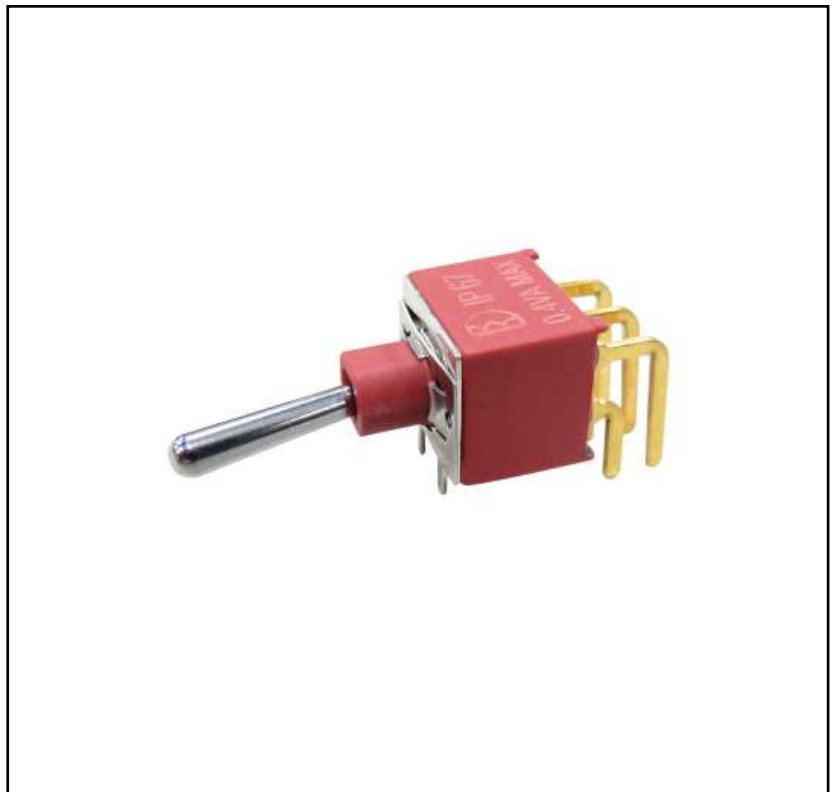


FEATURES

- UL, RoHS and Lead-Free compliance
- IP67
- Wide variety of switching functions: SPDT, DPDT, 3PDT
- Vertical, right angle and vertical right angle mounting brackets
- Customization available

RS PRO Sealed Miniature Toggle Switches

RS Stock No.: 2099344, 2099346, 2099343, 2099345



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

Sealed Miniature Toggle Switches

Similar Products

Stock No.	Brand	Switch Function	Terminal Type	Terminal Plating	Actuator Type	Bushing Type
2099344	RS PRO	SP ON-NONE-ON	PC thru-hole	GOLD	12.70 High	6.10 high
2099346	RS PRO	SP ON-OFF-ON	PC thru-hole	GOLD	12.70 High	6.10 high
2099345	RS PRO	SP ON-NONE-ON	Right angle, PC thru-hole	GOLD	12.70 High	6.10 high
2099343	RS PRO	DP ON-NONE-ON	Right angle, PC thru-hole	GOLD	12.70 High	6.10 high

SWITCH FUNCTION

NO. POLES	UUCSA MODEL NO.	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS / SCHEMATIC			
			POS.1	POS.2	POS.3	POS.1	POS.2	POS.3	
SP	Q11A11	1AS1	ON	NONE	ON	2-3	N/A	2-1	
	Q11A12	1AS2	ON	NONE	(ON)				
	Q11A13	1AS3	ON	OFF	ON	2-3 (COMB) 1-2	OPEN	2-1 (COMB) 3-2	
	Q11A14	1AS4	(ON)	OFF	(ON)				
	Q11A15	1AS5	ON	OFF	(ON)				
DP	Q11A21	1AD1	ON	NONE	ON	2-3,5-6	N/A	2-1,5-4	
	Q11A22	1AD2	ON	NONE	(ON)				
	Q11A23	1AD3	ON	OFF	ON		2-3 (COMB) 1-2	OPEN	2-1 (COMB) 3-2
	Q11A24	1AD4	(ON)	OFF	(ON)				
	Q11A25	1AD5	ON	OFF	(ON)				
	Q11A26	1AD6	ON	ON	ON				
	▲ Q11A27	1AD7	(ON)	ON	(ON)	2-3,5-6	2-3,5-4	2-1,5-4	
	▲ Q11A28	1AD8	ON	ON	(ON)				
	3P	Q11A31	1A31	ON	NONE	ON	2-3,5-6,8-9	N/A	2-1,5-4,8-7
		Q11A32	1A32	ON	NONE	(ON)			
Q11A33		1A33	ON	OFF	ON	2-3 (COMB) 1-2	OPEN	2-1 (COMB) 3-2	
Q11A34		1A34	(ON)	OFF	(ON)				
Q11A35		1A35	ON	OFF	(ON)				

() = MOMENTARY

▲ Please check the availability in advance before order

Product Description

1A series toggle switches comply with IP67 standards, and contact rating up to 5A. We offer a variety of switching functions, SPDT, DPDT, 3PDT and more.

We use water-proof sealing design to prevent dust from getting inside during soldering. The operating temperature range between -40°C and 85°C. Both bushing and insulator are complied with nylon UL94V-0 standard.

APPLICATIONS:

- telecommunications and networking equipment (wireless network cards, handheld devices, reset switches)
- instrumentation (shut-off switches, controllers)
- industrial controls (grips, joysticks, power supplies)
- test and measurement equipment
- elevator controls
- food processing equipment
- boat and marine control panels
- medical equipment (wheelchair motor switch)
- off-highway and construction equipment
- security systems and metal detectors

Sealed Miniature Toggle Switches

Specifications

SPECIFICATIONS

CONTACT RATING: Dependent upon contact material

MECHANICAL LIFE: 30,000 make-and-break cycles.

CONTACT RESISTANCE: 10 mΩ max. initial @ 2-4VDC
100mA for both silver and gold plated contacts.

INSULATION RESISTANCE: 1,000 MΩ min.

DIELECTRIC STRENGTH: 1,000 Vrms min.@sea level.

OPERATING TEMPERATURE: -40°C to 85°C.

MATERIALS

CASE & BUSHING: Glass filled nylon 6/6, flame retardant, heat stabilized (UL94v-0).

ACTUATOR: Brass, chrome plated with internal, O-ring seal standard.

SWITCH SUPPORT: Brass or steel, tin plated.

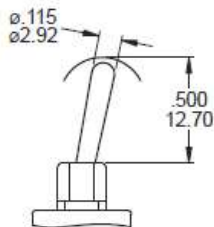
SWITCH SUPPORT RETAINER: Stainless steel.

CONTACT / TERMINALS: Copper alloy, with Silver or gold plated.

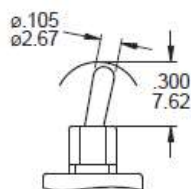
Actuator Options

Actuator shown with standard B4 Bushing,
Subtract .085 (2.15) for B1 bushing.

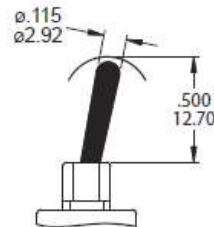
T1



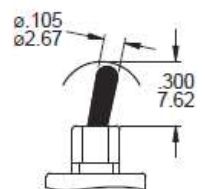
T2



TA



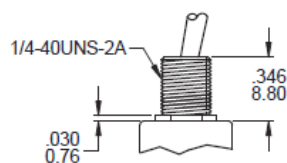
TB



PLASTIC ACTUATOR
(TC, Silver)

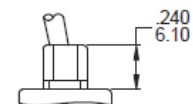
BUSHING OPTIONS

B1



Std for M1

B4



Std for M2, M6, M7, VS termination

Sealed Miniature Toggle Switches

TERMINATION OPTIONS

M1 Solder lug

M2 PC Thru-hole

M3 Quick connect

M5 Wire Wrap

OTHER TERMINATION OPTIONS

<p>M6 Right angle P.C. Mount</p> <p>M7 Vertical right angle P.C. Mount</p> <p>VS2 Vertical bracket P.C. Mount</p> <p>VS3 Vertical bracket P.C. Mount</p>	<p>M6N Right angle P.C. Mount with snap-in bracket</p> <p>V2N Vertical bracket P.C. Mount with snap-in bracket</p>
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OPTION CODE	DIM. 'A'
M51	.736 (18.70)
M52	.953 (24.20)
M53	.415 (10.55)
M54	1.062 (26.97)

CONTACT MATERIAL OPTIONS

	CONTACT PLATING	TERMINAL PLATING	RATINGS
Q	Silver	Gold flash over silver	5 Amps with resistant load @ 120VAC or 28VDC 2 Amps with resistant load @ 250VAC
C	Gold over Silver	Gold over silver	
R	Gold	Gold	0.4 Volt - Amps (VA) max. @ 20V max. (AC or DC)

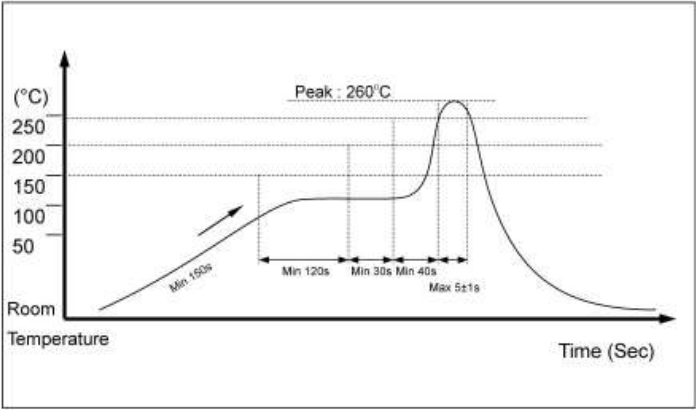
SOLDERING PROCESSES

MANUAL SOLDERING: Use soldering iron of 30 watts, controlled at 350°C approximately 5 seconds while applying solder.

WAVE SOLDERING: Recommended Soldering Temperature: 270 ± 5°C
Duration of Solder Immersion: Max 5 sec. (PCB is 1.6mm in thickness)

Sealed Miniature Toggle Switches

Reliability Performance

<p>Resistance Humidity</p>	<p>Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before the measurements are made :</p> <ul style="list-style-type: none"> ☐ Temperature : $40 \pm 2^{\circ}\text{C}$. ☐ Relative Humidity : 90~95%. ☐ Time : 96 hours.
<p>The Salt Testing</p>	<p>Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before the measurements are made :</p> <ul style="list-style-type: none"> ☐ Temperature : $35 \pm 2^{\circ}\text{C}$. ☐ The ratio of salt-water : 5%. ☐ The spray amount of salt- water : 1~2 ml/h. ☐ Time : 48 hours.
<p>Test of IP 67</p>	<p>Protected against the effects of temporary immersion in water. (1m below the surface of the water for duration of 30 min).</p>
<p>Wave Soldering</p>	<p>■ Wave Soldering :</p> <ul style="list-style-type: none"> ➤ Soldering Temperature: $260 \pm 5^{\circ}\text{C}$. ➤ Duration of Solder Immersion: 5 ± 1 seconds. ➤ Frequency of Soldering Process <p>Temperature Profile</p>  <ul style="list-style-type: none"> ➤ 2 times max. PCB is 1.6mm in thickness.
<p>Manual Soldering</p>	<p>■ Manual Soldering :</p> <ul style="list-style-type: none"> ➤ Soldering Temperature : 350°C max. ➤ Duration of Solder Heated : 3 ± 1 seconds. <p>■ Precautions in Handling</p> <ul style="list-style-type: none"> ➤ Care should be exercised so that flux from the upper part of the printed circuit board does not adhere to the switch. ➤ Except for washable type do not wash the switch. ➤ Please make sure that there is no flux rose over the surface of the PCB.

Sealed Miniature Toggle Switches

Additional Information

Custom Tariff Number 8536500000

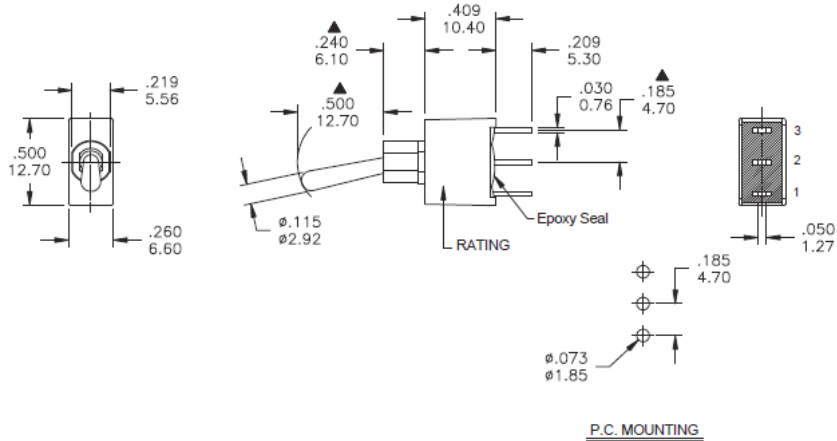
Approvals

Hazardous Area Certification RoHS 2011/65/EU & 2015/863

Standards Met IP 67

Stock No. 209-9344

Drawing:

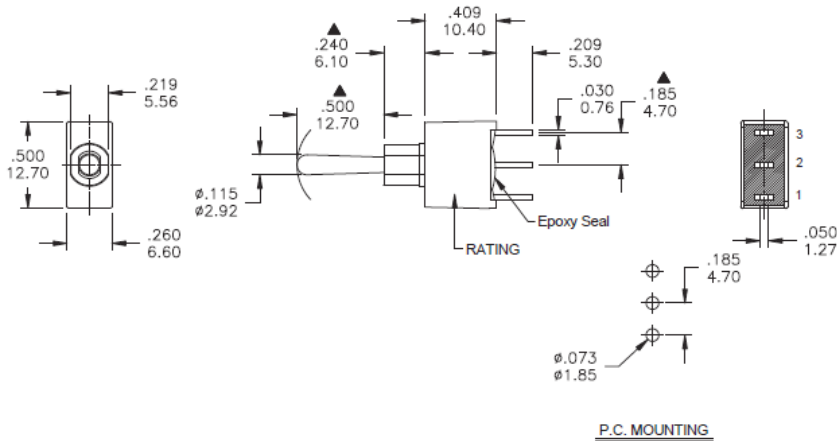


Model No.	POS.1	POS.2	POS.3
1AS1	ON	NONE	ON
Term. Comm.	2-3	N/A	2-1
SCHEMATIC		N/A	

SWITCH FUNCTION

Stock No. 209-9346

Drawing:



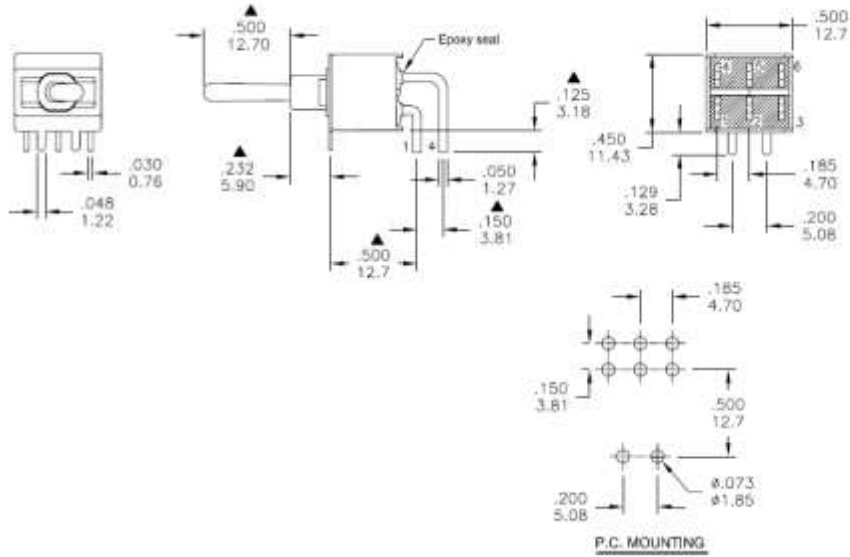
Model No.	POS.1	POS.2	POS.3
1AS3	ON	OFF	ON
Term. Comm.	2-3	OPEN	2-1
SCHEMATIC		OPEN	

SWITCH FUNCTION

Sealed Miniature Toggle Switches

Stock No. 209-9343

Drawing:

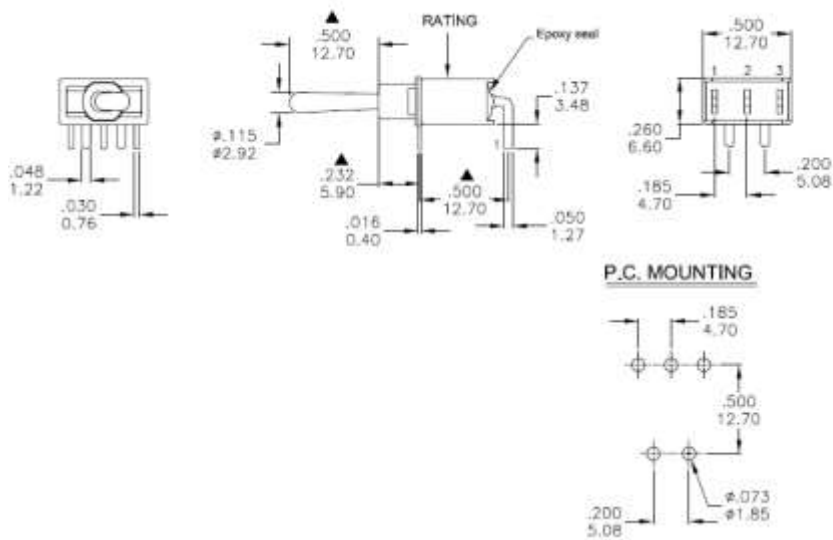


Model No.	POS.1	POS.2	POS.3
1AD1	ON	NONE	ON
Term. Comm.	2-3,5-6		2-1,5-4
SCHEMATIC		OPEN	

SWITCH FUNCTION

Stock No. 209-9345

Drawing:



Model No.	POS.1	POS.2	POS.3
1AS1	ON	NONE	DN
Term. Comm.	2-3		2-1
SCHEMATIC		N/A	

SWITCH FUNCTION