R5	Large rocker
R2	Small paddle	R6	Rocker & frame
R3	Medium rocker	R7	Paddle & frame
R4	Large paddle	R8	Rocker w/out frame
		R9	Paddle w/out frame

5 ACTUATOR COLOR & 6 FRAME COLOR^{1,2}

1 white	4 orange	7 blue
2 black	5 yellow	8 brown
3 red	6 green	9 gray

- 1 Black is standard. Other colors available, consult factory for details.
 2 Selection 6 is blank if actuator style R8 or R9 (no frame)

7 TERMINATION

M1	Solder Lug	VS4	PC Mount, U bracket, .460 high
M2	PCB	VS5	PC Mount, U bracket, .630 high
M3	Quick Connect	M61	Snap-In, U bracket, 90° horizontal
M5-1	Wire Wrap .750 [19.05]	M71	Snap-In, U bracket, 90° vertical
M5-2	Wire Wrap .964 [24.48]	VS21	Snap-In, U bracket, .620 mounting x .460 high
M5-3	Wire Wrap .425 [10.80]	VS31	Snap-In, U bracket, .620 mounting x .630 high
M5-4	Wire Wrap 1.062 [26.97]	VS41	Snap-In, U bracket
M6	PC Mount, 90° horizontal	VS51	Snap-In, U bracket
M7	PC Mount, 90° vertical		
VS2	PC Mount, U bracket, .620 mounting x .460 high		
VS3	PC Mount, U bracket, .620 mounting x .630 high		

8 CONTACT

	Material	Terminal Plating	Rating	Approvals
G	silver ¹	gold over silver ²	5A @ 125VAC or 28VDC, 2A @ 250VAC	UL CSA
K	gold ²	tin-lead ⁴	0.4VA max. @ 20V max (AC/DC)	—
P	silver ¹	tin-lead ⁴	5A @ 125VAC or 28VDC, 2A @ 250VAC	UL CSA
Q	silver ¹	silver ¹	5A @ 125VAC or 28VDC, 2A @ 250VAC	UL CSA
R	gold ²	gold ²	0.4VA max. @ 20V max (AC/DC)	—

NOTE:

- Tin-lead option available with PC type terminations only.
 1 Moveable contact & terminals: copper alloy, silver plate
 2 Moveable contact & terminals: copper alloy with gold plate over nickel plate
 3 Terminals: silver plate with outer layer in gold plating
 4 Outer terminals: copper alloy with tin-lead over nickel plate

9 EPOXY SEAL

E epoxy seal

1MS-Series Ordering Scheme



1 SERIES

1MS Sealed Miniature Rocker Switch

2 POLES

SP single pole - uses terminals 1, 2 & 3.
DP double pole uses terminals 1, 2, 3, 4, 5 & 6.
3P double pole uses terminals 1, 2, 3, 4, 5, 6, 7, 8 & 9.

3 CIRCUIT

() - momentary

Switching Position:

	2-3, 5-6, 8-9	OPEN	2-1, 5-4, 8-7
1	ON	NONE	ON
2	ON	NONE	(ON)
3	ON	OFF	ON
4	(ON)	OFF	(ON)
5	ON	OFF	(ON)

4 ACTUATOR STYLE

R1	Small rocker	R5	Large rocker
R2	Small paddle	R6	Rocker & frame
R3	Medium rocker	R7	Paddle & frame
R4	Large paddle	R8	Rocker w/out frame
		R9	Paddle w/out frame

5 TERMINATION

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6 CONTACT

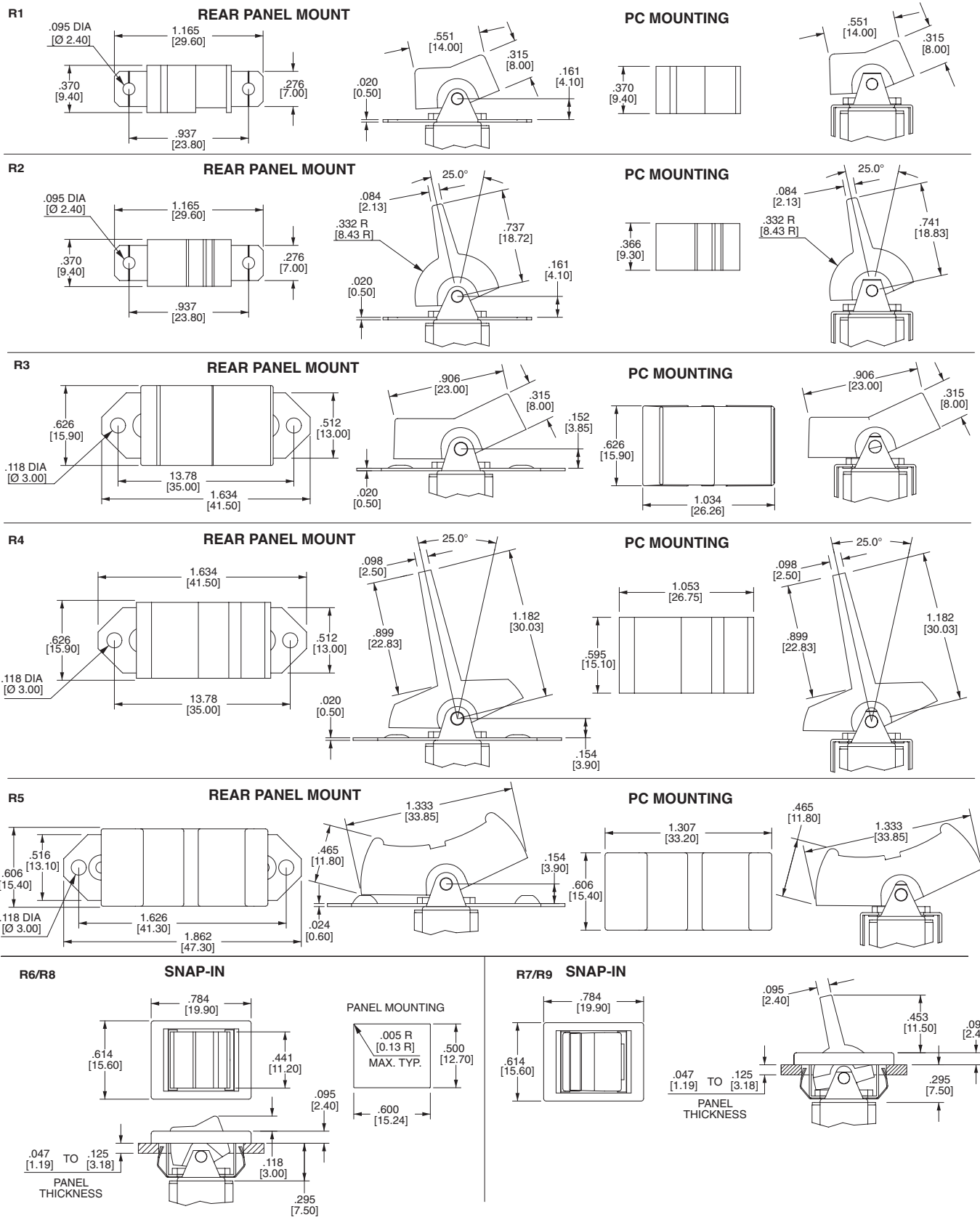
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NOTE:

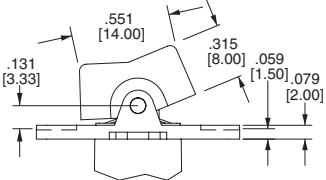
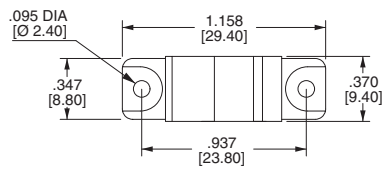
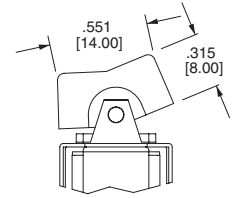
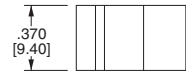
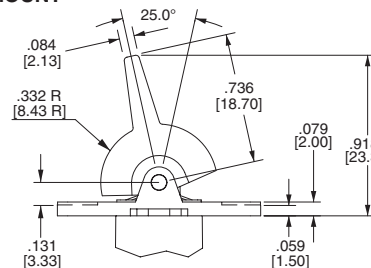
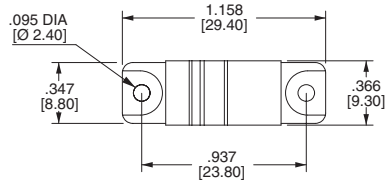
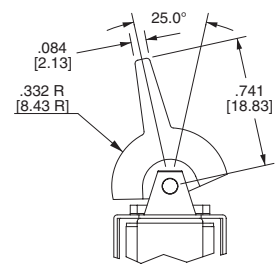
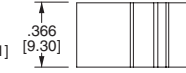
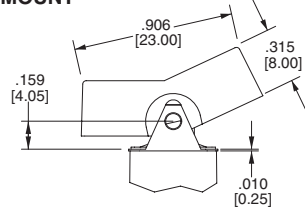
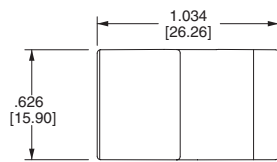
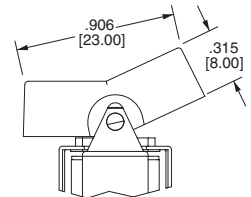
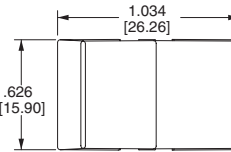
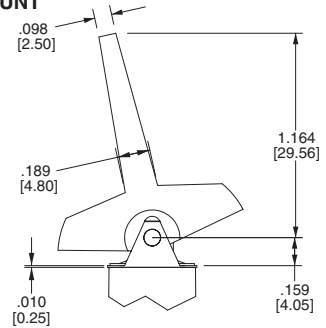
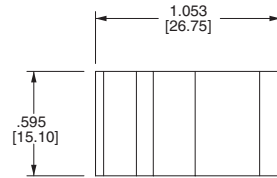
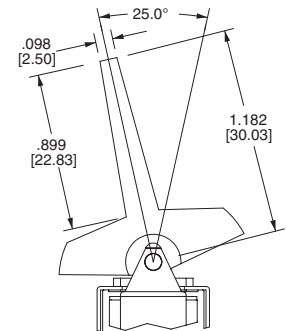
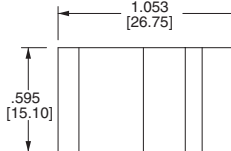
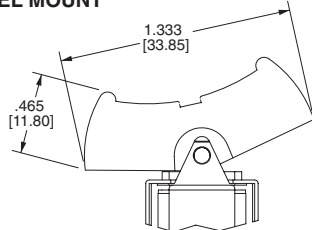
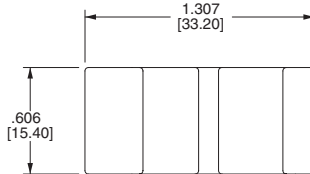
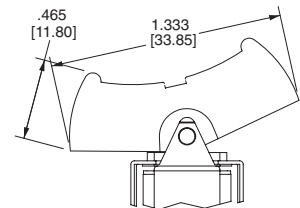
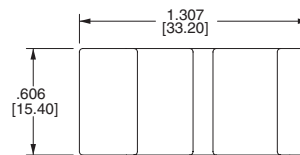
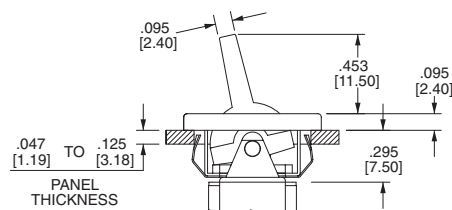
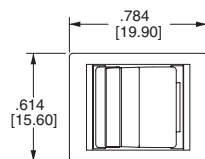
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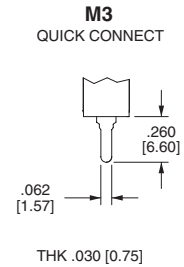
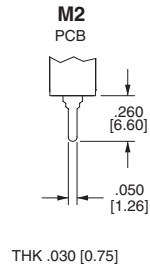
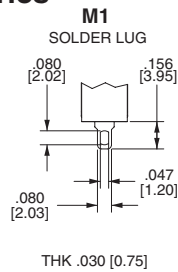
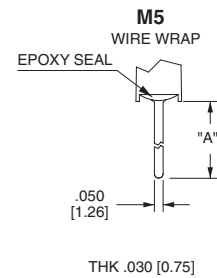
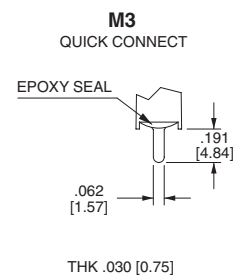
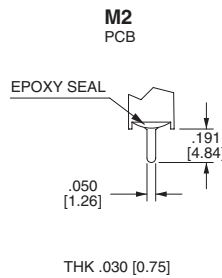
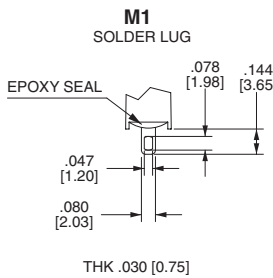
7 EPOXY SEAL

E epoxy seal

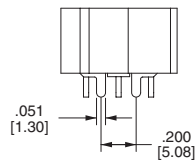
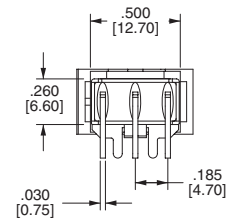
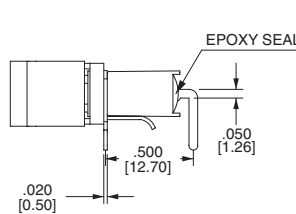
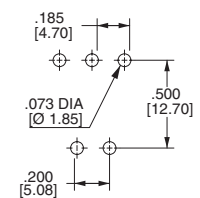
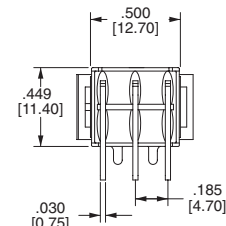
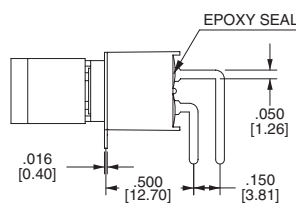
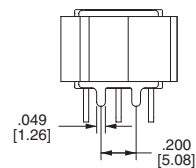
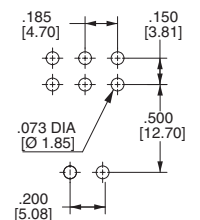
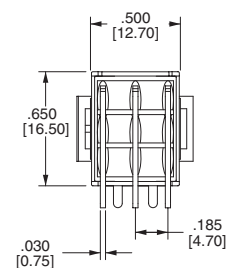
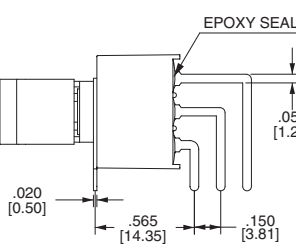
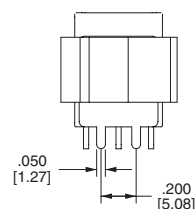
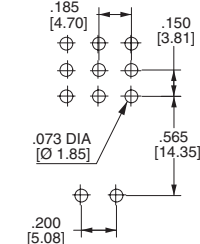
1M1-Series Dimensional Specifications: in.[mm]
ACTUATOR


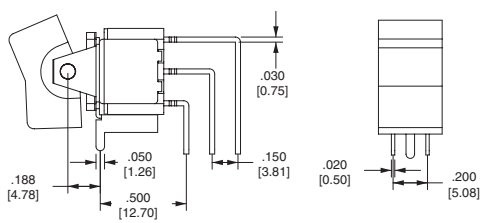
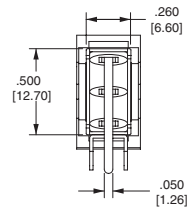
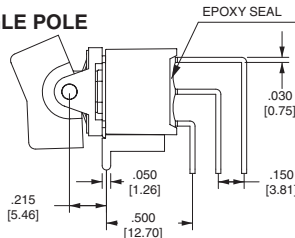
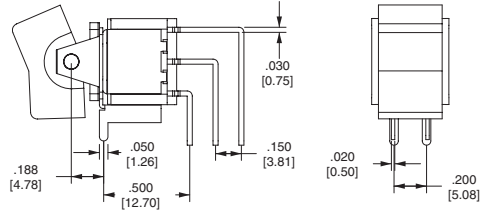
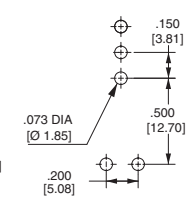
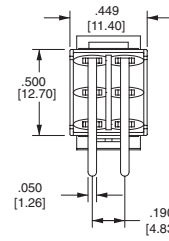
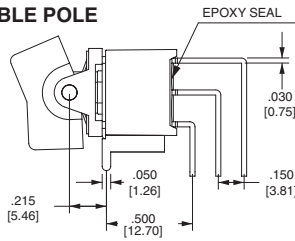
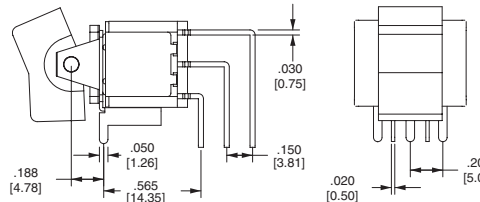
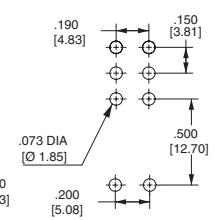
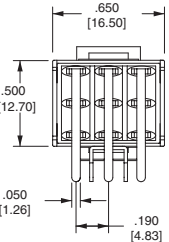
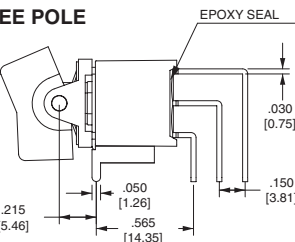
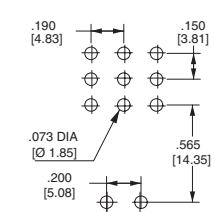
R8 and R9 are without frame. Actuators are as shown.

1MS-Series Dimensional Specifications: in.[mm]
ACTUATOR
R1 REAR PANEL MOUNT

PC MOUNTING

R2 REAR PANEL MOUNT

PC MOUNTING

R3 REAR PANEL MOUNT

PC MOUNTING

R4 REAR PANEL MOUNT

PC MOUNTING

R5 REAR PANEL MOUNT

PC MOUNTING

R7 SNAP-IN


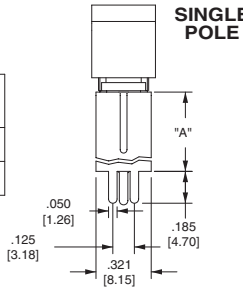
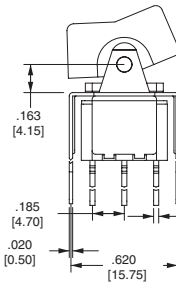
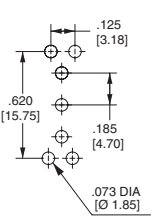
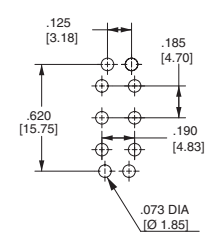
1M-Series Dimensional Specifications: in.[mm]
TERMINATION
1M1-Series

1MS-Series


OPTION CODE	DIM. "A"
M5-1	.750 [19.05]
M5-2	.964 [24.48]
M5-3	.425 [10.80]
M5-4	1.062 [26.97]

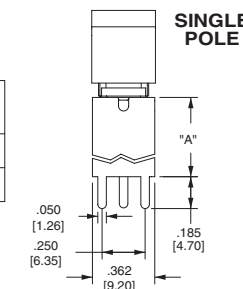
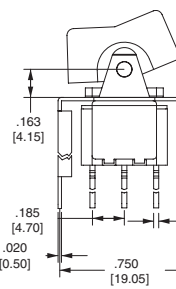
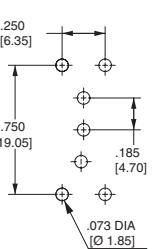
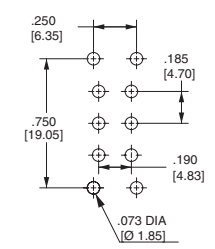
1M-Series
M6

SINGLE POLE

PC MOUNTING

DOUBLE POLE

PC MOUNTING

THREE POLE

PC MOUNTING


1M-Series Dimensional Specifications: in.[mm]
TERMINATION
M7

SINGLE POLE

PC MOUNTING

DOUBLE POLE

PC MOUNTING

THREE POLE

PC MOUNTING

VS2 & VS3

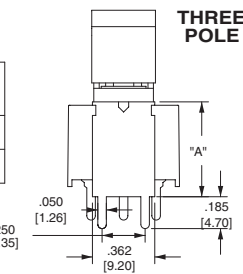
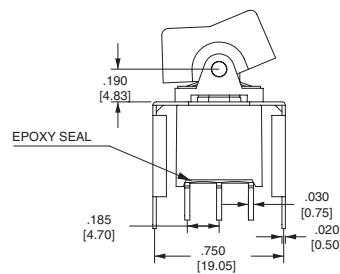
OPTION CODE	DIM. "A"
VS2	.460 [11.68]
VS3	.630 [16.00]


SINGLE POLE
PC MOUNTING

DOUBLE POLE
PC MOUNTING

VS4 & VS5

OPTION CODE	DIM. "A"
VS4	.460 [11.68]
VS5	.630 [16.00]


SINGLE POLE
PC MOUNTING

DOUBLE POLE
PC MOUNTING

U4 & VS5

OPTION CODE	DIM. "A"
U4	.551 [14.00]
VS5	.630 [16.00]


THREE POLE

PC MOUNTING
