

# HS-420I/M 防爆振动速度传感器

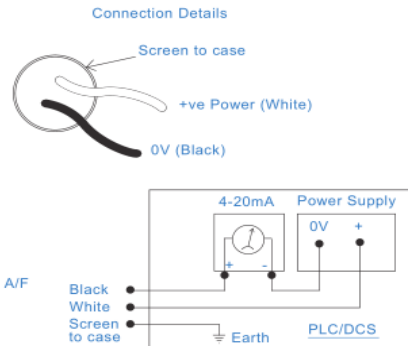
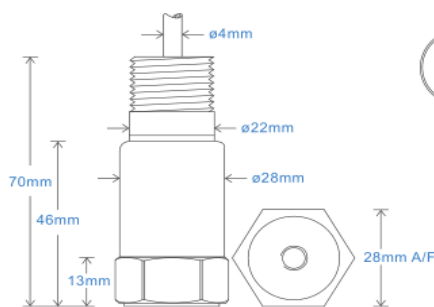
4 - 20 mA 振动速度 输出 通过用于端子的阻燃电缆

## 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

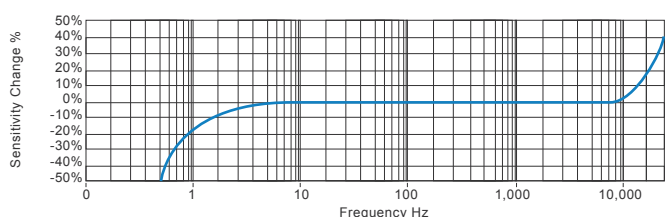
## 电气参数

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 <sup>8</sup> Ohms at 500 Volts

## 应用环境

环境温度	参考防爆等级
防护等级	IP65
最大振动	5000g
EMC	EN61326-1:2013

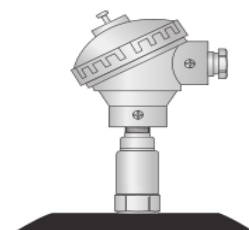
## 频率响应 (at 100mV/g)



## 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

<b>产品名称</b> HS - Hansford Sensors	<b>产品系列</b> 4201 - 工业振动传感器										
<b>H</b>	<b>S</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>附加选项</b> 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	<b>振动速度范围</b> 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					<b>电缆/接插件</b> 12 - 用于1/2" NPT和阻燃电缆的端子			<b>安装螺纹</b> 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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汉施弗德传感器(上海)有限公司



## Intrinsically Safe Requirements

	See : <a href="http://www.hansfordsensors.com.cn">www.hansfordsensors.com.cn</a> 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	Ui = 28V, li = 115mA, Pi = 0.65W Group II Ui = 16.5V Pi = 0.65W or Ui = 28V li = 115mA Pi = 0.65W Group I	Terminal Parameters	Ui = Vmax = 28V li = Imax = 115mA Pi = 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)		

## Certifications



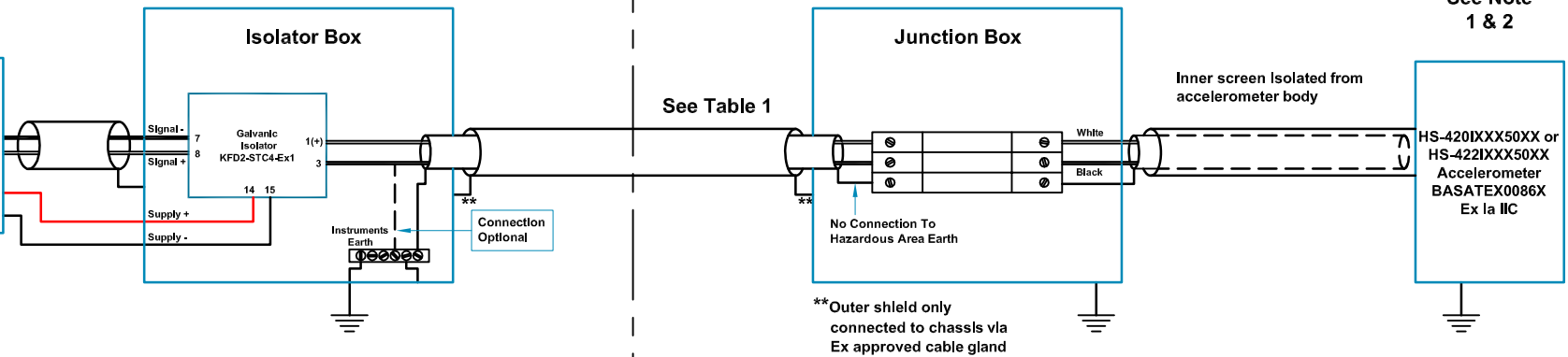
This product is certified in accordance with  
**UL 913, 8th Ed. Rev. December 6, 2013**  
**CAN/CSA C22.2 No. 157-92 (R2012) +Upd1 +Upd2**



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 汉施弗德传感器（上海）有限公司



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 $\mu\text{F}$	L/R Ratio $\mu\text{H}/\Omega$
IIC	0.097	72
IIB	0.768	277
IIA	2.598	585
Accelerometer With Integral Cable Length ≤ 50m		
Group	Capacitance $\mu\text{F}$	L/R Ratio $\mu\text{H}/\Omega$
IIC	0.091	72
IIB	0.762	277
IIA	2.592	585
Accelerometer With Integral Cable Length ≤ 100m		
Group	Capacitance $\mu\text{F}$	L/R Ratio $\mu\text{H}/\Omega$
IIC	0.083	72
IIB	0.754	277
IIA	2.584	585

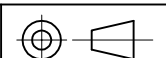
**Hansford Sensors Ltd**  
 HS-420I & HS-422I  
 Accelerometer System  
 Ex ia IIC T6 (-40°C ≤ Ta ≤ +60°C)

- 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**