

HS-422IT Intrinsically Safe Accelerometer

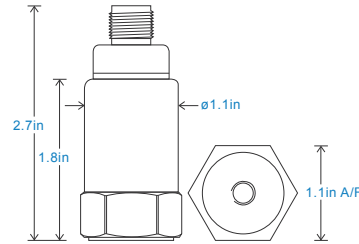
4-20mA acceleration and temperature output via M12 Connector

Key Features

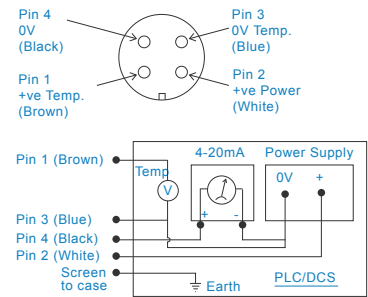
- Intrinsically Safe with European, USA and South African approvals
- For use with PLC/DCS systems
- Temperature output

Industries

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



Connection Details



Technical Performance

Mounted Base Resonance	10kHz min
Acceleration Ranges	see: 'How To Order' table $\pm 10\%$
	Nominal 80Hz at 72°F
Frequency Response	600cpm (10Hz) to 300kcpm (5kHz) $\pm 5\%$
	- ISO10816
Isolation	Base isolated
Range	50g peak
Temperature Output	10mV/°C - 0-1V proportional to 0-212°F (to convert this to 4-20mA use the HS-540 module)
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Compression
Mounting Torque	5.9ft. lbs
Weight	5.2 oz. (nominal)
Shielded Cable Assembly	HS-AC010 - straight
	HS-AC011 - right angle
Mounting Threads	see: 'How To Order' table

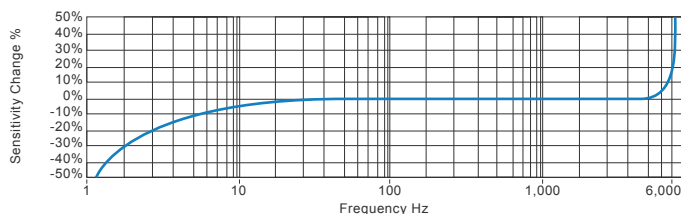
Electrical

Current Output	4-20mA DC proportional to acceleration
Supply Voltage	15-30 Volts DC (for 4-20mA)
Settling Time	2 seconds
Output Impedance	Loop Resistance 600 Ohms max. at 24 Volts
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

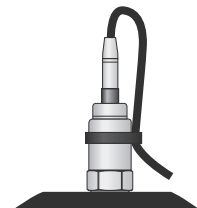
Typical Frequency Response



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



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We reserve the right to alter the specification of this product without prior notice
TS077U.7



4-20mA acceleration and temperature output via M12 Connector

Maximum Cable Length		nominal 100 metres see attached system drawings	US/Canada Approvals	Certificate No. USTC/15/FAI/01350 Class I, II, III, Division 1, 2, Groups A - G, T6, -40°C to +60°C, IP65 Class I, Zone 0, AEx, ia, IIC, T6, Ga, -40°C to +60°C
Certificate details: Group II		IECEx BAS08.0034X Baseefa08ATEX0086X ⒺII 1GD Ex ia IIC T6 Ga Ex ia IIIC T80°C IP65 Da (-40°C ≤ Ta ≤ +60°C)	Barrier	Zone 20, AEx, ia, IIIC, T80°C, IP65, Da, -40°C to +60°C 1 x Pepperl + Fuchs Galvanic Isolator KFD2-STC4-Ex1, which has superseded KFD2-CR-Ex1.30300 (BAS00ATEX7164) see attached system drawings
Accelerometer System Certificate		Baseefa08Y0087 Ex ia IIC T6 (-40°C ≤ Ta ≤ +60°C) *On request - consult Sales Office	1 x MTL Zener Barrier MTL7787+ (BAS01ATEX7217) or Pepperl + Fuchs Zener Barrier Z787 (BAS01ATEX7005) or any other barrier that conforms to system drawings attached	
Terminal Parameters	Ui = 28V, Ii = 115mA, Pi = 0.65W	Group II	System Connections for Zener Barrier	see attached system drawings
500V Isolation	Units Will Pass A 500V Isolation Test		System Connections for Galvanic Isolator	see attached system drawings
Certified Temperature Range	Ex ia IIC T6 Ga (-40°C ≤ Ta ≤ +60°C) (Gas) Ex ia IIIC T80°C IP65 Da (-40°C ≤ Ta ≤ +60°C) (Dust) Ex ia I Ma (-40°C ≤ Ta ≤ +60°C) (Mining)		Terminal Parameters	Ui = Vmax = 28V Ii = Imax = 115mA Pi = 0.65W
South African Approval	Certificate No. MASC MS/16-0229X only Group II (As Baseefa/ATEX)		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.

Product Prefix
HS - Hansford Sensors

Product Series
422 - Industrial Vibration Sensor

Acceleration Range (RMS unless specified)
001 - 0-1g
002 - 0-2g
005 - 0-5g
010 - 0-10g
100 - 0-100g

Cable/Connector
01 - PUR
54 - M12

Cable Length (if integral cable)
UXX - length specified in feet

Mounting Threads
01 - ¼-28" UNF Female
02 - ¼-28" UNF Male
05 - Quick Fit Female
06 - M6 x 1mm Male
08 - M8 x 1.25mm Male
10 - M10 x 1.5mm Male

Extra Options (if required)
F - Filtered
I - Intrinsically Safe (Group II)
L - 316L Stainless Steel
T - Temperature Output
U - Imperial Range
UP - Imperial Peak Range
UPP - Imperial Peak to Peak Range