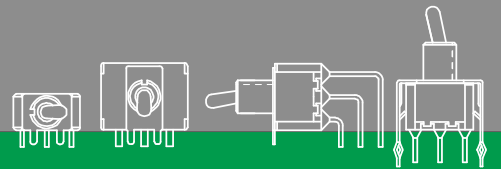




An ISO 9001 Company

Miniature Toggle Switches – PT series



SPECIFICATIONS

CONTACT RATING: Dependent upon contact material. See [Contact Plating & Ratings](#).

MECHANICAL LIFE: 40,000 make-and-break cycles.

CONTACT RESISTANCE: 10mΩ max. initial @ 2-4VDC

100mA for both silver and gold plated contacts.

INSULATION RESISTANCE: 1,000 MΩ min.

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

OPERATING TEMPERATURE: -40°C to 85°C.

MATERIALS

CASE: Diallyl phthalate (DAP) (UL94v-0).

ACTUATOR: Brass, chrome plated.

BUSHING: Brass, nickel plated.

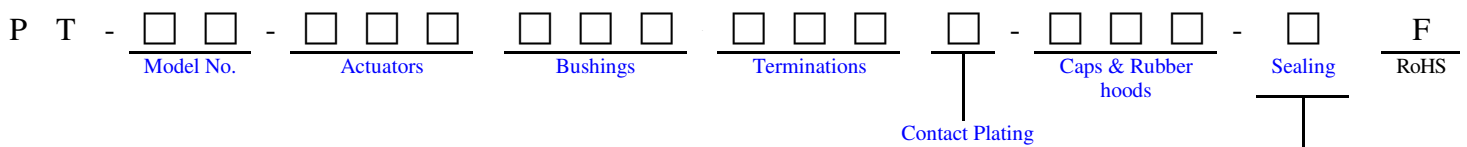
HOUSING: Stainless steel.

SWITCH SUPPORT: Brass, tin plated.

CONTACT / TERMINALS: Copper alloy, Silver or gold plated. See [Contact Plating & Ratings](#).

AI models available, consult sales representatives.

PART NUMBERING SYSTEM

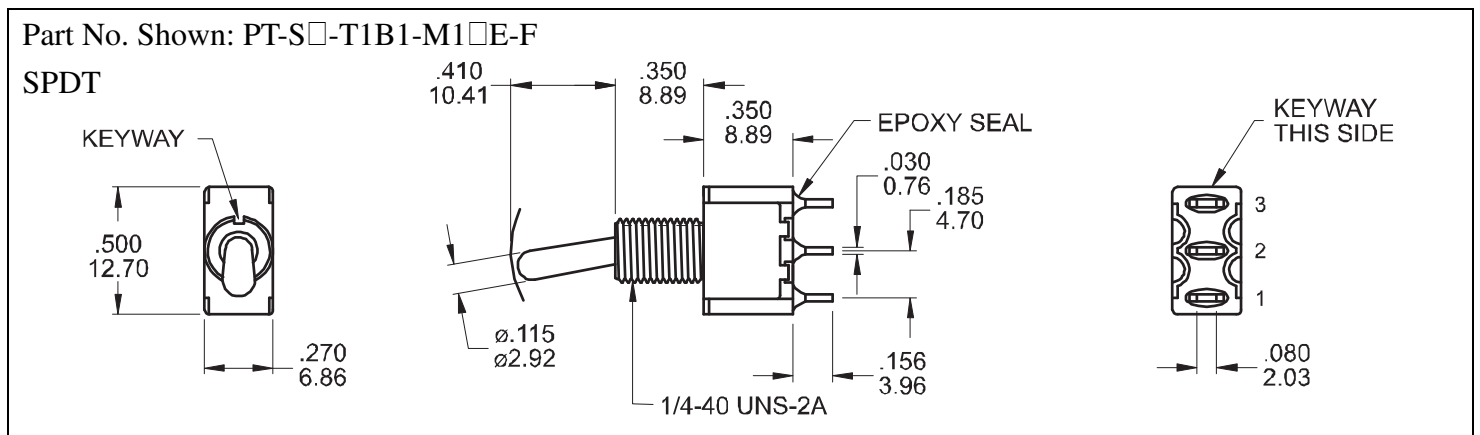


<input type="checkbox"/>	Without
E	Epoxy seal

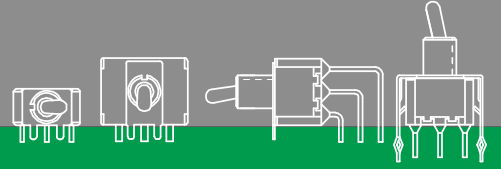
Model No./ Switching function ()= Momentary

Unit: Inch/ mm

SPST				SPDT				SPDT			
Model No.	Switching function			Model No.	Switching function			Model No.	Switching function		
S0	On	None	Off	S1	On	None	On	S3	On	Off	On
				S2	On	None	(On)		S4	(On)	Off
								S5	On	Off	(On)
Connected terminals	2-3	N/A	Open	Connected terminals	2-3	N/A	2-1	Connected terminals	2-3	Open	2-1
Schematic				Schematic				Schematic			



Miniature Toggle Switches – PT series



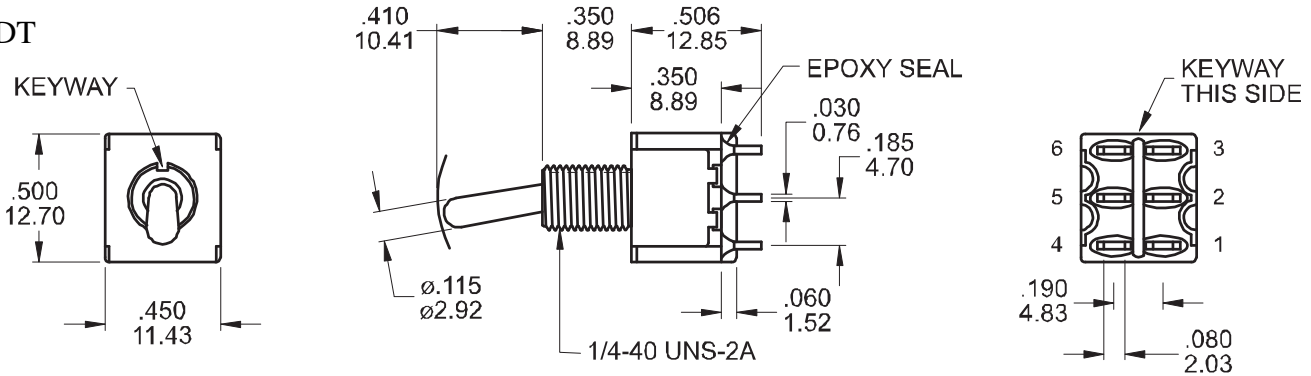
Model No./ Switching function ()= Momentary

Unit: Inch/ mm

DPDT			DPDT			DPDT					
Model No.	Switching function		Model No.	Switching function		Model No.	Switching function				
D1	On	None	On	D3	On	Off	On	D6	On	On	On
D2	On	None	(On)	D4	(On)	Off	(On)	D7	(On)	On	(On)
				D5	On	Off	(On)	D8	On	On	(On)
Connected terminals	2-3,5-6	N/A	2-1,5-4	Connected terminals	2-3,5-6	Open	2-1,5-4	Connected terminals	2-3,5-6	2-3,5-4	2-1,5-4
Schematic				Schematic				Schematic for D6			

Part No. Shown: PT-D□-T1B1-M1□E-F

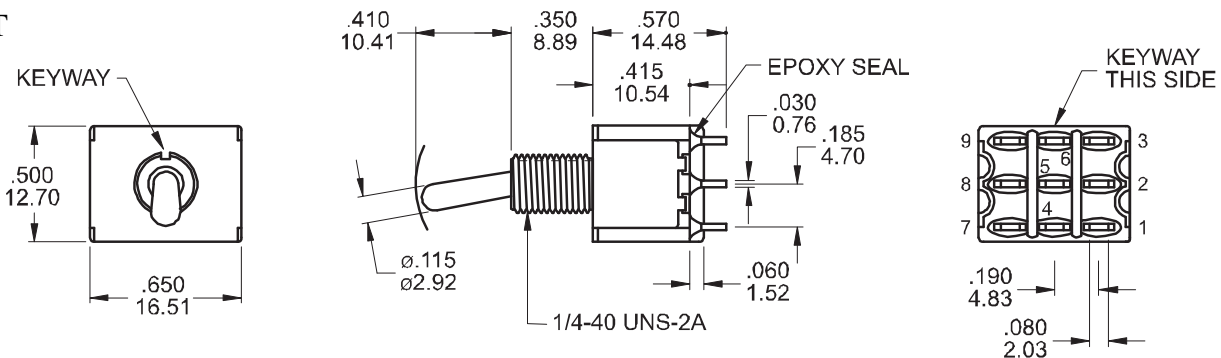
DPDT



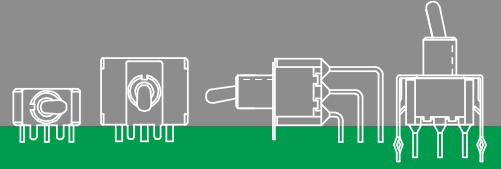
3PDT			3PDT				
Model No.	Switching function		Model No.	Switching function			
E1	On	None	On	E3	On	Off	On
E2	On	None	(On)	E4	(On)	Off	(On)
				E5	On	Off	(On)
Connected terminals	2-3,5-6,8-9	N/A	2-1,5-4,8-7	Connected terminals	2-3,5-6,8-9	Open	2-1,5-4,8-7
Schematic				Schematic			

Part No. Shown: PT-E□-T1B1-M1□E-F

3PDT



Miniature Toggle Switches – PT series



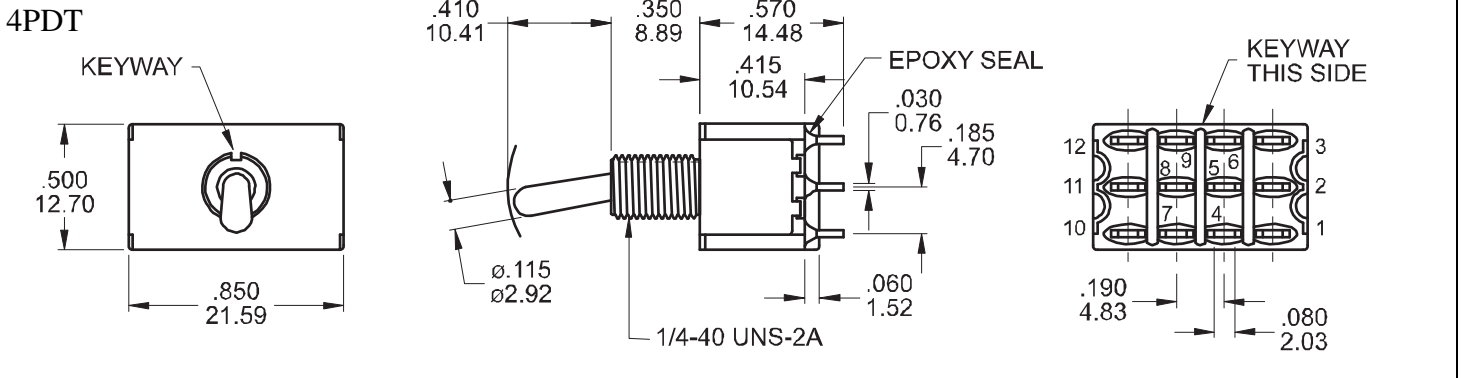
Model No./ Switching function ()= Momentary

Unit: Inch/ mm

4PDT				4PDT			
Model No.	Switching function			Model No.	Switching function		
F1	On	None	On	F3	On	Off	On
F2	On	None	(On)	F4	(On)	Off	(On)
				F5	On	Off	(On)
Connected terminals	2-3,5-6,8-9,11-12	N/A	2-1,5-4,8-7,11-10	Connected terminals	2-3,5-6,8-9,11-12	Open	2-1,5-4,8-7,11-10
Schematic				Schematic			

4PDT			
Model No.	Switching function		
F6	On	On	On
F7	(On)	On	(On)
F8	On	On	(On)
Connected terminals	2-3,5-6,8-9,11-12	2-3,5-4,8-9,11-10	2-1,5-4,8-7,11-10
Schematic for F6			

Part No. Shown: PT-F□-T1B1-M1□E-F



Actuators

Unit: Inch/ mm

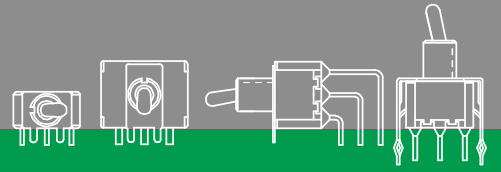
T1	T2	T3	T4	T5
STD.				

T1 ~ T5 actuator shown with standard B1 bushing.

Add .070 (1.78) for B3 Bushing.

Subtract .020 (0.51) for B6 Bushing.

Std. for M1, M2 Terminal. Subtract .016 (0.40) for M6, M7, V□□ (Exclude B1/B2 bushing)



Actuators

Unit: Inch/ mm

T6	T6A	T6B	T6C
<p>Flatted</p>			

T6,T6A,T6B ,T6C use with B11, B12, B15, B16 bushing only.

T7	T8	T9	
<p>Use with B0 bushing. Use with B17,B18 the lever is antirotation. And the size of lever is 13.00mm</p>	<p>Use with B0 bushing. Use with B17,B18 the lever is antirotation. And the size of lever is 18.00mm</p>	<p>Gloss Finish Plastic Chrome Finish</p> <p>B1 / B2 bushing Std. With black(T92) and red(T93) color only(Std.)</p>	

T10	T11	T12	T13
<p>STD.</p>			

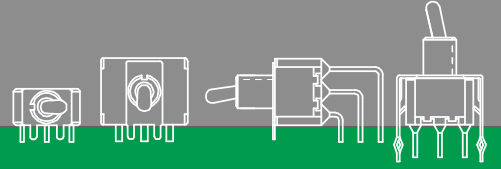
T10 ~ T13 use with M6, M7, V terminations only
T10 ~ T13 actuator shown with standard B4 bushing.

LK	LK1	LK2	Bushing option code is not required. Only on-on and on-off-on are available.	
			2 positions lock	3 positions lock

Bushings

Unit: Inch/ mm

B1 Threaded Std. B2 Unthreaded	B3 Threaded Std. B4 Unthreaded	B5 High torque	B6 High torque
<p>Subtract .016 (0.40) for M6, M7, V termination options.</p>	<p>B4 is standard for M6, M7, V termination options.</p>		



Bushings

Unit: Inch/ mm

B7 Threaded Std.	B8 Metric threaded	B9 Splash proof
		<p>O-Ring supplied with B9 bushing</p>

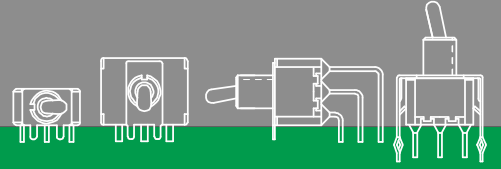
B10 Threaded	B11 Threaded Std. B12 Unthreaded	B15 Threaded Std. B16 Unthreaded
	<p>Use with T6□ actuators only</p>	<p>Use with T6□ actuators only</p>

B0 Threaded	B14 Splash proof	B17 Threaded	B18 Threaded
<p>Use with T7,T8 actuators only.</p> <p>B0 Bear strength from top of actuator up to 10kg aside up to 15kg.</p>	<p>Use with T7 , T8 actuators only</p>	<p>Use with T7,T8 actuators only. With plastic (POM) Insert.</p> <p>B17, B18 Bear strength from top of actuator up to 20kg aside up to 15kg.</p>	<p>Use with T7,T8 actuators only. With plastic (POM) Insert.</p>

Terminations & Sealing

Unit: Inch/ mm

M1-□-□□□ Solder, W/o epoxy seal	M1-□-□□□-E Solder, With epoxy seal	M2-□-□□□ PCB through hole, W/o epoxy seal	M2-□-□□□-E PCB through hole, with epoxy seal
<p>.030(0.76) THK.</p>	<p>.030(0.76) THK.</p>	<p>.030(0.76) THK.</p>	<p>.030(0.76) THK.</p>



Terminations & Sealing

Unit: Inch/ mm

M3 Quick connect	M5 Wire wrap	Option code	Dim. 'A'
<p>.030(0.76) THK.</p>	<p>.030(0.76) THK.</p>	M51	.736(18.70)
		M52	.953(24.20)
		M53	.415(10.55)
		M54	1.062(26.97)

M6 Right angle P.C. Mount

Part No. Shown: PT-S-T10B4-M6-E-F

SPDT

Options:

M6N Snap-in

SECTION A-A
TERM. NOS. FOR REFERENCE ONLY

P. C. B. Layout

Part No. Shown: PT-D-T10B4-M6-E-F

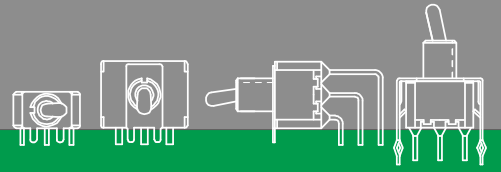
DPDT

Options:

M6N Snap-in

SECTION A-A
TERM. NOS. FOR REFERENCE ONLY

P. C. B. Layout



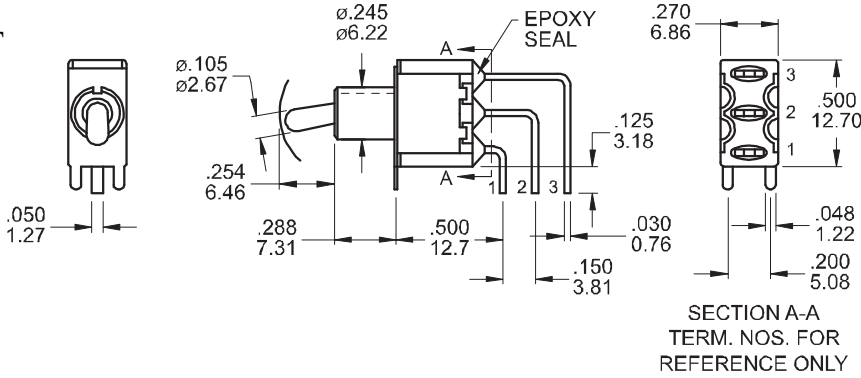
Terminations & Sealing

Unit: Inch/ mm

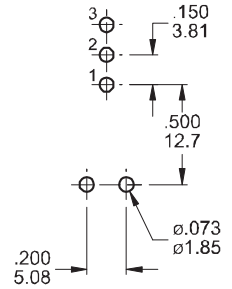
M7 Vertical right angle P.C. Mount

Part No. Shown: PT-S□-T10B4-M7□E-F

SPDT

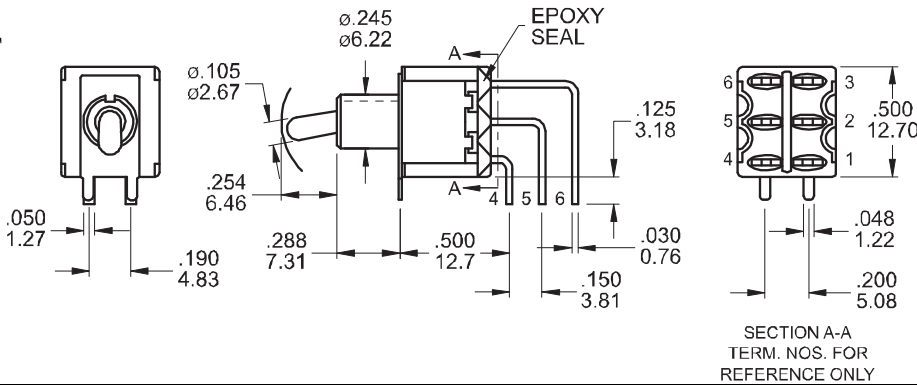


P. C. B. Layout

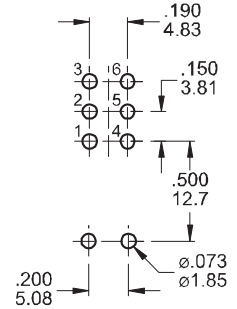


Part No. Shown: PT-D□-T10B4-M7□E-F

DPDT

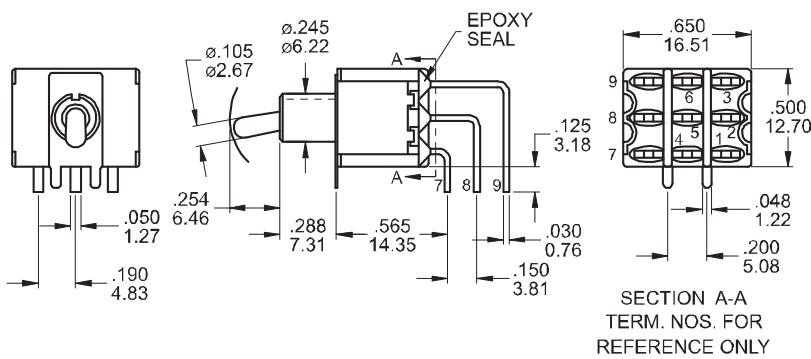


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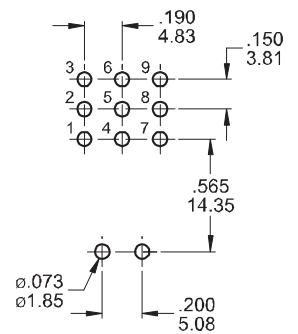


Part No. Shown: PT-E□-T10B4-M7□E-F

3PDT

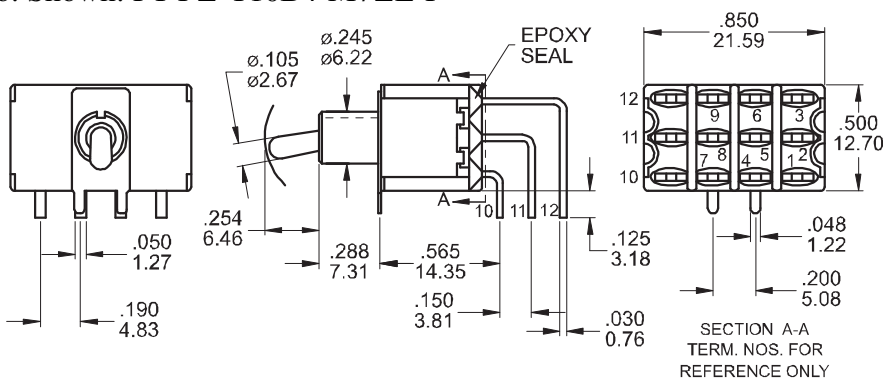


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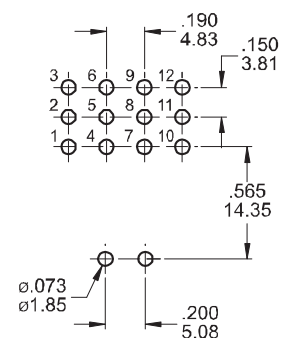


Part No. Shown: PT-F□-T10B4-M7□E-F

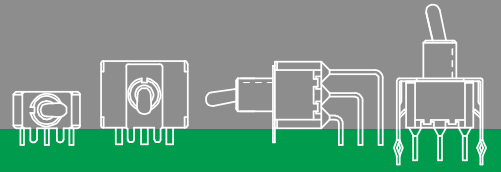
4PDT



P. C. B. Layout



Miniature Toggle Switches – PT series



Terminations & Sealing

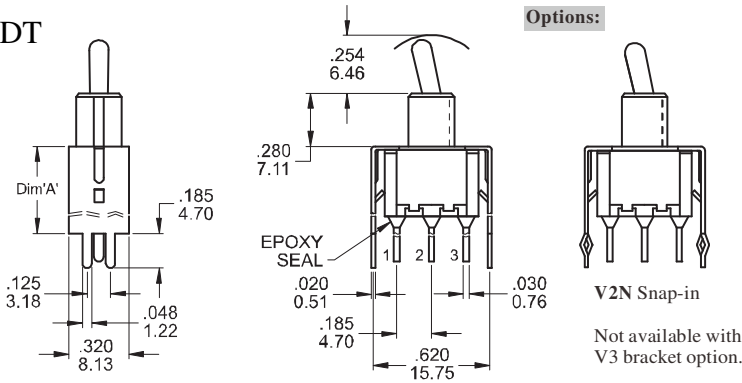
Unit: Inch/ mm

V□□ Vertical bracket P.C. Mount

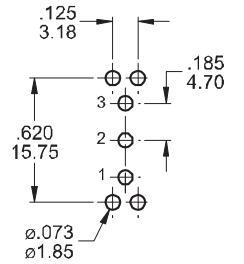
Part No. Shown: PT-S□-T10B4-V□□□E-F

P. C. B. Layout

SPDT



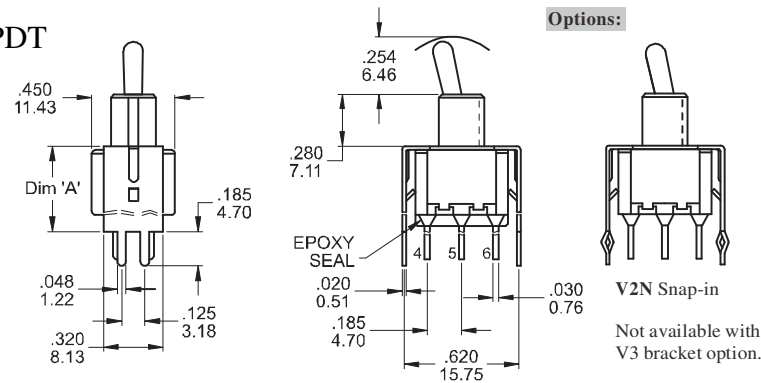
Option Code	Dim. 'A'
V2□	.460 11.68
V3	.630 16.00



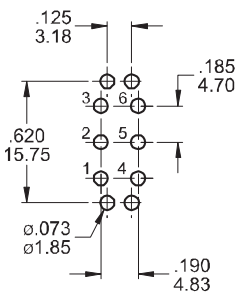
Part No. Shown: PT-D□-T10B4-V□□□E-F

P. C. B. Layout

DPDT



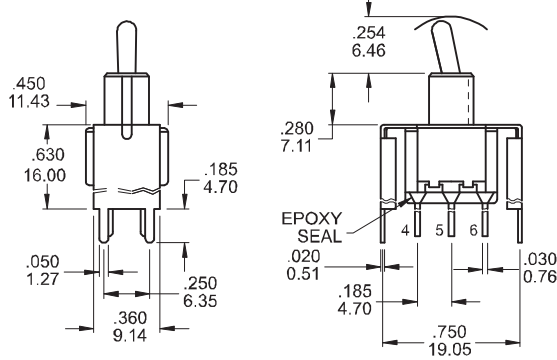
Option Code	Dim. 'A'
V2□	.460 11.68
V3	.630 16.00



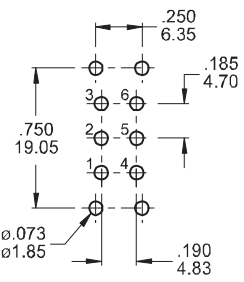
Part No. Shown: PT-D□- T10B4-V□□E-F

P. C. B. Layout

DPDT



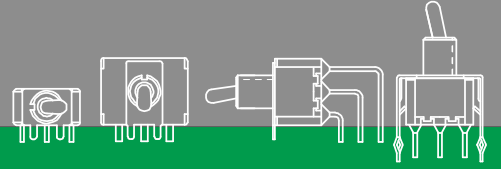
Option Code	Dim. 'A'
V4	.460 11.68
V5	.630 16.00



Contact Plating & Ratings

Option code	Contact plating	Terminal plating	Ratings
G	Gold	Gold	0.4 Volt-Amps (VA) max. @ 20V max. (AC or DC)
S	Silver	Silver	5 Amps with resistant load @ 120VAC or 28VDC
A	Gold over silver	Gold over silver	2 Amps with resistant load @ 250VAC

Miniature Toggle Switches – PT series



CAP & RUBBER HOOD SEALING

Unit: Inch/ mm

C4	Cap color					R1 Metric	R2 Inch (Std.)	
	1	White	5	Yellow	9			Gray
	2	Black(STD.)	6	Green				
	3	Red	7	Blue				
						Besides standard color, consult sales representatives in advance.		
						For actuator T1, T2 and bushing B1, B3, B5, B6 only		

PANEL MOUNTING

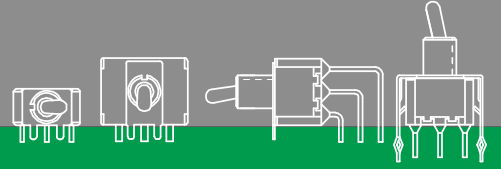
Unit: Inch/ mm

	1/4 inch bushing	Metric bushing	15/32 inch bushing	Splash proof bushing
Keyway bushing Without locking ring				
Keyway bushing With standard locking ring				
Flat busing Without locking ring				

HARDWARE

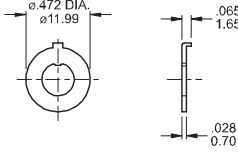
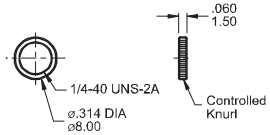
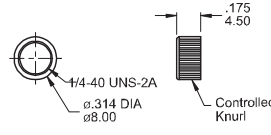
Unit: Inch/ mm

HW01 1/4 inch nut	HW02 Dress nut	HW03 Metric nut
<p>Supplied standard with B1, B3, B5, B6, B7, B9, B10, B11, B15 options.</p>		<p>Supplied standard with B8 metric bushing</p>
HW04 15/32 inch nut	HW06 Locking ring	HW07 Locking ring
<p>Supplied standard with B0, B14, B17, and B18 bushing</p>	<p>Locking ring supplied standard</p>	<p>Locking ring supplied with B5 bushing</p>
HW08 Locking ring	HW09 Locking washer	HW10 Locking washer
<p>Locking ring supplied with B0, B14, B17, and B18 bushing</p>	<p>Supplied standard with B1, B3 bushing</p>	<p>Supplied standard with B0, B14, B17, and B18 bushing</p>



HARDWARE

Unit: Inch/ mm

HW11 Locking ring	HW12 Dress nut Controlled Knurl	HW13 Dress nut Controlled Knurl
 <p>Locking ring supplied with B8 bushing</p>		

SOLDERING PROCESSES

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

Wave soldering: Recommended soldering temperature: 270 ± 5°C.

Duration of solder immersion: Max 5 sec. (PCB is 1.6mm in thickness).