

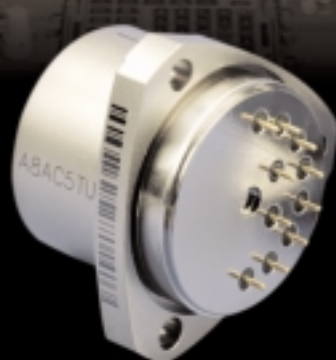


AEROSPACE

## Q-Flex® QA2000 Accelerometer

The inertial

navigation standard



Q-FLEX®  
ACCELEROMETER  
QA2000  
P/N 979-2000-002  
S/N 001  
DATE CODE 9826  
CAGE CODE 0YFP0  
Honeywell

## QA2000 Accelerometer

As the inertial navigation standard by which others are measured, Honeywell produces the QA2000. It is the predominant sensor used in today's commercial and military aircraft strap-down inertial navigation systems. The long-term stability and superior reliability characteristics of the QA2000 make it the best value inertial-grade accelerometer available on the market today.

As with the entire Q-Flex family of accelerometers, the QA2000 features a patented Q-Flex® etched-quartz-flexure seismic system. An amorphous quartz proof-mass structure provides excellent bias, scale factor, and axis alignment stability.

The integral electronics develops an acceleration-proportional output current providing both static and dynamic acceleration measurement. By use of customer supplied output load resistor, appropriately scaled for the acceleration range of the application, the output current can be converted into a voltage.

The QA2000 also includes a current-output, internal temperature sensor. By applying temperature-compensating algorithms, bias, scale factor, and axis misalignment performance are dramatically improved.

### Features

- Sets the standard for inertial navigation performance
- Excellent turn-on repeatability and stability performance
- Environmentally rugged
- Analog output
- Field-adjustable range
- Three fastener precision mounting flange
- Internal temperature sensor for thermal compensation
- Dual built-in test

## Specifications

### Performance

- Input range  $\pm 60$  g
- Bias  $< 4$  mg
- Scale factor  $1.33$  mA/g  $\pm 10\%$
- Axis misalignment  $< 2$  mrad
- Resolution/Threshold  $< 1$   $\mu$ g
- Bandwidth  $> 300$  Hz

### Environmental

- Operating temperature range  $-55$  to  $+95^\circ\text{C}$
- Shock  $250$  g
- Vibration  $15$ g, peak sine, 20-2000Hz

### Electrical

- Input voltage  $\pm 13$  to  $\pm 18$  VDC
- Quiescent current  $< 16$  mA per supply
- Quiescent power  $< 480$  mW @  $\pm 15$  VDC

### Physical

- Weight  $71$  grams
- Size  $1.0$  in. dia. X  $0.96$  in. high
- Case material Stainless steel

## Performance by Model

If other performance values are required, please contact Honeywell for special selection information.

(values listed are maximum)	QA-2000-010	QA-2000-020	QA-2000-030
<b>BIAS</b>			
One-year repeatability	550 $\mu$ g	220 $\mu$ g	160 $\mu$ g
<b>SCALE FACTOR</b>			
One-year repeatability	660 ppm	500 ppm	310 ppm
<b>AXIS ALIGNMENT</b>			
One-year repeatability	100 $\mu$ rad	100 $\mu$ rad	100 $\mu$ rad
<b>VIBRATION RECTIFICATION (50-500 Hz)</b>			
	40 $\mu$ g/(grms) <sup>2</sup>	40 $\mu$ g/(grms) <sup>2</sup>	20 $\mu$ g/(grms) <sup>2</sup>

Additional product specifications, outline drawings and block diagrams, and test data are available on request.

### ISO-9001 Certification Since 1995

For more information, please call **888-206-1667** or FAX **425-883-2104**. Visit [www.inertialsensor.com](http://www.inertialsensor.com)  
Specifications are subject to change without notice.

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