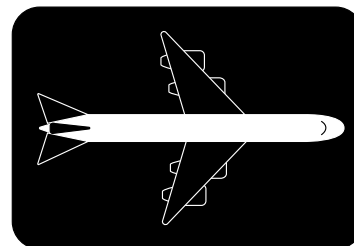


# JA-80GA Accelerometer



## Key features

- $\pm 30$  G measurement range (adjustable)
- $-55$  °C to  $+96$  °C operating temperature
- High accuracy quartz structure
- Built in self-test
- Cost effective

The JA-80GA accelerometer provides a high accuracy, cost effective measurement solution for industrial grade applications. JAE has used its wealth of knowledge of supplying parts to the aviation industry to develop this accelerometer to provide exceptional performance for demanding industrial applications.

## Applications

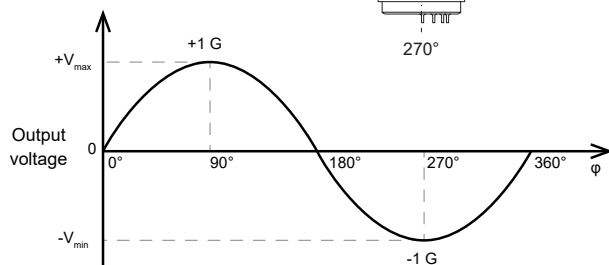
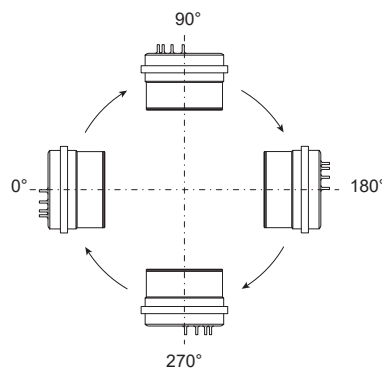
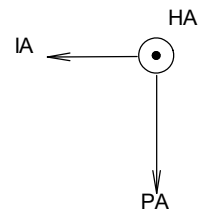
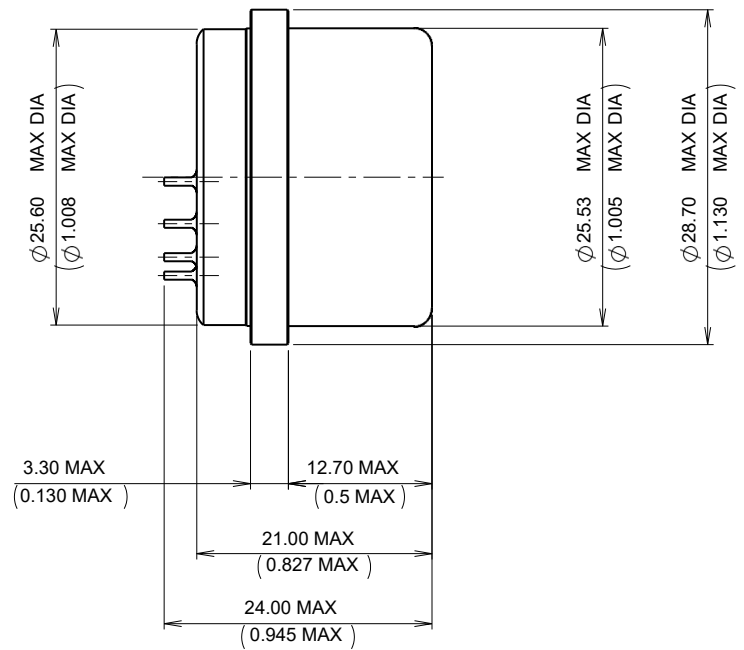
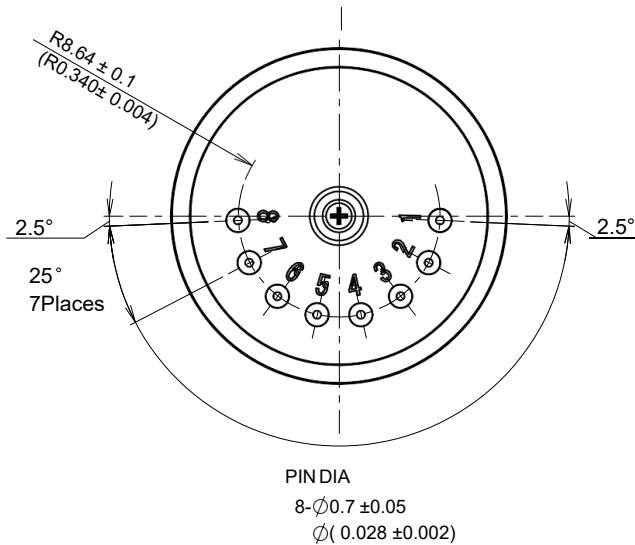
- Train ride comfort control
- Platform levelling
- Vibration/sway measurement
- Seismic detection
- Structural integrity monitoring
- Automotive testing

These high performance servo balanced quartz accelerometers have been designed specifically for  $-55$  to  $+96$ °C operation whilst providing excellent bias, scale factor and axis alignment stability. These accelerometers can be used in a wide range of control and measurement applications.

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

## Dimensional drawings

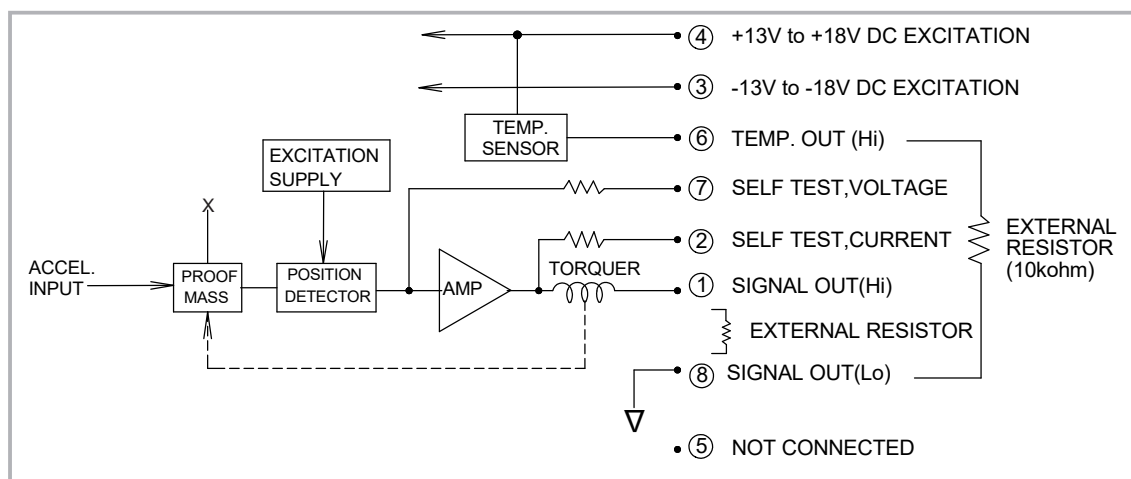
### JA-80GA



## Technical data

Environmental		
Temperature (operating/non-operating)		-55 °C to +96 °C
Vibration (sine)		25 G 0-peak, 30 Hz - 2,000 Hz
Shock (operating/non-operating)		250 G
Electrical		
Input voltage		$\pm 13.0 V_{DC}$ to $\pm 18.0 V_{DC}$
Input current (quiescent)		6.0 mA max.
Insulation resistance (power return to case)		50 M $\Omega$ min. @ 50 $V_{DC}$
Mechanical		
Weight		50 grams max.
Material		Stainless steel
Performance		
Measurement range		$\pm 30$ G min.
Scale factor	Nominal (@ 25 °C)	1.33 mA/G $\pm 10$ %
	Temperature coefficient (@ 25°C)	$\pm 180$ ppm/°C max.
Bias	Nominal (@ 25 °C)	$\pm 8.0$ mG max.
	Temperature coefficient	$\pm 70$ $\mu$ G/°C max.
Axis alignment	Nominal (@ 25 °C)	$\pm 2.0$ mrad max.
	Temperature coefficient	$\pm 5$ $\mu$ rad/°C max.
Noise	0.1 Hz to 10 Hz	0.009 $\mu$ A rms
	10 Hz to 500 Hz	0.09 $\mu$ A rms
	500 Hz to 10 kHz	2.0 $\mu$ A rms
Resolution and Threshold		1 $\mu$ G max.
Linearity		$\pm 0.05$ % full scale max up to $\pm 25$ G
Frequency response (bandwidth)		300 Hz min.
Integral temperature sensor (AD590)		1 $\mu$ A/K (nominal)
Long term stability (1 year)	Scale factor	$\pm 1,200$ ppm max.
	Bias	$\pm 1.2$ mG max.
	Axis alignment	$\pm 300$ $\mu$ rad max.

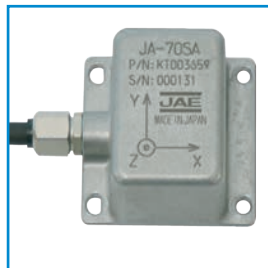
1 G = 9.80665 m/s<sup>2</sup>



## More accelerometers from JAE



Industrial  
Vibration  
Control



Structural  
Health  
Monitoring



Oil and Gas  
Exploration



Civil  
Aviation

## Document revision table

Document number	Issue	Revision date	Changes
VCL001-000017	01	01/07/2021	New document

JAE reserves the right to modify specifications without prior notice.