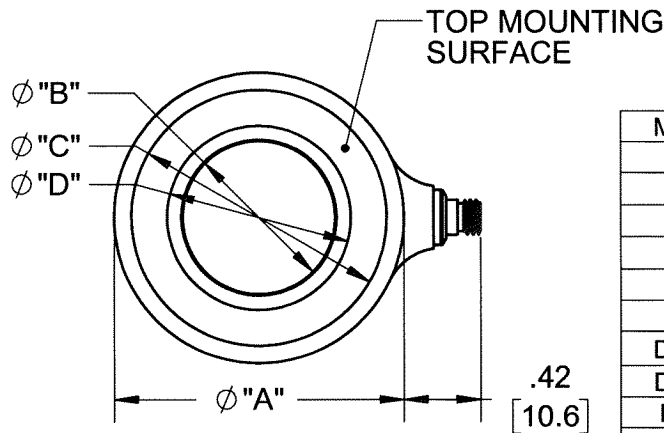


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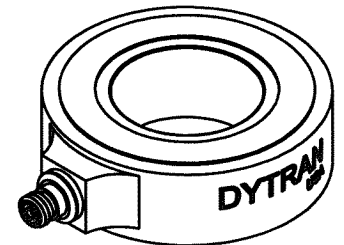
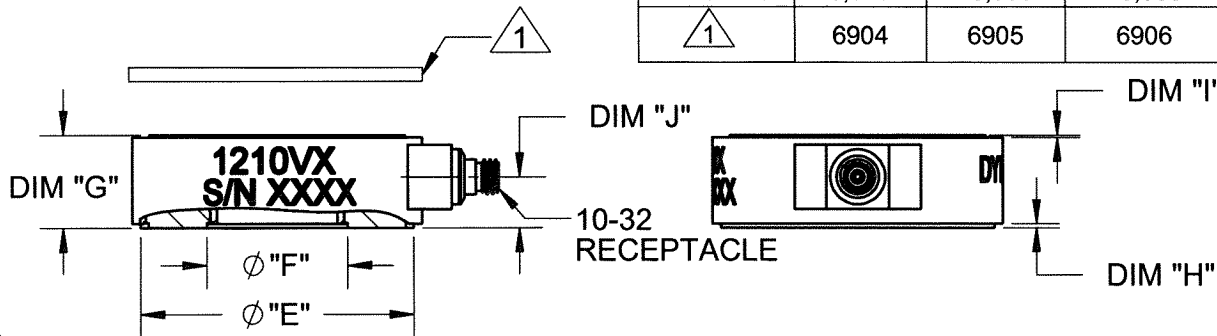
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**REVISIONS**

REV	ECN	DESCRIPTION	BY/DATE	CHK	APPR
A	9467	INITIAL RELEASE	JS 08/27/15	DV	RT
B	12444	1210V1 $\phi$ "B" WAS: .28 [7.1]	JS 01/18/16	LA	LN
C	14189	SEE ECN	RA, 05/07/18	EM	LN



MODEL	1210V1	1210V2	1210V3	1210V4	1210V5	1210V6	1210V7
$\phi$ "A"	.65 [16.5]	.87 [22.1]	1.10 [27.9]	1.34 [34]	1.58 [40.1]	2.05 [52.1]	2.95 [74.9]
$\phi$ "B"	.26 [6.6]	.41 [10.4]	.52 [13.2]	.66 [16.8]	.83 [21.1]	1.03 [26.2]	1.61 [40.9]
$\phi$ "C"	.56 [14.2]	.75 [19.0]	.97 [24.6]	1.18 [29.9]	1.39 [35.3]	1.86 [47.3]	2.73 [69.3]
$\phi$ "D"	.35 [8.89]	.51 [13.1]	.64 [16.4]	.82 [20.8]	1.0 [25.4]	1.22 [30.9]	1.85 [46.99]
$\phi$ "E"	.60 [15.1]	.80 [20.3]	1.02 [25.9]	1.26 [32.0]	1.49 [37.8]	1.97 [50.0]	2.84 [72.1]
$\phi$ "F"	.32 [8.0]	.47 [11.9]	.58 [14.7]	.74 [18.7]	.92 [23.3]	1.11 [28.2]	1.7 [43.2]
DIM "G"	.31 [7.9]	.39 [9.9]	.43 [10.9]	.47 [11.9]	.51 [12.9]	.59 [15]	.67 [17]
DIM "H"	.010 [.25]	.015 [.38]	.018 [.45]	.018 [.45]	.018 [.45]	.018 [.45]	.018 [.45]
DIM "I"	.010 [.25]	.020 [.50]	.020 [.50]	.020 [.50]	.020 [.50]	.020 [.50]	.020 [.50]
DIM "J"	.16 [4.1]	.20 [5.2]	.22 [5.7]	.23 [6.0]	.27 [6.9]	.29 [7.3]	.33 [8.5]
RANGE Lbf	5,000	10,000	20,000	40,000	60,000	80,000	100,000
$\triangle 1$	6904	6905	6906	6907	6901	6908	6909



$\triangle 1$  USE APPROPRIATE SUPPLIED WASHER ON TOP MOUNTING SURFACE.

**NOTES: UNLESS OTHERWISE SPECIFIED**

UNLESS OTHERWISE SPECIFIED: INTERPRET DIM & TOL PER ASME Y14.5M - 1994. REMOVE BURRS. COUNTERSINK INTERNAL THDS 90° TO MAJOR DIA. CHAM EXT THDS 45° TO MINOR DIA. THD LENGTHS AND DEPTHS ARE FOR MIN FULL THDS. THDS PER MIL-S-7742. DIMENSIONS APPLY AFTER FINISHING.	
USED ON	NEXT ASSY
APPLICATION	
THIRD ANGLE PROJECTION USA	
ALL MACHINED SURFACES. TOTAL RUNOUT WITHIN .005. BREAK SHARP EDGES .005 TO .010. MACHINED FILLET RADII .005 TO .015. WELDING SYMBOLS PER AWS A2.4. ABBREVIATIONS PER MIL-STD-12.	

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. DIMENSIONS IN BRACKETS [ ] ARE IN MILLIMETERS TOLERANCES ARE: INCHES    METRIC    ANGLES XX ± .03    .X ± 0.8    ± 1° .XXX ± .010    .XX ± 0.25		
MATERIAL		
FINISH		
DO NOT SCALE DRAWING		

CONTRACT NO.		
APPROVALS		DATE
ORIG	AB	12/26/12
CHK	DV	09/08/15
APP	RT	09/08/15
APP		

**MASTER COPY ONLY IF IN RED**  
Chatsworth, CA

TITLE: **OUTLINE/INSTALLATION DRAWING, 1210V SERIES**

SIZE <b>A</b>	CAGE CODE <b>2W033</b>	DWG. NO. <b>127-1210V</b>	REV <b>C</b>
SCALE: NONE		SOLIDWORKS	SHEET 1 OF 1

	<b>Force Sensors, Voltage Mode</b>	REV A, ECN 9467, 08/27/15
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- RING STYLE FORCE SENSOR
- HERMETICALLY SEALED
- EXCELLENT LINEARITY

**PHYSICAL**

		ENGLISH		SI	
Weight, Max Size	Outer Dia	2.11	oz	60.00	grams
	Inner Dia	1.34	Inches	34.04	mm
	Thickness	0.66	Inches	16.76	mm
Connector [1]	Type	0.47	Inches	11.94	mm
	Material	10-32		10-32	
Housing	Material	Stainless steel		Stainless steel	
	Isolation	Stainless steel		Stainless steel	
Sensing Element	Material	Case grounded		Case grounded	
	Mode	Quartz		Quartz	
		Compression		Compression	

**PERFORMANCE**

Sensitivity, ± 15 %	0.13	mV/Lb	0.03	mV/N
Range, Full Scale	40,000	Lbs.Force	177.93	kN
Maximum Force	50,000	Lbs.Force	222.41	kN
Maximum Unloaded Vibration	2,000	g's, Peak	19,600	m/s <sup>2</sup> Peak
Linearity [2]	± 1	% Full Scale	± 1	% Full Scale
Resonant Frequency, No Load	75	kHz	75	kHz
Stiffness	160	Lb/μin	27.72	kN/μm
Output Polarity for Compression Force	Positive		Positive	
Preload	2000	Lbs.Force	8.90	kN

**ENVIRONMENTAL**

Coefficient Of Thermal Sensitivity	0.03	%/°F	0.06	%/°C
Operating Temperature	-60 to +250	°F	-51 to +121	°C
Environmental Seal	Hermetic		Hermetic	
Insulation Resistance	1	TΩ	1	TΩ

**ELECTRICAL**

Discharge TC	>2000	sec	>2000	sec
Full Scale Output	5	Volts	5	Volts
Supply Current	2-20	mA	2-20	mA
Compliance Voltage	18-30	VDC	18-30	VDC
Bias Voltage	7.5-11.5	VDC	7.5-11.5	VDC
Output Impedance	<100	Ω	<100	Ω
Resolution	0.54	Lb	2.40	kN

**This family also includes:**

Model	Sensitivity (mV/Lb)	Range (Lbs.Force)	Max.Force (Lbs.Force)	Oper. Temp(°F)
1210V1	1.00	5,000	10,000	-60 to +250
1210V2	0.50	10,000	15,000	-60 to +250
1210V3	0.25	20,000	25,000	-60 to +250
1210V5	0.08	60,000	70,000	-60 to +250
1210V6	0.06	80,000	90,000	-60 to +250
1210V7	0.05	100,000	110,000	-60 to +250

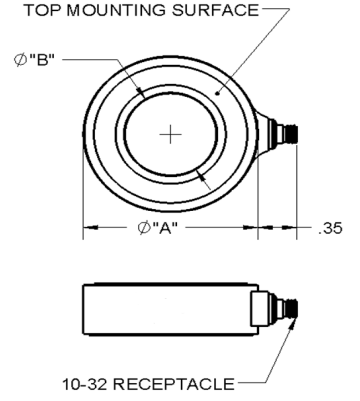
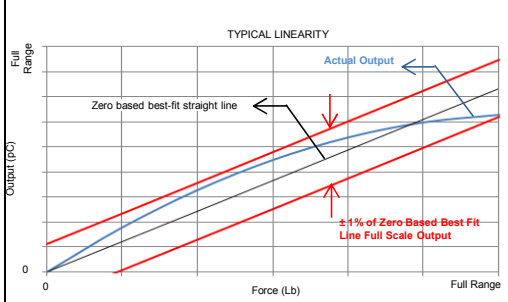
Please, refer to the performance specifications of the products in this family for detailed description

**Supplied Accessories:**

- 1) Accredited calibration certificate (ISO 17025)
- 2) Use supplied washer for top mounting surface (Model # 6907)

**Notes:**

- [1] Radially mounted with 10-32 receptacle micro coaxial connector
- [2] Percent of full scale or any lesser range, Zero based best-fit straight line method.



Model	A Outer Dia Inches	B Inner Dia Inches	C Thickness Inches
1210V1	0.65 [16.51]	0.26 [6.6]	0.31 [7.87]
1210V2	0.87 [22.09]	0.41 [10.41]	0.39 [9.90]
1210V3	1.10 [27.94]	0.54 [13.72]	0.41 [10.41]
1210V4	1.34 [34.06]	0.66 [16.76]	0.46 [11.68]
1210V5	1.58 [40.13]	0.83 [21.08]	0.49 [12.45]
1210V6	2.05 [52.07]	1.03 [26.16]	0.56 [14.22]
1210V7	2.95 [74.93]	1.61 [40.89]	0.64 [16.26]

Units on the line drawing are in inches, units in brackets are in millimeters. Refer to 127-1210V for more information.

