



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

➔ **Product Series**
3S-Series

➔ **Description**

The 3S family of sub-miniature pushbutton switches is composed of three switch series:

3S1-Series sub-miniature pushbutton switch

3SS-Series sealed sub-miniature pushbutton switch

3SM-Series surface mount sealed sub-miniature pushbutton switch

These series of PC mount sub-miniature pushbutton switches offer a variety of ratings, circuits, contact materials, terminal platings, and optional color caps.

The 3SS-Series and 3SM-Series are sealed switches that are IP67 certified. All series within the 3S family of switches are able to withstand temperatures from -30°C to +85°C, and all offer PC mounting.

Certifications

3S1-Series: No agency listings

3SS-Series & 3SM-Series: IP67

Number of Poles

3S1-Series: 1 pole

3SS & 3SM-Series: 1-2 pole

Ratings

1A @ 125 VAC or 28VDC

0.4VA max @ 20V max (AC/DC)

Dielectric Strength

1500 Volts RMS @ sea level

Insulation Resistance

1000 megohms (minimum)

Actuator Style

Round plunger

Case Material

all UL94 V-0

3S1-Series: Dially phthalate (DAP)

3SS-Series: Glass filled nylon 6/6,
flame retardant, heat stabilized

3SM-Series: Glass filled nylon 4/6,
flame retardant, heat stabilized

Plunger Material

3S1-Series: Thermoplastic polyester, black

3SS-Series: Thermoplastic polyester (UL 94V-0), with internal o-ring seal
3SM-Series: Nylon 4/6 (UL 94V-0), with internal o-ring seal

Bushing Material

3S1-Series: Brass, nickel plated

3SS-Series: Glass filled nylon 6/6,
flame retardant, heat stabilized (UL
94V-0)

3SM-Series: Glass filled nylon 4/6,
flame retardant, heat stabilized (UL
94V-0)

Housing Material

Stainless Steel

Switch Support

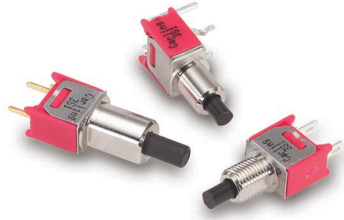
Brass, tin plated

Terminal Options

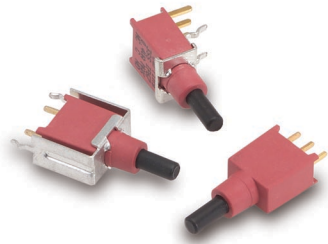
- Solder Lug
- PCB
- PC Mount
- Snap-in, U bracket

Mounting Hole Dimensions

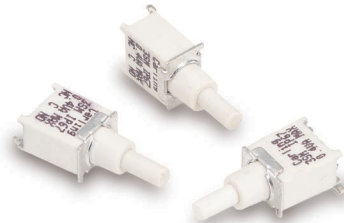
See PDF elibrary file above for dimensions



3S1-Series
Sub-Miniature
Pushbutton Switch



3SS-Series
Sealed Sub-Miniature
Pushbutton Switch



3SM-Series
Sealed Surface
Mount Sub-Miniature
Pushbutton Switch

Specifications

Contact Rating refer to ordering scheme
 Electrical Life 50,000 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 **3SS & 3SM-Series:** IP67
 Solder Heat Resistance. MIL-STD-202, Method 210
 Actuator Travel 25°

Materials

Case UL 94-0
3S1-Series: Diallyl phthalate (DAP)
3SS-Series: Glass filled nylon 6/6, flame retardant, heat stabilized
3SM-Series: Glass filled nylon 4/6, flame retardant, heat stabilized
 Plunger. 3S1-Series: Thermoplastic polyester, black
3SS -Series: Thermoplastic polyester (UL 94V-0), with internal o-ring seal
3SM-Series: Glass filled nylon 4/6, flame retardant, heat stabilized
 Bushing 3S1-Series: Brass, nickel plated
3SS-Series: Glass filled nylon 6/6, flame retardant, heat stabilized (UL 94V-0)
3SM-Series: Glass filled nylon 4/6, flame retardant, heat stabilized (UL 94V-0)
 Housing. Stainless Steel
 Switch Support Brass, tin plated
 Terminal Seal Epoxy

3S1-Series Ordering Scheme



1 SERIES 3S1 Sub-Miniature Pushbutton Switch	
2 POLES SP single pole	
3 CIRCUIT () - momentary	
8	ON (ON)
9	OFF (ON)
4 BUSHING	
B5	10-48 Threaded
B6	Unthreaded "D"
B7	Unthreaded
B8	1/4-40 Threaded "D"
B9	Flush Bushing
B0	1/4" Unthreaded "D"

5 TERMINATION		
M1	Solder Lug	
M2	PCB	
M6	PC Mount, 90° horizontal	
M61	Snap-In, 90° horizontal	
M7	PC Mount, 90° vertical	
M71	Snap-In, 90° vertical	
VS2	PC Mount, U bracket, .620 mounting x .460 high	
VS21	Snap-In, U bracket	

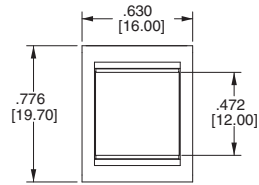
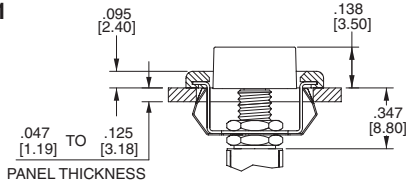
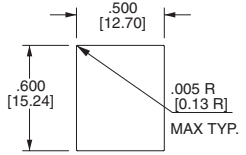
6 CONTACT		
	<i>Material</i>	<i>Terminal Plating</i>
G	silver ¹	gold over silver ³
K	gold ²	tin-lead ⁴
P	silver ¹	tin-lead ⁴
Q	silver ¹	silver ¹
R	gold ²	gold ²
	<i>Rating</i>	<i>Rating</i>
G	1A@125VAC or 28VDC	1A@125VAC or 28VDC
K	0.4VA max. @20V max (AC/DC)	0.4VA max. @20V max (AC/DC)
P	1A@125VAC or 28VDC	1A@125VAC or 28VDC
Q	1A@125VAC or 28VDC	1A@125VAC or 28VDC
R	0.4VA max. @20V max (AC/DC)	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 plated with outer layer in gold plating
 4 Outer terminals: copper alloy with tin-lead over nickel plate

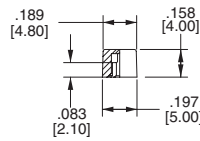
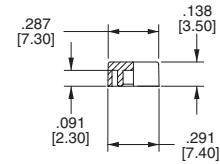
7 EPOXY SEAL	
E	epoxy seal

3S1-Series Dimensional Specifications: in. [mm]

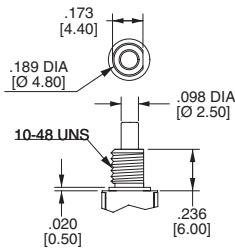
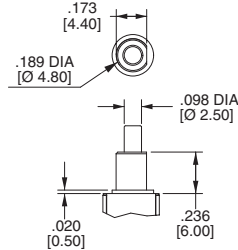
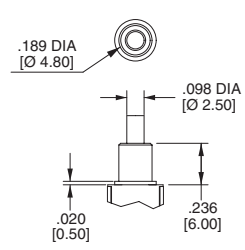
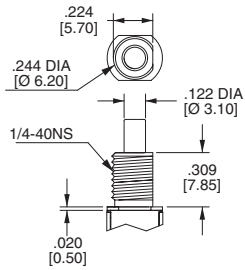
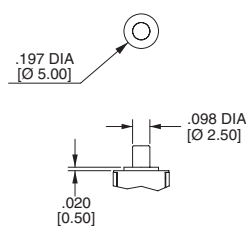
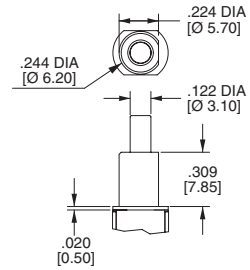
ACTUATOR

OP1

PANEL MOUNTING


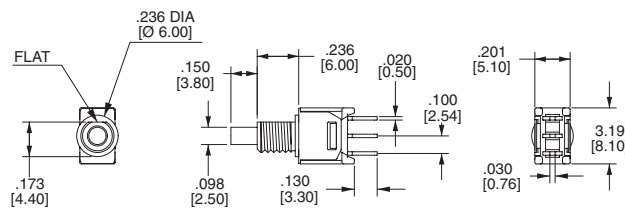
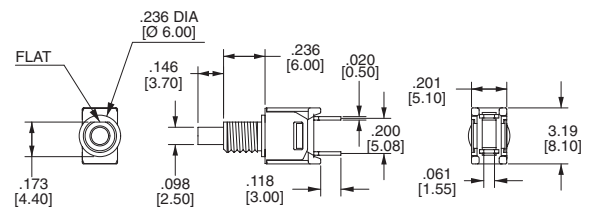
CAP

C1

C2


BUSHING

B5

B6

B7

B8

B9

B0


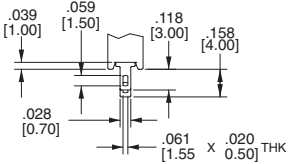
TERMINATION

SP8
SINGLE POLE DOUBLE THROW

SP9
SINGLE POLE SINGLE THROW


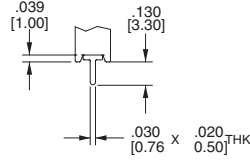
3S1-Series Dimensional Specifications: in. [mm]

TERMINATION

M1

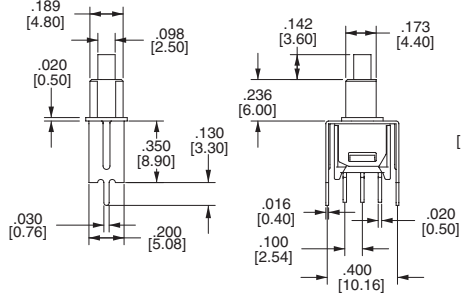


M2

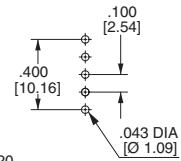


VS2

SINGLE POLE DOUBLE THROW

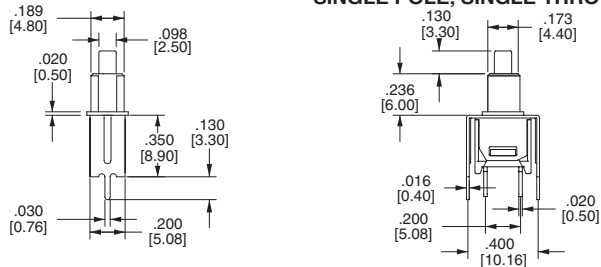


PC MOUNTING

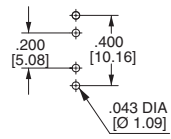


VS2

SINGLE POLE, SINGLE THROW

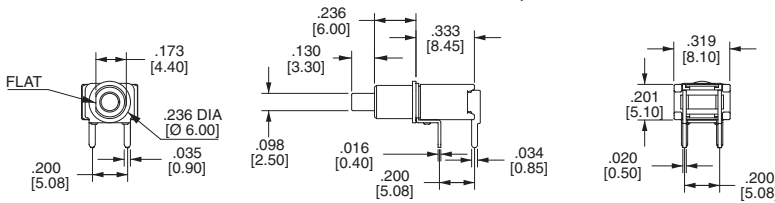


PC MOUNTING

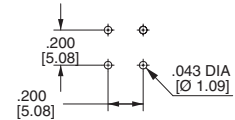


M6

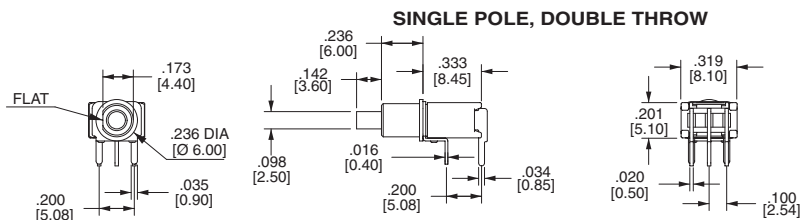
SINGLE POLE, SINGLE THROW



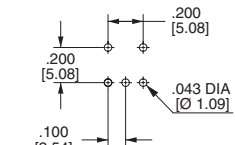
PC MOUNTING



SINGLE POLE, DOUBLE THROW

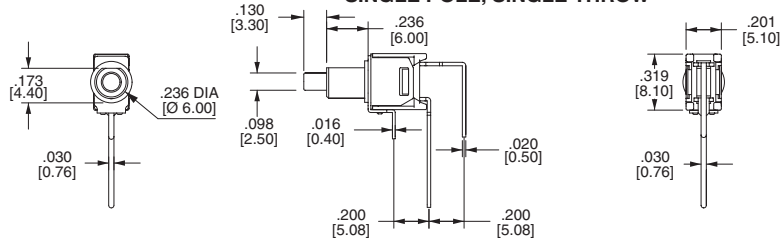


PC MOUNTING

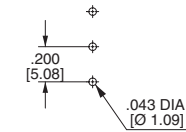


M7

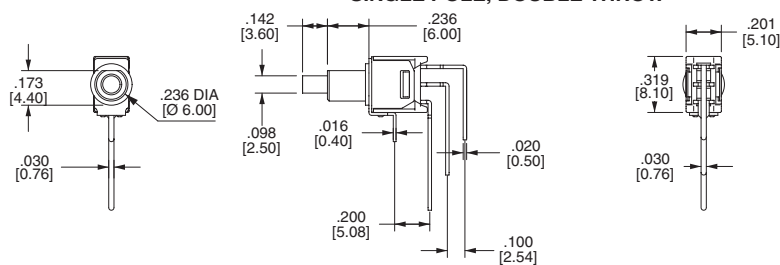
SINGLE POLE, SINGLE THROW



PC MOUNTING



SINGLE POLE, DOUBLE THROW



PC MOUNTING

