

loggi

7000 Series
Miniature Toggle Switches

Materials

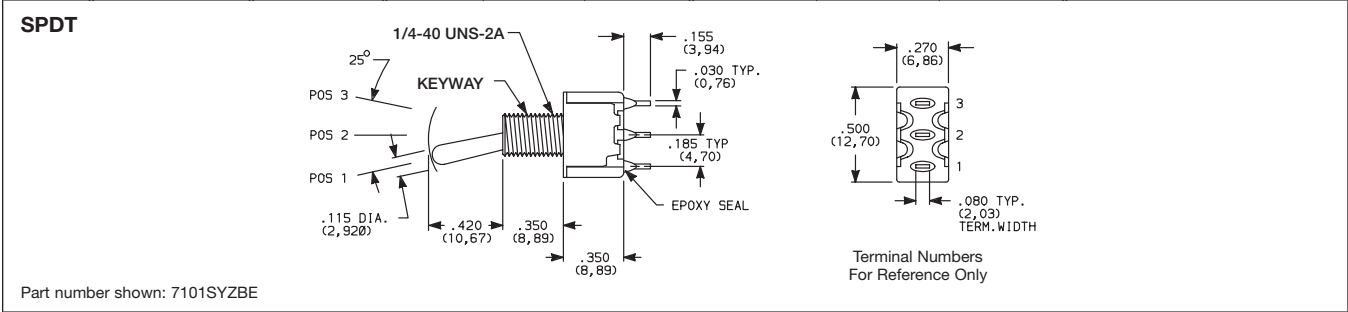
CASE: Glass filled nylon 6/6, flame retardant, heat stabilized, or diallyl phthalate (DAP) (UL 94V-0).
ACTUATOR: Brass, chrome plated.
BUSHING: Brass or zinc, nickel plated.
HOUSING: Stainless steel.
SWITCH SUPPORT: Brass or steel, tin plated.
END CONTACTS: B contact material: Copper alloy, with gold plate over nickel plate. Q contact material: Coin silver, silver plated. See page F-15 for additional contact materials.

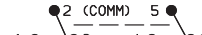
CENTER CONTACTS & ALL TERMINALS: B contact material: Copper alloy, with gold plate over nickel plate. Q contact material: Copper alloy, silver plated. See above for additional contact materials.
TERMINAL SEAL: Epoxy.
HARDWARE: Nut & Locking Ring: Brass, nickel plated.
Lockwasher: Steel, nickel plated.

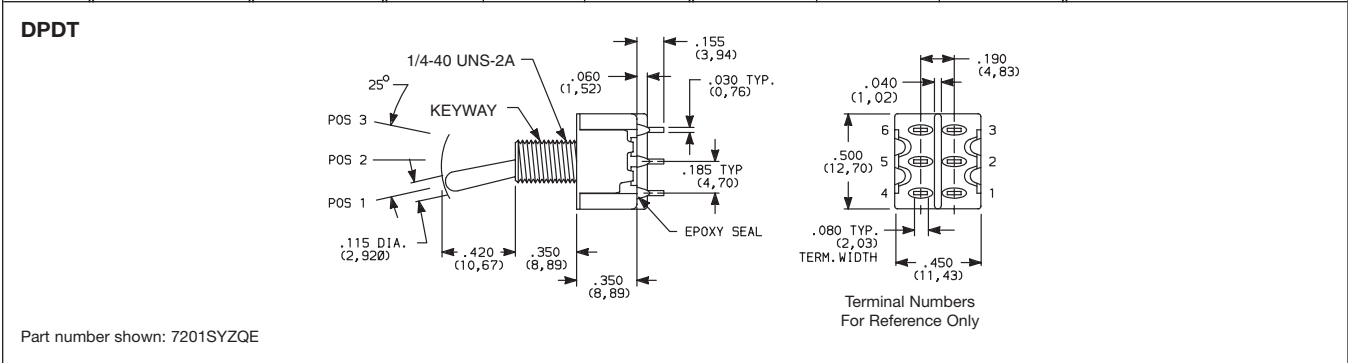
NOTE: Materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

SWITCH FUNCTION

NO. POLES	MODEL NO.	UL/CSA** 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 	
SP	7101	U11	ON	NONE	ON	2-3	N/A	2-1	
	7103	U13	ON	OFF	ON	2-3	OPEN	2-1	
	7105	U15	MOM.	OFF	MOM.				
	7107	U17	ON	OFF	MOM.				
	7108	U18	ON	NONE	MOM.	2-3	N/A	2-1	
	7109	U19	NONE	ON	MOM.	N/A	2-3	2-1	



DP	7201	U21	ON	NONE	ON	2-3,5-6	N/A	2-1,5-4	
	7203	U23	ON	OFF	ON	2-3,5-6	OPEN	2-1,5-4	
	7205	U25	MOM.	OFF	MOM.				
	7207	U27	ON	OFF	MOM.				
	7208	U28	ON	NONE	MOM.	2-3,5-6	N/A	2-1,5-4	
	7211 *	U211*	ON	ON	ON	2-3,5-6	2-3,5-4	2-1,5-4	
	7213*	U213*	ON	ON	MOM.				
	7215*	U215*	MOM.	ON	MOM.				



MOM. = Momentary
* Wiring for 3-way switch, see Section N.
** U11-U415 model nos. with all options when ordered with G, R, Q or S contact material.



Third Angle
Projection

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

SWITCH FUNCTION

Part number shown: 7401SYZQE

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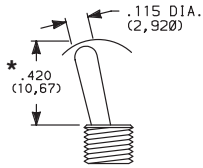
7000 Series Miniature Toggle Switches

ACTUATOR



S .420" HIGH 1

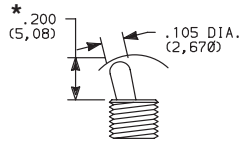
SP ANTIROTATION, .420" HIGH ^{2,3}



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

M .200" HIGH 1

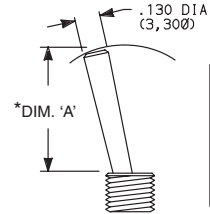
MP ANTIROTATION, .200" HIGH 2,3



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

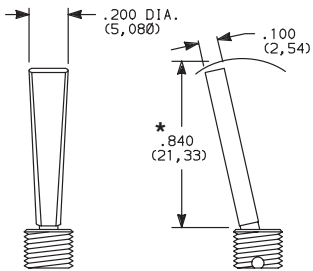
L1P, L2P ANTIROTATION,
.840", .640", .550" HIGH 2,3



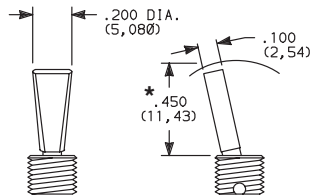
OPTION CODE	DIM 'A'
L	.840 (21,34)
L1, L1P	.640 (16,26)
L2, L2P	.550 (13,97)

Caps are available separately, see page F-16.

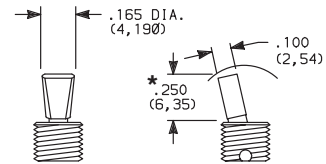
***P1** FLATTED WITH ANTIROTATION, .840" HIGH ^{2,3}



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



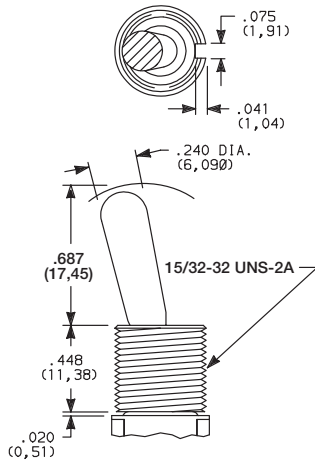
***P4** FLATTED WITH ANTIROTATION, .250" HIGH
2,3



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

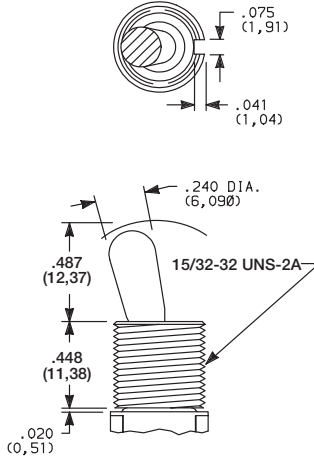
T .687 (17,45) HIGH 1,2

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

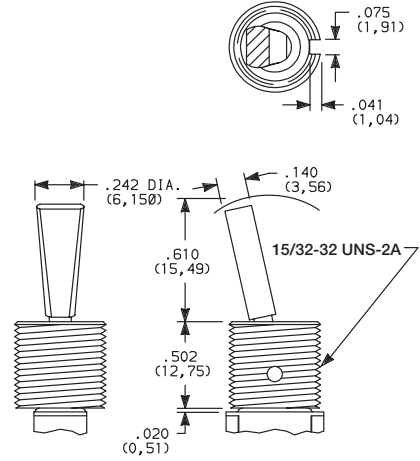


T1 .487 (12,37) HIGH 1,2

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

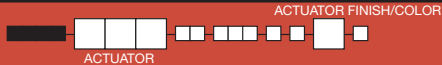
NOTE: Black hardware is supplied when either black actuators or bushings are specified. For additional hardware, see Section N.



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

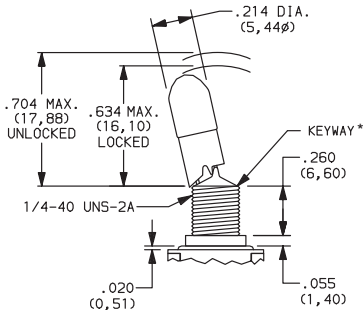
7000 Series Miniature Toggle Switches

ACTUATOR

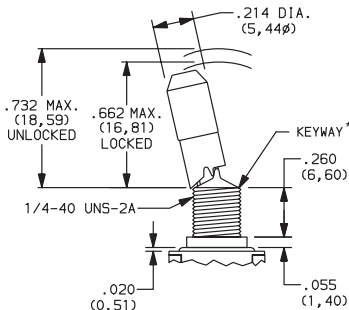


- K2** LOCKING LEVER, .704" HIGH
(threaded)
- K9** LOCKING LEVER, .704" HIGH
(unthreaded)

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



Replaces K, K8



Replaces K1, K18

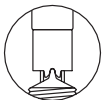
OPTION CODE	ACTUATOR CAP FINISH
NONE	NATURAL ALUMINUM—With Nickle Plated Bushing
2	BLACK ANODIZED ALUMINUM
3	RED ANODIZED ALUMINUM
7	BLUE ANODIZED ALUMINUM

* 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.

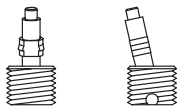
Locking levers supplied with bushing shown.

Bushing option code not required unless CW splashproof bushing ordered.

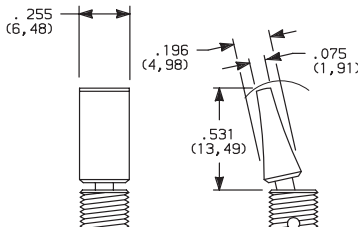
- L40** LEVER HANDLE WITHOUT CAP

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

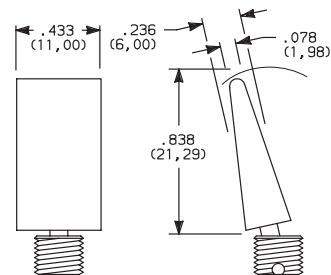
- L42** PLASTIC LEVER HANDLE WITH
ANTIROTATION AND CAP, P/N 4811



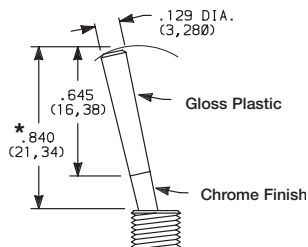
No color choice required



Finish: Matte (L41 & L42).



- L3** PLASTIC .940" HIGH



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

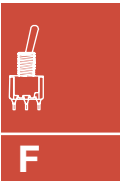
* Add .070 (1,78) for D, D8 & D9 bushings, subtract .020 (0,51) for H3 bushing.

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, FLAT³

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}

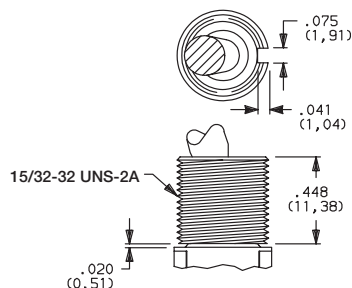
Y1 .378" HIGH, KEYWAY, THREADED, HIGH TORQUE^{1,2,4}

Y3 8.9mm HIGH, KEYWAY, THREADED, METRIC

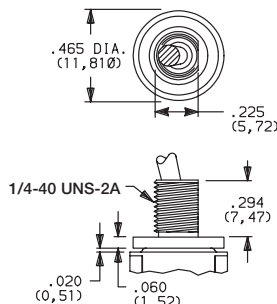
Y4 .378" HIGH, FLAT, THREADED, HIGH TORQUE^{1,2,5}

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.



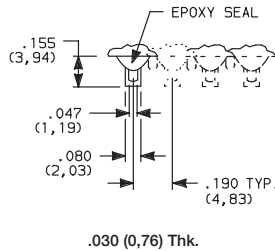
Third Angle Projection

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

7000 Series Miniature Toggle Switches

TERMINATIONS

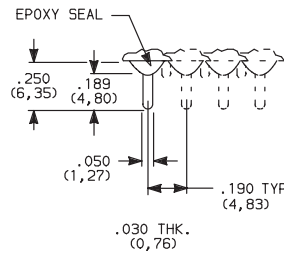
Z SOLDER LUG



SPDT thru 4PDT

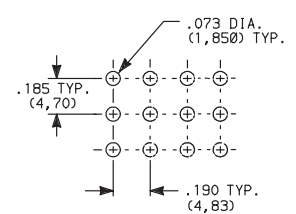
Not available with P, R or S contact materials.

C PC THRU-HOLE

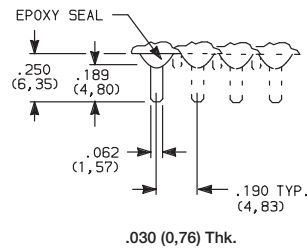


SPDT thru 4PDT

PC MOUNTING



Z3 QUICK CONNECT

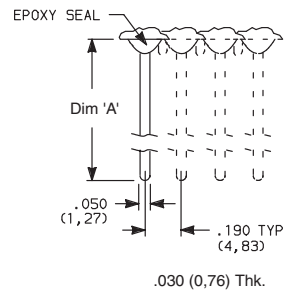


SPDT thru 4PDT

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

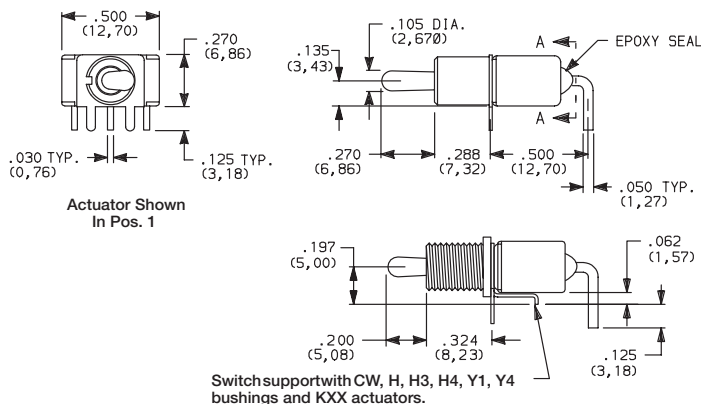
WIRE WRAP



SPDT thru 4PDT

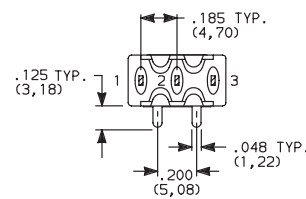
OPTION CODE	DIM 'A'
W	.750 (19,05)
W1	.964 (24,48)
W3	.425 (10,80)
W4	1.062 (26,97)
W5	1.305 (33,15)

A RIGHT ANGLE, PC THRU-HOLE



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

Part No. Shown: 7101MHABE



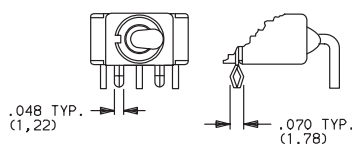
SECTION A-A

Terminal Nos.
For Reference Only



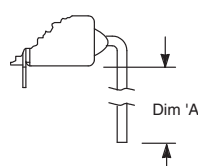
7101MD9ABE
Horizontal Actuation
SPDT

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



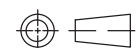
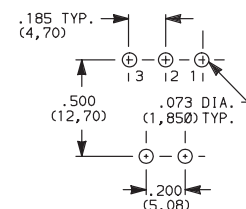
Not available with I seal option.
Terminal bend radii and lead-in manufacturing option.

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



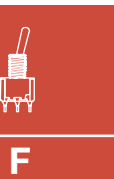
OPTION CODE	DIM 'A'
AW1	.72 (18,3)
AW4	.83 (21,1)

PC MOUNTING



Third Angle
Projection

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



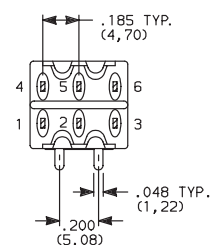
Toggle

TERMINATIONS

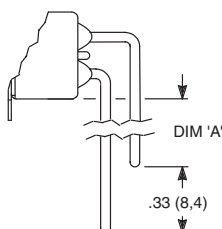
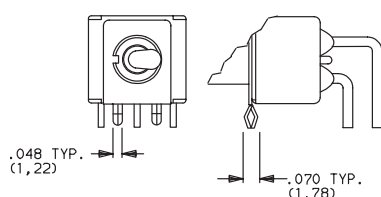
Diagram of a square component with dimensions:

- 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 DIA. (2,670), .225 (5,72), .270 (6,86), .288 (7,32), .500 (12,70), .150 (3,81), .050 TYP. (1,27), EPOXY SEAL, and A. The drawing also shows a probe tip and a probe body.

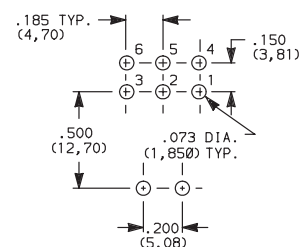


AW1, AW4 RIGHT ANGLE, EXTENDED,
PC THRU-HOLE



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

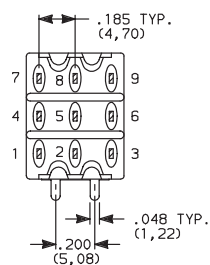
PC MOUNTING



A RIGHT ANGLE, PC THRU-HOLE

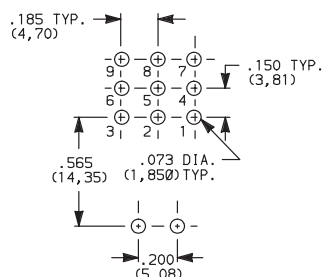


Technical drawing of a component with dimensions and labels. The drawing shows a cross-section of a device with a central cylindrical part and a larger rectangular block. Dimensions are given in inches and millimeters. Labels include ".105 DIA. (2,670)", ".324 (8,23)", ".270 (6,86)", ".288 (7,32)", ".565 (14,35)", ".150 TYP. (3,81)", ".050 TYP. (1,27)", "A", "A", "EPOXY SEAL", and "7".



SECTION A-A

PC MOUNTING



F-10

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

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TERMINATIONS

7000 Series Miniature Toggle Switches

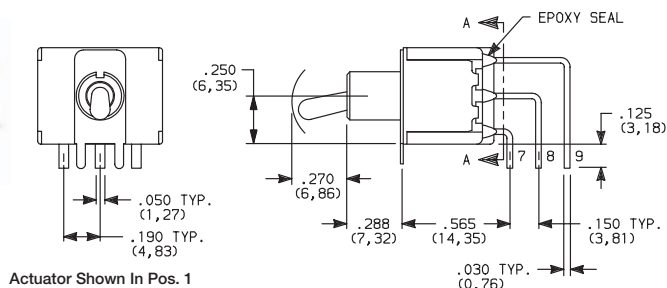
TERMINATIONS

AV2

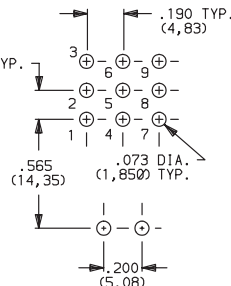
VERTICAL RIGHT ANGLE, PC THRU-HOLE,
.150" PITCH



7301MD9AV2BE
Vertical Actuation
3PDT



PC MOUNTING



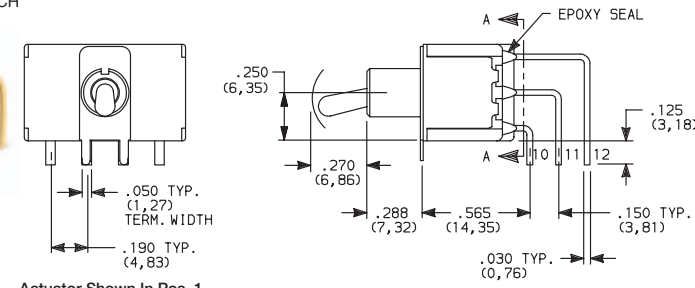
Not available with I seal option.
Terminal bend radii and lead-in manufacturing option.

AV2

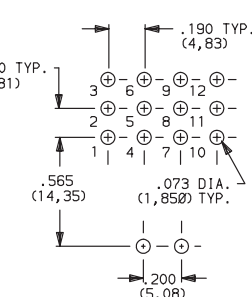
VERTICAL RIGHT ANGLE, PC THRU-HOLE,
.150" PITCH



7401MD9AV2BE
Vertical Actuation
4PDT



PC MOUNTING



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

V2, V6, V7, V8

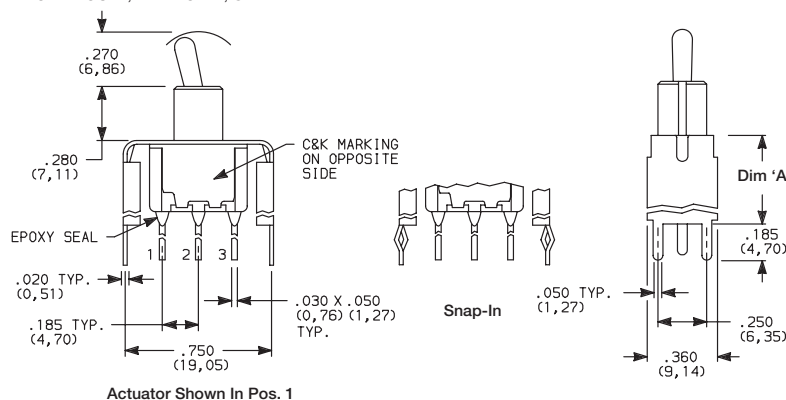
VERTICAL MOUNT, V-BRACKET

V21, V71, V81

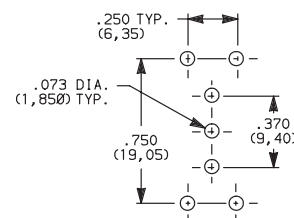
VERTICAL MOUNT, V-BRACKET, SNAP-IN



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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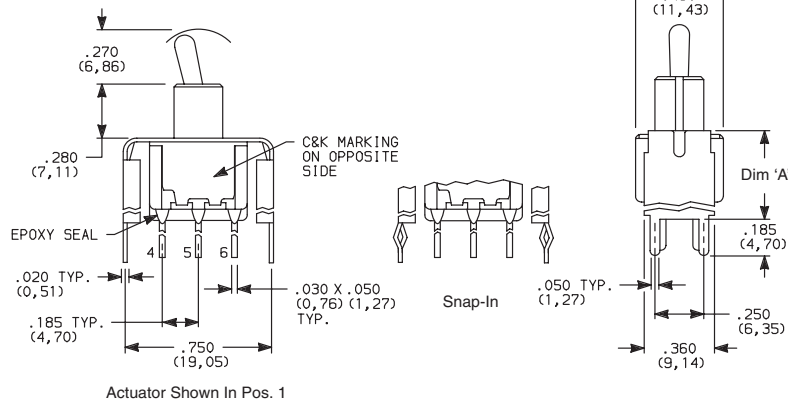
7000 Series Miniature Toggle Switches

TERMINATIONS



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

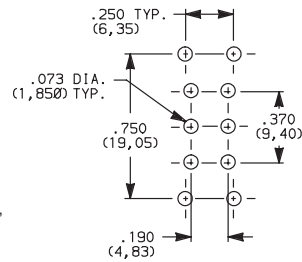
V21, V61, V71, V81 VERTICAL MOUNT, V-BRACKET, SNAP-IN



Actuator Shown In Pos. 1

Not available with I seal option.

PC MOUNTING



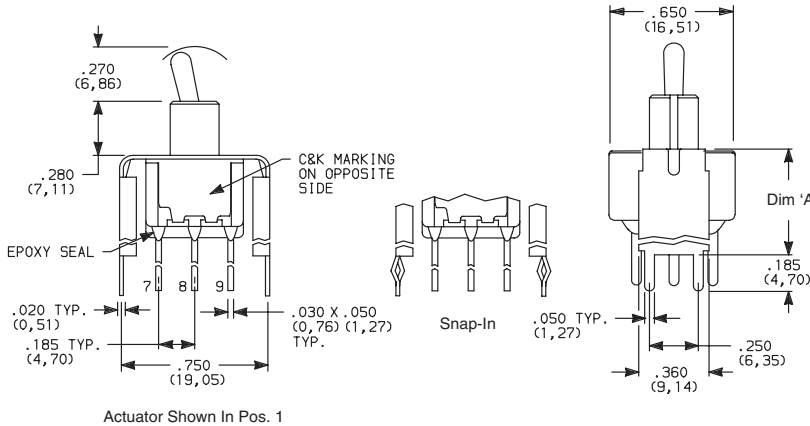
OPTION CODE	DIM 'A'
V2, V21	.555 (14,10)
V6, V61	.460 (11,68)
V7, V71	.630 (16,00)
V8, V81	.953 (24,21)



7201MD9_BE
DPDT

V2, V7, V8 VERTICAL MOUNT, V-BRACKET

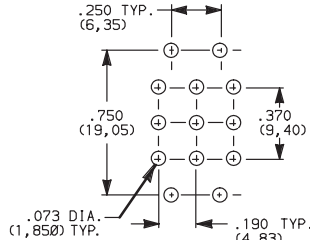
V21, V71, V81 VERTICAL MOUNT, V-BRACKET, SNAP-IN



Actuator Shown In Pos. 1

Not available with I seal option.

PC MOUNTING



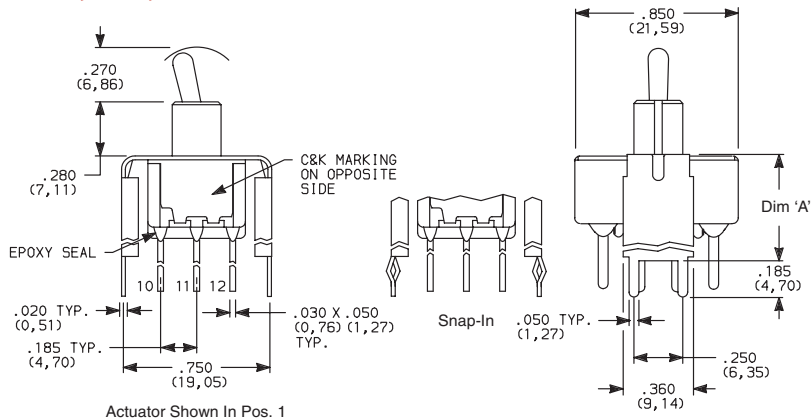
OPTION CODE	DIM 'A'
V2, V21	.555 (14,10)
V7, V71	.630 (16,00)
V8, V81	.953 (24,21)



7301MD9_BE
3PDT

V2, V7, V8 VERTICAL MOUNT, V-BRACKET

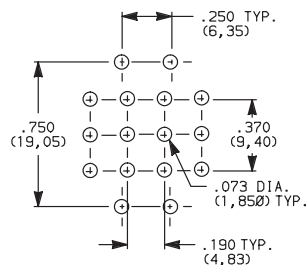
V21, V71, V81 VERTICAL MOUNT, V-BRACKET, SNAP-IN



Actuator Shown In Pos. 1

Not available with I seal option.

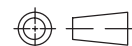
PC MOUNTING



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

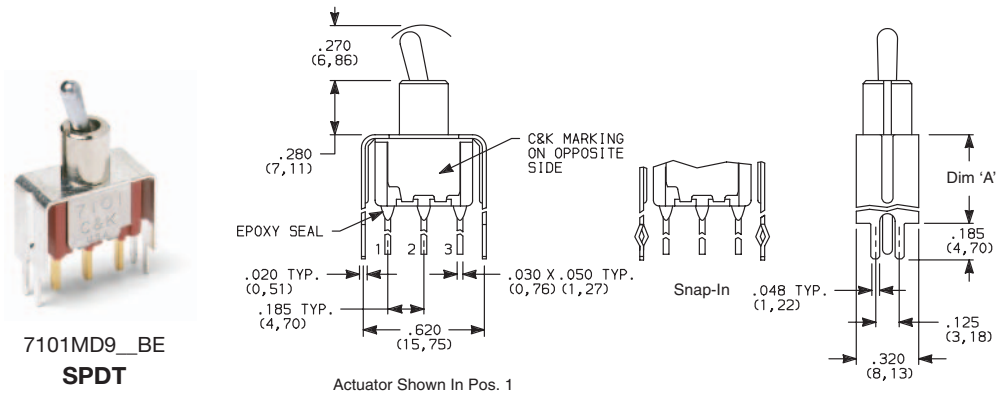


7000 Series Miniature Toggle Switches

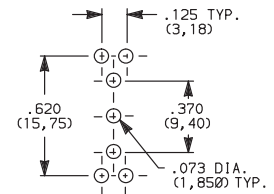
TERMINATIONS

V3, V4, V9 VERTICAL MOUNT, V-BRACKET

V31, V41 VERTICAL MOUNT, V-BRACKET, SNAP-IN



PC MOUNTING

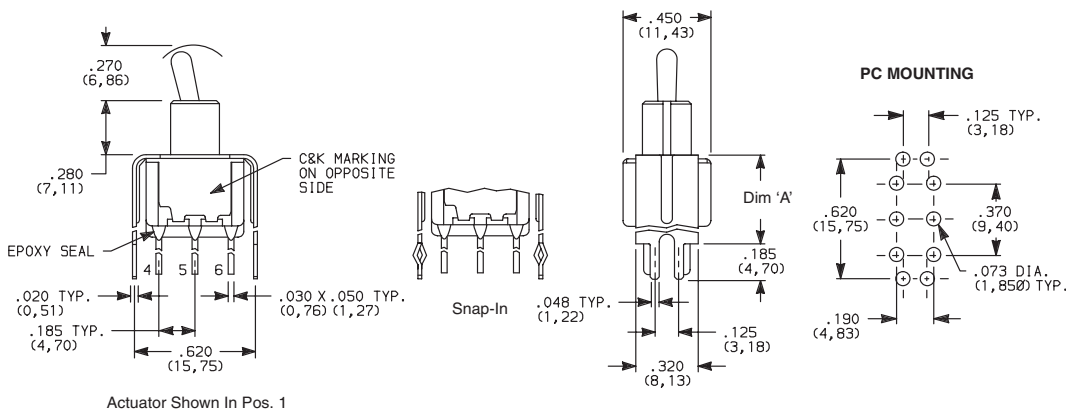


OPTION CODE	DIM 'A'
V3, V31	.460 (11,68)
V4, V41	.630 (16,00)
V9	1.150 (29,21)

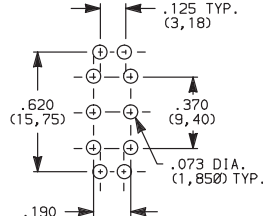
Not available with I seal option.

V3, V4, V9 VERTICAL MOUNT, V-BRACKET

V31, V41 VERTICAL MOUNT, V-BRACKET, SNAP-IN



PC MOUNTING

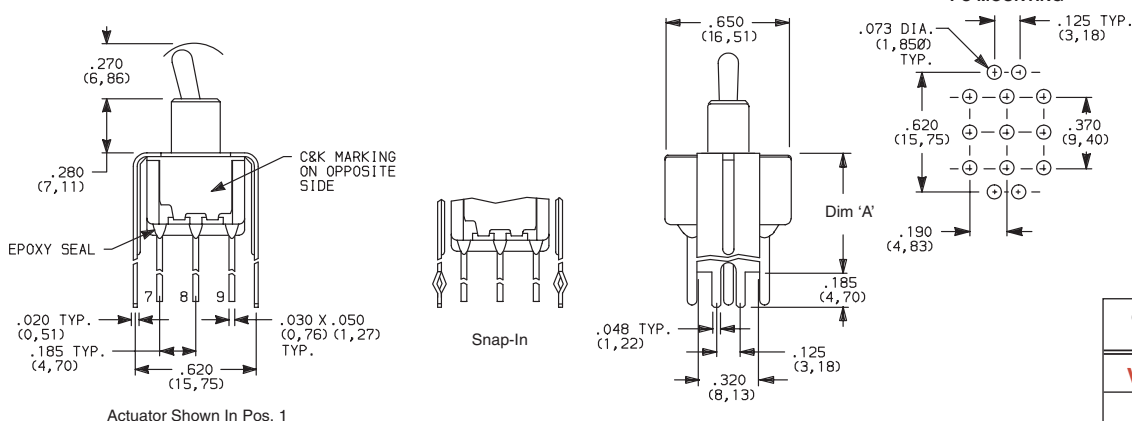


OPTION CODE	DIM 'A'
V3, V31	.460 (11,68)
V4, V41	.630 (16,00)
V9	1.150 (29,21)

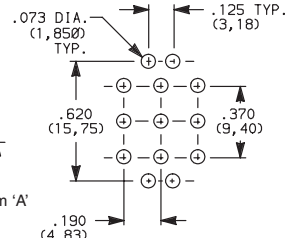
Not available with I seal option.

V4, V9 VERTICAL MOUNT, V-BRACKET

V41 VERTICAL MOUNT, V-BRACKET, SNAP-IN



PC MOUNTING



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

Not available with I seal option.



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

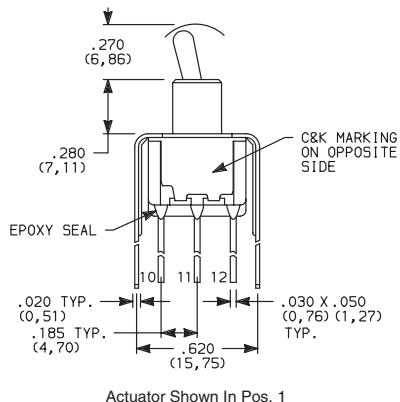
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7000 Series Miniature Toggle Switches

TERMINATIONS

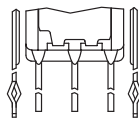
V4, V9 VERTICAL MOUNT, V-BRACKET

V41 VERTICAL MOUNT, V-BRACKET, SNAP-IN

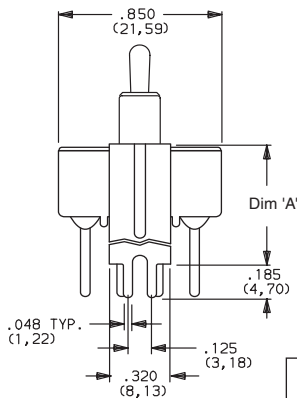


Actuator Shown In Pos. 1

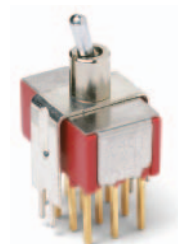
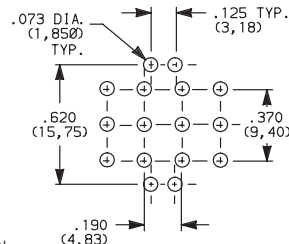
Not available with I seal option.



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   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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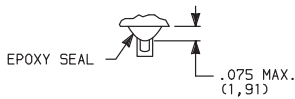


Toggle

7000 Series Miniature Toggle Switches

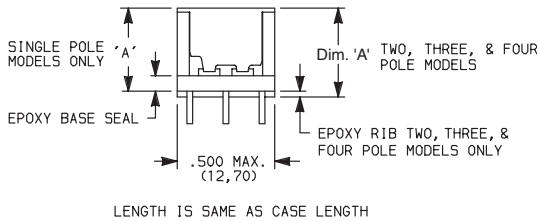
SEAL

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

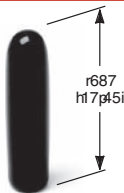
Cap



PART NO.
896801000 WHITE
896802000 BLACK
896803000 RED

Material: Polyethylene
Finish: Matte

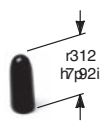
Cap



PART NO.
763701000 WHITE
763702000 BLACK
763703000 RED

Material: Vinyl
Finish: Matte

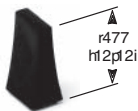
Cap



PART NO.
706201000 WHITE
706202000 BLACK
706203000 RED

Material: Vinyl
Finish: Matte

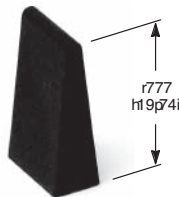
L41 Lever handle



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



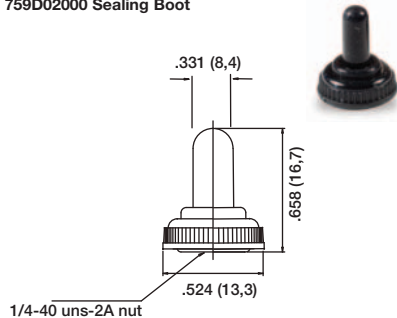
PART NO.
530100000

Available in loose pieces.

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

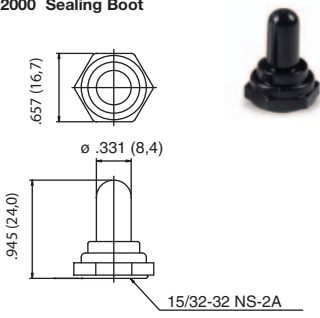
Other colors available, consult Customer Service Center.

759D02000 Sealing Boot



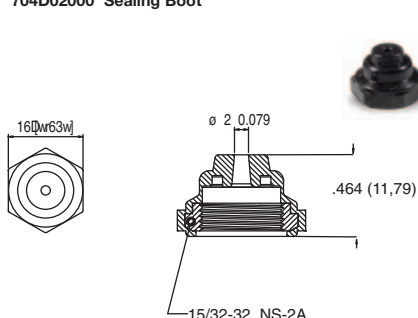
NOTE: For use with S actuator style when combined with D, H, H3, Y, and Y4 bushings

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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