Q-FLEX QA-650 ACCELEROMETER

Economical sensor package

For Q-Flex technology in an economical package, Honeywell produces the QA-650 for industrial grade applications, including: automotive test instrumentation, braking system deceleration, bridge and building sway and tilt monitoring, industrial and robotic control, land vehicle navigation, subway and high-speed train ride comfort control and offshore drilling platform motion monitoring.

As with the entire Q-Flex family of accelerometers, the QA-650 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 measurements. By use of a customer supplied output load resistor, appropriately scaled for the acceleration range of the application, the output current can be converted into a voltage.

Q-Flex QA-650

MORE THAN 3M QUARTZ ACCELEROMETERS SHIPPED OVER THE PAST TWO DECADES

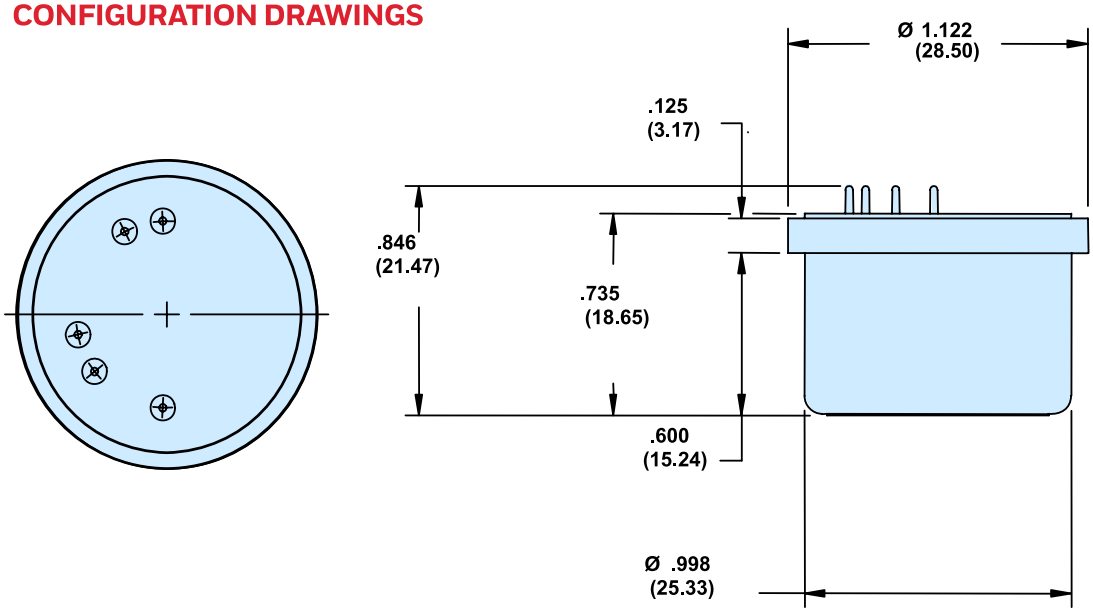
FEATURES

- Tactical navigation grade performance
- High value
- Environmentally rugged
- Analog output
- Compact design
- Built-in test
- Field-adjustable range

APPLICATIONS

- Automotive test instrumentation
- Autonomous vehicle testing
- Braking system deceleration
- Bridge and building sway and tilt monitoring
- Industrial and robotic control
- Land vehicle navigation
- Subway and train ride comfort control
- Offshore drilling platform motion monitoring

CONFIGURATION DRAWINGS



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PERFORMANCE CHARACTERISTICS	
Performance	
Input Range	±30 g
Bias	<15 mg
One-year Composite Repeatability	<2500 µg
Temperature Sensitivity	<100 µg/°C
Scale Factor One-year Composite Repeatability	1.20 to 1.40 mA/g <2500 ppm
Temperature Sensitivity Axis Misalignment Vibration Rectification	<200 ppm/°C <15000 µrad <100 (50-500 Hz) µg/g2rms
Environmental	
Operating Temperature Range	-55 to +96°C
Shock	100 g
Vibration Peak Sine	25 g @ 30-500 Hz
Resolution/Threshold	<10 µg
Bandwidth	>300 Hz
Thermal Modeling	Yes
Electrical	
Quiescent Current per Supply	<16 mA
Quiescent Power	<480 mW @ ±15 VDC
Input Voltage	±13 to ±18 VDC
Physical	
Weight	51 Nominal, 65 Max. grams
Diameter below mounting surface Height - bottom to mounting surface	Ø1.045 ±0.005 in. 0.617 in. Max.
Case Material	300 Series Stainless Steel

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

ISO-9001 CERTIFICATION SINCE 1995

DISCLAIMER: Specifications are subject to change without notice. Honeywell reserves the right to make changes to any product or technology herein to improve reliability, function or design. Honeywell does not assume any liability arising out of the application or use of the product.

Accelerometers exported from the United States must be done in accordance with the Export Administration Regulations (EAR) and/or the International Traffic in Arms Regulations (ITAR) as applicable.

For More Information
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THE FUTURE IS WHAT WE MAKE IT

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