

### SERIES RHM240A0X MODEL 410C01

# SIMPLE ASSEMBLY FORCE MONITORING SYSTEM



- 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<sup>®</sup> strain sensors and signal conditioners are ideal for product quality assurance applications that require the measurement of repetitive cycles. ICP<sup>®</sup> 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.

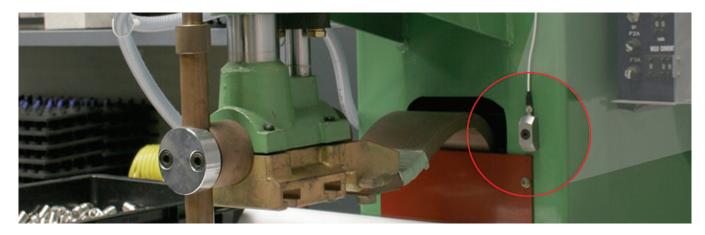
Strain sensor signals may also be used to protect machinery from excessive forces, trend tool wear, capture process deviations, and document the process to help ensure delivery of high quality parts with zero defects. As with all PCB<sup>®</sup> instrumentation, these products are complemented with toll-free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

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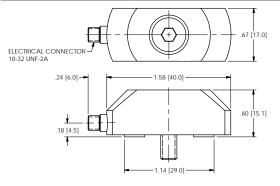
**SPECIFICATIONS** 

ICP® STRAIN SENSORS				
Model Number	RHM240A01	RHM240A02	RHM240A03	
Performance				
Sensitivity (±20%)	100 mV/με	50 mV/με	10 mV/με	
Measurement Range	50 pk µε	100 pk µε	300 pk µε	
Frequency Range (-5%)	0.015 to 2500 Hz	0.004 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	Ероху			
Mounting Torque	7.38 ft-lb (10 N-m)			
Size (Width x Length x Height)	0.67 x 1.81 x 0.6 in 17 x 46 x 15.2 mm			
Supplied Accessories				

Model Number	410C01		
Performance	English (SI)		
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, x20		
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 (113 x 99 x 45 mm)		
Mounting	35 mm DIN Rail		
Electrical Connector (Sensor Input)	BNC Jack		
Electrical Connector (Analog Output, Peak Output, Power, Ground)	Removable Screw Terminals		

Supplied Acc

Model M081A100 M6 x 1.00 flathead screw





#### 3425 Walden Avenue, Depew, NY 14043 USA

pcb.com | info@pcb.com

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#### nbn Austria GmbH

Riesstraße 146, 8010 Graz

Tel. +43 316 40 28 05 | Fax +43 316 40 25 06

