

# QFA-150-30G-LC Series, Low Input Current Quartz Flexure Accelerometer

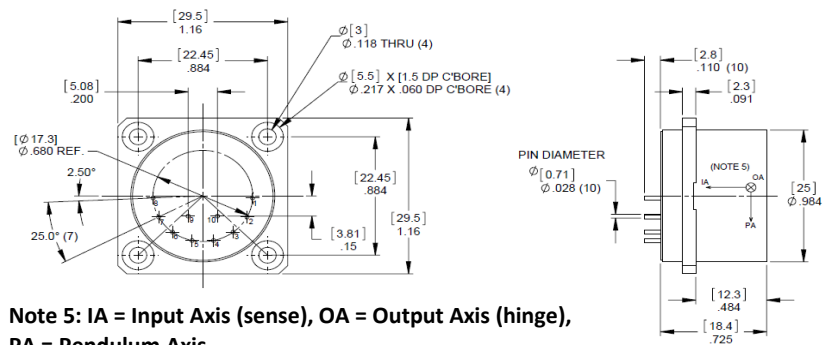
**Jewell  
Instruments**

*Making Sense out of Motion...*

The Jewell Instruments  
QFA-150-30G-LC Series Accelerometers  
are state of the art quartz  
flexure technology that provides  
high accuracy, repeatability  
and stability even in the  
harshest of environments.



**Square Flange - Outline Drawing**



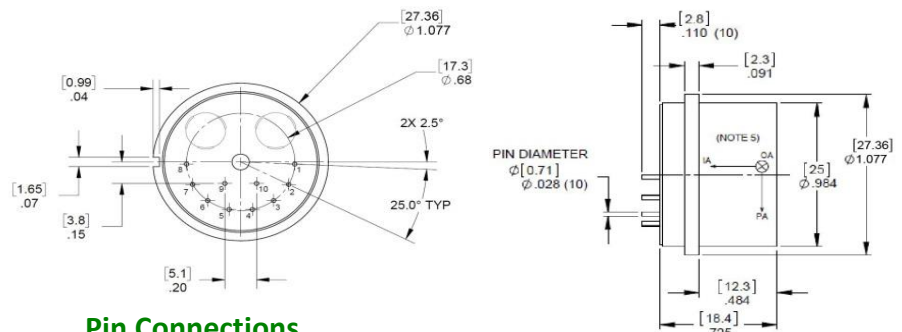
## Features & Benefits

- Mid Range Temperature
- Excellent Repeatability
- High Accuracy
- Environmentally Rugged
- High Stability
- Square or Round Mounting Flanges
- Small Compact Design
- Built-in Self Test System

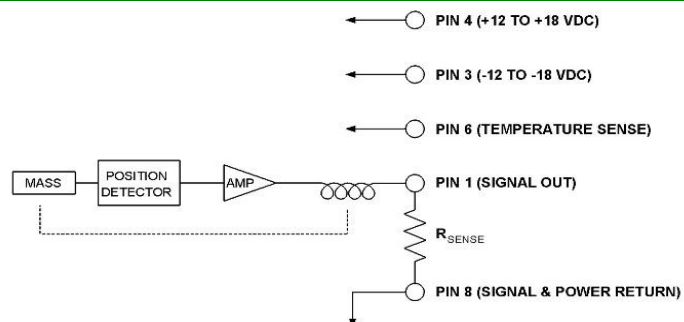
## Applications

- Rail Maintenance Track Geometry
- Wind Tunnel Testing
- 3D Modeling Equipment for Large Scale Geometries
- Survey Applications
- Marine Instrumentation
- Borehole Mapping

**Circle Flange - Outline Drawing**



**Pin Connections**



Rev. 3

# QFA-150-30G-LC Series, Low Input Current Quartz Flexure Accelerometer



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## Performance Specifications

### Performance

Acceleration Range, g Max. (Note 1)	±30
Scale Factor, mA/g (Note 2)	1.1 to 1.4
Bias, milli-g, Max. (@ 25° C)	20
Axis Alignment, mRad, Max. (@ 25° C)	±1.5
Threshold and Resolution, µg, Max.	10
Bandwidth, Hz, Min.	300
Scale Factor Temp. Sens, PPM/°C, Max.:	
+25°C to +125°C	±150
+125°C to +150°C	±200
Bias Temp. Sens, µg/°C, Max.	±100
Scale Factor Stability (1 year composite)	less than 250 ppm
Bias Stability (1 year composite)	less than 250 ug
Noise, mgrms, Max. (0Hz to 10kHz) (Max.)	3
Weight (grams)	55

### Electrical

Input Voltage, Vdc	±12 to ±18
Input Current, mA	+/-13mA max @ +/-18Vdc input +/- 10mA nominal @ +/-15Vdc input +/- 8mA nominal @ +/-12Vdc input
Output Impedance, ohms	External Load Resistor Dependent

### Environmental

Operational Temp Range, °C	-55°C to +150°C
Vibration, (Sine)	25 Hz to 500 Hz, 25g
Vibration, (Random) Rectification, µg/g <sup>2</sup> rms	50 Hz to 500 Hz, 100 µg/g <sup>2</sup> rms
Shock, g (0.5 msec, 1/2 sine)	1000

\*Specifications subject to change without notice on account of continued product development

Note 1: Specifications apply and are characterized up to ±1g range. The accelerometer is capable of supplying acceleration information up to ±30g but at reduced accuracy.

Note 2: Scale factor shown in mA/g as a standard. If you require scale factor in volts/g, please specify voltage range when ordering

Note 3: Voltage output via customer supplied load resistor.

## How to Order

Model #	Part #
QFA-150-30G-SQ-LC	848786-002
QFA-150-30G-RD-LC	848787-002

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.