

HS-104I ATEX Low Power Accelerometer

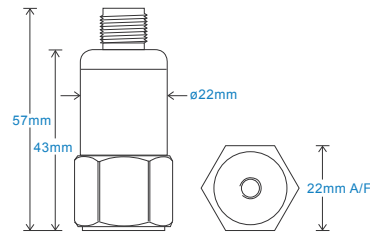
AC acceleration output via M12 Connector

Key Features

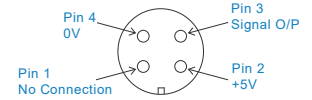
- Intrinsically Safe with European, USA and Australian approvals
- Low voltage
- Ultra low power consumption
- Customisable features

Industries

Building services, Pulp and Paper,
Mining, Metals, Utilities, Automotive,
Water, Pharmaceutical



Connection Details



Technical Performance

| | |
|------------------------|--|
| Mounted Base Resonance | see 'How To Order' table (nominal) |
| Sensitivity | see: 'How To Order' table $\pm 10\%$ Nominal 80Hz at 22°C |
| Frequency Response | 0.3Hz (18cpm) to 10kHz (600kcpm) $\pm 10\%$ |
| Isolation | Base isolated |
| Range | see: 'How To Order' table @ 5V power |
| Transverse Sensitivity | Less than 5% |
| Amplitude Linearity | $\pm 1\%$ |

Mechanical

| | |
|------------------------------|---|
| Case Material | Stainless Steel |
| Sensing Element/Construction | PZT/Shear |
| Mounting Torque | 8Nm |
| Weight | 106gms (nominal) |
| Screened Cable Assembly | HS-AC010 - straight HS-AC011 - right angle |
| Mounting Threads | see: 'How To Order' table |

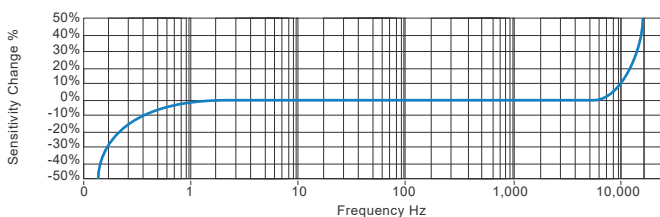
Electrical

| | |
|---------------------|---|
| Electrical Noise | < 500 μ g |
| Power Requirements | 5V nominal (other voltages 1.8 to 12V on request) |
| Current Consumption | 100 μ A nominal at 5V supply (60 μ A at 1.8V) |
| Bias Voltage | 50% of supply voltage |
| Settling Time | 1 second |
| Output Impedance | 100 Ohms max. |
| Case Isolation | >10 ⁸ Ohms at 500 Volts |

Environmental

| | |
|-----------------------------|-------------------------------------|
| Operating Temperature Range | see: attached certification details |
| Sealing | IP67 |
| Maximum Shock | 5000g |
| EMC | EN61326-1:2013 |

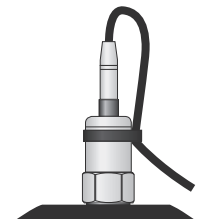
Typical Frequency Response (at 100mV/g)



Applications

Fans, Motors, Pumps, Compressors,
Centrifuges, Conveyors, Air Handlers,
Gearboxes, Rolls, Dryers, Presses,
Cooling, VAC, Spindles, Machine Tooling,
Process Equipment

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



This product is certified in accordance with
UL 60079-0, 6th Ed. Rev. July 26, 2013
UL 60079-11, 6th Ed. Rev. September 6, 2013
CAN/CSA C22.2 No. 60079-0:15 Rev. October 2015
CAN/CSA C22.2 No. 60079-11:14
UL 913, 8th Ed. Rev. October 16, 2015



www.hansfordsensors.com
sales@hansfordsensors.com

We reserve the right to alter the specification of this product without prior notice
TS929.6



HS-104I ATEX Low Power Accelerometer

AC acceleration output via M12 Connector

Intrinsically Safe Requirements

| | | | |
|----------------------------------|---|-----------------------------|---|
| Maximum Cable Length | Up to 92 metres | 500V Isolation | Units Will Pass A 500V Isolation Test |
| Certificate details: Group II | IECEx 18.0095X | Certified temperature range | Ex ia IIC T6 Ga (-55°C ≤ Ta ≤ +66°C) (Gas) |
| | Baseefa18ATEX0157X | | Ex ia IIC T4 Ga (-55°C ≤ Ta ≤ +116°C) (Gas) |
| | Ex ia IIC T6..T4 Ga | US/Canada Approvals | Certificate No. SGSNA/19/BAS/00005 |
| Terminal Parameters Connector | Ui = 12V, Ii = 160mA, Pi = 0.48W | | CI I, Div 1, Grp A-D T6 |
| | Ci = 494nF, Li = 0 | | CI I Zn 0 AEx ia IIC T6 Ga |
| | | | Ex ia IIC T6 Ga |
| | | | (-55°C to +66°C) |
| Terminal Parameters 92m of Cable | Ui = 12V, Ii = 160mA, Pi = 0.48W | | |
| | Ci = 529nF, Li = 66µH | | Or |
| Standards Applied to Product | EN IEC 60079-0:2018 | | CI I, Div 1, Grp A-D T4 |
| | EN 60079-11:2012 | | CI I Zn 0 AEx ia IIC T4 Ga |
| | IEC 60079-0 Edition 7 2017 | | Ex ia IIC T4 Ga |
| | IEC 60079-11 Edition 6 2011 | | (-55°C to +116°C) |
| Barrier | 1 x MTL Zener Barrier MTL7766ac (BAS01ATEX7217) | Control Drawing | M06-091-A |
| | Or any other barrier that conforms with the terminal parameters | | |

Special Conditions of use: When a sensor is supplied with integral cable, this must be terminated in an enclosure providing at least degree of protection IP20. The equipment is reduced with reduced certification markings. Refer to the Certificate Schedule for full certification marking and applicable temperature classification associated ambient temperature range. The screen of the cable is not to be connected to the barrier in the Safe Area, it must be connected in the Hazardous area only.

Note: If the equipment is to be used in unusual environments or aggressive substances are likely to be encountered, contact the manufacturer to discuss suitability.

How To Order

