

**TP\_ES Series, Tiny, Process Sealed**

**Features**

- Process and non-process sealed
- Compact design
- Vertical or right angle versions



**Typical performance characteristics**

Contact configuration . . . . . SPST, SPDT, DPDT  
 Contact timing . . . . . Break-Before-Make  
 Contact rating max. . . . . gold: 0.4VA @20VDC or peak AC  
 . . . . . silver: 1A @ 125VAC or 28 VDC resistive  
 Electrical life . . . . . 1 pole2 . . .2 pole  
 . . . . . gold . . . . 100,000 . . .80,000 cycles  
 . . . . . silver . . . . 60,000 . . .50,000 cycles  
 Contact resistance, initial. . . . . max.20 mOhms'  
 Insulation resistance . . . . . 1,000 MOhms @ 500VDC  
 Dielectric strength . . . . . 1,000 Volts rms @ sea level  
 Actuation force . . . . . 0.5 to 4N (50-400gf)  
 Actuator travel . . . . . momentary .030" (.762)

**Environmental specification**

Operating temperature . . . . . -30°C to +65°C  
 Storage temperature . . . . . -30°C to +65°C  
 Solder heat resistance . . . . . wave solder capable to 265° C  
 Seal . . . . . versions with process seal, with disposable cap

**Material specifications**

Contacts . . . . . copper or brass, gold over nickel finish or silver  
 . . . . . clad with silver over nickel finish  
 Actuator . . . . . thermoplastic  
 Terminals . . . . . brass with gold over nickel or silver over nickel  
 Case . . . . . thermoplastic  
 Frame and support bracket. . . . . steel with tin over copper finish  
 RoHS Directive 2002/95/EC . . . . . compliant

<b>Product key</b>	Typical product key											
	<b>TP</b>	<b>B</b>		<b>1</b>	<b>1</b>	<b>C</b>	<b>G</b>	<b>RA</b>	<b>ES</b>	<b>0</b>	<b>04</b>	
<b>Type</b>	Tiny pushbutton series											
<b>Bushing</b>												
<b>B</b>	round .188 (4.78) dia. bushing not threaded											
<b>F</b>	round 1/4-40 UNS 2B thread											
<b>Actuator</b>												
<b>blank</b>	standard											
<b>F</b>	flush (available with B bushings only)											
<b>Number of Poles</b>												
<b>1</b>	single pole											
<b>Contact rating</b>												
<b>1</b>	0.4VA Gold											
<b>Function</b>												
<b>C</b>	single throw, momentary											
<b>F</b>	double throw, momentary											
<b>Plating</b>												
<b>G</b>	Gold											
<b>Terminals</b>												
<b>PC</b>	printed circuit board						<b>RA</b> right angle (right angle, ES available with B and C bushing only)					
<b>Process Seal</b>												
<b>ES</b>	process sealed with disposable boot, epoxied double case											
<b>Button Color</b>												
<b>0</b>	black				<b>2</b> red				<b>6</b> blue			
<b>Material</b>												
<b>04</b>	RoHS compliant											

**TP\_ES Series, Tiny, Process Sealed (Continued)**

**Bushing**

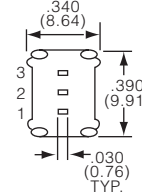
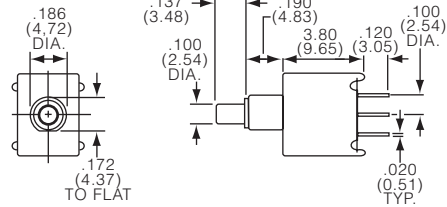


**B, Round .188 (4.78) dia. bushing not threaded**

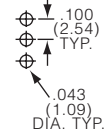
**printed circuit board**



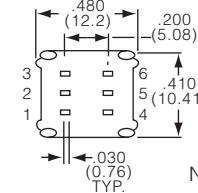
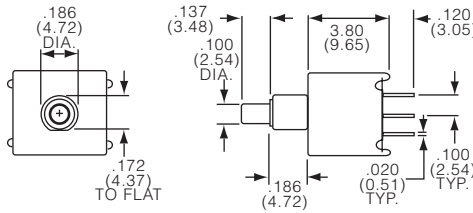
TPB11CGPCES



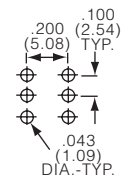
Note: no center terminal on 'C' function switch



TPB21RGPCES



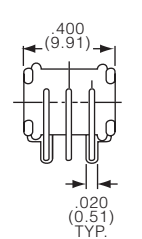
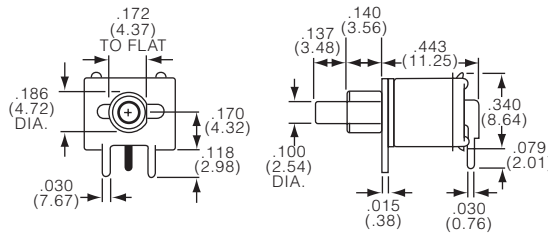
Note: no center terminals on 'M' function switch



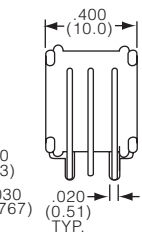
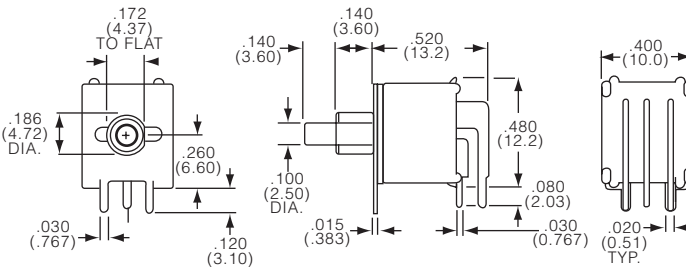
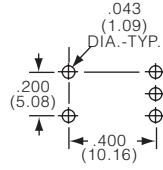
**right angle**



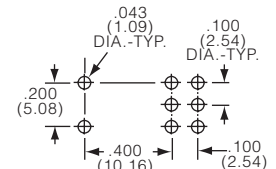
TPB11CGRAES



Note: no center terminal on 'C' function switch



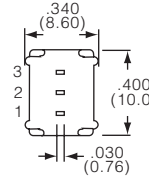
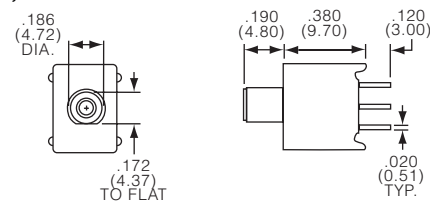
Note: no center terminals on 'M' function switch



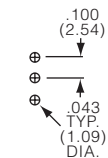
**printed circuit board, flush actuator**



TPBF11CGPCES

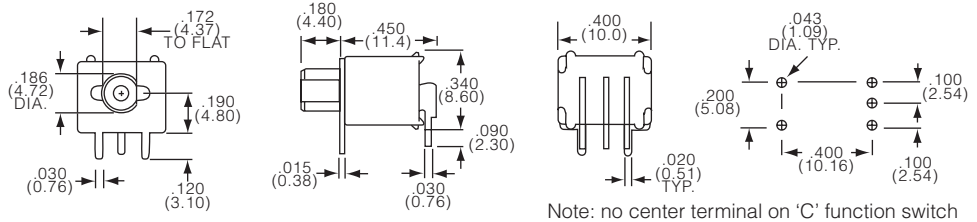


Note: no center terminal on 'C' function switch



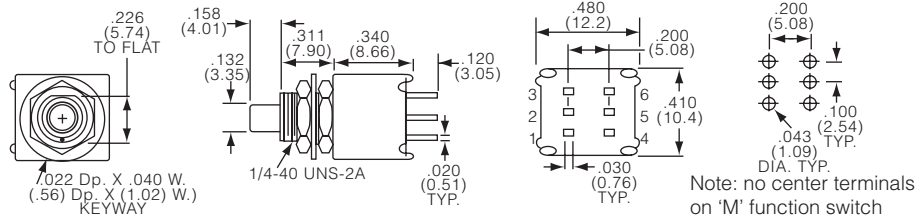
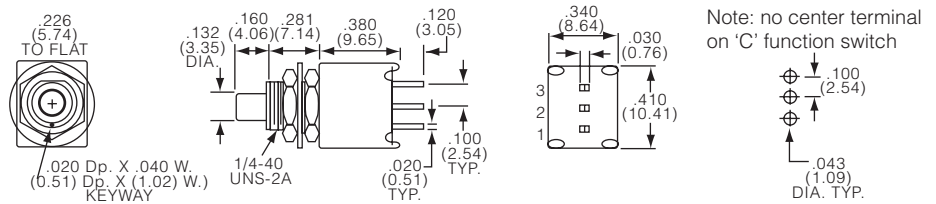
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**right angle, flush actuator**



**F, Round 1/4-40 UNS 2B thread**

**printed circuit board**



Product key	Bushing	Act.	Poles	Rating	Function	Off	On	Plating	Terminals	Btn.	Material	Part Number
TPB11CGPCES004	round	std	1	0.4VA	Off-(On)	Off	1-3	Gold	pcb	black	RoHS compliant	1825097-3
TPB11CGRAES004	.188 (4.78)								right angle			1825097-5
TPB11CGRAES204	dia									red		1825097-7
TPB11FGPCES204	bushing, not threaded				On-(On)	1-2	2-3		pcb			1-1825097-0
TPB11FGRAES004									right angle	black		1-1825097-4
TPB11FGRAES604										blue		1-1825097-5
TPBF11CGPCES004		flush			Off-(On)	Off	1-3		pcb	black		2-1825097-0
TPBF11CGRAES004									right angle			2-1825097-2
TPBF11FGPCES004					On-(On)	1-2	2-3		pcb			2-1825097-3
TPBF11FGRAES004									right angle			2-1825097-6
TPF11CGPCES004	1/4-40	std			Off-(On)	Off	1-3		pcb			1825100-3
TPF11FGPCES004	UNS 2B				On-(On)	1-2	2-3					1-1825100-0