

Toggles

Product Selection Guide

Toggles							
Series	7000	Military	E	ET	T	GT	9000
Switch Type	Miniature	Miniature	Miniature	Subminiature	Subminiature	Ultraminiature	Power
Poles/Throws	SPDT, DPDT, 3PDT, 4PDT	SPDT, DPDT	SPDT, DPDT, 3PDT	SPST, SPDT, DPDT	SPST, SPDT, DPDT	SPST, SPDT, DPST, DPDT	DPDT
Maximum Current Silver/Gold	5 Amps	5 Amps	7.5 Amps/ 5 Amps	3 Amps/ 2 Amps	3 Amps/ 2 Amps	0.4 VA	10 Amps
Process Sealed			•	•		•	
PCB Mount Options							
Vertical	•	•	•	•	•	•	•
Right Angle	•	•	•	•	•	•	
Vertical Right Angle	•	•	•	•	•	•	•
Surface Mount Options							
Vertical						•	
Right Angle				•		•	
Panel Mount Options							
Rear Mount	•	•	•		•		•
Termination Options							
PCB Thru-hole	•	•	•	•	•	•	•
Wire Wrap	•		•	•	•		
Solder Lug	•	•	•		•		•
Quick Connect	•		•				•
Other Available Options							
Support Brackets	•	•	•	•	•	•	•
Snap-in Retention	•		•	•			
ESD Protection	•		•	•	•		
Tape & Reel				•		•	
Bushing Options							
10-48					•		
1/4-40	•	•	•		•		•
15/32	•						•
M6P 0.75 (Metric)	•						
Page No.	F-3	F-17	F-22	F-30	F-37	F-43	F-48



F

Toggle



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

7000 Series Miniature Toggle Switches

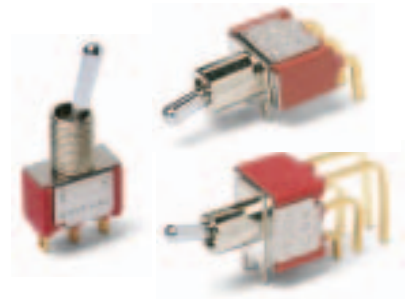
Features/Benefits

- 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 G-16 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/CSA models available, see pages F-4 & F-5.

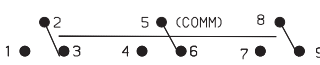


Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

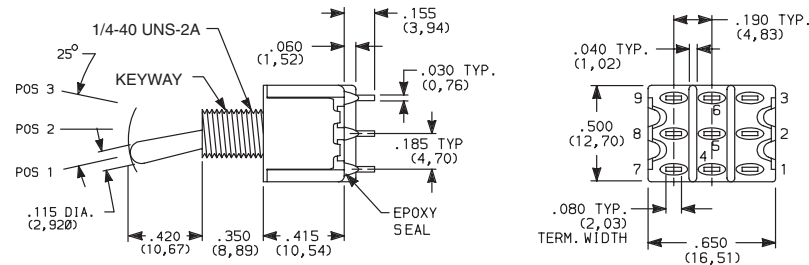


7000 Series Miniature Toggle Switches

SWITCH FUNCTION

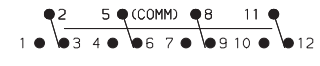
NO. POLES	MODEL NO.	UL/CSA** MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC
			POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
			KEYWAY 	KEYWAY 	KEYWAY 	KEYWAY 	KEYWAY 	KEYWAY 	
3P	7301	U31	ON	NONE	ON	2-3,5-6,8-9	N/A	2-1,5-4,8-7	
	7303	U33	ON	OFF	ON	2-3,5-6,8-9	OPEN	2-1,5-4,8-7	
	7305	U35	MOM.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

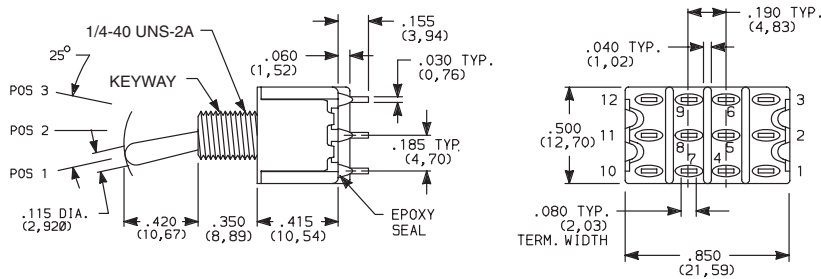


Part number shown: 7301SYZQE

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					
	7413*	U413*	ON	ON	MOM.	2-3,5-6,8-9,11-12	2-3,5-4,8-9,11-10	2-1,5-4,8-7,11-10		
	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.

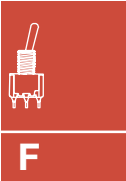


all options when ordered with G, Q, R or S contact material.



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

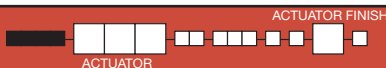
www.ck-components.com



Toggle

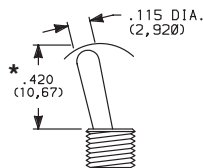
7000 Series Miniature Toggle Switches

ACTUATOR



S .420" HIGH ¹

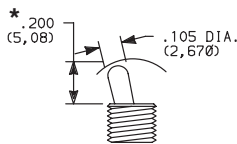
SP ANTIROTATION, .420" HIGH ^{2,3}



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

M .200" HIGH ¹

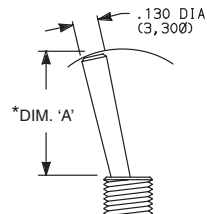
MP ANTIROTATION, .200" HIGH ^{2,3}



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

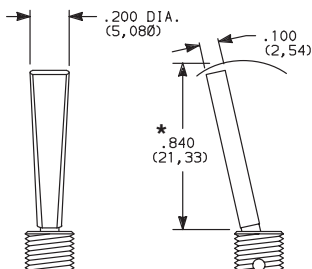
L1P, L2P ANTIROTATION, .840", .640", .550" HIGH ^{2,3}



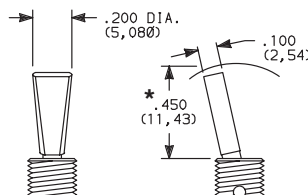
OPTION CODE	DIM 'A'
L	.840 (21,34)
L1, L1P	.640 (16,26)
L2, L2P	.550 (13,97)

Caps are available separately, see page F-16.

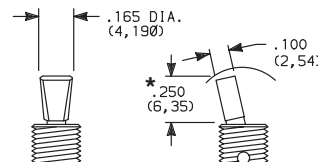
P1 FLATTED WITH ANTIROTATION, .840" HIGH ^{2,3}



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



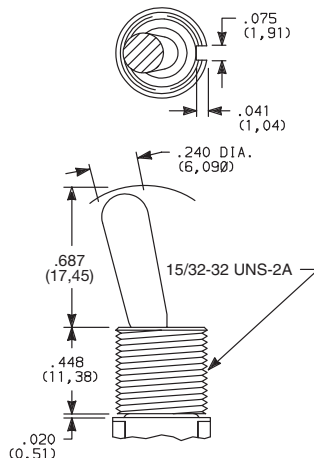
P4 FLATTED WITH ANTIROTATION, .250" HIGH ^{2,3}



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

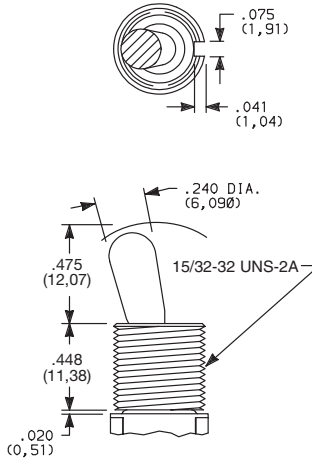
T .675 (17,15) HIGH ^{1,2}

TP ANTIROTATION, .675 (17,15) HIGH, 15/32 BUSHING ^{1,2,3}

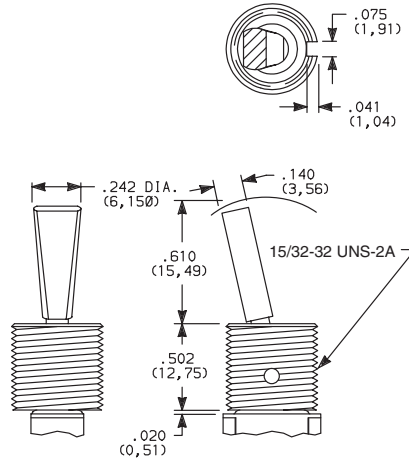


T1 .475 (12,07) HIGH ^{1,2}

T1P ANTIROTATION, .475 (12,07) 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.



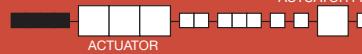
Third Angle Projection

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

C&K

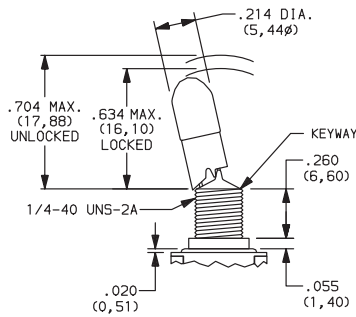
7000 Series Miniature Toggle Switches

ACTUATOR

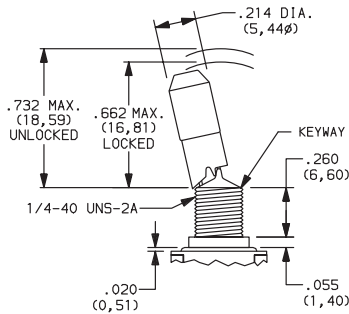


- K2** LOCKING LEVER, .704" HIGH (threaded)
K9 LOCKING LEVER, .704" HIGH (unthreaded)

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



Replaces K, K8



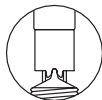
Replaces K1, K18

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

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.

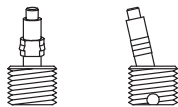
Locking levers supplied with bushing shown.

Bushing option code not required unless CW splashproof bushing ordered.

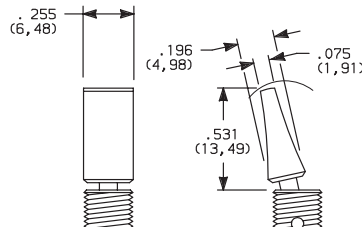
- L40** LEVER HANDLE WITHOUT CAP

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

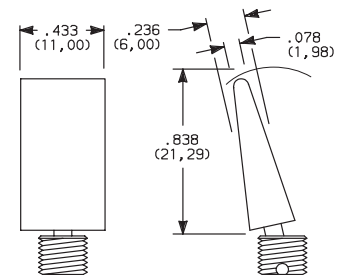
- L42** PLASTIC LEVER HANDLE WITH ANTIROTATION AND CAP, P/N 4811



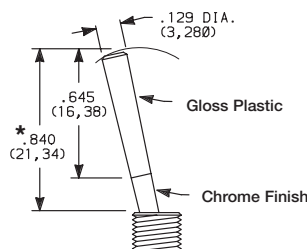
No color choice required



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.

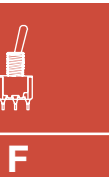
NOTE: Lever handle for L41 & L42 actuators supplied, but not installed. For interchangeability, order L40 actuator option and lever handles separately, see page F-16. L4X actuators not available with H4, Y1, Y4 bushings. Antirotation: Provides anti-'push-in' feature on actuator.



Third Angle
Projection

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

C&K



Toggle

7000 Series Miniature Toggle Switches

BUSHING



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

NONE NO BUSHING

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

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

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

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

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.

Y bushing standard with C, W-W5, Z or Z3 terminations.

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}

MFG. OPTION-RELIEF OR IMPERFECT THD.

CW THREADED, SPLASHPROOF ^{1,2}

For T & T1 actuators.

For actuators other than T & T1.

IP67 Degree of protection, totally protected against dust, full-scale voltage protection, temporary immersion. Internal actuator seal standard. External bushing seal washer available separately, see page F-16.

IP67 Degree of protection, totally protected against dust, full-scale voltage protection, temporary immersion. Internal actuator seal and external bushing seal washer standard.

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

- ¹ Will withstand 12 in.-lbs. of torque with no distortion.
- ² CW, H, H3, H4, Y1 & Y4 bushings not available on single pole models with A4 terminations.
- ³ D8 & H4 bushings available only with L, L1, L2, M & S actuators.
- ⁴ Y1 bushing available only with LXP, MP, PX & SP actuators.
- ⁵ 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.

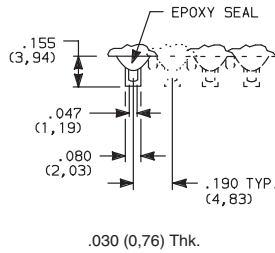


Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

7000 Series Miniature Toggle Switches

TERMINATIONS

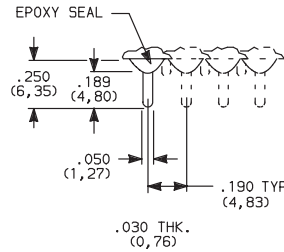
Z SOLDER LUG



SPDT thru 4PDT

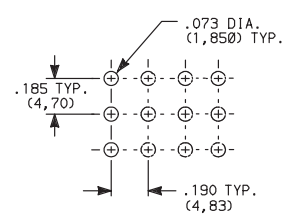
Not available with P, R or S contact materials.

C PC THRU-HOLE

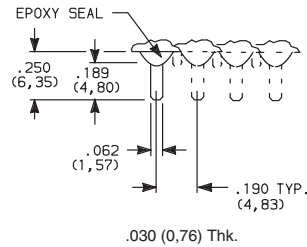


SPDT thru 4PDT

PC MOUNTING



Z3 QUICK CONNECT

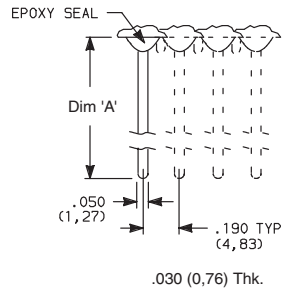


SPDT thru 4PDT

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

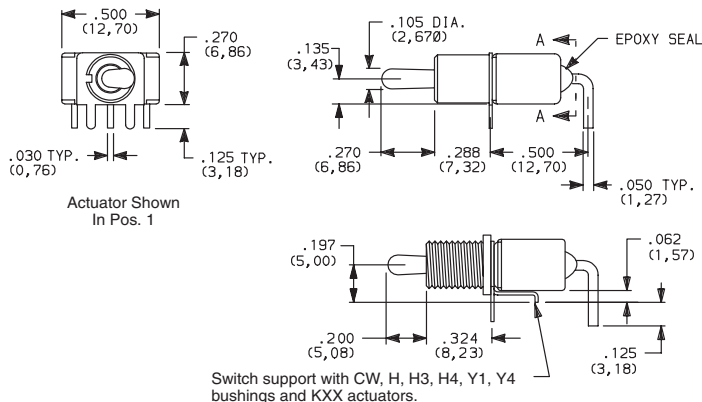
WIRE WRAP



SPDT thru 4PDT

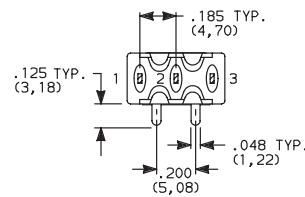
OPTION CODE	DIM 'A'
W	.750 (19,05)
W1	.964 (24,48)
W3	.425 (10,80)
W4	1.062 (26,97)
W5	1.305 (33,15)

A RIGHT ANGLE, PC THRU-HOLE



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

Part No. Shown: 7101MHABE



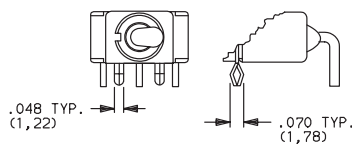
SECTION A-A

Terminal Nos.
For Reference Only



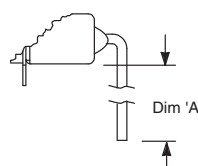
7101MD9ABE
Horizontal Actuation
SPDT

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



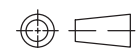
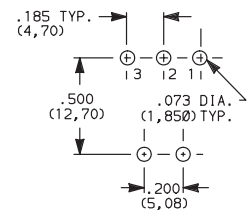
Not available with I seal option.
Terminal bend radii and lead-in manufacturing option.

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



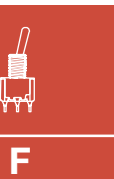
OPTION CODE	DIM 'A'
AW1	.72 (18,3)
AW4	.83 (21,1)

PC MOUNTING



Third Angle
Projection

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



F

Toggle

TERMINATIONS

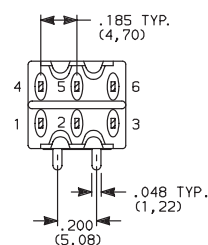
Diagram showing the mechanical drawing of a square component with dimensions: .500 (12, 70) for width, .450 (11, 43) for height, and .030 TYP. (0, 76) for pin thickness.

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:

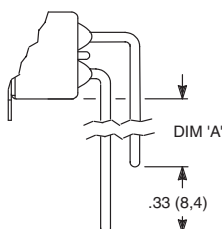
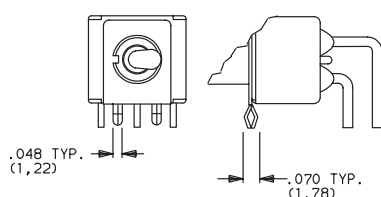
- $.105 \text{ DIA.}$ (2,670)
- $.225$ (5,72)
- $.270$ (6,86)
- $.288$ (7,32)
- $.500$ (12,70)
- $.150$ (3,81)
- $.050 \text{ TYP.}$ (1,27)
- EPOXY SEAL
- A
- 1
- 4

The drawing shows a probe assembly with a cylindrical body and a rectangular block. 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

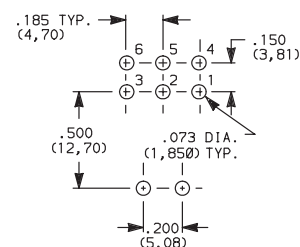


AW1, AW4 RIGHT ANGLE, EXTENDED,
PC THRU-HOLE

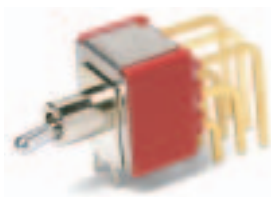
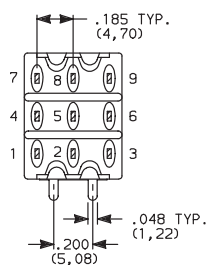


OPTION CODE	DIM 'A'
AW1	.40 (10,2)
AW4	.50 (12,7)

PC MOUNTING

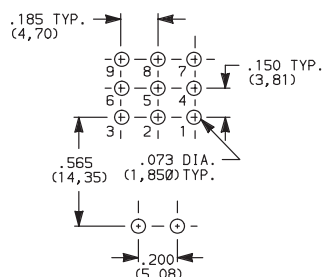


A RIGHT ANGLE, PC THRU-HOLE

[illegible]

SECTION A-A

PC MOUNTING



F-10

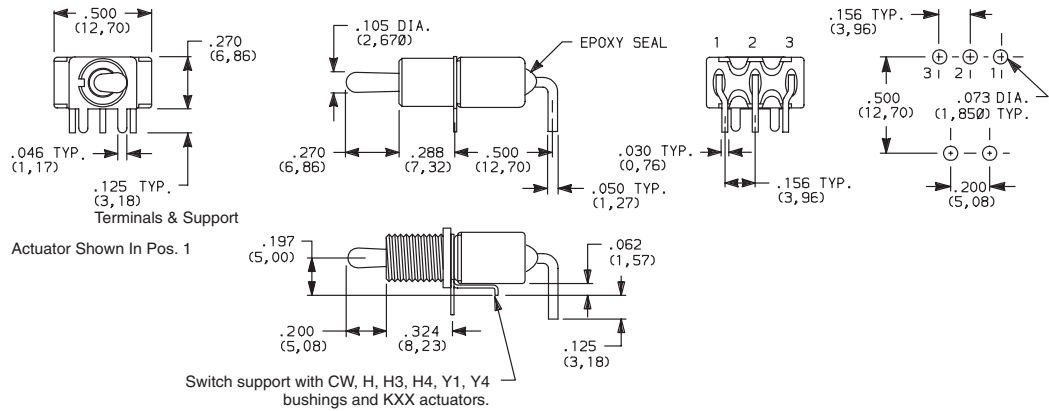
Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

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7000 Series Miniature Toggle Switches

TERMINATIONS

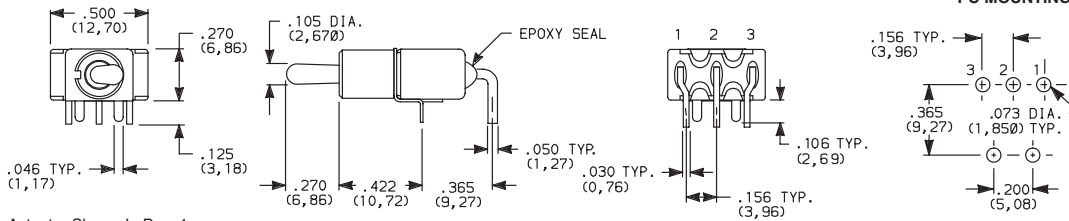
A2 RIGHT ANGLE, PC THRU-HOLE, .156" PITCH



7101MHA2BE
Horizontal Actuation
SPDT

Not available with TXX actuators and I seal.
Terminal bend radii and lead-in manufacturing option.
Part No. Shown: 7101MHA2BE

A4 RIGHT ANGLE, PC THRU-HOLE .156" PITCH

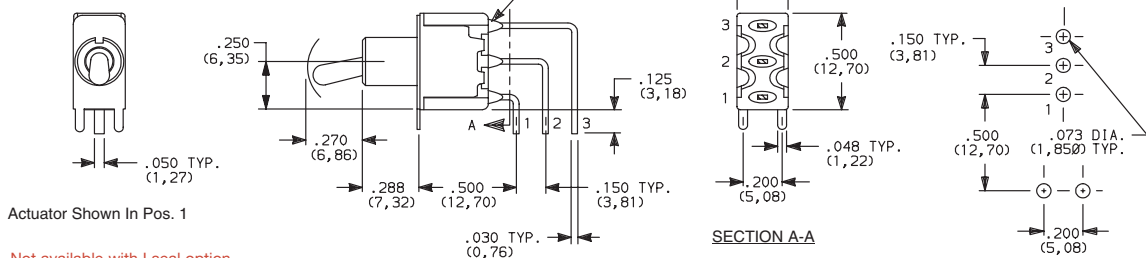


7101MD9A4BE
Horizontal Actuation
SPDT

Actuator Shown In Pos. 1
Not available with KXX & TXX actuators, CW, H, H3, H4, Y1 & Y4 bushings, and I seal. Terminal bend radii and lead-in manufacturing option.

NOTE: The A4 option is available with any contact material and can be UL recognized and CSA certified. The PC pattern must clear switch support legs.

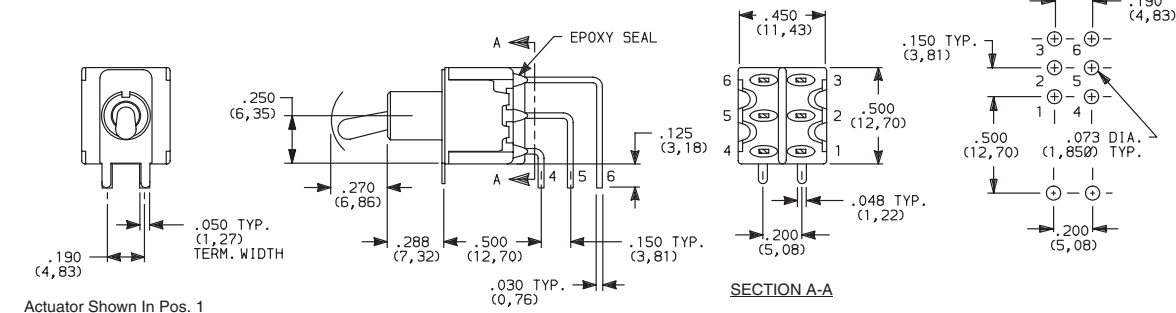
AV2 VERTICAL RIGHT ANGLE, PC THRU-HOLE, .150" PITCH



7101MD9AV2BE
Horizontal Actuation
SPDT

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

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



7201MD9AV2BE
Vertical Actuation
DPDT

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



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



F

Toggle

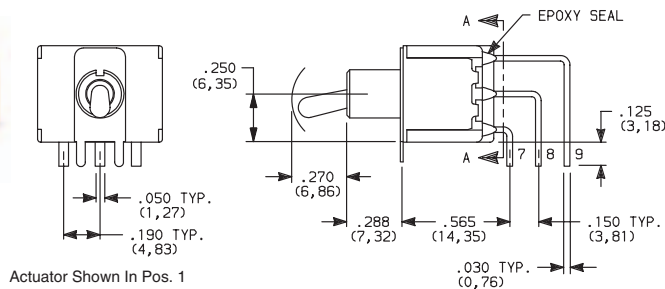
7000 Series Miniature Toggle Switches

TERMINATIONS

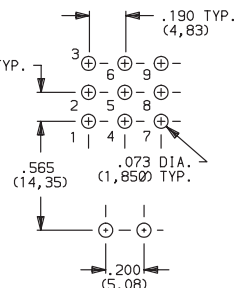
AV2 VERTICAL RIGHT ANGLE, PC THRU-HOLE,
.150" PITCH



7301MD9AV2BE
Vertical Actuation
3PDT



PC MOUNTING

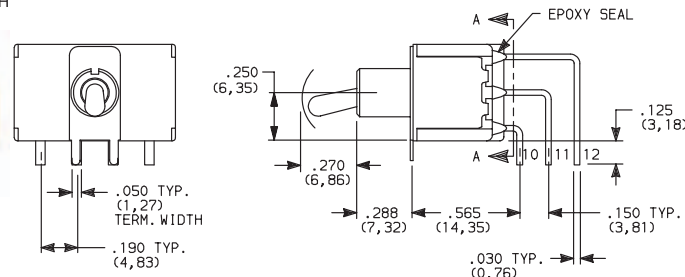


Not available with I seal option.
Terminal bend radii and lead-in manufacturing option.

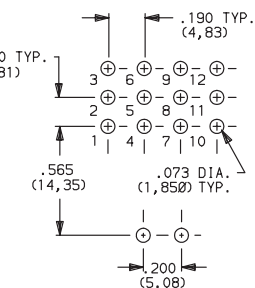
AV2 VERTICAL RIGHT ANGLE, PC THRU-HOLE,
.150" PITCH



7401MD9AV2BE
Vertical Actuation
4PDT



PC MOUNTING



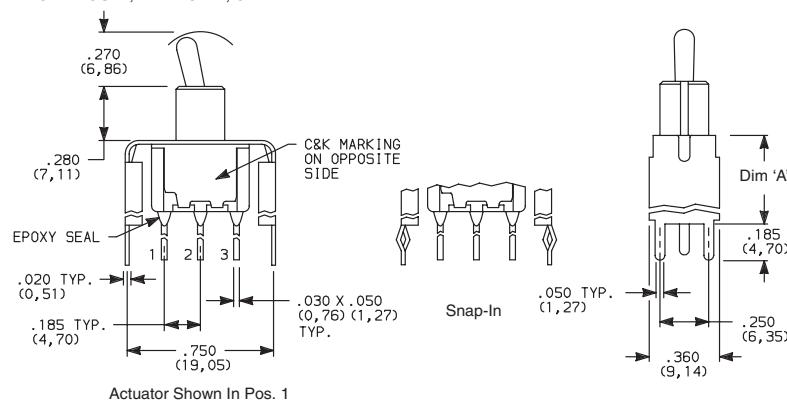
Not available with I seal option.
Terminal bend radii and lead-in manufacturing option.

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

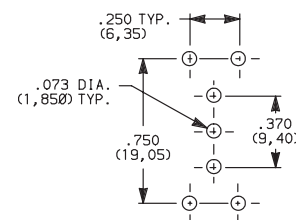
V21, V71, V81 VERTICAL MOUNT, V-BRACKET, SNAP-IN



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

C&K



Third Angle
Projection

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

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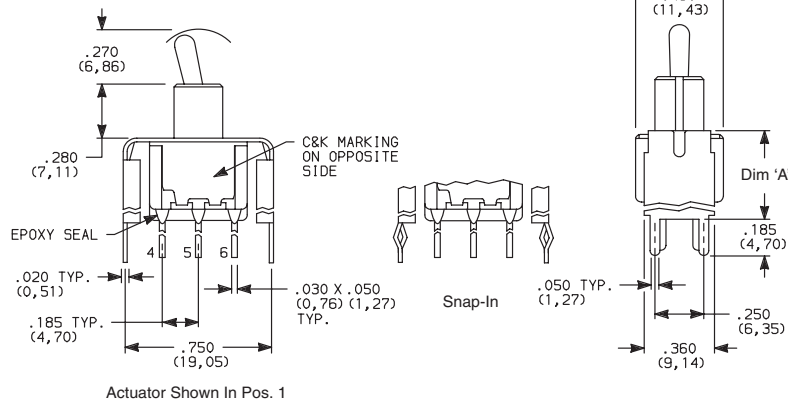
7000 Series Miniature Toggle Switches

TERMINATIONS



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

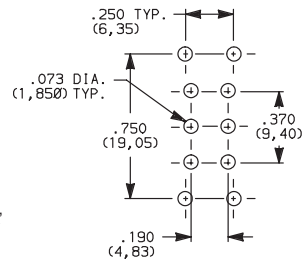
V21, V61, V71, V81 VERTICAL MOUNT, V-BRACKET, SNAP-IN



Actuator Shown In Pos. 1

Not available with I seal option.

PC MOUNTING



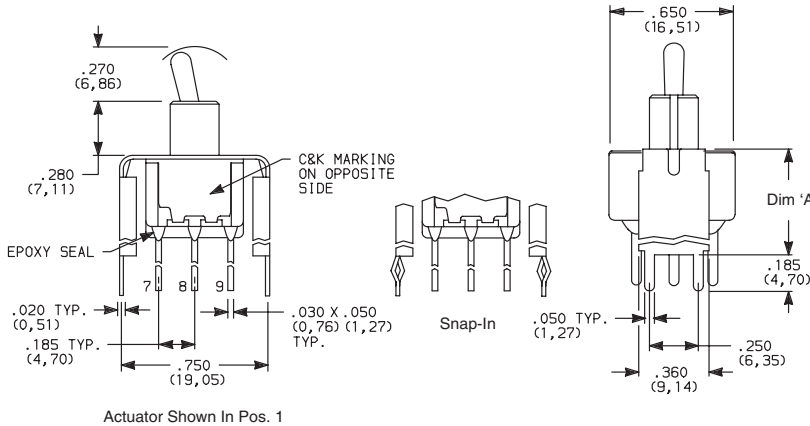
OPTION CODE	DIM 'A'
V2, V21	.555 (14,10)
V6, V61	.460 (11,68)
V7, V71	.630 (16,00)
V8, V81	.953 (24,21)



7201MD9_BE
DPDT

V2, V7, V8 VERTICAL MOUNT, V-BRACKET

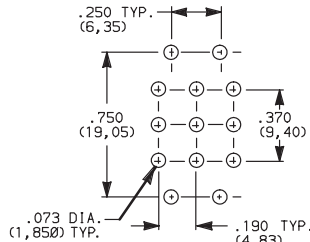
V21, V71, V81 VERTICAL MOUNT, V-BRACKET, SNAP-IN



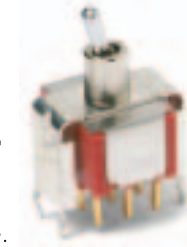
Actuator Shown In Pos. 1

Not available with I seal option.

PC MOUNTING



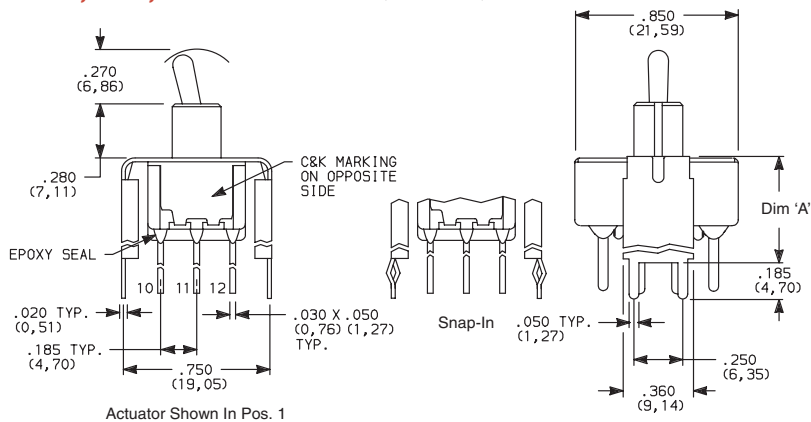
OPTION CODE	DIM 'A'
V2, V21	.555 (14,10)
V7, V71	.630 (16,00)
V8, V81	.953 (24,21)



7301MD9_BE
3PDT

V2, V7, V8 VERTICAL MOUNT, V-BRACKET

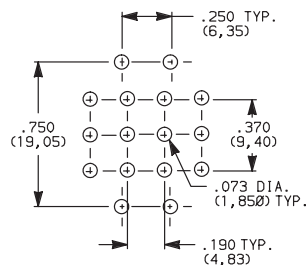
V21, V71, V81 VERTICAL MOUNT, V-BRACKET, SNAP-IN



Actuator Shown In Pos. 1

Not available with I seal option.

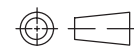
PC MOUNTING



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

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



7000 Series Miniature Toggle Switches

V3, V4, V9

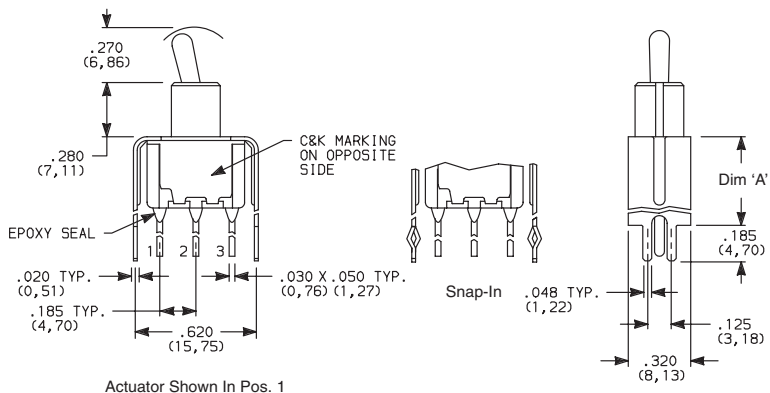
VERTICAL MOUNT, V-BRACKET

V31, V41

VERTICAL MOUNT, V-BRACKET, SNAP-IN

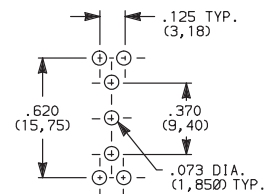


7101MD9__BE
SPDT



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

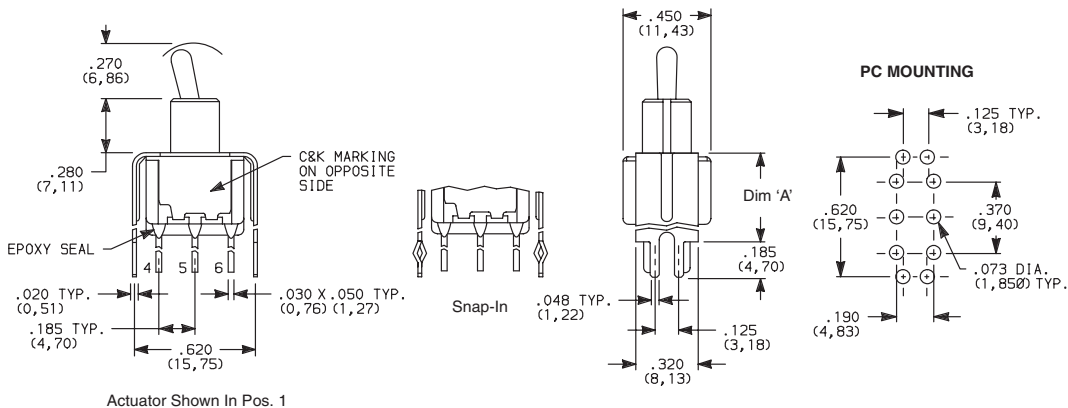
VERTICAL MOUNT, V-BRACKET

V31, V41

VERTICAL MOUNT, V-BRACKET, SNAP-IN



7201MD9__BE
DPDT



Actuator Shown In Pos. 1

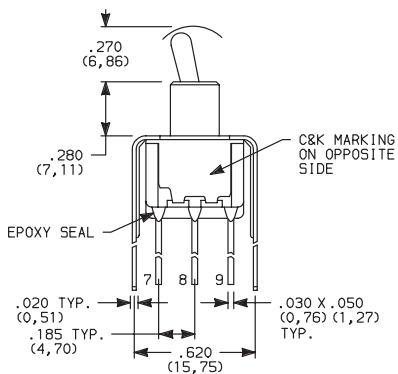
Not available with I seal option.

V4, V9

VERTICAL MOUNT, V-BRACKET

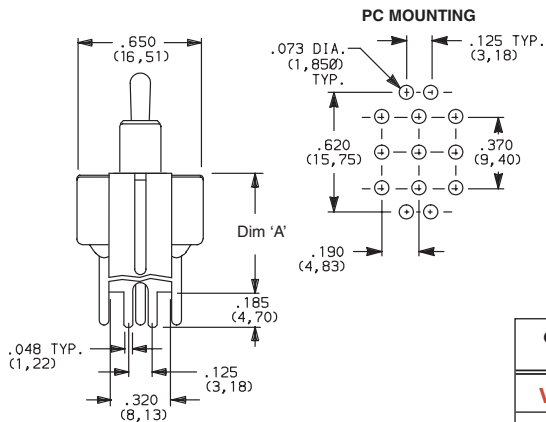
V41

VERTICAL MOUNT, V-BRACKET, SNAP-IN



Actuator Shown In Pos. 1

Not available with I seal option.



7301MD9__BE
3PDT

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



Third Angle Projection

Dimensions are shown: Inches (mm)

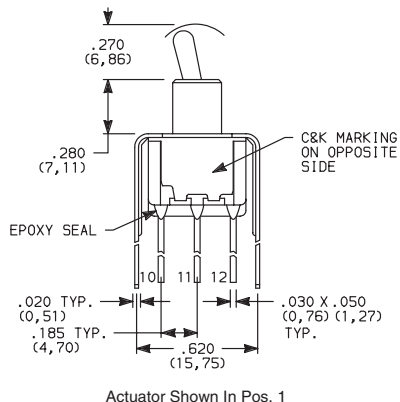
Specifications and dimensions subject to change

7000 Series Miniature Toggle Switches

TERMINATIONS

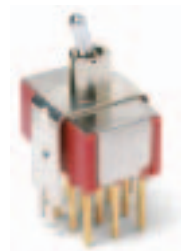
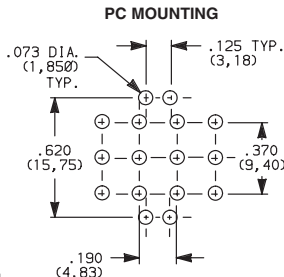
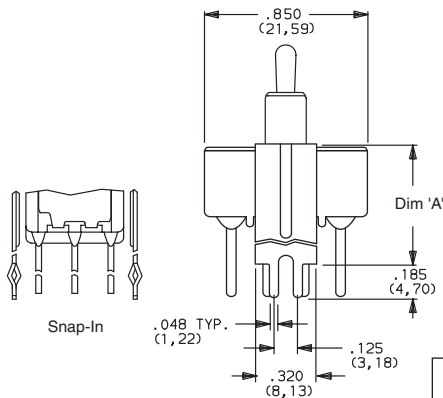
V4, V9 VERTICAL MOUNT, V-BRACKET

V41 VERTICAL MOUNT, V-BRACKET, SNAP-IN



Actuator Shown In Pos. 1

Not available with I seal option.



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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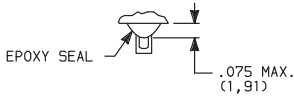


Toggle

7000 Series Miniature Toggle Switches

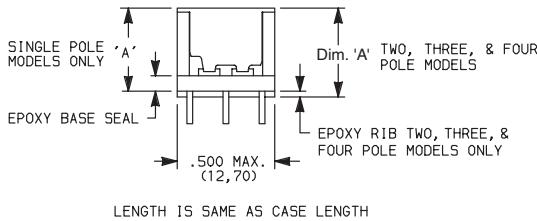
SEAL

E EPOXY SEAL



Compatible with “bottom-wash” PC board cleaning methods.

I EPOXY POTTED BASE

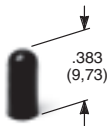


NO. POLES	DIM 'A'
SP	.410 (10,41)
DP	.440 (11,18)
3P	.505 (12,83)
4P	.505 (12,83)

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

AVAILABLE HARDWARE

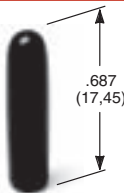
Cap



PART NO.
896801000 WHITE
896802000 BLACK
896803000 RED

Material: Polyethylene
 Finish: Matte

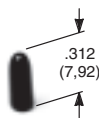
Cap



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

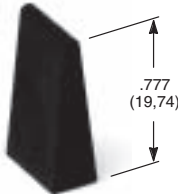
L41 Lever handle



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

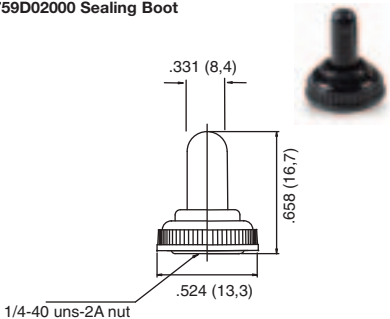


PART NO.
530100000

Available in loose pieces.

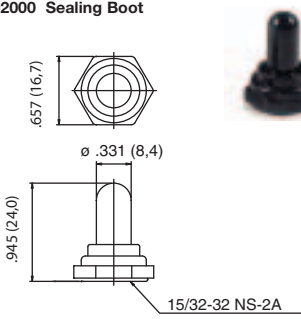
NOTE: Additional nuts, locking rings and lockwashers available separately, see Section N.
 Other colors available, consult Customer Service Center.

759D02000 Sealing Boot



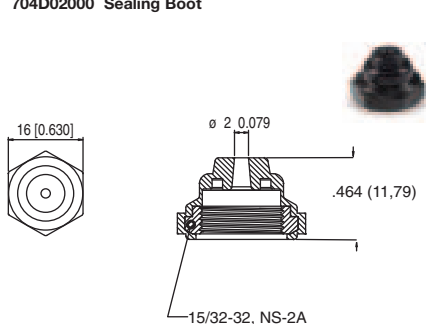
NOTE: For use with S actuator style when combined with D, H, H3, Y, and Y4 bushings

703D02000 Sealing Boot

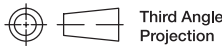


NOTE: For use with T and TP style actuators

704D02000 Sealing Boot



NOTE: For use with T, TP and T2P style actuators



Third Angle
Projection

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

www.ck-components.com



Military/Aerospace/HI-REL MIL-S-83731 Toggle Switches

Features/Benefits

- **Qualified to MIL-S-83731**
- **50 μ inch selective gold contact plating**
- **Epoxy sealed terminals for process compatibility**
- **Rated for logic level to 5 amp resistive loads and 2 amp inductive loads**
- **Flame retardant housing material**
- **RoHS compliant and compatible**

Test Requirement	MIL-S-83731/9, 10, 13, 14, 15, 16
1. Strength of Terminal	1 lb. – solder lug
2. Strength of Actuating Lever Pivot and Stop	10 lbs. & 8 lbs. throughout range
3. Strength of Mounting Means	15 lbs. in. torque on bushing
4. Dielectric (Sea Level) Indication	1000 VAC Group B, 750 VAC after electrical endurance. 500 μ A max. leakage
5. Contact Voltage Drop	2.5 millivolt initial, 5.0 millivolt after mechanical endurance @ 2-6 VDC 0.1 amp
6. Temperature Rise	50° C rise max. @ rated resistive load after endurance test
7. Short Circuit	10 operations carry 100 amps resistive load @ lowest DC volts
8. Mechanical Life	20K operations at specified high and low temperatures
9. Electrical Endurance	10K operations at specified high and low temperatures
10. Overload	50 operations @ 150% of rated resistive load
11. Electrical Endurance at Sea Level	10K operations resistive load @ room temperature 10K operations inductive load @ room temperature 10K operations lamp load @ room temperature Performed on different test samples
12. Vibration	Method 204 of MIL-STD-202, test condition A .06 D. A. or 10 G's 10-500 Hz, 10 usec. max. chatter
13. Shock	Fuse-method 213 or MIL-STD-202, 10 usec. max. chatter
14. Salt Spray Test Upon Completion	48 hours – method 101 of MIL-STD-202, test condition B 10 operations resistive load (toggle sealed switches only)
15. Moisture Resistance Test Upon Completion	Method 106 of MIL-STD-202 100 VDC potential between current carrying parts and panel
16. Sand & Dust	Method 110 of MIL-STD-202, test condition B 6 hours @ 23°C 2.5K operations mechanical life (toggle sealed switches only)
17. Explosion	MIL-STD-202 method 109, maximum rated DC inductive load (toggle sealed switches only)
18. Sealing	Toggle seal – 5 operations under 0.5 inches of H ₂ O above top of bushing
19. A.) Toggle Seal B.) Bushing Seal	(Toggle sealed switches only) (Panel sealed switches only)
20. Temperature Operation	Mechanical life, –25°C to +71°C
21. Life Low Cur. Level	No requirement
22. Fungus	No requirement
23. Intermediate Current	20K operations, 35/40 milliamps @ 5 VDC resistive load @ +71°C
24. Thermal Shock	Method 107 of MIL-STD-202 test condition A; 5 cycles @ –55°C/+85°C

RATINGS

CURRENT RATINGS – HIGH LEVEL

Current Capacity in Amperes – Per Pole		
28V dc	115V ac, 400 Hz	125V ac, 60 Hz
Lamp Load		
1	1	1
Resistive Load		
5	5	5
Inductive Load		
2	2	2

CURRENT RATINGS – LOGIC LEVEL

0.5 Volt – Amp (VA) Max. @ 28 V Max. (AC or DC)

MATERIALS

CASE: Diallyl phthalate (DAP) (UL 94 V-0).

BUSHING: Brass, nickel plated.

HOUSING: Stainless steel.

ACTUATOR: Brass, chrome plated.

SWITCH SUPPORT: Brass, tin plated.

TERMINALS: Gold over nickel over copper alloy.

TERMINAL SEAL: Epoxy.

CONTACTS: Gold over nickel over silver over brass.

PANEL SEAL: Silicone rubber.

MOUNTING HARDWARE: One hexagon nut, brass with nickel plating; one lockwasher, steel with nickel plating; one locking ring, brass with nickel plating.

HOW TO ORDER: Complete part numbers for MIL-S-83731 TOGGLE SWITCHES are shown on pages F–18 through F–21.



[illegible]

Technical drawing of the 1000 Series Connector showing front, side, and terminal views with dimensions in inches and millimeters.

Front View Dimensions:

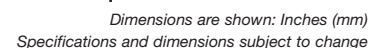
- Overall Width: $.410 \pm .010$ (10, 41 $\pm$ 25)
- Inner Diameter: $.465$ DIA. (11, 81 ϕ) MAX.
- Outer Diameter: $.510$ MAX. (12, 95)
- Thread: 1/4-40 UNS-2A THD.

Side View Dimensions:

- Overall Length: $.440$ MAX. (11, 17)
- Pin Diameter: $.060$ (1, 52)
- Pin Spacing: $.185$ TYP. (4, 70)
- Pin Length: $.155$ TYP. (3, 94)
- Pin Spacing (Bottom): $.190$ TYP. (4, 83)
- Pin Diameter (Bottom): $.115 \pm .003$ DIA. (2, 92 $\pm$ 0, 08 ϕ)
- Pin Position: POS. 1, POS. 2, POS. 3
- Throw: $25^\circ \pm 8^\circ$ THROW
- Seal: EPOXY SEAL

Terminal View:

- Terminal Nos. for Ref. Only: 1, 2, 3, 4, 5, 6
- Terminal Width: $.080$ WD. TYP. $\times$ $.031$ THK. MAX. TYP. (2, 03) $\times$ (0, 76)

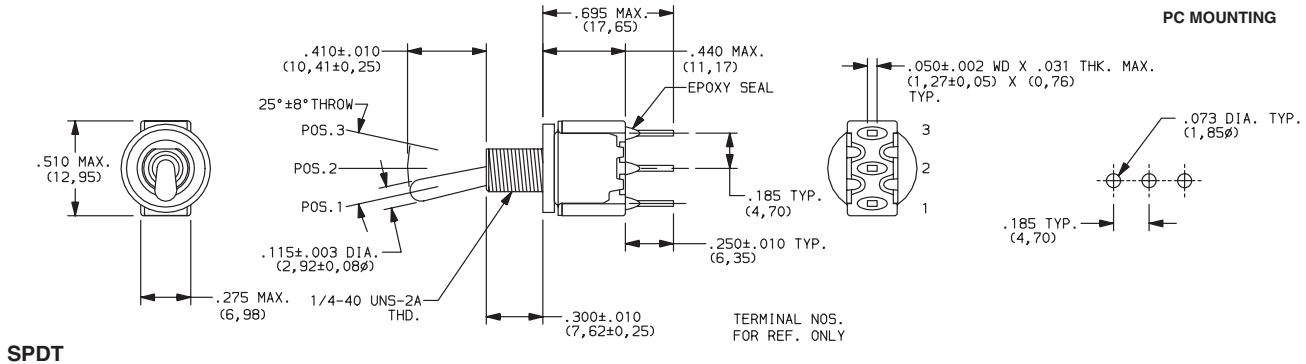


Military/Aerospace/HI-REL

MIL-S-83731 Toggle Switches

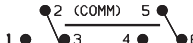


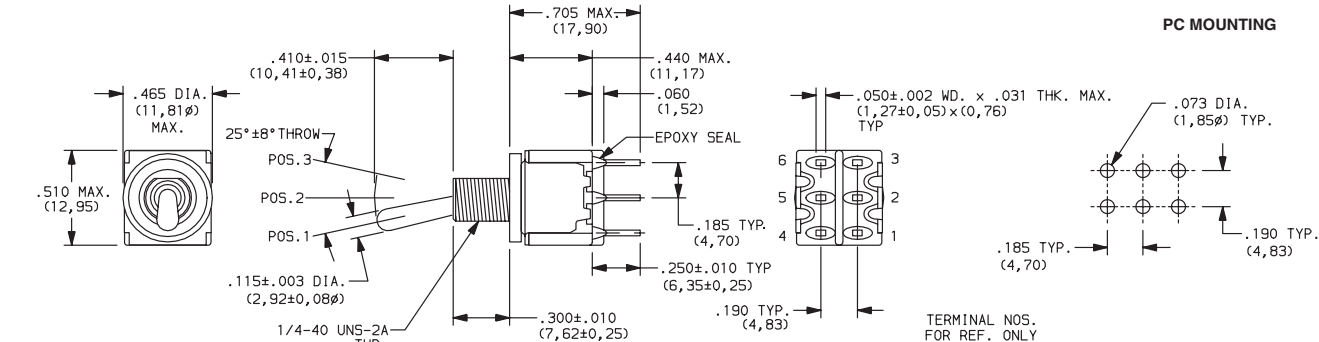
NO. POLES	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC
		POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
SP	M83731/9-212	ON	OFF	ON	2-3	OPEN	2-1	 SPDT
	M83731/9-232	ON	NONE	ON				
	M83731/9-262	ON	NONE	MOM.				
	M83731/9-272	MOM.	OFF	MOM.				
	M83731/9-312	ON	OFF	MOM.				
	M83731/9-342	NONE	ON	MOM.	N/A	2-3	2-1	



SPDT



NO. POLES	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC
		POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
								
DP	M83731/10-212	ON	OFF	ON	2-3,5-6	OPEN	2-1,5-4	
	M83731/10-232	ON	NONE	ON				
	M83731/10-262	ON	NONE	MOM.				
	M83731/10-272	MOM.	OFF	MOM.				
	M83731/10-312	ON	OFF	MOM.				
	M83731/10-322	ON	ON	ON	2-3,5-6	2-3,5-4	2-1,5-4	
	M83731/10-332	ON	ON	MOM.				
	M83731/10-342	NONE	ON	MOM.	N/A	2-3,5-6	2-1,5-4	
	M83731/10-352	MOM.	ON	MOM.	2-3,5-6	2-3,5-4	2-1,5-4	



DPDT



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

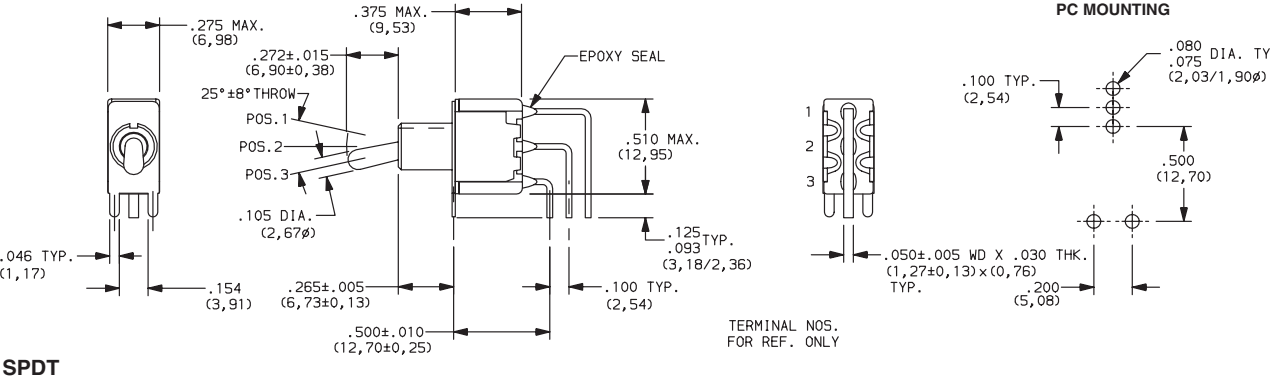
www.ck-components.com



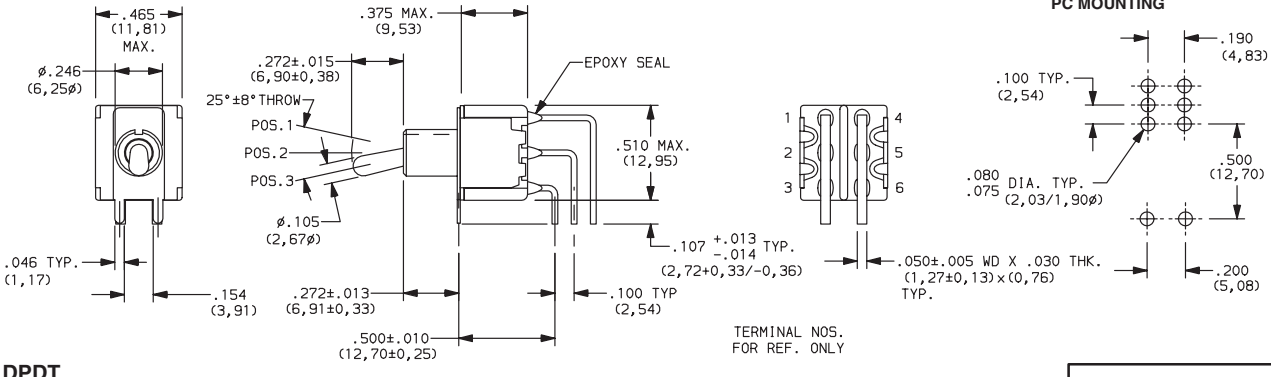
Military/Aerospace/HI-REL
MIL-S-83731 Toggle Switches



NO. POLES	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC
		POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
SP	M83731/13-211	ON	OFF	ON	2-3	OPEN	2-1	
	M83731/13-231	ON	NONE	ON				
	M83731/13-261	ON	NONE	MOM.				
	M83731/13-271	MOM.	OFF	MOM.				
	M83731/13-311	ON	OFF	MOM.				
	M83731/13-341	NONE	ON	MOM.	N/A	2-3	2-1	



NO. POLES	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC	
		POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3		
DP	M83731/14-211	ON	OFF	ON	2-3,5-6	OPEN	2-1,5-4		
	M83731/14-231	ON	NONE	ON					
	M83731/14-261	ON	NONE	MOM.					
	M83731/14-271	MOM.	OFF	MOM.					
	M83731/14-311	ON	OFF	MOM.	2-3,5-6	2-3,5-4	2-1,5-4		
	M83731/14-321	ON	ON	ON					
	M83731/14-331	ON	ON	MOM.	N/A	2-3,5-6	2-1,5-4		
	M83731/14-341	NONE	ON	MOM.	2-3,5-6	2-3,5-4	2-1,5-4		
	M83731/14-351	MOM.	ON	MOM.	2-3,5-6	2-3,5-4	2-1,5-4		



Toggle F

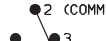


Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

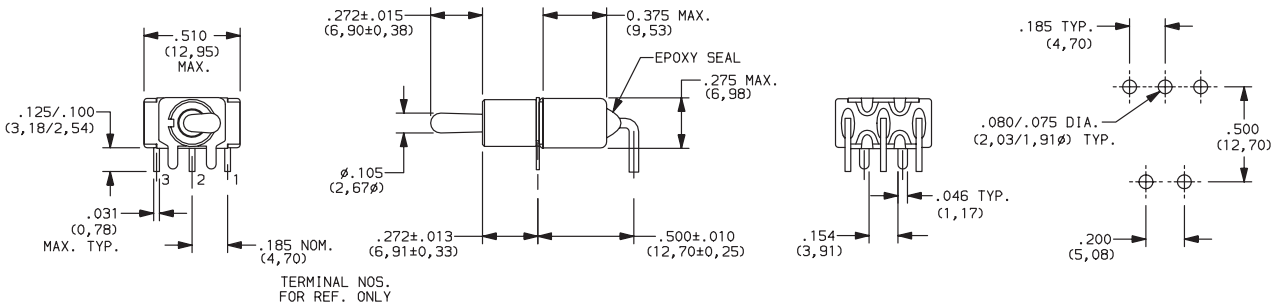
Military/Aerospace/HI-REL

MIL-S-83731 Toggle Switches



NO. POLES	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC
		POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
								
SP	M83731/15-211	ON	OFF	ON				 SPDT
	M83731/15-231	ON	NONE	ON				
	M83731/15-261	ON	NONE	MOM.				
	M83731/15-271	MOM.	OFF	MOM.				
	M83731/15-311	ON	OFF	MOM.				
	M83731/15-341	NONE	ON	MOM.				

PC MOUNTING

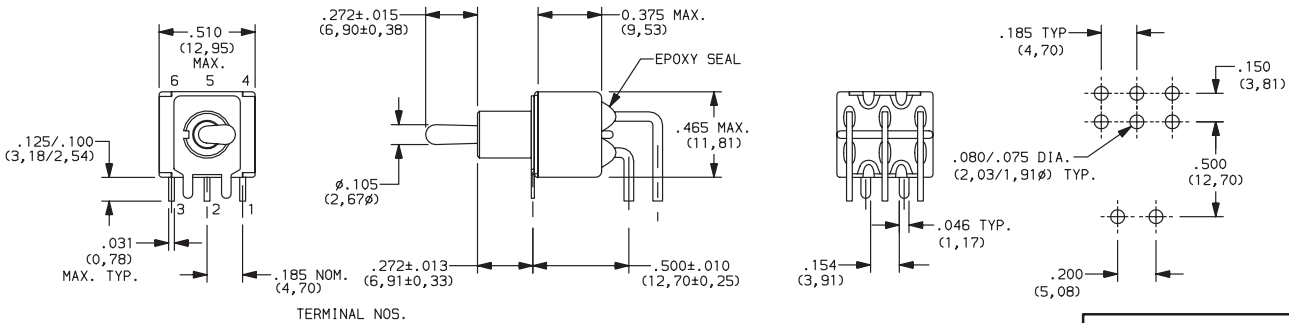


SPDT

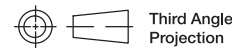


NO. POLES	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC
		POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
								
DP	M83731/16-211	ON	OFF	ON	2-3,5-6	OPEN	2-1,5-4	
	M83731/16-231	ON	NONE	ON				
	M83731/16-261	ON	NONE	MOM.				
	M83731/16-271	MOM.	OFF	MOM.				
	M83731/16-311	ON	OFF	MOM.	2-3,5-6	2-3,5-4	2-1,5-4	
	M83731/16-321	ON	ON	ON				
	M83731/16-331	ON	ON	MOM.				
	M83731/16-341	NONE	ON	MOM.	N/A	2-3,5-6	2-1,5-4	
	M83731/16-351	MOM.	ON	MOM.	2-3,5-6	2-3,5-4	2-1,5-4	

PC MOUNTING

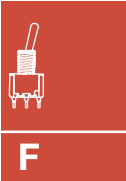


DPDT



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

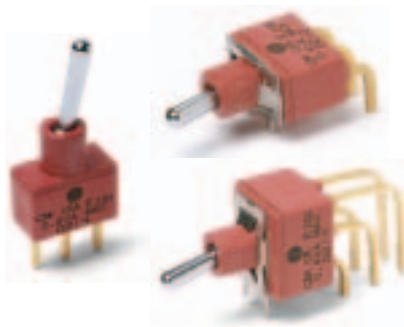
www.ck-components.com



Toggle

E Series

Sealed Miniature Toggle Switches



Features/Benefits

- Sealed against solder and cleaning process contaminants
- UL 94V-0 Nylon case and bushing
- Multi-positions
- ESD protection available
- RoHS compliant 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: E1XX & E2XX MODELS: 7.5 AMPS @ 125 V AC or 28 V DC; 3 AMPS @ 250 V AC. E3XX MODELS: 5 AMPS @ 125 V AC or 28 V DC; 2 AMPS @ 250 V AC. See page F-25 for additional ratings.

ELECTRICAL LIFE: E1XX and E2XX models: 40,000 make-and-break cycles at full load. E3XX models: 30,000 cycles.

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

INSULATION RESISTANCE: 10⁹ Ω min.

ELECTROSTATIC DISCHARGE (ESD) OPTION: F1 conductive bushing only. Dissipates up to 20,000 V DC from actuator to ground.

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).

DEGREE OF PROTECTION: IP57; Protection against harmful dust deposit, full-scale voltage protection, temporary immersion.

Materials

CASE & BUSHING: Glass filled nylon 6/6, flame retardant, heat stabilized (UL 94V-0). F1 conductive bushing option is impregnated with carbon fibers.

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

SWITCH SUPPORT: Brass or steel, matte-tin plated.

SWITCH SUPPORT RETAINER: Stainless steel.

CONTACTS & TERMINALS: B contact material: Copper alloy, with gold plate over nickel plate. Q contact material: Copper alloy, silver plated. See page F-29 for additional contact materials.

TERMINAL SEAL: Epoxy.

HARDWARE: Nut & Locking ring: Brass, nickel plated. Lockwasher: Steel, nickel plated.

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

NOTE: Specifications and materials 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-23 thru F-29. For additional options not shown in catalog, consult our Customer Service Center. All models are process sealed to withstand machine soldering temperatures and pressure wash cleaning methods.

Switch Function

- E101** SP, On-None-On
- E103** SP, On-Off-On
- E105** SP, Mom.-Off-Mom.
- E107** SP, On-Off-Mom.
- E108** SP, On-None-Mom.
- E201** DP, On-None-On
- E203** DP, On-Off-On
- E205** DP, Mom.-Off-Mom.
- E207** DP, On-Off-Mom.
- E208** DP, On-None-Mom.
- E211** DP, On-On-On
- E213** DP, On-On-Mom.
- E215** DP, Mom.-On-Mom.
- E301** 3P, On-None-On

Actuator

- M** .300" high
- S** .500" high
- L3** Plastic, .940" high

Bushing

- D1** .250" high
- F1** Conductive, .250" high*
- D9** .280" high
- Y** Threaded, .350" high

Terminations

- A** Right angle, PC thru-hole
- AV2** Vertical right angle, PC thru-hole
- C** PC Thru-hole
- V3** .460" high, V-bracket
- Z** Solder lug
- A3** Right angle, PC thru-hole
- AV3** Vertical right angle, PC thru-hole
- V6** .460" high, V-bracket
- V9** 1.150" high, V-bracket
- V31** .460" high, snap-in V-bracket
- V61** .460" high, snap-in V-bracket
- W** .750" long, wire wrap
- Z3** Quick connect

Contact Material

- B** Gold
- P** Gold, matte-tin
- Q** Silver
- S** Silver, matte-tin
- G** Gold over silver
- R** Gold over silver, matte-tin

Seal

- E** Epoxy

* F1 available with SP and DP versions only, please see page F-24

Toggle
F



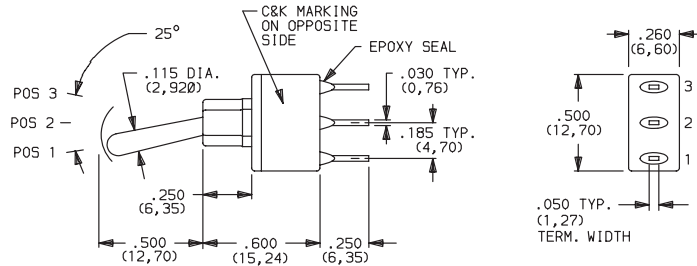
Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

E Series Sealed Miniature Toggle Switches

SWITCH FUNCTION

NO. POLES	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC
		POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
		C&K marking on opposite side			C&K marking on opposite side			
SP	E101	ON	NONE	ON	2-3	N/A	2-1	
	E103	ON	OFF	ON				
	E105	MOM.	OFF	MOM.	2-3	OPEN	2-1	
	E107	ON	OFF	MOM.				
	E108	ON	NONE	MOM.	2-3	N/A	2-1	

SPDT

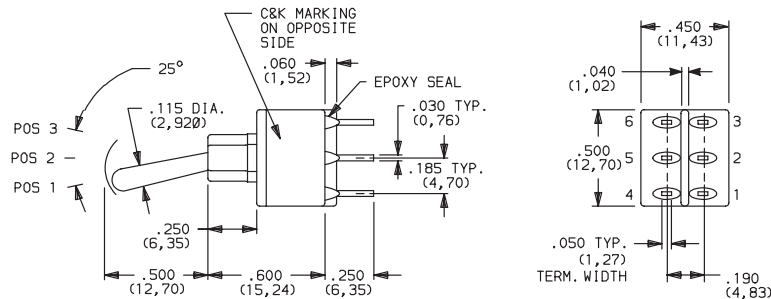


Part number shown: E101SD1CBE

Terminal Numbers
For Reference Only

DP	E201	ON	NONE	ON	2-3,5-6	N/A	2-1,5-4	
	E203	ON	OFF	ON				
	E205	MOM.	OFF	MOM.	2-3,5-6	OPEN	2-1,5-4	
	E207	ON	OFF	MOM.				
	E208	ON	NONE	MOM.	2-3,5-6	N/A	2-1,5-4	
	E211 **	ON	ON	ON				
	E213**	ON	ON	MOM.	2-3,5-6	2-3,5-4	2-1,5-4	
	E215**	MOM.	ON	MOM.				

DPDT



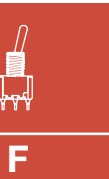
Part number shown: E201SD1CBE

Terminal Numbers
For Reference Only

MOM. = Momentary

** Wiring for 3-way switch, see Section N.

All models with all options when ordered with G,R, Q or S contact material except with F1 conductive bushing.



Toggle



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

E Series
Sealed Miniature Toggle Switches

SWITCH FUNCTION

NO. POLES	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC
		POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
		C&K marking on opposite side			C&K marking on opposite side			
3P	E301	ON	NONE	ON	2-3,5-6,8-9	N/A	2-1,5-4,8-7	
3PDT Part number shown: E301SD1CBE								

MOM. = Momentary ** Wiring for 3-way switch, see Section N.

All models with all options when ordered with G, R, Q or S contact material except with F1 conductive bushing.

ACTUATOR

M .300" HIGH

Standard when ordered with A, A3, AV2, AV3, V2-V61 terminations. Finish: Chrome.

S .500" HIGH

Standard when ordered with C, Z, Z3, W & W4 terminations. Finish: Chrome.

L3 PLASTIC, .940" HIGH

OPTION CODE	L3 ACTUATOR COLOR
2	BLACK

Other colors available, consult Customer Service Center. No color choice required for S & M actuators.

* Actuators shown with standard D1 bushing. Subtract .030 (0,76) for D9 bushing. Subtract .100 (2,54) for Y bushing.

BUSHING

D1 .250" HIGH, UNTHREADED

D9 .280" HIGH, UNTHREADED

E3XX models not available with D9 bushing.

F1 ESD CONDUCTIVE BUSHING, .250" HIGH, UNTHREADED

F1 bushing is not UL/CSA approved

Y THREADED, INSULATED, .350" HIGH WITH KEYWAY

PANEL MOUNTING

ESD protection depends on proper grounding of switch support bracket. F1 conductive bushing option is impregnated with carbon fibers; dissipates electrostatic discharge (ESD) up to 20,000 V from actuator to ground. Available with M & S actuator options and A, A3, AV2, AV3, V3-V61 termination options.

NOTE: Internal o-ring actuator seal standard for all bushing options.

Available only with C, Z, Z3, & W terminations. Available for 1&2 pole only. Hardware: One dress nut part number 299D01201, one hex nut part number 540400201 and lockwasher part number 700303202 supplied standard. Will withstand 4 in.-lbs. of torque with no distortion.



Third Angle Projection

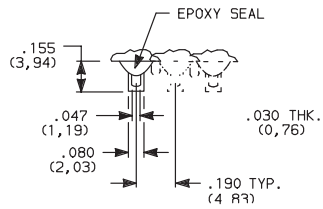
Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

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E Series Sealed Miniature Toggle Switches

TERMINATIONS

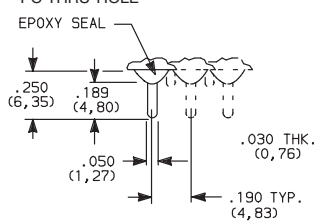
Z SOLDER LUG



Not available with F1 conductive bushing or P, R or S contact material.

SPDT thru 3PDT

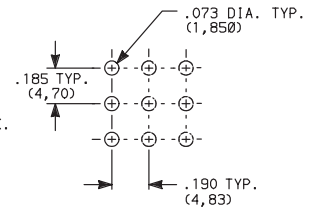
C PC THRU-HOLE



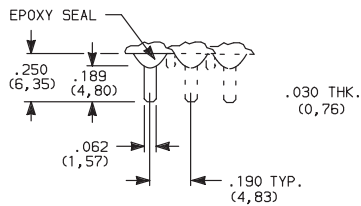
SPDT thru 3PDT

Not available with F1 conductive bushing.

PC MOUNTING



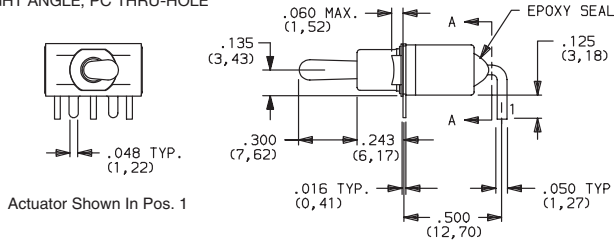
Z3 QUICK CONNECT



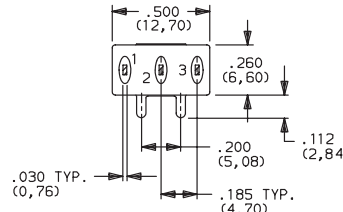
Not available with F1 conductive bushing or P, R or S contact material. Mating quick connector available; order part number 530100000, page F-26.

SPDT thru 3PDT

A RIGHT ANGLE, PC THRU-HOLE



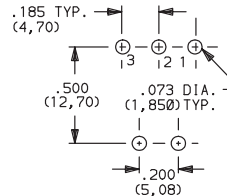
Actuator Shown In Pos. 1



SECTION A-A

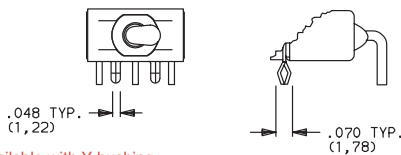
Terminal Nos. For Reference Only

PC MOUNTING



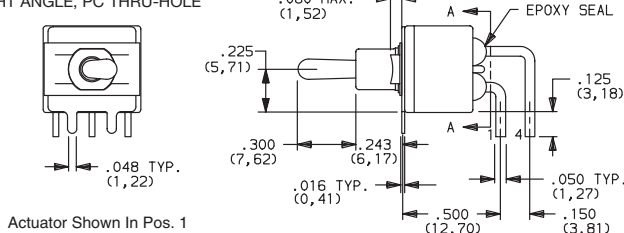
E101MD1ABE
Horizontal Actuation
SPDT

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

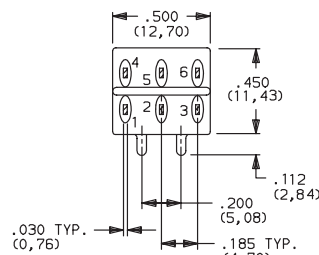


Not available with Y bushing.
Terminal bend radii and lead-in manufacturing option.

A RIGHT ANGLE, PC THRU-HOLE



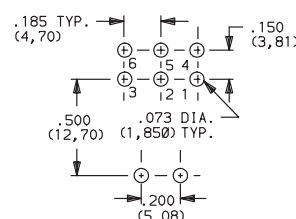
Actuator Shown In Pos. 1



SECTION A-A

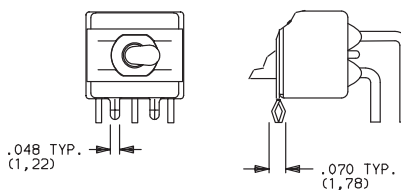
Terminal Nos. For Reference Only

PC MOUNTING



E201MD1ABE
Horizontal Actuation
DPDT

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



Not available with Y bushing.
Terminal bend radii and lead-in manufacturing option.



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



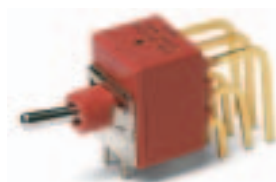
F

Toggle

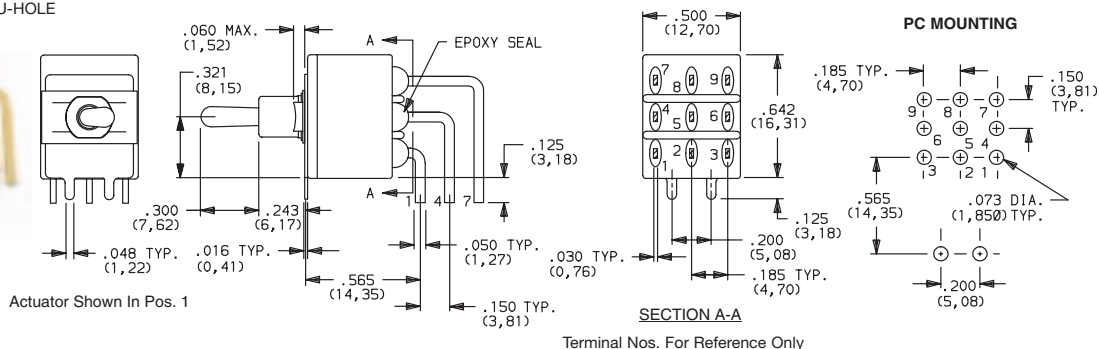
E Series Sealed Miniature Toggle Switches

TERMINATIONS

A RIGHT ANGLE, PC THRU-HOLE



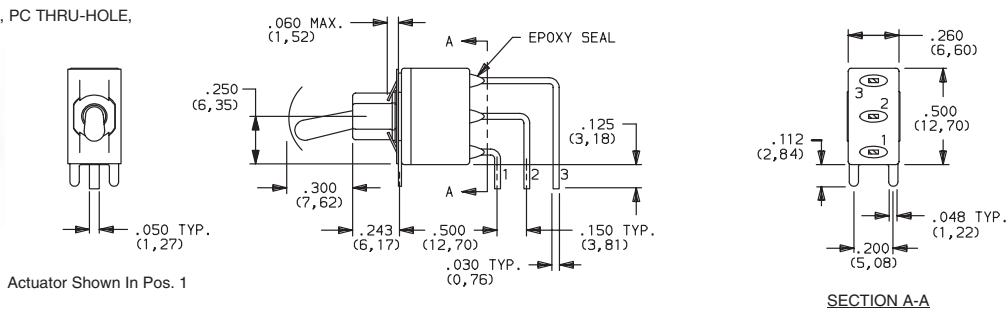
E301MD1ABE
Horizontal Actuation
3PDT



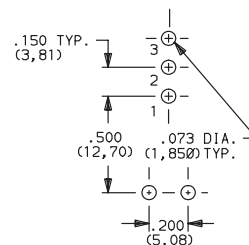
AV2 VERTICAL RIGHT ANGLE, PC THRU-HOLE, .150" PITCH



E101MD1AV2BE
Vertical Actuation
SPDT



AV3 VERTICAL RIGHT ANGLE, SNAP-IN, PC THRU-HOLE, .150" PITCH

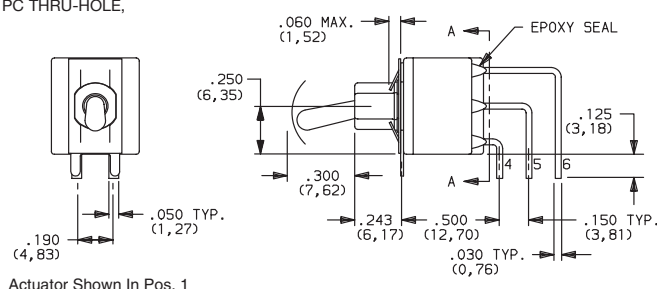


Not available with Y bushing.
Terminal bend radii and lead-in manufacturing option.

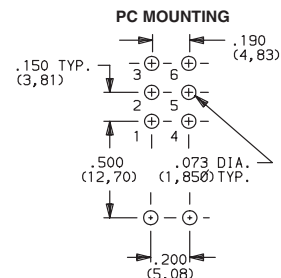
AV2 VERTICAL RIGHT ANGLE, PC THRU-HOLE, .150" PITCH



E201MD1AV2BE
Vertical Actuation
DPDT



A3 VERTICAL RIGHT ANGLE, SNAP-IN, PC THRU-HOLE, .150" PITCH



Not available with Y bushing.
Terminal bend radii and lead-in manufacturing option.



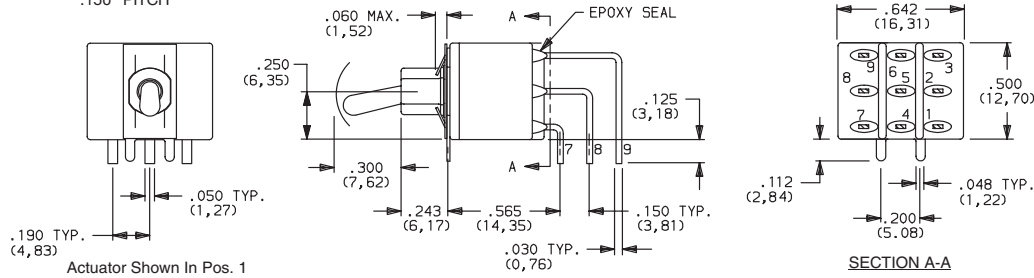
Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

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E Series Sealed Miniature Toggle Switches

TERMINATIONS

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

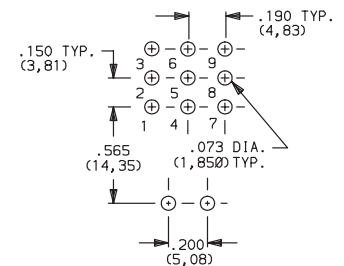


E301MD1AV2BE
Vertical Actuation
3PDT

AV3 VERTICAL RIGHT ANGLE, SNAP-IN, PC THRU-HOLE .150" PITCH



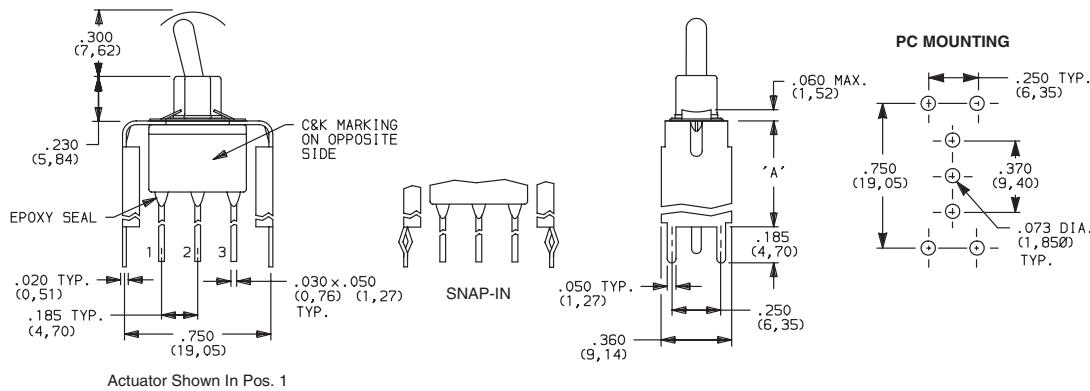
PC MOUNTING



Not available with D9 & Y bushings.
Terminal bend radii and lead-in manufacturing option.

V6 VERTICAL MOUNT, V-BRACKET

V61 VERTICAL MOUNT, V-BRACKET, SNAP-IN



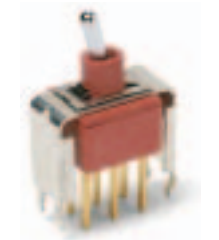
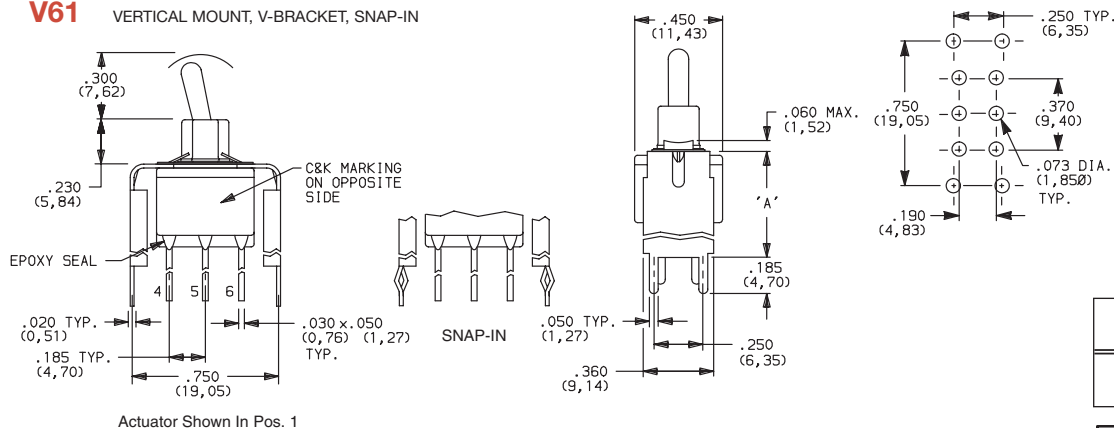
E101MD1_BE
SPDT

OPTION CODE	DIM 'A'
V6, V61	.460 (11,68)

Not available with Y bushing.

V6 VERTICAL MOUNT, V-BRACKET

V61 VERTICAL MOUNT, V-BRACKET, SNAP-IN



E201MD1_BE
DPDT

OPTION CODE	DIM 'A'
V6, V61	.460 (11,68)

Not available with Y bushing.



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

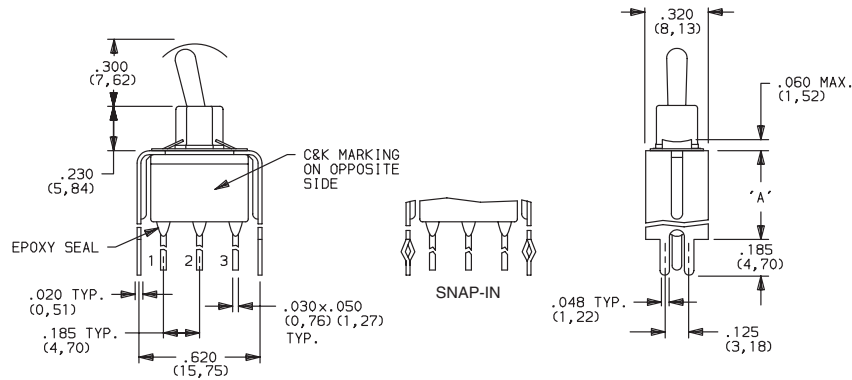


TERMINATIONS

V31 VERTICAL MOUNT, V-BRACKET, SNAP-IN



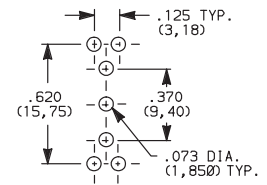
E101MD1__BE
SPDT



Actuator Shown In Pos. 1

Not available with Y bushing.

PC MOUNTING

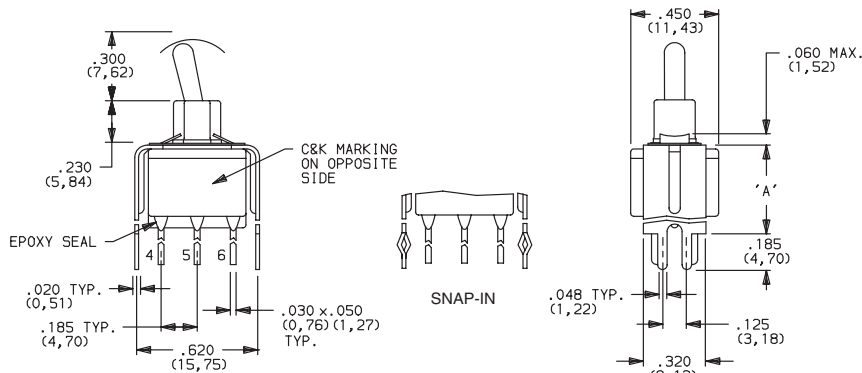


OPTION CODE	DIM 'A'
V3, V31	.460 (11,68)
V9	1.150 (29,21)

V31 VERTICAL MOUNT, V-BRACKET, SNAP-IN



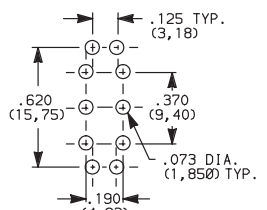
E201MD1__BE
DPDT



Actuator Shown In Pos. 1

Not available with Y bushing.

PC MOUNTING

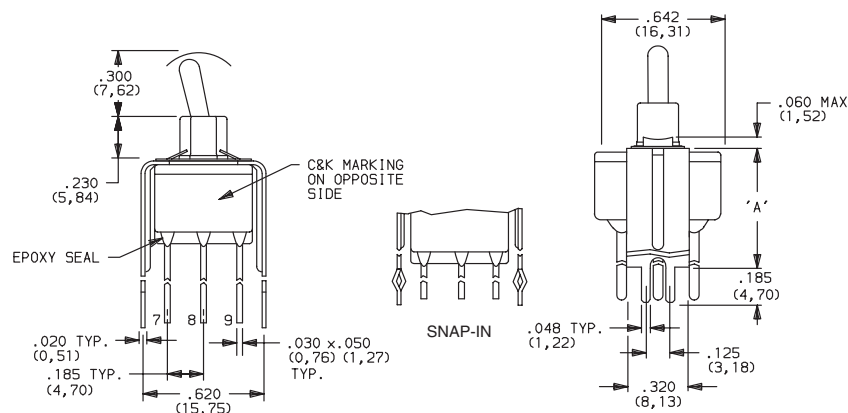


OPTION CODE	DIM 'A'
V3, V31	.460 (11,68)
V9	1.150 (29,21)

V9 VERTICAL MOUNT, V-BRACKET



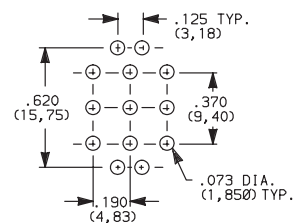
E301MD1__BE
3PDT



Actuator Shown In Pos. 1

Not available with D9 & Y bushings.

PC MOUNTING



OPTION CODE	DIM 'A'
V9	1.150 (29,21)



Dimensions are shown: Inches (mm)
 Dimensions subject to change

E Series Sealed Miniature Toggle Switches

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	E1XX & E2XX MODELS: 7.5 AMPS @ 125 V AC OR 28 V DC; 3 AMPS @ 250 V AC. E3XX MODELS: 5 AMPS @ 125 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	E1XX AND E2XX MODELS: 0.4 VA MAX @20 V AC OR DC MAX. OR 7.5 AMPS @125 V AC OR 28 V DC; 3 AMPS @ 250 V AC. DC E3XX MODELS: 0.4 VA MAX. @ 20 V AC OR DC MAX. OR 5 AMPS @ 125 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, with gold flash over silver plate. Or copper alloy, silver plated.

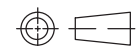
⁶ TERMINALS: Copper alloy, with matte-tin over nickel plate.

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

All models   with all options when ordered with S, R, G, or Q contact material except with F1 conductive bushing.

B contact material standard with all terminations.

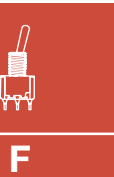
P, S & R contact materials not available with Z & Z3 terminations.



Third Angle
Projection

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

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Toggle

ET Series

Sealed Subminiature Toggle Switches

Features/Benefits

- Sealed against solder and cleaning process contaminants
- ESD protection available
- Thru-hole and surface mount models
- Compact size and small footprint save PCB space
- RoHS compliant models available



Models Available

Typical Applications

- Hand-held telecommunications
- Instrumentation
- Medical equipment



Specifications

CONTACT RATING: B contact material: 0.4 VA max. @ 20 V AC or DC max. See page F-35 for additional ratings.

ELECTRICAL LIFE: ETX1 models: 60,000 make-and-break cycles at full load. All other models: 30,000 cycles.

CONTACT RESISTANCE: Below 20 m Ω typ. initial @ 2-4 V DC, 100 mA, for both silver and gold plated contacts.

INSULATION RESISTANCE: 10⁹ Ω min.

ELECTROSTATIC DISCHARGE (ESD) RESISTANT OPTION:
M3 & S3 insulating actuator only: 9,000 V DC min. @ sea level, actuator to terminals. F1 conductive bushing only: Dissipates up to 20,000 V DC from actuator to ground. M3 & S3 actuator and F1 bushing options are not recommended for use together.

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).

DEGREE OF PROTECTION: IP57; Protection against harmful dust deposit, full-scale voltage protection, temporary immersion.

PACKAGING: Surface mount switches are shipped in tape and reel packaging, see page F-36 for drawings and reel information.

Materials

CASE & BUSHING: Glass filled nylon 6/6, flame retardant, heat stabilized (UL 94V-0) or glass filled 4/6 nylon, flame retardant, heat stabilized (UL 94V-0). F1 conductive bushing option is impregnated with carbon fibers.

ACTUATOR: M3 & S3 anti-static actuator: Nylon 4/6, black standard (UL 94V-0). All other actuators: Brass, chrome plated. Internal o-ring seal standard with all actuators.

SWITCH SUPPORT: Brass, tin plated.

CONTACTS & TERMINALS: B contact material: Copper alloy, with gold plate over nickel plate. Q contact material: Copper alloy, silver plated. See F-35 for additional contact materials.

TERMINAL SEAL: Epoxy.

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

NOTE: Specifications and materials 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-31 thru F-35. For additional options not shown in catalog, consult our Customer Service Center. All models are process sealed to withstand machine soldering temperatures and pressure wash cleaning methods.

Switch Function

- ET01 SP, On-None-On
- ET02 SPST, Off-None-On
- ET03 SP, On-Off-On
- ET05 SP, Mom.-Off-Mom.
- ET07 SP, On-Off-Mom.
- ET08 SP, On-None-Mom.
- ET21 DP, On-None-On
- ET23 DP, On-Off-On
- ET24 DP, On-On-On
- ET25 DP, Mom.-Off-Mom.
- ET27 DP, On-Off-Mom.
- ET28 DP, On-None-Mom.

Actuator

- M .240" high
- M3 Plastic, anti-static, .240" high
- S .400" high
- L .320" high
- S1 .540" high

Bushing

- D1 .177" High, Unthreaded
- F1 .177" high, unthreaded, ESD conductive

Terminations

- A Right angle, PC thru-hole
- AV Vertical right angle, PC thru-hole
- C PC Thru-hole
- SA Right angle, surface mount
- SA1 Right angle, surface mount rear-facing
- V3 Vertical mount, V-bracket
- AV3 Vertical right angle, snap-in, PC thru-hole
- V31 Vertical mount, V-bracket, snap-in
- W Wire wrap

Contact Material

- B Gold
- P Gold, matte tin
- Q Silver
- S Silver/matte-tin
- G Gold over silver
- R Gold over silver, matte-tin

Seal

- E Epoxy

Plastic Actuator Color

- NONE No actuator color
- 2 Black
- 1 White



ET Series Sealed Subminiature Toggle Switches

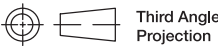
SWITCH FUNCTION

NO. POLES	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC	
		POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3		
		C&K marking on opposite side			C&K marking on opposite side				
SP	ET01	ON	NONE	ON	2-3	N/A	2-1		
	ET03	ON	OFF	ON	2-3	OPEN	2-1		
	ET05	MOM.	OFF	MOM.					
	ET07	ON	OFF	MOM.					
	ET08	ON	NONE	MOM.	2-3	N/A	2-1		
	ET02	OFF	NONE	ON	OPEN	N/A	3-1	SPST	
SPDT Part number shown: ET01MD1CBE ET02 Models: Omit terminal 2									
DP	ET21	ON	NONE	ON	2-3,5-6	N/A	2-1,5-4		
	ET23	ON	OFF	ON	2-3,5-6	OPEN	2-1,5-4		
	ET25	MOM.	OFF	MOM.					
	ET27	ON	OFF	MOM.					
	ET28	ON	NONE	MOM.	2-3,5-6	N/A	2-1,5-4		
	ET24**	ON	ON	ON	2-3,5-6	2-3,5-4	2-1,5-4	DPDT	
DPDT 									

MOM. = Momentary

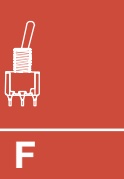
** Wiring for 3-way switch, see Section N.

All models with all options (except M3 actuator) when ordered with G, L, R or Q contact material except with F1 conductive bushing.



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

www.ck-components.com



Toggle

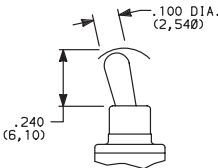
ET Series

Sealed Subminiature Toggle Switches

ACTUATOR

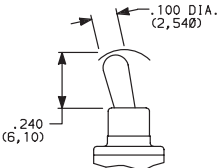
ACTUATOR COLOR

M .240" HIGH



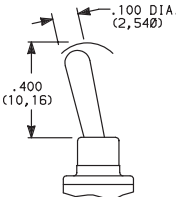
Standard with A, AV, V3 & V31 terminations.

M3 PLASTIC, ANTISTATIC, .240" HIGH



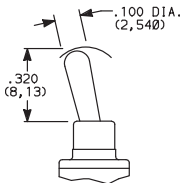
Material: Nylon 4/6 (UL 94V-0), black standard.
Static resistance: 9,000 V DC min. @ sea level, actuator to terminals. Not available with F1 conductive bushing option. Not UL approved.

S .400" HIGH

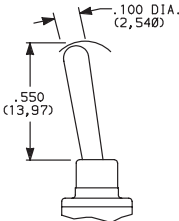


Standard with C or W terminations.

L .320" HIGH



S1 .540" HIGH



OPTION CODE	PLASTIC ACTUATOR COLOR
(NONE)	BLACK (M3 & S3 only)
1	WHITE (M3 & S3 only)

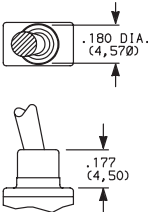
NOTE: All actuators have chrome finish (except M3 & S3).

BUSHING

D1 .177" HIGH, UNTHREADED

F1 ESD, CONDUCTIVE BUSHING UNTHREADED, .177" HIGH

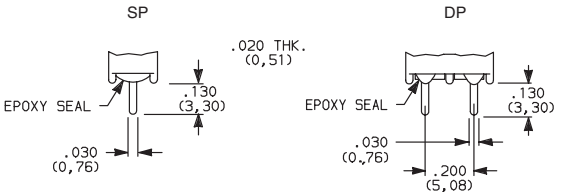
F1 bushing is not UL/CSA approved



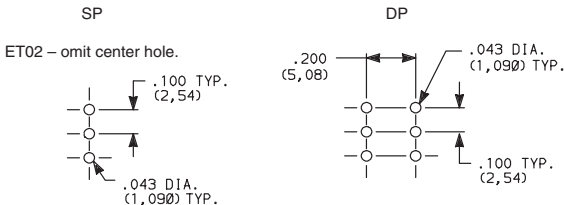
NOTE: ESD protection depends on proper grounding of switch support bracket. F1 conductive bushing option is impregnated with carbon fibers; dissipates electrostatic discharge (ESD) up to 20,000 V from actuator to ground. Available with all metal actuator options and A, AV, AV3, V3 and V31 termination options only.
Internal actuator o-ring seal standard.

TERMINATIONS

C PC THRU-HOLE



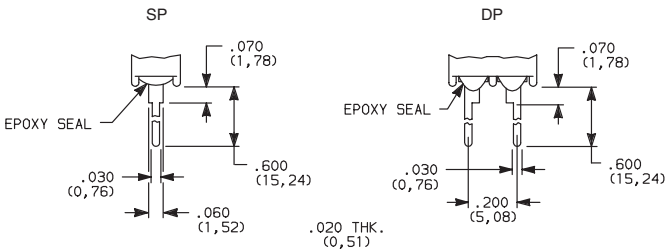
PC MOUNTING



SP and DP

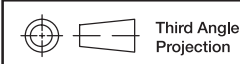
Not available with F1 conductive bushing.

W WIRE WRAP



SP and DP

Not available with F1 conductive bushing.



Third Angle Projection

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



F

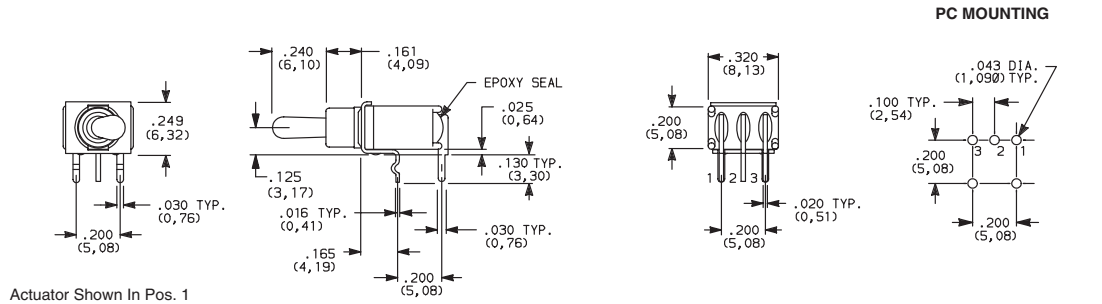
Toggle

ET Series Sealed Subminiature Toggle Switches

TERMINATIONS

A RIGHT ANGLE, PC THRU-HOLE

ET01MD1ABE
Horizontal Actuation
SPDT

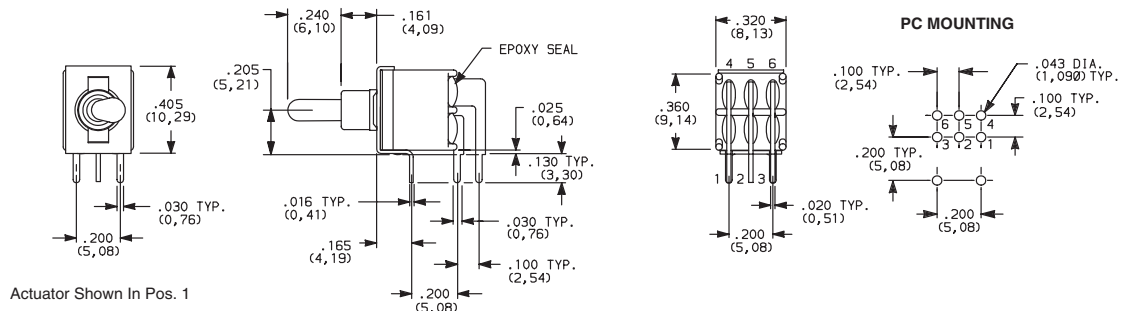


Not available with ET02 model.

A RIGHT ANGLE, PC THRU-HOLE



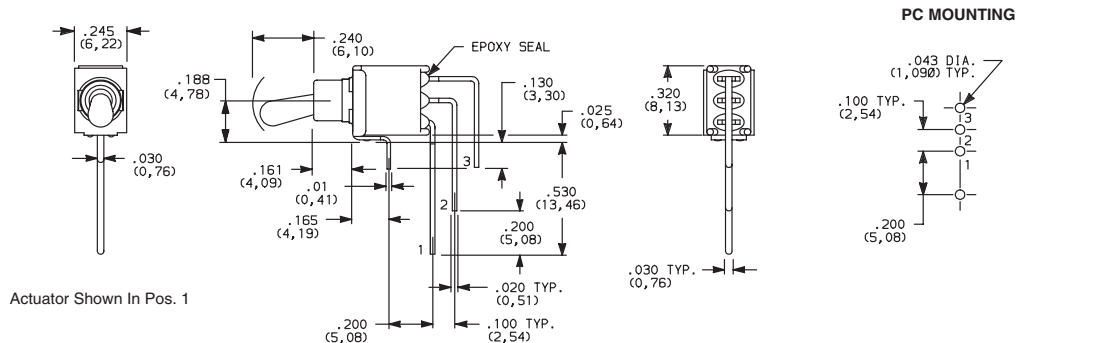
ET21MD1ABE
Horizontal Actuation
DPDT



AV VERTICAL RIGHT ANGLE, PC THRU-HOLE



ET01MD1AVBE
Vertical Actuation
SPDT



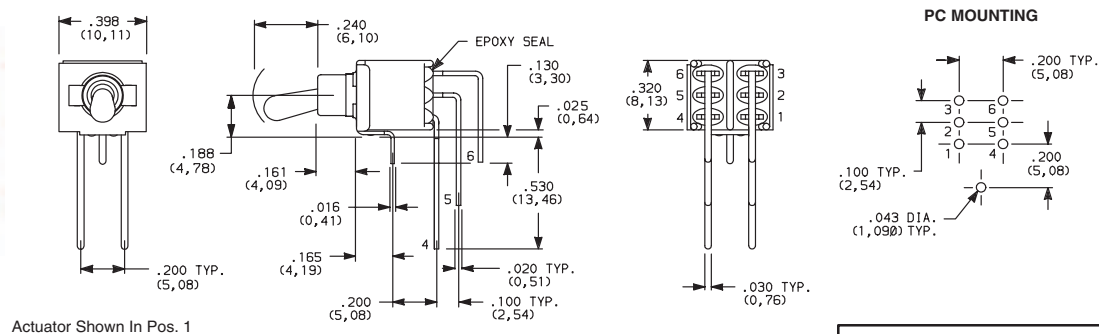
ET02 - omit terminal 2.

NOTE: Terminal bend radii and lead-in manufacturing option.

AV VERTICAL RIGHT ANGLE, PC THRU-HOLE



ET21MD1AVBE
Vertical Actuation
DPDT

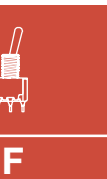


NOTE: Terminal bend radii and lead-in manufacturing option.



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

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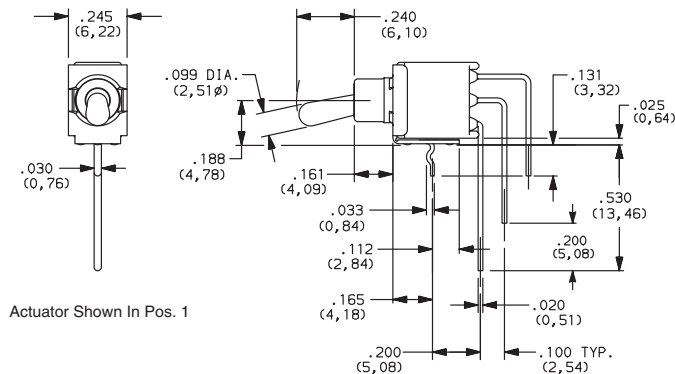


Toggle

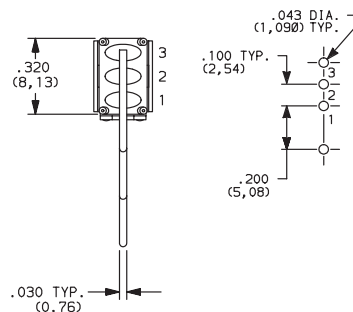
ET Series Sealed Subminiature Toggle Switches

TERMINATIONS

AV3 VERTICAL RIGHT ANGLE, SNAP-IN, PC THRU-HOLE

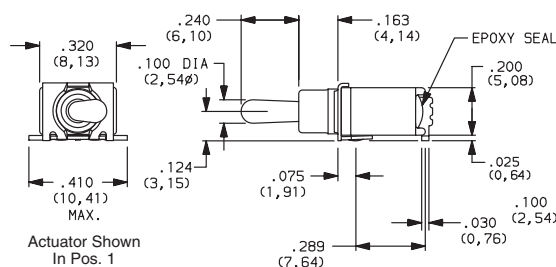


PC MOUNTING

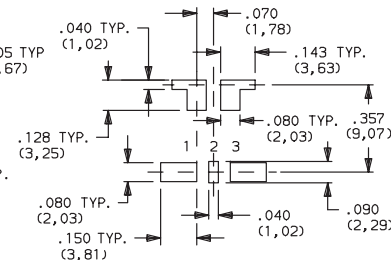


ET01SD1AV2BE
Vertical Actuation
SPDT

SA RIGHT ANGLE, SURFACE MOUNT



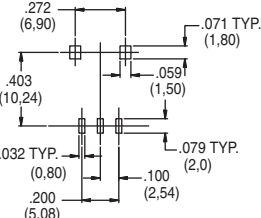
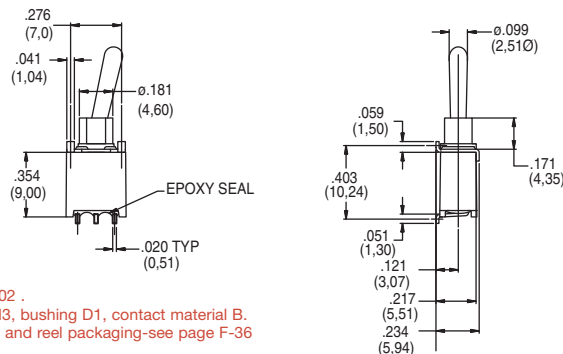
PC MOUNTING



ET01M3D1SAPE
Horizontal Actuation
SPDT Only

Not available with S and S1 actuators. Standard with tape & reel packaging. See page F-36.

SA1 RIGHT ANGLE, SURFACE MOUNT

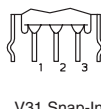
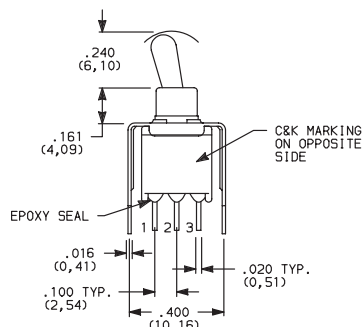


ET01M3D1SA1BE
Horizontal Actuation
SPDT Only

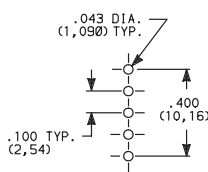
Not available in ET02.
Actuators M and M3, bushing D1, contact material B.
Standard with tape and reel packaging-see page F-36

V3 VERTICAL MOUNT, V-BRACKET

V31 VERTICAL MOUNT, V-BRACKET, SNAP-IN



PC MOUNTING



ET02 Models: Omit center hole.

ET01MD1V3BE
SPDT



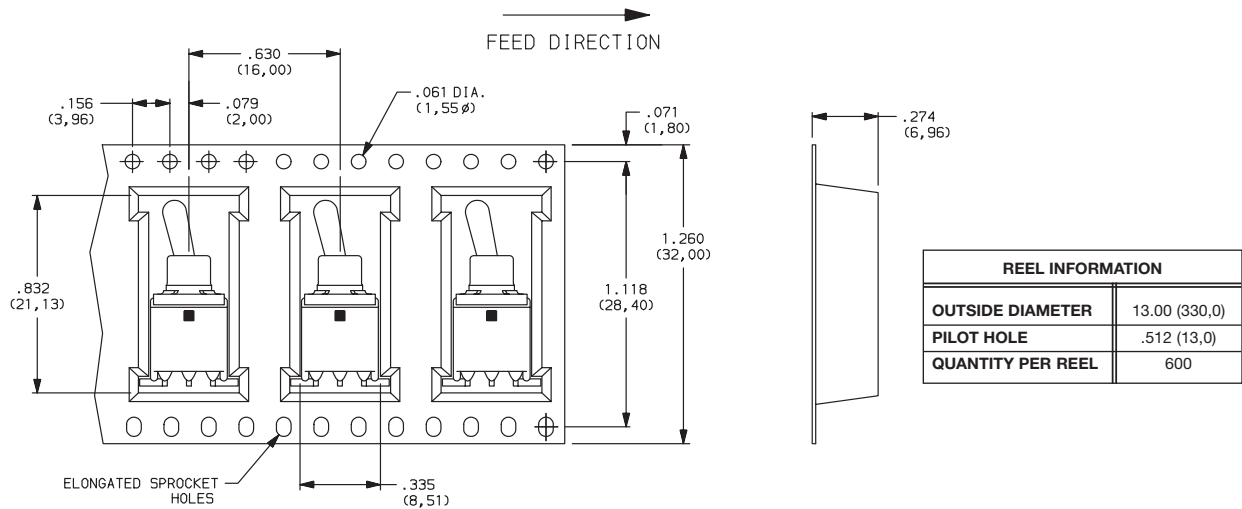
Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

www.ck-components.com

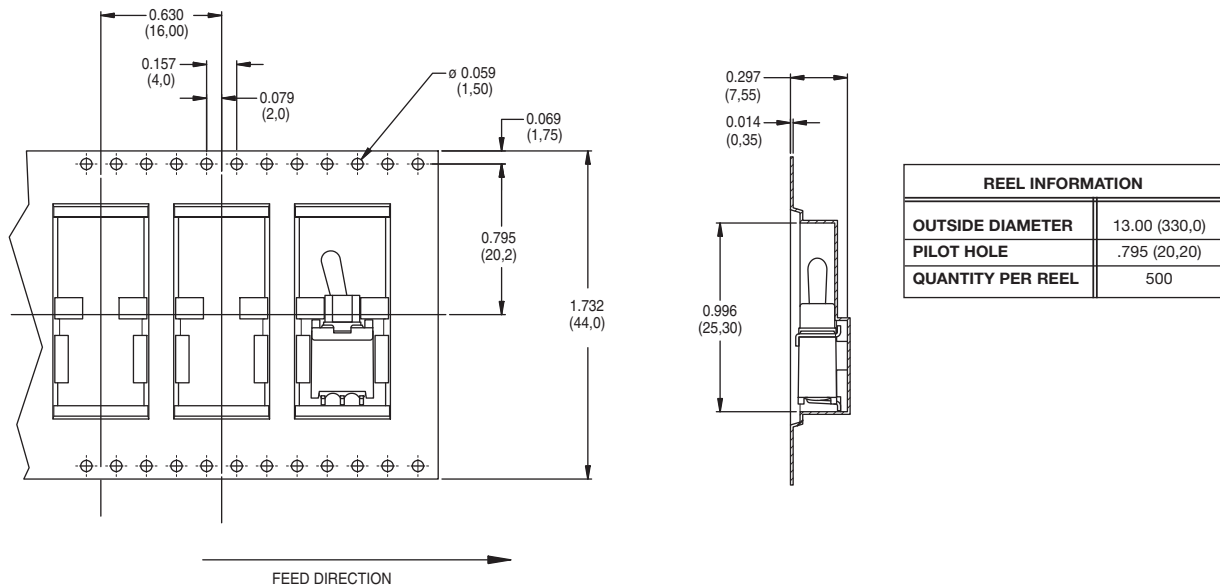
ET Series
Sealed Subminiature Toggle Switches

TAPE & REEL

For part number ET01M3D1SAKE



For part number ET01M3D1SA1BE



Toggle



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

T Series

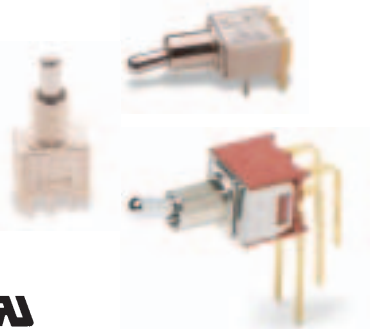
Subminiature Toggle Switches

Features/Benefits

- **Compact size—small footprint**
- **Single and double pole models**
- **PC and panel mount options available**
- **RoHS compliant models available**

Typical Applications

- **Hand-held telecommunications**
- **Instrumentation**
- **Medical equipment**



Specifications

CONTACT RATING: B contact material: 0.4 VA max. @ 20 V AC or DC max. Q contact material (TX01 models): 3 AMPS @ 120 V AC or 28 V DC. All other models: 2 AMPS @ 120 V AC or 28 V DC. See page F-42 for additional ratings.

ELECTRICAL LIFE: TX01 models: 60,000 make-and-break cycles at full load. All other models: 30,000 cycles.

CONTACT RESISTANCE: Below 20 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).

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

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

Materials

CASE: Glass filled nylon 6/6, flame retardant, heat stabilized or diallyl phthalate (DAP), (UL 94V-0) or glass filled nylon 4/6, flame retardant, heat stabilized.

ACTUATOR: Brass, chrome plated.

BUSHING: Brass, nickel plated.

HOUSING: Stainless steel.

SWITCH SUPPORT: Brass, matte-tin plated.

END CONTACTS: B contact material: Copper alloy, with gold plate over nickel plate. Q contact material: Coin silver, silver plated. See above for additional contact materials.

CENTER CONTACTS & TERMINALS: B contact material: Copper alloy, with gold plate over nickel plate. Q contact material: Copper alloy, silver plated. See page F-42 for additional contact materials.

TERMINAL SEAL: Epoxy.

HARDWARE: Nut & Locking Ring: Brass, nickel plated. Lockwasher: Steel, nickel plated. Additional hardware available separately, see Section N.

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-38 thru F-42. For additional options not shown in catalog, consult Customer Service Center. All models have epoxy terminal seal and are compatible with all “bottom-wash” PCB cleaning methods.

Switch Function	Actuator	Bushing	Terminations	Seal
T101 SPDT On-None-On	P3 Flatted, anti-rotation, .490" high	H .220" high, threaded, flat	A Right angle, PC thru-hole	E Epoxy
T102 SPDT Off-None-On	S .370" high	H9 .220" high, unthreaded, flat	AV Vertical right angle, PC thru-hole	
T103 SPDT On-Off-On	K Locking lever, round tip	CF Splashproof, .310" high, threaded, flat	C PC Thru-hole	
T105 SPDT Mom.-Off-Mom.	L1 .620" high	D9 .260" high, unthreaded, keyway	V3 Vertical mount V-bracket	
T107 SPDT On-Off-Mom.	M1 .220" high	T .310" high, threaded, flat	Z Solder lug	
T108 SPDT On-None-Mom.	S1 .410" high	T9 .310" high, unthreaded, flat	W Wire wrap	
T201 DPDT On-None-On	M .210" high	TD .260" high, threaded, keyway		
T203 DPDT On-Off-On	L .290" high	TK .310" high, threaded, keyway		
T205 DPDT Mom.-Off-Mom.		Y .220" high, threaded, keyway		
T207 DPDT On-Off-Mom.		Y9 .220" high, unthreaded, keyway		
T208 DPDT On-None-Mom.				
T211 DPDT On-On-On.				

Contact Material

- B** Gold
- P** Gold, matte tin
- Q** Silver
- G** Gold over silver
- R** Gold over silver, matte-tin



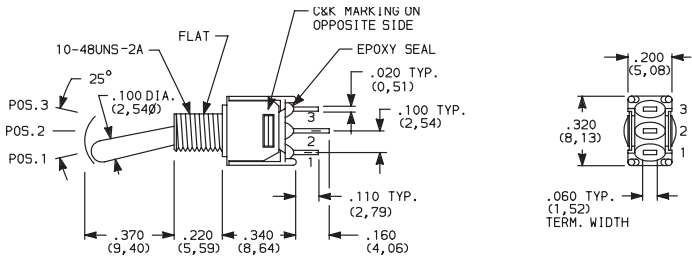
Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

T Series
Subminiature Toggle Switches

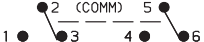
SWITCH FUNCTION

NO. POLES	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC
		POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
								
		C&K marking on opposite side			C&K marking on opposite side			
SP	T101	ON	NONE	ON	2-3	N/A	2-1	
	T103	ON	OFF	ON	2-3	OPEN	2-1	
	T105	MOM.	OFF	MOM.				
	T107	ON	OFF	MOM.				
	T108	ON	NONE	MOM.	2-3	NA	2-1	
	T102	OFF	NONE	ON	OPEN	N/A	3-1	SPST 

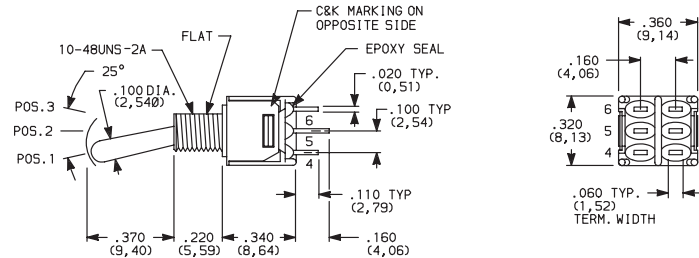
SPDT



Part number shown: T101SHZQE

NO. POLES	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC
		POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
								
		C&K marking on opposite side			C&K marking on opposite side			
DP	T201	ON	NONE	ON	2-3,5-6	N/A	2-1,5-4	
	T203	ON	OFF	ON	2-3,5-6	OPEN	2-1,5-4	
	T205	MOM.	OFF	MOM.				
	T208	ON	NONE	MOM.	2-3,5-6	N/A	2-1,5-4	
	T211*	ON	ON	ON.	2-3,5-6	2-3,5-4	2-1,5-4	

DPDT



Terminal Nos.
For Reference Only

Part number shown: T201SHZQE

MOM. = Momentary

All models with all options when ordered with G, L, R or Q contact material.



Third Angle
Projection

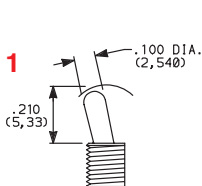
Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

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T Series Subminiature Toggle Switches

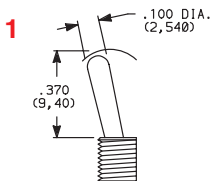
ACTUATOR

M .210" HIGH



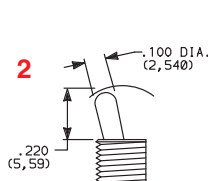
Standard with A, AV or V3 terminations.

S .370" HIGH

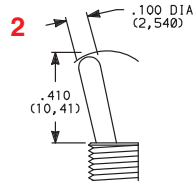


Standard with Z, C or W terminations.

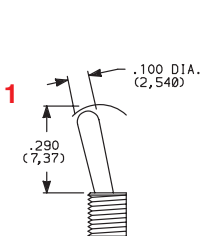
M1 .220" HIGH
(with "T" bushing)



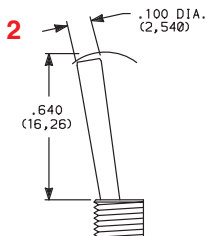
S1 .410" HIGH
(with "T" bushing)



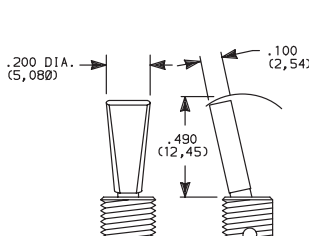
L .290" HIGH



L1 .620" HIGH



P3 ANTI-ROTATION, FLATTED,
.450" HIGH



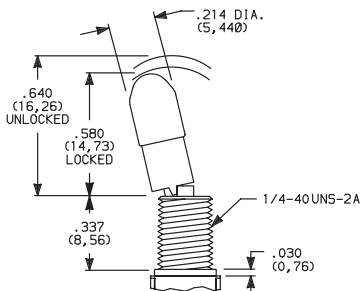
Available with T & T9 bushings only.
Dress nut part number 709901201
supplied standard with threaded bushing.

¹ Actuator shown with standard H bushing.
Subtract .040 (1,02) for TD and D9 bushings,
subtract .090 (2,29) for T, T9, TK, K9 &
CF bushings.

² Actuators shown with T, T9, TK & CF bushings,
add .050 (1,27) for TD and D9 bushings,
add .090 (2,29) for H, H9, Y & Y9 bushings.

All actuators have chrome finish (except K).

K LOCKING LEVER



Locking Positions



-01 & -02 Models
2 Position lock



-03 & -11 Models
3 Position lock



-08 Models
1 Position lock

K actuators have natural aluminum finish.

Keyway on right side. To prevent accidental actuation, toggles
must be lifted before being actuated. When released, toggles
again lock in place. Overtightening mounting nut may cause
actuator to bind.

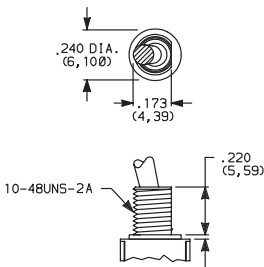
Not available with CF bushing option.

Bushing option code not required. Not available with TX05 & TX07 models.

BUSHING

H .220" HIGH THREADED, FLAT

H9 .220" HIGH UNTHREADED, FLAT

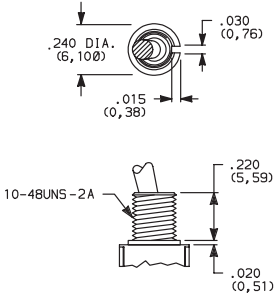


H standard with C, W & Z terminations.

H9 standard with A, AV & V3 terminations.

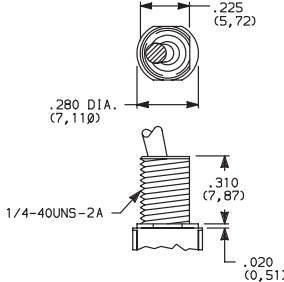
Y .220" HIGH THREADED, KEYWAY

Y9 .220" HIGH UNTHREADED, KEYWAY



T .310" HIGH THREADED, FLAT

T9 .310" HIGH UNTHREADED, FLAT



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

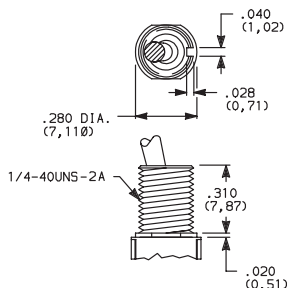
C&K



T Series Subminiature Toggle Switches

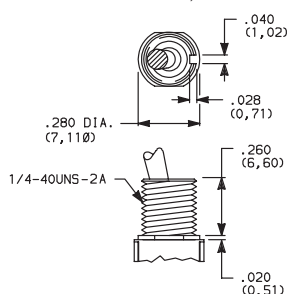
BUSHING

TK .310" HIGH THREADED, KEYWAY

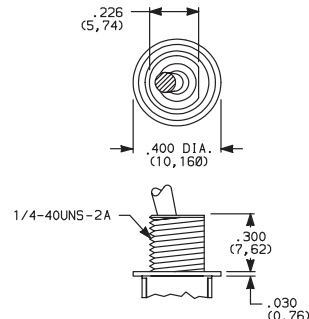


TD .260" HIGH THREADED, KEYWAY

D9 .260" HIGH UNTHREADED, KEYWAY

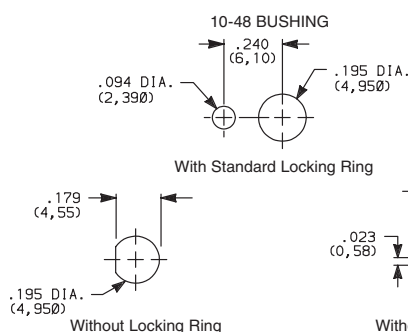


CF SPLASHPROOF, .310" HIGH THREADED, FLAT

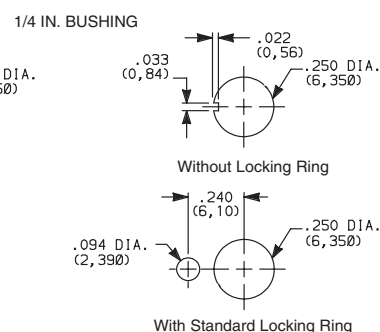
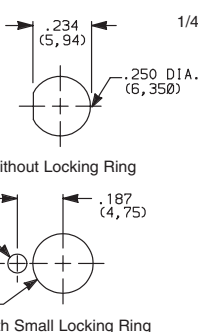


IP67 Degree of protection.
Internal o-ring actuator seal and
external bushing seal washer standard.

Not available with K locking lever option.

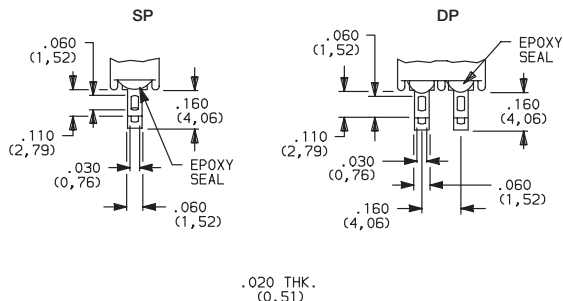


PANEL MOUNTING

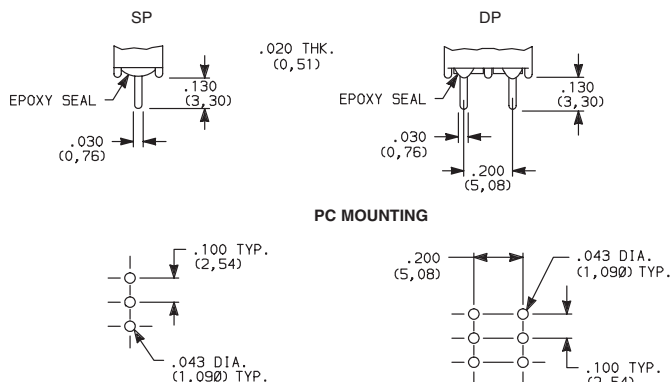


TERMINATIONS

Z SOLDER LUG



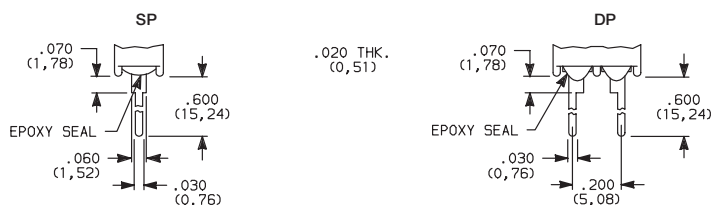
C PC THRU-HOLE



Not available with P or R contact materials.

T102 - omit center hole.

W WIRE WRAP



F

Toggle

C&K



Third Angle
Projection

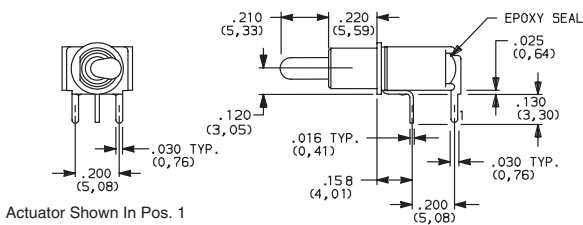
Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

T Series Subminiature Toggle Switches

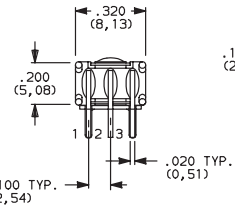
TERMINATIONS



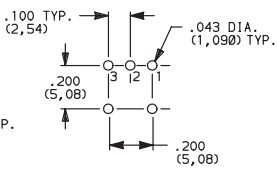
A RIGHT ANGLE, PC THRU-HOLE



Not available with T102 model.

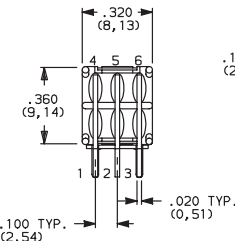
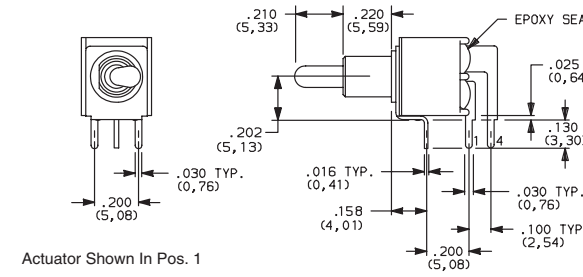


PC MOUNTING

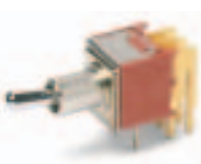
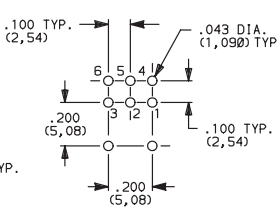


T101MH9ABE
Horizontal Actuation
SPDT

A RIGHT ANGLE, PC THRU-HOLE

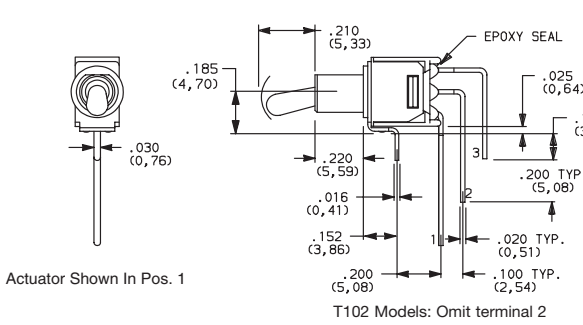


PC MOUNTING

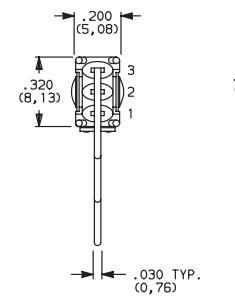


T201MH9ABE
Horizontal Actuation
DPDT

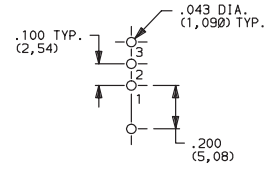
AV VERTICAL RIGHT ANGLE, PC THRU-HOLE



NOTE: Terminal bend radii and lead-in manufacturing option.

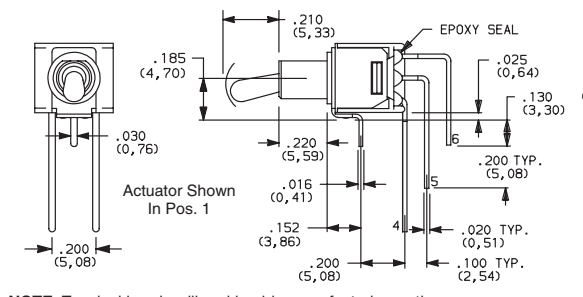


PC MOUNTING

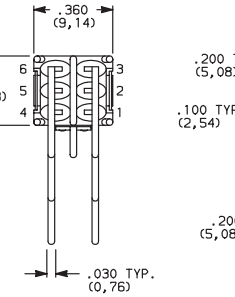


T101MH9AVBE
Vertical Actuation
SPDT

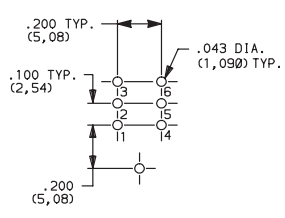
AV VERTICAL RIGHT ANGLE, PC THRU-HOLE



NOTE: Terminal bend radii and lead-in manufacturing option.

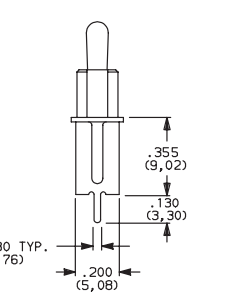
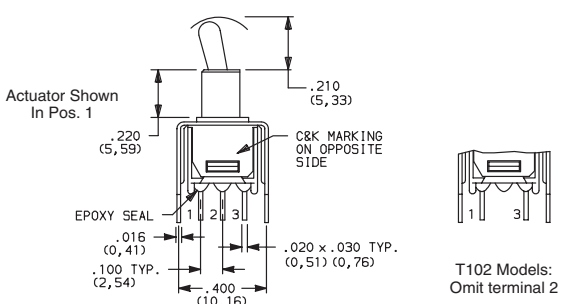


PC MOUNTING

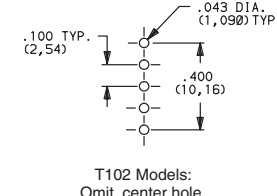


T201MH9AVBE
Vertical Actuation
DPDT

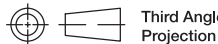
V3 VERTICAL MOUNT, V-BRACKET



PC MOUNTING



T101MH9V3BE
SPDT



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

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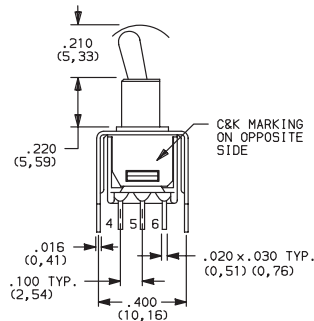
T Series Subminiature Toggle Switches

TERMINATIONS

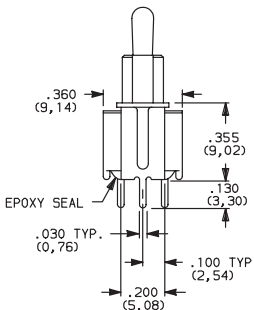
V3 VERTICAL MOUNT, V-BRACKET



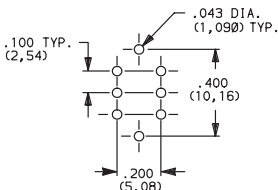
T201MH9V3BE
DPDT



Actuator Shown In Pos. 1



PC MOUNTING



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	TX01 MODELS: 3 AMPS @ 120 V AC OR 28 V DC. ALL OTHER MODELS: 2 AMPS @ 120 V AC OR 28 V DC.
G	GOLD OVER SILVER ^{2,3}	GOLD ³	LOW LEVEL/DRY CIRCUIT OR POWER	TX01 MODELS: 0.4 VA MAX @ 20 V AC OR DC MAX. OR 3 AMPS @ 120 V AC OR 28 V DC. ALL OTHER MODELS: 0.4 VA MAX @ 20 V AC OR DC MAX. OR 2 AMPS @ 120 V AC OR 28 V DC.
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 over nickel plate.

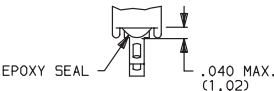
All models  with all options when ordered with R, G, or Q contact material.

B contact material standard with A, AV, V3 & W terminations.

Q contact material standard with C & Z terminations.

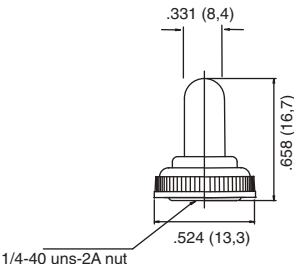
SEAL

E EPOXY SEAL

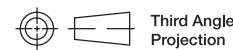


AVAILABLE HARDWARE

759D02000 SEALING BOOT



* Note: For use with S1 actuator style when combined with T, TK, and CF bushings.



Third Angle
Projection

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

www.ck-components.com

- ***Sealed against solder and cleaning process contaminants***
- ***Ultraminiature size, smallest footprint available***
- ***Thru-hole and surface mount models***
- ***High temperature materials (UL 94V-0)***
- ***RoHS compliant and compatible***

- **Hand-held telecommunications**
- **Small instrumentation**

CONTACT RATING: 0.4 VA max. @ 20 V AC or DC max.
MECHANICAL & ELECTRICAL LIFE: 40,000 make-and-break cycles at full load.
CONTACT RESISTANCE: Below 50 m Ω typ. initial @ 2-4 V DC, 100 mA.
INSULATION RESISTANCE: $10^9 \Omega$ min.
DIELECTRIC STRENGTH: 500 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).
PACKAGING: Surface mount switches shipped in anti-static tape and reel packaging per EIA 481-3, see page F-47 for drawings and reel information. Tape and cover strip are conductive for use near statically sensitive components, consult Customer Service Center.

HOUSING AND BASE: Glass filled nylon 4/6, flame retardant, heat stabilized (UL 94V-0).

ACTUATOR: Glass filled nylon 4/6, flame retardant, heat stabilized (UL 94V-0), with standard internal o-ring seal.

SWITCH SUPPORT: Brass, tin plated.

MOVABLE CONTACTS: Copper alloy, with gold plate over nickel plate.

STATIONARY CONTACTS: Copper alloy, with gold plate over nickel plate.

TERMINALS: Gold.

TERMINAL SEAL: Epoxy. All terminals insert molded.

Complete part numbers for GT Series Sealed Ultraminiature Toggle Switches are shown on pages F-43 thru F-47.



ACTUATOR SHOWN IN POS. 1

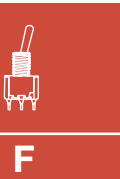
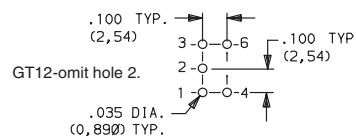
6
4

GT12 MODEL

TERMINALS 1,3,4 & 6 ONLY

NOTE: X= Plating Option; K (tin lead) or B (gold)

PC MOUNTING

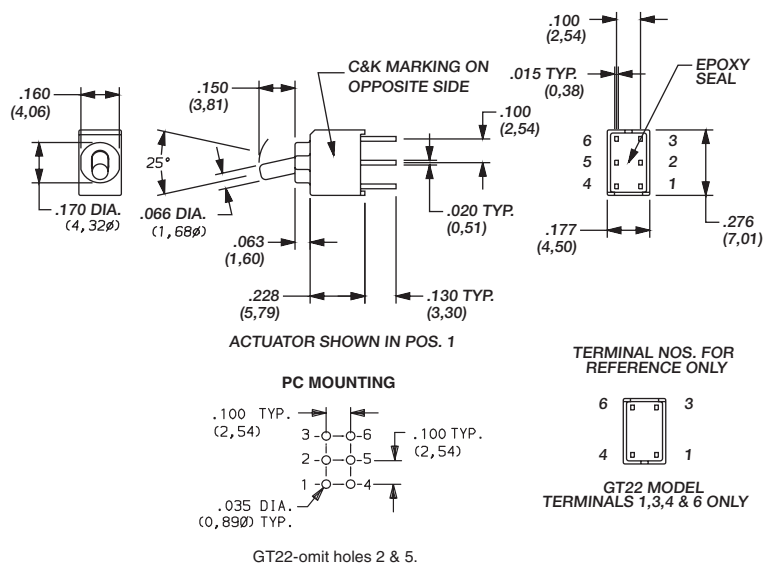


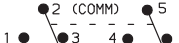
Toggle



www.ck-components.com

GT Series Sealed Ultraminiature Toggle Switches

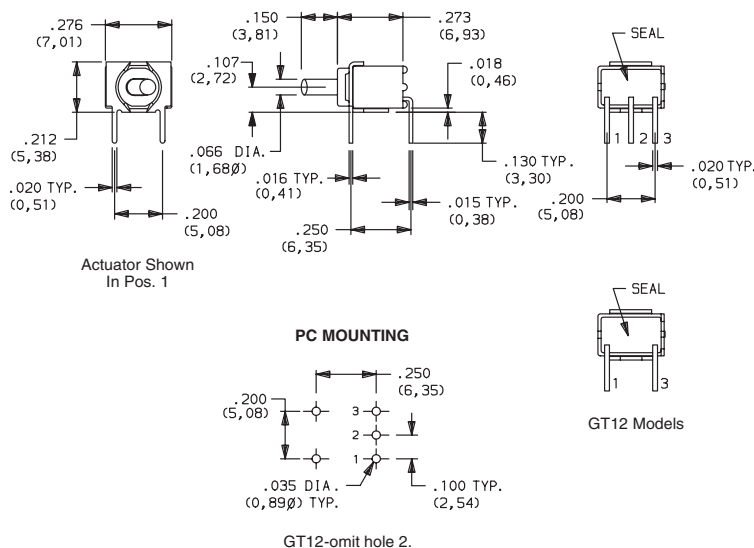


	SWITCH FUNCTION		
	POS.1	POS. 2	POS. 3
PART NUMBER			
GT21MCXE	ON	NONE	ON
GT23MCXE	ON	OFF	ON
Conn. Terms.	2-3, 5-6	OPEN	2-1, 5-4
Schematic			
			
DPDT			
GT22MCXE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1
Schematic			
			
DPST			

NOTE: X= Plating Option: K (tin lead) or B (gold)



GT21MCXE
DPDT



PART NUMBER	SWITCH FUNCTION		
	POS.1	POS. 2	POS. 3
GT11MABE GT13MABE	ON ON	NONE OFF	ON ON
Conn. Terms.	2-3	OPEN	2-1

Schematic

SPDT

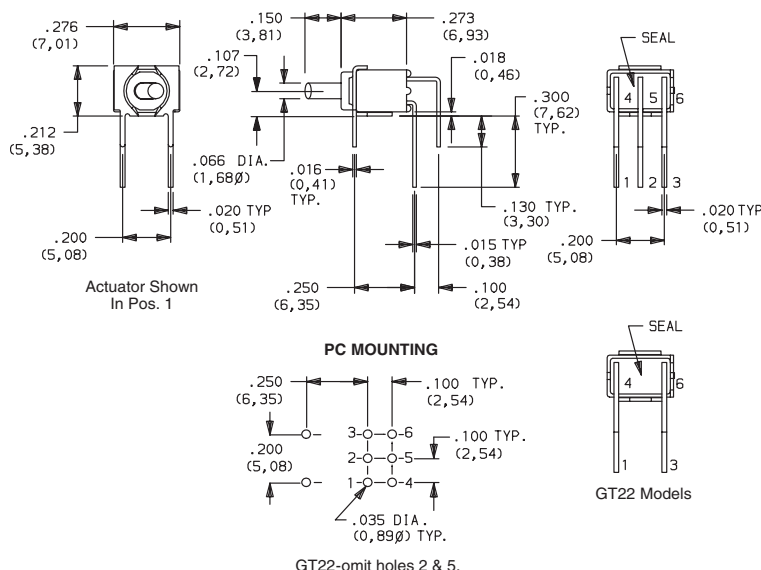
GT12MABE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1

Schematic

SPST



GT11MABE
Horizontal
Actuation
SPDT



PART NUMBER	SWITCH FUNCTION		
	POS.1	POS. 2	POS. 3
GT21MABE GT23MABE	ON ON	NONE OFF	ON ON
Conn. Terms.	2-3, 5-6	OPEN	2-1, 5-4
Schematic			
GT22MABE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1, 6-4
Schematic			



GT21MABE
Horizontal
Actuation
DPDT



F

Toggle



Third Angle Projection

Dimensions are shown: Inches (mm)

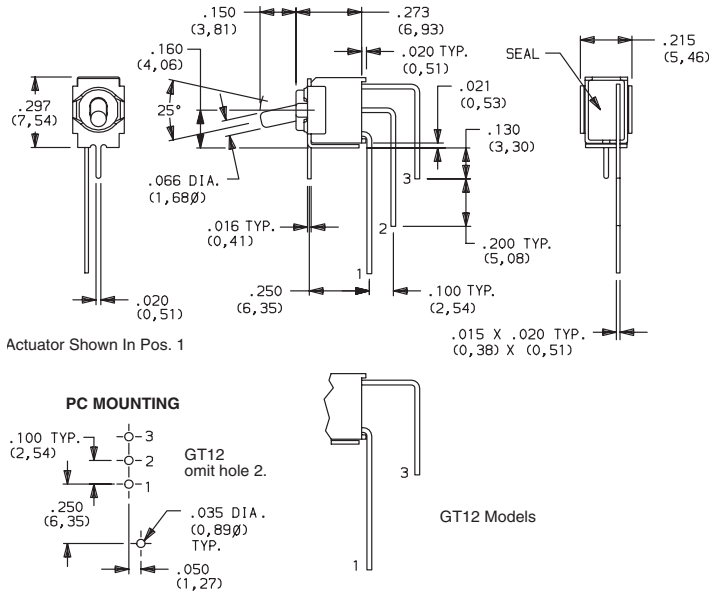
Specifications and dimensions subject to change

GT Series Sealed Ultraminiature Toggle Switches



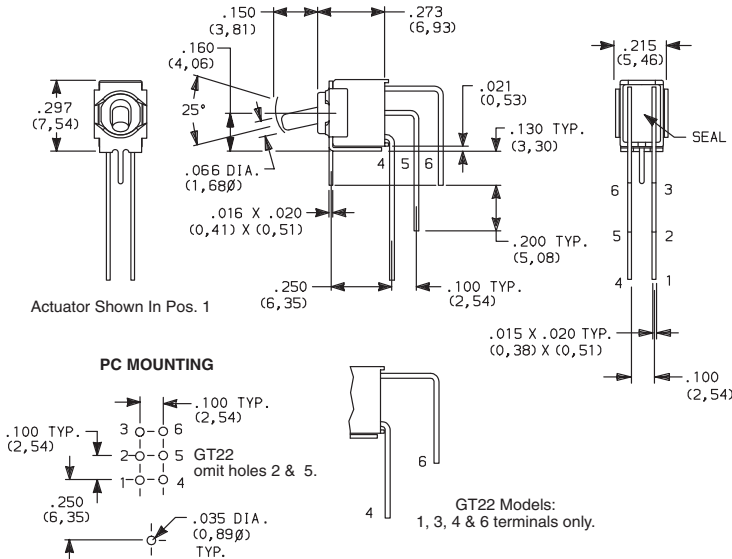
GT11MAVBE
Vertical
Actuation
SPDT

PART NUMBER	SWITCH FUNCTION		
	POS. 1	POS. 2	POS. 3
GT11MAVBE	ON	NONE	ON
GT13MAVBE	ON	OFF	ON
Conn. Terms.	2-3	OPEN	2-1
Schematic			
SPDT			
GT12MAVBE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1
Schematic			
SPST			



GT21MAVBE
Vertical
Actuation
DPDT

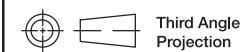
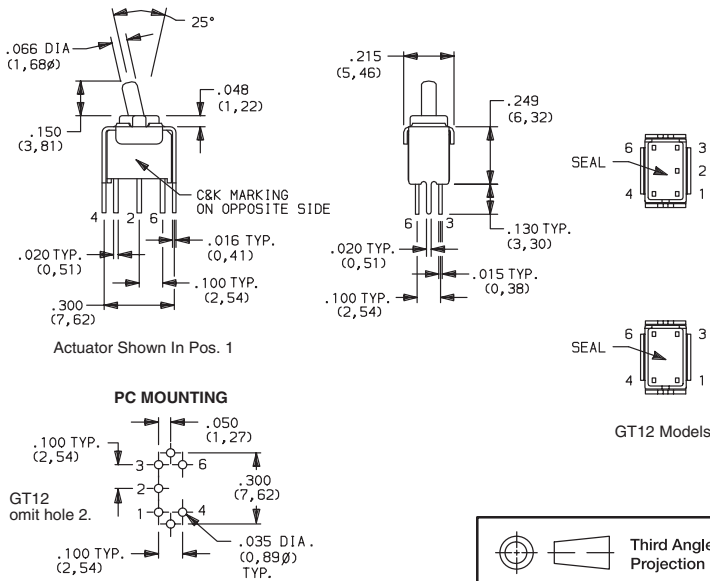
PART NUMBER	SWITCH FUNCTION		
	POS. 1	POS. 2	POS. 3
GT21MAVBE	ON	NONE	ON
GT23MAVBE	ON	OFF	ON
Conn. Terms.	2-3, 5-6	OPEN	2-1, 5-4
Schematic			
DPDT			
GT22MAVBE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1, 6-4
Schematic			
DPST			



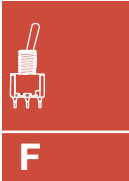
GT11MV3XE
SPDT

PART NUMBER	SWITCH FUNCTION		
	POS. 1	POS. 2	POS. 3
GT11MV3XE	ON	NONE	ON
GT13MV3XE	ON	OFF	ON
Conn. Terms.	2-3	OPEN	2-1
Schematic			
SPDT	Note: Pins 4 and 6 not connected		
GT12MV3XE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1
Schematic			
SPST	Note: Pins 4 and 6 not connected		

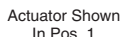
NOTE: X= Plating Option; K (tin lead) or B (gold)



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



GT21MV3XE
DPDT

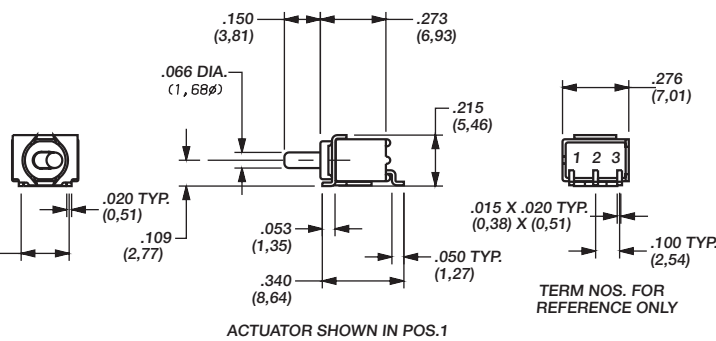


GT22 Models:
1, 3, 4 & 6 terminals only.

NOTE: X= Plating Option: K (tin lead) or B (gold)



GT11MSABE
Horizontal
Actuation
SPDT



TERM NOS. FOR
REFERENCE ONLY



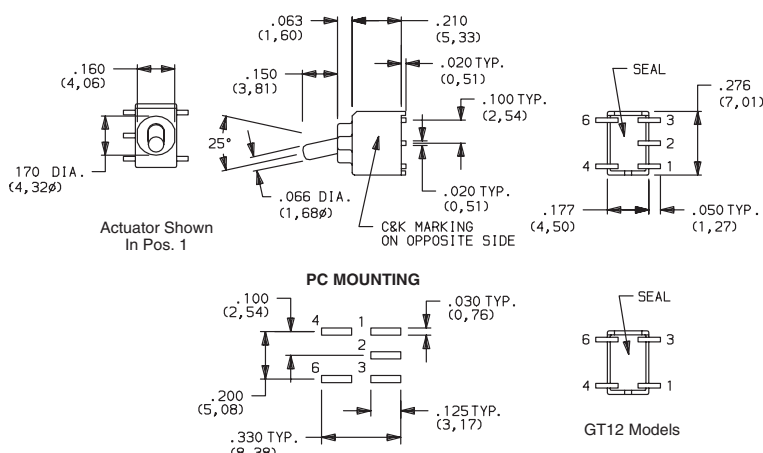
EPOXY SEAL

GT12 MODEL
TERMS 1 & 3 ONLY

PART NUMBER	SWITCH FUNCTION		
	POS.1	POS. 2	POS. 3
GT11MSABETR GT13MSABETR	ON ON	NONE OFF	ON ON
Conn. Terms.	2-3	OPEN	2-1
Schematic			
SPDT			
GT12MSABETR	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1
Schematic			
SPST			

Standard with tape & reel packaging, see page F-47.

GT12-omit pad 2.

GT11MSCXE
SPDT

GT12 Models

PART NUMBER	SWITCH FUNCTION		
	POS.1	POS. 2	POS. 3
GT11MSCXETR GT13MSCXETR	ON ON	NONE OFF	ON ON
Conn. Terms.	2-3	OPEN	2-1
Schematic 			
SPDT Note: Pins 4 and 6 not connected			
GT12MSCXETR	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1
Schematic 			
SPST Note: Pins 4 and 6 not connected			

NOTE: X= Plating Option; K (tin lead) or B (gold)



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

GT Series

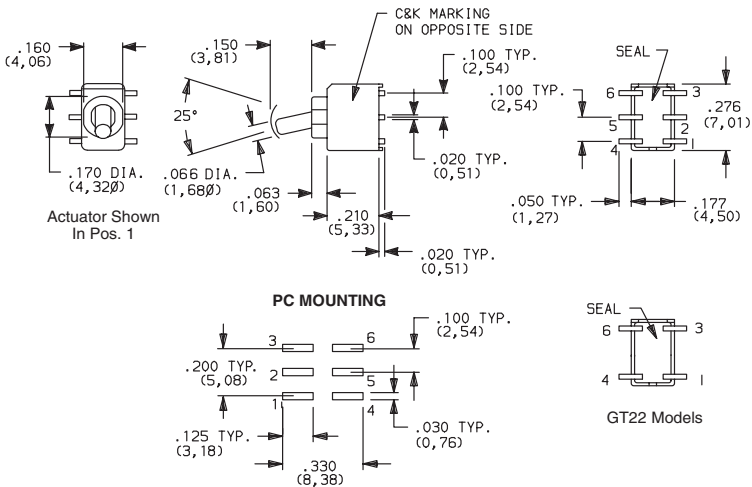
Sealed Ultraminiature Toggle Switches



GT21MSCXE
DPDT

PART NUMBER	SWITCH FUNCTION		
	POS. 1	POS. 2	POS. 3
GT21MSCXETR	ON	NONE	ON
GT23MSCXETR	ON	OFF	ON
Conn. Terms.	2-3, 5-6	OPEN	2-1, 5-4
Schematic			
DPDT			
GT22MSCXETR	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1, 6-4
Schematic			
DPST			

NOTE: X= Plating Option; K (tin lead) or B (gold)

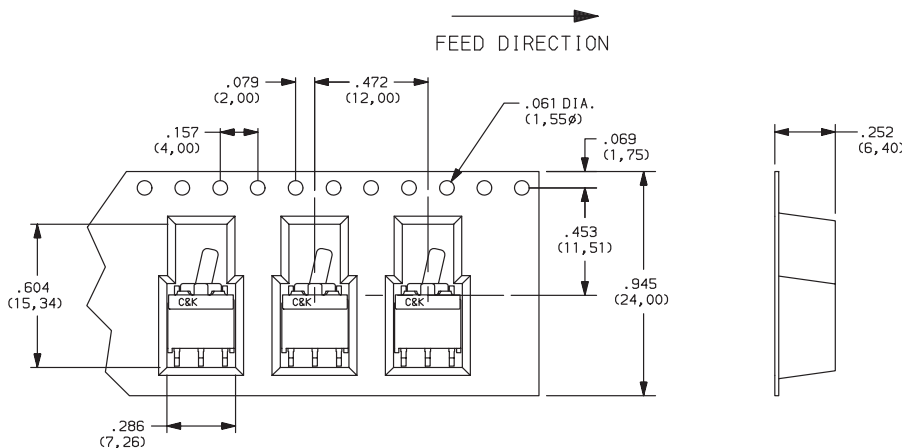


GT22-omit pads 2 & 5.

Standard with tape & reel packaging

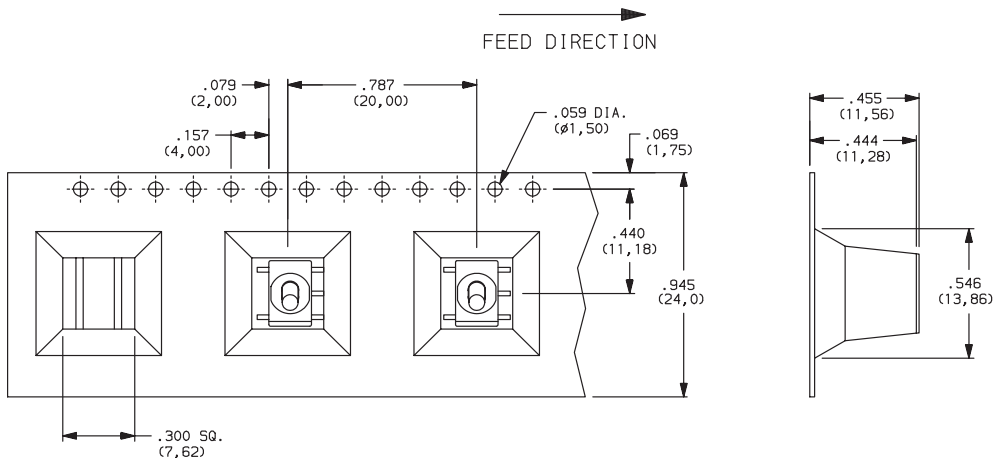
TAPE & REEL

For part numbers GT11MSABE, GT12MSABE, GT13MSABE

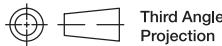


REEL INFORMATION	
OUTSIDE DIAMETER	13.00 (330,0)
PILOT HOLE	.512 (13,0)
QUANTITY PER REEL	600

For part numbers GT11MSCBE, GT12MSCBE, GT13MSCBE, GT21MSCBE, GT22MSCBE, GT23MSCBE,



REEL INFORMATION	
OUTSIDE DIAMETER	13.00 (330,0)
PILOT HOLE	.512 (13,0)
QUANTITY PER REEL	200



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

www.ck-components.com



9000 Series

Power Toggle Switches

Features/Benefits

- Power ratings up to 10 AMPS
- Double pole models
- Locking lever options available
- Wide variety of actuator styles
- RoHS compliant and compatible



Typical Applications

- Shut-off switch
- Small equipment



Specifications

CONTACT RATING: 9201 Model: 6 AMPS @ 120 V AC or 28 V DC; 3 AMPS @ 250 V AC. 9221 Model: 10 AMPS @ 125 V AC or 28 V DC; 5 AMPS @ 250 V AC.

ELECTRICAL LIFE: 25,000 make-and-break cycles at full load.

CONTACT RESISTANCE: Below 10 m Ω typ. initial @ 2-4 V DC, 100 mA.

INSULATION RESISTANCE: 10⁹ Ω min.

DIELECTRIC STRENGTH: 2,500 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).

NOTE: Any models supplied with Q contact material are RoHS compliant and compatible.

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

Materials

CASE: Diallyl phthalate (DAP) (UL 94V-0).

ACTUATOR: Brass, chrome plated.

BUSHING: Brass or zinc, nickel plated.

HOUSING: Stainless steel.

SWITCH SUPPORT: Brass or steel, matte-tin plated.

END CONTACTS: 9201 Model: Coin silver, silver plated. 9221 Model: Silver cadmium oxide.

CENTER CONTACTS: Copper alloy, silver plated.

ALL TERMINALS: 9201 Model: Copper alloy, silver plated. 9221 Model: Copper alloy, matte-tin plated.

TERMINAL SEAL: Epoxy.

HARDWARE: Nut & Locking ring: Brass, nickel plated. Lockwasher: Steel, nickel plated.

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-49 thru F-53. For additional options not shown in catalog, consult Customer Service Center.

Switch Function 9201 DPDT, On-On, 6 Amps 9221 DPDT, On-On, 10 Amps



F

Toggle



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

9000 Series Power Toggle Switches

SWITCH FUNCTION

NO. POLES	MODEL NO.	RATING*	SWITCH FUNCTION		CONNECTED TERMINALS		SCHEMATIC
			POS. 1	POS. 2	POS. 1	POS. 2	
			KEYWAY	KEYWAY	KEYWAY	KEYWAY	
DP	9201	6 AMPS	ON	ON	2-3,5-6	2-1,5-4	
	9221	10 AMPS	ON	ON			

DPDT

Labels and dimensions include: KEYWAY, 1/4 40 UNS-2A, 30°, POS. 1, .115 DIA. (2, 920), .100 (2, 54), EPOXY SEAL, .275 TYP. (6, 98), .030 TYP. (0, 76), .410 (10, 41), .296 (7, 52), .660 (16, 76), .155 (3, 94), .750 (19, 05), .400 (10, 16), .750 (19, 05).

Part number shown: 9201SH3ZQE

Terminal Nos.
Molded On Side Of Case

* See CONTACT MATERIAL, page F-52, for complete ratings.

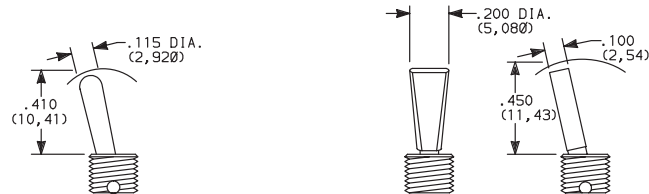
All 9000 Series models meet international dimensional and electrical requirements.

9221 model must be ordered with Z4 terminations and D seal option.

ACTUATOR

S ANTIROTATION, .410" HIGH

P3 FLATTED, ANTIROTATION, .450" HIGH



OPTION CODE	ACTUATOR FINISH
NONE	NATURAL ALUMINUM—With Nickel Plated Bushing
2	BLACK

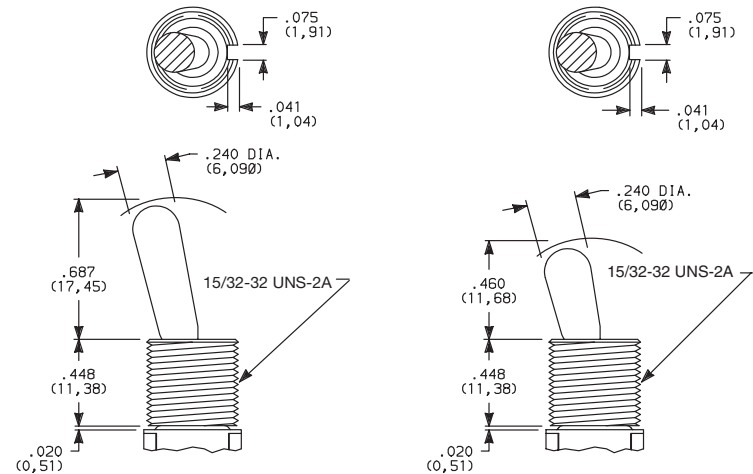
NOTE: Black hardware is supplied when either black actuators or bushings are specified. All hardware is available separately, see Section N.

Antirotation is standard on all actuators, provides 'anti-push-in' feature on actuator.

Dress nut part number: 709901201 supplied standard with P3 actuator.

T .687" HIGH, 15/32 BUSHING

T1 .460" HIGH, 15/32 BUSHING

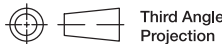


OPTION CODE	ACTUATOR FINISH
NONE	BRIGHT CHROME—With Nickel Plated Bushing
2	BLACK

NOTE: Bushing option code not required for T & T1 actuators unless CW splashproof bushing ordered.

Black hardware is supplied when either black actuators or bushings are specified. All hardware is available separately, see Section N.

Antirotation is standard on all actuators except T & T1, provides 'anti-push-in' feature on actuator.



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

C&K

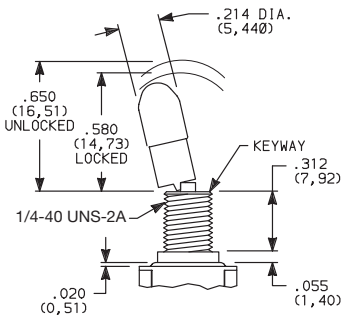


9000 Series
Power Toggle Switches

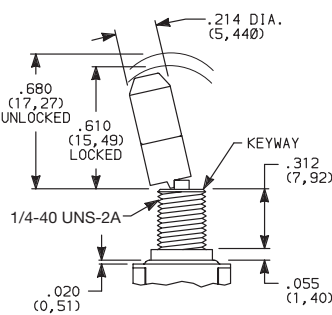
ACTUATOR



K LOCKING LEVER, .650" HIGH, THREADED



K1 LOCKING LEVER, .680" HIGH, THREADED



Locking Positions

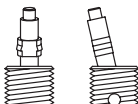


2 Position Lock

NOTE: To prevent accidental actuation, toggles must be lifted before being actuated. When released, toggles again lock in place. Bushing option code not required. Overtightening mounting nut may cause actuator to bind.

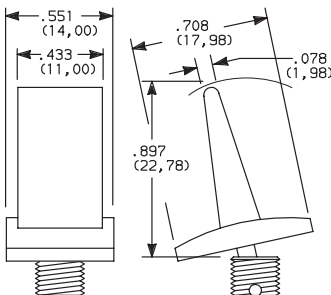
OPTION CODE	ACTUATOR CAP FINISH
NONE	NATURAL ALUMINUM-With Nickle Plated Bushing
2	BLACK ANODIZED ALUMINUM

L40 LEVER HANDLE WITHOUT CAP



No color choice required.

L43 PLASTIC LEVER HANDLE WITH ANTIROTATION AND CAP, P/N 4812



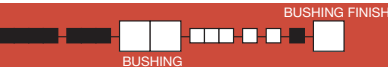
Finish: Matte

OPTION CODE	ACTUATOR CAP COLOR
2	BLACK
NONE	No Actuator Color (L40 option)

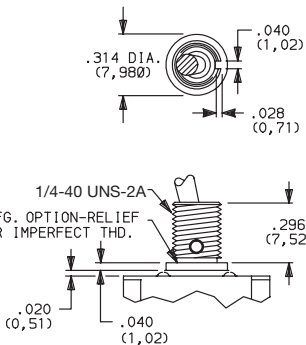
Other colors available, consult Customer Service Center.

NOTE: Lever handle actuator L43 supplied, but not installed. For interchangeability, order L40 actuator option and order lever handles separately, see page F-53. Antirotation is standard on all actuators, provides 'anti-push-in' feature.

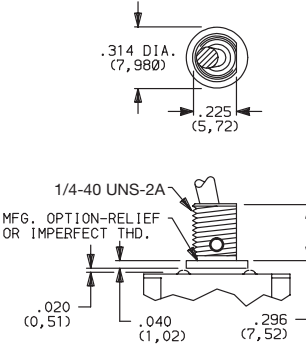
BUSHING



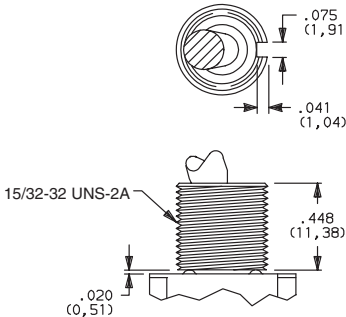
H3 .296" HIGH, THREADED, KEYWAY



H .296" HIGH, THREADED, FLAT



CW SPLASHPROOF, 15/32 BUSHING



OPTION CODE	BUSHING FINISH
NONE	NICKEL
2	BLACK

Will withstand 12 in./lbs. of torque with no distortion.

For T & T1 actuators only.

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.

Internal actuator seal standard. External bushing seal washer available separately, see page F-52.



Third Angle Projection

Dimensions are shown: Inches (mm)

Specifications and dimensions subject to change



9000 Series Power Toggle Switches

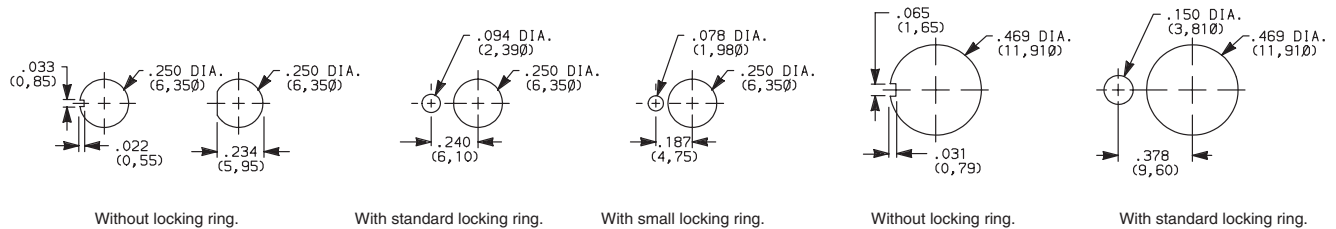
BUSHING



PANEL MOUNTING

1/4-40 UNS-2A

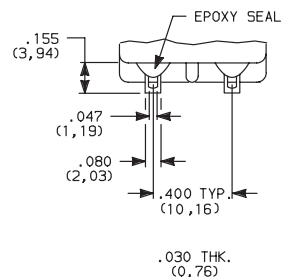
15/32-32 UNS-2A



TERMINATIONS

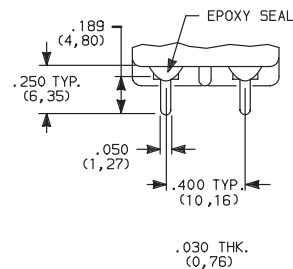


Z SOLDER LUG



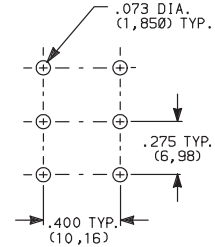
9201 Only

C PC THRU-HOLE



9201 Only

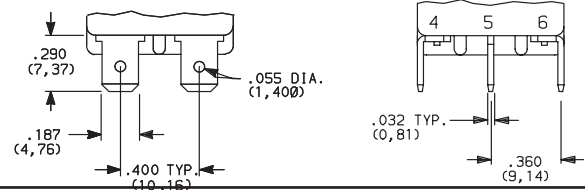
PC MOUNTING



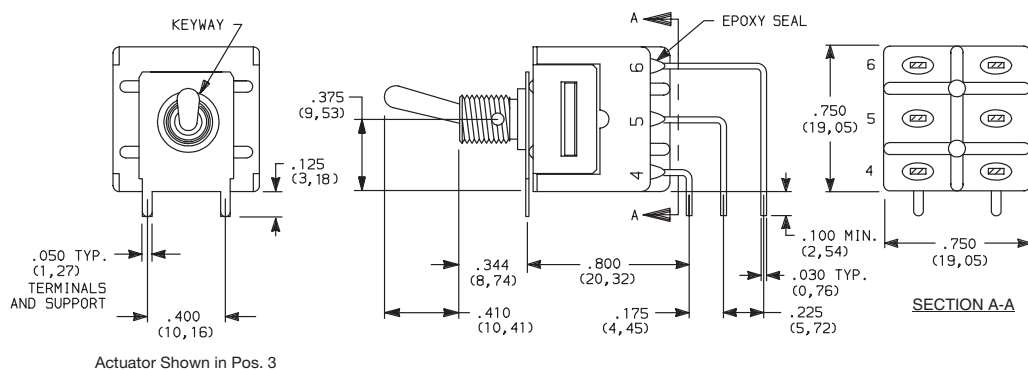
Z4 .187" QUICK CONNECT

9221 Only

NOTE: Only termination available with 9221 model. Must be ordered with D seal option. Mates with standard .187 Nema female connector.



AV2 VERTICAL RIGHT ANGLE, PC THRU-HOLE

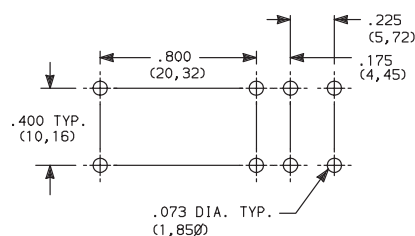


9201SH3AV2QE
Vertical Actuation
DPDT

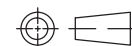
9201 Only

NOTE: Terminal bend radii and lead-in manufacturing option. Terminal spacing greater than 3mm at all points.

PC MOUNTING



Terminal Nos.
For Reference Only



Third Angle Projection

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



9000 Series
Power Toggle Switches

CONTACT MATERIAL

OPTION CODE	MODEL	CONTACT MATERIAL	TERMINAL PLATING	RATINGS	
Q	9201	SILVER ^{1,2}	SILVER OR TIN ^{2,5}	POWER	6 AMPS @120 V AC OR 28 V DC; 3 AMPS @ 250 V AC.
	9221	SILVER CADMIUM OXIDE ^{3,4,6}	TIN ⁵		10 AMPS @125 V AC OR 28 V DC; 5 AMPS @ 250 V AC.

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

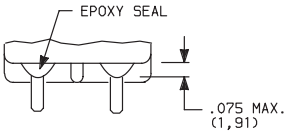
- ¹ END CONTACTS: Coin silver, silver plated.
² CENTER CONTACTS & ALL TERMINALS: Copper alloy, silver plated.
³ END CONTACTS: Silver cadmium oxide.
⁴ CENTER CONTACTS: Copper alloy, silver plated.
⁵ Z4 TERMINALS ONLY: Copper alloy, matte-tin plated.
⁶ Cadmium in electrical switch contacts is exempt from RoHS.

NOTE: Any models supplied with Q contact material are RoHS compliant.

All 9000 Series models meet international dimensional and electrical requirements. 
9221 model must be ordered with Z4 terminations and D seal option.

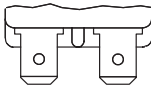
SEAL

E EPOXY SEAL



Not available with 9221 model or Z4 terminations.

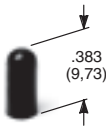
D NO EPOXY SEAL



Must be ordered with 9221 model and Z4 termination.

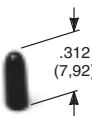
AVAILABLE HARDWARE

Cap
Compatible with S actuator



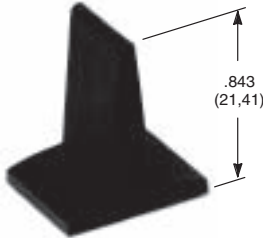
PART NO.
896801000 WHITE
896802000 BLACK
896803000 RED
Material: Polyethylene
Finish: Matte

Cap
Compatible with S actuator



PART NO.
706201000 WHITE
706202000 BLACK
706203000 RED
Material: Vinyl
Finish: Matte

L43 Actuator

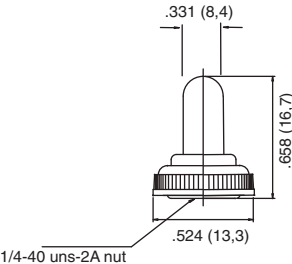


PART NO.
481202000 BLACK
481203000 RED
Material: Nylon
Finish: Matte

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

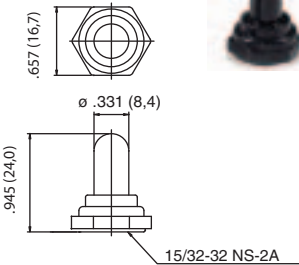
Other colors available, consult Customer Service Center.

759D02000 Sealing Boot



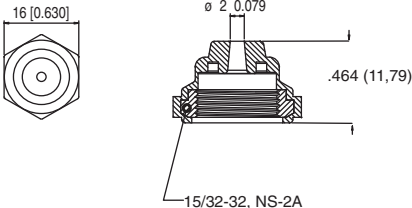
NOTE: For use with S actuator style when combined with H3 and H bushings

703D02000 Sealing Boot

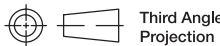


NOTE: For use with T style actuator

704D02000 Sealing Boot



NOTE: For use with T style actuator



Third Angle
Projection

Dimensions are shown: Inches (mm)

Specifications and dimensions subject to change

