

PORT PREPARATION:  
 DRILL ".1" (Ø.272) THRU  
 TAP 5/16-24 UNF-2B X  
 .360 MIN. DEPTH PERF. THREADS

- 3 WRENCH FLATS: 11/16 (.687) ACROSS FLATS X .31 HIGH.
- 2 IT IS IMPORTANT THAT BOTTOM SURFACE OF SENSOR BE IN INTIMATE CONTACT. INSPECT FOR BURRS, ETC.
- 1 PREPARE FLAT SURFACE OVER Ø.62 MINIMUM AREA BY GRINDING, SPOTFACING, LAPPING ETC. THIS AREA MUST BE FLAT WITHIN .001 TIR, TYP BOTH MODELS.

REDRAWN ON CAD 10/16/98

EXCEPT AS OTHERWISE NOTED

ALL DIMENSIONS IN INCHES  
 TOLERANCE: .XXX = ± .XX = ±

SURFACE FINISH  
 EXCEPT AS NOTED ✓

BREAK EDGES TO DEBURR  
 RADIUS OR CHAMFER

THESE DIAS ⊕ TO T.I.R.

FILLETS - MAX RAD.

		CHATSWORTH, CA.		
				SCALE 2X
DATE 1/30/82	PART NO. -			
DRAWN N.C.	CHECKED N.C.	MAT'L -		
APPROVED [Signature]	11-29-05	NEXT ASSEMBLY		USED ON 1050V
TITLE OUTLINE/INSTALLATION DRAWING, MODEL 1050V FORCE SENSOR				DWG NO. 127-1050V
				SHEET 1 OF 1

<b>Model Number</b> 1050V5	<b>PERFORMANCE SPECIFICATION</b>	<b>Doc No</b> PS1050V5
	<b>Force Sensors, IEPE</b>	REV B, ECN 13216, 01/17/17



- **DYNAMIC FORCE SENSOR**
- **VOLTAGE MODE**
- **EXCELLENT LINEARITY**

**PHYSICAL**

Weight, Max.	Type
Connector	Thread
Housing	Material
Sensing Element	Isolation
	Material
	Mode

ENGLISH		SI	
1.12	oz	32	grams
Coaxial		Coaxial	
10-32		10-32	
Stainless steel		Stainless steel	
Case grounded		Case grounded	
Quartz		Quartz	
Compression		Compression	

**PERFORMANCE**

	ENGLISH	SI
Sensitivity, +/-10%	5 mV/Lb	1.12 mV/N
Compression Range	1000 Lbs.Force	4448 N
Maximum Compression, +/-5%	15000 Lbs.Force	66720 N
Tension Range	500 Lbs.Force	2224 N
Maximum Tension [1], +/-5%	1000 Lbs.Force	4448 N
Resolution	.014 Lb. RMS	0.06227 N RMS
Linearity [2]	± 1 % Full Scale	± 1 % Full Scale
Mounted Resonance (Unloaded)	≥ 75 kHz	≥ 75 kHz
Stiffness	11.4 Lb/μin	1.97 kN/μm

**ENVIRONMENTAL**

	ENGLISH	SI
Coefficient Of Thermal Sensitivity	0.03 %/°F	0.05 %/°C
Operating Temperature	-100 to +250 °F	-73 to +121 °C
Maximum Vibration	5000 g's,Peak	49000 m/s^2 Peak
Maximum Shock	10,000 g's,Peak	98,000 m/s^2 Peak
Environmental Seal	Epoxy	Epoxy

**ELECTRICAL**

	ENGLISH	SI
Supply Current [3]	2 to 20 mA	2 to 20 mA
Compliance Voltage	18 to 30 VDC	18 to 30 VDC
Discharge Time Constant, Min.	2000 Seconds	2000 Seconds
F.S. Output Voltage	5 Volts	5 Volts
Output Impedance	100 Ω	100 Ω
Bias Voltage	7.5 to 9.5 VDC	7.5 to 9.5 VDC

**This family also includes:**

Model	Sensitivity (mV/Lb)	Range (LbsF) Compressive, Tensile	Max Force (LbsF) Compressive, Tensile	Discharge Time Constant (Sec)
1050V1	500	10, 10	200, 200	50
1050V2	100	50, 50	1000, 1000	100
1050V3	50	100, 100	2000, 1000	500
1050V4	10	500, 500	10000, 1000	2000
1050V6	1	5000, 500	15000, 1000	2000

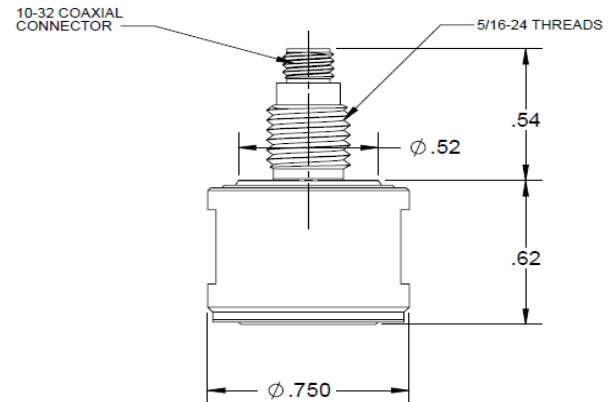
Refer to the performance specifications of the products in this family for detailed description

**Supplied Accessories:**

- 1) Accredited Calibration Certificate (ISO 17025)
- 2) MOD 6210 STEEL IMPACT CAP
- 3) MOD 6204 1/4-28 MOUNTING STUD

**Notes:**

- [1] Absolute maximum tension. Do not exceed in any case!
- [2] Percent of full scale or any lesser range, Zero based best-fit straight line method.
- [3] Power these instruments only with constant current type power units. Do not connect to a source of voltage without current limiting. This will destroy the integral IC amplifier.



Units on the line drawing are in inches, units in brackets are in millimeters. Refer to 127-1050V for more information.



21592 Marilla Street, Chatsworth, California 91311 Phone: 818.700.7818 Fax: 818.700.7880 www.dytran.com  
For permission to reprint this content, please contact info@dytran.com