



CRY431

1 Axis, 5 mV/g, High-G IEPE Accelerometer, Top 10-32UNF Connector

Features

- **Key Specifications**

Sensitivity	5 mV/g
Frequency Response	1 Hz to 12 kHz (± 1 dB)
Measuring Range (Peak)	$\pm 1000g$ pk

- **Applications**

Universal measurements
 High amplitude measurements
 Industrial vibration measurements

Introduction

CRY431 is a uniaxial acceleration sensor. The top output mode is 10-32 UNF, and it is installed on an object through an M5 bolt. It can be used to measure tiny motions in laboratories and scientific research, and can also be used to monitor the vibration status of industrial equipment online.

CRY431 can be externally connected with armored shielded cables for measuring vibration parameters such as acceleration, velocity, and displacement under strong interference conditions such as in industry and power.

Highlights

- **Applications of High-G Accelerometer**

High-g accelerometers are used to measure high-amplitude vibration, such as in collision and impact testing, aircraft and car acceleration, ballistic testing, and more. They can capture these huge acceleration changes and provide reliable data support.

- **Compatibility**

The IEPE accelerometer is a PE charge accelerometer with an integrated preamplifier with an output signal in the form of a low-impedance voltage output that can be matched to a common coaxial cable.

IEPE is a universal constant current source power supply technology used on sensors. Each manufacturer has different names, such as ICP, CCP, etc.

- **Calibration**

Each CRY SOUND accelerometer is calibrated at the factory using traceable calibration equipment. Calibration certificates are provided with each unit. CRY SOUND recommends recalibration at least once a year.

- **Quality & Warranty**

All CRY SOUND accelerometers are made of stainless steel with good corrosion resistance and robustness, suitable for long-term storage.

CRY SOUND preamplifiers are supported by a 1-year warranty—offering one of the best service guarantee in the world.

Technical Specifications

Dynamic Characteristics

Sensitivity	5 mV/g (160Hz)
Frequency Response	1 Hz to 12 kHz (± 1 dB)
Measuring Range (Peak)	$\pm 1000g$ pk
Transverse Sensitivity	$\leq 5\%$
Amplitude Non-linearity	$\leq \pm 1\%$

Electrical Characteristics

Output Impedance	$< 100 \Omega$
Excitation Voltage	18 VDC to 28 VDC
Full Scale Output (Peak)	± 5 V
Constant Current	2 mA to 10 mA
Noise	$< 50 \mu V$
Bias Voltage	9 V to 12 V

Environmental Characteristics

Shock Protection (Peak)	± 5000 g
Operating Temperature	$-40 \text{ }^\circ\text{C}$ to $+120 \text{ }^\circ\text{C}$

Physical Characteristics

Connector Type	Top 10-32UNF(Microdot)
Threaded Interface	M5
Sensing Structure	Shear Mode
Case Materials	304 Stainless Steel
Sensing Element	PZT-5
Weight	9.5 g

Ordering Information

Optional Accessories

Cable	10-32UNF (M5) to BNC cable/ 2m
Mounting Bolt	M5 bolt

Frequency Response

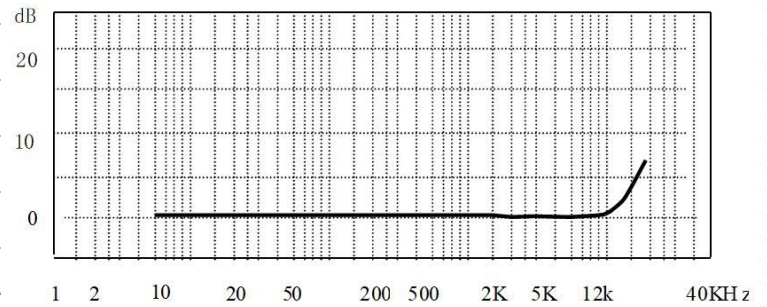


Fig.1 CRY431 Accelerometer Typical Frequency Response

Drawings(mm)

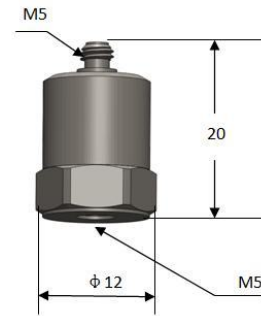


Fig.2 CRY431 Accelerometer Drawings

Dimensions

Height	20 mm(0.787")
Diameter	12 mm(0.472")

Related Products

CRY432	1 Axis, high-g, IEPE accelerometer 5 mV/g, side 10-32UNF connector
CRY433	1 Axis, high-sensitivity, IEPE accelerometer, 100 mV/g, top 10-32UNF connector
CRY441	1 Axis, high-g charge accelerometer, 5pC/ g, miniature, side 10-32UNF connector
CRY446	Triaxial, high-g, IEPE accelerometer, 10 mV/g, miniature, side connector

