

# TS2 Series Specifications

MECHANICAL (X & Y AXES)	
ANGLE OF MOVEMENT	30° (15° EACH DIRECTION)
EXPECTED CYCLE LIFE	2.5 MILLION
CENTERING	SPRING RETURN
MAX. VERTICAL LOAD	50lbF
MAX. HORIZONTAL LOAD	15lbF*

\* Measured 0.50" Above Panel Surface

ELECTRICAL	
SENSOR TYPE	HALL EFFECT
RESOLUTION	12 BIT
SUPPLY VOLTAGE	5VDC ± 0.01VDC
OUTPUT VOLTAGE	SEE OPTIONS
CENTER VOLTAGE	± 100mV
OVERVOLTAGE MAX.	20VDC
REVERSE POLARITY MAX.	-10VDC

ENVIRONMENTAL	
OPERATING TEMPERATURE	-40°F TO 185°F
STORAGE TEMPERATURE	-40°F TO 185°F
IP SEALING ABOVE FLANGE	IP67
EMC IMMUNITY LEVEL	EN61000-4-3 *Compliance to 30A/m
EMC EMISSIONS LEVEL	EN61000-6-3
ESD IMMUNITY LEVEL	EN61000-4-2 *Compliance to ±15kV/±8kV
VIBRATION TESTING	Per SAE J1455 Section 4.9 & MIL-STD810G 514.6
MECHANICAL SHOCK	Per SAE J1455 Section 4.10 & MIL-STD-202G

JST CONNECTOR		
PIN #	WIRE COLOR	DESCRIPTION
1	RED	POWER (+5V)
2	YELLOW	Y AXIS SENSOR
3	BLUE	X AXIS SENSOR
4	BLACK	GROUND

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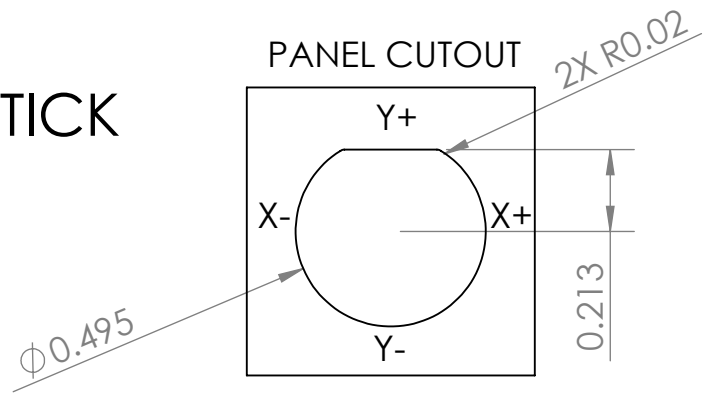
MATERIALS		
HOUSING	MINERAL & GLASS FILLED NYLON	
BOOT/ACTUATOR	SILICONE	SILICONE/NYLON

IP RATING: IP67 (ABOVE PANEL, ALL CONFIGURATIONS)

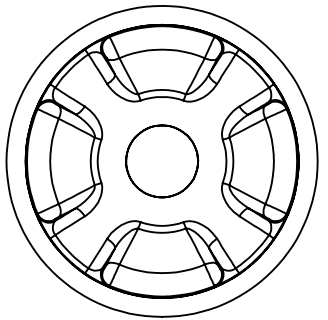
\*Extended Testing Levels

\*\*Note: More Actuator Options Available, See Configuration Guide

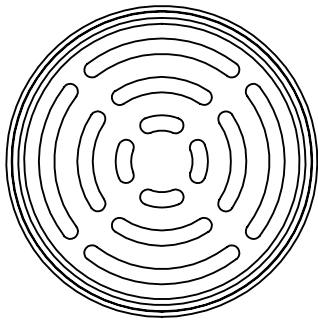
TS2 SERIES  
MICRO 2 AXIS THUMBSTICK  
SCALE 2:1



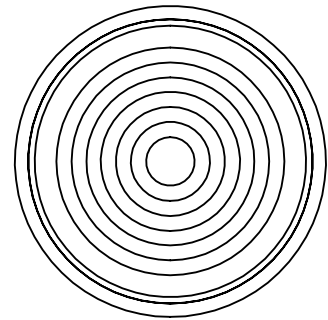
CASTLE,  
ELASTOMER



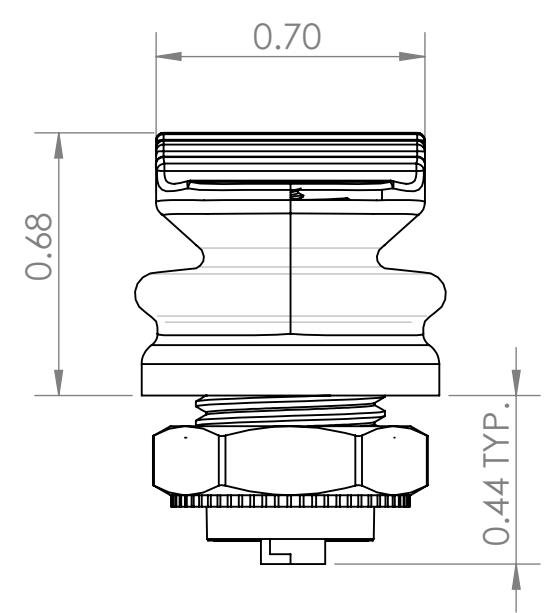
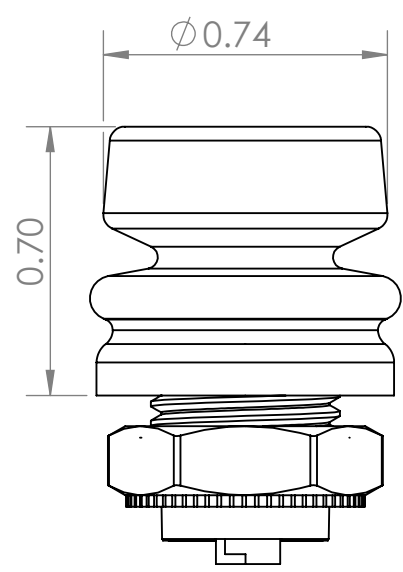
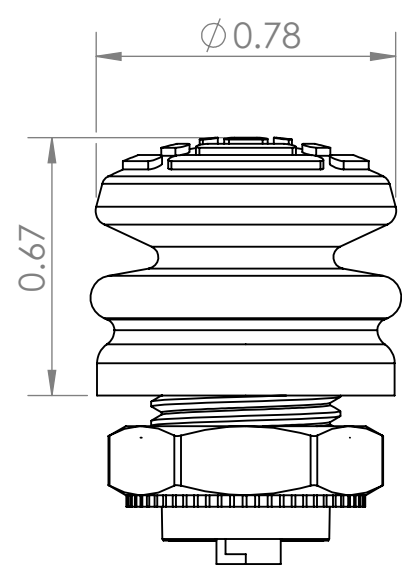
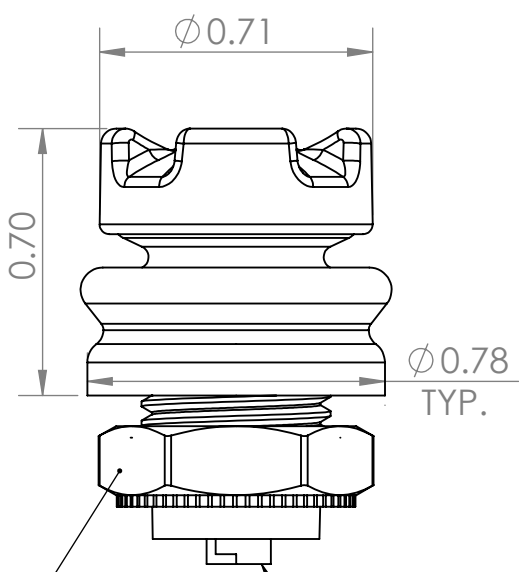
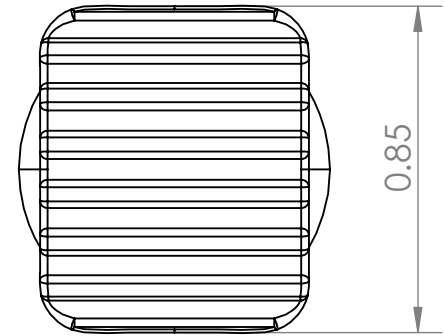
ROUND, CONVEX,  
ELASTOMER



ROUND, CONCAVE,  
ELASTOMER



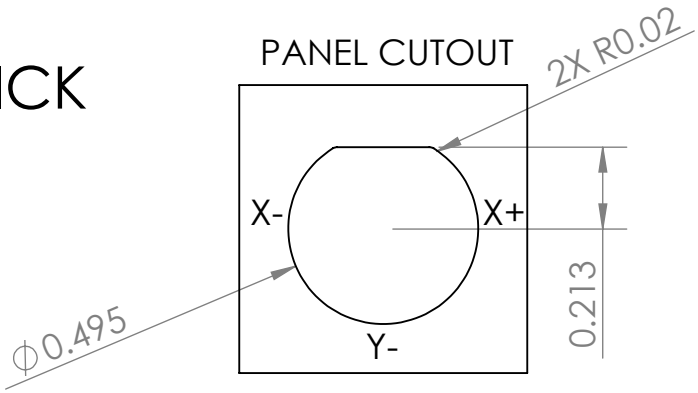
SINGLE AXIS, Y,  
ELASTOMER



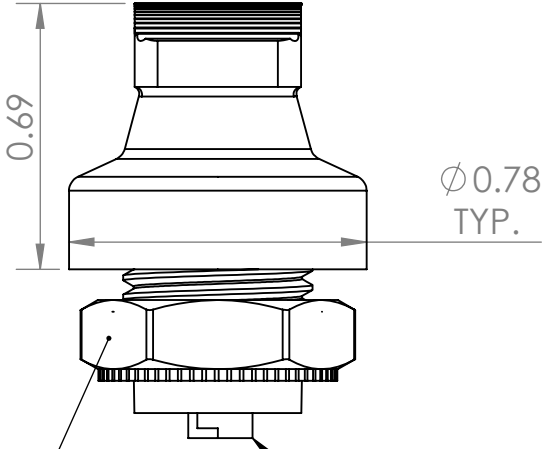
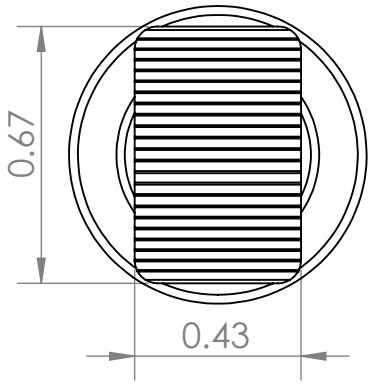
1/2" -20 NUT

4 PIN LATCH LOCK CONNECTOR  
(+5V, GND, X OUTPUT, Y OUTPUT)

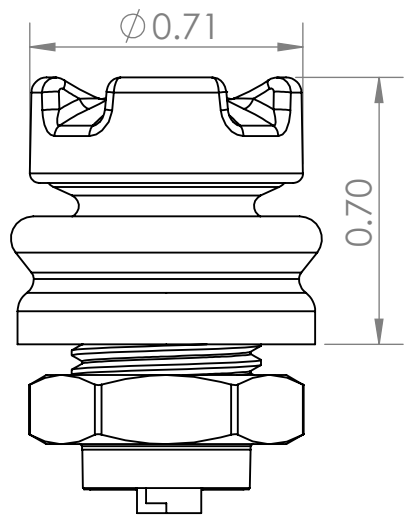
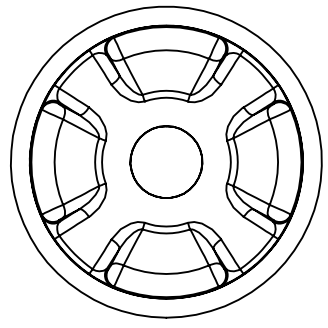
TS2 SERIES  
 MICRO 2 AXIS THUMBSTICK  
 SCALE 2:1



NARROW, CONVEX,  
 ELASTOMER



CASTLE,  
 HARD PLASTIC



1/2" -20 NUT      4 PIN LATCH LOCK CONNECTOR  
 (+5V, GND, X OUTPUT, Y OUTPUT)

TS2

SERIES

[Placeholder]

[Placeholder]

[Placeholder]

[Placeholder]

[Placeholder]

[Placeholder]

**LIMITER OPTION:**

S SQUARE ( □ )  
 R ROUND ( O )  
 Y Y LIMITER ( I )  
 G GUIDED FEEL ( □ /+ )

**OUTPUT OPTION:**

1 0V-5V  
 2 0.5V to 4.5V  
 3 0.25V to 4.75V  
 4 1V to 4V

**ACTUATOR COLOR:**

BK BLACK  
 GY GREY

**ACTUATOR OPTION:**

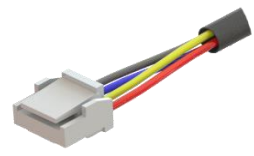
1 CASTLE CAP, ELASTOMER  
 2 ROUND, CONVEX, ELASTOMER  
 3 SINGLE AXIS Y, ELASTOMER  
 4 ROUND, CONCAVE, ELASTOMER  
 5 CONVEX, NARROW, ELASTOMER  
 H6 HARD PLASTIC CASTLE

**MOUNTING OPTION:**

T 1/2"-20 THREADED HOUSING

**TERMINATION:**

C .049" (1.25mm) JST Connector\*  
 W 24AWG Pigtail, 14" Length  
 Z 28AWG Pigtail, 14" Length



\*Note: Connectorized Version (Termination Option "C") Supplied With JST Connector & 14" (28AWG) Mating Wire Harness