MegaSig

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ACC 1834S3 微型三轴加速度计

产品规格书

ACC 1834S3 Micro Triaxial Accelerometer

Product Specification

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产品简介



ACC 1834S3 微型三轴加速度计

美格信压电式加速度传感器，内部自带了电荷放大器，采用压电陶瓷材料制造的敏感元件使其具有良好的性能，能够在更极限的温度和更宽的测量范围内稳定运行。

IEPE 压电式加速度传感器，采用1/4-28 UNF四芯线缆转BNC同轴线缆给传感器供给 2-10mA的恒流电源，而输出信号也由这同轴电缆输出，国际上通称ICP方式。

ACC 1834S3经常搭配MegaSig PM 6183等内置IEPE采集卡达到优秀测试效果。

功能特点

- IEPE供电三轴加速度计，整体采用钛合金材质，重量轻，体积小巧
- 整体采用剪切结构设计，抗干扰能力强，高稳定性
- 应用于多轴向振动测试分析，车辆、航空等研发及应用

规格参数

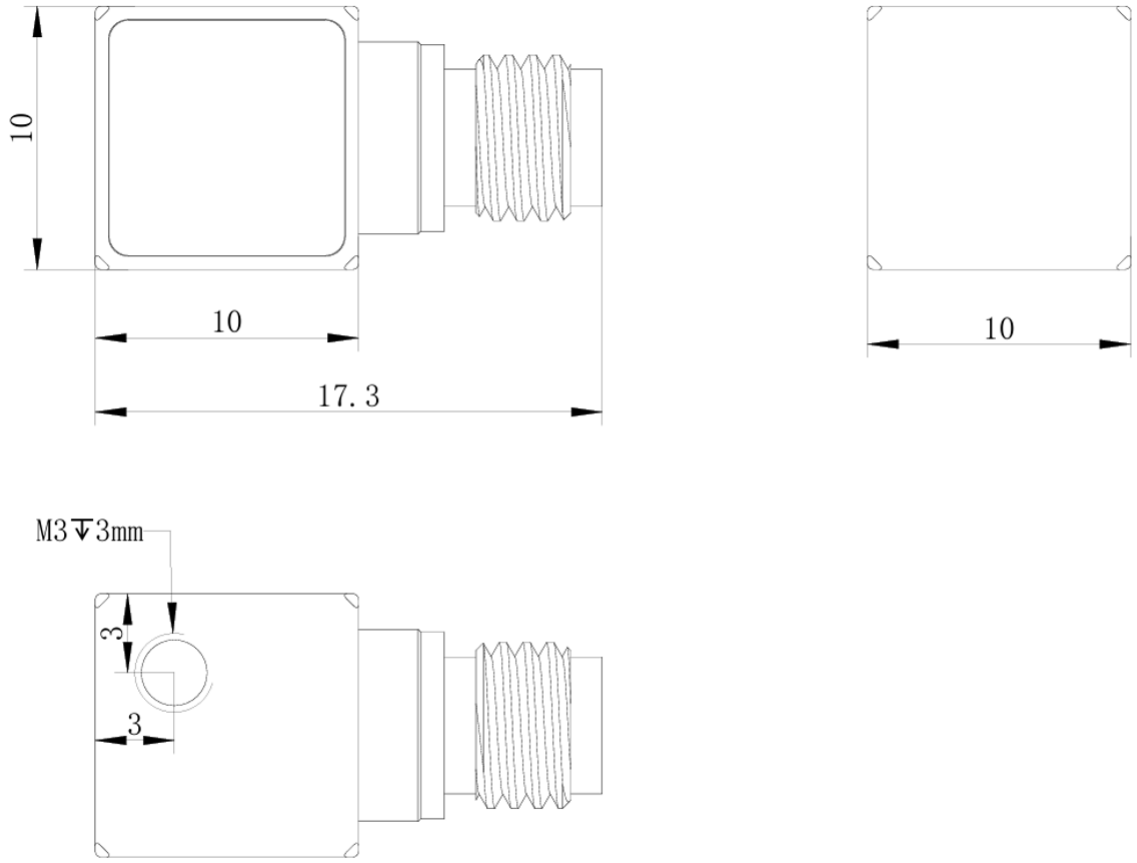
整体参数		
灵敏度		10mV/g（±10%）
测量范围		±500g
频率范围		1Hz-10kHz（±5%） 10k-15kHz（±10%）
最大横向灵敏度		≤5%
幅值线性度		≤1%
宽频带分辨率		0.005grms
安装谐振频率		>50kHz
冲击抵抗		2kg
工作电压范围		+18～+28V
工作电流范围		+2～+10mA（典型4mA））
工作温度范围		-40～+120℃
输出电压峰值		≤6V
宽带噪声		0.005g
频谱噪声	10 Hz	350(μg/√Hz)
	100 Hz	70(μg/√Hz)
	1000 Hz	30(μg/√Hz)
基座应变		0.001g/με
磁灵敏度		1.5g/T

机械结构

机械结构	
敏感元件	压电陶瓷
壳体材料	钛合金
结构形式	剪切型
重量	＜3.5g
输出接口	1/4-28四芯插座
输出接口位置	侧端出线
安装接口	M3内螺纹
附件	蜂蜡*1

机械尺寸

单位：mm



建议搭配使用线缆规格

型号	图片	说明
403A		1/4-28UNF接头 转 3×BNC接头，外径2.4mm蓝色PVR材质线缆，三轴低噪声线缆，柔软性较高，耐95℃，可定制长度

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Product introduction



Micro Triaxial Accelerometer

The MegaSig piezoelectric accelerometer features an internal charge amplifier. Its sensing element, made of piezoelectric ceramic material, delivers excellent performance, enabling stable operation under more extreme temperatures and across a wider measurement range.

The IEPE piezoelectric accelerometer utilizes a 1/4-28 UNF four-conductor to BNC coaxial cable. This cable supplies the sensor with a constant current power source of 2-10 mA, and also carries the output signal. This method is internationally known as ICP.

The ACC 1834S3, when paired with built-in IEPE acquisition cards such as the MegaSig PM 6183, often achieves outstanding testing results.

Features

- IEPE-powered triaxial accelerometer, constructed entirely from titanium alloy, featuring lightweight and compact design
- Shear structure design throughout ensures strong anti-interference capability and high stability
- Applied in multi-axial vibration testing and analysis, as well as research, development, and applications in automotive, aerospace, and other fields

Specification parameters

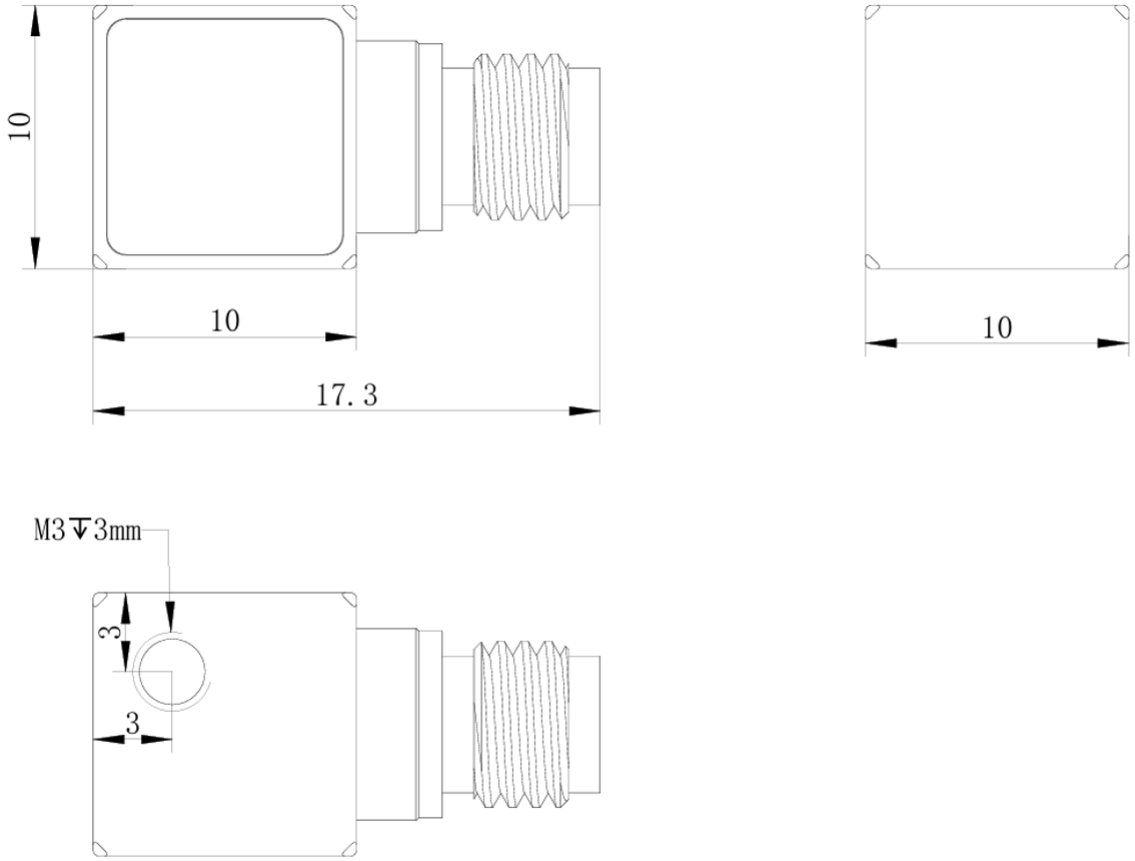
Parameters		
Sensitivity		10mV/g（±10%）
Measurement range		±500g
Frequency range		1Hz-10kHz（±5%） 10k-15kHz（±10%）
Maximum transverse sensitivity		≤5%
Amplitude linearity		≤1%
Wide-band Resolution		0.005grms
Mounting resonant frequency		>50kHz
Shock resistance		2kg
Operating voltage range		+18 ~ +28V
Operating current range		+2 ~ +10mA（typical 4mA））
Operating temperature range		-40 ~ ＋120℃
Peak output voltage		≤6V
Broadband noise		0.005g
Spectral noise	10 Hz	350(μg/√Hz)
	100 Hz	70(μg/√Hz)
	1000 Hz	30(μg/√Hz)
Base strain		0.001g/με
Magnetic sensitivity		1.5g/T

Mechanical structure

Mechanical structure	
Sensitive element	Piezoelectric ceramic
Shell material	Titanium alloy
Structure Type	Shear Type
Weight	＜3.5g
Output Connector	1/4-28 4-Pin Socket
Output connector position	Side-exit wiring
Mounting interface	M3 internal thread
Accessories	Beeswax *1

Mechanical Size

Unit: mm



Recommended cable specifications for matching use

Model	Picture	Description
403A		1/4-28UNF connector to 3×BNC connector, with an outer diameter of 2.4mm blue PVR material cable. It is a three-axis low-noise cable, featuring high flexibility, resistance to 95℃, and customizable length.

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