

Type 8795A50, 8795A50M5, 8795A50M8, 8795A50M9

8795A K-SHEAR® TRIAXIAL CUBE ACCELEROMETERS

The 8795A50 is a triaxial family of accelerometers that measure simultaneously shock and vibration in three orthogonal axis. They are available in two extended operating temperature ranges; the 8795A50M5 for high temperature 330°F operation and the 8795A50M8 for low temperature -320°F cryogenic operation. For installation ease, the sensors are housed in a convenient cube-

shaped package. The notched corner allows for convenient identification of the sensor's orientation when working in blind spots, such as under dashboards, etc. Permanent laser-etched markings on five sides clearly identify the three axes. The K-SHEAR design is insensitive to thermal transients and base strain. Quartz sensing elements provide years of accurate and repeatable measurements.

Continued

- Low impedance voltage mode
- Light 32gram weight titanium case
- Ideal for vehicle testing
- Patented K-SHEAR® design
- Low (-320°F) and High (330°F) versions available
- Hermetically sealed
- Conforming to CE

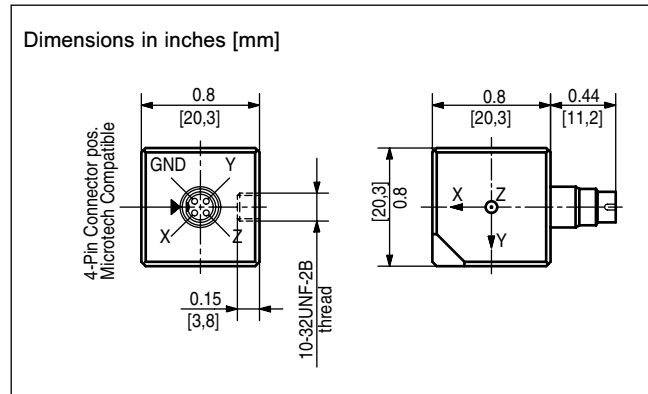


| Technical Data | Units | 8795A50, M5, M8 |
|--|-------------------------|-----------------|
| Acceleration Range | <i>g</i> | ±50 |
| Acceleration Limit | <i>g</i> _{pk} | ±100 |
| Threshold nom. | <i>g</i> _{rms} | 0.001 |
| Sensitivity ±10% @ 10 <i>g</i> _{rms} & 100Hz | mV/ <i>g</i> | 100 |
| Resonant Frequency nom. | kHz | 20 |
| Frequency Response ±5%, stud mount | Hz | 1 ... 4000 |
| | Hz | 1 ... 2000 |
| Time Constant nom. | s | 0.5 |
| Transverse Sensitivity typ. (max.) | % | 1.5 (3) |
| Amplitude Non-linearity | %FSO | ±1 |
| Environmental: | | |
| Base Strain Sensitivity @250 µε | <i>g</i> /µε | 0.01 |
| Shock (1 ms pulse width) max. | <i>g</i> _{pk} | 5000 |
| Long Term Stability | % | ±1 |
| Temperature Coefficient of Sensitivity | %/°F | -0.017 |
| | %/°C | -0.03 |
| Temperature Range Operating | | |
| 8795A50 | °F | -65 ... 250 |
| | °C | -54 ... 120 |
| 8795A50M5 | °F | -65 ... 330 |
| | °C | -54 ... 165 |
| 8795A50M8 | °F | -320 ... 250 |
| | °C | -195 ... 120 |
| Storage | | |
| 8795A50 | °F | -100 ... 300 |
| | °C | -74 ... 150 |
| 8795A50M5 | °F | -75 ... 330 |
| | °C | -60 ... 165 |
| 8795A50M8 | °F | -320 ... 300 |
| | °C | -195 ... 150 |

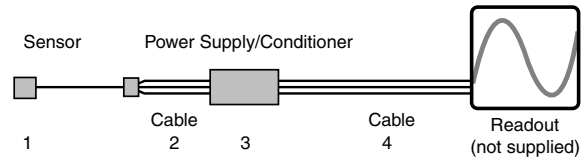
1 *g* = 9.80665 m/s², 1 inch = 25.4 mm, 1 gram = 0.03527 oz; 1 lbf-in = 0.1129 Nm

000-264e10.02 (DBK8.8795e)

| Technical Data | Units | 8795A50, M5, M8, M9 |
|---------------------------|-------------|---------------------------------|
| Output | | |
| Bias nom. | VDC | 11 |
| Impedance max. | Ω | 100 |
| Current | mA | 2 |
| Voltage F.S., nom. | V | ± 5 |
| Source | | |
| Voltage | VDC | 20...30 |
| Constant Current | mA | 2 ... 20 |
| Impedance | k Ω | >100 |
| Construction | | |
| Sensing Element | type | quartz/shear |
| Housing | material | titanium |
| Sealing-Housing/Connector | type | hermetic |
| Connector | type | 4-pin pos. Microtech Equivalent |
| Weight | grams | 32 |
| Mounting Torque | lbf-in (Nm) | 18 (2) |



Ordering Information



Specify:

- 1 - 8795A50 triaxial accelerometer or
8795A50M5 high temperature accelerometer, note: (1578A... cable must be used between sensor and 1756B(x) break out cable
- 8795A50M8 low temperature accelerometer
- 2 - 1578A... optional extension cable, 4-pin pos. Microtech equivalent pos. to 4-pin Microtech neg., specify length in meters
- 3 - 1756B(X) breakout cable, 4-pin neg. Microtech equivalent to 3x BNC pos. (X = 0.5, 3, 10 meters)
- 4 - 5100 series coupler or
5134A four-channel coupler
- 5 - 1511... output cable, BNC pos. to BNC pos., specify length in meters

A low impedance, voltage output is provided by the embedded Kistler Piezotron® electronic impedance converter. This output does not require special low noise cable and provides high noise immunity and insensitivity to cable motion. The low impedance output is also desirable for operation in a humid environment. Constructed in a heavy duty, hermetically sealed titanium case, all accelerometer models can withstand varied environmental conditions. The units can be stud or adhesive mounted.

Applications

Applications of this sensor include vehicle vibration and NVH testing, general laboratory, as well as modal testing.

Related Products

| | |
|----------|--|
| 8792A | 25 to 500 g ranges, through-hole mounting |
| 8793A500 | 11 gram, 0.63 square, 4-pin Microtech connector |
| 8794A500 | 7.6gram 0.63 square, low profile, integral cable |
| 8791A250 | 4 gram, 0.40 cube, integral cable |

Supplied Accessories

| | |
|------|--|
| 8402 | 10-32 mounting stud |
| 8411 | 10-32 to M6 mounting stud; shipped only outside N.A. |

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