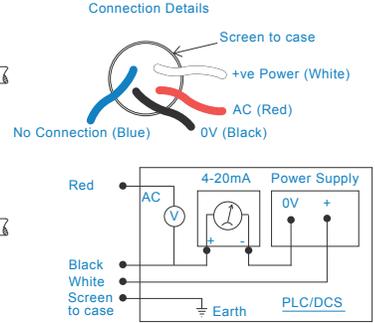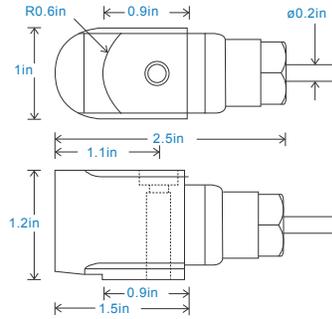# HS-421S Accelerometer
4-20mA velocity and AC acceleration output via PUR Cable

SIL

Key Features
- For use with PLC/DCS systems and data collectors
- Waterproof
- Resistant to oil

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

Dimensions: R0.6in, 0.9in, ø0.2in, 1in, 2.5in, 1.1in, 1.2in, 0.9in, 1.5in

Connection Details
- Screen to case
- +ve Power (White)
- AC (Red)
- No Connection (Blue)
- 0V (Black)

Red — 4-20mA — Power Supply — 0V, +
AC — V
Black
White
Screen to case — Earth — PLC/DCS

Technical Performance

Mounted Base Resonance	5kHz min
Velocity Ranges	see: 'How To Order' table ±10%
	Nominal 80Hz at 72°F
Frequency Response	600cpm (10Hz) to 60kcpm (1kHz) ± 5% - ISO10816
Isolation	Base isolated
Range	see: 'How To Order' table
Transverse Sensitivity	Less than 5%

Mechanical

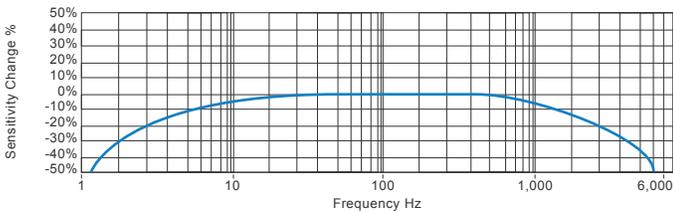|	
Case Material	Stainless Steel
Sensing Element/Construction	PZT/Shear
Mounting Torque	5.9ft. lbs
Mounting Bolt Provided	see: 'How To Order' table x 1.4in long
Weight	6.5 oz. (nominal)
Maximum Cable Length	3,280 ft.
Standard Cable Length	16 ft.
Sheilded Cable	PUR - length to be specified with order
Mounting Threads	see: 'How To Order' table
Submersible Depth	328 ft. max (10 bar)

Electrical

Outputs	4-20mA DC current proportional to Range and AC acceleration
Bias Voltage	3 Volts DC (nominal)
Supply Voltage	15-30 Volts DC (for 4-20mA)
Settling Time	1 seconds
Output Impedance	Loop Resistance 600 Ohms max. at 24 Volts
Case Isolation	>10^8 Ohms at 500 Volts

Environmental

Operating Temperature Range	-25 to 90ºC
Sealing	IP68
Maximum Shock	5000g
EMC	EN61326-1:2013

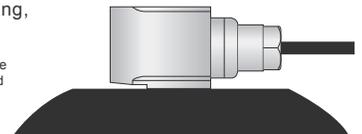## Typical Frequency Response

Sensitivity Change % (50% to -50%) vs Frequency Hz (1 to 6,000)

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.)

How To Order

Product Prefix
HS - Hansford Sensors

Product Series
421 - Industrial Vibration Sensor

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

H	S	4	2	1	S	X	X	X	X	X	X	X	X	X	X

Extra Options (if required)
F - Filtered
L - 316L Stainless Steel
RT - Temperature Output PT100
S - 90° Side Exit
T - Temperature Output

U - Imperial Range
UP - Imperial Peak Range
UPP - Imperial Peak to Peak Range

Velocity Range (RMS unless specified)	Sensitivity	Range
012 - 0-½ IPS	25mV/g	±80g
025 - 0-1 IPS	25mV/g	±80g
050 - 0-2 IPS	25mV/g	±80g
100 - 0-4 IPS	25mV/g	±80g

Cable/Connector
01 - PUR
03 - Braided
07 - Silicon
15 - Flame Retardant
52 - 3 Pin MS
54 - M12

Mounting Threads
02 - ¼-28" UNF Male
06 - M6 x 1mm Male
08 - M8 x 1.25mm Male

Hansford Sensors
Excellence in Vibration Monitoring

Safety Integrity Level SIL