

HS-420 Series Vibration Sensor

M12 Connector, 4-20mA Velocity Transducer for PLC Interface



Typical Applications

- Low cost online means of monitoring with the capability of interfacing direct into PLC, BMS or any 4-20mA input module.
Proven use in vibration monitoring for off-line applications using commercially available data collectors.
- **Protecting...**
Fans, Motors, Pumps, Compressors, Centrifuges, Conveyers, Air Handlers, Gearboxes, Rolls, Dryers, Presses, Cooling, HVAC, Spindles, Machine Tooling, Process Equipment and many more.

Technical Performance

Mounted Base Resonance	5 kHz min.
Velocity Ranges	0-10 to 0-100 mm/sec RMS $\pm 10\%$ Nominal 80 Hz at 22°C
Frequency Response	10 Hz to 1 kHz $\pm 5\%$ - ISO10816
Isolation	Base isolated
Measurement Range	50 g peak
Transverse Sensitivity	Less than 5%

Electrical

Output Current	4-20 mA DC proportional to RMS velocity (mm/s)
Supply Voltage	15 - 30 Volts DC (for 4-20 mA)
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	-25 to 90 °C
Sealing	IP67
Maximum Shock	5000 g
Emissions	EN61000-6-4:2007
Immunity	EN61000-6-2:2005

Mechanical

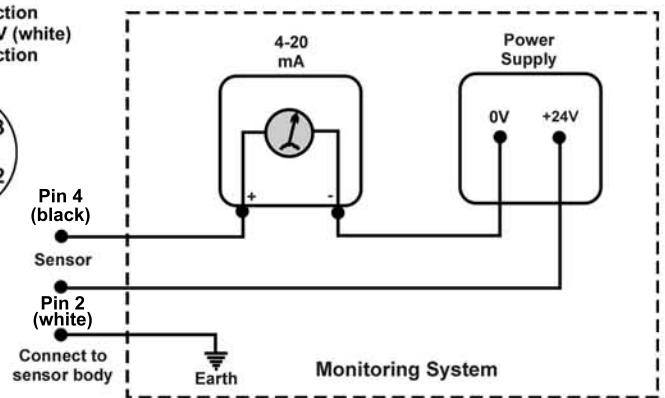
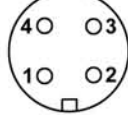
Case Material	Stainless Steel
Sensing Element/Construction	PZT/Compression
Mounting Torque	8 Nm
Weight	150 gms (nom)
Mating connector/Cable Assembly	M12 - Straight or Right Angle. Requires screened cable assembly
Mounting Threads	See 'How to order' table
Options	Ranges, filters, mating cable assemblies, intrinsically safe,

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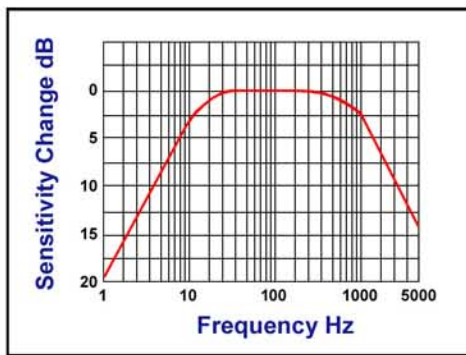
Dimensions



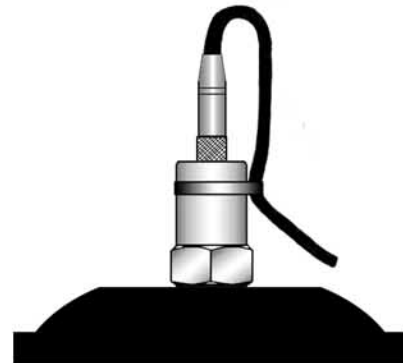
Pin 1 - No connection
 Pin 2 - +15 to 30 V (white)
 Pin 3 - No connection
 Pin 4 - 0V (black)



Frequency Response



Mounting of sensor to achieve good repeatable readings. 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

HS - Product Prefix

Extra Options
 T - Temperature
 F - Filtered

Product Series
 420 - 4-20mA Velocity Output (mm/s)
 421 - 4-20mA Velocity (mm/s) and AC Output
 422 - 4-20mA Acceleration ('g' RMS)

Cable
 02 ... 2 core O/B ETFE
 07 ... Blue Silicon Screened
 08 ... Fire Retardant
Connector
 50 ... 2 Pin
 52 ... 3 Pin
 54 ... M12 Connector

Mounting Threads
 01 ... 1/4"-28 UNF Female
 02 ... 1/2"-28 UNF Male
 05 ... Quick Fit Female
 06 ... M6 x 1mm Male
 08 ... M8 x 1.25mm Male
 10 ... M10 x 1.5mm Male
 12 ... M12 x 1.75mm Male

For 420 Series & 421 Series
VELOCITY RANGE
 010 ... 0-10 mm/sec RMS
 020 ... 0-20 mm/sec RMS
 025 ... 0-25 mm/sec RMS
 050 ... 0-50 mm/sec RMS
 100 ... 0-100 mm/sec RMS

For 421 Series only
AC (SENSITIVITY)
 100 mV/g
 100 mV/g
 100 mV/g
 50 mV/g
 50 mV/g

For 422 Series
ACCELERATION RANGE
 001 ... 0-1 g RMS
 002 ... 0-2 g RMS
 005 ... 0-5 g RMS
 010 ... 0-10 g RMS
 100 ... 0-100 g RMS

Please contact our Sales Office for information on sensor accessories (mounting studs, etc) and multichannel switch boxes.