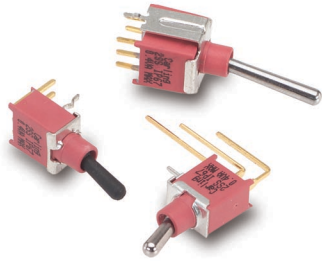
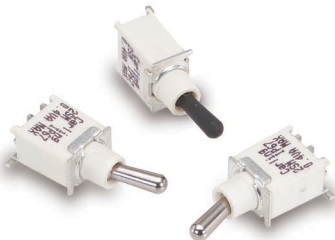


2S1-Series
Sub-Miniature Toggle
Switch



2SS-Series
Sealed Sub-Miniature
Toggle Switch



2SM-Series
Sealed Surface
Mount Sub-Miniature
Toggle Switch

Specifications

Contact Rating	refer to ordering scheme
Electrical Life	30,000 make & break cycles @ full load
Contact Resistance.	20 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	2SS & 2SM-Series: IP67
Solder Heat Resistance. . .	MIL-STD-202, Method 210
Actuator Travel	.25°

Materials

Case	all UL 94 V-0 2S1-Series: Dially phthalate (DAP) 2SS-Series: Glass filled nylon 6/6, flame retardant, heat stabilized 2SM-Series: Glass filled nylon 4/6, flame retardant, heat stabilized
Toggle.	2S1-Series: Brass, chrome plated. 2SS & 2SM-Series: Brass, chrome plated or nylon, internal o-ring sealed
Bushing	2S1-Series: Brass, nickel plated 2SS-Series: Glass filled nylon 6/6, flame retardant, heat stabilized (UL 94V-0) 2SM-Series: Glass filled nylon 4/6, flame retardant, heat stabilized (UL 94V-0)
Housing.	Stainless Steel
Switch Support	Brass, tin plated
Terminal Seal	Epoxy

2S1-Series Ordering Scheme

2S1	-	MSP		1	-	T1	-	B4	-	M6	Q	E
1		2		3		4		5		6	7	8
Series		Poles		Circuit		Actuator Style		Bushing		Termination	Contact	Seal

1 SERIES

2S1 Sub-Miniature Toggle Switch

2 POLES

MSP single pole - uses terminals 1, 2 & 3.
MDP double pole uses terminals 1,2, 3, 4, 5 & 6.

3 CIRCUIT

() - momentary

	Switching Position:		
	2-3, 5-6	OPEN	2-1, 5-4
1	ON	NONE	ON
2	ON	NONE	(ON)
3	ON	OFF	ON
4	(ON)	OFF	(ON)
5	ON	OFF	(ON)

4 ACTUATOR STYLE

T1 Round toggle .358 length	T3 Round toggle .299 length
T2 Round toggle .220 length	T4 Round toggle .433 length

5 BUSHING¹

B1	Threaded Standard, keyway
B2	Non-Threaded Standard, keyway
B3	Threaded Short, keyway
B4	Non-Threaded Short, keyway
B5	High Torque, 7.5mm, flat
B6	High Torque, 8.0mm, keyway
B7	Long threaded
B8	Metric

Note:
1 All Switches come with standard nut, washer and locking ring shipped bulk. B5 & B7 bushing styles use small locking ring.

6 TERMINATION

M1	Solder Lug
M2	PCB
M6	PC Mount, 90° horizontal
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
VS21	Snap-In, U bracket

7 CONTACT

	Material	Terminal Plating	Rating	Approvals
G	silver ¹	gold over silver ³	3A@125VAC or 28VDC, 1.5A @ 250VAC	UL CSA
K	gold ²	tin-lead ⁴	0.4VA max. @20V max (AC/DC)	-
P	silver ¹	tin-lead ⁴	3A@125VAC or 28VDC, 1.5A @ 250VAC	UL CSA
Q	silver ¹	silver ¹	3A@125VAC or 28VDC, 1.5A @ 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 plated over nickel plate
3 Terminals: silver plate with outer layer in gold plating
4 Outer terminals: copper alloy with tin-lead over nickel plate

8 EPOXY SEAL

E epoxy seal

2SS-Series Ordering Scheme

1 SERIES
2SS Sealed Sub-Miniature Toggle Switch

2 POLES
MSP single pole - uses terminals 1, 2 & 3.
MDP double pole uses terminals 1, 2, 3, 4, 5 & 6.

3 CIRCUIT

() - momentary

Switching Position:

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

4 ACTUATOR STYLE
T1 Round toggle .358 length
T2 Round toggle .220 length
T3 Round toggle .299 length
T4 Round toggle .433 length
P1 ESD resistant plastic toggle .421 length
P2 ESD resistant plastic toggle .272 length

5 BUSHING
B4 Unthreaded bushing

6 TERMINATION
M2 PCB
M6 PC Mount, 90° horizontal
M61 Snap-In PC Mount, 90° horizontal
M7 PC Mount, 90° vertical
M71 Snap-In PC Mount, 90° vertical
VS2 PC Mount, U bracket, .620 mounting x .460 high
VS21 Snap-In, U bracket

7 CONTACT

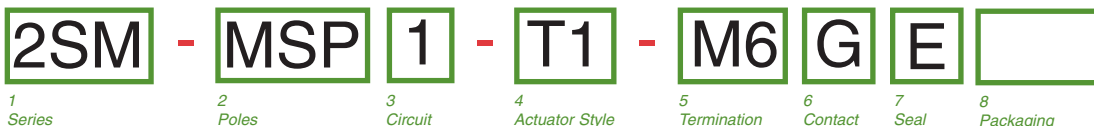
	Material	Terminal Plating	Rating	
G	silver ¹	gold over silver ³	3A@125VAC or 28VDC, 1.5A @ 250VAC	IP67
K	gold ²	tin-lead plated ⁴	0.4VA max. @20V max (AC/DC)	IP67
P	silver ¹	tin-lead plated ⁴	3A@125VAC or 28VDC, 1.5A @ 250VAC	IP67
R	gold ²	gold plated ²	0.4VA max. @20V max (AC/DC)	IP67

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

8 EPOXY SEAL
E epoxy seal

2SM-Series Ordering Scheme

1 SERIES
2SM Sealed Surface Mount Sub-Miniature Toggle Switch

2 POLES
MSP single pole - uses terminals 1, 2 & 3.

3 CIRCUIT

() - momentary

Switching Position:

	2-3	OPEN	2-1
1	ON	NONE	ON
2	ON	NONE	(ON)
3	ON	OFF	ON
4	(ON)	OFF	(ON)
5	ON	OFF	(ON)

4 ACTUATOR STYLE
T1 Round toggle .358 length
T2 Round toggle .220 length
P1 ESD resistant plastic toggle .421 length
P2 ESD resistant plastic toggle .272 length

5 TERMINATION
M6 Surface Mount, 90° flat
M7 Surface Mount, 90° vertical
S6 Surface Mount, 90° horizontal

6 CONTACT

	Material	Terminal Plating	Rating	
G	silver ¹	gold over silver ³	3A@125VAC or 28VDC, 1.5A @ 250VAC	IP67
K	gold ²	tin-lead plated ⁴	0.4VA max. @20V max (AC/DC)	IP67
P	silver ¹	tin-lead plated ⁴	3A@125VAC or 28VDC, 1.5A @ 250VAC	IP67
R	gold ²	gold plated ²	0.4VA max. @20V max (AC/DC)	IP67

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

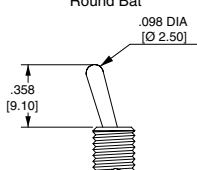
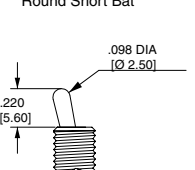
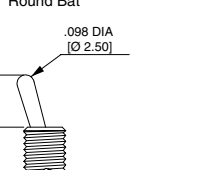
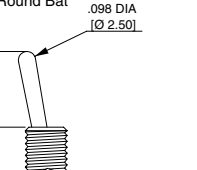
7 EPOXY SEAL
E epoxy seal

8 PACKAGING

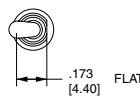
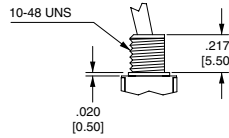
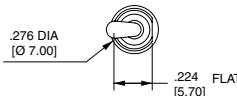
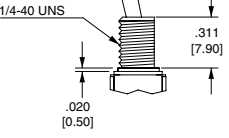
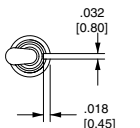
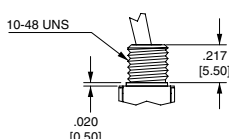
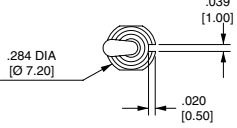
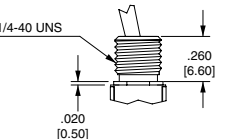
 Switches are bulk packed, unless **T/R** is specified at the end of the part number.

T/R tape reel - 500 pieces per reel

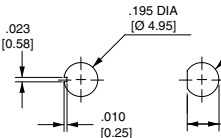
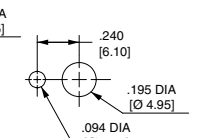
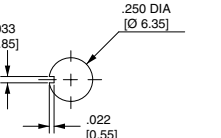
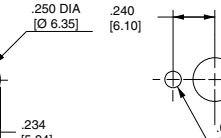
2S-Series Dimensional Specifications: in. [mm]
2S1-Series
ACTUATOR

T1¹ Round Bat 	T2¹ Round Short Bat 	T3 Round Bat 	T4 Long Round Bat 
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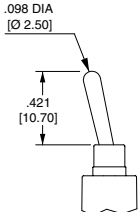
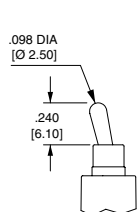
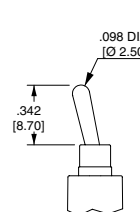
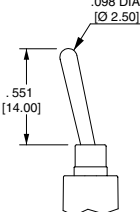
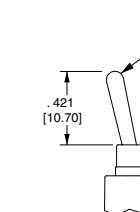
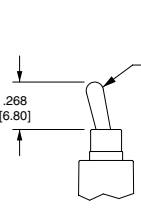
BUSHING

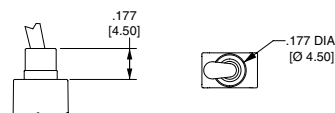
B1¹ Threaded, Flat B2 Non-Threaded, Flat 		B5 Threaded, Flat B6 Non-Threaded, Flat 	
B3 Threaded Keyway B4 Non-Threaded Keyway 		B7 Threaded Keyway B8 Non-Threaded Keyway 	

PANEL MOUNTING

10-48 BUSHING (B1,B2,B3,B4 BUSHINGS) 		1/4 IN. BUSHING (B5,B6,B7,B8 BUSHINGS) 	
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2SS-Series
ACTUATOR

T1 	T2 	T3 	T4 	P1 ESD Resistant Plastic Toggle 	P2 ESD Resistant Plastic Toggle 
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BUSHING
B4


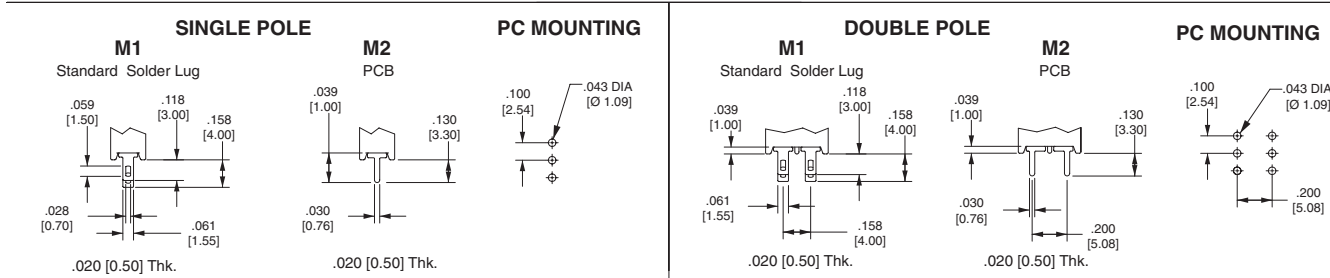
NOTE:

1 Subtract 2.55mm from toggle length for B1 bushing.

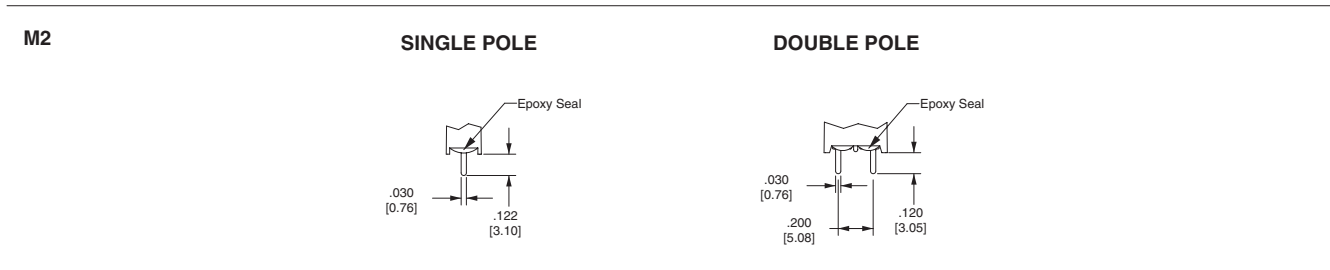
2S-Series Dimensional Specifications: in. [mm]

TERMINATION

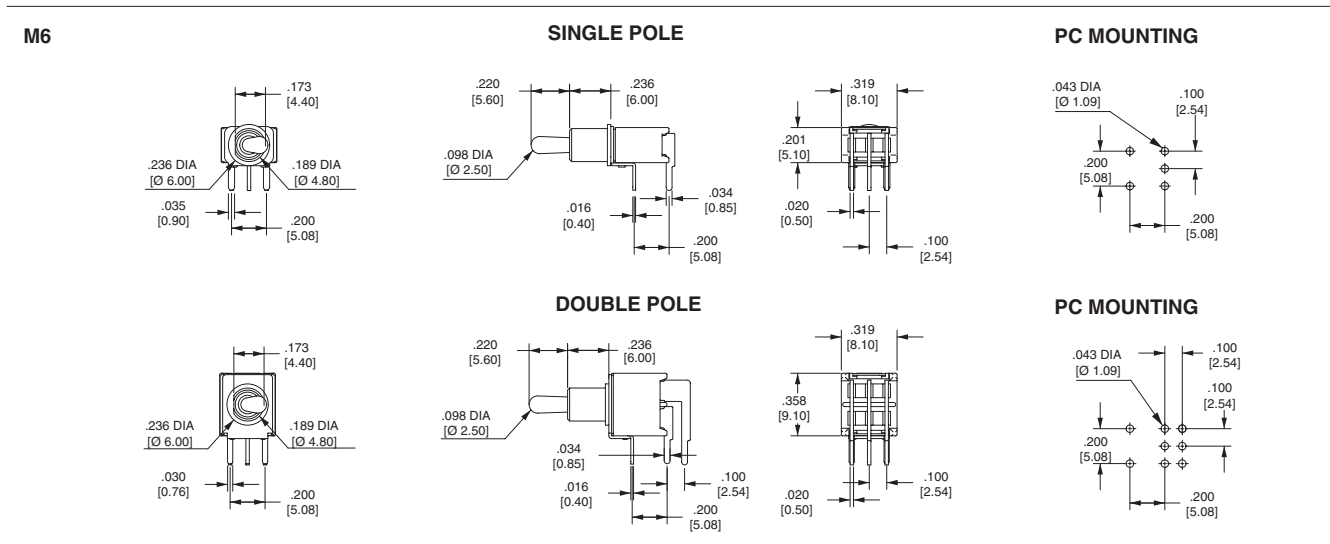
2S1-Series



2SS-Series



2S-Series



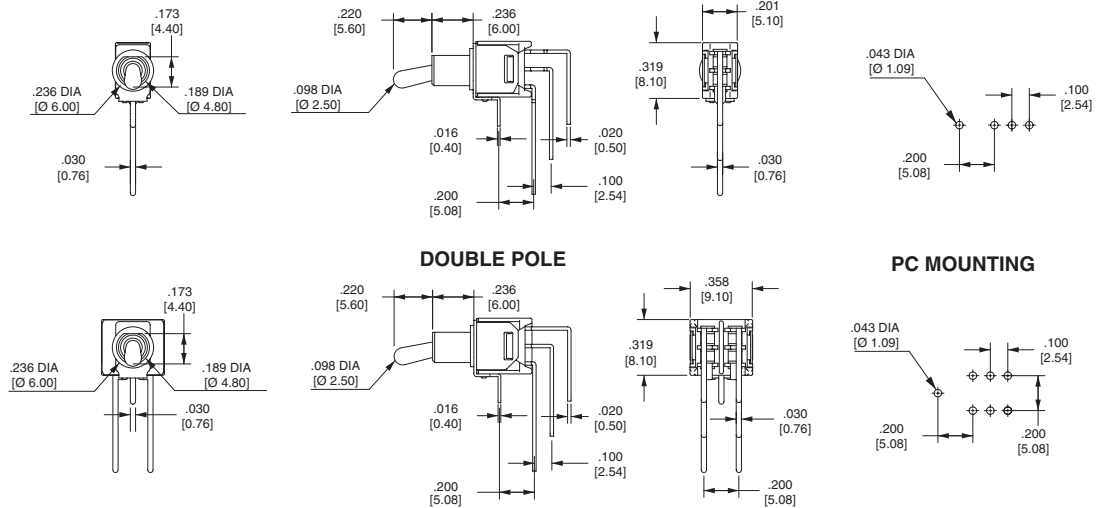
2S-Series Dimensional Specifications: in. [mm]

TERMINATION

M7

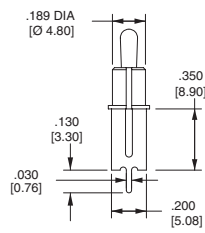
SINGLE POLE

PC MOUNTING

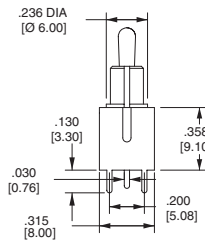
**VS2-VS3**

U Bracket Snap-in

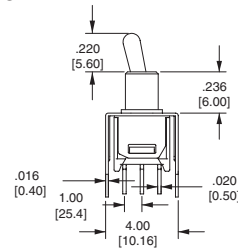
VS2



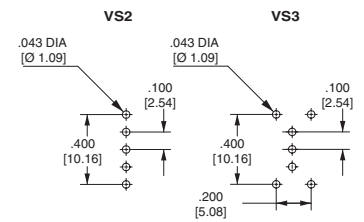
VS3



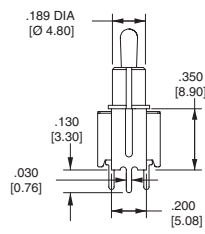
SINGLE POLE



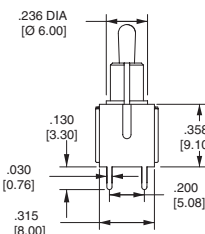
PC MOUNTING



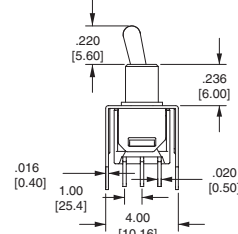
VS2



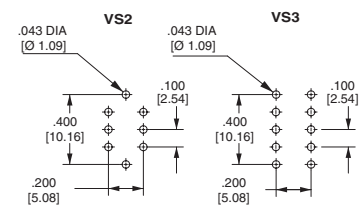
VS3



DOUBLE POLE

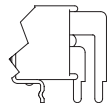


PC MOUNTING

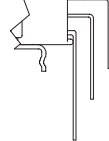


SNAP-IN TERMINATION

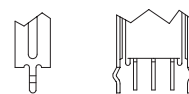
M61



M71



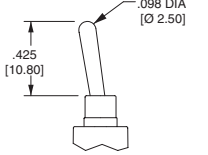
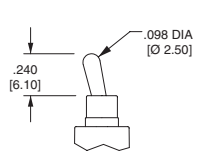
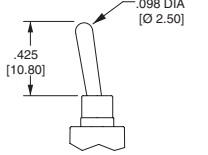
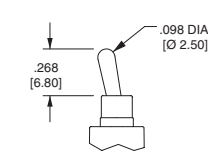
VS21



M61,M71,VS21 have the same P.C. mounting but with snap-in bracket.

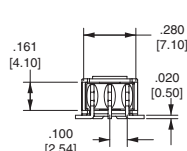
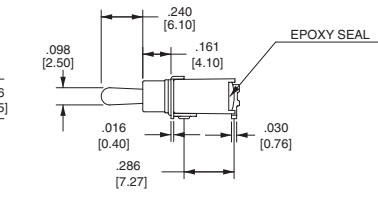
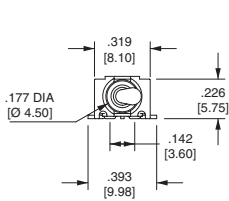
2SM-Series Dimensional Specifications: in. [mm]

ACTUATOR

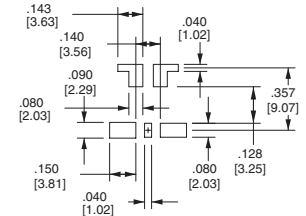
T1 Round Bat  For S6,M7 Only	T2 Round Bat 	P1 ESD Resistant Plastic Toggle 	P2 ESD Resistant Plastic Toggle 
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TERMINATION

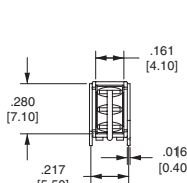
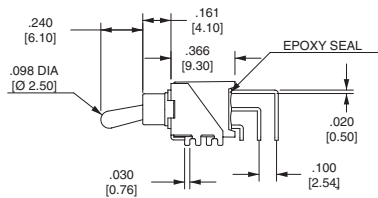
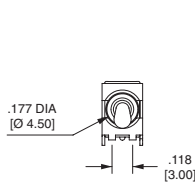
M6 90° Horizontal



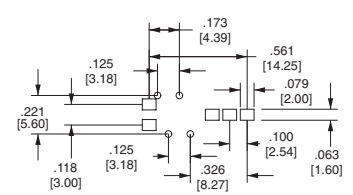
PC MOUNTING



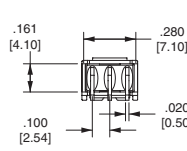
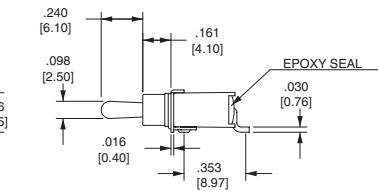
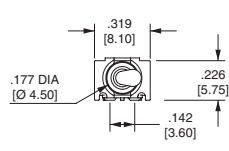
M7 90° Vertical



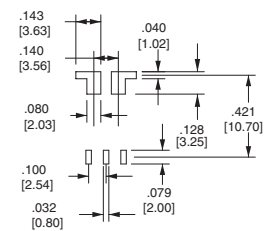
PC MOUNTING



S6 90° Horizontal



PC MOUNTING



2SM-Series Dimensional Specifications: in. [mm]

REEL TAPING

