

7000 Series Miniature Toggle Switches

Features/Benefits

- Multi-pole and multi-position
- Wide variety of actuator and termination options
- Epoxy terminal-seal compatible with bottom wash cleaning
- RoHS complaint models available

Typical Applications

- Telecommunications
- Instrumentation
- Medical equipment



Specifications

CONTACT RATING: B contact material: 0.4 VA max. @ 20 V AC or DC max. Q contact material: 5 AMPS @ 120 V AC or 28 V DC; 2 AMPS @ 250 V AC. See page F-15 for additional ratings.

ELECTRICAL LIFE: 7X01 and UX1 models: 100,000 make-and-break cycles at full load. All other models: 40,000 cycles.

CONTACT RESISTANCE: Below 10 m Ω typ. initial @ 2-4 V DC, 100 mA, for both silver and gold plated contacts.

INSULATION RESISTANCE: 10⁹ Ω min.

DIELECTRIC STRENGTH: 1000 Vrms min. @ sea level.

OPERATING TEMPERATURE: -30°C to 85°C.

SOLDERABILITY: Per MIL-STD-202F method 208D, or EIA RS-186E method 9 (1 hour steam aging).

For materials see page F-4.

NOTE: Any models supplied with P, S R, Q, B or G contact material are RoHS compliant and compatible.

NOTE: Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

Build-A-Switch

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages F-4 thru F-16. For additional options not shown in catalog, consult our Customer Service Center.

Switch Function	Actuator	Bushing	Terminations	Contact Material	Seal	Actuator Color/Finish	KXX Actuator Color/Finish	Bushing Finish
7101 SP On-None-On	M .200" high	D .280 high, keyway	A Right angle, PC thru-hole	B Gold	E Epoxy	NONE Bright chrome	NONE Natural aluminum	NONE Nickel on all bushings (except D8, satin chrome)
7103 SP On-Off-On	P3 Flatted, anti-rotation, .450" high	H .296 high, flat	AV2 Vert. right angle, PC thru-hole	P Gold, matte-tin	I Epoxy potted base	2 Black	2 Black anodized aluminum	2 Black
7105 SP Mom.-Off-Mom.	S .420" high	Y .350 high, keyway	C PC Thru-hole	Q Silver		3 Red	3 Red anodized aluminum	
7107 SP On-Off-Mom.	T .687" high, 15/32 bushing	NONE No bushing choice required	V3 .460 high, V-bracket	S Silver, matte-tin		S Satin chrome	7 Blue anodized aluminum	
7108 SP On-None-Mom.	K2 Locking lever, .704" high	CW Splashproof	Z Solder lug	G Gold over silver				
7109 SP None-On-Mom.	D8 .280" high, flat	D9 .280" high, keyway	A2 Right angle, PC thru-hole	R Gold over silver, matte-tin				
7201 DP On-None-On	K9 Locking lever, .704" high	H3 .315" high, keyway	A3 Right angle, PC thru-hole					
7203 DP On-Off-On	K12 Locking lever, .732" high	H4 8mm high, keyway	A4 Right angle, PC thru-hole					
7205 DP Mom.-Off-Mom.	K19 Locking lever, .732" high	Y1 .378" high, keyway	AW1 Right angle, extended, PC thru-hole					
7207 DP On-Off-Mom.	L .840" high	Y3 8.9mm high, keyway	AW4 Right angle, extended, PC thru-hole					
7208 DP On-None-Mom.	L1 .640" high	Y4 .378" high, flat	V2 .555" high, V-bracket					
7211 DP On-On-On	L1P Anti-rotation, .640" high	Y9 .350" high, keyway	V4 .630" high, V-bracket					
7213 DP On-On-Mom.	L2 .550" high		V6 .460" high, V-bracket					
7215 DP Mom.-On-Mom.	L2P Anti-rotation, .550" high		V7 .630" high, V-bracket					
7301 3P On-None-On	L3 Plastic .940" inch		V8 .953" high, V-bracket					
7303 3P On-Off-On	L40 Lever handle without cap		V9 1.150" high, V-bracket					
7305 3P Mom.-Off-Mom.	L41 .531" high lever handle with cap		V21 .555" high, snap-in V-bracket					
7308 3P On-None-Mom.	L42 .838" high lever handle with cap		V31 .460" high, snap-in V-bracket					
7401 4P On-None-On	MP Anti-rotation, .200" high		V41 .630" high, snap-in V-bracket					
7403 4P On-Off-On	P1 Flatted, anti-rotation, .840" high		V71 .630" high, snap-in V-bracket					
7405 4P Mom.-Off-Mom.	P4 Flatted, anti-rotation, .250" high		V81 .953" high, snap-in V-bracket					
7408 4P On-None-Mom.	SP Anti-rotation, .420" high							
7411 4P On-On-On	T1 .487" high, 15/32 bushing							
7413 4P On-On-Mom.	T1P Anti-rotation, .487" high, 15/32 bushing							
7415 4P Mom.-On-Mom.	T2P Flatted, anti-rotation, .610" high, 15/32 bushing							
	TP Anti-rotation, .687" high, 15/32 bushing							

Note: UL models available, see pages F-4 & F-5.



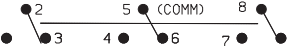
Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change



F-4

7000 Series Miniature Toggle Switches

SWITCH FUNCTION

NO. POLES	MODEL NO.	UL** MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC
			POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
			KEYWAY 	KEYWAY 	KEYWAY 	KEYWAY 	KEYWAY 	KEYWAY 	
3P	7301	U31	ON	NONE	ON	2-3,5-6,8-9	N/A	2-1,5-4,8-7	
	7303	U33	ON	OFF	ON	2-3,5-6,8-9	OPEN	2-1,5-4,8-7	
	7305	U35	MOM.	OFF	MOM.				
	7307	U37	ON	OFF	MOM.				
	7308	U38	ON	NONE	MOM.	2-3,5-6,8-9	N/A	2-1,5-4,8-7	

3PDT



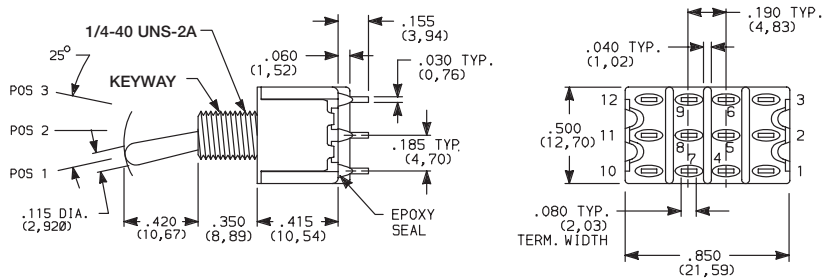
Part number shown: 7301SYZQE

Terminal Numbers
For Reference Only

4P	7401	U41	ON	NONE	ON	2-3,5-6,8-9,11-12	N/A	2-1,5-4,8-7,11-10		
	7403	U43	ON	OFF	ON	2-3,5-6,8-9,11-12	OPEN	2-1,5-4,8-7,11-10		
	7405	U45	MOM.	OFF	MOM.					
	7408	U48	ON	NONE	MOM.					
	7411*	U411*	ON	ON	ON	2-3,5-6,8-9,11-12	2-3,5-4,8-9,11-10	2-1,5-4,8-7,11-10		
	7413*	U413*	ON	ON	MOM.					
	7415*	U415*	MOM.	ON	MOM.					

4PDT

4PDT



Part number shown: 7401SYZQE

Terminal Numbers
For Reference Only

MOM. = Momentary

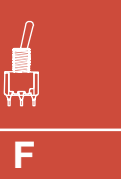
Wiring for 3-way switch, see Section N.

** U11-U415 model nos. with all options when ordered with G, Q, R or S contact material.



Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

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Toggle

7000 Series Miniature Toggle Switches

ACTUATOR



S .420" HIGH ¹

SP ANTIROTATION, .420" HIGH ^{2,3}



S actuator standard when ordered with C, W-W5, Z & Z3 terminations.
Caps are available separately, see page F-16.

M .200" HIGH ¹

MP ANTIROTATION, .200" HIGH ^{2,3}



M actuator standard when ordered with all terminations except C, W-W5, Z & Z3.
Caps are available separately, see page F-16.

L, L1, L2 .840", .640", .550" HIGH ¹

L1P, L2P ANTIROTATION, .840", .640", .550" HIGH ^{2,3}



OPTION CODE	DIM 'A'
L	.840 (21,34)
L1, L1P	.640 (16,26)
L2, L2P	.550 (13,97)

Caps are available separately, see page F-16.

***P1** FLATTED WITH ANTIROTATION, .840" HIGH ^{2,3}



***P3** FLATTED WITH ANTIROTATION, .450" HIGH ^{2,3}



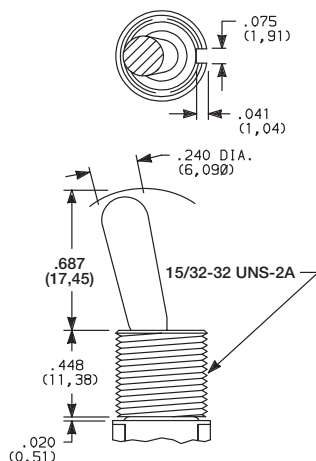
***P4** FLATTED WITH ANTIROTATION, .250" HIGH ^{2,3}



*Dress nut part number 709901201 supplied standard with threaded bushing. (Part number 709903201 with metric threaded bushings.)

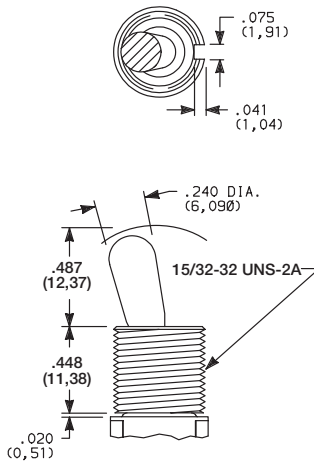
T .687 (17,45) HIGH ^{1,2}

TP ANTIROTATION, .687 (17,45) HIGH, 15/32 BUSHING ^{1,2,3}

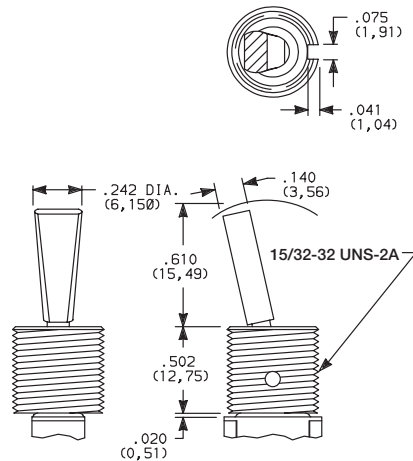


T1 .487 (12,37) HIGH ^{1,2}

T1P ANTIROTATION, .487 (12,37) HIGH, 15/32 BUSHING ^{1,2,3}



T2P FLATTED, ANTIROTATION, .610" HIGH, 15/32 BUSHING ^{1,2,3}



Bushing option code not required unless CW splashproof bushing ordered. TP & T1P actuators not available with CW splashproof bushing. All TXX actuators not available on single pole models with A-A4, AW1-AW4 terminations.

Bushing option code not required. T2P actuator not available with CW splashproof bushing or single pole models with A-A4, AW1-AW4 terminations.



F

Toggle

- 1 L, L1, L2, M, S & TXX actuators not available with Y1 bushing.
- 2 L1P, L2P, MP, P1, P3, P4, SP & TXX actuators not available with D8 & H4 bushing.
- 3 Antirotation: Provides anti-"push-in" feature on actuator.

* Add .070 (1,78) for D, D8 & D9 bushings, subtract .020 (0,51) for H3 bushing.

OPTION CODE	ACTUATOR FINISH
NONE	BRIGHT CHROME-With Nickel Plated Bushing
2	BLACK
S	SATIN CHROME

NOTE: Black hardware is supplied when either black actuators or bushings are specified. For additional hardware, see Section N.



Third Angle Projection

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

C&K

7000 Series Miniature Toggle Switches

ACTUATOR



- K2** LOCKING LEVER, .704" HIGH
(threaded)
- K9** LOCKING LEVER, .704" HIGH
(unthreaded)

- K12** LOCKING LEVER, .732" HIGH
(threaded)
- K19** LOCKING LEVER, .732" HIGH
(unthreaded)



Replaces K, K8



Replaces K1, K18

OPTION CODE	ACTUATOR CAP FINISH
NONE	NATURAL ALUMINUM—With Nickle Plated Bushing
2	BLACK ANODIZED ALUMINUM
3	RED ANODIZED ALUMINUM
7	BLUE ANODIZED ALUMINUM

* All KXX models including KXXCW have a keyway

Locking Positions



-01 Models
2 Position lock



-03 & -11 Models
3 Position lock



-05, -09 & -15 Models
1 Position lock



-07 & -13 Models
2 Position lock



-08 Models
1 Position lock

NOTE: To prevent accidental actuation, toggle must be lifted before being actuated. When released, toggle will lock in place. Overtightening mounting nut may cause actuator to bind.

Locking levers supplied with bushing shown.

Bushing option code not required unless CW splashproof bushing ordered.

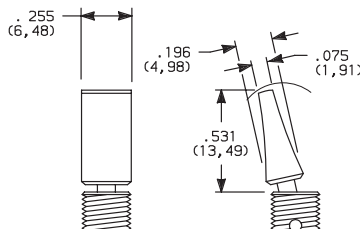
- L40** LEVER HANDLE WITHOUT CAP

- L41** PLASTIC LEVER HANDLE WITH
ANTIROTATION AND CAP, P/N 4810

- L42** PLASTIC LEVER HANDLE WITH
ANTIROTATION AND CAP, P/N 4811



No color choice required



Finish: Matte (L41 & L42).



- L3** PLASTIC .940" HIGH



OPTION CODE	PLASTIC ACTUATOR COLORS
NONE	No Actuator Color (L40 option)
2	BLACK
3	RED

* Add .070 (1,78) for D, D8 & D9 bushings, subtract .020 (0,51) for H3 bushing.

NOTE: Lever handle for L41 & L42 actuators supplied, but not installed. For interchangeability, order L40 actuator option and lever handles separately, see page F-16. L4X actuators not available with H4, Y1, Y4 bushings. Antirotation: Provides anti-'push-in' feature on actuator.



Third Angle
Projection

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change



F

Toggle

7000 Series Miniature Toggle Switches

BUSHING



Y .350" HIGH, THREADED, KEYWAY
Y9 .350" HIGH, UNTHREADED, KEYWAY

No bushing choice required with KXX, TXX actuators. (exception: Specify CW if splashproof bushing desired).

NONE NO BUSHING

D .280" HIGH, THREADED, KEYWAY
D8 .280" HIGH, UNTHREADED, FLAT ³
D9 .280" HIGH, UNTHREADED, KEYWAY

D9 bushing standard with all terminations except C, W-W5, Z or Z3. Add .070 (1,78) to all actuators lengths with D, D8 & D9 bushings.

H .296" HIGH, FLAT THREADED, HIGH TORQUE ^{1,2}

H3 .315" HIGH, KEYWAY THREADED, HIGH TORQUE ^{1,2}

Subtract .020 (0,51) from all actuator lengths for H3 bushing.

H4 8mm HIGH, KEYWAY, THREADED, METRIC HIGH TORQUE ^{1,2,3}

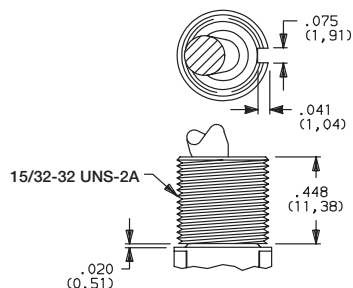
Y1 .378" HIGH, KEYWAY, THREADED, HIGH TORQUE ^{1,2,4}

Y3 8.9mm HIGH, KEYWAY, THREADED, METRIC

Y4 .378" HIGH, FLAT, THREADED, HIGH TORQUE ^{1,2,5}

CW THREADED, SPLASHPROOF ^{1,2}
For T & T1 actuators.

For actuators other than T, T1 and KXX.



IP67 Degree of protection, totally protected against dust, full-scale voltage protection, temporary immersion. Internal actuator seal standard. External bushing seal available separately from APM Hexseal, part # MFS-60064.



IP67 Degree of protection, totally protected against dust, full-scale voltage protection, temporary immersion. Internal actuator seal and external bushing seal washer standard. IP65 degree of protection for LXP, MP, PX or SP with CW option.

OPTION CODE	BUSHING FINISH
NONE	NICKEL on all bushings except 'D8' satin chrome.
2	BLACK

- Will withstand 12 in.-lbs. of torque with no distortion.
- CW, H, H3, H4, Y1 & Y4 bushings not available on single pole models with A4 terminations.
- D8 & H4 bushings available only with L, L1, L2, M & S actuators.
- Y1 bushing available only with LXP, MP, PX & SP actuators.
- Y4 bushing not available with L4X actuators.

NOTE: Two mounting nuts, locking ring and lockwasher supplied standard with threaded bushings. Black hardware is supplied when either black bushings or actuators are specified. Optional mounting nut and locking ring styles and finishes available, see Section N.

PANEL MOUNTING

1/4 INCH BUSHING

METRIC BUSHING

15/32 INCH BUSHING



Third Angle Projection

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

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7000 Series Miniature Toggle Switches

TERMINATIONS

Z SOLDER LUG



SPDT thru 4PDT

Not available with P, R or S contact materials.

C PC THRU-HOLE



SPDT thru 4PDT

PC MOUNTING



Z3 QUICK CONNECT

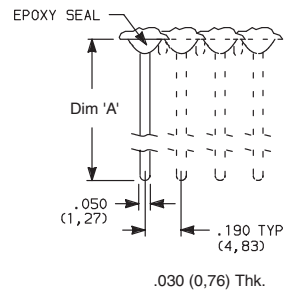


SPDT thru 4PDT

Not available with P, R or S contact materials.
Mating quick connector available, order part number 530100000, page F-16.

W, W1, W3, W4, W5

WIRE WRAP



SPDT thru 4PDT

OPTION CODE	DIM 'A'
W	.750 (19,05)
W1	.964 (24,48)
W3	.425 (10,80)
W4	1.062 (26,97)
W5	1.305 (33,15)

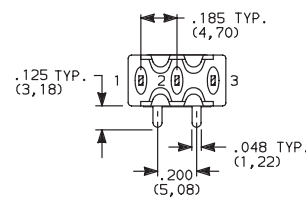
A RIGHT ANGLE, PC THRU-HOLE



Actuator Shown
In Pos. 1

Switch support with CW, H, H3, H4, Y1, Y4
bushings and KXX actuators.

Part No. Shown: 7101MHABE



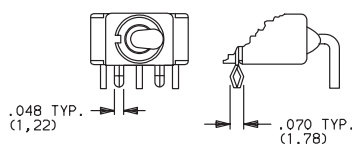
SECTION A-A

Terminal Nos.
For Reference Only



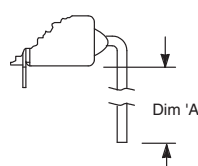
7101MD9ABE
Horizontal Actuation
SPDT

A3 RIGHT ANGLE, SNAP-IN, PC THRU-HOLE



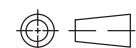
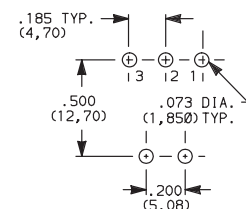
Not available with I seal option.
Terminal bend radii and lead-in manufacturing option.

AW1, AW4 RIGHT ANGLE, EXTENDED, PC THRU-HOLE



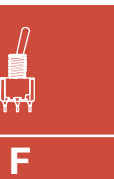
OPTION CODE	DIM 'A'
AW1	.72 (18,3)
AW4	.83 (21,1)

PC MOUNTING



Third Angle
Projection

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change



Toggle

TERMINATIONS

Diagram of a square component with dimensions:

- Width: .500 (12,70)
- Height: .450 (11,43)
- Thickness: .030 TYP. (0,76)

Technical drawing of a probe assembly. The drawing shows a cross-section of the assembly with various dimensions and labels. The dimensions are given in inches and millimeters (in parentheses). The labels include:

- $.105 \text{ DIA.}$ (2, 670)
- $.225$ (5, 72)
- $.270$ (6, 86)
- $.288$ (7, 32)
- $.500$ (12, 70)
- $.150$ (3, 81)
- $.050 \text{ TYP.}$ (1, 27)
- EPOXY SEAL
- A
- 1
- 4

The drawing shows a probe assembly with a central probe tip and a base. The probe tip has a diameter of $.105 \text{ DIA.}$ (2, 670). The base has a length of $.270$ (6, 86). The probe tip is mounted on a base with a length of $.288$ (7, 32). The base has a diameter of $.500$ (12, 70). The probe tip is mounted on a base with a length of $.150$ (3, 81). The base has a diameter of $.050 \text{ TYP.}$ (1, 27). The base is sealed with EPOXY SEAL. The probe tip is labeled A. The base is labeled 1. The probe tip is labeled 4.

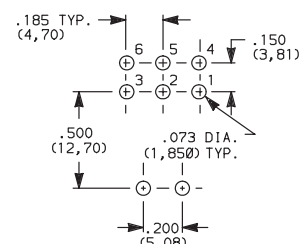


AW1, AW4 RIGHT ANGLE, EXTENDED,
PC THRU-HOLE



OPTION CODE	DIM 'A'
AW1	.40 (10,2)
AW4	.50 (12,7)

PC MOUNTING



A RIGHT ANGLE, PC THRU-HOLE



Diagram of the U-100 component showing dimensions: .500 (12, 70) and .650 (16, 51).

Technical drawing of a component showing dimensions and features:

- Dimensions:**
 - $.105 \text{ DIA. (2,670)}$
 - $.324 \text{ (8,23)}$
 - $.270 \text{ (6,86)}$
 - $.288 \text{ (7,32)}$
 - $.565 \text{ (14,35)}$
 - $.150 \text{ TYP. (3,81)}$
 - $.050 \text{ TYP. (1,27)}$
- Features:**
 - A**: Two points on the top and bottom surfaces of the component.
 - EPOXY SEAL**: A label pointing to the top surface of the component.
 - 1, 4, 7**: Three vertical lines on the right side of the component, likely indicating specific features or sections.



SECTION A-A

PC MOUNTING



F-10

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

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TERMINATIONS

Diagram illustrating the dimensions of the 2-pin connector:

- Overall width: .500 (12, 70)
- Overall height: .270 (6, 86)
- Pin diameter: .046 TYP. (1, 17)
- Pin spacing: .125 TYP. (3, 18)

Terminals & Support

Technical drawing of a CW, H, H3, H4, Y1, Y4 bushings and KXX actuators. The drawing shows two views of the component with dimensions in inches and millimeters.

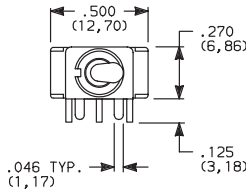
Top View Dimensions:

- .105 DIA. (2,678)
- EP0XY SEAL
- .270 (6,86)
- .288 (7,32)
- .500 (12,70)
- .030 T (0,76)
- .050 TYP. (1,27)

Bottom View Dimensions:

- .197 (5,00)
- .200 (5,08)
- .324 (8,23)
- .062 (1,57)
- .125 (3,18)

support with CW, H, H3, H4, Y1, Y4 bushings and KXX actuators.



Technical drawing of a probe assembly. The drawing shows a cylindrical body with a probe tip on the left and a handle on the right. Dimensions are given in inches and millimeters. Labels include ".105 DIA. (2,670)", "EPOXY SEAL", ".050 TYP. (1,27)", and ".03 (0)".

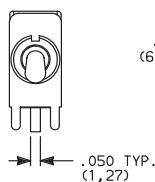
Dimensions:

- Probe tip diameter: .105 DIA. (2,670)
- Probe tip length: .270 (6,86)
- Probe body length: .422 (10,72)
- Probe body diameter: .365 (9,27)
- Probe tip to handle distance: .050 TYP. (1,27)
- Probe tip to handle distance: .03 (0)

Labels:

- EPOXY SEAL

Figure 1 is a block diagram of a 3-bit parallel adder. It consists of three adders, labeled 1, 2, and 3, arranged in a cascade. Each adder has two inputs and one output. The inputs are labeled A, B, and C, and the outputs are labeled 1, 2, and 3. The adders are represented by circles with a plus sign inside. The inputs and outputs are connected by lines. The outputs are labeled with their decimal values and bit patterns: 1 (3, 96), 2 (1, 850), and 3 (5, 08). The diagram also shows the internal structure of the adders, with lines indicating the flow of data between the inputs, the adders, and the outputs.



Technical drawing of a 4-pin connector assembly. The drawing shows a side view of the connector with dimensions in inches and millimeters. Key dimensions include:

- Overall width: .270 (6,86)
- Pin spacing (center-to-center): .288 (7,32)
- Pin diameter: .030 TYP. (0,76)
- Pin length: .150 TYP. (3,81)
- Pin 1 to Pin 2 distance: .500 (12,70)
- Pin 2 to Pin 3 distance: .125 (3,18)
- Pin 3 to Pin 4 distance: .125 (3,18)
- Pin 4 to Pin 5 distance: .125 (3,18)
- Pin 5 to Pin 6 distance: .125 (3,18)
- Pin 6 to Pin 7 distance: .125 (3,18)
- Pin 7 to Pin 8 distance: .125 (3,18)
- Pin 8 to Pin 9 distance: .125 (3,18)
- Pin 9 to Pin 10 distance: .125 (3,18)
- Pin 10 to Pin 11 distance: .125 (3,18)
- Pin 11 to Pin 12 distance: .125 (3,18)
- Pin 12 to Pin 13 distance: .125 (3,18)
- Pin 13 to Pin 14 distance: .125 (3,18)
- Pin 14 to Pin 15 distance: .125 (3,18)
- Pin 15 to Pin 16 distance: .125 (3,18)
- Pin 16 to Pin 17 distance: .125 (3,18)
- Pin 17 to Pin 18 distance: .125 (3,18)
- Pin 18 to Pin 19 distance: .125 (3,18)
- Pin 19 to Pin 20 distance: .125 (3,18)
- Pin 20 to Pin 21 distance: .125 (3,18)
- Pin 21 to Pin 22 distance: .125 (3,18)
- Pin 22 to Pin 23 distance: .125 (3,18)
- Pin 23 to Pin 24 distance: .125 (3,18)
- Pin 24 to Pin 25 distance: .125 (3,18)
- Pin 25 to Pin 26 distance: .125 (3,18)
- Pin 26 to Pin 27 distance: .125 (3,18)
- Pin 27 to Pin 28 distance: .125 (3,18)
- Pin 28 to Pin 29 distance: .125 (3,18)
- Pin 29 to Pin 30 distance: .125 (3,18)
- Pin 30 to Pin 31 distance: .125 (3,18)
- Pin 31 to Pin 32 distance: .125 (3,18)
- Pin 32 to Pin 33 distance: .125 (3,18)
- Pin 33 to Pin 34 distance: .125 (3,18)
- Pin 34 to Pin 35 distance: .125 (3,18)
- Pin 35 to Pin 36 distance: .125 (3,18)
- Pin 36 to Pin 37 distance: .125 (3,18)
- Pin 37 to Pin 38 distance: .125 (3,18)
- Pin 38 to Pin 39 distance: .125 (3,18)
- Pin 39 to Pin 40 distance: .125 (3,18)
- Pin 40 to Pin 41 distance: .125 (3,18)
- Pin 41 to Pin 42 distance: .125 (3,18)
- Pin 42 to Pin 43 distance: .125 (3,18)
- Pin 43 to Pin 44 distance: .125 (3,18)
- Pin 44 to Pin 45 distance: .125 (3,18)
- Pin 45 to Pin 46 distance: .125 (3,18)
- Pin 46 to Pin 47 distance: .125 (3,18)
- Pin 47 to Pin 48 distance: .125 (3,18)
- Pin 48 to Pin 49 distance: .125 (3,18)
- Pin 49 to Pin 50 distance: .125 (3,18)
- Pin 50 to Pin 51 distance: .125 (3,18)
- Pin 51 to Pin 52 distance: .125 (3,18)
- Pin 52 to Pin 53 distance: .125 (3,18)
- Pin 53 to Pin 54 distance: .125 (3,18)
- Pin 54 to Pin 55 distance: .125 (3,18)
- Pin 55 to Pin 56 distance: .125 (3,18)
- Pin 56 to Pin 57 distance: .125 (3,18)
- Pin 57 to Pin 58 distance: .125 (3,18)
- Pin 58 to Pin 59 distance: .125 (3,18)
- Pin 59 to Pin 60 distance: .125 (3,18)
- Pin 60 to Pin 61 distance: .125 (3,18)
- Pin 61 to Pin 62 distance: .125 (3,18)
- Pin 62 to Pin 63 distance: .125 (3,18)
- Pin 63 to Pin 64 distance: .125 (3,18)
- Pin 64 to Pin 65 distance: .125 (3,18)
- Pin 65 to Pin 66 distance: .125 (3,18)
- Pin 66 to Pin 67 distance: .125 (3,18)
- Pin 67 to Pin 68 distance: .125 (3,18)
- Pin 68 to Pin 69 distance: .125 (3,18)
- Pin 69 to Pin 70 distance: .125 (3,18)
- Pin 70 to Pin 71 distance: .125 (3,18)
- Pin 71 to Pin 72 distance: .125 (3,18)
- Pin 72 to Pin 73 distance: .125 (3,18)
- Pin 73 to Pin 74 distance: .125 (3,18)
- Pin 74 to Pin 75 distance: .125 (3,18)
- Pin 75 to Pin 76 distance: .125 (3,18)
- Pin 76 to Pin 77 distance: .125 (3,18)
- Pin 77 to Pin 78 distance: .125 (3,18)
- Pin 78 to Pin 79 distance: .125 (3,18)
- Pin 79 to Pin 80 distance: .125 (3,18)
- Pin 80 to Pin 81 distance: .125 (3,18)
- Pin 81 to Pin 82 distance: .125 (3,18)
- Pin 82 to Pin 83 distance: .125 (3,18)
- Pin 83 to Pin 84 distance: .125 (3,18)
- Pin 84 to Pin 85 distance: .125 (3,18)
- Pin 85 to Pin 86 distance: .125 (3,18)
- Pin 86 to Pin 87 distance: .125 (3,18)
- Pin 87 to Pin 88 distance: .125 (3,18)
- Pin 88 to Pin 89 distance: .125 (3,18)
- Pin 89 to Pin 90 distance: .125 (3,18)
- Pin 90 to Pin 91 distance: .125 (3,18)
- Pin 91 to Pin 92 distance: .125 (3,18)
- Pin 92 to Pin 93 distance: .125 (3,18)
- Pin 93 to Pin 94 distance: .125 (3,18)
- Pin 94 to Pin 95 distance: .125 (3,18)
- Pin 95 to Pin 96 distance: .125 (3,18)
- Pin 96 to Pin 97 distance: .125 (3,18)
- Pin 97 to Pin 98 distance: .125 (3,18)
- Pin 98 to Pin 99 distance: .125 (3,18)
- Pin 99 to Pin 100 distance: .125 (3,18)

Labels include: A, A, EPOXY SEAL, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

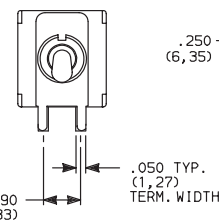
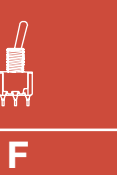


Figure 1 is a cross-sectional view of the assembly. It shows a central component with a conical tip on the left and a multi-layered structure on the right. Dimensions are given in inches and millimeters. Key dimensions include: a total height of .250 (6,35) on the left; a central width of .270 (6,86); a distance of .288 (7,32) from the center to the start of the multi-layered section; a total width of .500 (12,70) for the multi-layered section; a distance of .150 TYP (3,81) from the end of the multi-layered section to the right edge; and a total width of .125 (3,18) on the right. A .030 TYP dimension is shown at the bottom right. An 'EPOXY SEAL' is indicated at the top right, and 'A' is marked at two points on the multi-layered section.



Third Angle Projection

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

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7000 Series Miniature Toggle Switches

TERMINATIONS

AV2 VERTICAL RIGHT ANGLE, PC THRU-HOLE,
.150" PITCH



7301MD9AV2BE
Vertical Actuation
3PDT



PC MOUNTING



Not available with I seal option.
Terminal bend radii and lead-in manufacturing option.

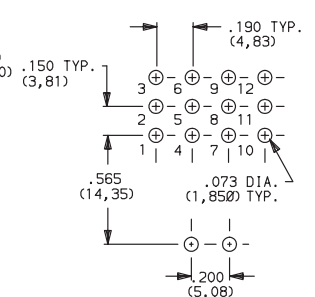
AV2 VERTICAL RIGHT ANGLE, PC THRU-HOLE,
.150" PITCH



7401MD9AV2BE
Vertical Actuation
4PDT



PC MOUNTING



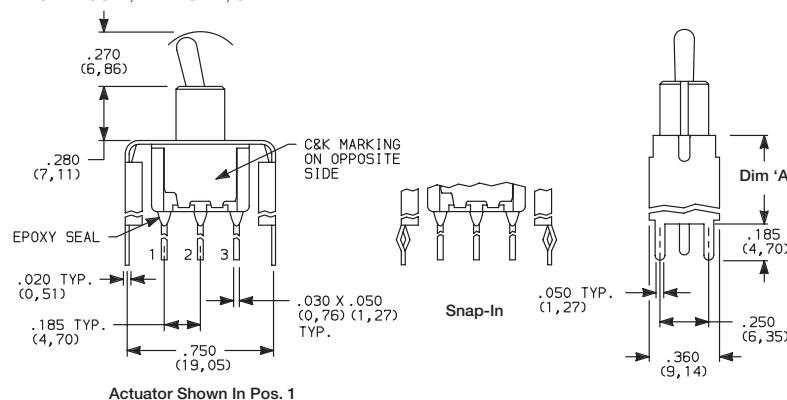
Not available with I seal option.
Terminal bend radii and lead-in manufacturing option.

V2, V6, V7, V8 VERTICAL MOUNT, V-BRACKET

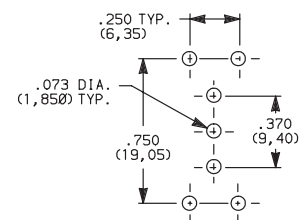
V21, V71, V81 VERTICAL MOUNT, V-BRACKET, SNAP-IN



7101MD9_BE
SPDT



PC MOUNTING



OPTION CODE	DIM 'A'
V2, V21	.555 (14,10)
V6	.460 (11,68)
V7, V71	.630 (16,00)
V8, V81	.953 (24,21)

Not available with I seal option.



F

Toggle



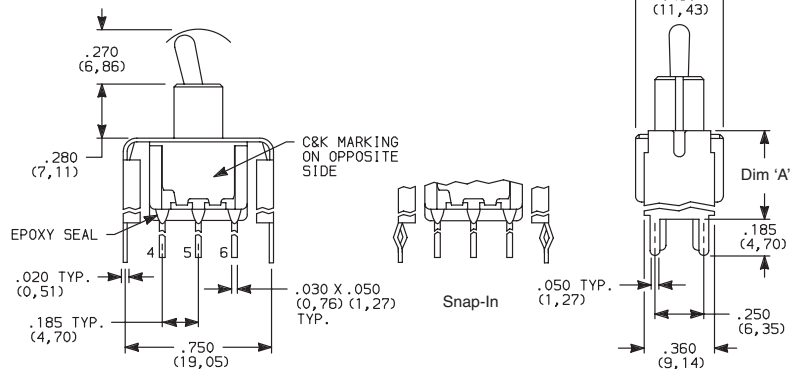
Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

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TERMINATIONS

V2, V6, V7, V8 VERTICAL MOUNT, V-BRACKET

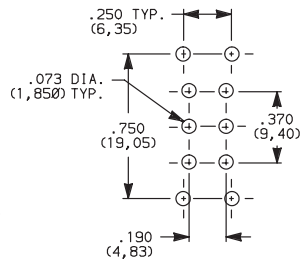
V21, V61, V71, V81 VERTICAL MOUNT, V-BRACKET, SNAP-IN



Actuator Shown In Pos. 1

Not available with I seal option.

PC MOUNTING



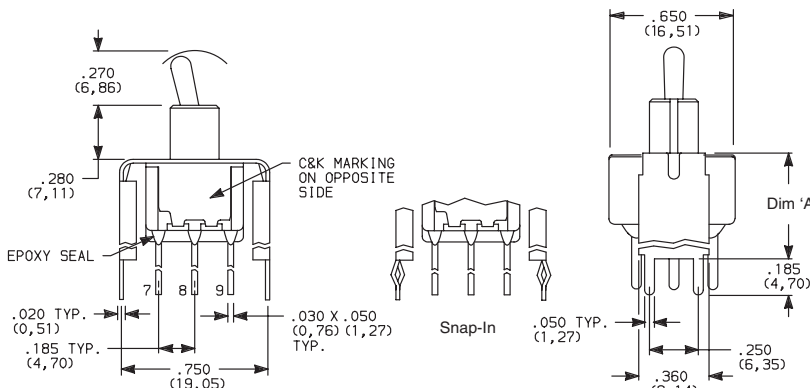
OPTION CODE	DIM 'A'
V2, V21	.555 (14,10)
V6, V61	.460 (11,68)
V7, V71	.630 (16,00)
V8, V81	.953 (24,21)



7201MD9__BE
DPDT

V2, V7, V8 VERTICAL MOUNT, V-BRACKET

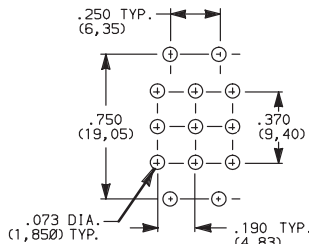
V21, V71, V81 VERTICAL MOUNT, V-BRACKET, SNAP-IN



Actuator Shown In Pos. 1

Not available with I seal option.

PC MOUNTING



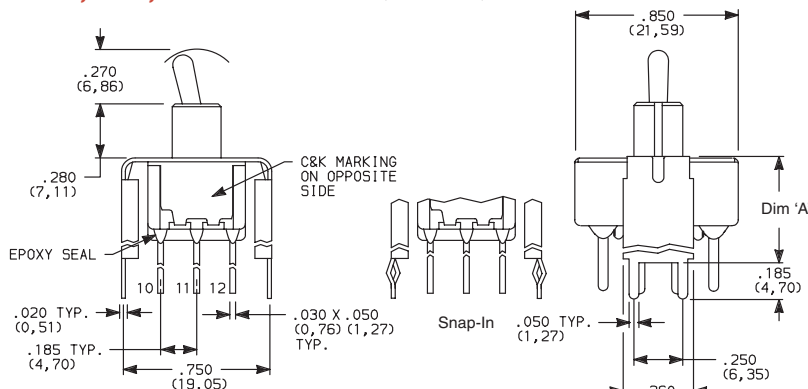
OPTION CODE	DIM 'A'
V2, V21	.555 (14,10)
V7, V71	.630 (16,00)
V8, V81	.953 (24,21)



7301MD9_BE
3PDT

V2, V7, V8 VERTICAL MOUNT, V-BRACKET

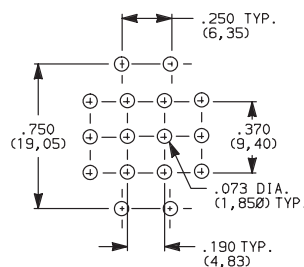
V21, V71, V81 VERTICAL MOUNT, V-BRACKET, SNAP-IN



Actuator Shown In Pos. 1

Not available with I seal option.

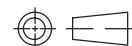
PC MOUNTING



OPTION CODE	DIM 'A'
V2, V21	.555 (14,10)
V7, V71	.630 (16,00)
V8, V81	.953 (24,21)



7401MD9_BE
4PDT



Third Angle Projection

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

7000 Series Miniature Toggle Switches

V3, V4, V9

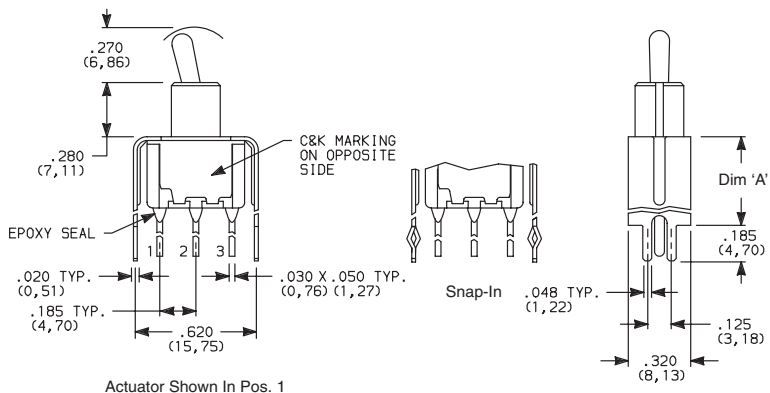
VERTICAL MOUNT, V-BRACKET

V31, V41

VERTICAL MOUNT, V-BRACKET, SNAP-IN

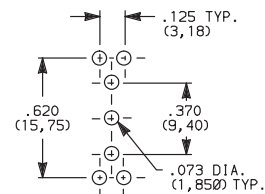


7101MD9__BE
SPDT



Actuator Shown In Pos. 1

PC MOUNTING



OPTION CODE	DIM 'A'
V3, V31	.460 (11,68)
V4, V41	.630 (16,00)
V9	1.150 (29,21)

Not available with I seal option.

V3, V4, V9

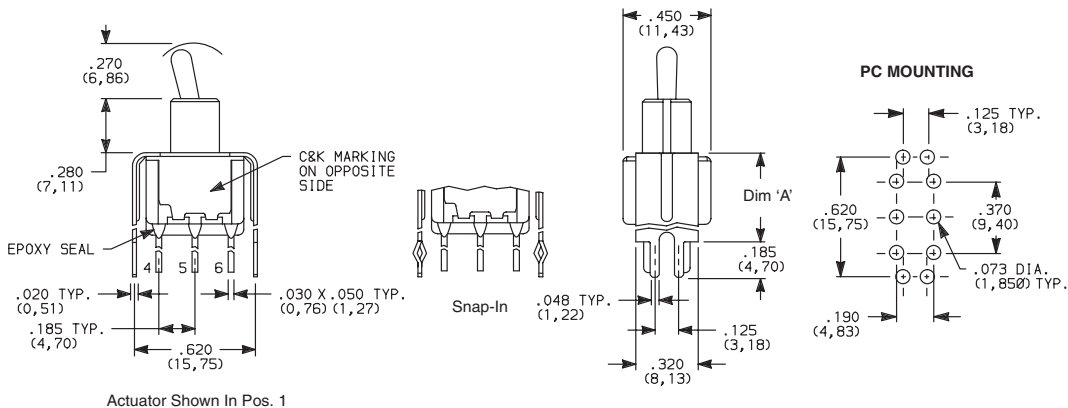
VERTICAL MOUNT, V-BRACKET

V31, V41

VERTICAL MOUNT, V-BRACKET, SNAP-IN



7201MD9__BE
DPDT



Actuator Shown In Pos. 1

Not available with I seal option.

V4, V9

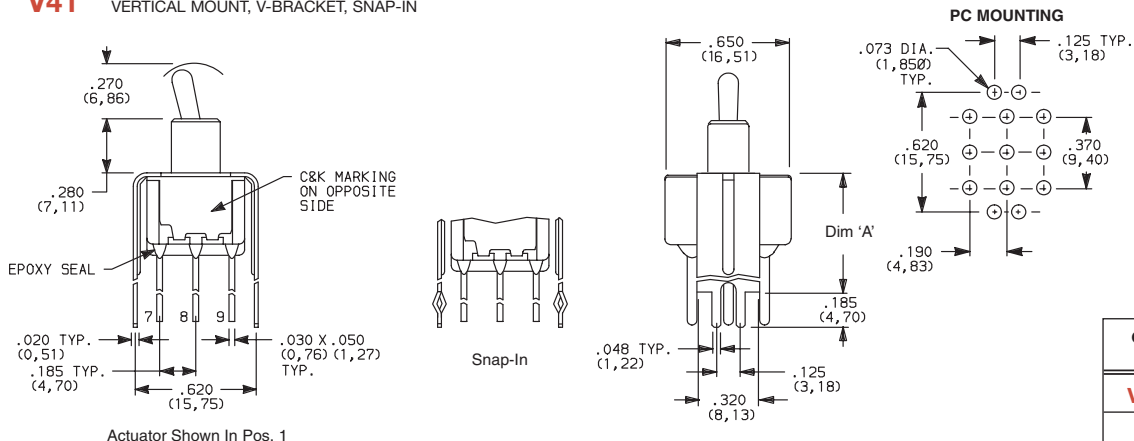
VERTICAL MOUNT, V-BRACKET

V41

VERTICAL MOUNT, V-BRACKET, SNAP-IN



7301MD9__BE
3PDT



Actuator Shown In Pos. 1

Not available with I seal option.



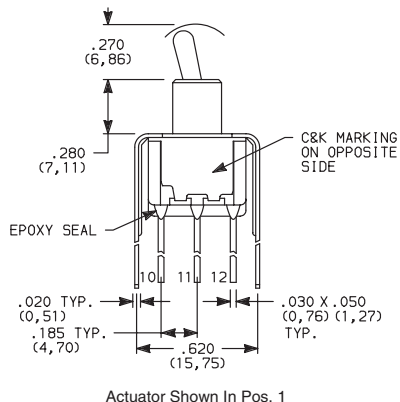
Dimensions are shown: Inches (mm)
 Colors and dimensions subject to change

7000 Series Miniature Toggle Switches

TERMINATIONS

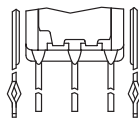
V4, V9 VERTICAL MOUNT, V-BRACKET

V41 VERTICAL MOUNT, V-BRACKET, SNAP-IN

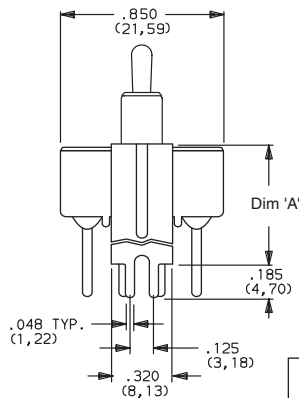


Actuator Shown In Pos. 1

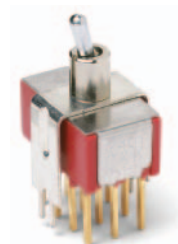
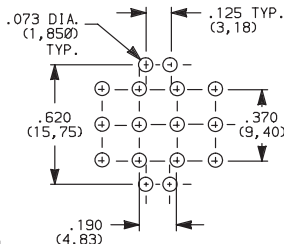
Not available with I seal option.



Snap-In



PC MOUNTING



7401MD9_BE
4PDT

OPTION CODE	DIM 'A'
V4, V41	.630 (16,00)
V9	1.150 (29,21)

CONTACT MATERIAL

OPTION CODE	CONTACT MATERIAL	TERMINAL PLATING	RATINGS	
B	GOLD ¹	GOLD ¹	LOW LEVEL/ DRY CIRCUIT	0.4 VA MAX. @ 20 V AC OR DC MAX.
P		MATTE-TIN ⁶		
Q	SILVER ^{4,5}	SILVER ⁵	POWER	5 AMPS @ 120 V AC OR 28 V DC; 2 AMPS @ 250 V AC.
S		MATTE-TIN ⁶		
G	GOLD OVER SILVER ^{2,3}	GOLD ³	LOW LEVEL/DRY CIRCUIT OR POWER	0.4 VA MAX @ 20 V AC OR DC MAX. OR 5 AMPS @ 120 V AC OR 28 V DC; 2 AMPS @ 250 V AC.
R		MATTE-TIN ⁶		

* Note: See Technical Data section of this catalog for RoHS compliant and compatible definitions and specifications.

¹ CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.

² END CONTACTS: Coin silver, with gold plate over nickel plate.

³ CENTER CONTACTS & ALL TERMINALS: Copper alloy, with gold plate over nickel plate.

⁴ END CONTACTS: Coin silver, silver plated.

⁵ CENTER CONTACT & ALL TERMINALS: Copper alloy, silver plated.

⁶ TERMINALS: Copper alloy, with matte tin alloy nickel plate.

NOTE: Any models supplied with P, S, R, Q, B or G contact material are RoHS compliant.

U11-U415 model numbers **cRLus** with all options when ordered with G, S, R, or Q contact material.

B contact material standard with all terminations except C, Z & Z3.

Q contact material standard with C, Z & Z3 terminations.

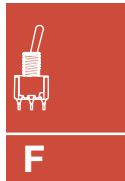
P, S & R contact materials not available with Z & Z3 terminations.



Third Angle
Projection

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

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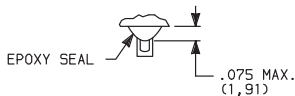


Toggle

7000 Series Miniature Toggle Switches

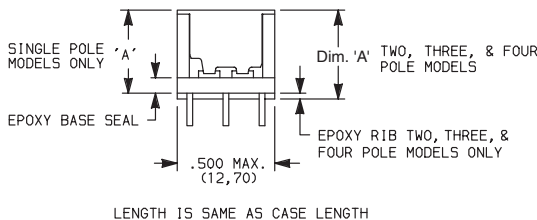
SEAL

E EPOXY SEAL



Compatible with "bottom-wash" PC board cleaning methods.

I EPOXY POTTED BASE



NO. POLES	DIM 'A'
SP	.410 (10,41)
DP	.440 (11,18)
3P	.505 (12,83)
4P	.505 (12,83)

Available with C, W-W5, Z & Z3 terminations only.

AVAILABLE HARDWARE

Cap



PART NO.
896801000 WHITE
896802000 BLACK
896803000 RED

Material: Polyethylene
Finish: Matte

Cap



PART NO.
763701000 WHITE
763702000 BLACK
763703000 RED

Material: Vinyl
Finish: Matte

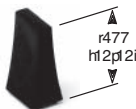
Cap



PART NO.
706201000 WHITE
706202000 BLACK
706203000 RED

Material: Vinyl
Finish: Matte

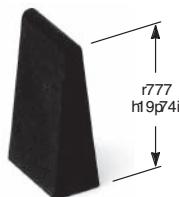
L41 Lever handle



PART NO.
481001000 WHITE
481002263 BLACK
481003000 RED

Material: Nylon
Finish: Matte

L42 Lever handle



PART NO.
481101000 WHITE
481102263 BLACK
481103000 RED

Material: Nylon
Finish: Matte

Fits Z3 Termination female connector



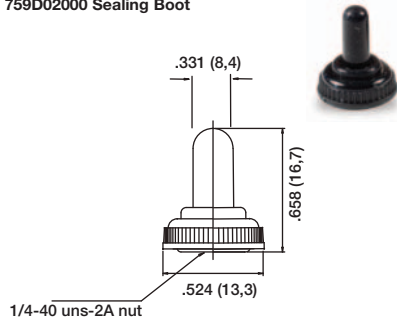
PART NO.
530100000

Available in loose pieces.

NOTE: Additional nuts, locking rings and lockwashers available separately, see Section N.

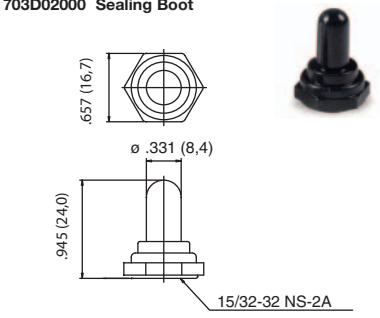
Other colors available, consult Customer Service Center.

759D02000 Sealing Boot



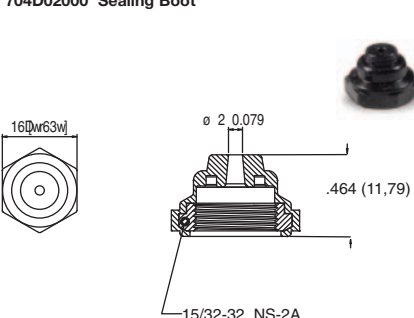
NOTE: For use with S actuator style when combined with D, H, H3, Y, and Y4 bushings

703D02000 Sealing Boot



NOTE: For use with T and TP style actuators. **Can not be used for Switch Functions: 7103, 7203, 7303, 7403, 7107, 7207, 7307, 7407.**

704D02000 Sealing Boot



NOTE: For use with T, TP and T2P style actuators. Can not be used for Switch Functions: 7103, 7203, 7303, 7403, 7107, 7207, 7307, and 7407.



Third Angle Projection

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

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