

ACC 1821 - SxLx 系列单轴加速度计

产品规格书

ACC 1821-SxLx Series Uniaxial Accelerometer

Product Specification

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产品简介

ACC 1821 单轴加速度传感器



ACC 1821-SxL1



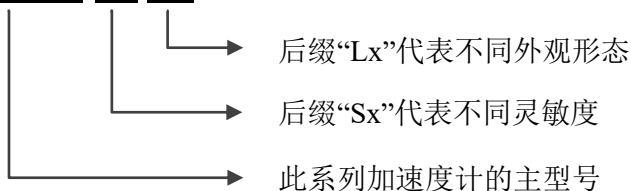
ACC 1821-SxL2

ACC 1821-SxLx 系列加速度计是压电式加速度传感器，它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，能够长期使用中保持足够的稳定性。

使用同轴电缆给此系列的传感器提供 2-10mA 的恒流电源，同时输出信号也由这个同轴电缆输出，国际上通称为 IEPE 方式。

型号说明

ACC 1821-Sx Lx



例如：型号名称为“ACC 1821-S5L1”的加速度计对应的规格是 ACC 1821 系列的加速度计，灵敏度为 100mV/g，外观形态为 L1（侧端出线，内螺纹 M5 固定）的加速度计。

功能特点

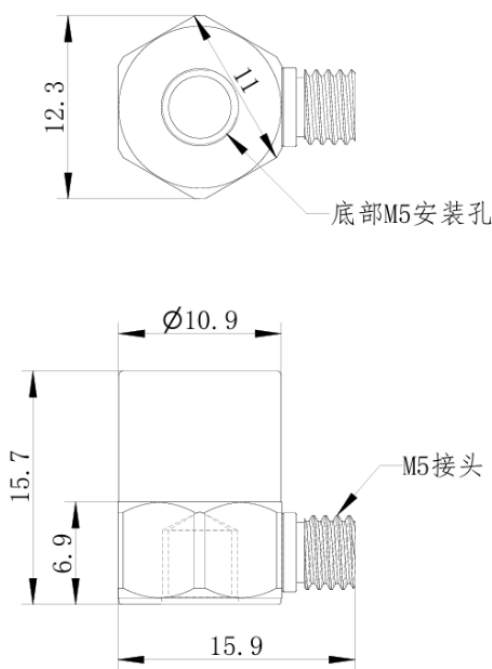
- IEPE 供电型单轴加速度计，整体采用钛合金材质，重量轻，体积小巧
- 整体采用剪切结构设计，高带宽，高稳定性
- 应用于通用型振动测量、汽车 NVH 测试、电机类产品下线检测、模态试验等场景

规格参数

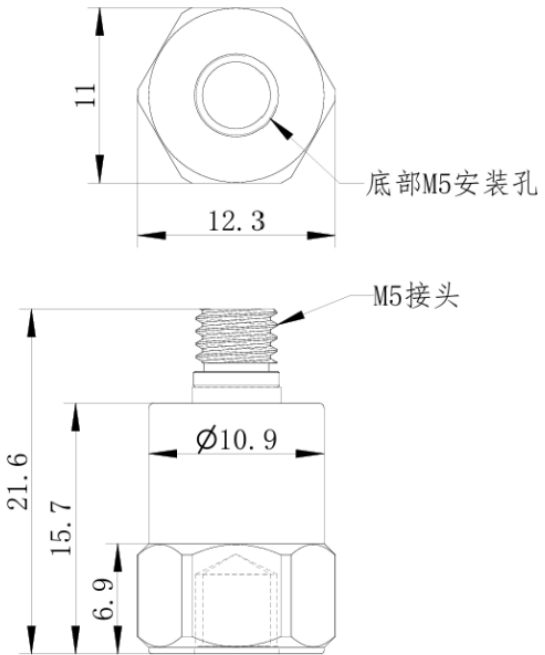
ACC 1821-SxLx 系列			
灵敏度等级		S3	S5
出厂灵敏度		10mV/g (±10%)	100mV/g (±10%)
测量范围		±500g	±50g
频率范围		0.5Hz - 10kHz (±5%) 0.3Hz - 15kHz (±10%)	0.5Hz-10kHz (±5%) 0.3Hz-15kHz (±10%)
横向灵敏度		≤5%	≤5%
幅值线性度		≤1%	≤1%
宽带分辨率		0.0001grms	0.0001grms
安装谐振频率		>40kHz	>40kHz
冲击抵抗		3000g	2000g
工作电压范围		+18~+28V	+18~+28V
工作电流范围		2mA~10mA (典型4mA)	2mA~10mA (典型4mA)
工作温度范围		-40°C~120°C	-40°C~120°C
温度系数		-0.1%/°C	-0.1%/°C
宽带噪声		4000μg	550μg
频谱噪声	10Hz	250 (μg/√Hz)	57 (μg/√Hz)
	100Hz	65 (μg/√Hz)	18 (μg/√Hz)
	1000Hz	35 (μg/√Hz)	5.7 (μg/√Hz)
基座应变		0.002g/με	0.002g/με
磁灵敏度		1.5g/T	1.5g/T
敏感元件		压电陶瓷	
壳体材料		钛合金	
结构形式		剪切型	
重量		≤5.5g	
输出接口		M5	
输出接口位置		可选L1 (侧端出线) 或L2 (顶端出线)	
安装接口		底部M5内螺纹连接	
附件		M5连接螺栓	

外形尺寸

unit(mm)



L1形态外形尺寸

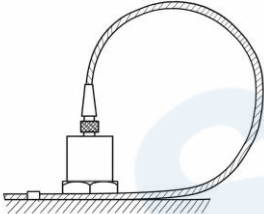
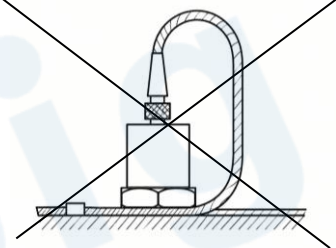
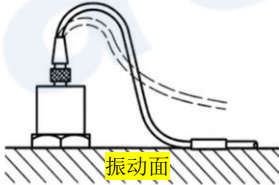
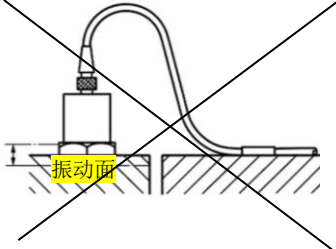
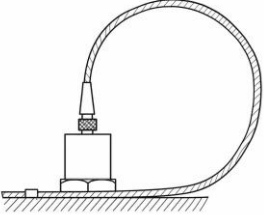
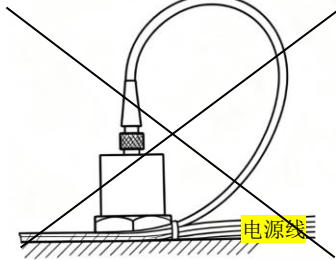


L2形态外形尺寸

订购信息

PN号	型号	图片	说明
900015-20 900015-22	ACC 1821		单轴加速度传感器
960034-01	PM 6183		数据采集卡
730008-030	102C030		M5接头转BNC接头低噪声线缆，长度3.0m
730008-060	102C060		M5接头转BNC接头低噪声线缆，长度6.0m
730008-090	102C090		M5接头转BNC接头低噪声线缆，长度9.0m
730008-000	102C		M5接头转BNC接头低噪声线缆，可定制长度

线缆使用注意事项

注意事项	正确	错误
安装接头处牢固连接，禁止硬折		
线缆的固定位置需要跟随振动面，避免振动对接线端子的拉扯		
线缆要远离强电干扰源，避免与电源线平行布线		

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Product introduction

ACC 1821-SxLx Uniaxial Accelerometer



ACC 1821-SxL1

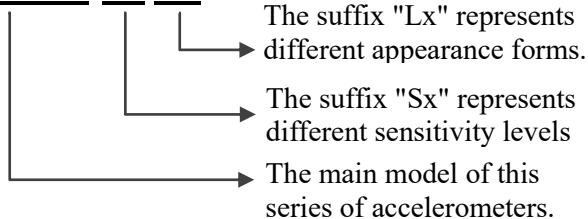
ACC 1821-SxL2

The ACC 1821-SxLx series accelerometers are piezoelectric acceleration sensors that integrate an internal charge amplifier. Their sensing elements, fabricated from piezoelectric ceramic materials, deliver robust performance and maintain sufficient stability over long-term operation.

Powered via coaxial cable with a constant current supply of 2-10 mA, these sensors output signals through the same cable — a configuration internationally recognized as the IEPE (Integrated Electronics Piezo-Electric) standard.

Model description

ACC 1821-Sx Lx



For example: the accelerometer with the model name "ACC 1821-S5L1" corresponds to the specifications of an ACC 1821 series accelerometer, featuring a sensitivity of 100mV/g and an appearance form of L1 (cable exit from the side, with an internal thread M5 for fixation).

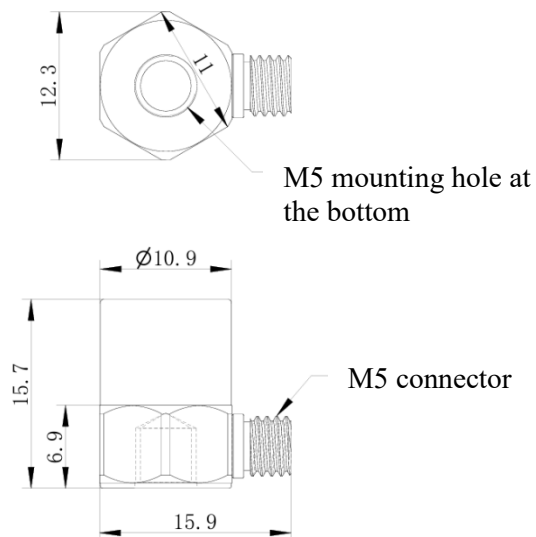
Features

- IEPE-powered single-axis accelerometer, featuring a lightweight and compact design made entirely of titanium alloy
- Utilizes a shear-type structural design throughout, offering high bandwidth and high stability
- Suitable for applications in general vibration measurement, automotive NVH testing, end-of-line testing for motor products, modal testing, and other similar scenarios

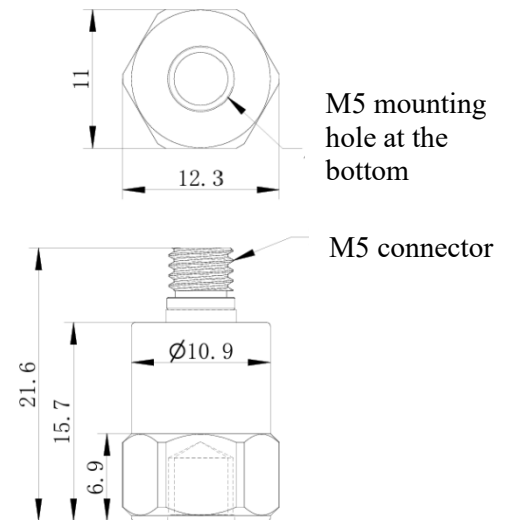
Specification parameters

ACC 1821-SxLx serial			
Sensitivity class		S3	S5
Factory sensitivity		10mV/g (±10%)	100mV/g (±10%)
Measurement range		±500g	±50g
Frequency range		0.5Hz-10kHz (±5%) 0.3Hz-15kHz (±10%)	0.5Hz-10kHz (±5%) 0.3Hz-15kHz (±10%)
Transverse sensitivity		≤5%	≤5%
Amplitude linearity		≤1%	≤1%
Broadband resolution		0.0001grms	0.0001grms
Mounted resonant frequency		>40kHz	>40kHz
Shock survival		3000g	2000g
Operating voltage range		+18~+28V	+18~+28V
Operating current range		2mA~10mA (typical 4mA)	2mA~10mA (typical 4mA)
Operating temperature range		-40°C~120°C	-40°C~120°C
Temperature range coefficient		-0.1%/°C	-0.1%/°C
Broadband noise		4000μg	550μg
Spectral noise	10Hz	250 (μg/√Hz)	57 (μg/√Hz)
	100Hz	65 (μg/√Hz)	18 (μg/√Hz)
	1000Hz	35 (μg/√Hz)	5.7 (μg/√Hz)
Base strain		0.002g/με	0.002g/με
Magnetic sensitivity		1.5g/T	1.5g/T
Sensing element		Piezoelectric ceramic	
Housing material		Titanium alloy	
Construction type		Shear-type	
Weight		≤ 5.5g	
Output interface		M5	
Output interface location		Optional L1 (side-terminal wiring) or L2 (top-terminal wiring)	
Mounting interface		Bottom M5 internal thread connection	
Accessories		M5 connecting bolt	

Mechanical structure



L1 Physical dimensions and shape

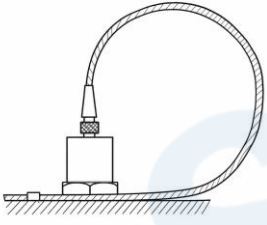
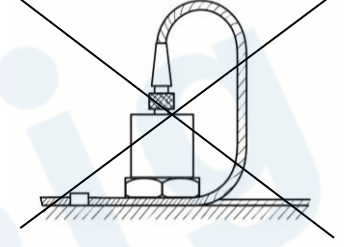
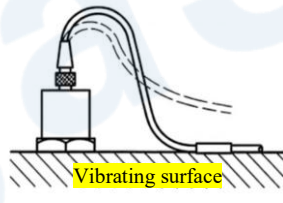
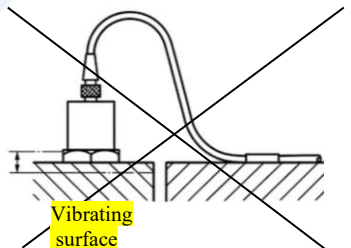
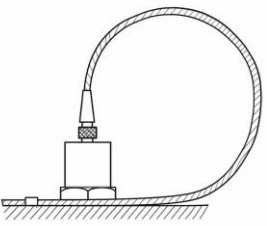
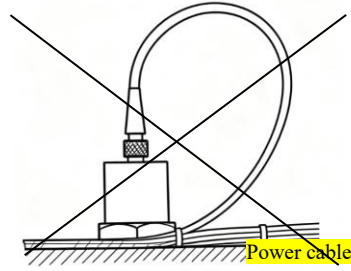


L2 Physical dimensions and shape

Ordering Information

PN	Model	Picture	Description
900015-20 900015-22	ACC 1821	 (L1) (L2)	Uniaxial Accelerometer
960034-01	PM 6183		Data Acquisition Card
730008-030	102C030		M5 Plug to BNC Plug low noise cable, length 3.0m
730008-060	102C060		M5 Plug to BNC Plug low noise cable, length 6.0m
730008-090	102C090		M5 Plug to BNC Plug low noise cable, length 9.0m
730008-000	102C		M5 Plug to BNC Plug low noise cable, customizable length.

Installation & Usage Precautions

Precautions	Correct	Incorrect
Securely connect the cable at the connector; no sharp bending		
The cable fixation point shall follow the vibrating surface to avoid vibration pulling on the cable terminal		
Keep the cable away from strong electrical interference sources and avoid parallel routing with power cables.		

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