ACCELEROMETERS FOR HEALTH & USAGE MONITORING SYSTEMS (HUMS)
Health and Usage Monitoring Systems (HUMS) are gaining wide acceptance as an effective predictive maintenance strategy for helicopter gearboxes and drive train, gas turbine engines and some fixed wing aircraft. Due to the large number of critical flight safety systems on aircraft, particularly rotating systems on helicopters, vibration monitoring technology is effective in detecting and thus preventing catastrophic mechanical failures. Accelerometers used in HUMS typically have specialized requirements for performance, reliability, and packaging, depending on the particular aircraft and standards involved.

Manufactured in our AS9100 facility, this brochure showcases our ICP® and charge output accelerometers in several hermetically sealed configurations. While this sensor family represents a sampling of solutions used for this critical application, advanced design capabilities permit PCB to customize solutions specific to your requirements. Please inquire to learn which solution is right for your application.

**HIGHLIGHTS**

- Accelerometers tailored for mechanical diagnostics and rotor track & balance
- Case isolated to reduce EMI & ground loop interference
- ICP® & charge output operations
- Can be qualified to RTCA/DO-160 & MIL-STD-810

**APPLICATIONS**

- Mechanical Diagnostics
- Rotor Track & Balance (RTB)
- Engine Vibration Monitoring (EVM) Systems
LOW PROFILE INDUSTRIAL ICP® ACCELEROMETER
MODEL 602D01

- Sensitivity: 100 mV/g (10.2 mV/(m/s²))
- Measurement Range: ±50 m (±490 m/s² pk)
- Frequency Range (±3dB): 0.5 to 8000 Hz

RING-STYLE ICP® ACCELEROMETER
MODEL 355A40

- Sensitivity: 10 mV/g (1.02 mV/(m/s²))
- Measurement Range: ±500 g (±4905 m/s² pk)
- Frequency Range: (±5 %): 1 to 20000 Hz

STUD MOUNT CERAMIC SHEAR ICP® ACCELEROMETER
MODEL 337A30

- Sensitivity: 10 mV/g (1.02 mV/(m/s²))
- Measurement Range: ±500 g (±4905 m/s² pk)
- Frequency Range (±10 %): 1 to 15000 Hz

MINIATURE RING-STYLE ICP® ACCELEROMETER
MODEL 355A44

- Sensitivity: 10 mV/g (1.02 mV/(m/s²))
- Measurement Range: ±500 g (±4905 m/s² pk)
- Frequency Range (±5 %): 1 to 5500 Hz

UHT-12™ MINIATURE ICP® ACCELEROMETER
MODEL 320C52

- Sensitivity: 10 mV/g (1.02 mV/(m/s²))
- Measurement Range: ±500 g (±4905 m/s² pk)
- Frequency Range: (±5%) 1 to 10000 Hz
- Size L x W X H: 0.65 x 0.38 x 0.23 in. (16.4 x 9.6 x 5.84 mm.)

UHT-12™ MINIATURE ICP® ACCELEROMETER
MODEL 320C53

- Sensitivity: 1 mV/g (0.102 mV/(m/s²))
- Measurement Range: ±5000 g (±49050 m/s² pk)
- Frequency Range: (±5%) 1 to 5000 Hz
- Size L x W X H: 0.65 x 0.38 x 0.23 in. (16.4 x 9.6 x 5.84 mm.)

SINGLE AXIS ICP® FOR MECHANICAL DIAGNOSTICS

UNIAXIAL ACCELEROMETER
MODEL 355A63

- Sensitivity: 100 mV/g (10.2 mV/(m/s²))
- Measurement Range: ±50 g (±490 m/s²)
- Frequency Range (±5%): 3 to 3000 Hz
TRIAXIAL ICP® FOR MECHANICAL DIAGNOSTICS

TRIAXIAL THRU-HOLE MOUNTING ICP® ACCELEROMETER
MODEL 354B04

- Sensitivity: 10 mV/g (1.02 mV/(m/s²))
- Measurement Range: ±500 g (±4905 m/s² pk)
- Frequency Range (±5%): 0.4 to 10,000 Hz

TRIAXIAL INDUSTRIAL ICP® ACCELEROMETER
MODEL 629A30

- Sensitivity: 10 mV/g (1 mV/(m/s²))
- Measurement Range: ±500 g (±4905 m/s²)
- Frequency Range (±3dB): 0.8 to 8000 Hz

TRIAXIAL INDUSTRIAL ICP® ACCELEROMETER
MODEL 629A11

- Sensitivity: 100 mV/g (10.2 mV/(m/s²))
- Measurement Range: ±50 g (±490 m/s² pk)
- Frequency Range (±3dB): 0.8 to 8000 Hz

PRECISION SIDE EXIT TRIAXIAL INDUSTRIAL ACCELEROMETER
MODEL 629A30

- Sensitivity: 10 mV/g (1 mV/(m/s²))
- Measurement Range: ±50 g (±491 m/s² pk)
- Frequency Range (±5%): 0.4 to 10,000 Hz

MODEL 354B05

- Sensitivity: 100 mV/g (10.2 mV/(m/s²))
- Measurement Range: ±50 g (±491 m/s² pk)
- Frequency Range (±5%): 0.4 to 10,000 Hz

MODEL 629A31

- Sensitivity: 100 mV/g (10.2 mV/(m/s²))
- Measurement Range: ±50 g (±490 m/s²)
- Frequency Range (±3dB): 0.8 to 8000 Hz
UHT-12™ HIGH TEMPERATURE ACCELEROMETER
MODEL EX600B13
Sensitivity: 100 mV/g (10.2 mV/(m/s²))
Sensing Element: UHT-12™
Measurement Range: ±50 g (±490 m/s²)

MODEL EX600B14
Sensitivity: 10 mV/g (1.02 mV/(m/s²))
Sensing Element: UHT-12™
Measurement Range: ±500 g (±4900 m/s²)

CHARGE OUTPUT ACCELEROMETER
MODEL 357C71
Sensitivity: 10 pC/g (1.02 pC/(m/s²))
Measurement Range: ±1000 g (±9810 m/s² pk)
Frequency Range (±5%): 4000 Hz

MODEL 357C72
Sensitivity: 50 pC/g (5.1 pC/(m/s²))
Measurement Range: ±500 g (±4905 m/s² pk)
Frequency Range (±5%): 2500 kHz

MODEL 357C73
Sensitivity: 100 pC/g (10.2 pC/(m/s²))
Measurement Range: ±300 g (±2943 m/s² pk)
Frequency Range (±5%): 2000 Hz
MINIATURE (2 GM) RING-STYLE CHARGE OUTPUT ACCELEROMETER
MODEL 357B06

Sensitivity: 5 pC/g (0.51pC/(m/s²))
Measurement Range: ±500 g (±4905 m/s² pk)
Frequency Range (+5%): 10000 Hz
Size L x W X H: 0.65 x 0.38 x 0.23 in. (16.4 x 9.6 x 5.84 mm.)

MINIATURE RING-STYLE CHARGE OUTPUT ACCELEROMETER
MODEL 357M113

Sensitivity: 5 pC/g (0.51pC/(m/s²))
Measurement Range: +/- 2000 g (19,620 m/s² pk)
Frequency Range (+5%): 10000 Hz

UHT-12™ CHARGE OUTPUT ACCELEROMETER
MODEL 357A100

Sensitivity: 5.0 pC/g (0.510 pC/(m/s²))
Measurement Range: ±200 g (±1962 m/s² pk)
Frequency Range (+5%): 4000 Hz

CHARGE MODE FOR HIGHER TEMPERATURES
UHT-12™ CHARGE OUTPUT ACCELEROMETER
MODEL EX357E90

Sensitivity: 5 pC/g (.51 pC/(m/s²))
Measurement Range: ±1000 g (±9800 m/s² pk)
Frequency Range: (±5%) 3000 Hz
Active in Vertical Direction

UHT-12™ CHARGE OUTPUT ACCELEROMETER
MODEL EX357E91

Sensitivity: 5 pC/g (.51 pC/(m/s²))
Measurement Range: ±1000 g (±9800 m/s² pk)
Frequency Range: (±5%) 3000 Hz
Active in Horizontal Direction

UHT-12™ CHARGE OUTPUT ACCELEROMETER
MODEL EX357E92

Sensitivity: 2.3 pC/g (0.23 pC/(m/s²))
Measurement Range: ±1000 g (±9800 m/s² pk)
Frequency Range (±5%): 3000 Hz
Active in Vertical Direction

UHT-12™ CHARGE OUTPUT ACCELEROMETER
MODEL EX357E93

Sensitivity: 2.3 pC/g (0.23 pC/(m/s²))
Measurement Range: ±1000 g (±9800 m/s² pk)
Frequency Range (±5%): 3000 Hz
Active in Horizontal Direction