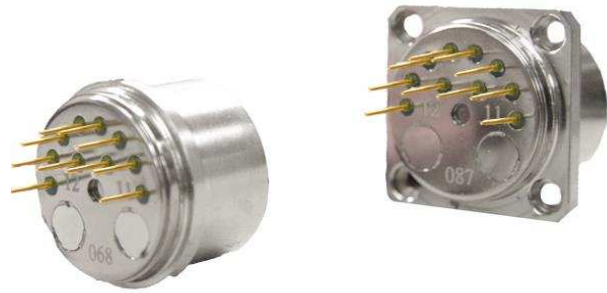


# QFA-180 Series High Temperature Quartz Flexure Accelerometer

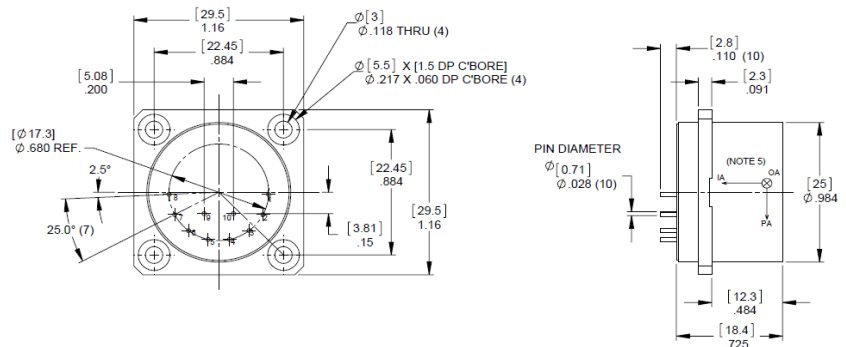


*Making Sense out of Motion...*

The Jewell Instruments QFA-180 Series Accelerometers are state of the art quartz flexure technology that provides high accuracy, repeatability and stability even in the harshest of environments.



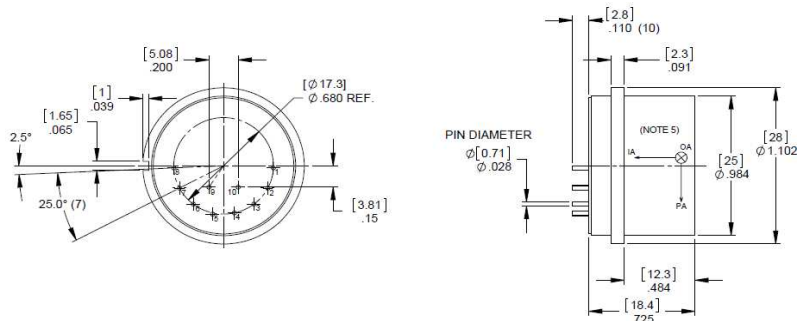
**Square Flange - Outline Drawing**



## Features & Benefits

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

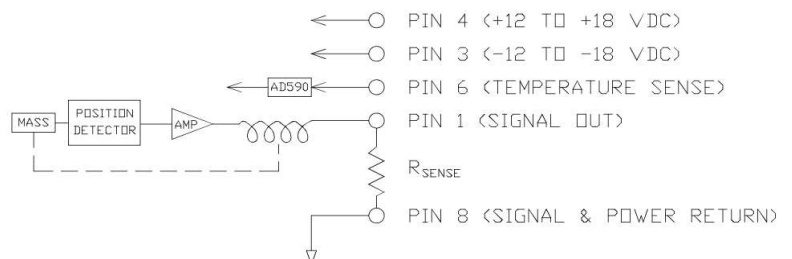
**Circle Flange - Outline Drawing**



## Applications

- Well borehole logging (Wireline)
- Measure While Drilling (MWD)
- Oil Drilling
- Orientation Systems for Drilling Applications
- Borehole Mapping

**Pin Connections**



# QFA-180 Series High Temperature Quartz Flexure Accelerometer



*Making Sense out of Motion...*

## 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)	40
Axis Alignment, mRad, Max. (@ 25° C)	±15
Threshold and Resolution, µg, Max.	10
Bandwidth, Hz, Min.	300
Scale Factor Temp. Sens, PPM/°C, Max.:	
+25°C to +100°C	±80
+100°C to +180°C	±170
Bias Temp. Sens, µg/°C, Max.	±100
Scale Factor Stability (1 year composite)	less than 350 ppm
Bias Stability (1 year composite)	less than 500 ug
Noise, mgrms, Max. (0Hz to 10kHz) (Max.)	3
Weight (grams)	55

### Electrical

Input Voltage, Vdc	±12 to ±18
Input Current (quiescent), mA (Max.)	12
Output Impedance, ohms	External Load Resistor Dependent

### Environmental

Operational Temp Range, °C	-55°C to +180°C
Vibration, (Sine)	25 Hz to 500 Hz, 25g
Vibration, (Random) Rectification, ug/g <sup>2</sup> rms	50 Hz to 500 Hz, 100 ug/g <sup>2</sup> rms
Shock, g (0.5 msec, 1/2 sine)	1000

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: Voltage output via customer supplied load resistor.

## Custom Capabilities

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

## How to Order

Model #	Part #
QFA-180-30G-SQ	848198-001
QFA-180-30G-RD	848199-001

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.

**Jewell Instruments LLC, 850 Perimeter Road, Manchester, NH 03103**  
**sales@jewellinstruments.com • www.jewellinstruments.com • Tel (800) 227-5955**