



Integrated-Circuit-Piezoelectric/AE Sensors



PCB Piezotronics, Inc. has been a supplier of precision sensors for acceleration, pressure and force measurements since 1967. Unmatched customer service, state-of-the-art manufacturing capabilities, and worldwide distribution have contributed to the steady growth and success. Customers from industrial, governmental, educational, aerospace, automotive, medical, and R&D disciplines have relied on PCB to deliver products and solutions for many demanding requirements.

Structural Solutions Private Limited, specializing on system solutions in the field of Noise, Vibration and Harshness is now pleased to inform the strategic alliance with PCB Piezotronics, USA to provide cost effective technology intensive sensors and system solutions to the Indian Industry.

As an introductory offer PCB is pleased to supply new calibrated accelerometers in exchange of any old damaged / working accelerometers of any make with 30% discounted price.

Vibration Sensors

Precision Quartz Shear ICP/AE Accelerometers :

Miniature, General Purpose, Through Hole

Applications:

- Routine vibration measurements
- Product testing
- Structural testing
- Testing in adverse environments
- Impulse response measurements
- Vibration control



Ceramic Shear ICP/AE Accelerometers :
Teardrop, Miniature, Low Profile, Through Hole, High Resolution

Applications:

- Low amplitude vibration measurements
- High frequency vibrations
- Minimized mass loading effects
- Space restricted installations
- Low profile accelerometers
- Ring shaped accelerometers



Triaxial ICP/AE and Charge Output Accelerometers :

Miniature, General Purpose, Through Hole, High Temperature, Structural Analysis, Filtered Output

Applications:

- Simultaneous x, y, and z axis measurements
- Engine vibration and NVH studies
- Modal analysis
- Road response tests
- Vehicle testing
- Flight testing
- Package testing
- Squeak and rattle
- Structural Analysis



Shock Accelerometers:

High Frequency, General Purpose, Charge & Voltage Output

Applications:

- Aerospace vehicle separations
- Pile driver monitoring
- Simulated pyroshock events
- Recoil and penetration
- Impact press monitoring
- Explosive studies
- Shaker impact monitoring



Charge Output Accelerometers:

Miniature, General Purpose, High Temperature

Applications:

- Interface with existing charge amplifiers
- High temperature vibration measurements
- Engine compartment studies
- Exhaust component vibration tests
- Steam turbine testing
- Jet engine vibration analysis



Seismic ICP/AE Accelerometers :

Extreme Environment Quartz Shear ICP/AE Accelerometers:

High Temperature, Cryogenic, HALT, HASS, ESS

Applications:

- Building vibration monitoring
- Earthquake detection
- Structural testing of bridges
- Floor vibration monitoring
- Geological formation studies
- Foundation vibration monitoring



Structural Test / Array Accelerometers: Modally Tuned ICP/AE Impact Hammers and Hammer Kits

Applications:

- High temperature
- Cryogenic temperature
- HALT, HASS, ESS
- Thermal stress screening
- Environmental testing
- Combined environmental chambers



Metric ICP/AE and Charge Mode Accelerometers:

Applications:

- Structural vibration testing
- Multi-channel modal analysis
- Automotive NVH analysis
- iBody-in-white testing
- Aircraft GVT's



Modally Tuned ICP Impact Hammers & Kits:

Applications:

Modal analysis
Structural testing
Impulse and response
Resonance determination
Laboratory design test evaluation
Civil structure health determination



Low Profile Load Cells: 500 ñ 200k lb- For higher range tension and compression measurements

Applications:

Component testing, Material testing, Structural testing, Life cycle testing, Bumper impact, Press applications



Metric ICP and Charge Output Accelerometers :

Applications:

Metric mounting threads
Metric hex sizes
Directly replaceable
M3 coaxial electrical connectors
Metric standardized sensitivities with 159.2 Hz reference frequency calibration



Fatigue Rated Load Cells:

Fatigue Rated load cells are available in capacities from 250 lb to 250k lb (1100 to 1.1M N).

Applications:

Material testing, Structural testing, Life cycle testing, Torque arm, Component testing, Calibration standard



Capacitive Accelerometers :

Precision, Triaxial, Low Cost

Applications:

Uniform acceleration measurement
Low-frequency vibration analysis
Automotive ride quality assessment
Modal analysis
Robotics
Elevator ride quality
Tilt measurement



Rod-Style Load Cells: From 1000 to 50000Lb, Lightweight aluminum for lower ranged units, high strength steel for higher ranged units.

Applications: Ideal for tension applications, quality assurance cable, chain, or wire tension, process automation, hydraulic actuators, production Monitoring



Special Purpose Sensors :

Economy/OEM Accelerometers, Dynamic ICP Strain Sensor, Triaxial ICP Seat Pad Accelerometer, Human Vibration Monitor, ICP Mechanical Impedance Sensor

Applications:

Low cost / OEM sensors
Dynamic strain measurements
Whole-body vibrations
Mechanical impedance



S-Beam Load Cells: 100 ñ 10k lb, Universal load cell for tension and compression

Applications: weighing applications



Calibration Equipment and Services :

Portable Shaker

Provides mechanical excitation at 1 g rms / 1 g pk
Fixed, 159.2 Hz frequency
Powered by four iAA alkaline batteries (included)
Automatic shut-off or continuous operation
Mechanical stops protect from overload
Optional AC power adaptor



Hollow Compression Load Cells

50 ñ 50k lb, Hollow compression load cells feature a smooth thru hole design and are cost effective solutions for applications requiring a load structure to pass directly through the load cell itself.



Multi-Component Torque-Thrust

Sensors: 500 in-lb / 5000 lb ñ 5000 in-lb / 10k lb, Multi-component torque-thrust sensors simultaneously measure a reaction torque and force with a single device.

Applications: Safety testing, structural testing, biomedical applications, crash barriers



Force & Torque Sensors

Strain Guage Load Cells

General Purpose Load Cells: General purpose load cells

are available range in capacity from as small as 25 lb, to as large as 500klb. Applications: Component testing, Quality control, Seat testing, Weighing material testing, Torque arm.



Strain Guage Torque Sensors

Reaction Torque Sensors: 2000 ñ 500k in-lb, Rotary torque sensors employ a freely rotating shaft within a fixed housing.

Applications:

Viscosity and lubrication studies, torsion testing, bearing, friction, dynamometer, braking testing, stepping witch torque.



Rotary Transformer Torque Sensors

Non-contact rotary transformer rather than slip rings or brushes

Applications:

pump testing, efficiency testing, engine dynamometer, transmission testing, electric motor testing, gear box efficiency testing



Gravimetric Calibrator

Calibrates accelerometers, impact hammers and force sensors
References measurements to Earth's gravity
Utilizes drop and ratio techniques
Applies Newton's law $F=ma$
Builds confidence in sensor performance
Provides educational insight of sensor behavior



TORQUEDISC: The TORQUEDISCÆ is a short coupled torsionally stiff structure that is ideal for a wide range of applications requiring high accuracy, in line, rotary torque measurements. Applications: chassis dynamometer, 4-square dynamometer, drive shaft torque measurement, engine dynamometer, efficiency testing



Back-to-back Calibration Standards

The back-to-back reference calibration accelerometer is mounted to a mechanical exciter and the sensor to be calibrated is installed onto its surface.

Acceleration Calibration Workstation
Hopkinson Bar Calibration System



Dynamic Force Sensors (Quartz)

General Purpose Quartz Force Sensors:

They are offered in both ICPÆ and charge mode types and are available to measure full-scale compression forces from 10 to 5000 lb and fullscale tensile forces from 10 to 500 lb.



Applications:

Dynamic compression and tension, Impact testing, Punching and forming, Drop testing, Materials testing, Machinery studies

3-Component Quartz Force Sensors: 3-Component quartz

force sensors are capable of simultaneously measuring dynamic force in three orthogonal directions (X, Y, and Z). Applications: Force-limited vibration testing, Cutting tool forces, Force dynamometers, Engine mount analysis, Biomechanics research, Modal analysis



Acoustic Products :

Precision Microphones, Preamplifiers, Array Microphones, Calibrators, Accessories



Signal Conditioners :

Battery Powered, Line Powered, Modular, Multi Channel, Meters and Monitors, Charge Converters, TEDS Instrumentation, Kits



Quartz Impact Force Sensors: Quartz impact force sensors are specifically designed for compressive impact loading.

Applications: Impact measurements, Crash testing, Punch and tablet presses, Package drop testing



Cable Assemblies and Connector Adaptors



Mounting Accessories



Miniature ICPÆ Quartz Force Sensors: are designed for applications demanding small size and very high sensitivity.

Applications:

Very small compression and tension forces, Break point materials testing, Penetration forces, Print head monitoring.



➡ For further product & application details please contact:

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