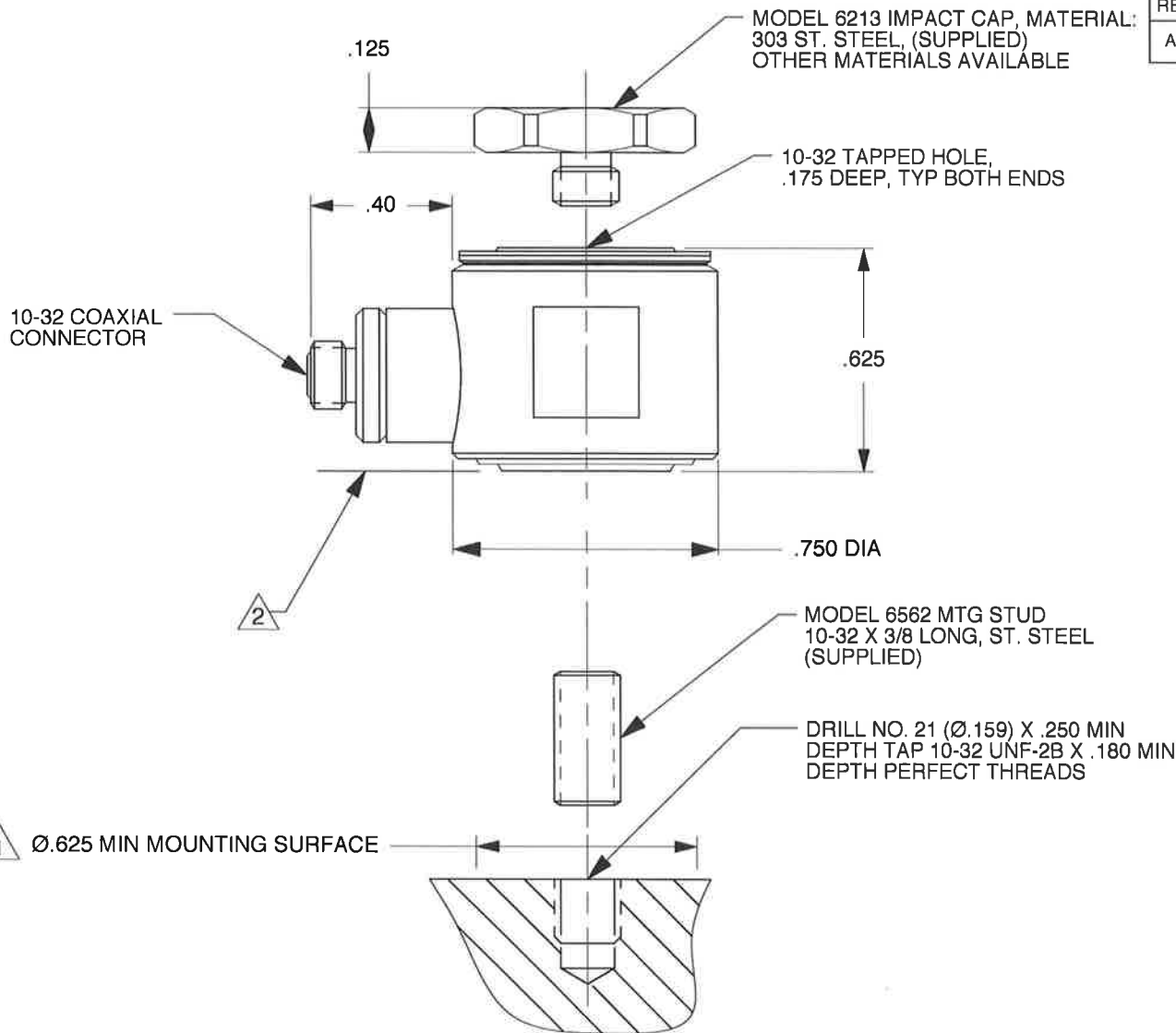


REV	ECN	DESCRIPTION	BY/DATE	CHK	APPR
A	11429	ADDED DIMENSION DIA .750	LA 11/05/14	JK	WJ



- 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.625 MINIMUM AREA BY GRINDING, SPOTFACING, LAPPING ETC. THIS AREA MUST BE FLAT WITH .001 TIR, TYP BOTH MODELS.

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.

DYTRAN
INSTRUMENTS, INC.

MASTER

ONLY IF IN RED

CHATSWORTH, CA.

SCALE	2X	REV	-	DATE	-	ECN	SEE REV BLK
DATE	1/15/01	PART NO.					
DRAWN	N.C.	CHECKED	N.C.	MAT'L			
APPROVED	WJ 11/19/14		NEXT ASSEMBLY	USED ON		SERIES 1053V	
TITLE						DWG NO.	
OUTLINE/INSTALLATION DRAWING, MODEL SERIES 1053V						127-1053V	
SHEET 1 OF 1							

Model Number 1053V1	PERFORMANCE SPECIFICATION					DOC NO PS1053V1
	DYNAMIC FORCE SENSOR					REV A, ECN 11034, 06/25/14



- COMPRESSIVE & TENSILE LOADINGS
- EXCELLENT LINEARITY

PHYSICAL

Weight, Max.
Connector
Material
Sensing Element

ENGLISH		SI	
1.0	oz	28	grams
10-32		10-32	
Stainless Steel		Stainless Steel	
Quartz		Quartz	
Compression		Compression	

PERFORMANCE

Sensitivity, ± 10 %
Compression Range
Maximum Compression
Tension Range
Maximum Tension [1]
Resolution
Linearity [2]
Resonant Frequency, Unloaded
Stiffness, Force Sensor

500	mV/lbf	112.4	mV/N
10	lbf	44.5	N
200	lbf	890	N
10	lbf	44.5	N
200	lbf	890	N
0.00014	lbf, rms	0.00062	N
±1	% Full Scale	±1	% Full Scale
75	kHz	75	kHz
11.4	lbf/μin	2.0	kN/μm

ENVIRONMENTAL

Maximum Shock, Unloaded
Maximum Vibration, Unloaded
Temperature Range
Thermal Coefficient
Seal

10,000	g pk	98100	m/s ²
5,000	g pk	49050	m/s ²
-100 to +250	°F	-73 to +121	°C
0.03	%/°F	0.05	%/°C
Epoxy		Epoxy	

ELECTRICAL

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

±5	V	±5	V
<100	Ω	<100	Ω
7.5 to 9.5	VDC	7.5 to 9.5	VDC
18 to 30	VDC	18 to 30	VDC
2 to 20	mA	2 to 20	mA
50	Sec	50	Sec

This family also includes:

Model	Sens. (mV/lbf)	Compression Range (lbf)	Max. Compression (lbf)	Tension Range (lbf)	Max. Tension (lbf)	T.C. (sec)	Resolution (lbf, RMS)
1053V2	100	50	1000	50	200	100	0.0007
1053V3	50	100	2000	100	200	500	0.0014
1053V4	10	500	10000	200	200	2000	0.007
1053V5	5	1,000	15000	200	200	2000	0.014
1053V6	1	5,000	15000	200	200	2000	0.07

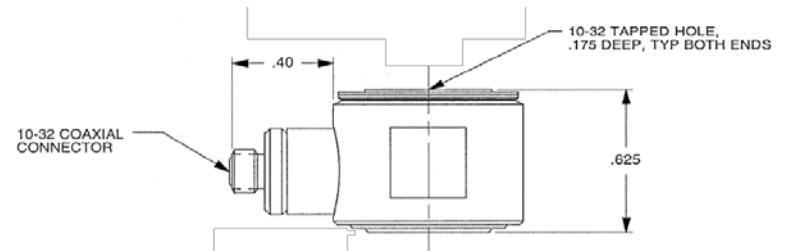
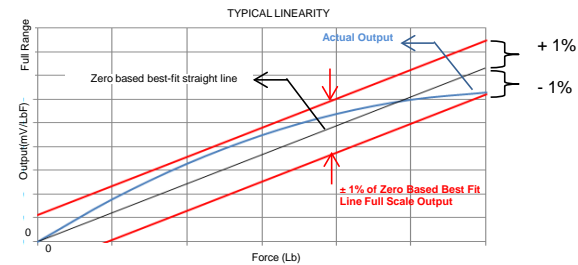
Refer to the performance specifications of the products in this family for detailed description.

Supplied Accessories:

- 1) Accredited calibration certificate (ISO 17025)
- 2) Model 6213 steel impact cap, Model 6562 10-32 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] Do not apply power to this system without current limiting, 20 mA MAX. To do so will destroy the integral IC amplifier
- [4] In the interest of constant product improvement, we reserve the right to change specifications without notice.



Units on the line drawing are in inches, units in brackets are in millimeters. Refer to 127-1053V for more information.



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