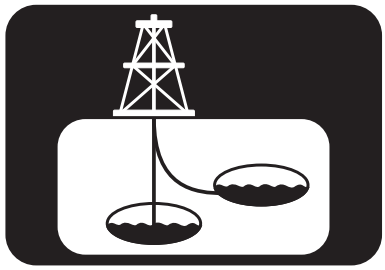
Technology to Inspire Innovation

JAE

JA-5H200 Accelerometer



Key features

- 200 °C operating temperature
- High accuracy with long term stability
- Shock and vibration resistant
- Ultimate reliability
- Easy to integrate

Applications

Designed for extreme downhole applications including:

- Directional Drilling
- MWD/LWD
- Wireline

The 200 °C JA-5H200 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.

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 200 °C.

An extreme product for extreme applications.

To be exported in accordance with all relevant regulations.

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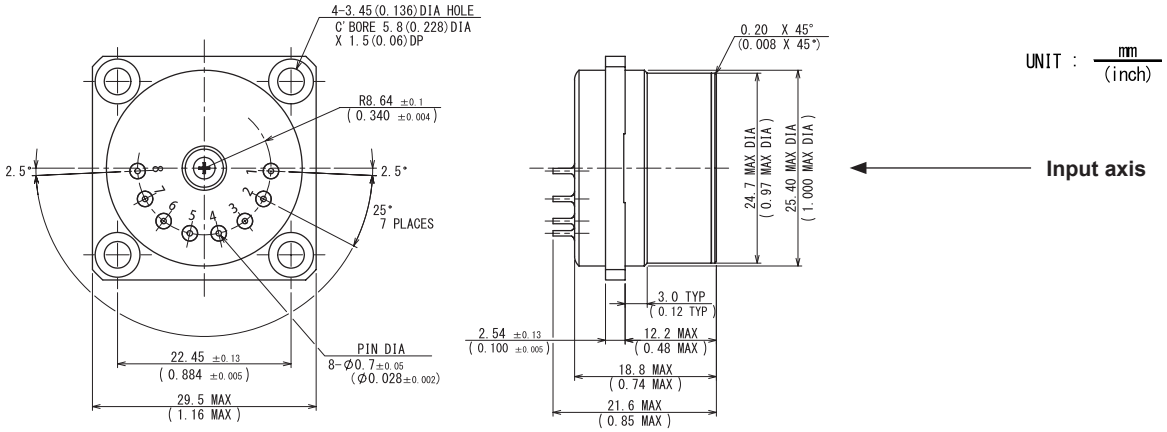
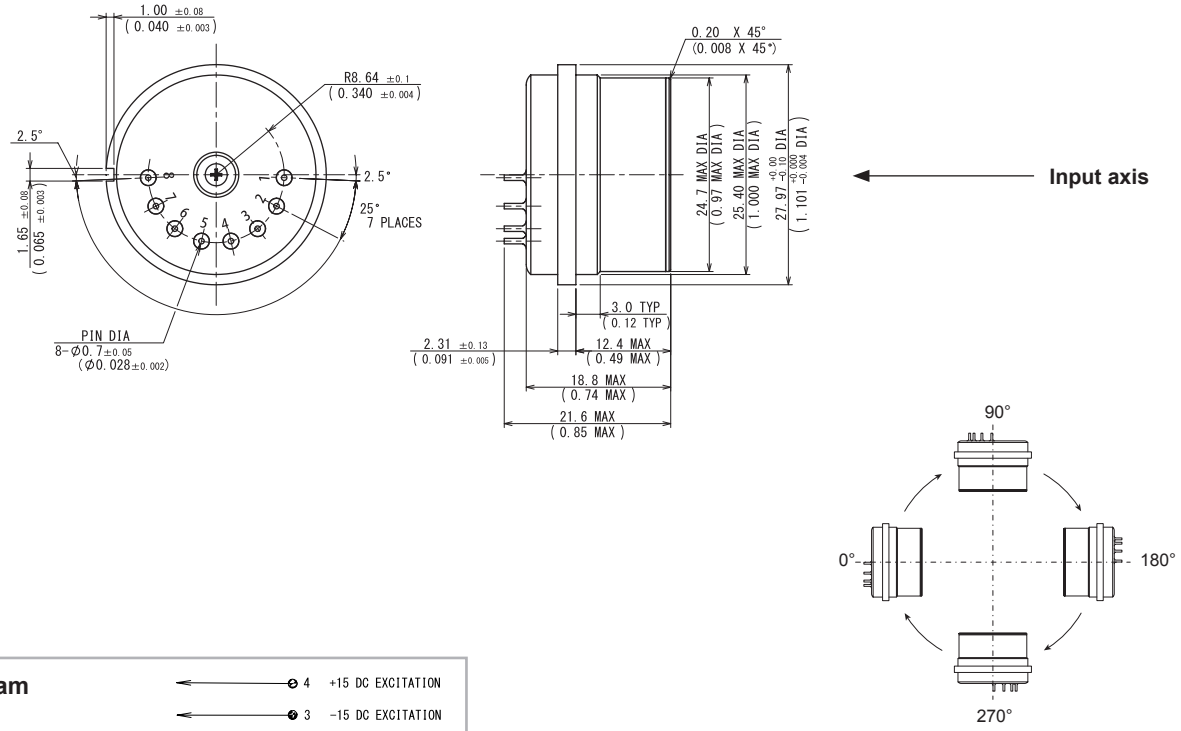
Dimensional drawings

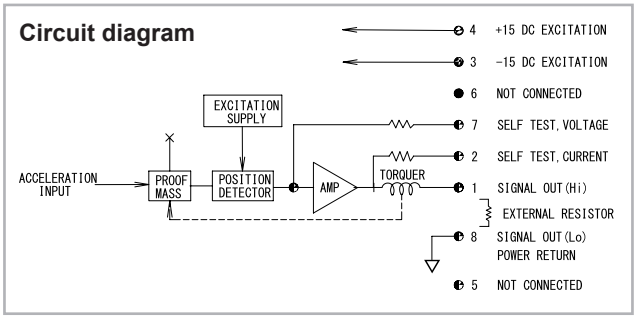
JA-5H200-1

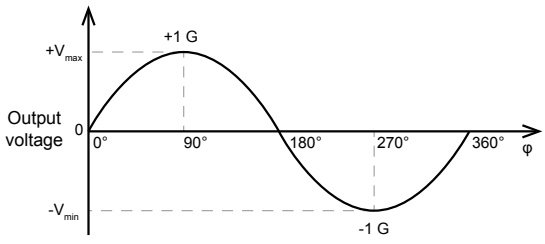


JA-5H200-2



Circuit diagram





Technical data

Environmental		
Temperature	Operating	0 °C to +200 °C
	Non-operating	-40 °C to +200 °C
Vibration	Sine	30 G 0-peak, 50 Hz - 500 Hz
	Random	20 Grms, 10 Hz - 500 Hz
Shock (0.5 ms, half sine)	Operating	1,000 G
	Survival	1,500 G
Electrical		
Input voltage		±12.0 V_{DC} to ± 18.0 V_{DC}
Input current (quiescent)		4.5 mA max.
Insulation resistance (power return to case)		50 MΩ min. @ 50 V_{DC}
Mechanical		
Weight		50 grams max.
Material		Stainless steel (non-magnetic)
Performance		
Measurement range		±4.0 G min.
Output voltage		±10.0 V_{DC} min. @ ±15.0 V_{DC} excitation
Scale factor	Nominal (@ 25 °C)	3.0 mA/G ± 5 %
	Temperature coefficient (@ 25°C)	±180 ppm/°C max.
Bias	Nominal (@ 25 °C)	±15.0 mG max.
	Temperature coefficient	±150 µG/°C max.
Axis alignment	Nominal (@ 25 °C)	±3.0 mrad max.
	Temperature coefficient	±7 µrad/°C max.
Noise	1 Hz to 500 Hz	4 µA rms max.
	500 Hz to 10 kHz	14 µA rms max.
Resolution and Threshold		1 µG max.
Linearity		±0.01 % full scale max.
Frequency response (bandwidth)		500 Hz min.
Long term stability (1 year)	Combined Scale factor and Bias shift	2,000 µG max.
	Axis alignment	±400 µrad max.

1 G = 9.80665 m/s^2

JAE accelerometers are also available as custom **Inclinometer** packages.

More accelerometers from JAE

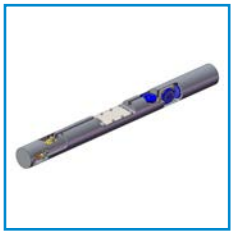
JA-5 series
Ø25 mm

JA-25 series
Ø19 mm

JA-35 series
Ø15 mm

More downhole products from JAE

Magnetometers



Directional Modules

Document revision table

Document number	Issue	Revision date	Changes
VCL001-000007	01	01/07/2021	New document

JAE reserves the right to modify specifications without prior notice.

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