

Type 8752A50, 8752A50M5

8752A INDUSTRIAL K-SHEAR® ACCELEROMETER

The 8752A50 and the 8752A50M5 high temperature 165 °C version are industrial accelerometers that feature reliability and accuracy characteristics required for use in the most demanding of machine vibration measurements. With Kistler's unique K-SHEAR design, the inaccuracies long associated with industrial acceleration measurements are eliminated.

Highly accurate machinery housing vibration measurements are possible because the K-SHEAR is immune to base strain, Abrupt changes in surface temperature do not cause false alarms since K-SHEAR is insensitive to thermal transients. Because K-SHEAR is immune to transverse motion, the accelerometer is sensitive to acceleration only in the axis of interest.

Continued

- Low impedance voltage mode
- Quartz-shear stability and precision
- Accurate on flexible and stiff surfaces
- Insensitive to thermal transients
- High temperature version available
- Case ground isolated
- Conforming to CE



Technical Data	Units	8752A50	8752A50M5
Acceleration Range	g	±50	±50
Acceleration Limit	g _{pk}	±300	±300
Threshold nom.	g _{rms}	0.002	0.002
Sensitivity ±5%	mV/g	100	—
±10%	mV/g	—	100
Resonant Frequency mounted nom.	kHz	31	31
Frequency Response ±5%	Hz	0.5 ... 5000	1.0 ... 5000
	CPM	30 ... 300000	60 ... 300000
±10%	Hz	0.5 ... 8000	0.7 ... 8000
	CPM	30 ... 480000	42 ... 480000
±3dB	Hz	0.5 ... 12000	0.5 ... 12000
	CPM	30 ... 720000	30 ... 720000
Amplitude Non-linearity	%FSO	± 1	± 1
Time Constant nom.	s	1.0	1.0
Transverse Sensitivity typ.(max.)	%	1.5 (3)	1.5 (3)
Base Strain Sensitivity @ 250 µε	g/µε	<0.004	<0.004
Shock Limit (1ms pulse) max.	g	3000	3000
Temperature Coefficient of Sensitivity	%/°F	-0.016	-0.016
	%/°C	-0.03	-0.03
Temperature Range Operating			
8752A50	°F	-65 ... 250	-65 ... 330
	°C	-54 ... 120	-54 ... 165
Storage			
8752A50	°F	-100 ... 300	-100 ... 330
	°C	-74 ... 150	-74 ... 165
Output			
Bias nom.	VDC	11	11
Impedance	Ω	≤100	≤100
Current	mA	2	2
Voltage	V	±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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Technical Data	Units	8752A50 8752A50M5
Source		
Voltage	VDC	20 ... 30
Constant Current	mA	2 ... 20
Impedance min.	kΩ	100
Construction		
Sensing Element	type	quartz/shear
Housing/Base	material	316L St. Stl
Sealing-housing connector	type	hermetic
Connector	type	Mil-C-5015
Ground Isolation min.	MΩ	10
Weight	g	115
Mounting Torque	lbf-in (Nm)	24 (3)

The quartz shear sensing element provide long-term stability required for dependable trend measurements. An integral Piezotron® impedance converter provides a low impedance voltage output, ensuring reliability.

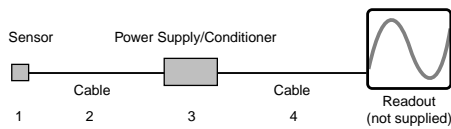
K-SHEAR virtually eliminates false alarms caused by accelerometer errors. The sensor's MIL-C-5015 top connector is compatible with industry standard connections. The unit is constructed of welded hermetically sealed 316L stainless steel to withstand the harshest industrial environments. The entire accelerometer case is electrically isolated from the signal return, preventing unwanted ground loops. The sensor's internal electronic impedance converter can be powered by most portable data collectors, permanent monitoring equipment or FFT analyzers.

Applications

The 8752 accelerometer pair are designed for use in industrial applications for machinery monitoring, predictive maintenance and analysis of gears and anti-friction bearings. The quartz, shear-sensing design is ideally suited for measurements on machinery such as compressors, turbines, generators and other critical rotating machinery.

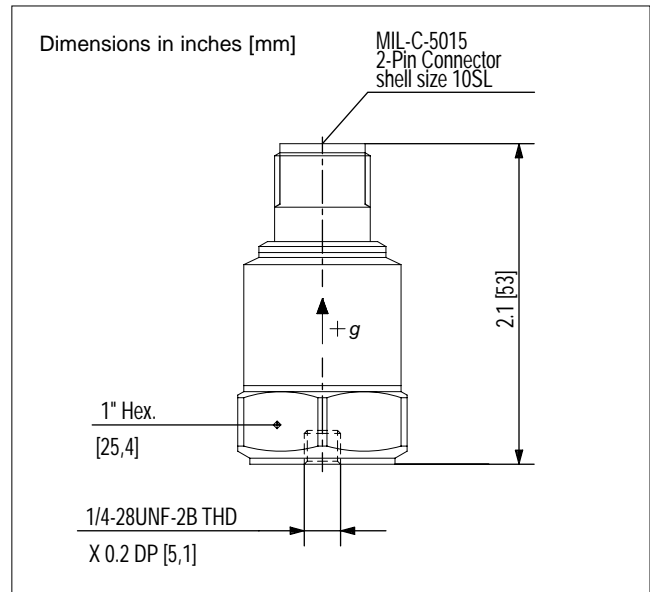
Ideal for use on dryer sections in pulp and paper mills, gas turbines, roll processes in steel mills and other areas where the unit will be subjected to continuous or intermittent high temperatures. The high degree of reliability afforded by the 8752A50M5 makes it ideal for installation on the most critical plant machinery.

Ordering Information



Specify:

- 1 - 8752A50 accelerometer or 8752A50M5 high temperature accelerometer
- 2 - sensor cable (see optional accessories)
- 3 - 5100 coupler series or dual mode charge amplifier
- 4 - 1511... output cable, BNC pos. to BNC pos., specify length in meters



Supplied Accessories

- 8412 mounting stud, 1/4-28 thd.
- 8421 mounting stud 1/4-28 to M8 thd., shipped only outside N.A.

Optional Accessories

- 1770A... sensor cable MS-3106 to BNC pos., use with 8752A50, specify length in meters
- 1772A... sensor cable, MS-3106 to BNC pos., use with 8752A50M5, specify length in meters
- 1774A... sensor cable, molded MS-3106 to BNC pos., use with 8752A50, specify length up to 30 meters
- 1776A... sensor cable, MS-3106 silicon boot, quick disconnect to BNC pos., use with 8752A50, specify length in meters
- 1778A... sensor cable, MS-3106 silicon boot, quick disconnect to BNC pos., use with 8752A50M5, specify length in meters
- 1780A... sensor cable, MS-3106 (90° elbow with strain relief) to BNC pos., use with 8752A50, specify length in meters

Note: MS-3106 mates with MIL-C-5015 accelerometer. All cables available in a 3 meter standard length; maximum length except where noted is 10 meters.

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