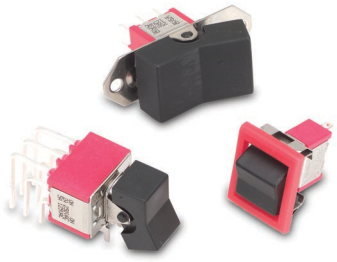


1M1-Series
Miniature Rocker & Paddle Switch

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

1M1	-	SP	1	-	R8	/	2	-		M6	Q	E
1 Series		2 Poles	3 Circuit		4 Actuator Style		5 Actuator Color		6 Frame Color	7 Termination	8 Contact	9 Seal

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[3]	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

1MS	-	SP	1	-	R6	-	M6	G	E
1 Series		2 Poles	3 Circuit		4 Actuator Style		5 Termination	6 Contact	7 Seal

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

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

6 CONTACT

	Material	*Terminal Plating*	*Rating*	*Approvals*
G	silver[1]	gold over silver[3]	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.
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

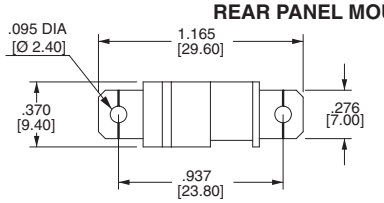
7 EPOXY SEAL
E epoxy seal

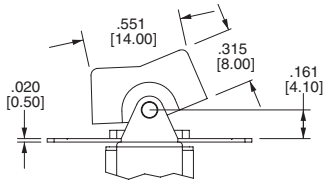
1M1-Series Dimensional Specifications: in.[mm]

ACTUATOR

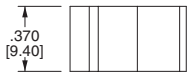
R1

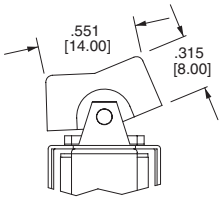
REAR PANEL MOUNT





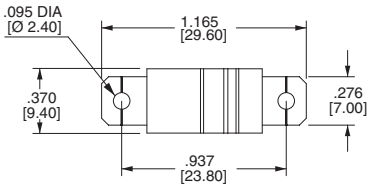
PC MOUNTING

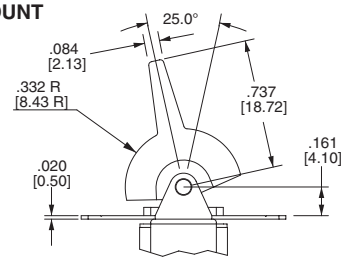




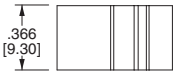
R2

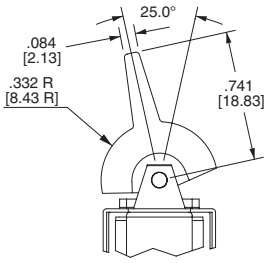
REAR PANEL MOUNT





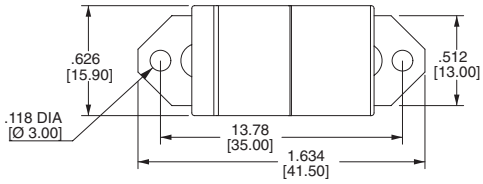
PC MOUNTING

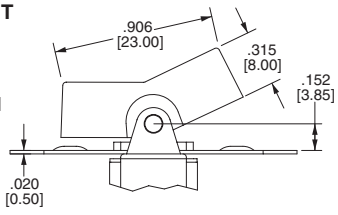




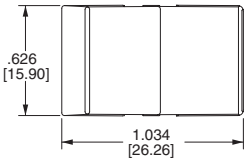
R3

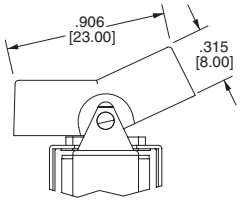
REAR PANEL MOUNT





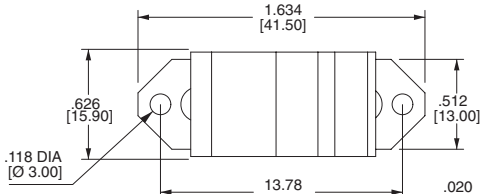
PC MOUNTING

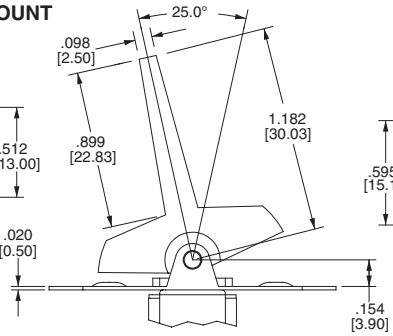




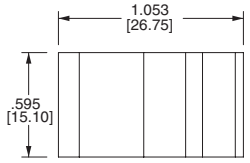
R4

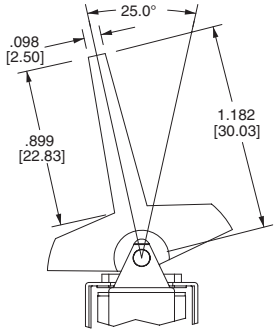
REAR PANEL MOUNT





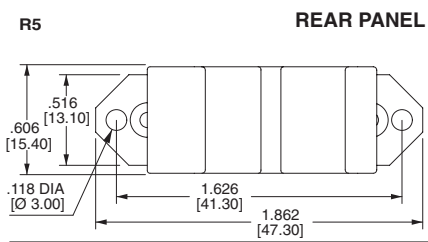
PC MOUNTING

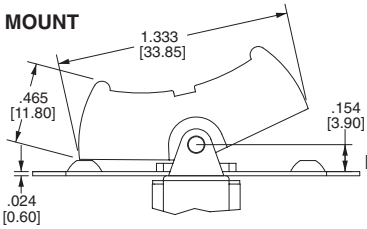




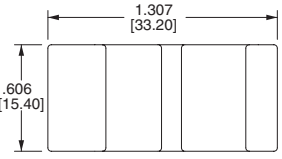
R5

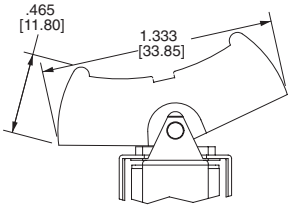
REAR PANEL MOUNT



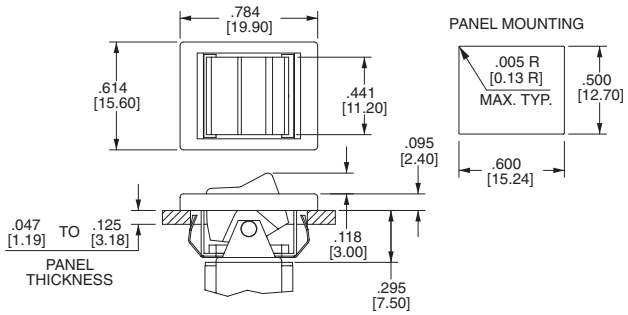


PC MOUNTING

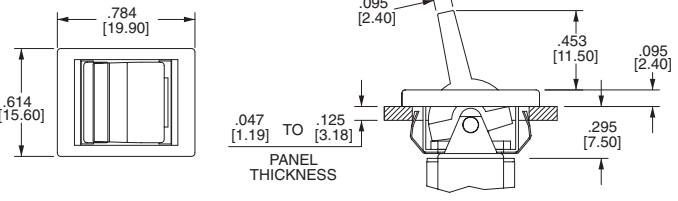




R6/R8 **SNAP-IN**



R7/R9 **SNAP-IN**

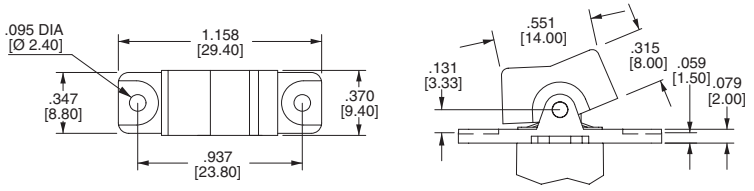


R8 and R9 are without frame. Actuators are as shown.

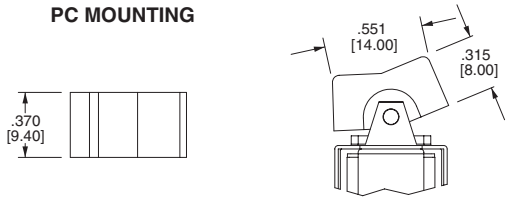
1MS-Series Dimensional Specifications: in.[mm]

ACTUATOR

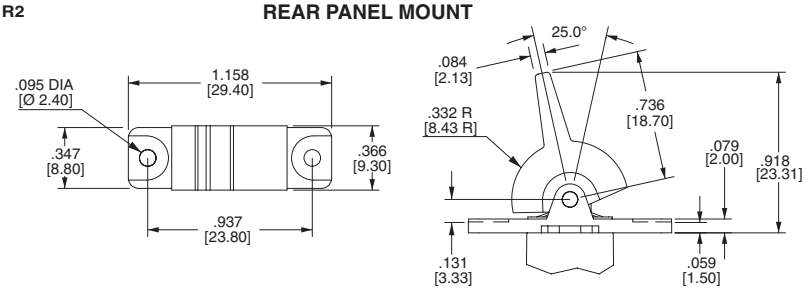
R1 REAR PANEL MOUNT



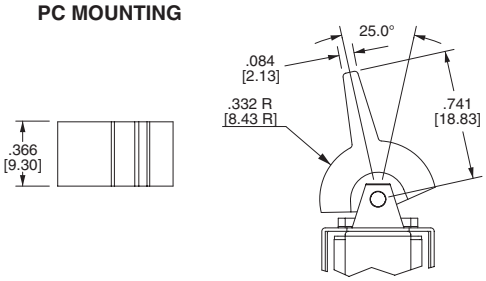
PC MOUNTING



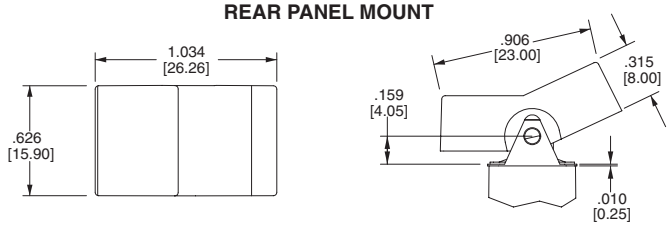
R2 REAR PANEL MOUNT



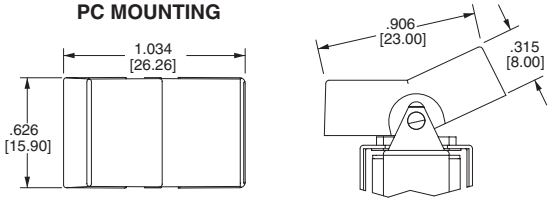
PC MOUNTING



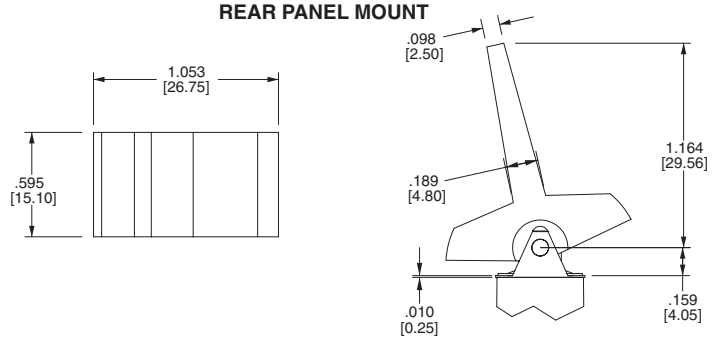
R3 REAR PANEL MOUNT



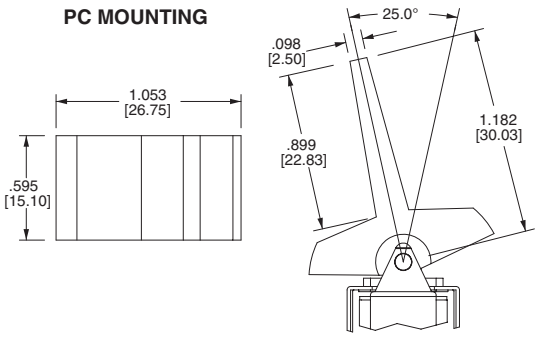
PC MOUNTING



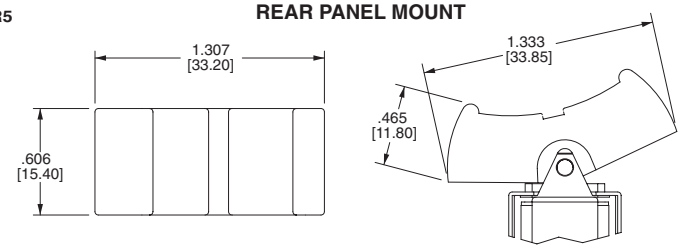
R4 REAR PANEL MOUNT



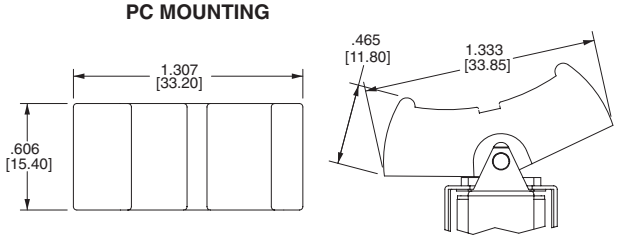
PC MOUNTING



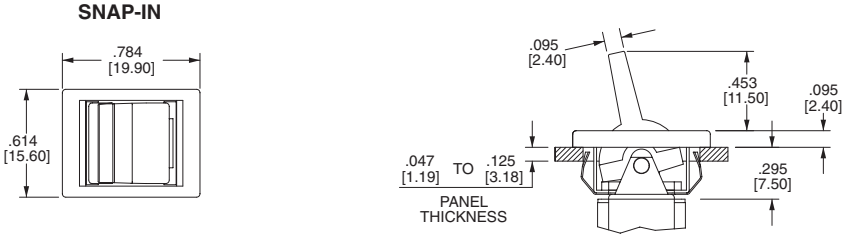
R5 REAR PANEL MOUNT



PC MOUNTING



R7 SNAP-IN

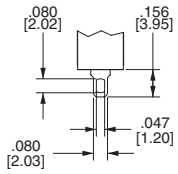


1M-Series Dimensional Specifications: in.[mm]

TERMINATION

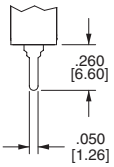
1M1-Series

M1
SOLDER LUG



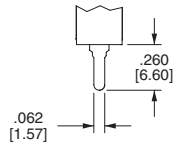
THK .030 [0.75]

M2
PCB



THK .030 [0.75]

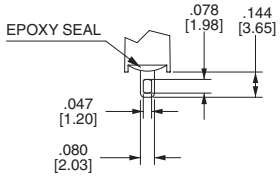
M3
QUICK CONNECT



THK .030 [0.75]

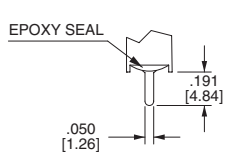
1MS-Series

M1
SOLDER LUG



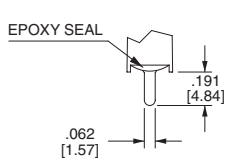
THK .030 [0.75]

M2
PCB



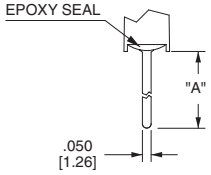
THK .030 [0.75]

M3
QUICK CONNECT



THK .030 [0.75]

M5
WIRE WRAP



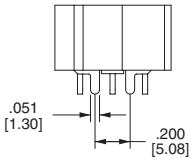
THK .030 [0.75]

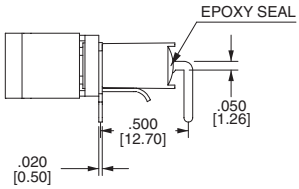
OPTION CODE	DIM. "A"
M5-1	.750 [19.05]
M5-2	.964 [24.48]
M5-3	.425 [10.80]
M5-4	1.062 [26.97]

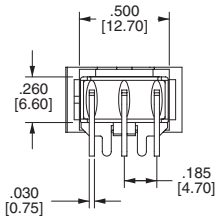
1M-Series

M6

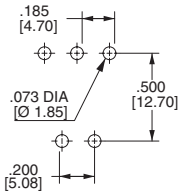
SINGLE POLE



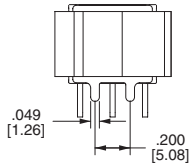


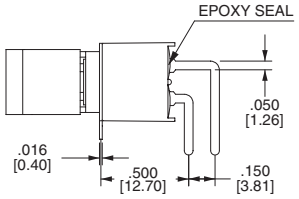


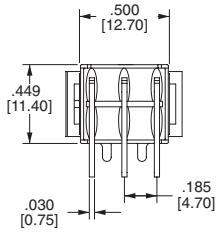
PC MOUNTING



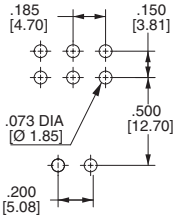
DOUBLE POLE



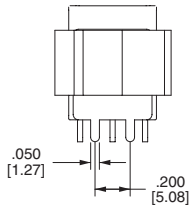


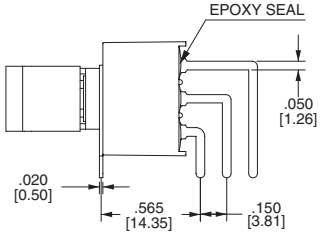


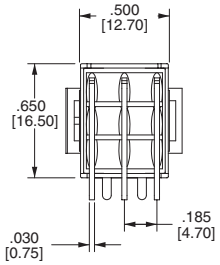
PC MOUNTING



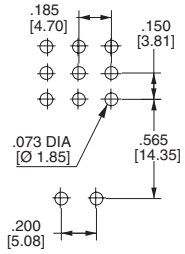
THREE POLE







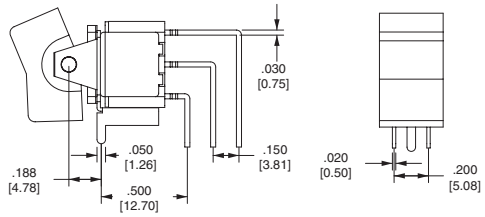
PC MOUNTING



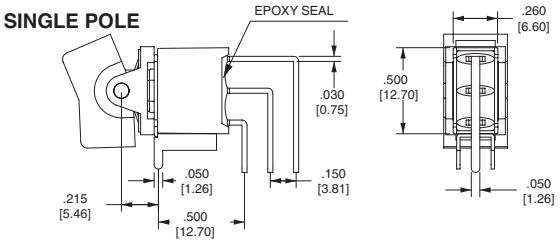
1M-Series Dimensional Specifications: in.[mm]

TERMINATION

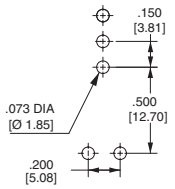
M7

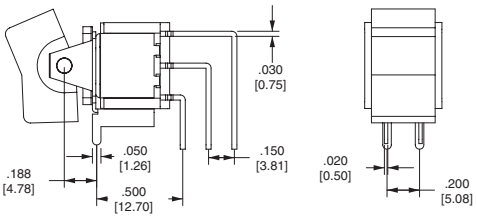


SINGLE POLE

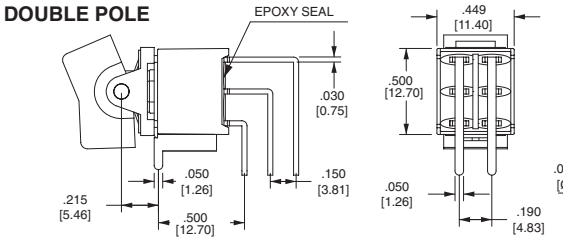


PC MOUNTING

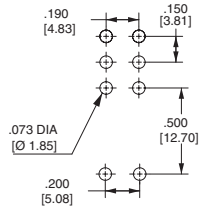


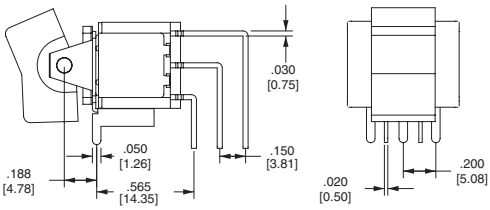


DOUBLE POLE

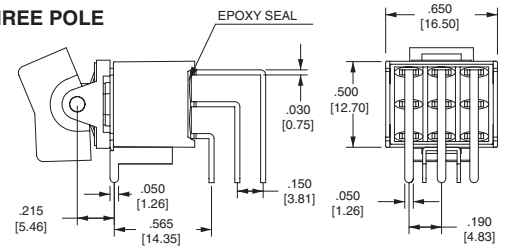


PC MOUNTING

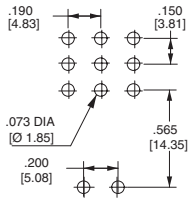




THREE POLE



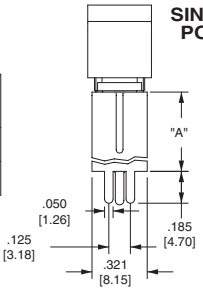
PC MOUNTING



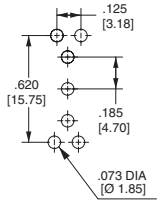
VS2 & VS3

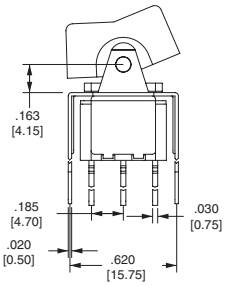
OPTION CODE	DIM. "A"
VS2	.460 [11.68]
VS3	.630 [16.00]

SINGLE POLE

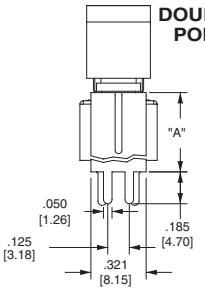


PC MOUNTING

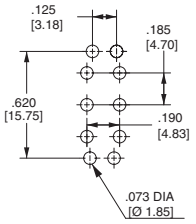




DOUBLE POLE



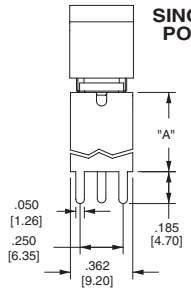
PC MOUNTING



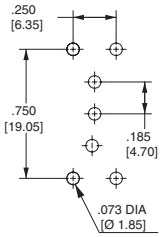
VS4 & VS5

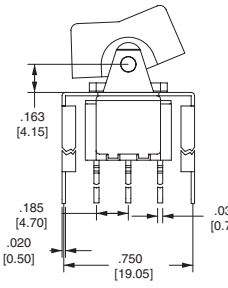
OPTION CODE	DIM. "A"
VS4	.460 [11.68]
VS5	.630 [16.00]

SINGLE POLE

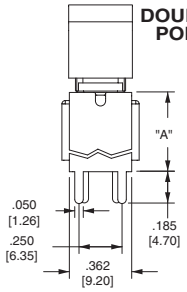


PC MOUNTING

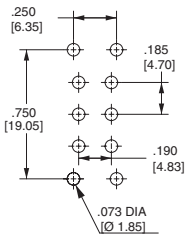




DOUBLE POLE



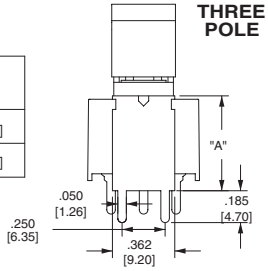
PC MOUNTING

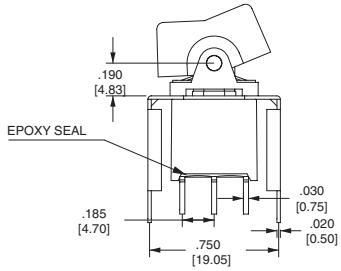


U4 & VS5

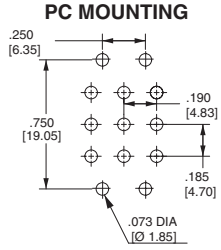
OPTION CODE	DIM. "A"
U4	.551 [14.00]
VS5	.630 [16.00]

THREE POLE





PC MOUNTING



OCEAN CHIPS
Океан Электроники
Поставка электронных компонентов

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «**JONHON**», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «**FORSTAR**».

AVIC JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).

FORSTAR®

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