



## 9 JMA-165-RH



### Description

Our CENELEC and AREMA qualified JMA-165 series MEMS accelerometers are now a cost effective and viable alternative to the traditional forced balanced designs.

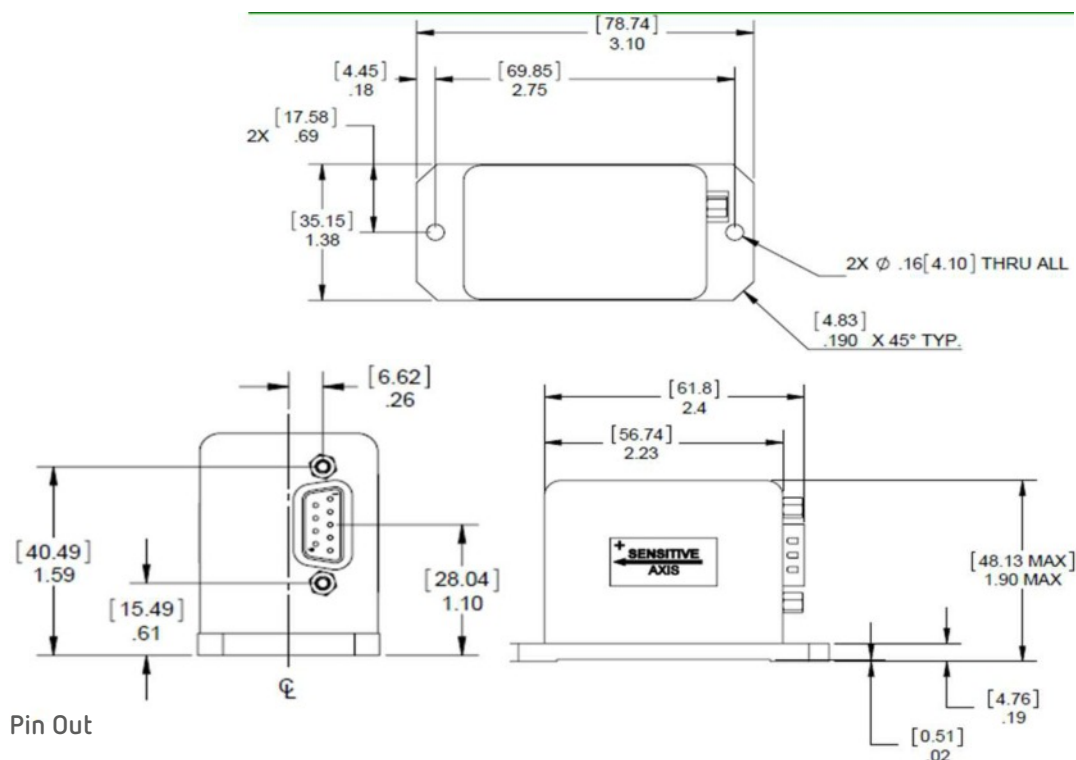
### Features

- $\pm 0.5G$  &  $\pm 1.0G$  full ranges
- CENELEC/AREMA certified
- Low-cost MEMS technology
- Internal heater for reduced thermal drift
- RoHS Compliant
- Filtering Available

### Applications

- Automated Train Controls
- Acceleration/Deceleration Control
- Rail Maintenance & Testing
- Train Performance Testing

### Outline Diagram



Pin Out

PIN	FUNCTION
1	+Vcc
2	COMMON
3	-Vcc
4	SIG OUT
5	N/C
6	N/C
7	N/C
8	N/C
9	N/C

## ■ Performance Specifications

### STATIC/DYNAMIC

Measurement Range, (g) <sup>1</sup>	±0.5	±1
Output Voltage Range (Volts)	±5.00	±5.00
Scale Factor Tolerance (g)	±0.0075	±0.015
Scale Factor Temp Coefficient (ppm/°C, Max.)	125	75
Bias (g, Max.)	-0.01 to 0.01	-0.01 to 0.01
Bias Temp Coefficient (mg/°C, Max.)	1	0.50
Transverse Axis Alignment (°Max.)	0.7	0.7
Resolution and Threshold (mg, Max.)	0.025	0.15
Linearity (% of Full Scale, Max.)	0.2	0.1
Repeatability (mg, Max.)	2.00	1.00
Bandwidth (Hz Nominal) (-3dB)	100	100
Cross Axis Sensitivity (g/g Max.)	0.01	0.005
Warm-Up Time (Seconds, Max.)	30	30

### ELECTRICAL AND ENVIRONMENTAL

Input Voltage (Vdc)	±12 to ±18
Operating Current	-8mA/+150mA quiescent (+500mA peak max., 30 sec. max.)
Heater Preset (°C)	25.0
Output Impedance (Ohms Nominal)	1
Noise (Broadband grms max.)	0.005
Operating Temperature	-40°C to +70°C
Storage Temperature	-55°C to +85°C
Shock	10g (half sine, 0.011 sec)
Weight (grams)	85
Seal	IP65

Notes: 1 - Intermediate ranges available, please see model number structure below. Custom ranges available on request.

### Meets CENELEC/AREMA Standards

CENELEC EN 50121:2015

CENELEC EN 50155:2007

CENELEC EN 6100:2010

AREMA Part 11.5.1 (2009)

### ■ Order code

±0.5G Range  Model Number: JMA-165-0.5-RH

±1.0G Range  Model Number: JMA-165-1-RH