SERIES RHM240A0X
MODEL 410C01

SIMPLE ASSEMBLY FORCE MONITORING SYSTEM

- Indirectly monitors force during manufacturing processes
- Avoids damage & detects tool wear
- Monitors process deviations
- Provides data for quality assurance
- Single screw installation, onto machine structure

DO YOUR CUSTOMERS DEMAND ZERO DEFECTS?

Simple, ready-to-use monitoring systems that use piezoelectric quartz ICP® strain sensors and signal conditioners are ideal for product quality assurance applications that require the measurement of repetitive cycles. ICP® strain sensors feature high stiffness, sensitivity stability, repeatability, high resolution, extremely long life, and robust packaging for harsh industrial environments.

Proper assembly force is vital to the strength of a formed metal part. An assembly force that is too low results in poor mechanical strength of the joint. A force that is too high causes excessive deformation, and can damage or reduce the fatigue life of a component. Assembly processes such as clinching, crimping, orbital forming, press-fit, riveting, and staking may be validated through installation of a RHM240A0X onto the machine’s structural frame.

Strain sensor signals may also be used to protect machinery from excessive forces, trend tool wear, capture process deviations, and document the process to help ensure delivery of high quality parts with zero defects. As with all PCB® instrumentation, these products are complemented with toll-free applications assistance, 24-hour customer service, and are backed by a no-risk policy that guarantees satisfaction or your money refunded.
**ICP® STRAIN SENSORS**

**Model Number**
- RHM240A01
- RHM240A02
- RHM240A03

**Performance**
- Sensitivity (+20%): 100 mV/με, 50 mV/με, 10 mV/με
- Measurement Range: 50 με, 100 με, 300 με
- Frequency Range (-5%): 0.015 to 2500 Hz, 0.004 to 2500 Hz
- Broadband Resolution (1 to 10000 Hz): 0.0001 με, 0.0002 με, 0.001 με

**Environmental**
- Temperature Range (Operating): -65 to +250 °F (-54 to +121 °C)

**Electrical**
- Output Bias Voltage: 8 to 14 VDC
- Discharge Time Constant: ≥ 35 sec, ≥ 150 sec, ≥ 150 sec

**Mechanical**
- Sensing Element: Quartz
- Housing Material: Stainless Steel
- Electrical Connector: 10-32 Coaxial Jack
- Sealing: Epoxy
- Mounting Torque: 7.38 ft-lb (10 N-m)
- Size (Width x Length x Height): 0.67 x 1.81 x 0.6 in

**Supplied Accessories**
- Model M081A100 M6 x 1.00 flathead screw

---

**SPECIFICATIONS**

**Model Number**
- 410C01

**Performance**
- Channels: 1
- Output Voltage (Instantaneous): ±10 V
- Output Voltage (Peak): 0 to 10 V
- High Frequency Response: 10 kHz
- Low Frequency Response, AC coupled (-5%): 0.5 Hz
- Low Frequency Response, DC coupled: Governed by Sensor DTC
- Voltage Gain (Incremental Steps): x1, x2, x4, x8, x10, x16, x60

**Environmental**
- Temperature Range (Operating): +60 to +110 °F (+15 to +45 °C)

**Electrical**
- Power Required (+10%): 24 VDC
- Current Draw: 200 mA
- Broadband Electrical Noise (1 Hz to 10 kHz): 200 μV rms
- Peak Hold Reset: Solid State Ready
- Discharge Time Constant (AC coupled): 1 sec

**Physical**
- Size (Length x Height x Width): 4.46 x 3.9 x 1.78 in
- Mounting: 35 mm DIN Rail
- Electrical Connector (Sensor Input): BNC Jack
- Electrical Connector (Analog Output, Peak Output, Power, Ground): Removable Screw Terminals

---

PCB Piezotronics, Inc. is a designer and manufacturer of microphones, vibration, pressure, force, torque, load, and strain sensors, as well as the pioneer of ICP® technology used by design engineers and predictive maintenance professionals worldwide for test, measurement, monitoring, and control requirements in automotive, aerospace, industrial, R&D, military, educational, commercial, OEM applications, and more. With a worldwide customer support team, 24-hour SensorLine® service, and a global distribution network, PCB® is committed to Total Customer Satisfaction. Visit www.pcb.com for more information. PCB Piezotronics, Inc. is a wholly owned subsidiary of MTS Systems Corporation. Additional information on MTS can be found at www.mts.com.

---

MTS Sensors, a division of MTS Systems Corporation (NASDAQ: MTSC), vastly expanded its range of products and solutions after MTS acquired PCB Piezotronics, Inc. in July, 2016. PCB Piezotronics, Inc. is a wholly owned subsidiary of MTS Systems Corp.; IMI Sensors and Larson Davis are divisions of PCB Piezotronics, Inc.; AccuMetrics, Inc. and The Modal Shop, Inc. are subsidiaries of PCB Piezotronics, Inc.