

HS-420I/M 防爆振动速度传感器

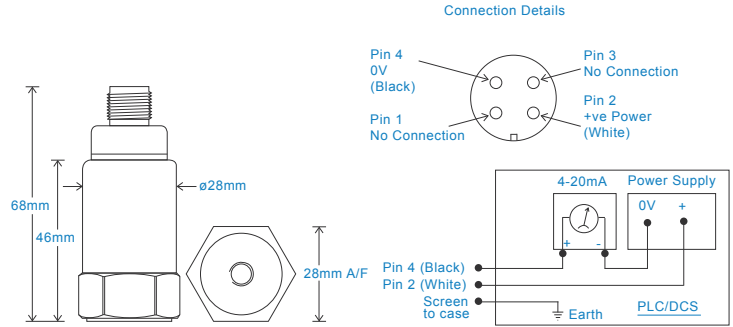
4 - 20 mA 振动速度输出 通过 M12接插件

主要性能

- 性价比高, 防爆本安型
- 用于PLC/DCS系统数据采集
- 可定制的功能

应用领域

大型机械, 纸浆和造纸, 采矿, 金属, 航空航天, 汽车, 水, 制药, 风能, 轴承, 发动机, 压缩机等等



技术性能

| | |
|-------|--|
| 基座共振 | 5kHz min |
| 灵敏度 | 请参阅: 产品选型表 ±10% 额定 80Hz 在 22°C温度下 |
| 频率响应 | 10Hz (600cpm) to 1kHz (60kcpm) ± 5% - ISO10816 |
| 隔离 | 基座隔离 |
| 范围 | 请参阅: 产品选型表 |
| 横向灵敏度 | 小于5% |

机械参数

| | |
|--------|----------|
| 材质 | 不锈钢 |
| 感应原件 | 压电陶瓷/压缩 |
| 安装扭矩大小 | 8Nm |
| 重量 | 150g |
| 电缆选型 | 请参阅产品选型表 |
| 连接器 | 请参阅产品选型表 |
| 螺纹安装 | 请参阅产品选型表 |

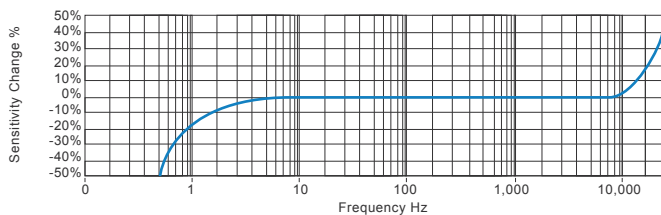
电气参数

| | |
|----------------|------------------------------------|
| 电压: | 15-30Volts DC (4~20mA) |
| 电流输出 | 4-20mA 直流与速度成比例 |
| 电流范围 | 0.5mA to 8mA |
| 偏电压 | 10 - 12 Volts DC |
| 建立时间 | 2 seconds |
| 输出阻抗 | 600 Ohms max. |
| Case Isolation | >10 ⁸ Ohms at 500 Volts |

应用环境

| | |
|------|----------------|
| 环境温度 | 参考防爆等级 |
| 防护等级 | IP67 |
| 最大振动 | 5000g |
| EMC | EN61326-1:2013 |

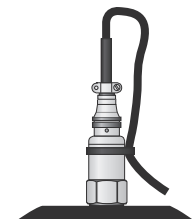
频率响应 (at 100mV/g)



应用领域

风能, 电动机, 泵, 压缩机, 离心机, 输送机, 空气处理机, 齿轮箱, 辊, 干燥机, 压力机, 冷却, VAC, 主轴, 机床, 工艺设备

Vibration sensor should be firmly fixed to a flat surface (spot face surface may be needed to be produced and cable anchored to sensor body.)



产品选型表

| | | | | | | | | | | | |
|--|---|---|--|---|---|---|---|---|---|---|---|
| 产品名称 HS - Hansford Sensors | 产品系列 4201 - 工业振动传感器 | | | | | | | | | | |
| H | S | 4 | 2 | 0 | X | X | X | X | X | X | X |
| 附加选项 F - 低频最小0.1Hz (下单告知所需低频) I - 防爆本安 (Group II) L - 316L 不锈钢材质 M - 矿用防爆本安(Group I) T - 温度输出 10mV/C P - 峰值 PP - 峰峰值 | 振动速度范围 010 - 0-10 mm/s 020 - 0-20 mm/s 025 - 0-25 mm/s 050 - 0-50 mm/s 100 - 0-100 mm/s 150 - 0-150 mm/s | 电缆/接插件 01 - PUR耐油电缆 02 - 屏蔽铠装电缆 07 - 硅胶防水电缆 08 - 阻燃材质电缆 50 - 2 Pin MS接插件 54 - M12接插件 | 安装螺纹 01 - 1/4-28" UNF Female 02 - 1/4-28" UNF Male 05 - Quick Fit Female 06 - M6 x 1mm Male 08 - M8 x 1.25mm Male 10 - M10 x 1.5mm Male | | | | | | | | |



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www.hansfordsensors.com.cn

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Intrinsically Safe Requirements

| | | | |
|-----------------------------------|---|--|--|
| | See : www.hansfordsensors.com.cn attached system drawings | US/Canada Approvals | Certificate No. SGSNA/18/SUW/0000231 Class I, II, III, Division 1, 2, Groups A - G, T4, -40°C to +110°C, Class I, Zone 0, AEx, ia, IIC, T4, Ga, -40°C to +110°C Zone 20, AEx, ia, IIIC, T130°C, IP65, Da, -40°C to +110°C |
| Certificate details: Group I + II | IECEX BAS08.0034X Baseefa08ATEX0086X ⓈII 1GD Ex ia IIC T6 Ga Ex ia IIIC T80°C IP65 Da Ⓢ I M1 Ex ia I Ma (-40°C ≤ Ta ≤ +60°C) | Barrier | 1 x Pepperl + Fuchs Galvanic Isolator KFD2-STC4-Ex1, which has superseded KFD2-CR-Ex1.30300 (BAS00ATEX7164) see attached system drawings |
| Certificate details: Group II | ⓈII 1GD Ex ia IIC T4 Ga Ex ia IIIC T130°C IP65 Da (-60°C ≤ Ta ≤ +110°C) | | 1 x MTL Zener Barrier MTL7787+ (BAS01ATEX7217) or Pepperl + Fuchs Zener Barrier Z787 (BAS01ATEX7005) or any other barrier that conforms to system drawings attached |
| Accelerometer System Certificate | Baseefa08Y0087 Ex ia IIC T6 (-40°C ≤ Ta ≤ +60°C) *On request - consult Sales Office | System Connections for Zener Barrier | see attached system drawings |
| | | System Connections for Galvanic Isolator | see attached system drawings |
| Terminal Parameters | U _i = 28V, I _i = 115mA, P _i = 0.65W Group II U _i = 16.5V P _i = 0.65W or U _i = 28V I _i = 115mA P _i = 0.65W Group I | Terminal Parameters | U _i = V _{max} = 28V I _i = I _{max} = 115mA P _i = 0.65W |
| 500V Isolation | Units Will Pass A 500V Isolation Test | Notes: | Special conditions of safe use for Group II dust. The free end of the cable on the integral cable version of the apparatus must be terminated in an appropriately certified dust-proof enclosure. The unit has no serviceable parts. |
| Certified Temperature Range | Ex ia IIC T6 Ga (-40°C ≤ Ta ≤ +60°C) (Gas) Ex ia IIC T4 Ga (-40°C ≤ Ta ≤ +110°C) (Gas) Ex ia IIIC T80°C IP65 Da (-40°C ≤ Ta ≤ +60°C) (Dust) Ex ia IIIC T130°C IP65 Da (-40°C ≤ Ta ≤ +110°C) (Dust) Ex ia I Ma (-40°C ≤ Ta ≤ +60°C) (Mining) | | |
| Australia Approval Group 1 | IECEX ITA 10.0003X Ex ia I Ma (-40°C ≤ Ta ≤ +60°C) | | |
| South African Approval | Certificate No. MASC MS/16-0229X Group I and II (As Baseefa/ATEX) | | |



This product is certified in accordance with
UL 913, 8th Ed. Rev. December 6, 2013
CAN/CSA C22.2 No. 157-92 (R2012) +Upd1 +Upd2



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Non-hazardous area apparatus which is unspecified except that it must not be supplied from nor contain under normal or abnormal conditions, a source of potential with respect to earth in excess of 250 volts DC. under normal conditions the potential at the connections to the galvanic isolator must not exceed 40 volts DC.

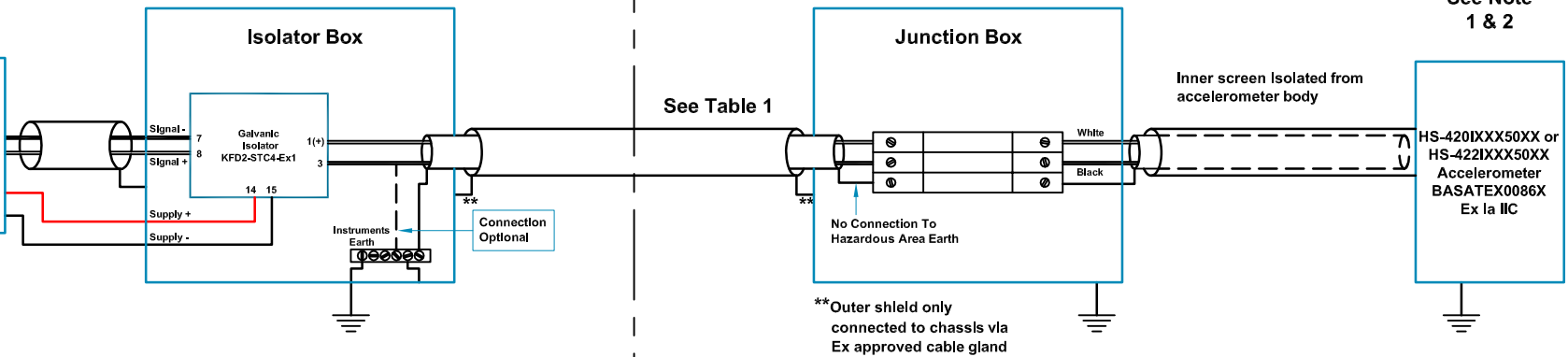


Table 1: Cable Parameters For Additional Cable Lengths

| Accelerometer With Integral Cable Length ≤ 10m | | |
|---|----------------|----------------|
| Group | Capacitance μF | L/R Ratio μH/Ω |
| IIC | 0.097 | 72 |
| IIB | 0.768 | 277 |
| IIA | 2.598 | 585 |
| Accelerometer With Integral Cable Length ≤ 50m | | |
| Group | Capacitance μF | L/R Ratio μH/Ω |
| IIC | 0.091 | 72 |
| IIB | 0.762 | 277 |
| IIA | 2.592 | 585 |
| Accelerometer With Integral Cable Length ≤ 100m | | |
| Group | Capacitance μF | L/R Ratio μH/Ω |
| IIC | 0.083 | 72 |
| IIB | 0.754 | 277 |
| IIA | 2.584 | 585 |

Hansford Sensors Ltd
 HS-420I & HS-422I
 Accelerometer System
 Ex ia IIC T6 (-40°C ≤ Ta ≤ +60°C)

- Notes:**
- The capacitance and inductance, or inductance - to - resistance ratio (L/R) of hazardous area cable, must not exceed the values shown in Table 1.
 - The cable from the accelerometer to the junction box must not be installed in a high velocity dust laden atmosphere.
 - The installer is to perform a risk assessment in accordance with clause 10 of EN 60079-25 and install lightning protection arrestors as deemed necessary.

| Rev No | DRF No | Date Drg | Drg By | Appd By | Material: N/A |
|--------|---------|----------|--------|---------|---------------|
| A | Release | 16/09/15 | MJS | CMH | |

Tolerances Unless Stated
 0 or 0.0 ±0.5
 0.00 ±0.15
 Angle ±5°
 Finish All Over
 Threads g6 H6

Hansford Sensors Ltd
 Artisan, Hillbottom Rd
 Sands Industrial Estate
 High Wycombe
 Bucks. HP12 4HJ

Do Not Scale
 All Dimensions In mm Unless
 Otherwise Stated
If In Doubt - Ask!

Description: **System Connections Details**
 For HS-420I & HS-422I Group II
 Accelerometers With 2 Pin MS Connector
 F.U.W. Galvanic Isolation
 Drawing No: **M06-059-A**
 Scale: **NTS**
 Sheet: **1 of 1**
 Form Number:
QF024 Issue 1