

Type 8784A5, 8786A5

## 8784A5 & 8786A5 CERAMIC SHEAR ACCELEROMETERS

The 8784A5 (top connector) and 8786A5 (side connector) are low impedance, voltage mode accelerometers designed for vibration measurements in single to multichannel applications. The unique connector design is rugged and maintains excellent integrity with repeated connections. The ceramic sensing element components have been carefully designed to provide the level of performance

most often required in general purpose vibration measurements. Kistler's shear technology assures high immunity to base strain, thermal transients and transverse accelerations. Other outstanding features include high frequency response, light weight and hermetic sealing.

Continued

- Ceramic Shear sensing element
- Low impedance, voltage mode
- High sensitivity; resolution less than 1 millig
- Low transverse sensitivity
- Rugged connector for repeated connections
- Priced for OEM
- Conforming to CE



8784A5



8786A5

Technical Data	Unit	8784/8786A5
<b>Acceleration Range</b>	<i>g</i>	±5
<b>Acceleration Limit</b>	<i>g</i>	±500
<b>Transverse Limit</b>	<i>g<sub>pk</sub></i>	±500
<b>Threshold</b> nom.	<i>g<sub>rms</sub></i>	0.0004
<b>Sensitivity</b> ±10%	mV/ <i>g</i>	1000
<b>Resonant Frequency</b> mounted, nom.	kHz	27
<b>Frequency Response</b> , ±5 %	Hz	1 ... 6000
<b>Amplitude Non-linearity</b>	% FSO	±1
<b>Time Constant</b>	s	0.5
<b>Transverse Sensitivity</b> nom. (5% max.)	%	1.5
<b>Base Strain Sensitivity</b> @ 250 µε	<i>g/µε</i>	0.005
<b>Shock Limit</b> (1 ms puls width) max.	<i>g<sub>pk</sub></i>	2500
<b>Temperature Coefficient of Sensitivity</b>	%/°F	-0.027
	%/°C	-0.05
<b>Operating Temperature</b>	°F	-65 ... 175
	°C	-54 ... 80
<b>Output Bias:</b>	VDC	11
<b>Impedance</b>	Ω	≤ 500
<b>Voltage</b> F.S nom.	VDC	±5
<b>Source Voltage</b>	VDC	18 ... 30
<b>Constant Current</b>	mA	2 ... 20
<b>Construction</b>		
<b>Sensing Element</b>	type	ceramic shear
<b>Housing/Base</b>	material	Titanium
<b>Sealing</b> -Housing/Connector	type	Hermetic
<b>Connector</b>	type	10-32 neg.
<b>Weight</b>	g	21
<b>Mounting Torque</b>	lbf-in (Nm)	18 (2)

1 g = 9.80665 m/s<sup>2</sup>, 1 inch = 25.4 mm, 1 gram = 0.03527 oz; 1 lbf-in = 0.1129

Kistler Instrument Corporation reserves the right to discontinue or change specifications, designs or materials without notice consistent with sound engineering principles and quality practices.

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A low impedance, voltage output is provided by the internal Kistler electronic impedance convertor. This output allows for the use of inexpensive coaxial cable, while providing high noise immunity and insensitivity to cable motion. Power this accelerometer with one of Kistler's couplers, signal conditioners or from ICP compatible power sources found in many measurement electronic units.

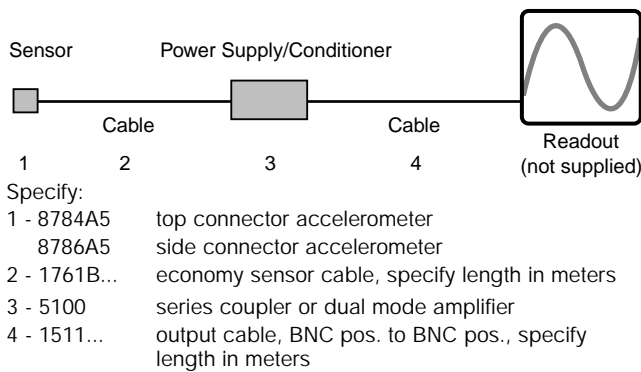
**Applications**

Types 8784A5 and 8786A5 are multipurpose accelerometers, useful for many applications. These accelerometers provide less than one milli g resolution suitable for use in low level measurement applications. The wide bandwidth and rugged construction is ideal for impact and vibration related applications including condition monitoring and vehicle testing. These sensors offer excellent performance and cost advantages for demanding OEM applications. Contact Kistler for OEM and quantity discounts.

**Related Products**

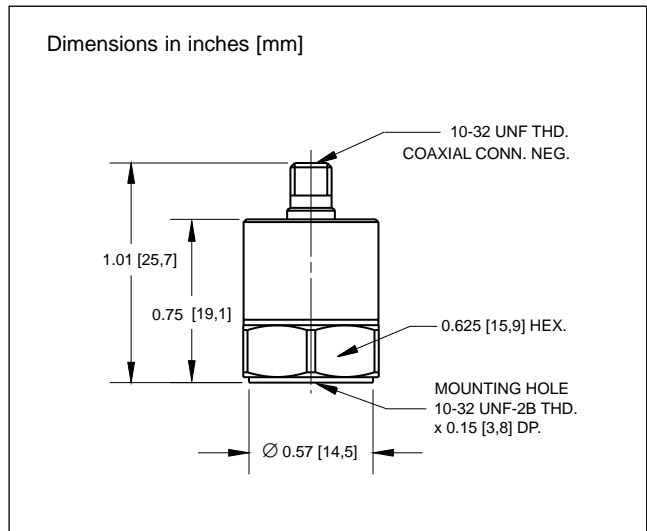
- 8202A10 high impedance, charge mode, high temp., 10pC/g
- 8203A50 high impedance, charge mode, high temp., 50pC/g
- 8284A30 high impedance, charge mode, 33pC/g
- 8286A30 high impedance, charge mode, 33pC/g
- 8290A25 high impedance, charge mode, triaxial, 25pC/g
- 8774A50 low impedance, voltage mode, 50g, 100mV/g
- 8776A50 low impedance, voltage mode, 50g, 100mV/g

**Ordering Information**

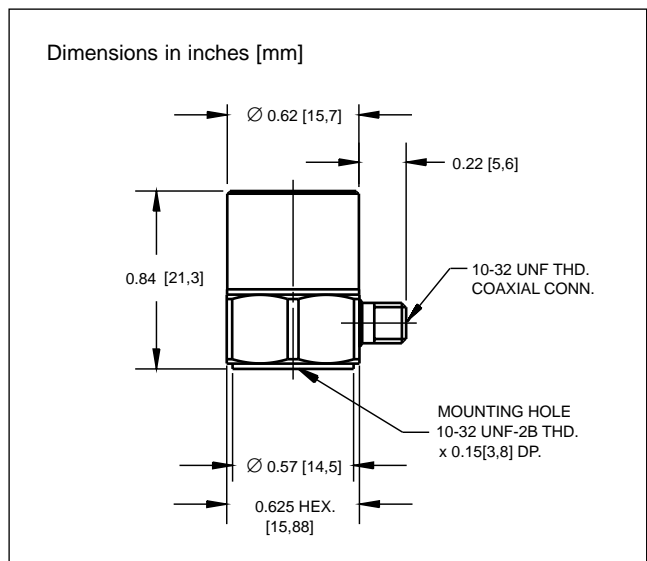


**Supplied Accessory**

- 8402 Mounting stud (10-32 thd.)



8784A5, top connector



8786A5, side connector

**Optional Accessories**

- 8410 mounting stud (10-32 to 1/4-28 thd.)
- 8411 mounting stud (10-32 to M6 thd.)
- 8436 adhesive mounting pad
- 8452A mounting magnet

000-257e-10.02 (DBK8.8784/86e)