

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	Contact Material	Seal	Actuator Color/Finish	KXX Actuator Color/Finish	Bushing Finish
7101 SP On-None-On	M .200" high	D .280 high, keyway	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	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	Q Silver		3 Red	3 Red anodized aluminum	
7107 SP On-Off-Mom.	T .687" high, 15/32 bushing	NONE No bushing choice required	S Silver, matte-tin		S Satin chrome	7 Blue anodized aluminum	
7108 SP On-None-Mom.	K2 Locking lever, .704" high	CW Splashproof	G Gold over silver				
7109 SP None-On-Mom.	D8 .280" high, flat	D8 .280" high, flat	R Gold over silver, matte-tin				
7201 DP On-None-On	D9 .280" high, keyway	H3 .315" high, keyway					
7203 DP On-Off-On	H4 8mm high, keyway	H4 8mm high, keyway					
7205 DP Mom.-Off-Mom.	Y1 .378" high, keyway	Y1 .378" high, keyway					
7207 DP On-Off-Mom.	Y3 8.9mm high, keyway	Y3 8.9mm high, keyway					
7208 DP On-None-Mom.	Y4 .378" high, flat	Y4 .378" high, flat					
7211 DP On-On-On	Y9 .350" high, keyway	Y9 .350" high, keyway					
7213 DP On-On-Mom.							
7215 DP Mom.-On-Mom.							
7301 3P On-None-On							
7303 3P On-Off-On							
7305 3P Mom.-Off-Mom.							
7308 3P On-None-Mom.							
7401 4P On-None-On							
7403 4P On-Off-On							
7405 4P Mom.-Off-Mom.							
7408 4P On-None-Mom.							
7411 4P On-On-On							
7413 4P On-On-Mom.							
7415 4P Mom.-On-Mom.							

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

Terminations

- A** Right angle, PC thru-hole
- AV2** Vert. right angle, PC thru-hole
- C** PC Thru-hole
- V3** .460 high, V-bracket
- Z** Solder lug
- A2** Right angle, PC thru-hole
- A3** Right angle, PC thru-hole
- A4** Right angle, PC thru-hole
- AW1** Right angle, extended, PC thru-hole
- AW4** Right angle, extended, PC thru-hole
- V2** .555" high, V-bracket
- V4** .630" high, V-bracket
- V6** .460" high, V-bracket
- V7** .630" high, V-bracket
- V8** .953" high, V-bracket
- V9** 1.150" high, V-bracket
- V21** .555" high, snap-in V-bracket
- V31** .460" high, snap-in V-bracket
- V41** .630" high, snap-in V-bracket
- V71** .630" high, snap-in V-bracket
- V81** .953" high, snap-in V-bracket

W .750" long, wire wrap

W1 .964" long, wire wrap

W3 .425" long, wire wrap

W4 1.062" long, wire wrap

W5 1.305" long, wire wrap

Z3 Quick connect



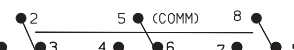
Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change



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	 4PDT
	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



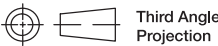
Part number shown: 7401SYZQE

Terminal Numbers
For Reference Only

MOM. = Momentary

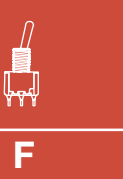
Wiring for 3-way switch, see Section N.

** 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}



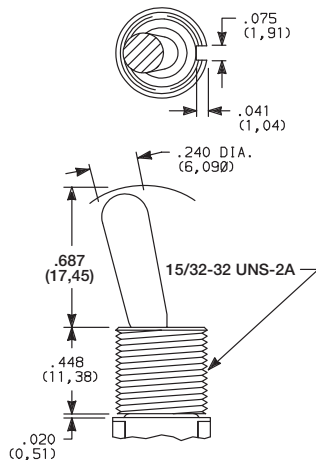
***P4** FLATTED WITH ANTIROTATION, .250" HIGH ^{2,3}



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

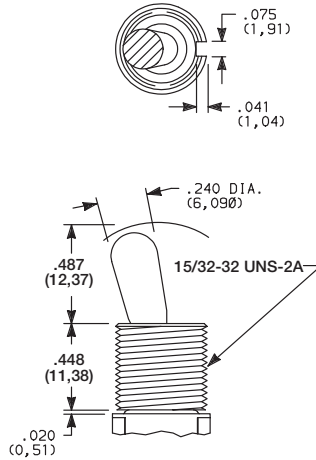
T .687 (17,45) HIGH ^{1,2}

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

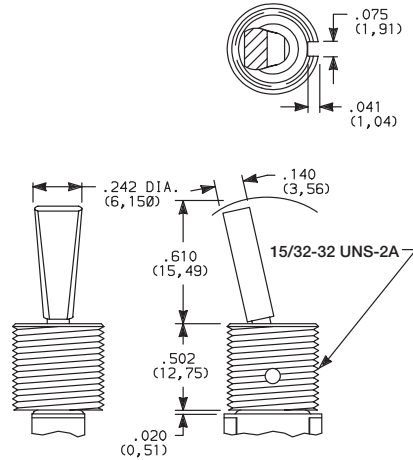


T1 .487 (12,37) HIGH ^{1,2}

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.



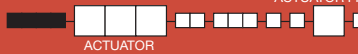
Third Angle Projection

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



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



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

D8 **D, D9**

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

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

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.

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

Without locking ring. With standard locking ring. With small locking ring. Without locking ring. With locking ring. Without locking ring. With standard locking ring.



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

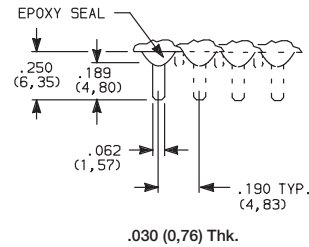


SPDT thru 4PDT

PC MOUNTING



Z3 QUICK CONNECT

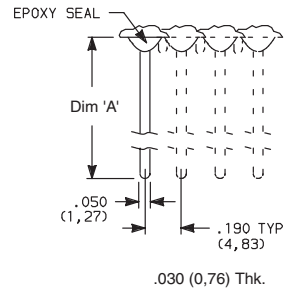


SPDT thru 4PDT

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

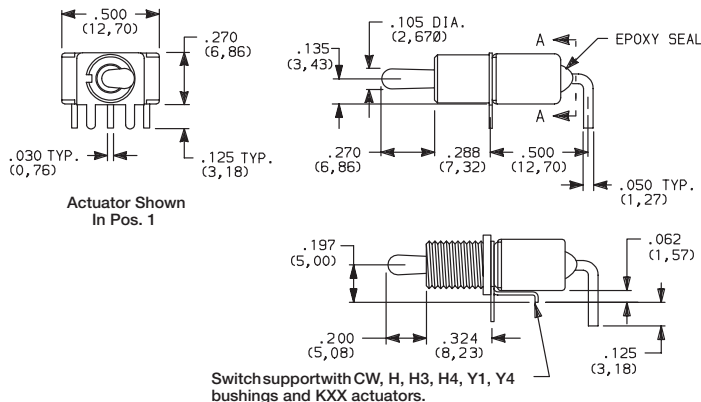
WIRE WRAP



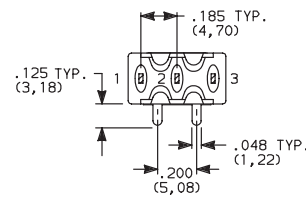
OPTION CODE	DIM 'A'
W	.750 (19,05)
W1	.964 (24,48)
W3	.425 (10,80)
W4	1.062 (26,97)
W5	1.305 (33,15)

SPDT thru 4PDT

A RIGHT ANGLE, PC THRU-HOLE



Part No. Shown: 7101MHABE



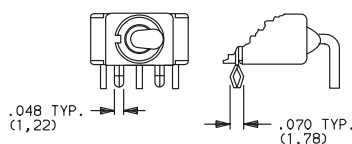
SECTION A-A

Terminal Nos.
For Reference Only



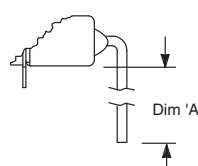
7101MD9ABE
Horizontal Actuation
SPDT

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



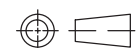
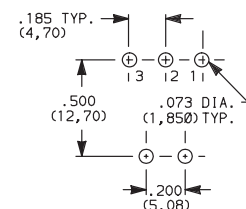
Not available with I seal option.
Terminal bend radii and lead-in manufacturing option.

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



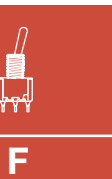
OPTION CODE	DIM 'A'
AW1	.72 (18,3)
AW4	.83 (21,1)

PC MOUNTING



Third Angle
Projection

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



F

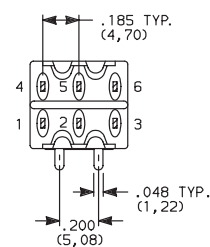
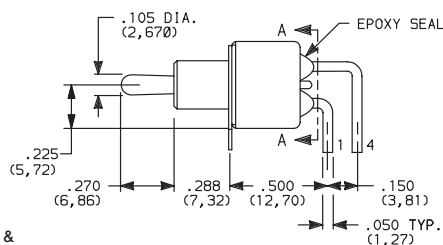
Toggle

TERMINATIONS

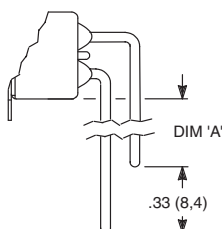
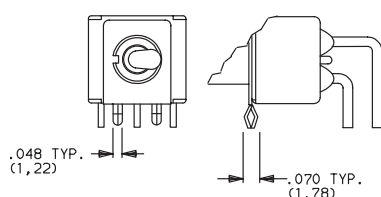
Diagram of a square component with dimensions:

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

.125 TYP.
(3, 18)
Terminals &
Support

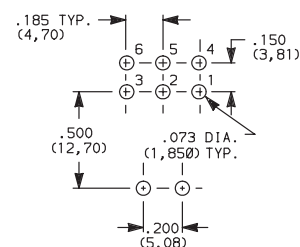


AW1, AW4 RIGHT ANGLE, EXTENDED,
PC THRU-HOLE



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

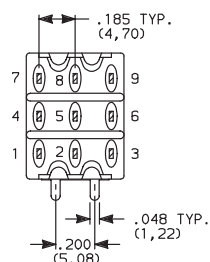
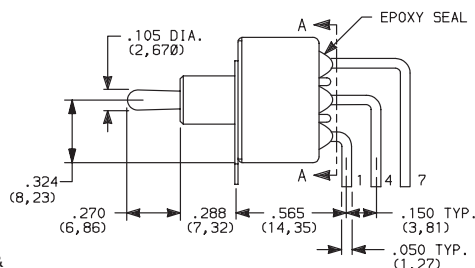
PC MOUNTING



A RIGHT ANGLE, PC THRU-HOLE



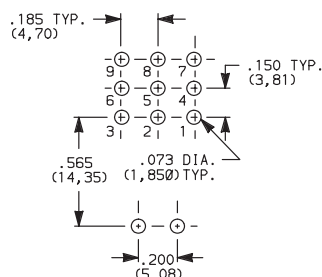
Actuator Shown
In Pos. 1



SECTION A-A

Technical drawing of a transformer with three secondary windings. The top winding has a tap with a dimension of .18 (4,6). The bottom winding has a dimension of .33 TYP. (8,4).

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 showing two views of an actuator assembly with dimensions in inches and millimeters.

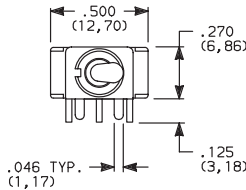
Top View Dimensions:

- Overall Diameter: .105 DIA. (2, 670)
- Distance from center to seal: .270 (6, 86)
- Distance from center to spring: .288 (7, 32)
- Distance from spring to seal: .500 (12, 70)
- Seal Thickness: .030 T (0, 76)
- Seal Width: .050 TYP. (1, 27)
- Label: EP0XY SEAL

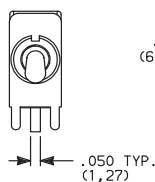
Side View Dimensions:

- Overall Diameter: .197 (5, 00)
- Distance from center to spring: .200 (5, 08)
- Distance from spring to seal: .324 (8, 23)
- Seal Thickness: .062 (1, 57)
- Seal Width: .125 (3, 18)

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

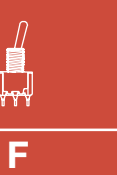
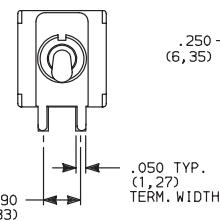


Technical drawing of a probe assembly. The drawing shows a cylindrical probe with a conical tip. Dimensions are given in inches and parentheses for millimeters. Labels include: .105 DIA. (2,670), EPOXY SEAL, .050 TYP. (1,27), .03 (0,), .365 (9,27), .422 (10,72), and .270 (6,86).



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)
- Pin 100 to Pin 101 distance: .125 (3,18)
- Pin 101 to Pin 102 distance: .125 (3,18)
- Pin 102 to Pin 103 distance: .125 (3,18)
- Pin 103 to Pin 104 distance: .125 (3,18)
- Pin 104 to Pin 105 distance: .125 (3,18)
- Pin 105 to Pin 106 distance: .125 (3,18)
- Pin 106 to Pin 107 distance: .125 (3,18)
- Pin 107 to Pin 108 distance: .125 (3,18)
- Pin 108 to Pin 109 distance: .125 (3,18)
- Pin 109 to Pin 110 distance: .125 (3,18)
- Pin 110 to Pin 111 distance: .125 (3,18)
- Pin 111 to Pin 112 distance: .125 (3,18)
- Pin 112 to Pin 113 distance: .125 (3,18)
- Pin 113 to Pin 114 distance: .125 (3,18)
- Pin 114 to Pin 115 distance: .125 (3,18)
- Pin 115 to Pin 116 distance: .125 (3,18)
- Pin 116 to Pin 117 distance: .125 (3,18)
- Pin 117 to Pin 118 distance: .125 (3,18)
- Pin 118 to Pin 119 distance: .125 (3,18)
- Pin 119 to Pin 120 distance: .125 (3,18)
- Pin 120 to Pin 121 distance: .125 (3,18)
- Pin 121 to Pin 122 distance: .125 (3,18)
- Pin 122 to Pin 123 distance: .125 (3,18)
- Pin 123 to Pin 124 distance: .125 (3,18)
- Pin 124 to Pin 125 distance: .125 (3,18)
- Pin 125 to Pin 126 distance: .125 (3,18)
- Pin 126 to Pin 127 distance: .125 (3,18)
- Pin 127 to Pin 128 distance: .125 (3,18)
- Pin 128 to Pin 129 distance: .125 (3,18)
- Pin 129 to Pin 130 distance: .125 (3,18)
- Pin 130 to Pin 131 distance: .125 (3,18)
- Pin 131 to Pin 132 distance: .125 (3,18)
- Pin 132 to Pin 133 distance: .125 (3,18)
- Pin 133 to Pin 134 distance: .125 (3,18)
- Pin 134 to Pin 135 distance: .125 (3,18)
- Pin 135 to Pin 136 distance: .125 (3,18)
- Pin 136 to Pin 137 distance: .125 (3,18)
- Pin 137 to Pin 138 distance: .125 (3,18)
- Pin 138 to Pin 139 distance: .125 (3,18)
- Pin 139 to Pin 140 distance: .125 (3,18)
- Pin 140 to Pin 141 distance: .125 (3,18)
- Pin 141 to Pin 142 distance: .125 (3,18)
- Pin 142 to Pin 143 distance: .125 (3,18)
- Pin 143 to Pin 144 distance: .125 (3,18)
- Pin 144 to Pin 145 distance: .125 (3,18)
- Pin 145 to Pin 146 distance: .125 (3,18)
- Pin 146 to Pin 147 distance: .125 (3,18)
- Pin 147 to Pin 148 distance: .125 (3,18)
- Pin 148 to Pin 149 distance: .125 (3,18)
- Pin 149 to Pin 150 distance: .125 (3,18)</



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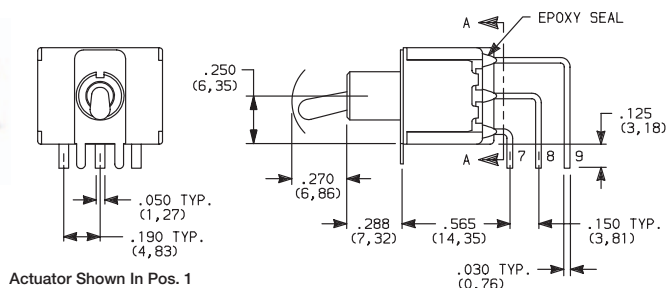
7000 Series Miniature Toggle Switches

TERMINATIONS

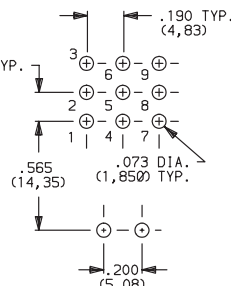
AV2 VERTICAL RIGHT ANGLE, PC THRU-HOLE,
.150" PITCH



7301MD9AV2BE
Vertical Actuation
3PDT



PC MOUNTING



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

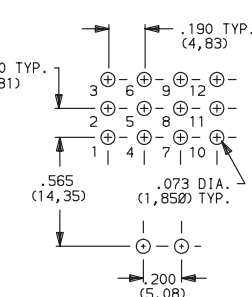
AV2 VERTICAL RIGHT ANGLE, PC THRU-HOLE,
.150" PITCH



7401MD9AV2BE
Vertical Actuation
4PDT



PC MOUNTING



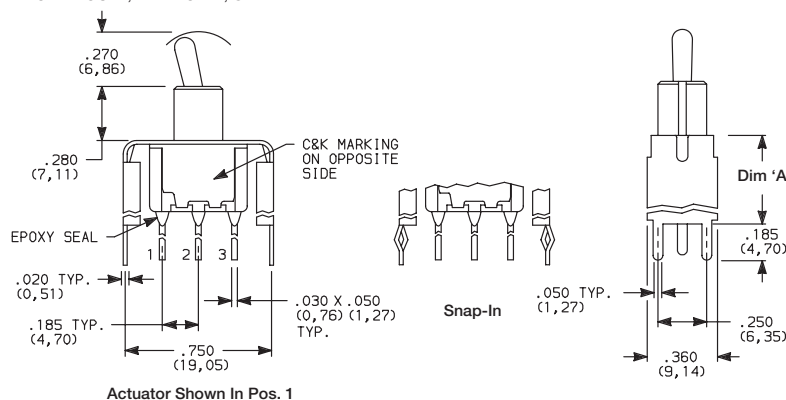
Not available with I seal option.
Terminal bend radii and lead-in manufacturing option.

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

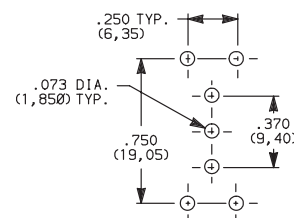
V21, V71, V81 VERTICAL MOUNT, V-BRACKET, SNAP-IN



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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7000 Series Miniature Toggle Switches

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



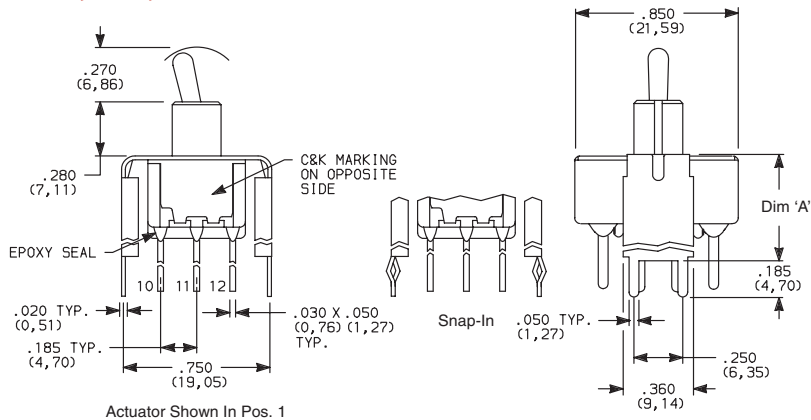
OPTION CODE	DIM 'A'
V2, V21	.555 (14,10)
V7, V71	.630 (16,00)
V8, V81	.953 (24,21)



7301MD9_BE
3PDT

V2, V7, V8 VERTICAL MOUNT, V-BRACKET

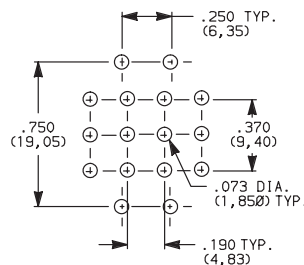
V21, V71, V81 VERTICAL MOUNT, V-BRACKET, SNAP-IN



Actuator Shown In Pos. 1

Not available with I seal option.

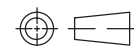
PC MOUNTING



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



7000 Series Miniature Toggle Switches

V3, V4, V9

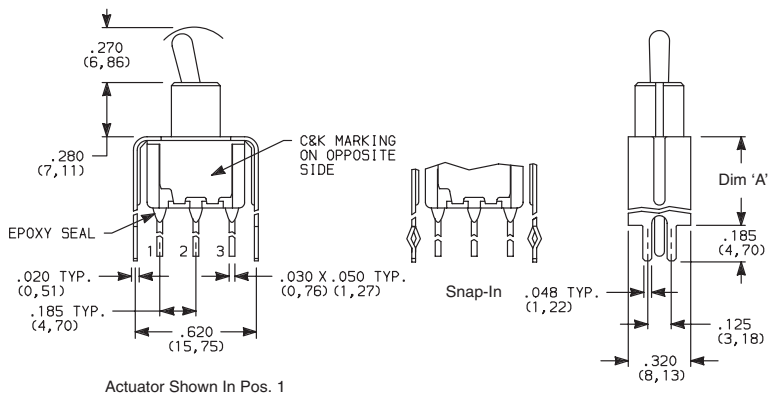
VERTICAL MOUNT, V-BRACKET

V31, V41

VERTICAL MOUNT, V-BRACKET, SNAP-IN

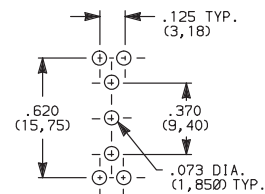


7101MD9__BE
SPDT



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

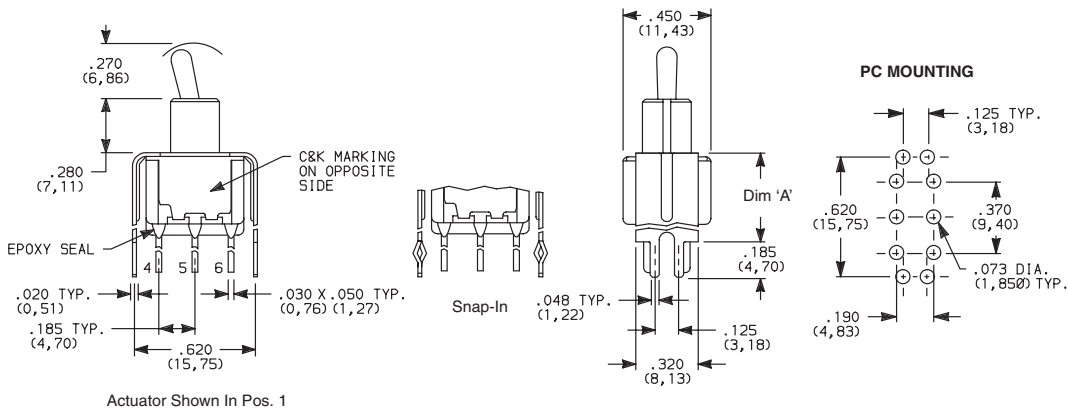
VERTICAL MOUNT, V-BRACKET

V31, V41

VERTICAL MOUNT, V-BRACKET, SNAP-IN



7201MD9__BE
DPDT



Actuator Shown In Pos. 1

Not available with I seal option.

V4, V9

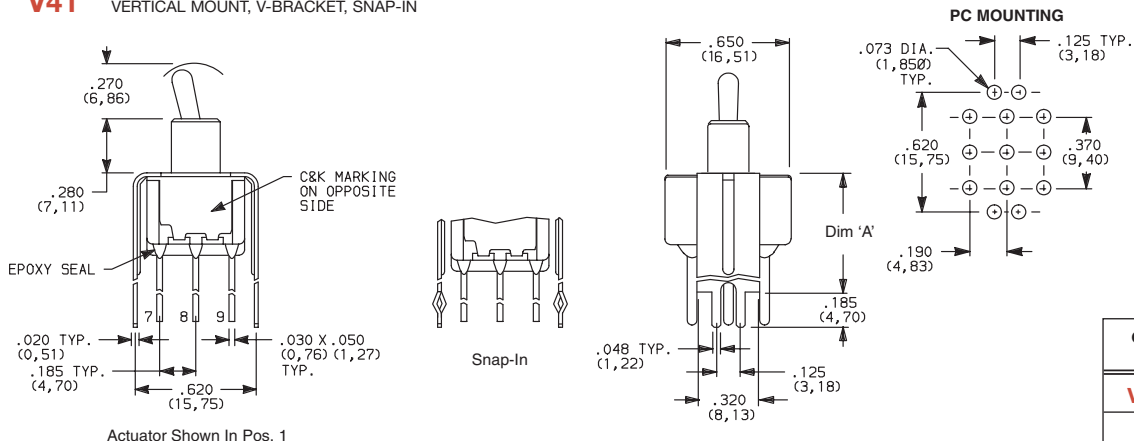
VERTICAL MOUNT, V-BRACKET

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)

Specifications and dimensions subject to change

7000 Series Miniature Toggle Switches

TERMINATIONS

V4, V9 VERTICAL MOUNT, V-BRACKET
V41 VERTICAL MOUNT, V-BRACKET, SNAP-IN

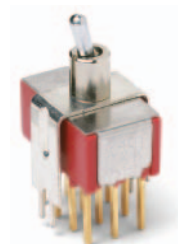
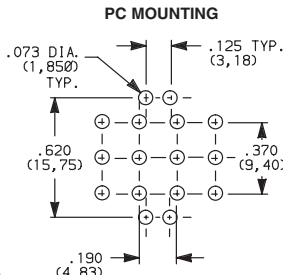
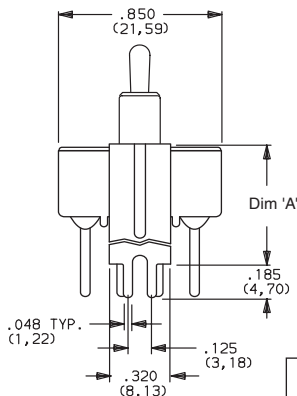


Actuator Shown In Pos. 1

Not available with I seal option.



Snap-In



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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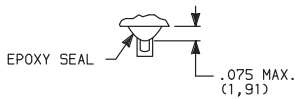


Toggle

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.

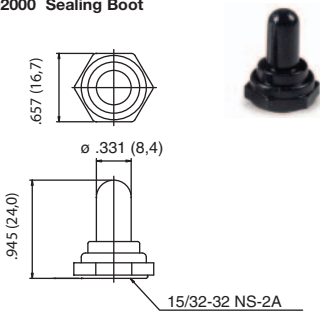
Other colors available, consult Customer Service Center.

759D02000 Sealing Boot



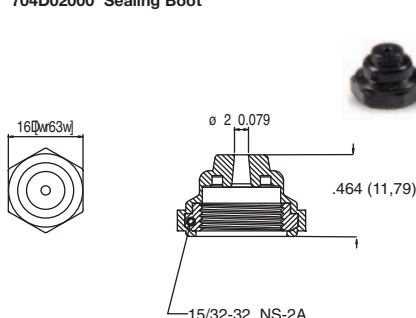
NOTE: For use with S actuator style when combined with D, H, H3, Y, and Y4 bushings

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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