

Type 8712A5M1

8712A5M1 K-SHEAR® HIGH SENSITIVITY ACCELEROMETER

The 8712A5M1 is an extremely sensitive accelerometer with 1000mV/g sensitivity. It features a rugged all welded, hermetic construction with an electrical ground isolation. The low impedance voltage output minimizes noise pick-up and eliminates the need for highly insulated low noise cables. The electrically isolated base prevents potential ground loop problems.

The 8712A5M1 utilizes Kistler's exclusive K-SHEAR design which provides very low sensitivity to base strain, thermal transients and transverse acceleration. Quartz sensing elements afford the ultimate in long-term stability which ensures repeatable and accurate measurements for many years.

- Low impedance voltage mode
- Very high sensitivity
- Quartz shear accuracy and stability
- High immunity to thermal transients
- Ground Isolated
- Welded hermetic construction
- Conforming to CE



1:1



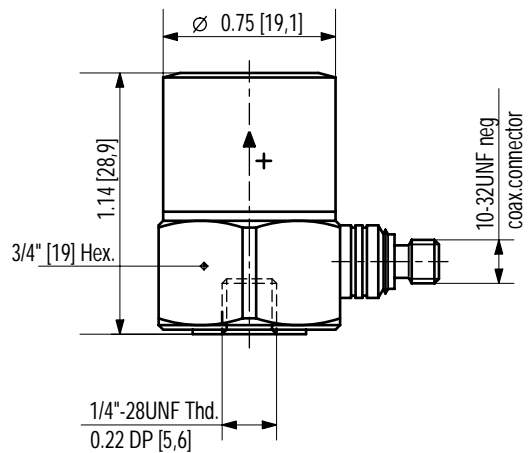
8712A5M1 accelerometer with 1939A cable and factory welded connector

Technical Data	Units	8712A5M1
Acceleration Range	<i>g</i>	±5
Acceleration Limit	<i>g</i> _{pk}	±50
Transverse Acceleration Limit	<i>g</i> _{pk}	±100
Threshold nom.	<i>g</i> _{rms}	0.0004
Sensitivity ±5%	mV/ <i>g</i>	1000
Resonant Frequency mounted nom.	KHz	24
Frequency Response ±5%	Hz	0.5 ... 8000
±10%	Hz	0.3 ... 11 000
Amplitude Non-linearity	%FSO	±1
Time Constant nom.	s	1
Transverse Sensitivity nom (max 3%)	%	1.5
Base Strain Sensitivity @ 250 µε	<i>g</i> /µε	≤0.002
Shock Limit (1ms pulse) max.	<i>g</i> _{pk}	1000
Long Term Stability	%	±1
Temperature Coefficient of Sensitivity	%/°F	-0.03
	%/°C	-0.06
Temperature Range Operating (4 mA supply current)	°F	-65 ... 212
	°C	-54 ... 100
Storage	°F	-105 ... 300
	°C	-75 ... 150
Output		
Bias nom.	VDC	11
Impedance	Ω	<100
Voltage F.S.	V	±5
Current	mA	2

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

Technical Data	Units	8712A5M1
Source		
Voltage	VDC	20 ... 30
Constant Current	mA	2 ... 20
Impedance	k Ω	>100
Construction		
Sensing Element	type	quartz/shear
Housing/Base	material	Stl. St.
Sealing-Housing/Connector	material	hermetic
Connector	type	10-32 neg.
Ground Isolation min.	M Ω A	10
Weight	g	51
Mounting Torque	lbf-in (Nm)	18 (2)

Dimensions in inches [mm]

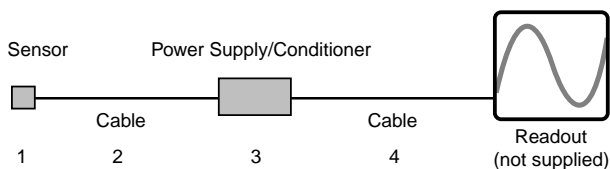


Applications

The 8712A5M1 is ideally suited for applications involving low amplitude vibrations over a wide frequency range. Some examples include heavy structures, suspension building and machines.

For permanent installation, Kistler offers a cable with a connector that can be factory welded (Type 1939) to the 8712A5M1 connector. See the ordering information below for details.

Ordering Information



Specify:

- 1 - 8712A5M1 high sensitivity accelerometer
- 2 - 1761B... sensor cable, 10-32 pos. to BNC pos., or
1939A... cable with weldable connector 10-32 pos. to
BNC pos., specify length in meters
- 3 - 5100 coupler series or dual mode amplifier
- 4 - 1511... output cable, BNC pos. to BNC pos., specify
length in meters

Supplied Accessories

- 8410 mounting stud 1/4-28 to 10-32
- 8412 mounting stud 1/4-28
- 8421 mounting stud 1/4-28 to M8; shipped only outside N. A.