

Quartz Flexible Accelerometer

Quartz flexible accelerometer is a precision instrument comprises quartz glass flexible support and advanced servo circuit based on the principal of inertia. When the carrier is subjected to acceleration, the output of the accelerometer is precisely proportional to the input acceleration. Our accelerometer has a current output form of high output impedance, and users can choose the sampling resistance according to their requirement without affecting the stability of the system.

At present, our quartz flexible accelerometer has formed a series of products, types from the high-precision ug JN-06A accelerometer for satellite microgravity measurement to low-cost, anti-harsh environment TN-06KG accelerometer, as many as dozens, and widely used in aerospace, aviation, navigation, ship, vehicle, petroleum, geotechnical engineering and other fields, providing signals for navigation, guidance, control, leveling, monitoring and other systems.



1.1JN-30B Quartz Flexible Accelerometer

1.1.1 Product Feature

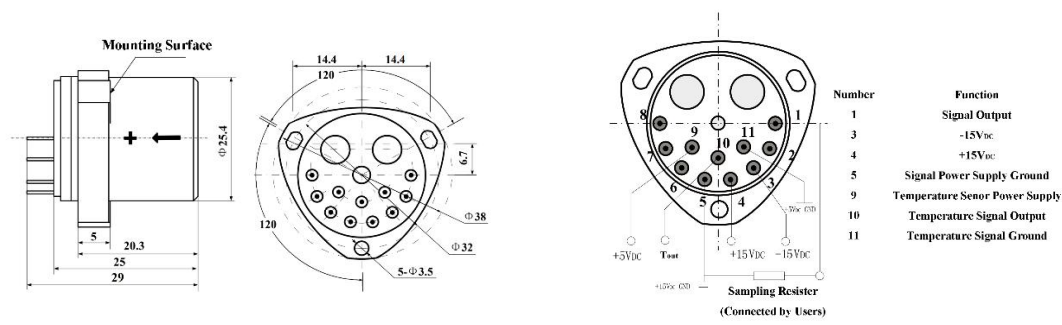
- Excellent index repeatability
- Analog output
- Build-in digital temperature sensor
- Wide load resistance range
- Triangle precision mounting flanges
- Application in the inertial navigation system of the new generation weapon

1.1.2 Performance Characteristics

Performance	JN-30B-I	JN-30B-II
Input Range (g)	±50	±20
Bias (mg)	≤5	≤5
Temperature Sensitivity (μg/°C)	≤10	≤20
One-month Composite Repeatability (1σ) (μg)	≤10	≤20
Six-month Composite Repeatability (1σ) (μg)	≤15	-
Scale Factor (mA/g)	1.2 ~ 1.6	1.2 ~ 1.6
Temperature Sensitivity (10 ⁻⁶ /°C)	≤10	≤30
One-month Composite Repeatability (1σ) (10 ⁻⁶)	≤10	≤30
Six-month Composite Repeatability (1σ) (10 ⁻⁶)	≤30	-
Linearity (μg/g ²)	≤10	≤30
Threshold (μg)	Less than 1	Less than 5
Resolution (μg)	Less than 1	Less than 5
Input Voltage (V)	±12 ~ ±18	±12 ~ ±18
Operating Temperature (°C)	-45 ~ +80	-45 ~ +80
Size (mm)	Ø25.4×29	Ø25.4×29
Weight (g)	≤75	≤75

1.1.3 Outline

Outline



JN-30B Configuration Drawings

JN-30B Pin & Wiring Diagram

Environment

Vibration Peak Sine

15g@20Hz ~ 2000Hz

Shock

100g, half-sine, 8ms ~ 12ms

Storage Temperature

-55°C ~ +80°C



1.2JN-06A Quartz Flexible Accelerometer

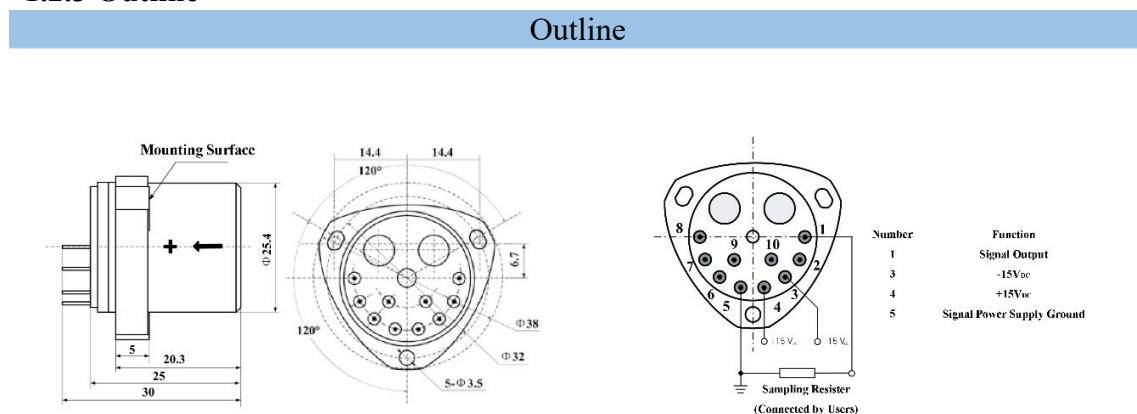
1.2.1 Product Feature

- Analog output
- Excellent index repeatability
- Build-in temperature sensor available according to needs
- Wide load resistance range
- Triangle precision mounting flanges
- Application in satellite control unit, microgravity measurement device and inertial navigation system in the manned reentry capsule

1.2.2 Performance Characteristics

Performance	JN-06A-I	JN-06A-II
Input Range (g)	±20	±20
Bias (mg)	≤5	≤5
Temperature Sensitivity (μg/°C)	≤10	≤30
One-month Composite Repeatability (1σ) (μg)	≤10	≤30
Six-month Composite Repeatability (1σ) (μg)	≤30	-
Scale Factor (mA/g)	1.2 ~ 1.6	1.2 ~ 1.6
Temperature Sensitivity (10 ⁻⁶ /°C)	≤10	≤50
One-month Composite Repeatability (1σ) (10 ⁻⁶)	≤10	≤40
Six-month Composite Repeatability (1σ) (10 ⁻⁶)	≤50	-
Linearity (μg/g ²)	≤10	≤40
Threshold (μg)	Less than 1	Less than 5
Resolution (μg)	Less than 1	Less than 5
Input Voltage (V)	±12 ~ ±18	±12 ~ ±18
Operating Temperature (°C)	-45 ~ +80	-45 ~ +80
Size (mm)	Ø25.4×30	Ø25.4×30
Weight (g)	≤70	≤70

1.2.3 Outline



JN-06A Configuration Drawings	JN-06A Pin & Wiring Diagram
-------------------------------	-----------------------------

Environment	
Vibration Peak Sine	15g@20Hz ~ 2000Hz
Shock	100g, half-sine, 8ms ~ 12ms
Storage Temperature	-55°C ~ +80°C

1.3JN-06D Quartz Flexible Accelerometer

1.3.1 Product Feature

- High-g capability
- Analog output
- Excellent index repeatability
- Build-in temperature sensor available according to needs
- Wide load resistance range
- Triangle precision mounting flanges

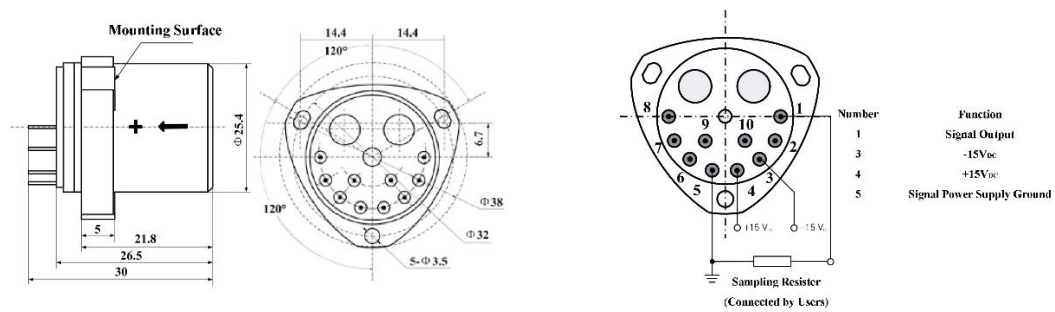


1.3.2 Performance Characteristics

Performance	JN-06D-I	JN-06D-II
Input Range (g)	±80	±40
Bias (mg)	≤5	≤5
Temperature Sensitivity (μg/°C)	≤30	≤50
One-month Composite Repeatability (1σ) (μg)	≤30	≤60
Scale Factor (mA/g)	0.9 ~ 1.3	0.9 ~ 1.3
Temperature Sensitivity (10 ⁻⁶ /°C)	≤50	≤80
One-month Composite Repeatability (1σ) (10 ⁻⁶)	≤40	≤60
Linearity (μg/g ²)	≤40	≤40
Threshold (μg)	Less than 5	Less than 5
Resolution (μg)	Less than 5	Less than 5
Input Voltage (V)	±12 ~ ±18	±12 ~ ±18
Operating Temperature (°C)	-45 ~ +80	-45 ~ +80
Size (mm)	Ø25.4×30	Ø25.4×30
Weight (g)	≤80	≤80

1.3.3 Outline

Outline



JN-06D Configuration Drawings

JN-06D Pin & Wiring Diagram

Environment

Vibration Peak Sine

20g@20Hz ~ 2000Hz

Shock

100g, half-sine, 8ms ~ 12ms

Storage Temperature

-55°C ~ +80°C

1.4 JN-06E Quartz Flexible Accelerometer

1.4.1 Product Feature

- Analog output
- Excellent index repeatability
- Build-in temperature sensor available according to needs
- Wide load resistance range
- Square precision mounting flanges
- Application in engineering applications

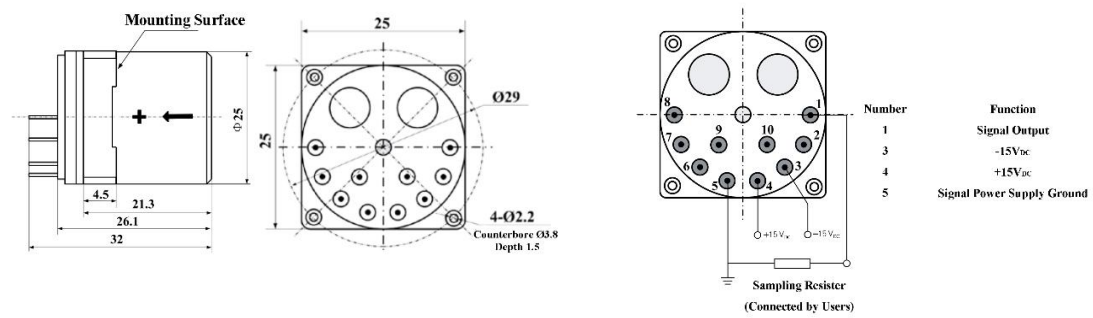


1.4.2 Performance Characteristics

Performance	JN-06E-I	JN-06E-II
Input Range (g)	± 20	± 20
Bias (mg)	≤ 5	≤ 5
Temperature Sensitivity ($\mu\text{g}/^\circ\text{C}$)	≤ 30	≤ 50
One-month Composite Repeatability (1σ) (μg)	≤ 30	≤ 50
Scale Factor (mA/g)	1.2 ~ 1.6	1.2 ~ 1.6
Temperature Sensitivity ($10^{-6}/^\circ\text{C}$)	≤ 30	≤ 80
One-month Composite Repeatability (1σ) (10^{-6})	≤ 30	≤ 50
Linearity ($\mu\text{g}/\text{g}^2$)	≤ 15	≤ 40
Threshold (μg)	Less than 5	Less than 5
Resolution (μg)	Less than 5	Less than 5
Input Voltage (V)	$\pm 12 \sim \pm 18$	$\pm 12 \sim \pm 18$
Operating Temperature ($^\circ\text{C}$)	$-45 \sim +80$	$-45 \sim +80$
Size (mm)	$\varnothing 25.4 \times 32$	$\varnothing 25.4 \times 32$
Weight (g)	≤ 70	≤ 70

1.4.3 Outline

Outline



JN-06E Configuration Drawings

JN-06E Pin & Wiring Diagram

Environment

Vibration Peak Sine

15g@20Hz ~ 2000Hz

Shock

100g, half-sine, 8ms ~ 12ms

Storage Temperature

-55°C ~ +80°C

1.5 JN-11 Quartz Flexible Accelerometer

1.5.1 Product Feature

- Small size and light weight
- Analog output
- Excellent index repeatability
- Shock and vibration resistance
- Wide load resistance range
- Square precision mounting flanges
- Wide temperature range

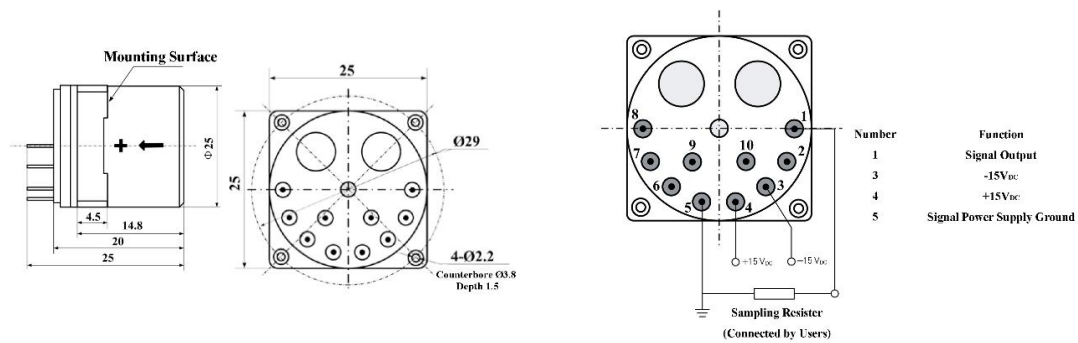


1.5.2 Performance Characteristics

Performance	JN-11
Input Range (g)	± 30
Bias (mg)	≤ 8
Temperature Sensitivity ($\mu\text{g}/^\circ\text{C}$)	≤ 40
One-month Composite Repeatability (1σ) (μg)	≤ 50
Scale Factor (mA/g)	1.0 ~ 1.6
Temperature Sensitivity ($10^{-6}/^\circ\text{C}$)	≤ 80
One-month Composite Repeatability (1σ) (10^{-6})	≤ 80
Linearity ($\mu\text{g}/\text{g}^2$)	≤ 40
Input Voltage (V)	$\pm 12 \sim \pm 18$
Operating Temperature ($^\circ\text{C}$)	$-45 \sim +100$
Size (mm)	$\varnothing 25 \times 25$
Weight (g)	≤ 50

1.5.3 Outline

Outline



JN-11 Configuration Drawings

JN-11 Pin & Wiring Diagram

Environment

Vibration Peak Sine

25g@30Hz ~ 500Hz

Shock

500g, half-sine, 1ms ~ 3ms

Storage Temperature

-55°C ~ +80°C

1.6 JN-20A Quartz Flexible Accelerometer

1.6.1 Product Feature

- Small size and light weight
- Analog output
- Wide load resistance range
- Square precision mounting flanges
- Application in unmanned aircraft and petroleum pipeline

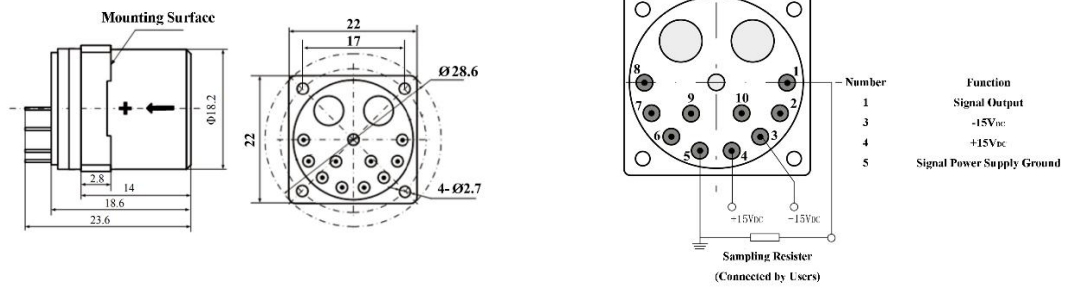


1.6.2 Performance Characteristics

Performance	JN-20A-I	JN-20A-II
Input Range (g)	±80	±30
Bias (mg)	≤5	≤5
Temperature Sensitivity (μg/°C)	≤40	≤50
One-month Composite Repeatability (1σ) (μg)	≤40	≤80
Scale Factor (mA/g)	0.6 ~ 1.3	0.9 ~ 1.3
Temperature Sensitivity (10 ⁻⁶ /°C)	≤60	≤60
One-month Composite Repeatability (1σ) (10 ⁻⁶)	≤40	≤80
Linearity (μg/g ²)	≤50	≤50
Threshold (μg)	Less than 5	Less than 5
Resolution (μg)	Less than 5	Less than 5
Input Voltage (V)	±12 ~ ±18	±12 ~ ±18
Operating Temperature (°C)	-45 ~ +80	-45 ~ +80
Size (mm)	Ø18.2×23.6	Ø18.2×23.6
Weight (g)	≤35	≤35

1.6.3 Outline

Outline



JN-20A Configuration Drawings

JN-20A Pin & Wiring Diagram

Environment

Vibration Peak Sine

15g@20Hz ~ 2000Hz

Shock

100g, half-sine, 8ms ~ 12ms

Storage Temperature

-55°C ~ +80°C



1.7 JN-06F Quartz Flexible Accelerometer

1.7.1 Product Feature

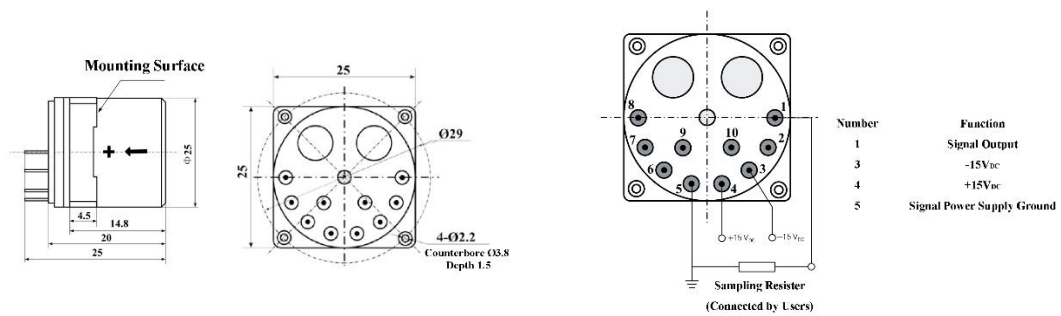
- Small size and light weight
- Analog output
- Shock, vibration and high temperature resistance
- Wide load resistance range
- Square precision mounting flanges

1.7.2 Performance Characteristics

Performance	JN-06F
Input Range (g)	±10
Bias (mg)	≤10
Temperature Sensitivity (μg/°C)	≤100
Three-hour Stability (1σ) (10 ⁻⁶)	≤100
Scale Factor (mA/g)	2.3 ~ 3.5
Temperature Sensitivity (10 ⁻⁶ /°C)	≤100
Three-hour Stability (1σ) (10 ⁻⁶)	≤100
Input Voltage (V)	±12 ~ ±18
Operating Temperature (°C)	-45 ~ +100
Size (mm)	Ø25×25
Weight (g)	≤60

1.7.3 Outline

Outline



JN-06F Configuration Drawings

JN-06F Pin & Wiring Diagram

Environment

Vibration Peak Sine
Shock
Storage Temperature

15g@20Hz ~ 2000Hz
500g, half-sine, 1ms ~ 3ms
-55°C ~ +120°C



1.8 JN-20K/20KG Quartz Flexible Accelerometer

1.8.1 Product Feature

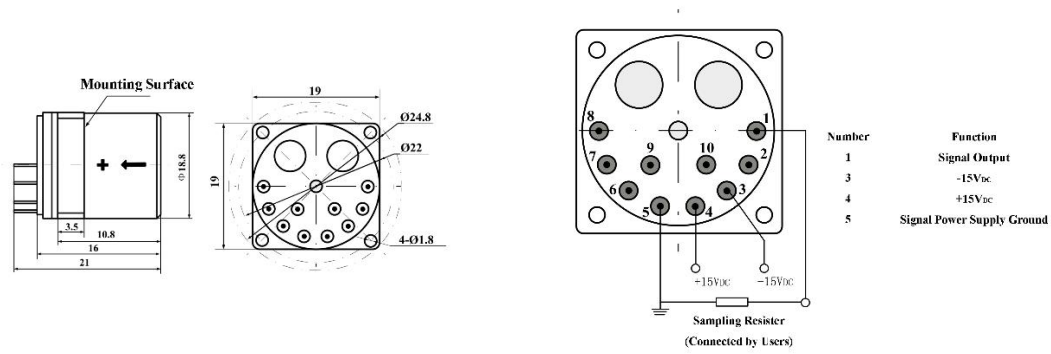
- Anti-adverse environment
- Small size and light weight
- Analog output
- Wide load resistance range
- Square precision mounting flanges
- Application in measurement system of oil drilling

1.8.2 Performance Characteristics

Performance	JN-20K	JN-20KG
Input Range (g)	±20	±20
Bias (mg)	≤20	≤30
Temperature Sensitivity (μg/°C)	≤150	≤150
Three-hour Stability (1σ) (μg)	≤100	≤200
Scale Factor (mA/g)	2.2 ~ 3.5	1.5 ~ 3.5
Temperature Sensitivity (10 ⁻⁶ /°C)	≤200	≤300
Three-hour Stability (1σ) (10 ⁻⁶)	≤100	≤200
Input Voltage (V)	±12 ~ ±18	±12 ~ ±18
Operating Temperature (°C)	-45 ~ +125	-45 ~ +125
Size (mm)	Ø18.8×21	Ø18.8×21
Weight (g)	≤25	≤25

1.8.3 Outline

Outline



JN-20K/20KG Configuration Drawings JN-20K/20KG Pin & Wiring Diagram

Environment

Random Vibration	20g rms@10Hz ~ 2000Hz
Shock	1000g, half-sine, 0.5ms
Storage Temperature	-55°C ~ +130°C



1.9 JN-06K/06KG Quartz Flexible Accelerometer

1.9.1 Product Feature

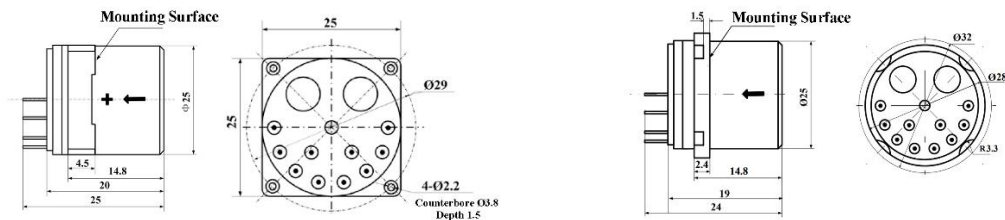
- Anti-adverse environment
- Analog output
- Wide load resistance range
- Optional round or square precision mounting flanges
- Provide temperature model for temperature compensation
- Application in measurement system of oil drilling

1.9.2 Performance Characteristics

Performance	JN-20K	JN-20KG
Input Range (g)	±10	±10
Bias (mg)	≤20	≤20
Temperature Sensitivity (μg/°C)	≤150	≤150
Three-hour Stability (1σ) (μg)	≤100	≤150
Scale Factor (mA/g)	2.3 ~ 3.5	1.3 ~ 3.5
Temperature Sensitivity (10 ⁻⁶ /°C)	≤150	≤300
Three-hour Stability (1σ) (10 ⁻⁶)	≤100	≤150
Input Voltage (V)	±12 ~ ±18	±12 ~ ±18
Operating Temperature (°C)	-45 ~ +125	-45 ~ +160
Size (mm)	Ø25×25	Ø25×25
Weight (g)	≤60	≤60

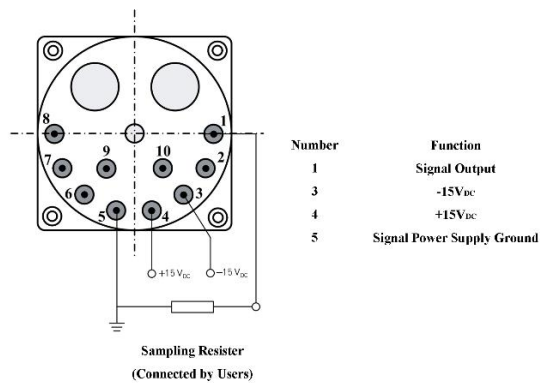
1.9.3 Outline

Outline



JN-06K Configuration Drawings

JN-06KG Configuration Drawings



JN-06K/06KG Pin & Wiring Diagram

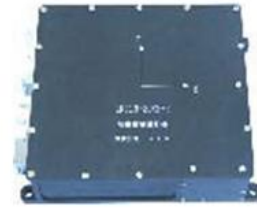
Environment

Random Vibration	20g rms@10Hz ~ 2000Hz
Shock	1000g, half-sine, 0.5ms
Storage Temperature	-55°C ~ +130°C

1.10 Three-axis Acceleration Measurement Combination

1.10.1 Product Feature

- Small size, light weight and low power consumption
- Provides acceleration data in all three directions of the X, Y and Z axis simultaneously
- With digital signal output
- Precise positioning mounting



1.10.2 Performance Characteristics

Performance		Index	Index
Maximum Outline Dimension (mm×mm×mm)		72×72×78	72×72×55
Weight (g)		≤800	≤500
Power Supply	Input Voltage (V)	15±3	15±3
	Power Consumption (W)	< 5	< 5
Measuring Range (g)		±0.2 ~ ±20	±0.2 ~ ±20
Pass- band Broadband (kHz)		≥100	≥100
Bias (mg)		≤3	≤5
Scale Factor (kHz/g)		65000±20000	65000±20000
Bias Month Composite Repeatability (1σ) (μg)		50	80
Scale Factor Month Composite Repeatability (1σ) 10 ⁻⁶		80	100