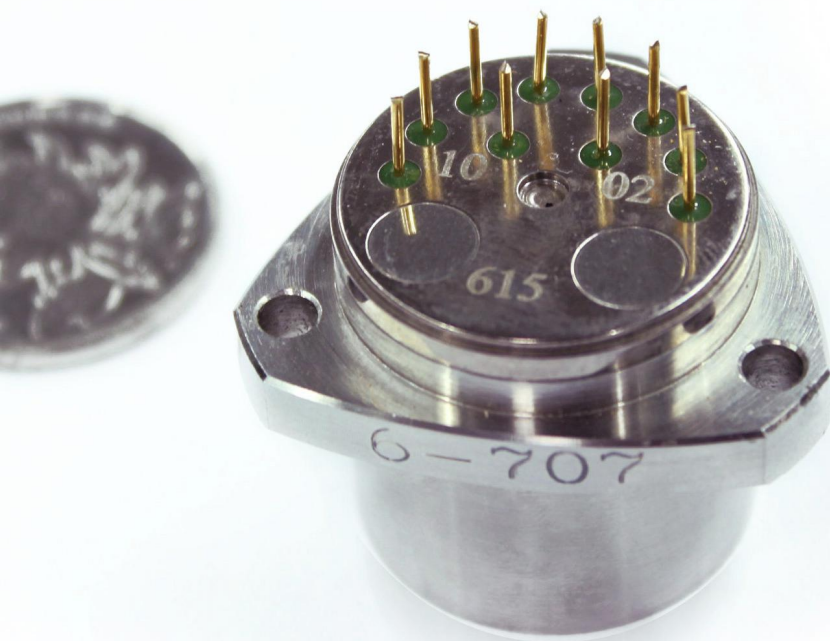


AS1920 Quartz Accelerometer Specifications





Descriptions

A quartz accelerometer is a force equilibrium sensor, a precise instrument designed according to the principle of inertia. The acceleration input is converted to its fracture's subtle displacement, and then balanced by a feedback force. As a force feedback loop is used, the accelerometer has the features of high precision, high shock resistance, broad measurement range and excellent overload capacity. It is one of the most essential devices in the inertial navigation and guidance system. A quartz accelerometer consists of a gauge head, an excitation circuit and a frequency measurement circuit. The gauge head consists of a damping plate, a metal pendulum and a force sensitive quartz stick.

Features

- Low lag
- High accuracy
- Small volume
- High resolution
- Low power
- Low cost
- High stability
- Excellent overload capacity
- Broad measurement range

Applications

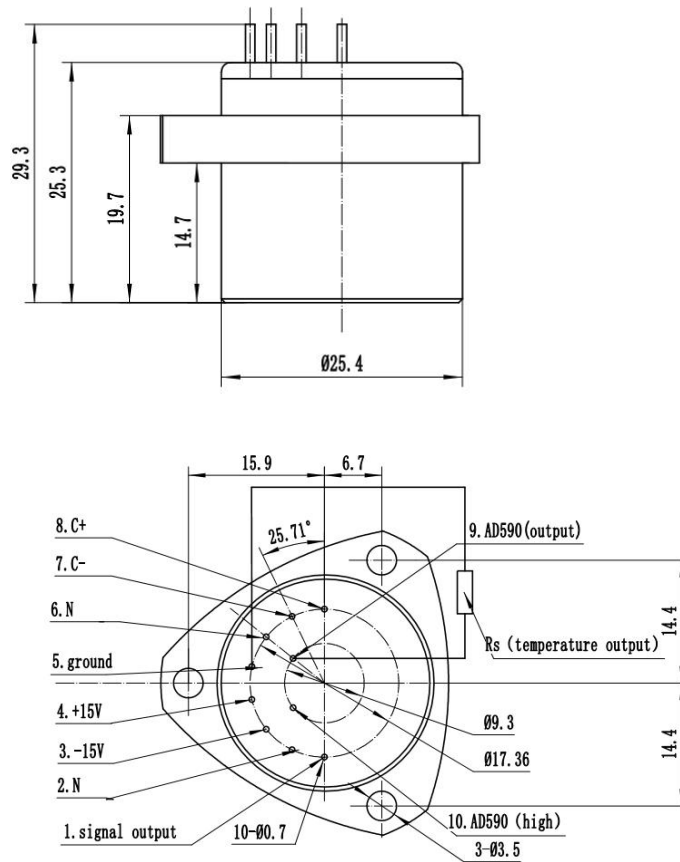
- Drilling and Inclination Measurement
- Aeronautics and Astronautics
- Instruments and Equipment



Performance Characteristics

No	Parameter	AS1920-01	AS1920-02	AS1920-03	Unit
1	Range Rs=100	±70	±70	±70	g
2	Threshold (Resolution)	5	5	5	μg
2	Bias (K0/k1)	≤(±4)	≤(±7)	≤(±10)	mg
3	Scale Factor (K1)	1.3 ±0.2	1.3 ±0.2	1.3 ±0.2	mA/g
4	Second-order Nonlinearity K2/k1	≤±20	≤±60	≤±60	μg/g ²
5	0g 4hours Stability	≤15	≤30	≤30	μg
6	1g 4hours Stability	≤15	≤30	≤30	ppm
7	Bias Drift K0(1σ,1month)	≤20	≤80	≤100	μg
8	Repeatability of scale factor k1/k1(1σ,1month)	≤20	≤80	≤100	ppm
9	Second-order Coefficient repeatabilityK2/k1 (1σ,1month)	≤±15	≤±30	≤±30	μg/g ²
10	Bias thermal coefficient	≤±20	≤±100	≤±100	μg/°C
11	Scale Factor Thermal Coefficient	≤±30	≤±100	≤±160	ppm/°C
13	Noise(Resistance 840Ω)	≤5	≤8.4	≤8.4	mv
14	Natural Frequency	400~800	400~800	400~800	Hz
15	Bandwidth	800~2500	800~2500	800~2500	Hz
16	Vibration	5(20-2000)	5(20-2000)	5(20-2000)	g(Hz)
17	Shock	100,5,1/2	100,5,1/2	100,5,1/2	g,ms,sin
18	Working Temperature	-40~+85	-40~+85	-40~+85	°C
19	Store Temperature	-60~+120	-60~+120	-60~+120	°C
20	Supply Power	±12~±15	±12~±15	±12~±15	V
21	Consume Current	≤±20	≤±20	≤±20	mA
22	Temperature Sensor	Optional	Optional	Optional	
23	Dimensions	Φ25.4x30	Φ25.4x30	Φ25.4x30	mm
24	Weight	≤80	≤80	≤80	gram

Dimensions



Mark(For temperature selection of version only) :The temperature sensor is AD590,Point 10 is the high power,The point 9 is the low power,The point 9 and power ground use one platinum resistance;The value is 1K,The thermal coefficient is less then 5ppm.

Attention:



The product has own defect within one-year warranty , If the product is broken, all charge will be paid by your site. If the product faulty or damaged, Don't repair it by yourself, Please send it back to us for repair.



※More information please visit RION website: www.rion-tech.net



◎INS+GPS ◎IMU ◎AHRS ◎NORTH FINDER ◎GYRO ◎ACCELEROMETER

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