



➔ **Product Type**
PC Mount Miniature & Sub-Miniature Rocker Switches

➔ **Product Series**
1M-Series

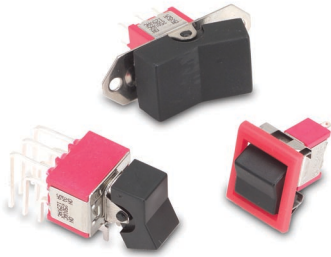
The 1M family of miniature rocker & paddle switches is composed of two switch series:

- 1M1-Series miniature rocker and paddle switch
- 1MS-Series sealed miniature rocker and paddle switch

These series of PC mount sub-miniature rocker switches offer a variety of ratings, circuits, contact materials, terminal platings, rocker and paddle actuator styles and colors.

The 1MS-Series are sealed switches that are UL and CUL approved, and IP67 certified. The 1M1-Series of switches has UL & CSA agency approvals. All series within the 1M family of switches are able to withstand temperatures from -30°C to +85°C, and all offer PC mounting.

Certifications	1M1-Series: UL, CSA 1MS-Series: UL, CUL, IP67
Number of Poles	1M1-Series: 1-4 poles 1MS-Series: 1-3 poles
Ratings	5A @ 125 VAC or 28VDC 2A @ 250VAC
Dielectric Strength	0.4VA max @ 20V max (AC/DC) 1500 Volts RMS @ sea level
Insulation Resistance	1000 megohms (minimum)
Actuator Style	Small, medium, & large rockers Small, medium, & large paddles Rockers with and without frames Paddles with and without frames
Case Material	all UL94 V-0 1M1-Series: Dially phthalate (DAP) 1MS-Series: Glass filled nylon 6/6, flame retardant, heat stabilized
Rocker Material	1M1-Series: Nylon (UL 94V-0) 1MS-Series: Nylon, black standard, internal o-ring sealed
Bushing Material	1M1-Series: Brass, nickel plated 1MS-Series: Glass filled nylon 6/6, flame retardant, heat stabilized (UL 94V-0)
Housing Material	1M1-Series: Stainless Steel 1MS-Series: Spring Steel
Switch Support	1M1 & 1MS-Series: Brass, tin plated
Terminal Options	Solder Lug PCB PC Mount Snap-in, U bracket Wire Wrap
Mounting Hole Dimensions	See PDF elibrary file above for dimensions



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 .620 mounting x .630 high
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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M2	PCB	VS4	PC Mount, U bracket, .460 high
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M6	PC Mount, 90° horizontal		
M7	PC Mount, 90° vertical		
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6 CONTACT

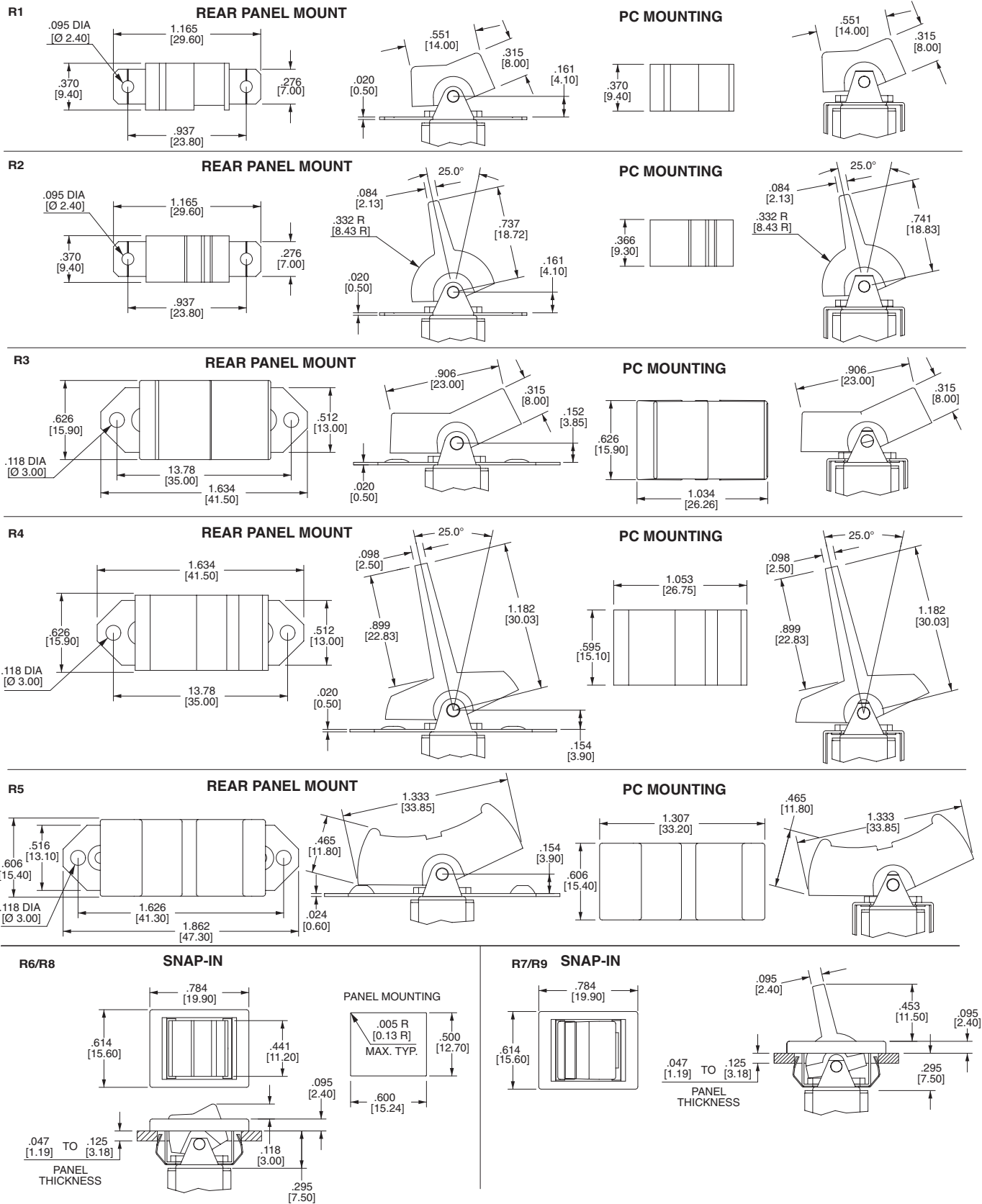
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G	silver ¹	gold over silver ²	5A@125VAC or 28VDC, 2A @ 250VAC	UL CUL
K	gold ²	tin-lead ⁴	0.4VA max. @20V max (AC/DC)	-
P	silver ¹	tin-lead ⁴	5A@125VAC or 28VDC, 2A @ 250VAC	UL CUL
R	gold ²	gold ²	0.4VA max. @20V max (AC/DC)	-

NOTE:
 Tin-lead option available with PC type terminations only.
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7 EPOXY SEAL
E epoxy seal

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

ACTUATOR

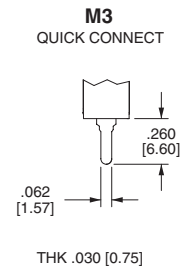
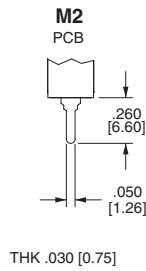
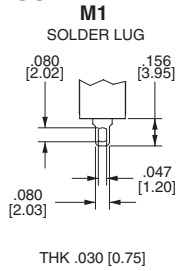


R8 and R9 are without frame. Actuators are as shown.

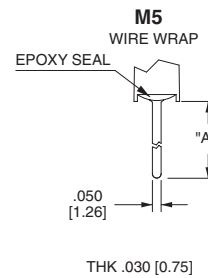
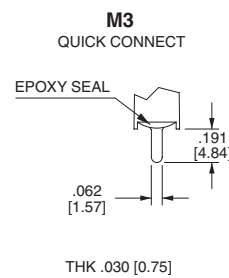
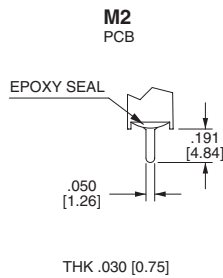
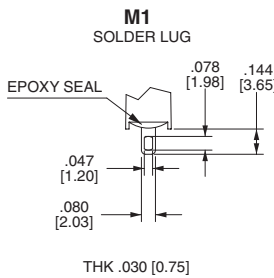
1M-Series Dimensional Specifications: in.[mm]

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

