

Accelerometer with dual temperature output



Description

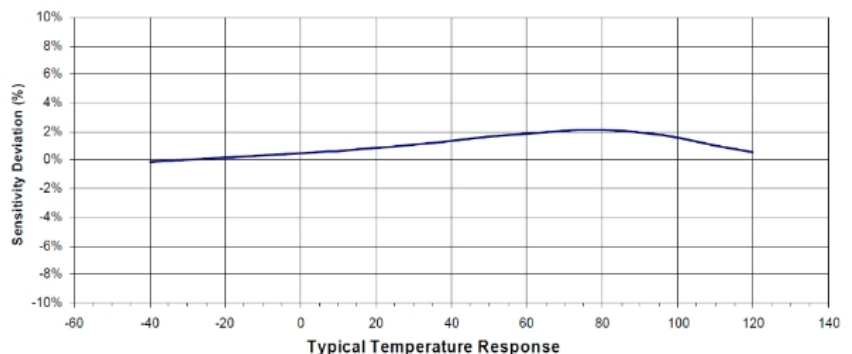
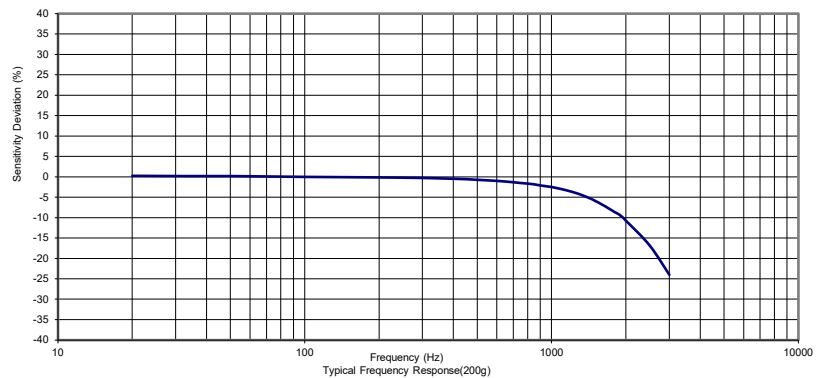
Model 812T is a high-sensitivity accelerometer which simultaneously measures acceleration and low-frequency vibration. 812T is capacitive accelerometer family utilizes a silicon Micro-Electro-Mechanical System (MEMS) variable capacitance sensing element. The output signal is scaled as a voltage which is proportional to the applied acceleration, signal format is single-ended $2.5 \pm 2V$. The accelerometer is powered by a single regulated supply between 8 to 36 Vdc. Thermal drift has been compensated by internal circuit for the best environment stability. The sensing element and electronics are contained in a tough housing with an integral cable terminated by specified connector for train application. The output cables are protected by fire resistant tubes for long term out-door use. Signal ground is isolated from the test object for better interference shielding. The accelerometer can be mounted by M6 metric screw or adhesive. 812T is well-suited for a wide variety of train and railway applications requiring low frequency measurements and reliable package.

Features

- DC response
- 200g full scale
- Motion, low frequency
- Temperature compensation
- Dual temperature output

Application

- Gearbox condition monitoring
- Train bogie detection
- Watercraft testing



Specification

All values are typical at +24°C (+75°F), 12Vdc excitation and apply to each axis unless otherwise stated.

| 项目 | 规格 | 单位 |
|----------------------------------|-------------|--------------|
| 类型 | 电容型 | |
| 测量范围 | ±200 | g |
| 测量精度 | ±5 | g@200g |
| 灵敏度 ±10% | 10 | mV/g |
| 频率响应 ±5% | 0-1000 | Hz |
| ZMO(差分) | ±50 | mV |
| 满量程输出电压 | ±2 | Vpk (FSO=2V) |
| 偏置电压 | 2.5 | Vdc |
| 激励电压 | 8 to 36 | Vdc |
| 激励电流 | <5 | mA |
| 残留噪声 (通频带) | 800 | µV RMS |
| 冲击极限 | 2000 | g |
| 横向灵敏度 | <3 | % |
| 非线性 (BFSL) | ±1 | %FSO |
| 温度零位漂移, -40 to +85°C, REF. 24°C | ±2.5 | %FSO |
| 温度灵敏度漂移, -40 to +85°C, REF. 24°C | ±3 | % |
| 输出阻抗 | <100 | Ω |
| 启动时间 | <100 | 毫秒 |
| 工作温度范围 | -40 to +120 | °C |
| 防护等级 | IP68 | |

温度传感器规格:

| 项目 | 规格 | 单位 |
|------------|--------------|----------|
| 类型 | PT1000/PT100 | 二线制, 双通道 |
| 测量范围 | -30~250 | °C |
| 测量精度 (B 级) | 0.3+0.005* t | °C |

复合传感器规格:

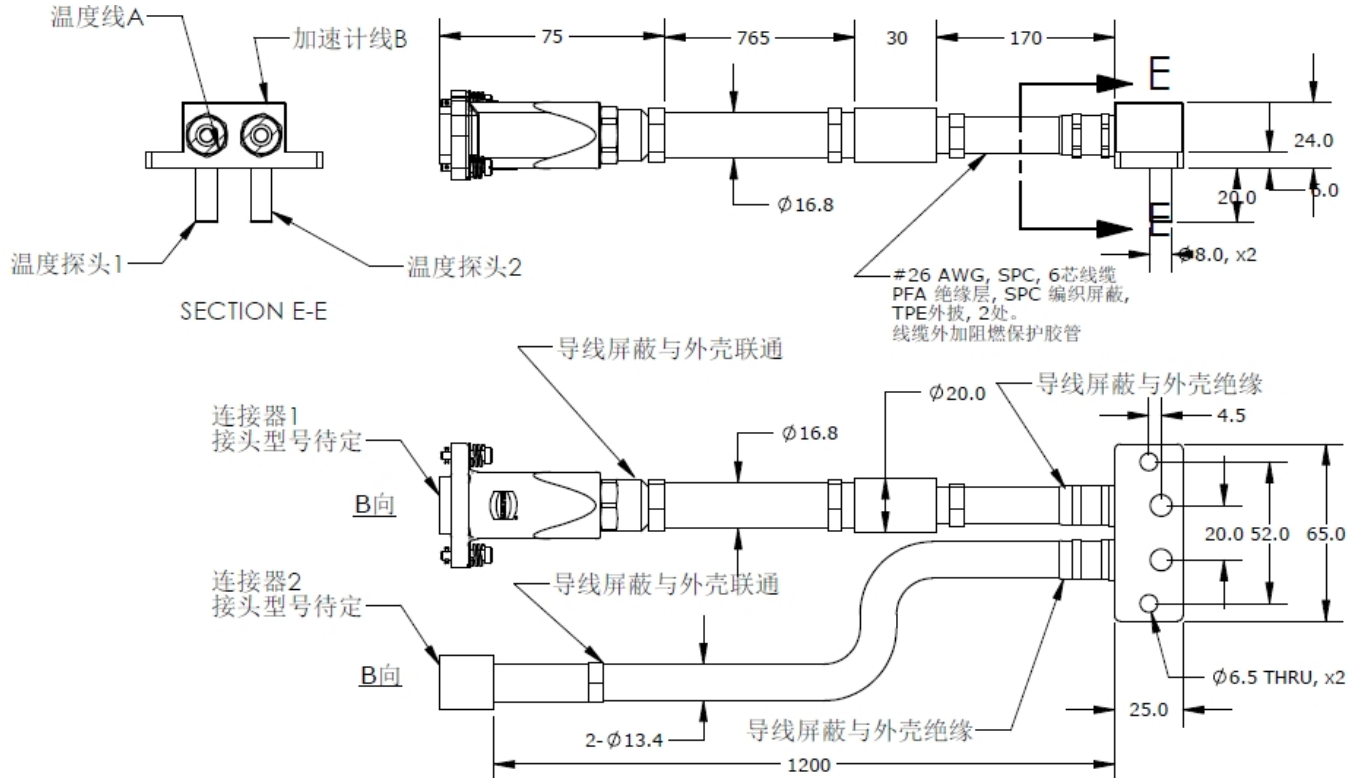
| 项目 | 规格 | 单位 |
|--------------------|-------------|----|
| 外壳材料 | 不锈钢 316 | |
| 防护等级 | IP68 | |
| 绝缘电阻 (@500Vdc) | >200 | MΩ |
| 绝缘强度 (@交流 2500Vdc) | >60 | 秒 |
| 工作环境温度 | -40 to +120 | °C |
| 重量 (不含线缆) | <200 | 克 |
| 安装螺丝 (2 颗) | M6X16 | |

Accessories

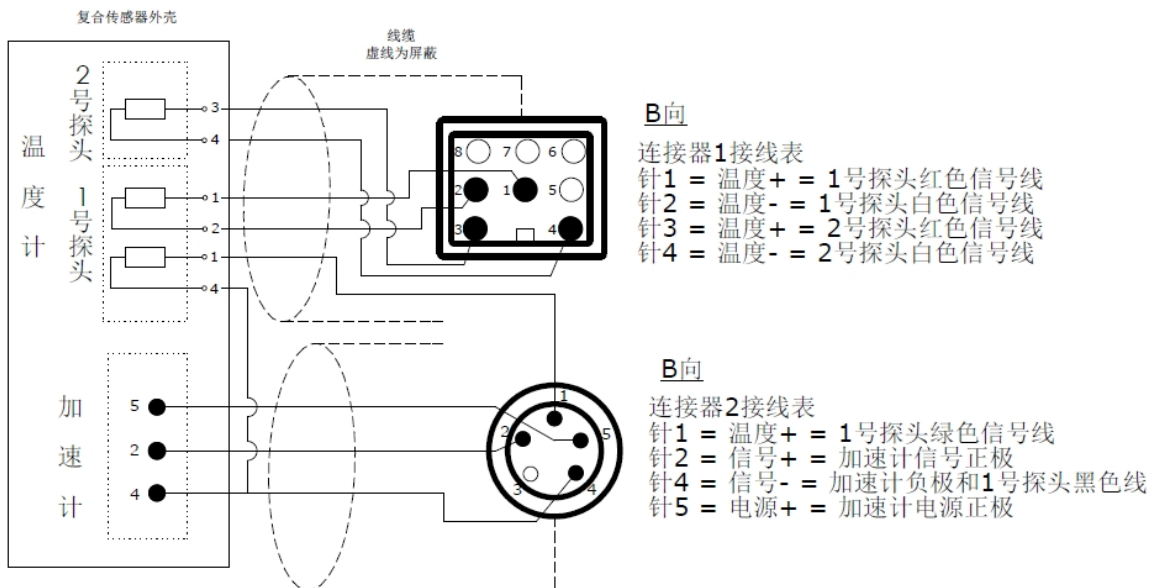
Calibration certificate included.

| Part Number | Description | Availability |
|-------------|------------------------------------|---------------|
| PM0124 | M6x16 socket head cap screws | 2pcs included |
| IN-3062 | 8 channels data acquisition system | Optional |

Measurement configuration



Wiring configuration



Ordering information

| | | | | |
|-------|---|----------|---|-------------------------|
| 812T | - | 200 | - | 1 |
| Model | - | Range | - | Cable length |
| 812T | - | 200=200g | - | 1=1 meter 3=3 meters |



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