KISTLER

Type 8690C5 ... 8690C50

8690C PiezoBEAM® TRIAXIAL ACCELEROMETERS

The 8690C series of accelerometers simultaneously measure vibration in three, mutually perpendicular axes (x, y and z). They feature high sensitivity and low impedance voltage output.

The lightweight units reduce mass loading in multichannel data acquisition or modal applications. This series of triaxial sensors, with an integral four-pin connector, is designed for simplified installation in confined areas. Each unit may be mounted on three surfaces.

The 8690C triaxial PiezoBEAMs offer outstanding phase response, thermal stability, as well as wide frequency range. They are constructed of hard, anodized aluminum and are environmentally sealed. The low impedance output allows for use of low-cost, standard cables.

The accelerometers will operate directly from the internal power source found in most FFT analyzers (Piezotron®, IEPE compatible, etc.) or from several Kistler power supply couplers available.

- Low impedance, voltage mode
- High sensitivity
- Low cost, lightweight triaxial design
- High accuracy and stability
- Choice of ranges and sensitivities
- Excellent thermal stability
- Conforming to CE

Technical Data	Units	8690C5	8690C10	8690C50
Acceleration Range	g	±5	±10	±50
Acceleration Limit	g_{pk}	±8	±16	±80
Threshold nom.	μV_{rms}	120	140	100
	μg_{rms}	120	280	1000
Sensitivity ±5 % (at 100Hz, 3 g_{rms})	mV/g	1000	500	100
Resonant Frequency mounted, nom.	kHz	9	22	22
Frequency Response ± 5%	Hz	1… 3000	1… 5000	1…6000
Phase Shift, < 5°	Hz	4…2000	4…2000	4…4000
Amplitude Non-linearity	%FSO	±1	±1	±1
Time Constant nom.	s	1	1	1
Transverse Sensitivity	%	<1	<1	<1
Long Term Stability	%	±1	±1	±1
Environmental:				
Base Strain Sensitivity @ 250 με	$g/\mu\varepsilon$	<0.001	<0.001	<0.001
Shock Limit (0.2ms pulse width)	g_{pk}	5000	10000	10000
Temperature Coefficient of Sensitivity	%/°F	– 0.02	+0.04	+0.04
	%/ °C	– 0.04	+0.08	+0.08
Temperature Range Operating (4 mA supply current)	°F		32 …150	
	°C		0 … 65	
Storage	°F		– 10 … 200	
	°C		– 23 ... 94	

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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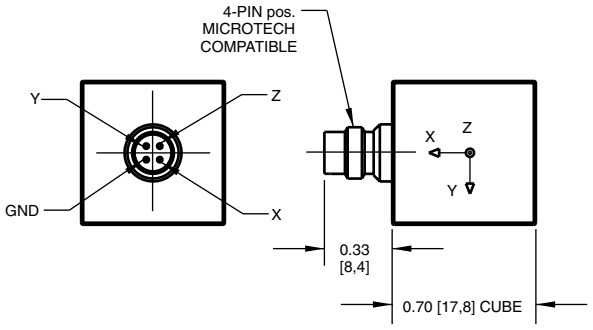
000-234e-10.02 (DBK8.8690e)

Technical Data	Units	8690C...
Output		
Bias	VDC	11
Impedance	Ω	<500
Current, (4mA supply)	mA	2
Voltage full scale	V	±5
Source		
Constant Current	mA	2 ... 20
Voltage	VDC	20 ... 30
Construction		
Sensing Element	type	ceramic bimorph/ bender
Housing	material	Al, hard anodized
Sealing housing/connector	type	Epoxy
x **Connector**	type	4-pin pos. Microtech Equivalent
Ground Isolation	MΩ	10
Weight	gra,s	11.2
Mounting	type	adhesive/wax

Dimensions in inches [mm]



Supplied Accessory

8432 mounting wax

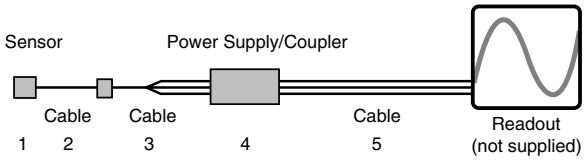
Related Products

8630C… single axis accelerometer series; adhesive mount
8636C… single axis accelerometer series; stud mount
8632C… single axis accelerometer series; cube configuration, adhesive mount
8692C… triaxial accelerometer series; magnetic or stud mount

Optional Accessories

For a complete list of accessories, request data sheet K9.012.

Ordering Information



Specify:

1 - 8690C…	triaxial accelerometer or
2 - 1578...	extension cable, 4-pin Microtech pos. to 4-pin Microtech neg., specify length in meters
3 - 1756B(x)	cable, 4-pin Microtech neg., to 3x BNC pos., length x = 0.5, 3, 10 meters
4 - 5100	coupler series, or
5134	four-channel coupler
5 - 1511...	output cable BNC pos. to BNC pos., specify length in meters

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