

HS-420I/M本安型振动变送器

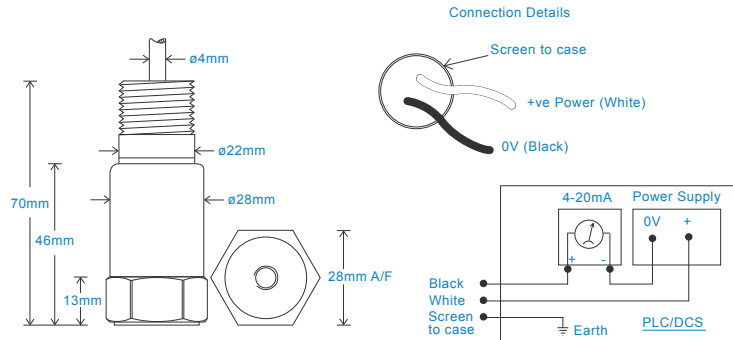
4-20mA 振动速度输出阻燃电缆，与防爆接线盒一起使用

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 $\pm 10\%$ 额定 80Hz 在 22°C 温度下
频率响应	10Hz (600cpm) to 1kHz (60kcpm) $\pm 5\%$ - 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

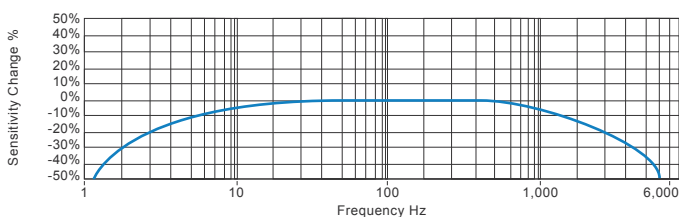
电气参数

电压:	15-30Volts DC (4~20mA)
电流输出	4-20mA 直流与速度成比例
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

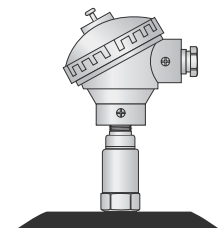
Typical Frequency Response



Applications

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.)



Certifications

HS - Hansford Sensors		产品系列 420I - 工业振动传感器									
H	S	4	2	0	X	X	X	X	X	X	X
附加选项		振动速度范围					电缆/接插件		安装螺纹		
F - 低频最小0.1Hz (下单告知所需低频)		010 - 0-10 mm/s					12 - 带 1/2" NPT 和 阻燃		01 - 1/4-28" UNF Female		
I - 防爆本安 (Group II)		020 - 0-20 mm/s					电缆 用于接 防爆盒		02 - 1/4-28" UNF Male		
L - 316L 不锈钢材质		025 - 0-25 mm/s							05 - Quick Fit Female		
M - 矿用防爆本安(Group I)		050 - 0-50 mm/s							06 - M6 x 1mm Male		
T - 温度输出 10mV/°C		100 - 0-100 mm/s							08 - M8 x 1.25mm Male		
P - 峰值		150 - 0-150 mm/s							10 - M10 x 1.5mm Male		
PP - 峰峰值											

HS-AA042 & HS-AA052 本安防爆接线盒

铝或者不锈钢材质



用于本质安全区域，以帮助连接导管和现场电缆。

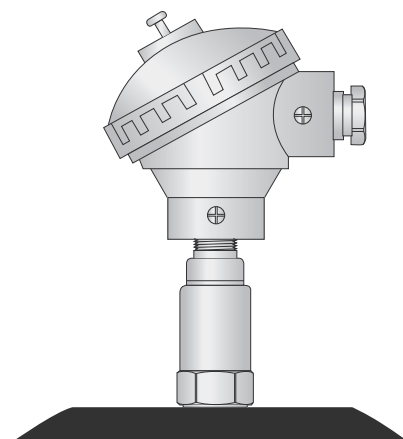
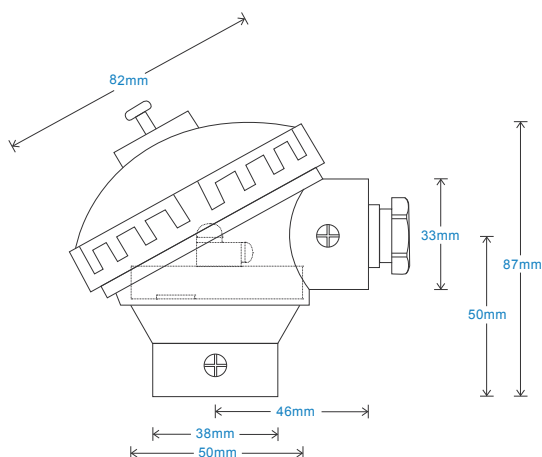
如果在本质安全环境中使用，接线头被归类为“简单设备”。
工作温度范围：由传感器的本质安全认证确定。

防护等级：IP67

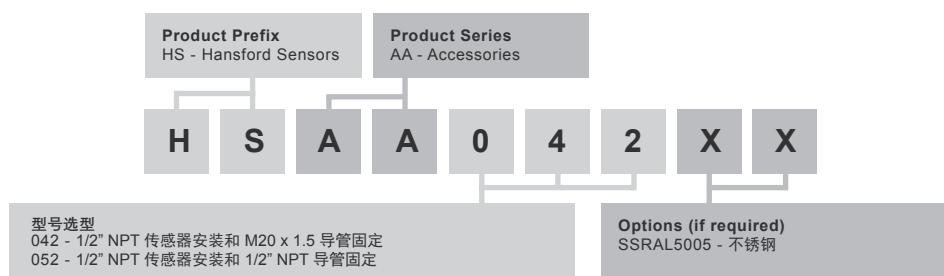
铝制重量：260 克 默认材质

不锈钢重量：850 克

Applications



How To Order



HS-420I/M本安型振动变送器

4-20mA 振动速度输出阻燃电缆，与防爆接线盒一起使用

Intrinsically Safe Requirements

Maximum Cable Length	nominal 100 metres see 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, IIC, T130°C, IP65, Da, -40°C to +110°C
Certificate details: Group I + II	IECEEx BAS08.0034X Baseefa08ATEX0086X ⓈII 1GD Ex ia IIC T6 Ga Ex ia IIC 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 IIC 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, Ii = 115mA, Pi = 0.65W Group II Ui = 16.5V Pi = 0.65W or Ui = 28V Ii = 115mA Pi = 0.65W Group I	Terminal Parameters	Ui = Vmax = 28V Ii = 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 IIC T80°C IP65 Da (-40°C ≤ Ta ≤ +60°C) (Dust) Ex ia IIC T130°C IP65 Da (-40°C ≤ Ta ≤ +110°C) (Dust) Ex ia I Ma (-40°C ≤ Ta ≤ +60°C) (Mining)		
Australia Approval Group 1	IECEEx 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



T: 150 210 98804
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汉施弗德传感器（上海）有限公司



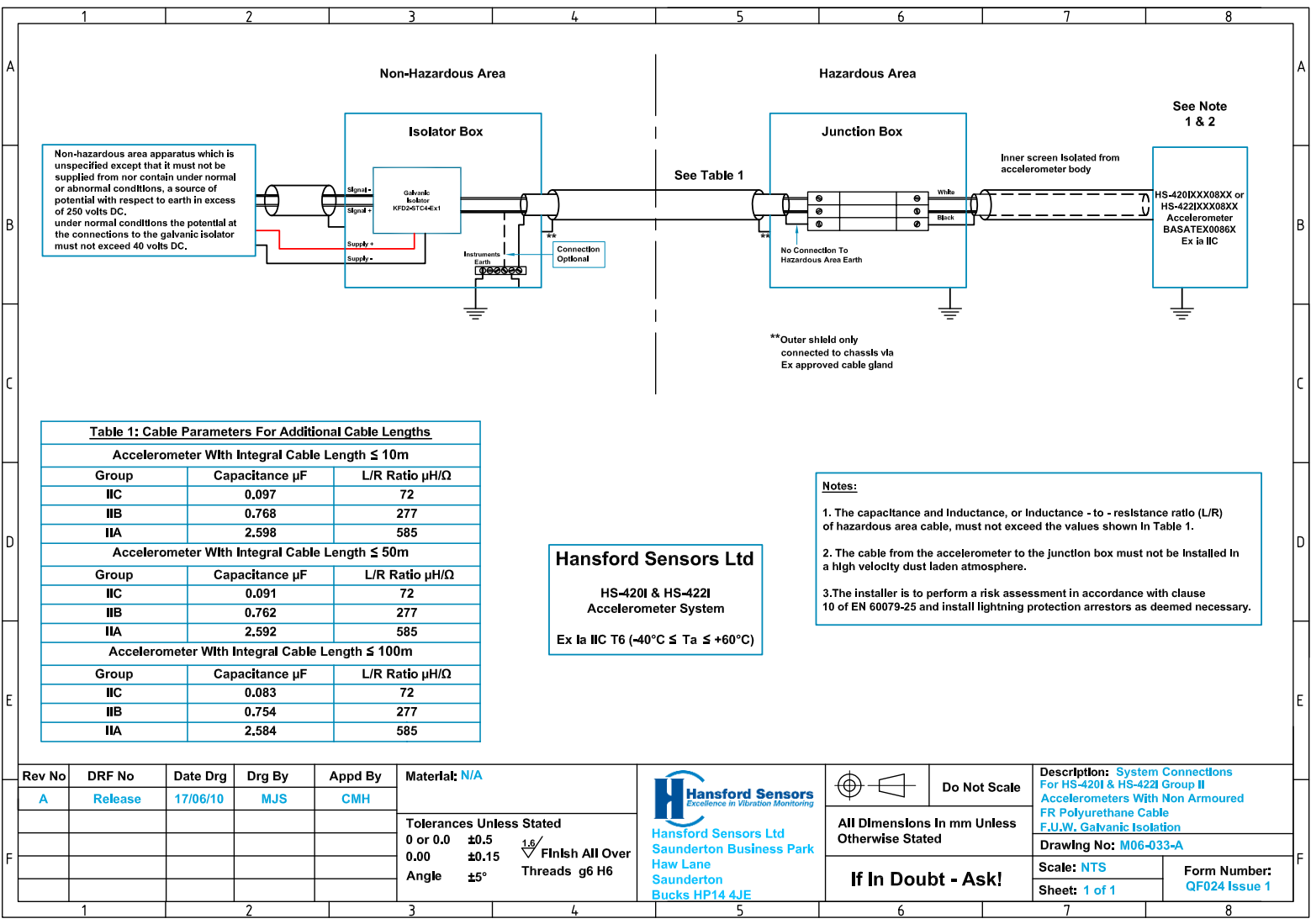


Table 1: Cable Parameters For Additional Cable Lengths

Accelerometer With Integral Cable Length $\leq 10\text{m}$

Group	Capacitance μF	L/R Ratio $\mu\text{H}/\Omega$
IIC	0.097	72
IIB	0.768	277
IIA	2.598	585

Accelerometer With Integral Cable Length $\leq 50\text{m}$

Group	Capacitance μF	L/R Ratio $\mu\text{H}/\Omega$
IIC	0.091	72
IIB	0.762	277
IIA	2.592	585

Accelerometer With Integral Cable Length $\leq 100\text{m}$

Group	Capacitance μF	L/R Ratio $\mu\text{H}/\Omega$
IIC	0.083	72
IIB	0.754	277
IIA	2.584	585

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HS-420I & HS-422I
Accelerometer System

Ex ia IIC T6 ($-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$)

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

A Release 17/06/10 MJS CMH

Material: N/A

Tolerances Unless Stated
0 or 0.0 ± 0.5
0.00 ± 0.15
Angle $\pm 5^{\circ}$

$\frac{1.6}{\sqrt{}} \checkmark$ Finish All Over
Threads g6 H6



Hansford Sensors Ltd
Saunderton Business Park
Haw Lane
Saunderton
Bucks HP14 4JE



Do Not Scale

All Dimensions In mm Unless
Otherwise Stated

If In Doubt - Ask!

Description: System Connections
For HS-420I & HS-422I Group II
Accelerometers With Non Armoured
FR Polyurethane Cable
F.U.W, Galvanic Isolation

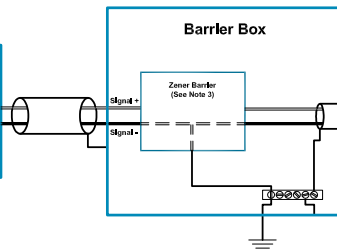
Drawing No: M06-033-A

Scale: NTS

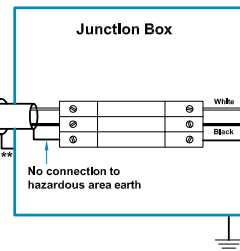
Sheet: 1 of 1

Form Number:
QF024 Issue 1

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 rms or 250 volts dc, under normal conditions the potential at the connections to the zener barrier must not exceed 40 volts dc.



See Table 1



**Outer shield only connected to chassis via Ex approved cable gland

Inner screen isolated from accelerometer body

See Note 1 & 2

HS-420KXX08XX or HS-422JXX08XX Accelerometer BASATEX0086X Ex Ia IIC

Table 1: Cable Parameters For Additional Cable Lengths

Accelerometer With Integral Cable Length $\leq 10\text{m}$		
Group	Capacitance μF	L/R Ratio $\mu\text{H}/\Omega$
IIC	0.081	56
IIB	0.247	168
IIA	0.662	448
Accelerometer With Integral Cable Length $\leq 50\text{m}$		
Group	Capacitance μF	L/R Ratio $\mu\text{H}/\Omega$
IIC	0.075	56
IIB	0.241	168
IIA	0.656	448
Accelerometer With Integral Cable Length $\leq 100\text{m}$		
Group	Capacitance μF	L/R Ratio $\mu\text{H}/\Omega$
IIC	0.067	56
IIB	0.233	168
IIA	0.648	448



**Baseefa
Certification
Schedule
Drawing**

baseefa 08 Y 0087

Handwritten signature

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HS-420I & HS-422I
Accelerometer System
Baseefa08Y0087
Ex Ia IIC T6 (-40°C $\leq$ Ta $\leq$ +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.
- Any shunt zener diode safety barrier certified by an ec approved body to [EEEx ia] IIC having the following output parameters: Uo = 28V dc, Io = 93mA dc, Po = 0.65W. e.g. MTL7787 to BAS01ATEX7217 or Pepperl + Fuchs Z787 to BAS01ATEX7005.
- 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
A	Release	10/03/08	MJS	CMH

Material: N/A

Tolerances Unless Stated
0 or 0.0 ± 0.5 $\frac{1.6}{\sqrt{}} \text{ Finish All Over}$
0.00 ± 0.15 Threads g6 H6
Angle $\pm 5^\circ$

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Excellence in Vibration Monitoring
Hansford Sensors Ltd
Saunderton Business Park
Haw Lane
Saunderton
Bucks HP14 4JE



Do Not Scale

All Dimensions In mm Unless Otherwise Stated

If In Doubt - Ask!

Description: System Connections For HS-420I & HS-422I Group II Accelerometers With Non Armoured FR Polyurethane Cable F.U.W. Zener Barrier
Drawing No: M06-013-A
Scale: NTS
Sheet: 2 of 2
Form Number: QF024 Issue 1