

Type 8798A5 ... 8798A50

## 8798A CERAMIC SHEAR TRIAXIAL ACCELEROMETERS

The 8798A triaxial accelerometer series measure vibration in three mutually perpendicular axis. The unique annular, ceramic shear sensor element features extremely low thermal transient response, a high immunity to base strain and transverse acceleration. An advanced hybrid charge amplifier design provides outstanding phase response as well as a wide operating frequency range. The light weight aluminum housing is epoxy sealed and hard anodized coated to provide ground isolation.

The three built-in IEPE electronic charge to voltage converters provide a low impedance output signal. The 8798A accelerometers can be powered by any Kistler 5100 series Piezotron® coupler/signal conditioner or by any commercially available IEPE voltage mode piezoelectric sensor power supply.

- Low impedance, voltage mode
- Lightweight, ceramic shear sensor
- Ultra low thermal transient response
- Durable hard anodized, ground isolated aluminum housing
- Conforming to CE

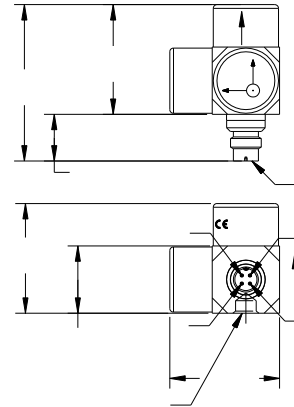


Technical Data	Units	8798A5	8798A10	8798A50
<b>Acceleration Range</b>	<i>g</i>	±5	±10	±50
<b>Acceleration Limit</b>	<i>g<sub>pk</sub></i>	±8	±16	±80
<b>Threshold</b> nom.	$\mu g_{rms}$	400	500	2000
<b>Sensitivity</b> ± 5% (at 100 Hz, 3 <i>g<sub>rms</sub></i> )	mV/ <i>g</i>	1000	500	100
<b>Resonant Frequency</b> mounted, nom.	kHz	20	20	20
<b>Frequency Response</b> ± 5%	Hz	1 ... 5000	1 ... 5000	1 ... 5000
<b>Phase Shift</b> , < 5°	Hz	2 ... 3000	2 ... 3000	2 ... 5000
<b>Amplitude Non-linearity</b> , nom.	%FSO	±1	±1	±1
<b>Time Constant</b> nom.	s	1	1	1
<b>Transverse Sensitivity</b>	%	<5	<5	<5
<b>Environmental:</b>				
<b>Base Strain Sensitivity</b> @ 250 $\mu\epsilon$	<i>g</i> / $\mu\epsilon$	< 0.005	< 0.005	< 0.05
<b>Shock Limit</b> (0.2 ms pulse width) max.	<i>g<sub>pk</sub></i>	5000	7000	7000
<b>Sensitivity Shift</b> typ. (for 2...8 mA)	%	±1	±1	±1
<b>Temperature Coefficient of Sensitivity</b>	%/°F	-0.08	-0.06	-0.06
	%/°C	-0.15	-0.10	-0.10
<b>Temperature Range Operating</b> (4 mA supply current)	°F	32 ... 150	32 ... 150	32 ... 150
	°C	0 ... 65	0 ... 65	0 ... 65
<b>Storage</b>	°F	-10 ... 200	-10 ... 200	-10 ... 200
	°C	-23 ... 94	-23 ... 94	-23 ... 94
<b>Output:</b>				
<b>Bias</b> nom.	VDC	11	11	11
<b>Impedance</b>	$\Omega$	<500	<500	<100
<b>Voltage</b> full scale	V		±5	
<b>Current</b>	mA		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 Nm

Technical Data	Unit	8798A...
<b>Source</b>		
Voltage	VDC	20 ... 30
Constant Current	mA	2 ... 18
Sensitivity Shift typ., 2 ... 18mA	%	±1
Impedance	kΩ	>100
<b>Construction</b>		
Sensing Element	type	ceramic/shear
Case	material	Al / hard anodized
Sealing housing/connector	type	epoxy
Connector	type	4-Pin pos., Microtech Equivalent
Ground Isolation min.	MΩ	10
Weight	gram	22
Mounting	type	stud/wax

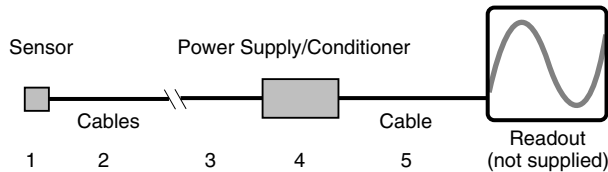
Dimensions in inches [mm]



**Applications**

The low weight of the 8798A triaxial accelerometer series, is highly desirable in measurement applications on light weight structures where mass loading must be kept to a minimum. The accelerometers are highly suited for multi-channel measurements; modal analysis measurements on automotive bodies and aircraft structures; general vibration measurements.

**Ordering Information**



Specify:

- 1 - 8798A...      triaxial accelerometer
- 2 - 1578A...      optional extension cable with Microtech equivalent connector 4-pin neg. to Microtech 4-pin pos., specify length in meters
- 3 - 1756B(X)      break out cable, 4-pin Microtech equivalent connector neg. -3x BNC pos. (X = 0.5, 3,10m)
- 4 - 5100      coupler series or
- 5134A      four-channel coupler
- 5 - 1511...      output cable, BNC pos. to BNC pos., specify length in meters

**Supplied Accessory**

- 8402      mounting stud, 10-32 UNF-2A
- 8432      mounting wax
- 8411      mounting stud, 10-32 to M6, shipped only outside N.A.

000-266e-10.02 (DBK8.8798e)