Structural Test ICP® Accelerometers

Applications

- Structural Vibration Testing
- Multi-channel Modal Analysis
- Analytical Model Correlation
- Design Studies
- Force Response Simulation

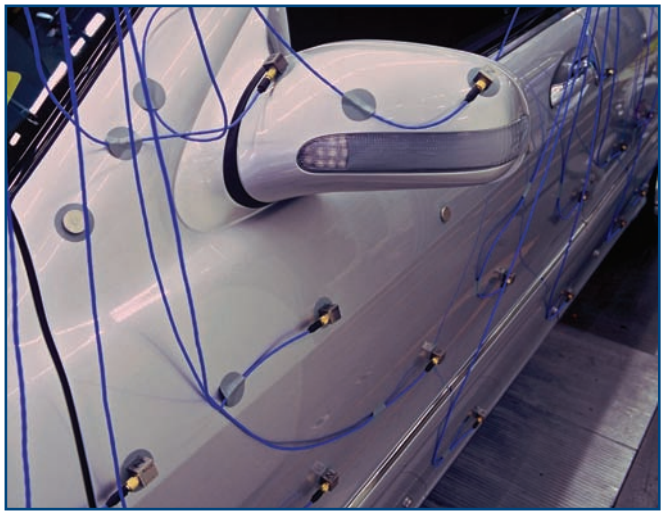
The Series 333 ICP® accelerometers, and their accessories, have been specifically designed to address the needs of multi-point modal and structural test measurement applications. This equipment has been developed in conjunction with the world renowned University of Cincinnati Structural Dynamics Research Laboratory and proven in real-world testing situations.

All accelerometers feature high-output, piezoceramic sensing elements for strong output signal levels when measuring lower-amplitude input vibrations. All reduce mass-loading effects by employing ultra-lightweight casing materials. All exhibit minimal phase deviation, an important consideration for mode shape analysis.

Each unit in this family includes TEDS functionality as an option. A sensor incorporating a Transducer Electronic Data Sheet (TEDS) is a mixed-mode (analog/digital) sensor with a built-in read/write memory that contains information about the sensor and its use. A TEDS sensor has an internal memory that includes information about the manufacturer, specifications and calibration, defined by IEEE standard 1451.4, effectively giving it the ability of "plug-and-play" self-identification within a measurement system. Using the same two-wire design of traditional piezoelectric with internal charge amplifier transducers, the TEDS sensor can flip between analog and digital modes, functioning with either a typical analog output, or with a digital bit stream output. Although a TEDS sensor can be connected to any ICP® sensor signal conditioner, only a TEDS-capable ICP® signal conditioner and data acquisition equipment support the digital communication mode.

Mounting pads, multi-conductor signal cables, and patch panels all help to control and organize the cable bundles of sensor arrays. This helps to minimize set-up time and potential errors that are often the result of cable tangles encountered during multi-channel structural testing.

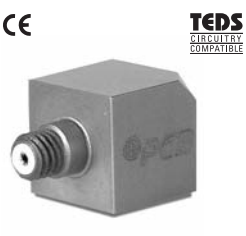
Structural Test ICP® Accelerometers



Highlights

- High output piezoceramic sensing element for strong output signal
- Lightweight casing materials to minimize mass loading effects
- Available in a variety of packages, mounting and cable options

Structural Test ICP® Accelerometers

Photos Shown Actual Size				
Model Number	**333B**	**333B30**	**333B40**	**333B50**
Sensitivity	100 mV/g	100 mV/g	500 mV/g	1000 mV/g
Measurement Range	± 50 g pk	± 50 g pk	± 10 g pk	± 5 g pk
Broadband Resolution	0.00007 g rms	0.00015 g rms	0.00005 g rms	0.00005 g rms
Frequency Range (± 5%)	2 to 1k Hz	0.5 to 3k Hz	0.5 to 3k Hz	0.5 to 3k Hz
Resonant Frequency	≥ 5 kHz	≥ 40 kHz	≥ 20 kHz	≥ 20 kHz
Temperature Range	0 to +150 °F -18 to +66 °C	0 to +150 °F -18 to +66 °C	0 to +150 °F -18 to +66 °C	0 to +150 °F -18 to +66 °C
Sensing Element	Ceramic/Shear	Ceramic/Shear	Ceramic/Shear	Ceramic/Shear
Electrical Connector	3-Pin Socket	10-32 Coaxial Jack	10-32 Coaxial Jack	10-32 Coaxial Jack
Housing Material	Polymer	Titanium	Titanium	Titanium
Sealing	Hermetic	Hermetic	Hermetic	Hermetic
Weight	5.6 gm	4.0 gm	7.5 gm	7.5 gm
Size	0.48 x 0.84 in 11.9 x 21.3 mm	0.4 in Cube 10.2 mm Cube	0.45 in Cube 11.4 mm Cube	0.45 in Cube 11.4 mm Cube
Mounting	Adhesive	5-40 Thread	5-40 Thread	5-40 Thread
Supplied Accessories				
Wax/Adhesive	—	080A109/080A90	080A109/080A90	080A109/080A90
Adhesive Mounting Base	—	080A25	080A25	080A25
Mounting Stud/Screw	—	081A27, M081A27	081A27, M081A27	081A27, M081A27
Additional Versions				
Alternate Mounting	—	333B32 - Adhesive	333B42 - Adhesive	333B52 - Adhesive
Alternate Connector Position	—	333B35 - Top	333B45 - Top	—
Additional Accessories				
Adhesive Mounting Base and Cable	080B37, 080B38, 080B40	—	—	—
Triaxial Mounting Adaptor	080B55, 080A141	—	—	—
Removal Tool	—	039A08	039A09	—
Mating Cable Connector	—	EB	EB	EB
Recommended Cables	080B38	002, 003 CE	002, 003 CE	002, 003 CE

■ See models 356A16, 356A17, & 356B18 listed on page 8 for Triaxal Configuration of Structural Test ICP® Accelerometers.