

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]		NEXT ASSEMBLY		USED ON 1050V
TITLE				DWG NO.
OUTLINE/INSTALLATION DRAWING, MODEL 1050V FORCE SENSOR				127-1050V
				SHEET 1 OF 1

Model Number 1050V3	PERFORMANCE SPECIFICATION	Doc No PS1050V3
	Force Sensors, IEPE	REV B, ECN 13216, 01/17/17



- DYNAMIC FORCE SENSOR
- VOLTAGE MODE
- EXCELLENT LINEARITY

PHYSICAL

Weight, Max.
Connector
Housing
Sensing Element

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

Sensitivity, +/-10%
Compression Range
Maximum Compression, +/-5%
Tension Range
Maximum Tension [1], +/-5%
Resolution
Linearity [2]
Mounted Resonance (Unloaded)
Stiffness

50	mV/Lb	11.2	mV/N
100	Lbs.Force	445	N
2000	Lbs.Force	8896	N
100	Lbs.Force	445	N
1000	Lbs.Force	4448	N
.0014	Lb. RMS	0.00623	N RMS
± 1	% Full Scale	± 1	% Full Scale
≥ 75	kHz	≥ 75	kHz
11.4	Lb/μin	1.97	kN/μm

ENVIRONMENTAL

Coefficient Of Thermal Sensitivity
Operating Temperature
Maximum Vibration
Maximum Shock
Environmental Seal

0.03	%/°F	0.05	%/°C
-100 to +250	°F	-73 to +121	°C
5000	g's,Peak	49000	m/s^2 Peak
10,000	g's,Peak	98,000	m/s^2 Peak
Epoxy		Epoxy	

ELECTRICAL

Supply Current [3]
Compliance Voltage
Discharge Time Constant, Min.
F.S. Output Voltage
Output Impedance
Bias Voltage

2 to 20	mA	2 to 20	mA
18 to 30	VDC	18 to 30	VDC
500	Seconds	500	Seconds
5	Volts	5	Volts
100	Ω	100	Ω
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
1050V4	10	500, 500	10000, 1000	2000
1050V5	5	1000, 500	15000, 1000	2000
1050V6	1	5000, 500	15000, 1000	2000

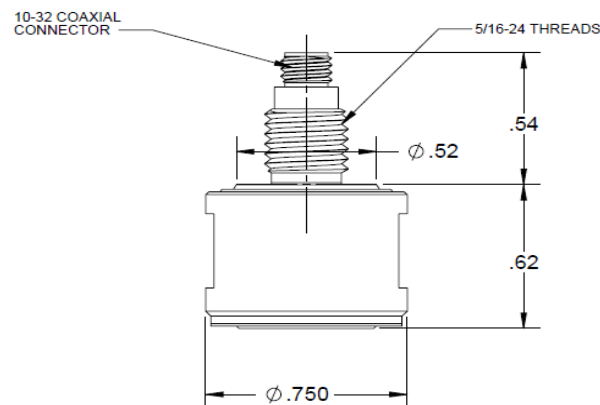
Refer to the performance specifications of the products in this family for detailed description

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.



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