RESEARCH AND DEVELOPMENT SENSORS AND INSTRUMENTATION

PCB PIEZOTRONICS
AN AMPHENOL COMPANY

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SHOCK & VIBRATION, FORCE, PRESSURE, AND ACOUSTICS

INDUSTRIES

- Acoustic Architectural Design
- Appliances
- Consumer Electronics
- Chemical
- Environmental Testing
- Food & Beverage
- Industrial Hygiene
- Injection Molding
- Machine Tool
- Medical Metal, Glass, Plastic & Material Forming
- Pharmaceutical
- Package Design & Testing
- Power Tool
- Production/Process Equipment
- Quality Assurance
- Semiconductor

PCB Piezotronics Inc. manufactures the largest selection of sensors and sensor accessory products worldwide. Product lines include sensors for the measurement of acceleration, acoustics, force, load, pressure, shock, strain, torque, and vibration. All sensors are backed by our Total Customer Satisfaction guarantee.

Engineers and scientists at leading businesses, research institutions, and independent laboratories around the world choose PCB® as their sensor manufacturer. In a global marketplace driven by innovation and development, PCB has a sensor for every stage of product development including R&D, production variation control, and process monitoring and protection.

PLATINUM STOCK SENSORS
SAME DAY SHIPPING - LIFETIME WARRANTY

At PCB, we don't just know the sensor business; we pioneered ICP® technology. For over 50 years, every sensor design and assembly is subjected to tight in-house inspection and quality control. That's why we have impeccable product performance and longevity, the expectation our customers have for every PCB sensor.

Platinum Stock Sensors* program is one of the ways we live up to our Total Customer Satisfaction guarantee. Driven by customer demand, these sensors and cables are the best fit for typical R&D, product testing, and industrial monitoring applications. Platinum Stock Sensors ship the same day and are backed by a lifetime warranty — if you are not 100% satisfied, simply send them back. We'll repair or replace them, guaranteed. No questions asked!

*For U.S. customers, orders up to 10 units placed before 4 p.m. EST ship the same day. IF NOT, YOUR SHIPPING IS FREE. For orders outside the U.S., please contact your local representative. Volume discounts are valid in the USA only

PIEZOELECTRIC ACCELEROMETERS

PCB® piezoelectric accelerometers offer tremendous versatility for shock and vibration measurements. Sensors are available with measurement capabilities down to 1µg, (for making low level, low frequency vibration measurements) and up to 100,000g's, (for measuring short duration transient shock events).

HIGHLIGHTS

- Durable - No Moving Parts
- Rigidity Imparts High Frequency Range
- Single Axis and Triaxial Configurations
- Most Sensors Hermetically Sealed in a Titanium Housing
- Screw, Stud, or Adhesive Housing

APPLICATIONS

- Product Qualification Studies
- Vibration Control
- Quality Assurance (End of Line Testing)
- Package Drop Testing
- Structural Vibration Testing
- Environmental Testing
- Floor Vibration Monitoring
- Simulated Pyroshock Testing

MINIATURE TEARDROP ICP®

MODEL 352A21

- ± 500 g range
- Low 0.6 gram mass
- Low 0.14" height

HIGH SENSITIVITY ICP®

MODEL 352C33

- ± 50 g range
- Low 0.1 mg resolution
- 0.5 to 10,000 Hz frequency range

MINIATURE TRIAXIAL ICP®

MODEL 356A01

- ± 1000 g range
- Triaxial configuration
- Low 1.0 gram mass

SHOCK ICP®

MODEL 350D02

- ± 50,000 g range
- Built-in filtering
- Electrically case isolated

MINIATURE FLEXURAL ICP®

MODEL 393B05

- ± 0.5 g range
- High 10 V/g sensitivity
- Low 4 µg resolution

TRIAXIAL ICP®

MODELS 356A45/44/43 & J356AXX

- 50/100/500 g
- Triaxial configuration
- TEDS enabled

DYNAMIC FORCE SENSORS

Quartz, piezoelectric force sensors are durable measurement devices with exceptional characteristics for the measuring of dynamic force events. Typical measurements include dynamic and quasistatic forces as encountered during actuation, compression, impact, impulse, reaction, and tension.

Assembly force monitoring using 208C Series force sensor

HIGHLIGHTS

- Rugged and durable
- High Stiffness
- Very Repeatable
- Wide Dynamic Range
- Fast Rise Time
- High Useable Frequency Range

APPLICATIONS

- Modal Analysis
- Biomechanics
- Drop Testing
- Component Fatigue Testing
- Impact & Repetitive Applications
- Material Studies

GENERAL PURPOSE

208C SERIES

- Ranges 10 to 5k lbs
- Tension / compression
- 5/8” H x 5/8” D
- General purpose

ICP® QUARTZ RING

201B SERIES

- Ranges 10 to 5k lbs
- Low profile design
- High resonant freq.
- 0.31” H x 0.65” D

TRIAXIAL ICP®

260 SERIES

- 3-Axis, Fx, Fy, Fz
- ICP®
- Mtg. hardware incl.
- Ranges 1k to 10k lbs

ICP® QUARTZ

MODELS 200C20 & 200C50

- 20k lb FS capacity & 50k lb
- Impact cap incl.
- ¼-28 (F) mtg. thd.
- S.S. construction

ICP® QUARTZ LINK

SERIES 221

- Ranges 10to 50k lb
- uses 201B-207C rings
- Metric & UNF mounting options
- S.S. construction

DYNAMIC PRESSURE SENSORS

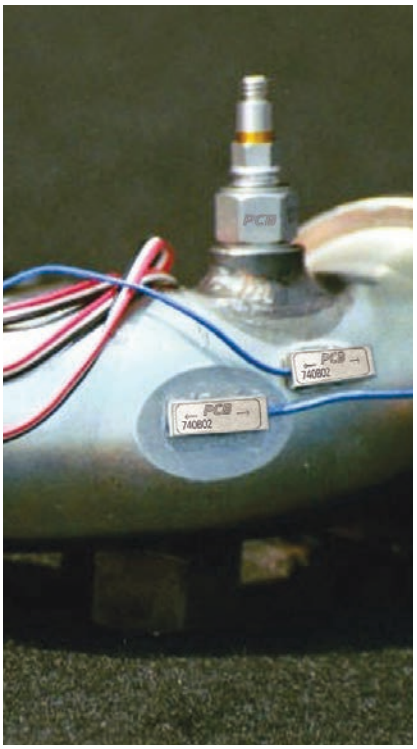
A wide variety of pressure sensors are provided to satisfy a multitude of dynamic measurement requirements. Whether it's a pharmaceutical injection design application, a component test, or a pulsation study of a hydraulic pump, PCB® has off-the-self sensors and can custom design sensors for specific applications.

HIGHLIGHTS

- Fast, Micro-second Response Time
- Resonant Frequency to 500 kHz
- Measurement of Small Pressure Changes Under Large Static Pressures
- Operating Temperature Range From -320 to +750 °F (-196 to +399 °C)
- Rugged Solid State Construction

APPLICATIONS

- Fluid Borne Noise
- Pulsations, Surges, Cavitations
- Combustion Studies
- Explosive Component Testing
- Hydraulic & Pneumatics Systems
- High Intensity Sound



Automotive air bag propellant testing using 102 Series ICP® pressure sensor

HIGH RESOLUTION ICP®

102 SERIES

- Ranges 50 to 10 kpsi
- Ground isolated
- Easy installation
- Rise time of ≤ 1 µsec

HIGH SENSITIVITY PROBE

112 SERIES

- Acceleration compensation
- ≥ 250 kHz res. freq.
- ICP®
- High sensitivity

HIGH FREQUENCY ICP®

113 SERIES

- ≥ 500 kHz res. freq
- Rise time of ≤ 1 µsec
- Frequency tailored
- Acceleration compensation

ICP® ACOUSTIC

106 SERIES

- Hermetic acoustic
- Ranges 1 to 8.3 psi
- Acceleration compensation
- ICP®

HIGH TEMPERATURE

116 SERIES

- 100 psi FS range
- -400 °F to +650 °F
- 6 pC/psi
- Hermetically sealed

PRECISION PREPOPLARIZED MICROPHONES

A broad portfolio of acoustic products is provided to measure sound pressure and noise. These range from the industry's first ½" low noise (to 6.5 dB(A)) prepolarized microphone and other high accuracy 377 and 378 series of IEC compliant microphones and preamplifiers to the value oriented 130F series of "array" electret microphones and preamplifiers.

HIGHLIGHTS

- Modern Prepolarized (0V)
- Traditional Externally Polarized (200V)
- Free-field, Random Incidence and Pressure Response Fields
- Wide Dynamic Range 6.5 dB(A) to 178 dB
- Wide Temperature Range -40° to 800°C
- IEC 61094 & Class 1 Compliant Models
- 378 and 377 series are A2LA and ILAC Accredited and CE marked
- Calibrations are traceable through one or more of the following: National Labs, NIST, PTB or DFM

APPLICATIONS

- Sound Power Testing
- Engine Noise Analysis
- Sound Quality
- Wind Turbine Measurements
- Material Absorption Testing
- Beamforming & Holography
- Computer Disk Drive Noise
- Noise, Vibration, Harshness (NVH) Testing
- Noise Source Identification

1/2” HIGH SENSITIVITY FREE-FIELD CONDENSER

MODEL 378B02

- 15 dB(A) Noise floor
- 3.75 Hz to 20 kHz
- For open areas and anechoic chamber tests

1/2” HIGH TEMPERATURE FREE-FIELD CONDENSER

MODEL HT378B02

- Temperatures up to 125 °C
- 16 dB(A) to 138.5 dB
- For engine analysis and exhaust testing

1/2” HIGH FREQUENCY RANDOM INCIDENCE CONDENSER

MODEL 377A21

- 4 Hz to 25 kHz
- 20 dB(A) to 162 dB
- For reverb chambers, cabin noise, and room acoustics

1/4” SIDE-VENTED PRESSURE FIELD CONDENSER

MODEL 378A14

- 4 Hz to 70 kHz
- 50 dB(A) to 173 dB
- For impedance tube, ducts, and flush mount testing

1/4” COST EFFECTIVE FREE-FIELD ICP® ARRAY

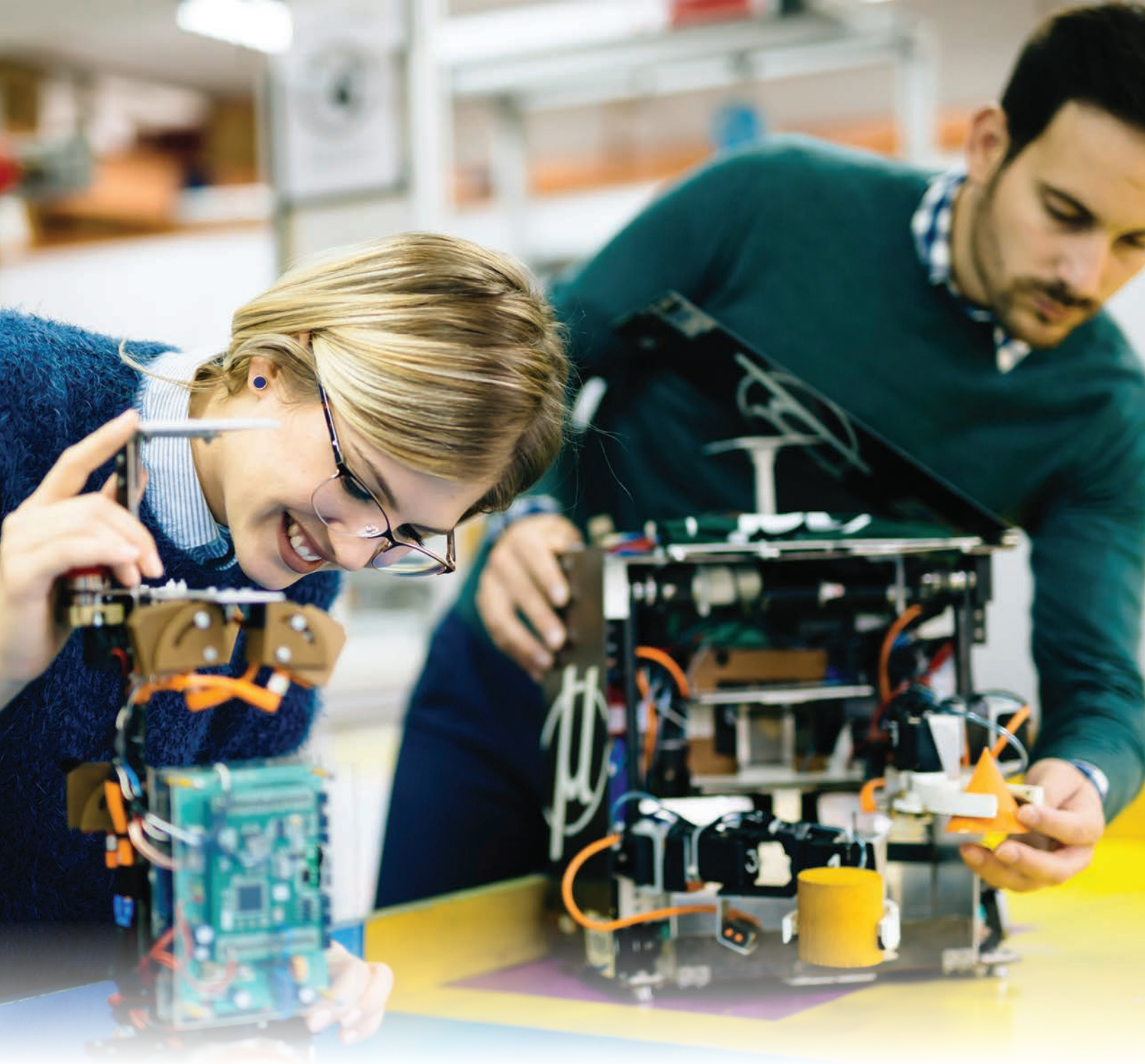
MODEL 130F20

- Audible range testing
- 26 dB(A) Noise floor
- For beamfoarming and large channel count systems

1/2” LOW NOISE FREE-FIELD CONDENSER

MODEL 378A04

- Industry’s first 6.5 dB(A) 0V
- High sensitivity, 450 mV/pa
- For disc drive, white goods, and electric vehicle testing



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