

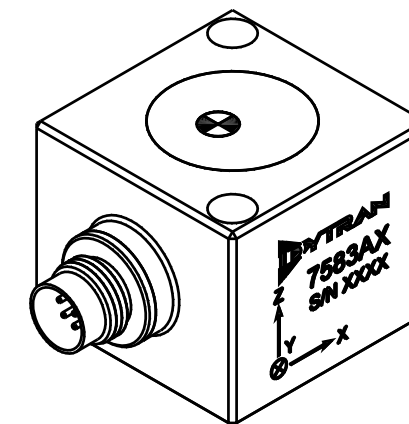
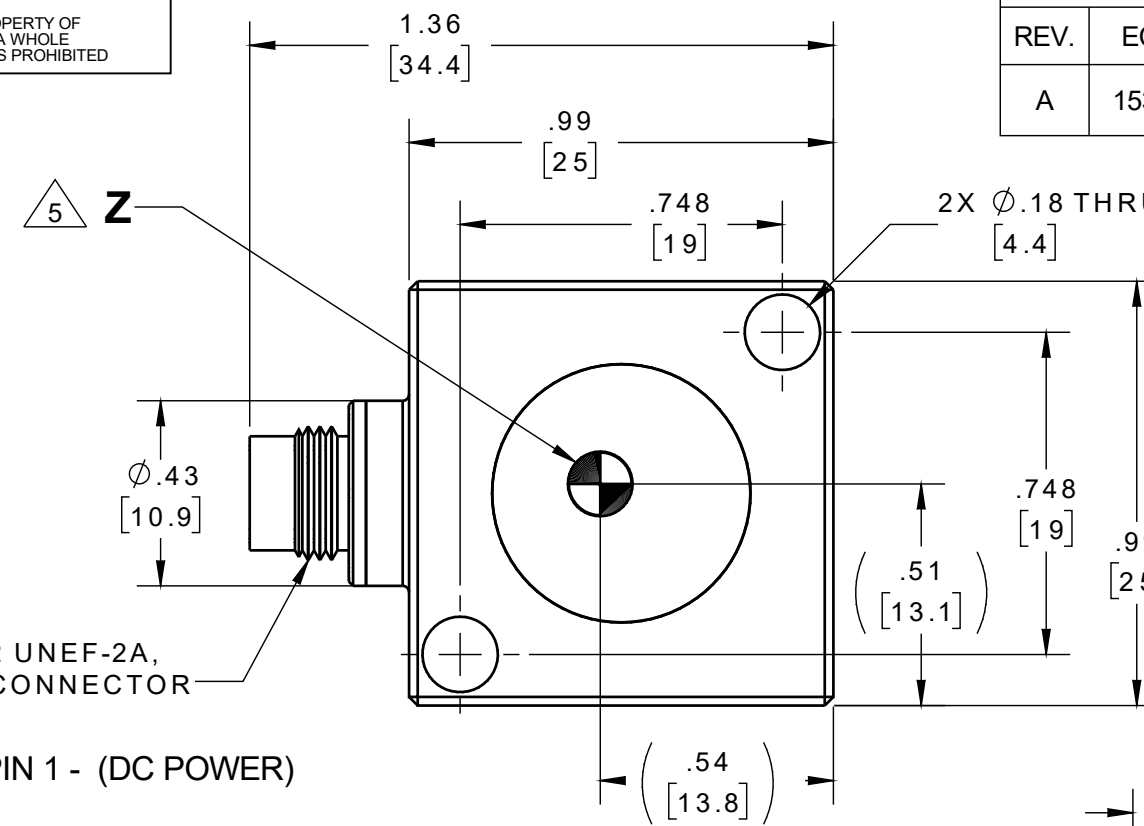
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REVISIONS

REV.	ECN	DESCRIPTION	BY/DATE	CHK	APPR
A	15322	INITIAL RELEASE. SAME AS REV X2.	KG 05/14/20	DP	LN

MODEL	INPUT RANGE
7583A1	±2g
7583A2	±5g
7583A3	±10g
7583A4	±30g
7583A5	±50g
7583A6	±100g
7583A7	±200g



C

C

KEY

3 5/16-32 UNEF-2A, 9-PIN CONNECTOR

PIN 8 - (GND)

PIN 7 AONZ (-Z)

PIN 6 AOPZ (+Z)

PIN 9 - NC

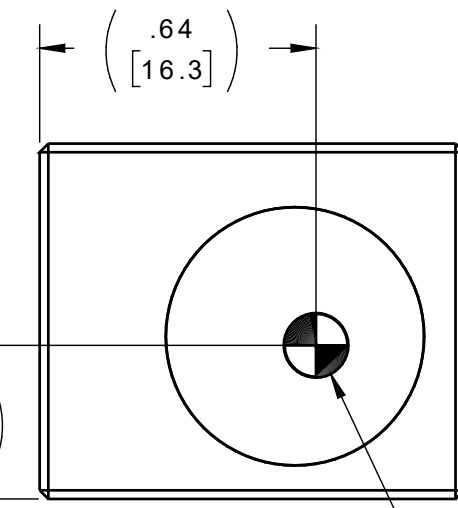
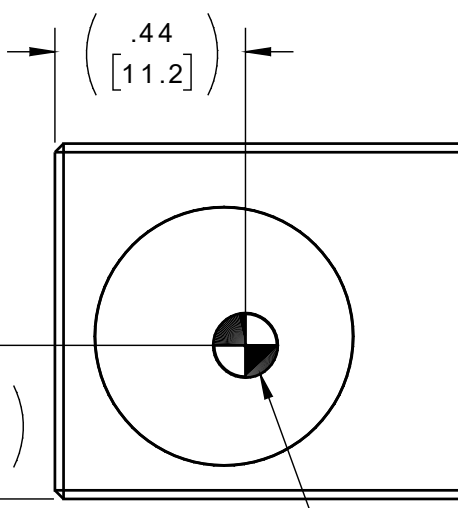
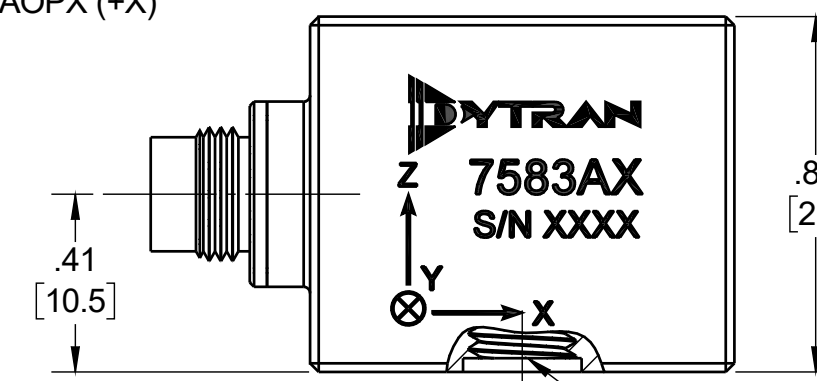
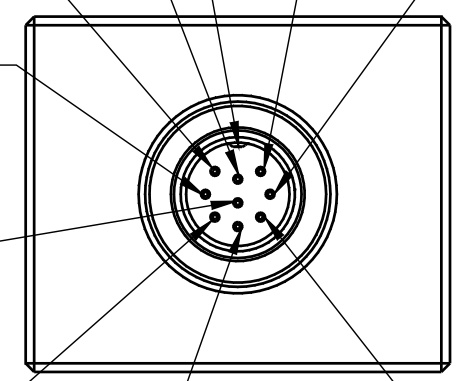
PIN 5 AONY (-Y)

PIN 4 AOPY (+Y)

PIN 3 AONX (-X)

PIN 2 AOPX (+X)

PIN 1 - (DC POWER)



B

B

1/4-28 UNF-2B  
SEE SHEET 2 FOR MOUNTING PREPARATION

- 5 MARKING DENOTES LOCATION OF SENSING ELEMENT'S CENTER OF MASS.
- 4. MINOR VOIDS, SCARS, SCRATCHES AND MOUNTING BLEMISH/WITNESS MARKS ON EXTERIOR SURFACES ARE ALLOWED DUE TO RESTRAINING AND HANDLING DURING TESTING, TRANSPORT OR PROCESSING. THESE APPEAR AS INDICATORS THAT DO NOT AFFECT FORM, FIT OR FUNCTION AS INTENDED BY DESIGN OR APPLICATION.
- 3 MATES WITH DYTRAN 6964AXX CABLE (XX DENOTES LENGTH IN FT).
- 2. WEIGHT: 38 GRAMS, MAX.
- 1. MATERIAL: TITANIUM ALLOY.

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. DIMENSIONS APPLY AFTER FINISHING.		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. DIMENSIONS IN BRACKETS [ ] ARE IN MILLIMETERS TOLERANCES ARE:		Chatsworth, CA	
DECIMALS .XX ±.03 .XXX ±.010	METRIC .X ±.08 .XX ±0.25	ANGLES ±1°		<b>TITLE:</b> OUTLINE/INSTALLATION DWG, TRIAxIAL DC ACCELEROMETER, 7583AX SERIES	
<b>APPROVALS</b> ORIG: KG CHK: DP APP:		<b>DATE</b> 08/09/19 05/21/20		<b>SIZE</b> B <b>CAGE CODE</b> 2W033 <b>DWG NO</b> 127-7583A1 <b>REV</b> A	
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.		DO NOT SCALE DRAWING		<b>SCALE:</b> 1:1 <b>SHEET 1 OF 2</b>	

A

A

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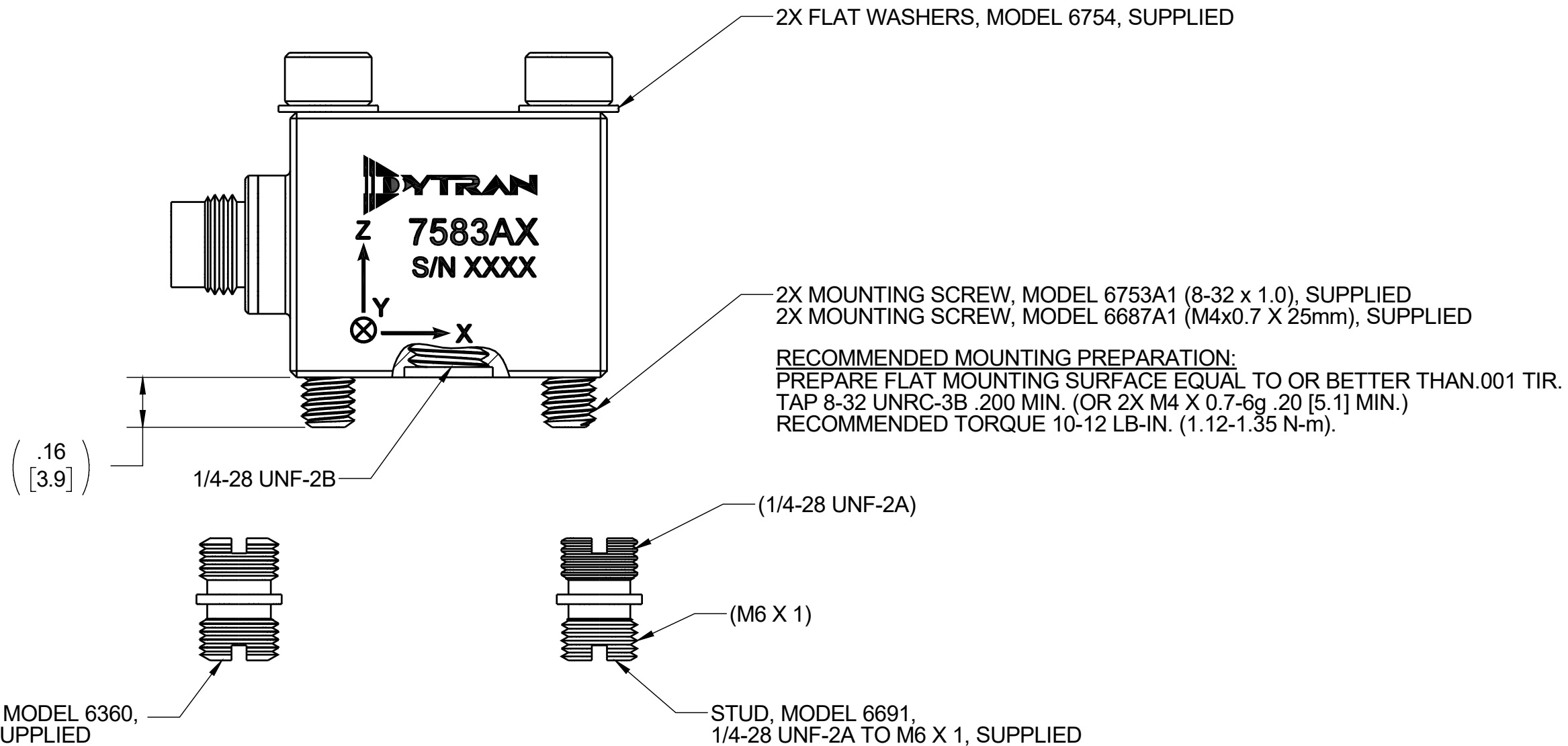
C

B

B

A

A



**RECOMMENDED MOUNTING PREPARATION: MODEL 6366**  
PREPARE MOUNTING SURFACE,  $\phi 1.25$  [31.2] MIN, FLAT TO .001 TIR.  
TAP 1/4-28 UNF-2B  $\nabla$  .200 [5.1] MIN. TORQUE TO 12-15 Lb-in.

**RECOMMENDED MOUNTING PREPARATION: MODEL 6691**  
PREPARE MOUNTING SURFACE,  $\phi 1.25$  [31.2] MIN, FLAT TO .001 TIR.  
TAP M6 X 1  $\nabla$  .200 [5.1] MIN. TORQUE TO 12-15 Lb-in.

 Chatsworth, CA			
TITLE: <b>OUTLINE/INSTALLATION DWG, TRIAxIAL DC ACCELEROMETER, 7583AX SERIES</b>			
SIZE <b>B</b>	CAGE CODE <b>2W033</b>	DWG NO <b>127-7583A1</b>	REV <b>A</b>
SCALE: 2:1		SHEET 2 OF 2	

<b>Model Number</b> 7583A1	<b>PERFORMANCE SPECIFICATION</b>	<b>DOC NO</b> <b>PS7583A1</b>
	<b>TRIAxIAL VARIABLE CAPACITANCE ACCELEROMETER</b>	REV B, ECN 15908, 08/28/20



- TRIAXIAL VARIABLE CAPACITANCE ACCELEROMETER
- DIFFERENTIAL MODE
- HERMETICALLY SEALED
- DC RESPONSE
- HIGH SHOCK SURVIVAL
- EXTENDED FREQUENCY RESPONSE

**PHYSICAL**

Weight, Max  
Connector Type  
Mounting Thru Holes  
Material  
Sensing Technology

ENGLISH		SI	
1.33	oz	38	grams
9-pin, 5/16-32 UNEF-2A		9-pin, 5/16-32 UNEF-2A	
2 X Ø.18"		2 X Ø4.57mm	
Titanium Alloy		Titanium Alloy	
MEMS		MEMS	

**PERFORMANCE**

Input Range  
Frequency Response (±5%)  
Frequency Response (±3dB)  
Resonant Frequency  
Sensitivity Differential, ±10% [1]  
Output Noise, Differential, Typ.  
Non-Linearity, Max.  
Transverse Sensitivity, Max.  
Phase Shift (2 to 120 Hz)

±2	g pk	±19.61	m/s <sup>2</sup> pk
0 - 625	Hz	0 - 625	Hz
0 - 1150	Hz	0 - 1150	Hz
>1200	Hz	>1200	Hz
2000	mV/g	203.9	mV/m/s <sup>2</sup>
8	µg RMS/√ Hz	78	µm/s <sup>2</sup> RMS/√ Hz
0.5	% F.S.	0.5	% F.S.
3	%	3	%
<4°		<4°	

**ENVIRONMENTAL**

Maximum Mechanical Shock  
Operating Temperature Range  
Scale Factor Temperature Shift [2]  
Seal

6000	g pk	58840	m/s <sup>2</sup> pk
-67 to +257	°F	-55 to +125	°C
-11 to +122	ppm/°F	-20 to +220	ppm/°C
Hermetic		Hermetic	

**ELECTRICAL**

Output Common Mode Voltage  
Bias Calibration Error  
Output Impedance, Nom.  
Operating Voltage  
Operating Current (AOP & AON open)  
Power Supply Rejection Ratio  
Ground Isolation  
Warm Up Time  
Overload Recovery

2.45 - 2.65	VDC	2.45 - 2.65	VDC
0.007	g	0.0007	m/s <sup>2</sup>
1	Ω	1	Ω
+6 to +14	VDC	+6 to +14	VDC
<18	mA DC	<18	mA DC
>65	dB	>65	dB
>30	MΩ	>30	MΩ
<0.5	sec	<0.5	sec
<200	µsec	<200	µsec

**This family also includes:**

Model	Input Range (g pk)	Frequency Response (Hz) (±3dB)	Sensitivity Differential, ±10% (mV/g)	Max.Shock (g pk)	Noise Differential (µg RMS/√Hz)
7583A2	± 5	0-1900	800	6000	17
7583A3	± 10	0-3200	400	6000	34
7583A4	± 30	0-4000	133	6000	102
7583A5	± 50	0-4500	80	6000	170
7583A6	± 100	0-5000	40	6000	339
7583A7	± 200	0-7000	20	6000	678

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

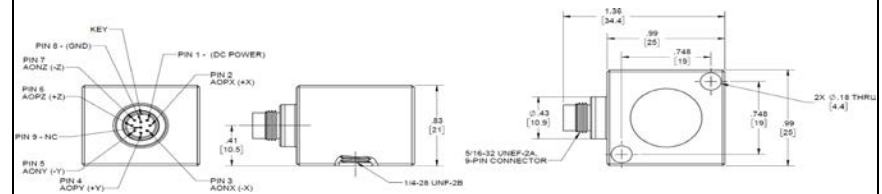
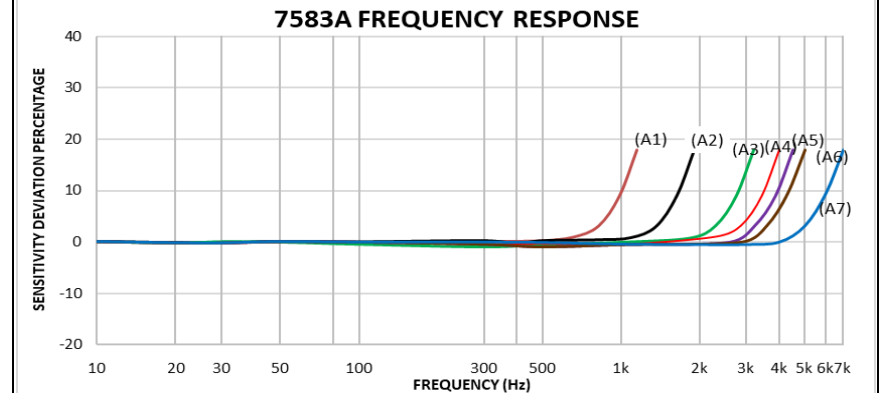
**Supplied Accessories:**

- 1) Accredited calibration certificate (ISO 17025)
- 2) Mounting stud, Model 6360, 1/4-28 UNF-2A, Qty 1
- 3) Mounting stud, Model 6691, 1/4-28 UNF-2A to M6 X 1, Qty 1
- 4) Mounting screws, Model 6753A1, 8-32 x 1.0, Qty. 2
- 5) Mounting screws, Model 6687A1, M4x0.7 x 25mm, Qty. 2
- 6) Flat washers, Model 6754, Qty. 2

**Notes:**

- [1] Single ended sensitivity is half of values shown.
- [2] Over the rated temperature range.

[3] In the interest of constant product improvement, we reserve the right to change specifications without notice. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary overtime. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts.



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