

MON-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 offline 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 (5 ranges)
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	EN61000-6-4:2001
Immunity	EN61000-6-2:1999

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,



MONITION LTD


Condition Monitoring
& Plant Reliability Services

Tel: +44(0) 1909 722000
Fax: +44(0) 1909 722208
Email: sales@monition.com
Web: www.monition.com

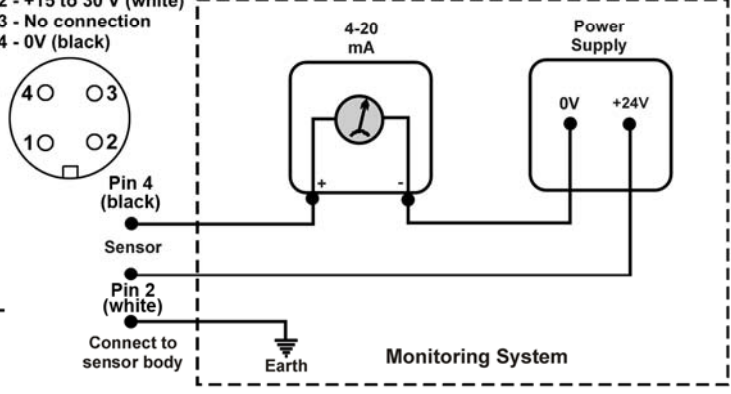
PRODUCT DATA

HS-420 Series Vibration Sensor

Dimensions

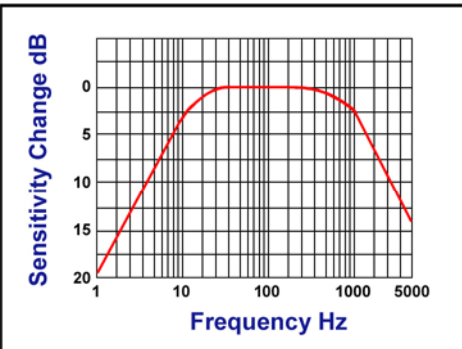


Pin 1 - No connection
 Pin 2 - +15 to 30 V (white)
 Pin 3 - No connection
 Pin 4 - 0V (black)

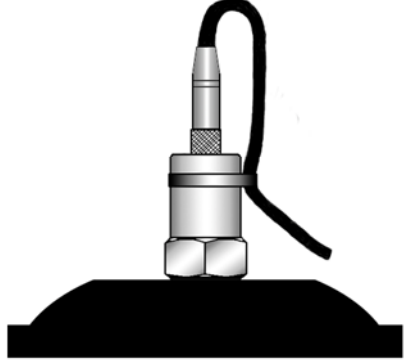


Monitoring System

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

Extra Options
 T - Temperature
 F - Filtered

4 2 X T X X X 0 2 0 5

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

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

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

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

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