NEW FROM PCB®

Sensors & Instrumentation for Measuring Vibration, Sound, Torque, Pressure, Force, and Strain
ACCELEROMETERS FOR SHOCK & VIBRATION MEASUREMENTS

- ICP® Shock Accelerometers
- Triaxial ICP® Accelerometers
- Single Axis ICP® Accelerometers

Miniature, Lightweight ICP® Shock Accelerometers
Models 352A91 & 352A92
- Sensitivity: 1 mV/g – 352A91
  0.25 mV/g – 352A92
- Measurement Range: ±5000 g pk – 352A91
  ±20000 g pk – 352A92
- Overload Shock Limit: ±20000 g pk – 352A91
  ±30000 g pk – 352A92

Ground Isolated Lightweight Miniature Triaxial ICP® Accelerometer
Model HTJ356B01
- Sensitivity: 5 mV/g
- Measurement Range: ±1000 g pk
- Operation to 356 °F (180 °C)

Ground Isolated Miniature Triaxial ICP® Accelerometers with TEDS
Model J356A43
- Sensitivity: 10 mV/g
  (1.02 mV/(m/s²))
- Measurement Range: ±500 g pk (±4905 m/s² pk)
- Frequency Range: 0.7 Hz to 7 kHz
- Electrical Isolation: > 10⁹ Ohm

Model J356A44
- Sensitivity: 50 mV/g
  (5.1 mV/(m/s²))
- Measurement Range: ±100 g pk (±981 m/s² pk)
- Frequency Range: 0.7 Hz to 7 kHz
- Electrical Isolation: > 10⁹ Ohm

Model J356A45
- Sensitivity: 100 mV/g
  (10.2 mV/(m/s²))
- Measurement Range: ±50 g pk (±490 m/s² pk)
- Frequency Range: 0.7 Hz to 7 kHz
- Electrical Isolation: > 10⁹ Ohm
Low Temperature Coefficient Triaxial ICP® Accelerometer with TEDS
Model TLD339A36
- Operation to 325 °F (163 °C)
- Temperature Coefficient of Sensitivity: -0.03%/°F (-0.06 %/°C)
- Sensitivity: 10 mV/g

Thru-hole Triaxial ICP® Accelerometers with Case Isolation and TEDS
Models 354A04 & 354A05
- Sensitivity: 10 mV/g – 354A04
  100 mV/g – 354A05
- Measurement Range: ±500 g pk – 354A04
  ±50 g pk – 354A05
- Frequency Range: 0.4 Hz to 5 kHz

Low Temperature Coefficient Ground Isolated ICP® Accelerometer with UHT-12™ Element
Model 320C53
- Operation to 325 °F (163 °C)
- Temperature Coefficient of Sensitivity: -0.005%/°F (-0.009 %/°C)
- Sensitivity: 1 mV/g
- Measurement Range: ±5000 g pk

Ultra-lightweight ICP® Accelerometer with Detachable Cable
Model 352A26
- Sensitivity: 10 mV/g
- Frequency Range: 2 Hz to 10 kHz
- Overload Shock Limit: ±5000 g pk
FORCE & STRAIN SENSORS FOR RESEARCH & DEVELOPMENT

- ICP® Strain Sensor
- ICP® Force Sensor
- Modally Tuned® Impact Hammers

Uniaxial ICP® Strain Sensor, Ground Isolated with 10 ft (3 m) Integral Cable
Model RHM240M40
- Sensitivity: 10 mV/µε
- Measurement Range: ±300 pk µε
- Thru-hole design for M6 fastener
- Electrical Isolation: > 10⁸ Ohm

Multi-purpose ICP® Force Sensor with TEDS
Model TLD208C02
- Sensitivity: 50 mV/lb (11241 mV/kN)
- Measurement Range: 100 lb (0.4448 kN)
- Upper Frequency Limit: 36 kHz
SENSORS FOR RESEARCH & DEVELOPMENT

Small Modally Tuned® Impact Hammer with Force Sensor, Tips and TEDS
Model TLD086C03
- Sensitivity: 10 mV/lbf (2.25 mV/N)
- Measurement Range: ±500 lbf pk (±2224 N pk)
- Hammer Mass: 0.34 lb (0.16 kg)

Modally Tuned® Impact Hammer with Force Sensor, Tips and TEDS
Model TLD086D05
- Sensitivity: 1 mV/lbf (0.23 mV/N)
- Measurement Range: ±5000 lbf pk (±22240 N pk)
- Hammer Mass: 0.7 lb (0.32 kg)

Modally Tuned® Impact Hammer with Force Sensor, Tips and TEDS
Model TLD086D20
- Sensitivity: 1 mV/lbf (0.23 mV/N)
- Measurement Range: ±5000 lbf pk (±22240 N pk)
- Hammer Mass: 2.4 lb (1.1 kg)

Large Modally Tuned® Impact Hammer with Force Sensor, Tips and TEDS
Model TLD086D50
- Sensitivity: 1 mV/lbf (0.23 mV/N)
- Measurement Range: ±5000 lbf pk (±22240 N pk)
- Hammer Mass: 12 lb (5.5 kg)
PRESSURE SENSORS FOR RESEARCH & DEVELOPMENT

- ICP® Blast Pressure Pencil Probe
- Micro ICP® Pressure Sensor
- Rocket Motor ICP® Pressure Sensor

Quartz, Free-field, ICP® Blast Pressure Pencil Probe with 2 Outputs for Time of Arrival Measurement

<table>
<thead>
<tr>
<th>SPECIFICATIONS</th>
<th>137B25</th>
<th>137B26</th>
<th>137B27</th>
<th>137B28</th>
<th>137B32</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity (±15%)</td>
<td>100 mV/psi (14.5 mV/kPa)</td>
<td>20 mV/psi (2.90 mV/kPa)</td>
<td>10 mV/psi (1.45 mV/kPa)</td>
<td>1 mV/psi (0.145 mV/kPa)</td>
<td>20 mV/psi (2.9 mV/kPa)</td>
</tr>
<tr>
<td>Measurement Range</td>
<td>50 psi (345 kPa)</td>
<td>250 psi (1724 kPa)</td>
<td>500 psi (3447 kPa)</td>
<td>1000 psi (6895 kPa)</td>
<td>250 psi (1724 kPa)</td>
</tr>
<tr>
<td>Frequency (± 5%)</td>
<td>≥ 400 kHz</td>
<td></td>
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<tr>
<td>Incident Rise Time</td>
<td>≤ 6.5 mSec (msec)</td>
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</tbody>
</table>

Micro ICP® Pressure Sensor for High Frequency Velocity and Time of Arrival Measurement
Model 132B38
- Sensitivity: 140 mV/psi (20.3 mV/kPa)
- Measurement Range: 50 psi (345 kPa)
- Frequency Range: 11 kHz to 1.0 MHz
- Size: 0.13 in (3.2 mm) Diameter by 0.30 in (7.6 mm) Length

Rocket Motor ICP® Pressure Sensor with Field Replaceable Coolant Ports and Integral Armored Cable, 4 ft (1.2 m)
Model 123B22
- Sensitivity: 1.0 mV/psi (0.145 mV/kPa)
- Measurement Range: 3000 psi (20685 kPa)
- Operation with Water Flow to 250 °F (121 °C)
SPINNING WHEEL INTEGRATED FORCE TRANSDUCERS

SWIFT® Evo

SWIFT Evo 10 Motorcycle/ATV
- Fx & Fz up to 20 (4,400) kN (lbf)
- Mx & Mz up to 3 (2,235) kN-m (lbf-ft)
- Hysteresis (force) 0.2 (0.15) %FS (Typical)

SWIFT Evo 20 Small Car
- Fx & Fz up to 30 (6,744) kN (lbf)
- Mx & Mz up to 6 (4,425) kN-m (lbf-ft)
- Hysteresis (force) 0.2 (0.1) %FS (Typical)

SWIFT Evo 30 Passenger Car
- Fx & Fz up to 50 (11,240) kN (lbf)
- Mx & Mz up to 9 (6,638) kN-m (lbf-ft)
- Hysteresis (force) 0.2 (0.15) %FS (Typical)

SWIFT Evo 40 Light Truck
- Fx & Fz up to 60 (13,489) kN (lbf)
- Mx & Mz up to 15 (11,063) kN-m (lbf-ft)
- Hysteresis (force) 0.2 (0.1) %FS (Typical)

SWIFT Evo 45 Medium Truck
- Fx & Fz up to 120 (26,977) kN (lbf)
- Mx & Mz up to 28 (20,652) kN-m (lbf-ft)
- Hysteresis (force) 0.2 (0.2) %FS (Typical)

Evo Transducer Interface
- New Graphical User Interface for easy set-up
- TEDS
- Low profile
SENSORS FOR
MACHINERY HEALTH
MONITORING

- ICP® Accelerometers
- Vibration Transmitters
- Vibration Switches
- Enclosures

ICP® Accelerometers with M12 Connector
Models 601A92, 602D91 & 603C91
- Sensitivity:
  - 500 mV/g – 601A92
  - 100 mV/g – 602D91
  - 100 mV/g – 603C91
- Frequency Range:
  - 0.17 to 10k Hz– 601A92
  - 0.5 to 8k Hz– 602D91
  - 0.5 to 10k Hz– 603C91

Small High Frequency Triaxial ICP® Accelerometer
Model (EX)639A91
- Sensitivity: 100 mV/g
- Frequency Range: 0.5 to 13k Hz
- Extremely small footprint (0.95” x 0.95” excluding the side exit connector)

Switch Boxes with Continuous and Switched Outputs
Models 691C41 & 691C42
- Switched output connectors:
  - BNC for vibration
  - BNC for temperature
  - MIL connector for vibration and temperature
- Continuous output connectors:
  Terminal blocks

SENSORS FOR MACHINERY HEALTH MONITORING

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  Terminal blocks
SENSORS FOR
POWER GENERATION
EQUIPMENT

- ICP® Accelerometers
- Charge Output Accelerometers

1200 °F (649 °C) Single-Ended Charge Output Accelerometers with UHT-12™ Element
Models 357E90, 357E91, 357E92 & 357E93
- Sensitivity: 5 pC/g – 357E90,91
  2.3 pC/g – 357E92,93
- Frequency Range: Up to 3 kHz

1200 °F (649 °C) Differential Charge Output Accelerometers with UHT-12™ Element
Models 357A94 & 357A95
- Sensitivity: 3.3 pC/g
- Frequency Range: Up to 3 kHz

900 °F (482 °C) Differential Charge Output Accelerometer with UHT-12™ Element
Model 357A100
- Sensitivity: 5.0 pC/g
- Frequency Range: Up to 4 kHz

900 °F (482 °C) Single-Ended Charge Output Accelerometer with UHT-12™ Element
Model 357A63
- Sensitivity: 0.53 pC/g
- Frequency Range: Up to 10 kHz

1200 °F (649 °C) Single-Ended Charge Output Accelerometer with UHT-12™ Element
Model 357A64
- Sensitivity: 1.15 pC/g
- Frequency Range: Up to 10 kHz

1200 °F (649 °C) Single-Ended Charge Output Accelerometer with UHT-12™ Element
Model 357M168
- Sensitivity: 1.15 pC/g
- Frequency Range: Up to 10 kHz
MICROPHONES FOR ACOUSTIC MEASUREMENTS

- Prepolarized, 0V ICP® Microphones
- Externally Polarized, 200V Microphones
- Phantom Powered, 48V Microphones
- Cost effective Array ICP® Microphones

Hazardous Locations & Explosive Atmospheres Compliant ICP® Condenser Microphone
Model EX378B02
- ATEX, IECEx, ETL approved and IEC-61094 compliant
- M1 below ground approved outside North America
- Frequency Range: 3.75 Hz to 20 kHz
- Dynamic Range: 15.5 dBA to 137 dB

1/2" Low Noise Free-field ICP® Microphone System with TEDS
Model 378A04
- Prepolarized (industry’s first)
- Frequency Range: 10 Hz to 16 kHz
- Less than 6.5 dBA noise floor

1/2" Water & Dust Resistant Free-field ICP® Microphone System
Model 130A24
- For harsh environments - IP55 Rated
- Frequency Range: 20 Hz to 16 kHz
- 3% Distortion Rating: 143 dB (150 dB before clipping)

1/2" Stereo-matched Microphone and Preamplifier Pair for Phantom Power
Model 379A33
- Frequency Range: 3.15 Hz to 40 kHz (±3dB)
- Dynamic Range: 22 dBA to 150 dB
- Uses audio XLR connector

High amplitude ¼” Array ICP® Microphone System with TEDS
Model 130A23
- Dynamic Range: 30 dBA to 150 dB
- Frequency Range: 20 Hz to 20 kHz (±/- 2 dB)
- 5° phase to 5 kHz for noise source location applications

Phantom Powered Preamplifier for Test and Measurement Microphones
Model 426A14
- 12V, 24V, & 48V compatible
- Works with 1/4” and 1/2” prepolarized microphones
- Uses audio XLR connector
NOISE & VIBRATION MONITORING SOLUTIONS

- Sound Level Meters
- Noise Monitoring Systems
- Audiometer Calibration Systems
- Headphone Test Fixtures

SoundAdvisor™ Permanent Noise Monitoring
Model NMS045
- 24/7 network access
- Easy to install and maintain
- AC or solar power options
- Email and text alerts of exceedances

SoundAdvisor™ Portable Noise Monitoring
Model NMS044
- Remote 24/7 Monitoring
- Easy deployment in the field
- Solar power options
- Real-time alerts

SoundAdvisor™ Sound Level Meter
Model 831C
- Designed for web browser access
- Connectivity via cellular, Wi-Fi, and Ethernet
- Expandable memory for continuous sound recording

Audiometer Calibration System
Model AudCal
- Portable, field-ready calibration solution
- Test supra-aural & circumaural headsets, bone vibrators, insert earphones, and speakers
- Perform sound booth certifications

Audiometer Calibration Software
Model 831C-AUD
- Firmware to test any audiometer
- Perform semi-automated testing and generate PDF reports with digital signatures
- Manage and recall data, calculations, and calibration reports

Headphone Test Fixture
Model AEC206
- Test supra-aural, circumaural, supra-concha, intraconcha, and insert-type headphones
- Production quality assurance
- Headphone research & development
SENSOR KITS

**Extreme Temperature Kit**
Model 300A36
Includes:
- Charge output accelerometer (Model 357E92)
- Low-noise coaxial cable (Model 003A05)
- In-line charge converter (Model 422E35)
- Low-cost, black coaxial cable (Model 012A10)

**Modal Kit**
Model 300A37
Includes:
- Modal array, ceramic shear ICP® accelerometers (Model TLD333B30)
- General purpose Modal Analysis impact hammer (Model 086C03)
- Low-noise coaxial cables (Model 003C10)
- Low-cost, black coaxial cable for impact hammer (Model 012A10)
- Adhesive Kit (Model 080A90)

**General Purpose Pressure Kit**
Models 100A05 to 100A08
Includes:
- High frequency ICP® pressure sensors (Models 113B21, 26, 27, & 28)
- High frequency ICP® pressure sensor, placebo version (Model 113B22PBO)
- Mounting adaptors (Model 061A59)

**Pencil Probe Kit**
Models 100A21 to 100A25
Includes:
- Quartz, free-field, ICP® blast pressure pencil probes (Models 137B21B, 22B, 23B, 24B, & 25B)
- Quartz, free-field, ICP® blast pressure pencil probe placebo version (Model 137BPBO)
- Quartz, free-field, ICP® blast pressure pencil probe (Model 137B32)
- Dual Output Cable (Model 010AY005QM)