

Type 8792A25 ...8792A500

8792A K-SHEAR® TRIAXIAL ACCELEROMETER

The 8792A series of quartz shear triaxial accelerometers are rugged, low impedance voltage mode sensors. They are available in four ranges from 25g to 500g with sensitivities from 10mV/g to 200mV/g. This triaxial design allows simultaneous shock and vibration measurements in three mutually perpendicular axes: X, Y and Z.

Kistler's K-SHEAR design provides a wide operating frequency range along with extremely low sensitivity to thermal transients, base strain and transverse acceleration. Quartz sensing crystals ensure the long-term stability not achievable with other sensing materials.

Continued

- Low impedance, voltage mode output
- Quartz shear sensing elements
- High immunity to thermal transients
- Ultra-low base strain sensitivity
- Wide frequency range
- Ground isolated
- Low profile design
- Conforming to CE



Technical Data	Units	8792A25	8792A50	8792A100	8792A500
Acceleration Range	g	±25	±50	±100	±500
Acceleration Limit	g _{pk}	±50	±100	±200	±1000
Threshold	g _{rms}	0.003	0.005	0.009	0.01
Sensitivity ±5% @ 100Hz, 10g _{rms}	mV/g	200	100	50	10
Resonant Frequency nom. mtd.	kHz	54	54	54	54
x Frequency Response ±5%	Hz	10 ... 5000	3.0 ... 5000	3.0 ... 10000	–
x Frequency Response ±10%	Hz	3 ... 5000	1.0 ... 5000	1.0 ... 10000	–
+ Frequency Response -5%, +10%	Hz	-	-	-	1 ... 5000
Amplitude Non-linearity	%	±1	±1	±1	±1
Time Constant nom.	s	0.5	1	1.5	1
Transverse Sensitivity typ. (max.)	%	1.5 (3)	1.5 (3)	1.5 (3)	1.5 (3)
Base Strain Sensitivity @250 µε, max.	g/µε	0.005	0.005	0.005	0.005
Shock (1 ms pulse), max.	g	2000	2000	2000	5000
Long Term Stability	%	±1	±1	±1	±1
Temperature @ 4mA supply current					
Coefficient of Sensitivity	%/°F	-0.03	-0.03	-0.03	-0.03
	%/°C	-0.06	-0.06	-0.06	-0.06
Range Operating	°F	-65...212	-65...212	-65...212	-65...250
	°C	-55 ... 100	-55 ... 100	-55 ... 100	-55 ... 120
Storage	°F	-100...250	-100...250	-100...250	-100...300
	°C	-75 ... 120	-75 ... 120	-75 ... 120	-75 ... 150
Output					
Bias nom.	VDC	11	11	11	11
Impedance max.	Ω	100	100	100	100
Current	mA	2	2	2	2
Voltage F.S., nom.	V	±5	±5	±5	±5

1 g = 9.80665 m/s², 1 inch = 25.4 mm, 1 gram = 0.03527 oz; 1 lbf-in = 0.1129 Nm

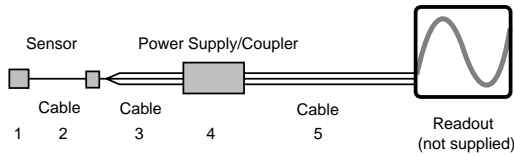
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Three Piezotron electronic impedance converters provide a low impedance voltage output allowing the use of low-cost cables and eliminate the need for charge amplifiers. Another advantage of a low impedance output is the ability to drive long cable lengths with low-noise susceptibility.

The entire unit is housed in a welded, hermetically sealed, stainless steel case for years of reliable operation. An isolated stainless steel base is incorporated to eliminate potential ground loops. A single center mounting hole allows for convenient attachment and alignment of the X and Y axes.

Ordering Information

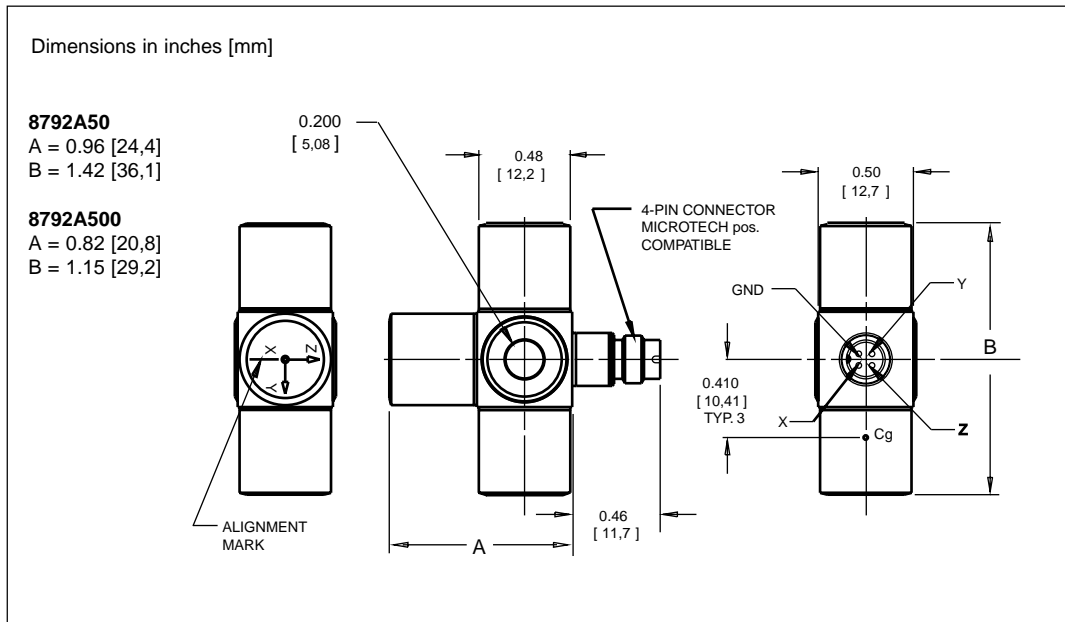


- Specify:
- 1 - 8792A... triaxial accelerometer
 - 2 - 1578sp extension cable, 4-pin Microtech equivalent
4-pin Microtech neg., optional
 - 3 - 1756B3 4-pin Microtech cable, neg. to 3x BNC pos.,
specify length in meters
 - 4 - 5100... coupler series or dual mode charge amplifier
 - 5 - 1511... cable, BNC to BNC, specify length in meters

Technical Data	Units	8792A25 ... 500
Source		
Current	mA	2...18
Voltage	VDC	20...30
Impedance	k	100
Construction		
Seal	type	hermetic
Housing/Base	material	stl stl
Sensing Element	type	shear/quartz
Connector	type	4-pin pos. Microtech Equivalent
Ground Isolation	M	10
Weight	g	29
Mounting Torque	lbf-in (Nm)	18 (2)

Supplied Accessories

- 431-0475-003 (1) socket cap head screw, 10-32
x 0.75" long
- 431-0494-001 (1) socket cap head screw, M5
x 20mm long



000-260e-08.02 (DBK8.8792e)