

Component name	Base material	Finish
Case	LCP, black, UL94 V-0	
Terminal, wire lug (gold)	Brass	Gold over nickel
Terminal, PC, RA & VRA (gold)	Brass	Gold over nickel in contact area, Tin over nickel in solder area
Terminal, PC & wire lug (silver)	Silver clad copper	Silver over nickel
Contact (gold)	Copper alloy or brass	Gold over nickel
Contact (silver)	Silver clad copper or copper	Silver over nickel
Frame	Steel	Tin over copper
Spring	Music wire	
Plunger Button	Nylon 6/6, black, red or blue. UL94 HB (extended) or UL94V-2 (flush)	
Support bracket (RA*ES versions only)	Brass	Tin over copper
Support bracket, VRA	Steel	Tin over copper
Bushing	Brass	Nickel over copper
ES Housing (ES versions)	Nylon 6/6, natural, UL94 V-2	
ES boot (ES versions)	Vinyl plastisol, black	

Specifications	
Rating	Gold: .4VA max. @ 20VDC or peak AC resistive Silver: 1 A @ 125VAC or 28 VDC resistive
Initial termination resistance	20 milliohms max.
Insulation resistance	1,000 Megohms min @ 500 VDC
Dielectric strength	1,000 volts RMS at sea level
Timing	Break before make
Plunger travel	.030
Actuation force	50 to 400 grams
Life expectancy	.4 VA, 1 pole: 100,000 .4 VA, 2 poles: 80,000 1 A, 1 pole: 60,000 1 A, 2 poles: 50,000
Operating temperature	-30° C to +65° C
Storage temperature	-30° C to +65° C
Terminal seal	Single pole: epoxy Double pole: epoxy optional

Model	Actuator	Poles	Rating	Function	Plating	Terminations	Process Seal	Button color	04
TPB	Blank = extended	1	1 = Gold .4VA	C = SPST momentary	G = Gold	Blank = Wire lug	ES = process sealed 2	0 = Black	
	F = flush	2 (1+1)	3 = Silver 1 Amp 1	F = SPDT momentary	Blank = Silver 1	PC = printed circuit		2 = Red	
		2		M = DPST momentary		RA = right angle 2		6 = Blue	
				R = DPDT momentary		VRA = vertical right angle 3			

NOTES:
 1. Silver only available in wire lug and pc terminations
 2. RAES available with B and C bushing only
 3. VRA only available in single pole

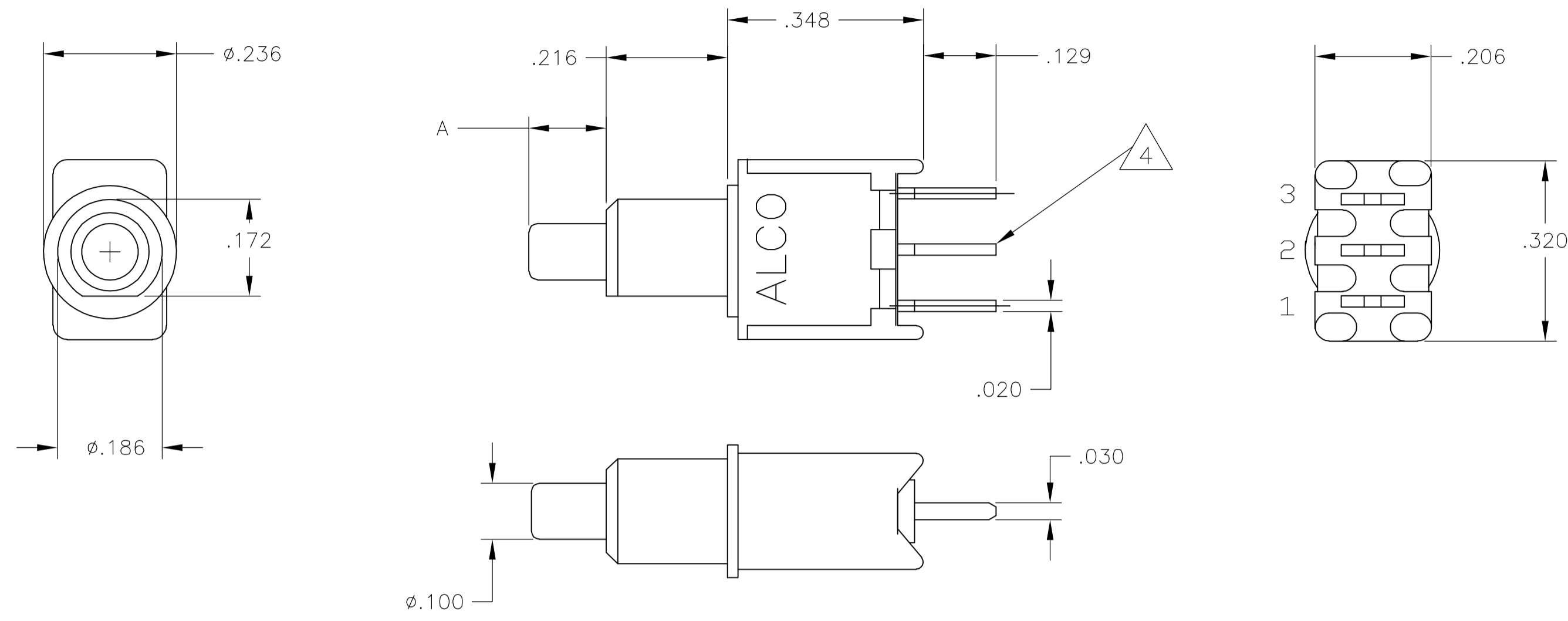
Tyco P/N	Alco P/N	Flush Actuator?	Poles	Throws	Plating	Terminals	Process sealed?	Button Color	Function				Dim A
									ALCO	ALCO	ALCO	ALCO	
1825097-1	TPB11CGPC004	no	1	1	Gold	PC	No	Black	Off	Mom	Off	1-3	.133
1825097-2	TPB11CGPC204	no	1	1	Gold	PC	No	Red	Off	Mom	Off	1-3	.133
1825097-3	TPB11CGPCE004	no	1	1	Gold	PC	yes	Black	Off	Mom	Off	1-3	.133
1825097-6	TPB11CGRA004	no	1	1	Gold	Right Angle	No	Black	Off	Mom	Off	1-3	.133
1825097-4	TPB11CGRA204	no	1	1	Gold	Right Angle	No	Red	Off	Mom	Off	1-3	.133
1825097-5	TPB11CGRAES004	no	1	1	Gold	Right Angle	yes	Black	Off	Mom	Off	1-3	.133
1825097-7	TPB11CGRAES204	no	1	1	Gold	Right Angle	yes	Red	Off	Mom	Off	1-3	.133
1825097-8	TPB11CGVRA004	no	1	1	Gold	VRA	No	Black	Off	Mom	Off	1-3	.117
1825097-9	TPB11FGPC004	no	1	2	Gold	PC	No	Black	On	Mom	1-2	2-3	.133
1-1825097-0	TPB11FGPCE204	no	1	2	Gold	PC	yes	Red	On	Mom	1-2	2-3	.133
1-1825097-1	TPB11FGRA004	no	1	2	Gold	Right Angle	No	Black	On	Mom	1-2	2-3	.133
1-1825097-2	TPB11FGRA204	no	1	2	Gold	Right Angle	No	Red	On	Mom	1-2	2-3	.133
1-1825097-3	TPB11FGRA604	no	1	2	Gold	Right Angle	No	Blue	On	Mom	1-2	2-3	.133
1-1825097-4	TPB11FGRAES004	no	1	2	Gold	Right Angle	yes	Black	On	Mom	1-2	2-3	.133
1-1825097-5	TPB11FGRAES604	no	1	2	Gold	Right Angle	yes	Blue	On	Mom	1-2	2-3	.133
1-1825097-6	TPB11FGVRA004	no	1	2	Gold	VRA	No	Black	On	Mom	1-2	2-3	.117
1-1825097-7	TPB21MGPC004	no	2	1	Gold	PC	No	Black	Off	Mom	Off	1-3, 4-6	.133
1-1825097-8	TPB21MGPC204	no	2	1	Gold	PC	No	Red	Off	Mom	Off	1-3, 4-6	.133
2-1825097-8	TPB21MGRA004	no	2	1	Gold	Right Angle	No	Black	Off	Mom	Off	1-3, 4-6	.133
1-1825097-9	TPB21RGRA004	no	2	2	Gold	Right Angle	No	Black	On	Mom	1-2, 4-5	2-3, 5-6	.133
2-1825097-0	TPBF11CGPCE004	yes	1	1	Gold	PC	yes	Black	Off	Mom	Off	1-3	.000
2-1825097-1	TPBF11CGRA004	yes	1	1	Gold	Right Angle	No	Black	Off	Mom	Off	1-3	.000
2-1825097-2	TPBF11CGRAES004	yes	1	1	Gold	Right Angle	yes	Black	Off	Mom	Off	1-3	.000
2-1825097-3	TPBF11FGPCE004	yes	1	2	Gold	PC	yes	Black	On	Mom	1-2	2-3	.000
2-1825097-4	TPBF11FGRA004	yes	1	2	Gold	Right Angle	No	Black	On	Mom	1-2	2-3	.000
2-1825097-5	TPBF11FGRA204	yes	1	2	Gold	Right Angle	No	Red	On	Mom	1-2	2-3	.000
2-1825097-6	TPBF11FGRAES004	yes	1	2	Gold	Right Angle	yes	Black	On	Mom	1-2	2-3	.000

NOTES:
 1. TERMINAL NUMBERS ARE FOR REFERENCE ONLY AND DO NOT APPEAR ON SWITCHES
 2. ALL MATERIALS AND FINISHES COMPLY WITH EU DIRECTIVE 2002/95/EC OF 27JAN2003 (ROHS).
 3. DISPOSABLE BOOT SUPPLIED WITH ES VERSIONS. BOOT TO BE PLACED OVER BUSHING BEFORE SOLDER WASHING
 4. CENTER TERMINAL PRESENT ON DOUBLE THROW SWITCHES ONLY.
 5. CENTER HOLE REQUIRED ON DOUBLE THROW SWITCHES ONLY.

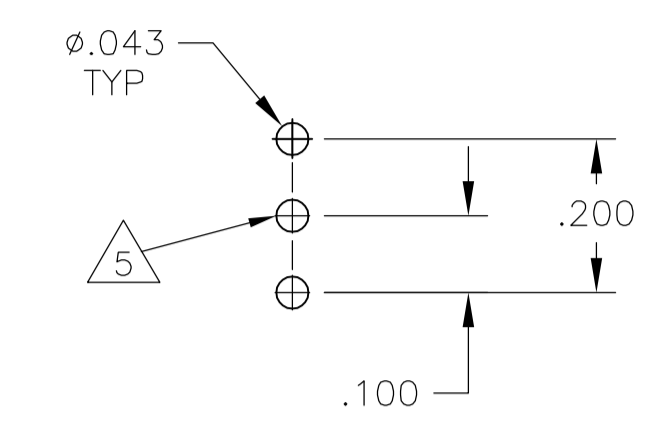
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 APVD M. ZITTO 21JUL05
 NAME M. ZITTO
 PRODUCT SPEC
 APPLICATION SPEC
 SIZE A1 CASE CODE 00779 DRAWING NO 1825097
 WEIGHT
 CUSTOMER DRAWING SCALE 4:1 SHEET 1 OF 6 REV A

tyco Electronics Tyco Electronics Corporation Harrisburg, Pa 17105-3608
 PUSHBUTTON SWITCH, TPB SERIES

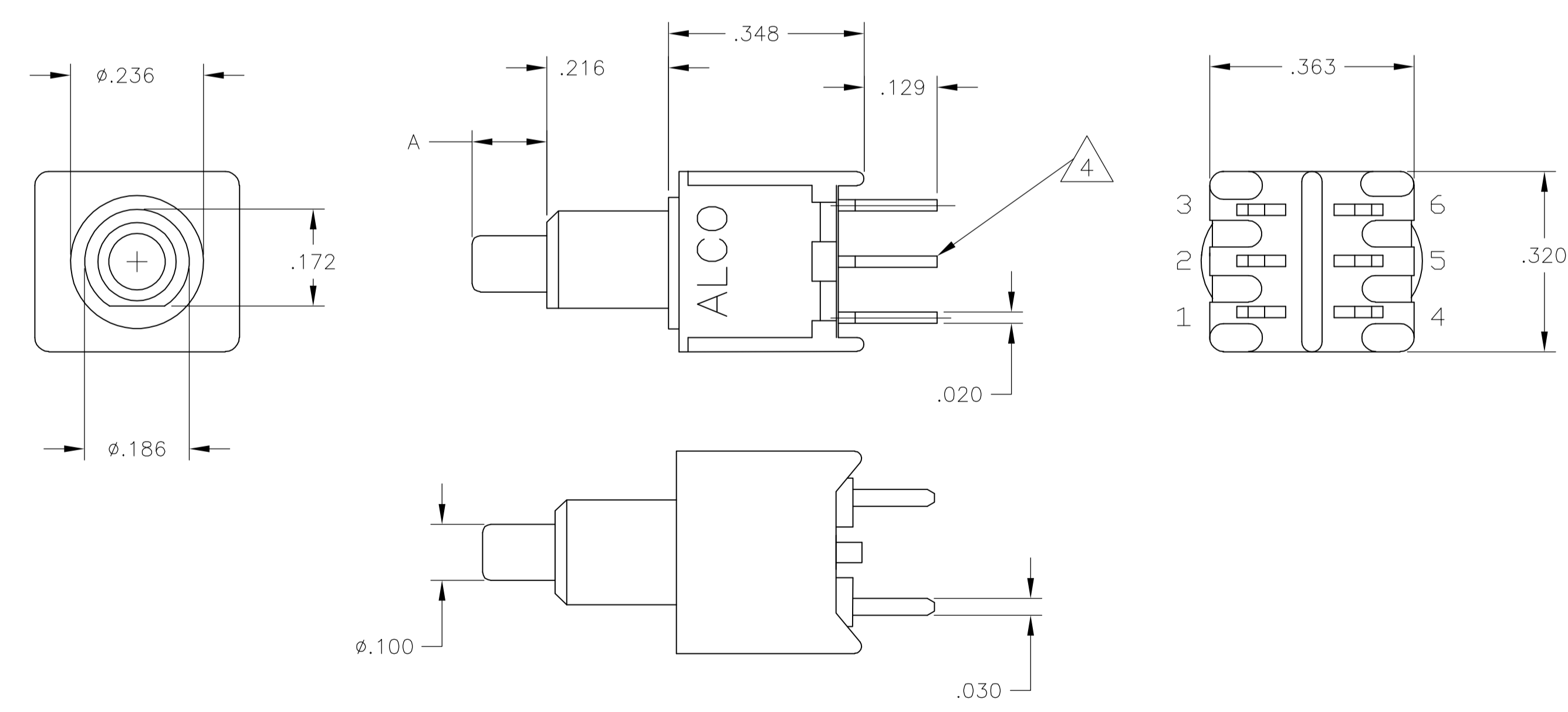
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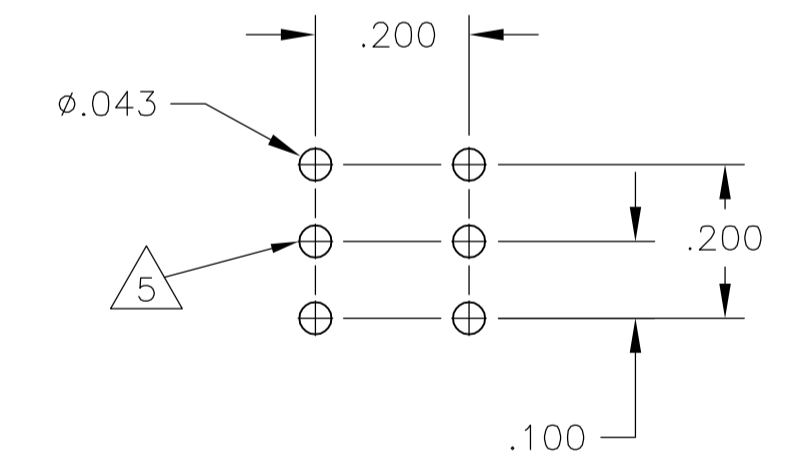
TPB11CGPC & TPB11F6PC



PCB HOLE LAYOUT



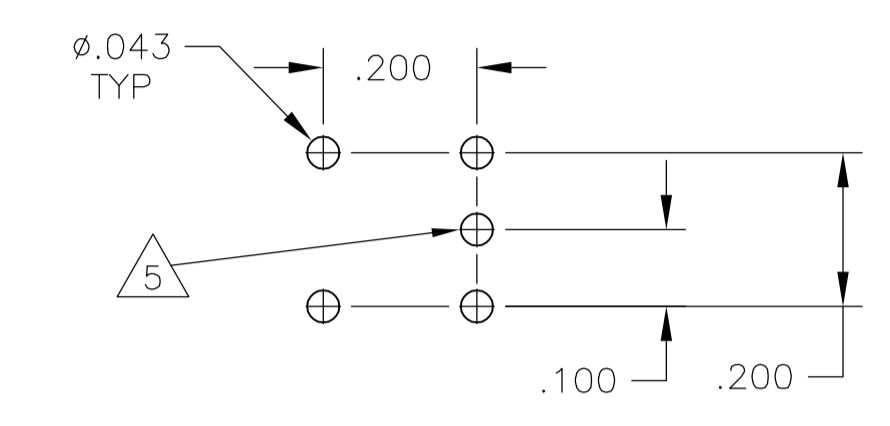
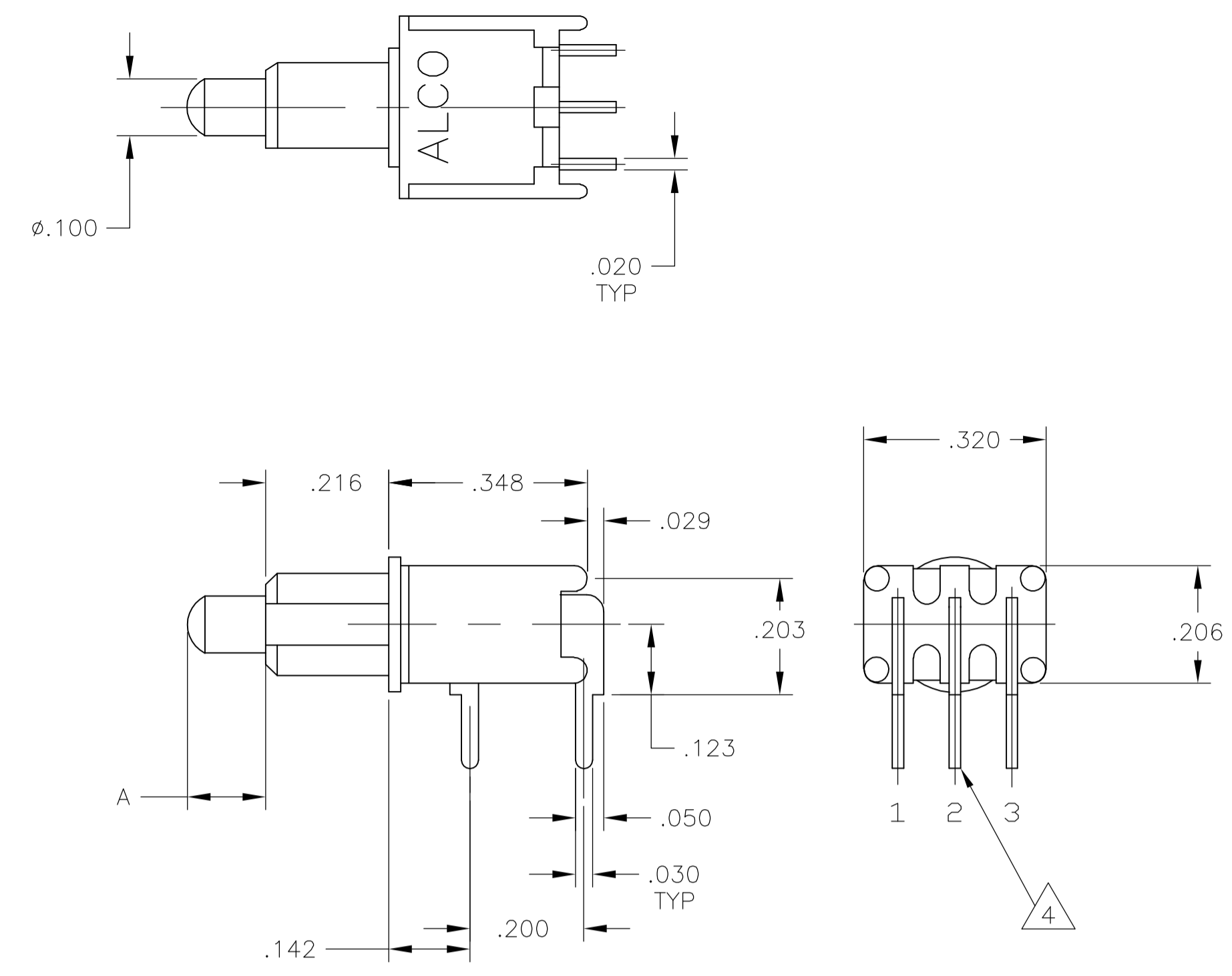
TPB21MGPC & TPB21RGPC



PCB HOLE LAYOUT

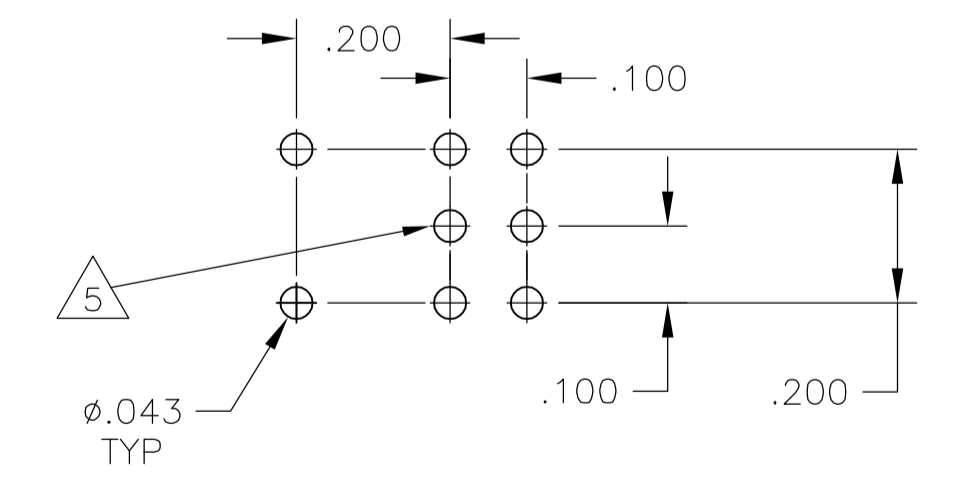
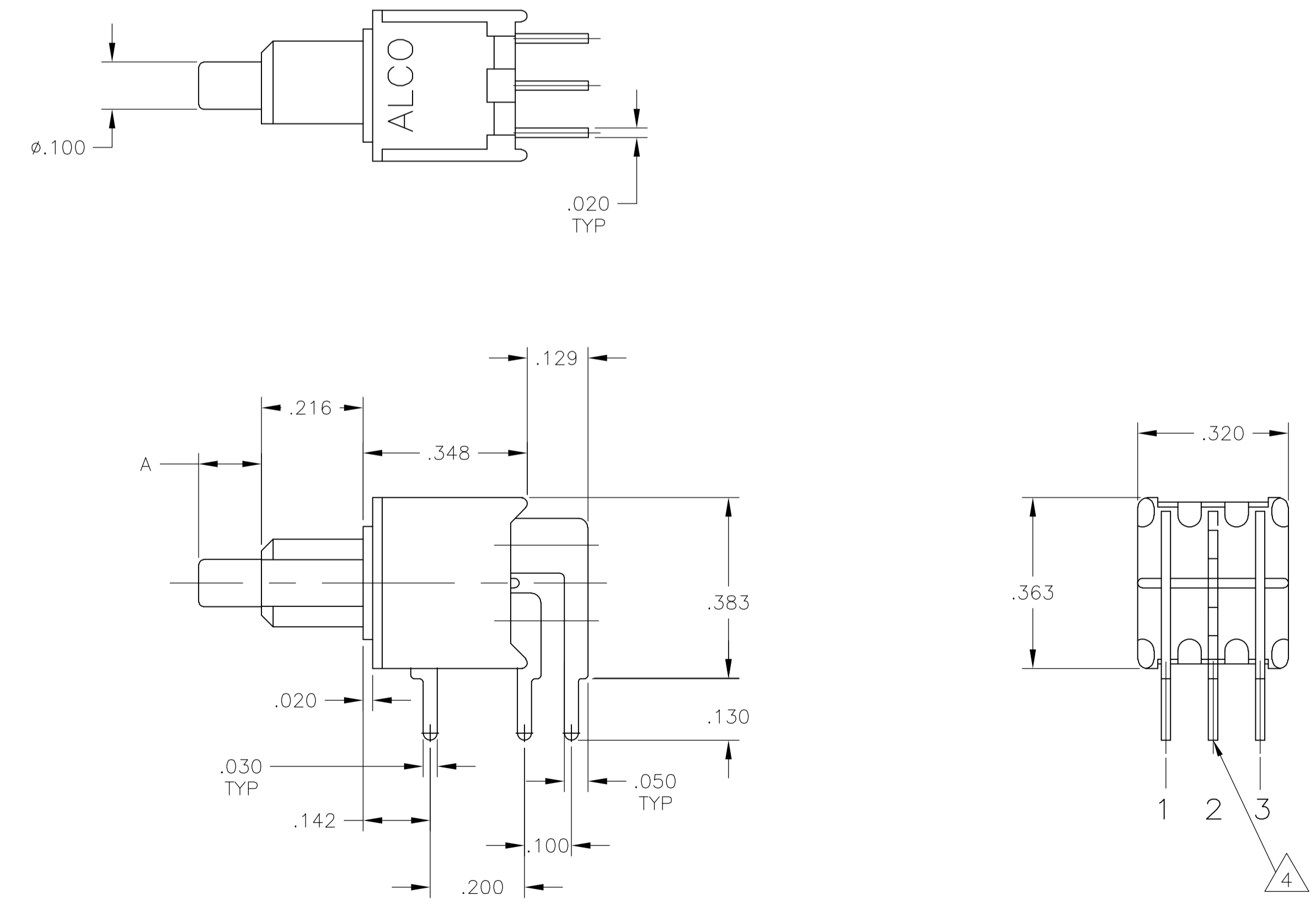
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TOLERANCES UNLESS OTHERWISE SPECIFIED:		APVD M. ZITTO 21JUL05	PRODUCT SPEC		
0 PLC ± -		APPLICATION SPEC			
1 PLC ± -		SIZE			
2 PLC ± -		CAGE CODE			
3 PLC ± .010		DRAWING NO			
4 PLC ± -		RESTRICTED TO			
ANGLES ± -		WEIGHT			
FINISH		A1 00779 C=1825097			
MATERIAL		CUSTOMER DRAWING			
		SCALE 4:1		SHEET 2 OF 6	
				REV A	

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AD		SEE SHEET 1					



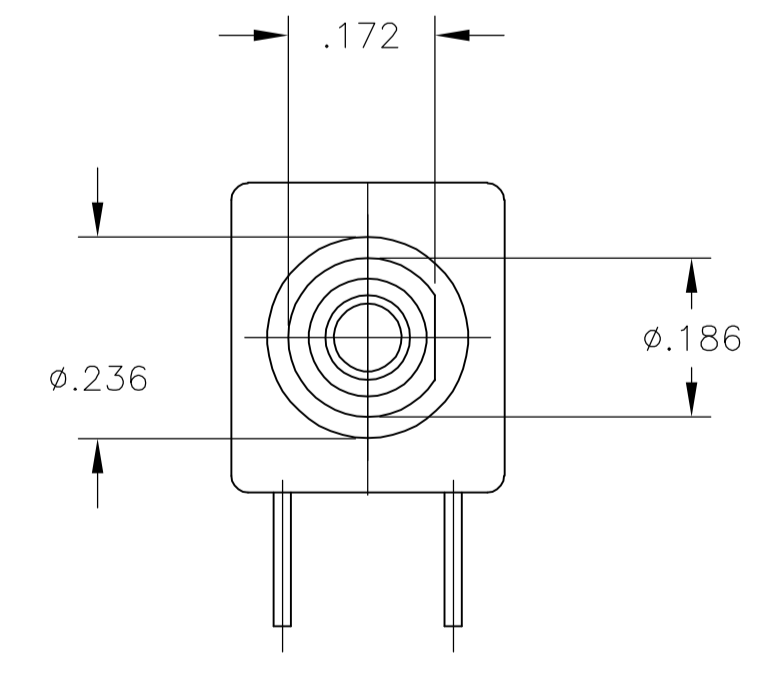
PCB HOLE LAYOUT

TPB11CGRA & TPB11FGRA
 TPBF11CGRA & TPBF11FGRA



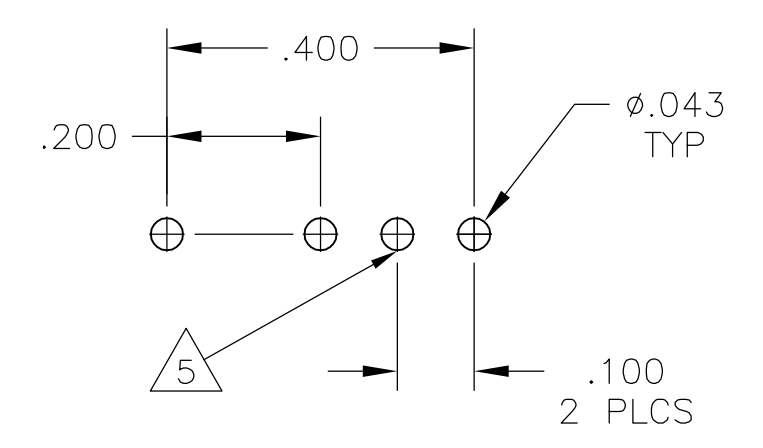
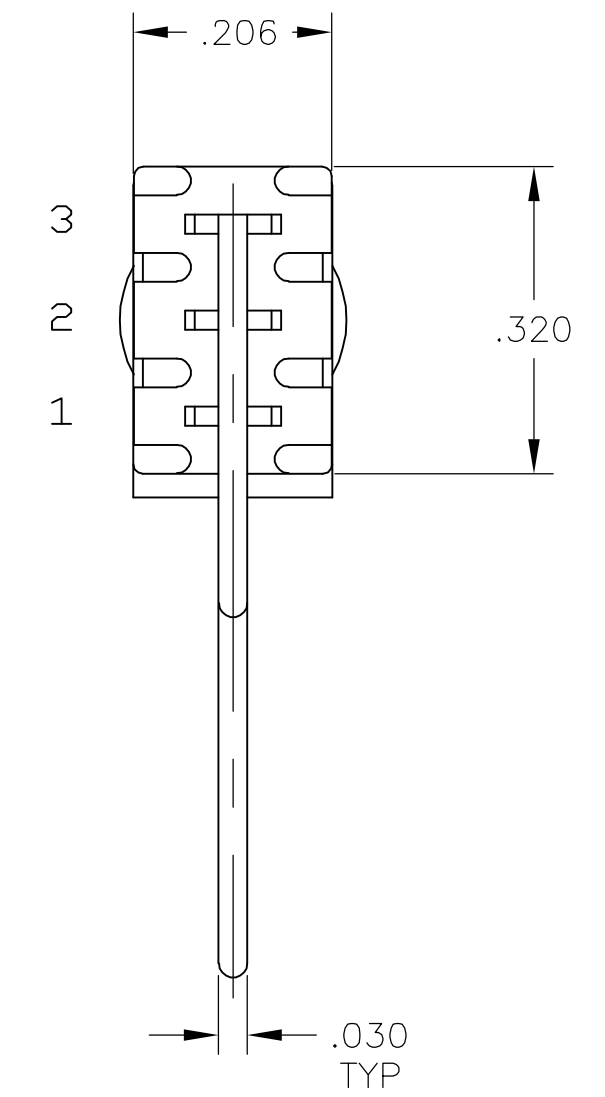
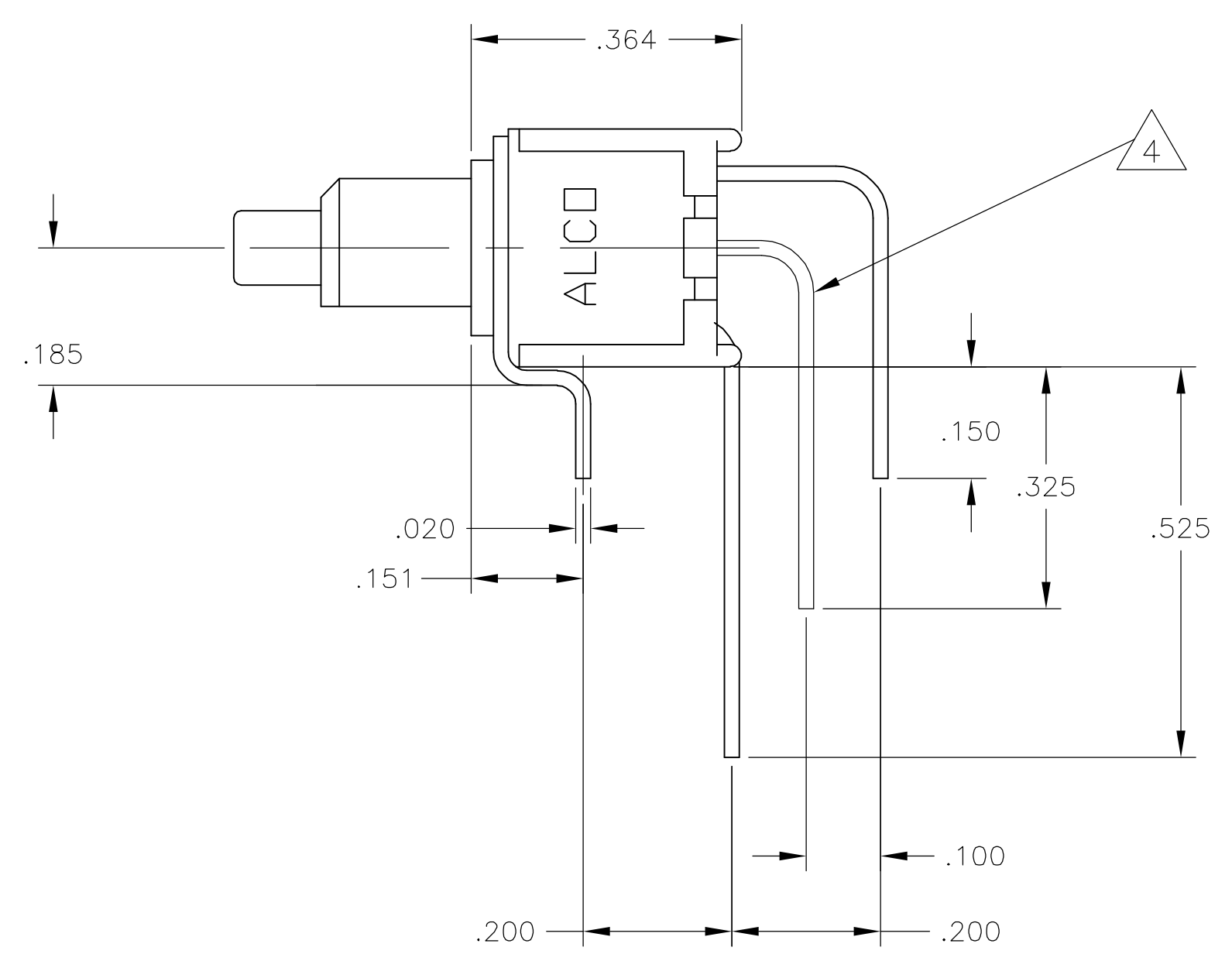
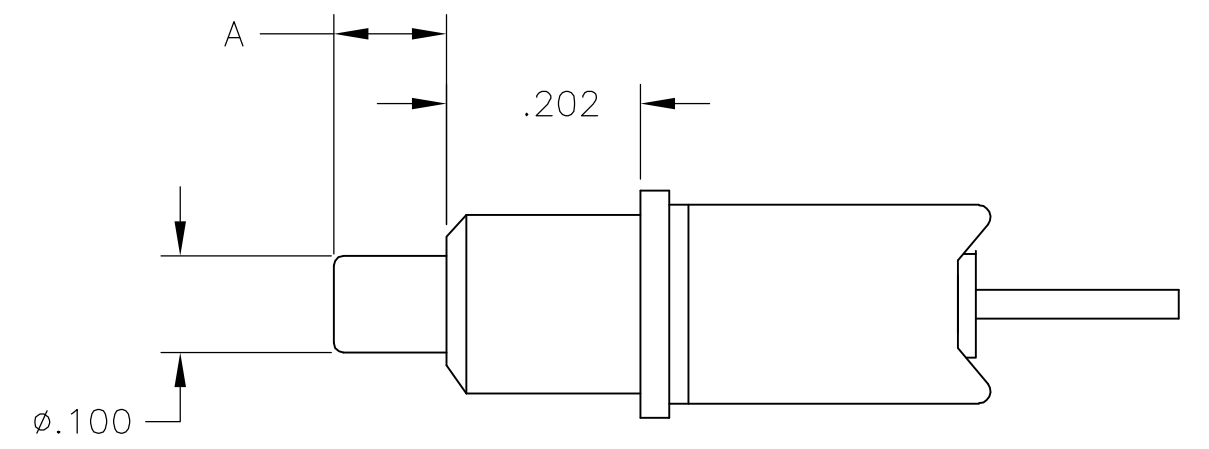
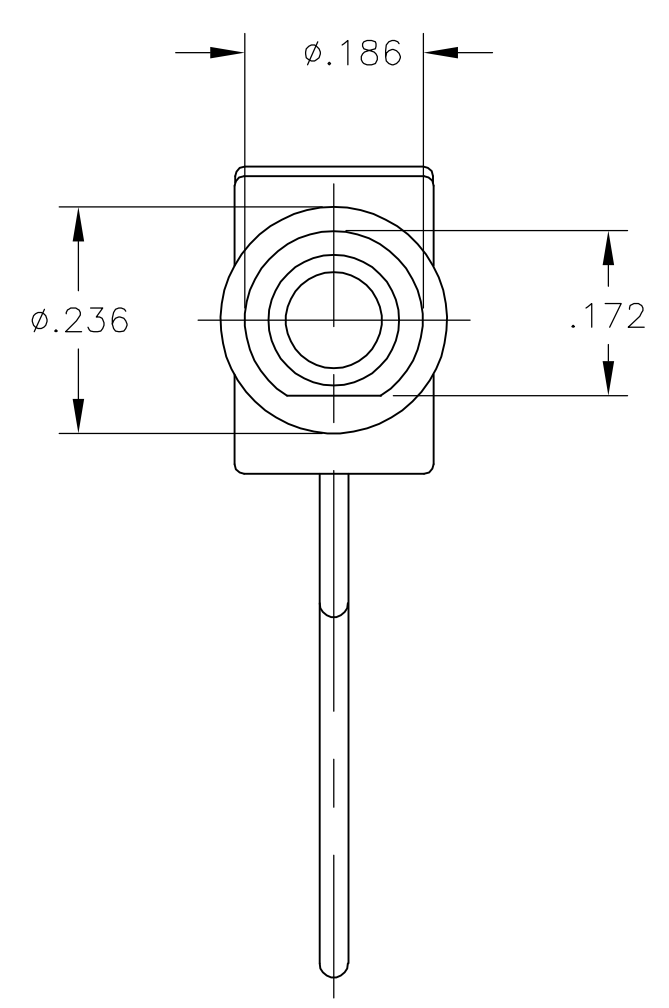
PCB HOLE LAYOUT

TPB21MGRA & TPB21RGRA



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1. PLC	± .005	APPLICATION SPEC		
2. PLC	± .005			
3. PLC	± .010			
4. PLC	± .010			
ANGLES	± .010			
FINISH				
MATERIAL		SIZE	A1	RESTRICTED TO
		CAGE CODE	00779	
		DRAWING NO	1825097	
		WEIGHT		
		CUSTOMER DRAWING		
		SCALE	4:1	
		SHEET	3 OF 6	
		REV	A	

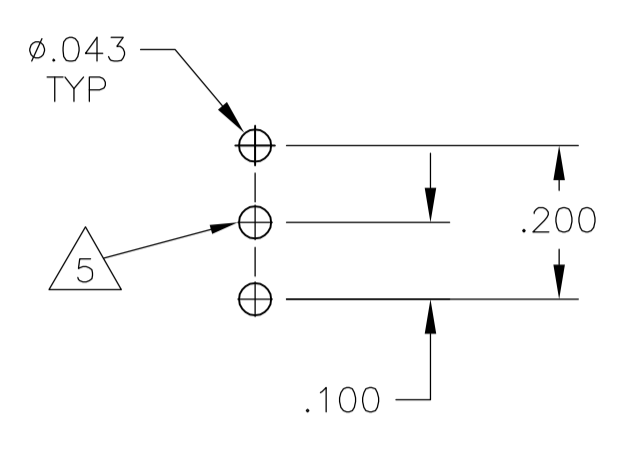
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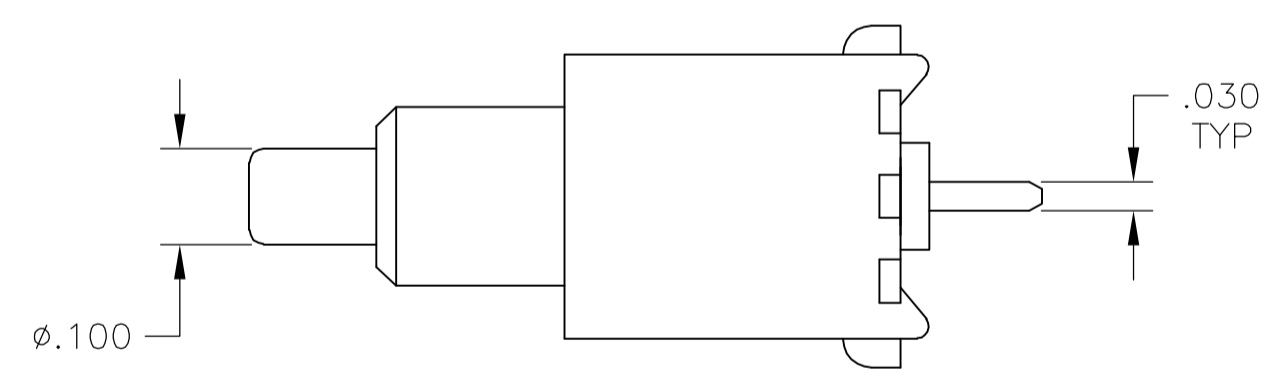
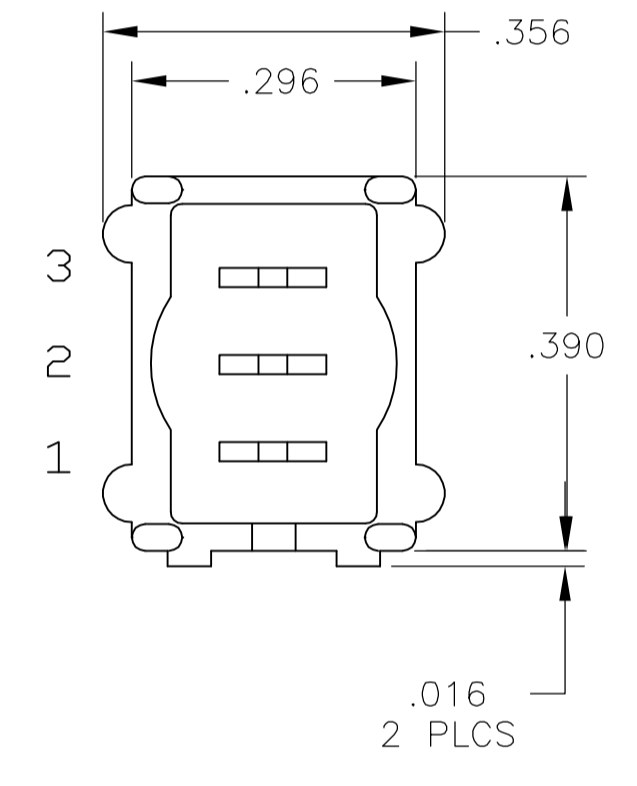
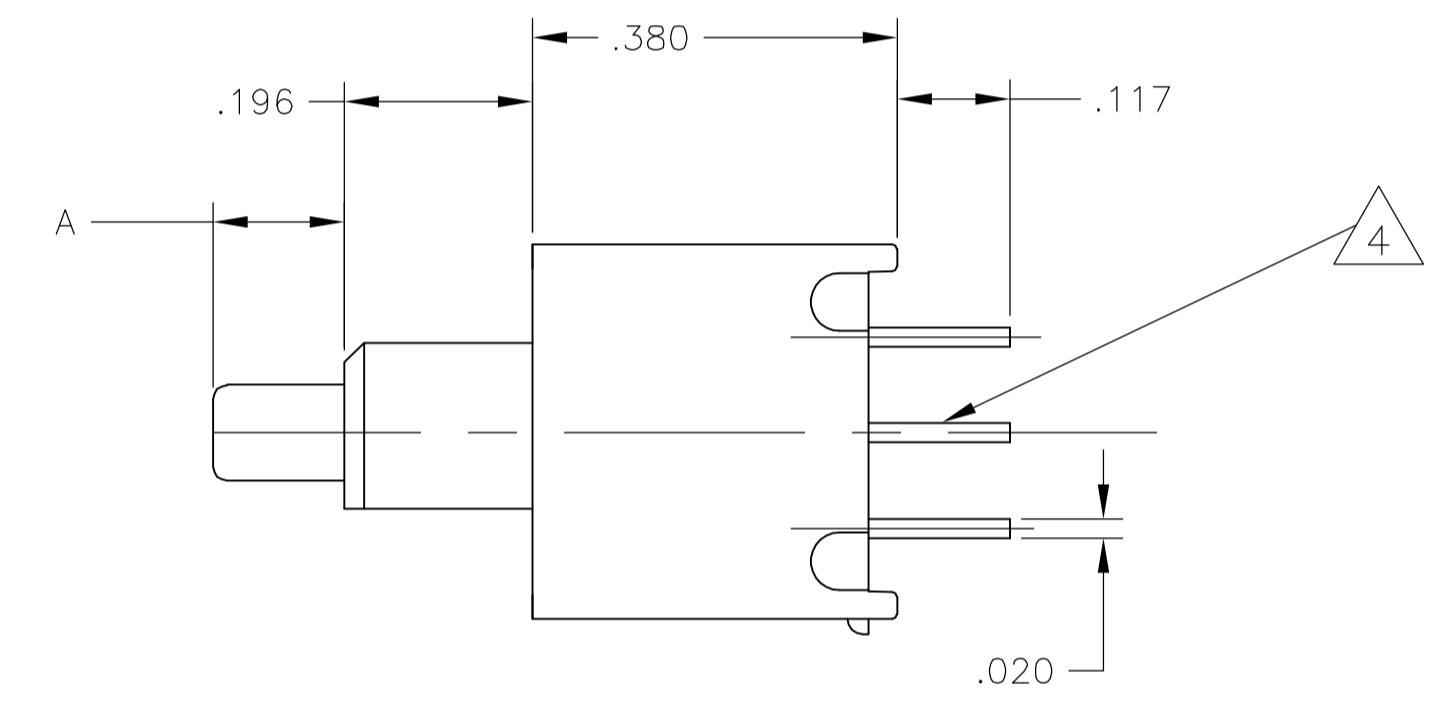
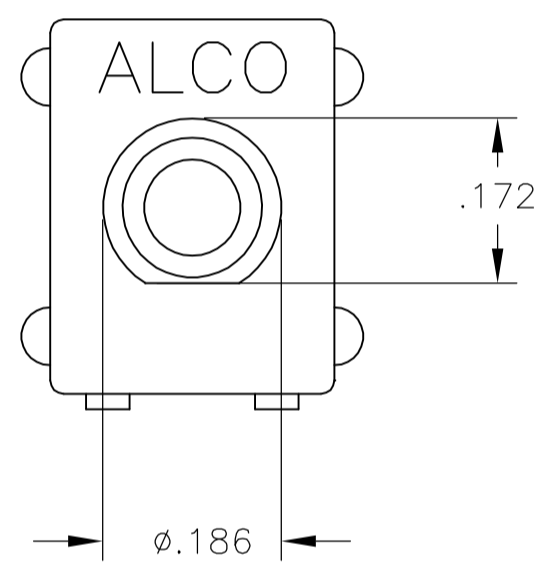
PCB HOLE LAYOUT

TPB11CVRA & TPB11FGVRA

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0 PLG ± -		APPLICATION SPEC	SIZE A1
1 PLG ± -		RESTRICTED TO	CAGE CODE 00779
2 PLG ± -		SCALE 4:1	DRAWING NO. 1825097
3 PLG ± .010		SHEET 4	OF 6
4 PLG ± -		REV A	
ANGLES ± -			
MATERIAL	FINISH	WEIGHT	CUSTOMER DRAWING



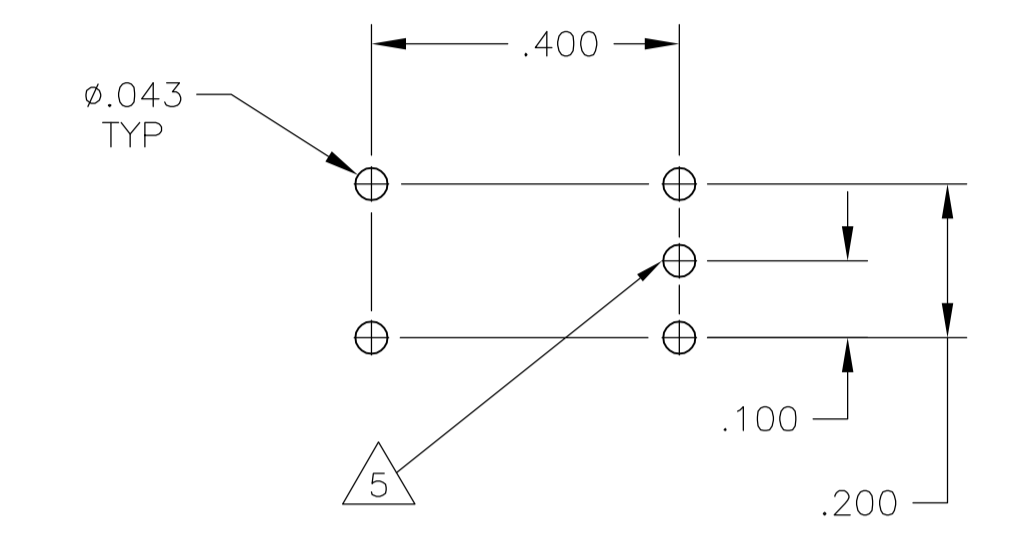
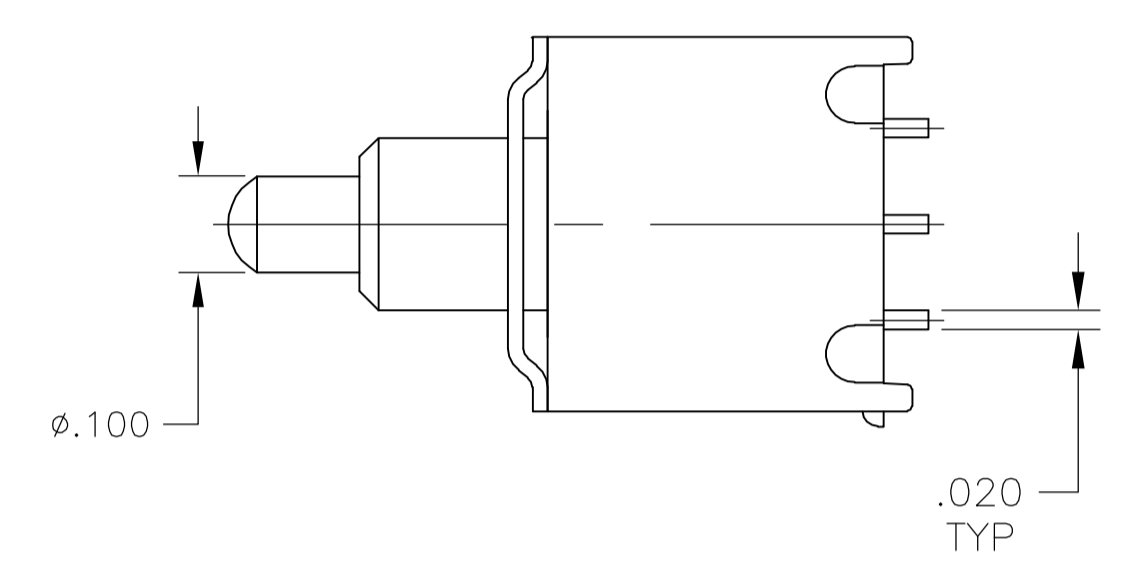
PCB HOLE LAYOUT



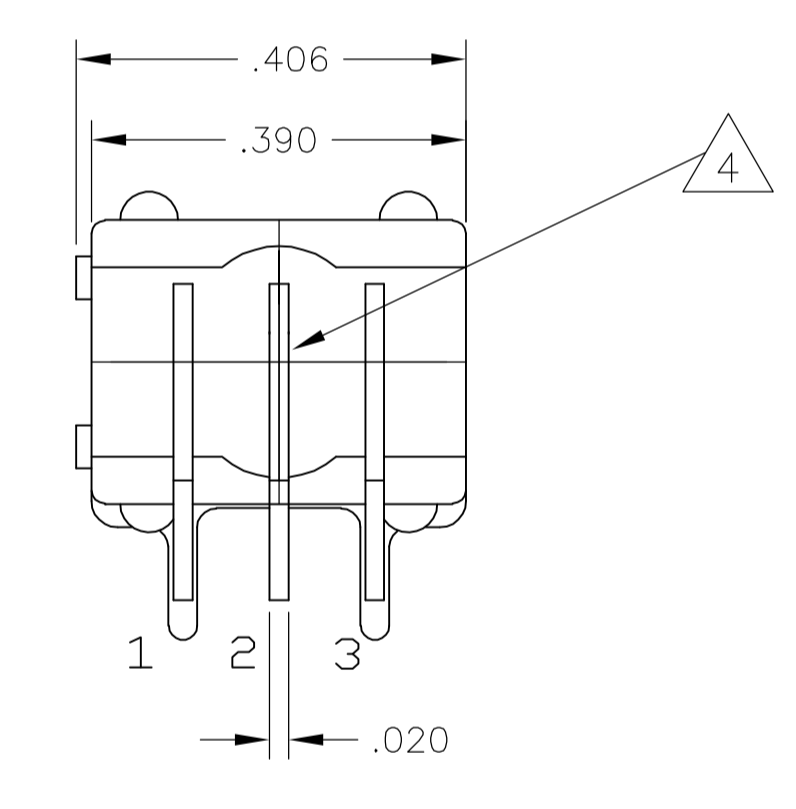
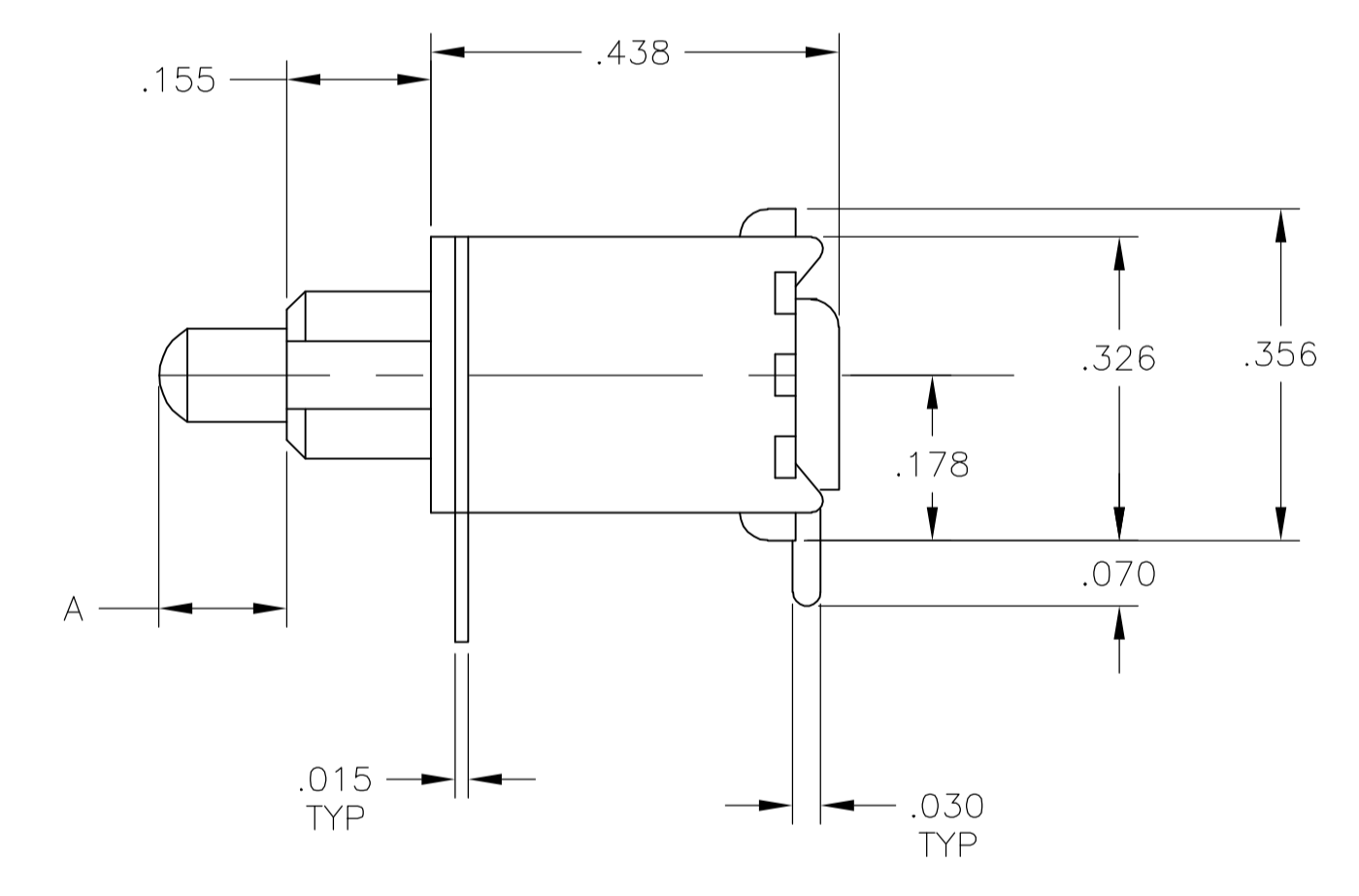
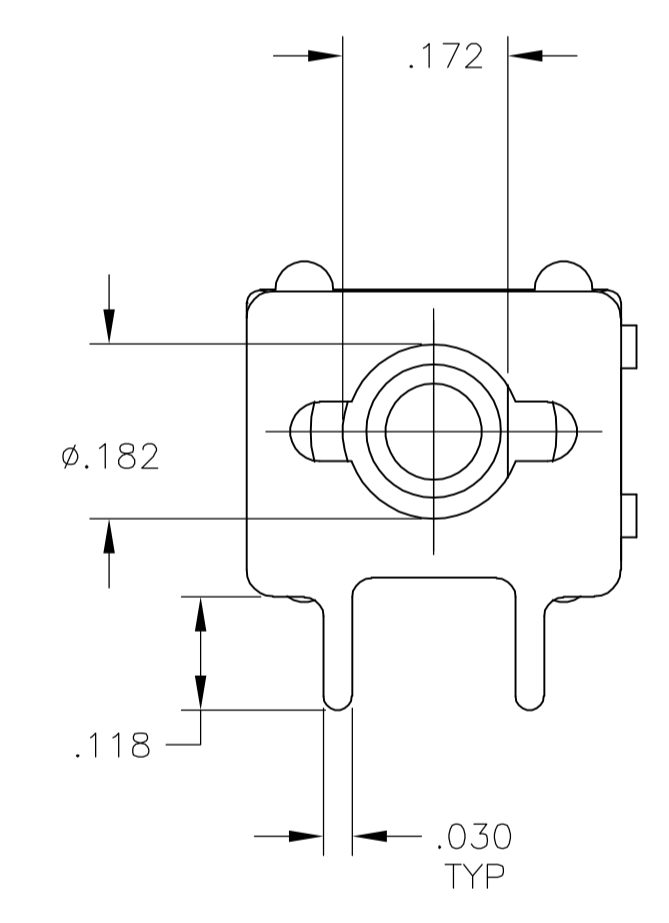
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 TPBF11CGPCES & TPBF11FGPCES

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DIMENSIONS: INCHES		CHK M. ZITTO 21JUL05		NAME PUSHBUTTON SWITCH, TPB SERIES	
TOLERANCES UNLESS OTHERWISE SPECIFIED:		APVD M. ZITTO 21JUL05	PRODUCT SPEC		
0 PLC ± - 1 PLC ± - 2 PLC ± - 3 PLC ± .010 4 PLC ± - ANGLES ± ± -		APPLICATION SPEC		RESTRICTED TO	
MATERIAL		WEIGHT	SIZE A1	CAGE CODE 00779	DRAWING NO 1825097
FINISH		CUSTOMER DRAWING		SCALE 4:1	SHEET 5 OF 6 REV A

LOC		DIST		REVISIONS			
AD		DATE	DESCRIPTION	DATE	BY	APP'D	
			SEE SHEET 1				



PCB HOLE LAYOUT



TPB11CGRAES & TPB11FGRAES
 TPBF11CGRAES & TPBF11FGRAES

THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN M. BINNER 20JUL05		Tyco Electronics Corporation Harrisburg, Pa 17105-3608	
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TOLERANCES UNLESS OTHERWISE SPECIFIED:		APP'D M. ZITTO 21JUL05	PRODUCT SPEC		
0. PLC ± - 1. PLC ± - 2. PLC ± - 3. PLC ± .010 4. PLC ± - ANGLES ± -		APPLICATION SPEC		RESTRICTED TO	
MATERIAL		WEIGHT	SIZE A1	CAGE CODE 00779	DRAWING NO 1825097
CUSTOMER DRAWING			SCALE 4:1	SHEET 6	OF 6 REV A