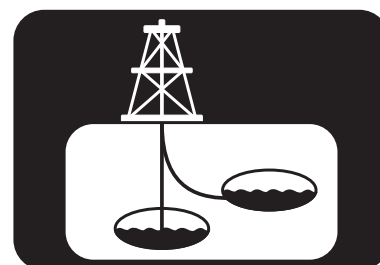


# JA-5H175 Accelerometer



## Key features

- 175 °C operating temperature
- High accuracy with long term stability
- Shock and vibration resistant
- Ultimate reliability
- Easy to integrate

The 175 °C JA-5H175 accelerometers have been developed to meet the increasing high temperature needs of downhole applications. As one of the key suppliers of accelerometers to downhole applications JAE has used its wealth of knowledge to extend the working temperature of the accelerometer to provide reliable long term operation even at extreme temperatures without compromising performance.

## Applications

Designed for extreme downhole applications including:

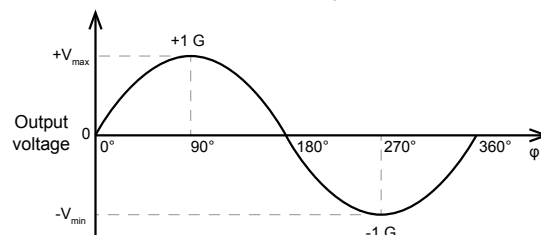
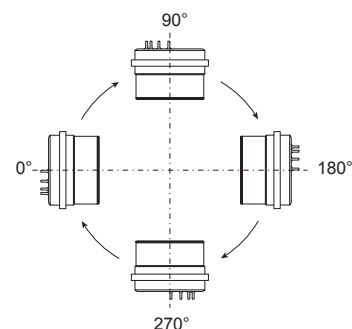
- Directional Drilling
- MWD/LWD
- Wireline

These high performance servo balanced quartz accelerometers have been specifically designed to survive the environmental challenges of downhole applications including Directional Drilling, MWD/LWD and Wireline. The proven rugged design provides reliable long term operation even at 175 °C.

*An extreme product for extreme applications.*

*To be exported in accordance with all relevant regulations.*

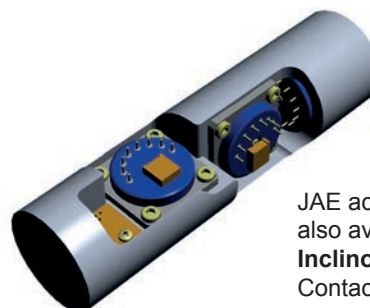
**JA-5H175-1**



## Technical data

Environmental		
Temperature (operating/non-operating)		-40 °C to +175 °C
Vibration	Sine	30 G 0-peak, 30 Hz - 500 Hz
	Random	20 Grms, 15 Hz - 500 Hz
Shock (0.5 ms, half sine)	Operating	1,000 G
	Survival	1,500 G
Electrical		
Input voltage		$\pm 12.0 V_{DC}$ to $\pm 18.0 V_{DC}$
Input current (quiescent)		4.5 mA max.
Insulation resistance (power return to case)		50 M $\Omega$ min. @ 50 V <sub>DC</sub>
Mechanical		
Weight		50 grams max.
Material		Stainless steel (non-magnetic)
Performance		
Measurement range		$\pm 4.0$ G min.
Output voltage		$\pm 10.0 V_{DC}$ min. @ $\pm 15.0 V_{DC}$ excitation
Scale factor	Nominal (@ 25 °C)	
	Temperature coefficient	-40 °C to +100 °C
		+100 °C to +175 °C
Bias	Nominal (@ 25 °C)	$\pm 15.0$ mG max.
	Temperature coefficient	$\pm 150 \mu\text{G}/^\circ\text{C}$ max.
Axis alignment	Nominal (@ 25 °C)	$\pm 3.0$ mrad max.
	Temperature coefficient	$\pm 7 \mu\text{rad}/^\circ\text{C}$ max.
Noise	1 Hz to 500 Hz	4 $\mu\text{A}$ rms max.
	500 Hz to 10 kHz	14 $\mu\text{A}$ rms max.
Resolution and Threshold		1 $\mu\text{G}$ max.
Linearity		$\pm 0.01$ % full scale max.
Frequency response (bandwidth)		500 Hz min.
Long term stability (1 year)	Combined Scale factor and Bias shift	1,800 $\mu\text{G}$ max.
	Axis alignment	$\pm 400 \mu\text{rad}$ max.

$$1 \text{ G} = 9.80665 \text{ m/s}^2$$



JAE accelerometers are also available as custom **Inclinometer** packages. Contact us for details.

## Contact information

### North and South America

JAE Electronics, Inc.  
1100 W. Park One Drive  
Sugar Land  
TX 77478  
United States

T: +1 281 325 5760  
E: [support.aerospace@jae.com](mailto:support.aerospace@jae.com)

### Europe

JAE Europe, Ltd.  
Royal Pavilion, Tower 3  
1st Floor, Wellesley Road  
Aldershot, Hampshire  
GU11 1PZ  
United Kingdom

T: +44 1252 55 11 00  
E: [support.aerospace@jae.co.uk](mailto:support.aerospace@jae.co.uk)

### Japan and Rest of World

Japan Aviation Electronics  
Industry, Ltd.  
1-19, Aobadai 3-chome  
Meguro-ku  
Tokyo 153-8539  
Japan

T: +81 3 3780 2925  
E: [aerinfo@jae.co.jp](mailto:aerinfo@jae.co.jp)

## More accelerometers from JAE



JA-5 series  
Ø25 mm



JA-25 series  
Ø19 mm



JA-35 series  
Ø15 mm

## More downhole products from JAE



Magnetometers



Directional Modules

For more information on these products and other product ranges visit  
[www.jae.com](http://www.jae.com)

## Document revision table

Document number	Issue	Revision date	Changes
VCL001-000009	01	01/07/2021	New document

JAE reserves the right to modify specifications without prior notice.