
BS-AQ30 Accelerometer



BS-AQ30 series quartz flexible accelerometer is a high-precision inertial navigation level accelerometer for a large number of military applications (up to 100g). The product has excellent long-term stability, repeatability, start-up performance, environmental adaptability and high reliability, which can be used for static test or dynamic test. It is also a standard vibration sensor and inclination sensor.

The output current of the product has a linear relationship with the force or acceleration received. Users can select the appropriate sampling resistance through calculation to achieve high precision output. And according to user needs built-in temperature sensor, used to offset value and scale factor compensation, reduce the impact of environmental temperature.

Applications: inertial measurement of military high-precision inertial navigation system in aerospace, aviation, ships, weapons and other fields and precision instrument equipment vibration isolation test and inclination test.

Features

1. Excellent turn-on repeatability performance
2. Environmentally rugged
3. Analog output
4. Field adjustable range
5. Internal temperature sensor for thermal compensation (option)
6. High range(100g)

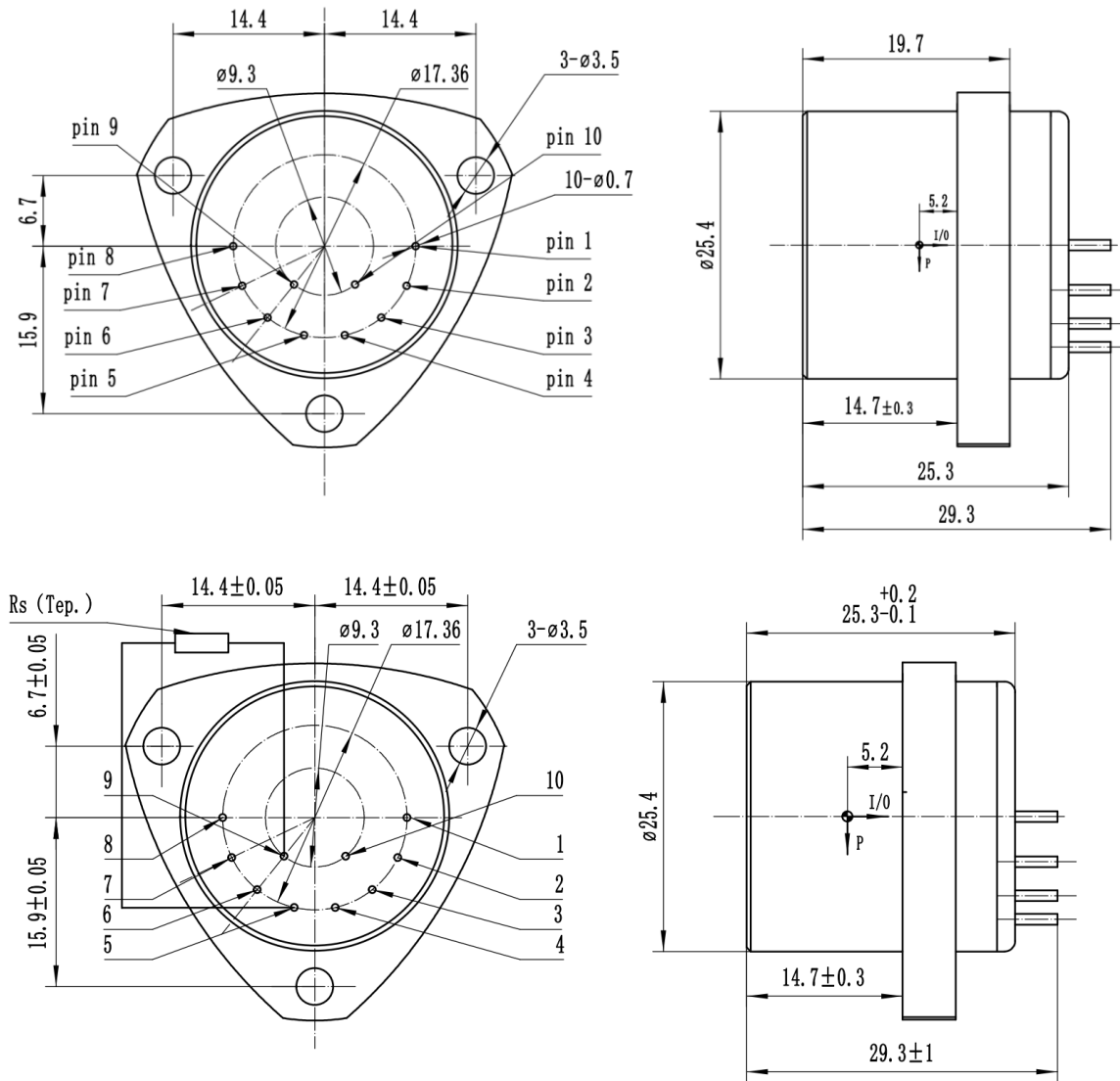
Full product codes:

BS-AQ30A-70-A1ES

BS-AQ30B-70-A1ES

BS-AQ30C-70-A1ES

Configuration Drawing and interface



Mark: 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 than 5ppm.

Performance characteristics

S/No	Parameters	BS-AQ30A	BS-AQ30B	BS-AQ30C
1	Range	±70g	±70g	±70g
2	Threshold /Resolution	2μg	3μg	5μg
3	Bias k0/k1	≤±3 mg	≤±3 mg	≤±5 mg
4	Scale factor k1	0.8~1.2 mA/g	0.8~1.2 mA/g	0.8~1.2 mA/g
5	Class II nonlinearity Coefficient k2/k1	≤±10μg /g ²	≤±15μg /g ²	≤±20μg /g ²
6	0g 4 hours short time stability	≤10 μg	≤15 μg	≤20 μg
7	1g 4 hours short time stability	≤10 ppm	≤15 ppm	≤20 ppm
8	Bias drift Sigma k0(1σ, one month)	≤10 μg	≤20 μg	≤30 μg
9	repeatability of scale factor Sigma k1/k1(1σ, one month)	≤15ppm	≤30 ppm	≤50 ppm
10	Class II nonlinearity Coefficient repeatability k2/k1(1σ, one month)	≤±10 μg /g ²	≤±20 μg /g ²	≤±30 μg /g ²
11	Bias thermal coefficient	≤±10 μg /°C	≤±30 μg /°C	≤±50 μg /°C
12	Scale factor thermal coefficient	≤±20 ppm /°C	≤±30 ppm /°C	≤±50 ppm /°C
13	Noise (sample resistance 840Ω)	≤5mv	≤5mv	≤5mv
14	Natural Frequency	400~800 Hz	400~800 Hz	400~800 Hz
15	Bandwidth	800~2500 Hz	800~2500 Hz	800~2500 Hz
16	Vibration	6g(20-2000Hz)	6g(20-2000Hz)	6g(20-2000Hz)
17	Shock	100g,8ms,1/2sin	100g,8ms,1/2sin	100g,8ms,1/2sin
18	Temperature range(Operating)	-55~+85°C	-55~+85°C	-55~+85°C
19	Temperature range(saved)	-60~+120°C	-60~+120°C	60~+120°C
20	Power	±12~±15V	±12~±15V	±12~±15V
21	Consume current	≤±20mA	≤±20mA	≤±20mA
22	Temp. sensor	Option	Option	Option
23	Size	Φ25.4X30mm	Φ25.4X30mm	Φ25.4X30mm
24	Weight	≤80g	≤80g	≤80g