

HS-100IS Intrinsically Safe Accelerometer

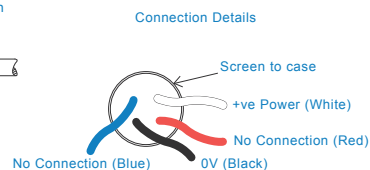
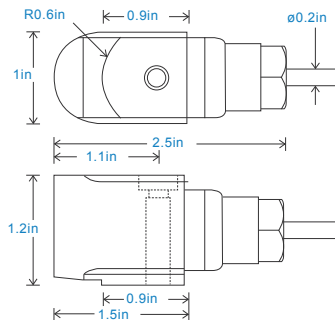
AC acceleration output via PUR Cable

Key Features

- Intrinsically Safe with European, USA, South African, Indian and Australian approvals
- Side entry for easy access

Industries

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



Technical Performance

Mounted Base Resonance	see 'How To Order' table (nominal)
Sensitivity	see: 'How To Order' table $\pm 10\%$ Nominal 80Hz at 72°F
Frequency Response	120cpm (2Hz) to 600kcpm (10kHz) $\pm 5\%$ 90cpm (1.5Hz) to 720kcpm (12kHz) $\pm 10\%$ 48cpm (0.8Hz) to 900kcpm (15kHz) $\pm 3\text{dB}$
Isolation	Base isolated
Range	see: 'How To Order' table
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Compression
Mounting Torque	5.9ft. lbs
Mounting Bolt Provided	see: 'How To Order' table x 1.2in long
Weight	6.5 oz. (nominal)
Maximum Cable Length	3,280 ft.
Standard Cable Length	16 ft.
Shielded Cable	PUR - length to be specified with order
Mounting Threads	see: 'How To Order' table
Submersible Depth	328 ft. max (10 bar)

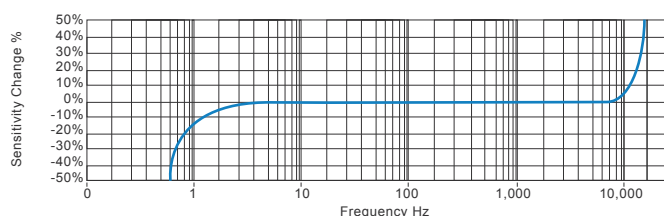
Electrical

Electrical Noise	0.1mg max
Current Range	0.5mA to 8mA
Bias Voltage	10 - 12 Volts DC
Settling Time	2 seconds
Output Impedance	200 Ohms max.
Case Isolation	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	see: attached certification details
Sealing	IP68
Maximum Shock	5000g
EMC	EN61326-1:2013

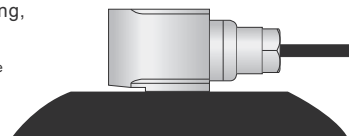
Typical Frequency Response (at 100mV/g)



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 913, 8th Ed. Rev. December 6, 2013
CAN/CSA C22.2 No. 157-92 (R2012) +Upd1 +Upd2



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

TS151U.11



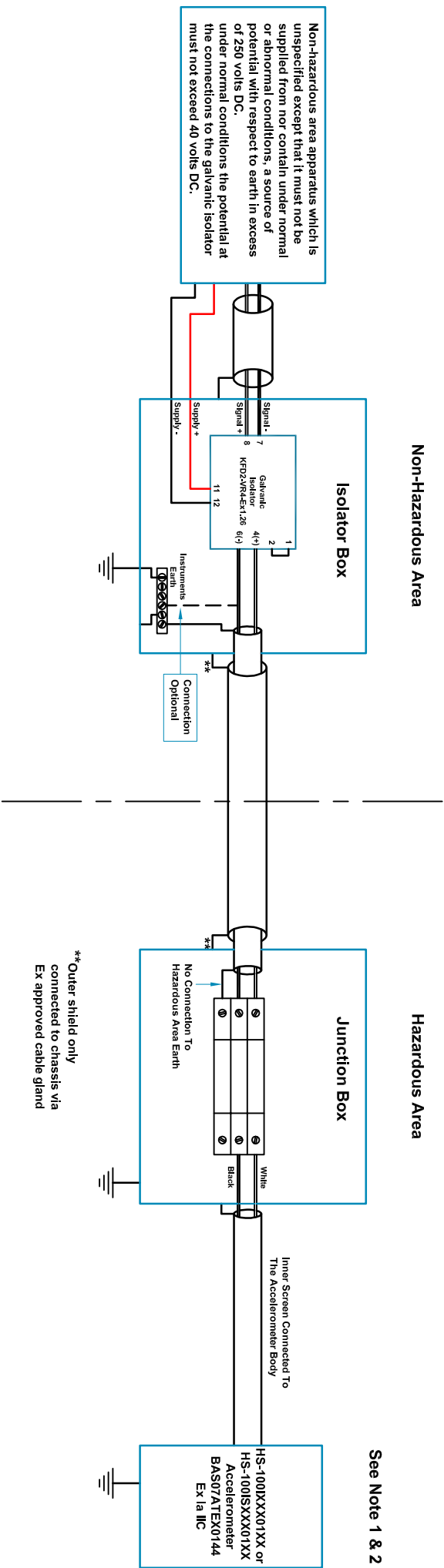


Table 1: Cable Parameters For Additional Cable Lengths

Accelerometer With Integral Cable Length ≤ 10m		
Group	Capacitance µF	L/R Ratio µH/Ω
IIC	0.086	46
IIB	0.730	172
IIA	2.470	363
Accelerometer With Integral Cable Length ≤ 50m		
Group	Capacitance µF	L/R Ratio µH/Ω
IIC	0.051	46
IIB	0.695	172
IIA	2.435	363
Accelerometer With Integral Cable Length ≤ 92m		
Group	Capacitance µF	L/R Ratio µH/Ω
IIC	0.013	46
IIB	0.657	172
IIA	2.397	363

Hansford Sensors Ltd

HS-1001 or HS-1001S Accelerometer System
Baseefa07Y0145/1
Ex ia IIC T4 (-55°C ≤ Ta ≤ +110°C) or
Ex ia IIC T6 (-55°C ≤ Ta ≤ +60°C)

- Notes:**
1. The capacitance and inductance, to resistance ratio (L/R) of hazardous area cable, must not exceed the values shown in Table 1.
 2. The cable from the accelerometer to the junction box must not be installed in a high velocity dust laden atmosphere
 3. The installer is to perform a risk assessment in accordance with clause 10 of EN 60079-25 and install lightning protection arrestors as deemed necessary.

Rev No	DRF No	Date Drg	Drg By	Appd By	Material: N/A		
A	Release	15/06/07	MJS	CMH	 Hansford Sensors Ltd Excellence in Vibration Monitoring Hansford Sensors Ltd Artisan, Hillbottom Rd Sands Industrial Estate High Wycombe Bucks HP12 4HJ		
B	DFR0164	13/01/11	MJS	CMH			
					Tolerances Unless Stated 0 or 0.0 ±0.5 0.00 ±0.15 Angle ±5°	1/6 Finish All Over Threads g6 H6	
1							
2							
3							
4							
5							
6							
7							
8							



Do Not Scale

All Dimensions in mm Unless Otherwise Stated

Description: System Connections
For HS-1001 & HS-1001S Group II Accelerometers With Non Armoured PUR Cable F.U.W. Galvanic Isolation

Drawing No: M06-004-B

Scale: NTS

Form Number: QF024 Issue 1

If In Doubt - Ask!

