HS-173 Premium Triaxial Accelerometer

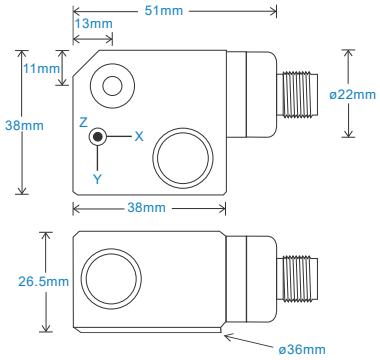
Three AC outputs via M12 Connector

Key Features

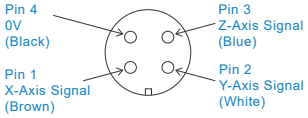
- Output via three axies
- For use with data collector
- Customisable features

Industries

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



Connection Details



Technical Performance

Mounted Base Resonance	see 'How To Order' table (nominal)
	+3kHz for aluminium version
Sensitivity	see: 'How To Order' table ±10%
	Nominal 80Hz at 22°C per axies
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) ± 5%
	1.5Hz (90cpm) to 12kHz (720kcpm) ± 10%
	0.8Hz (48cpm) to 15kHz (900kcpm) ± 3dB
Isolation	Base isolated
Range	see: 'How To Order' table
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel unless specified Aluminium
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Weight	235gms (nominal) - Stainless Steel
	115gms (nominal) - Aluminium
Screened Cable Assembly	HS-AC010 - straight
Mounting Threads	see: 'How To Order' table

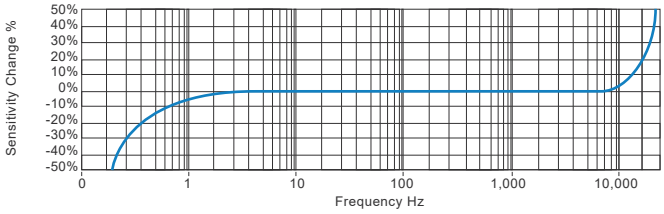
Electrical

Electrical Noise	0.1mg max
Current Range	0.5mA to 8mA
Bias Voltage	10 - 12 Volts DC
Settling Time	1 second
Output Impedance	200 Ohms max.
Case Isolation	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-55 to 150°C
Sealing	IP67
Maximum Shock	5000g
EMC	EN61326-1:2013

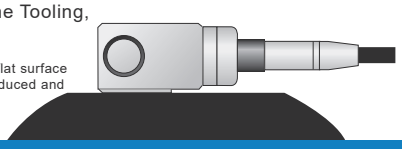
Typical Frequency Response (at 100mV/g)



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.)



How To Order

Product Prefix
HS - Hansford Sensors

Product Series
173 - Triaxial Industrial Vibration Sensor

H	S	1	7	3	X	X	X	X	X	X	X	X

Extra Options (if required)
AL - Aluminium Material
F - Filtered
RT - Temperature Output PT100
T - Temperature Output

Sensitivity	Range	Resonant Frequency
010 - 10mV/g	±800g	20kHz (1,800kcpm)
030 - 30mV/g	±250g	19kHz (1,680kcpm)
050 - 50mV/g	±160g	18kHz (1,560kcpm)
100 - 100mV/g	±80g	17kHz (1,440kcpm)
250 - 250mV/g	±32g	16kHz (1,320kcpm)
500 - 500mV/g	±16g	15kHz (1,200kcpm)

Cable/Connector
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

www.hansfordsensors.com
sales@hansfordsensors.com

TS262.13

HS-173 Premium Triaxial Accelerometer

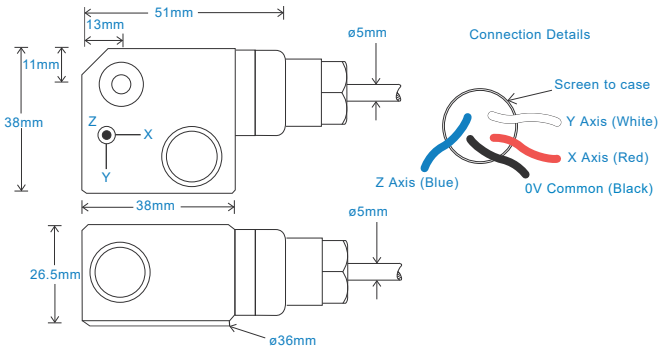
AC acceleration output via PUR cable

Key Features

- Output via three axes
- Waterproof
- Resistant to oil

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 ±10%
	Nominal 80Hz at 22°C per axies
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) ± 5%
	1.5Hz (90cpm) to 12kHz (720kcpm) ± 10%
	0.8Hz (48cpm) to 15kHz (900kcpm) ± 3dB
Isolation	Base isolated
Range	see: 'How To Order' table
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel unless specified Aluminium
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Weight	235gms (nominal) - Stainless Steel
Maximum Cable Length	1000 metres
Standard Cable Length	5 metres
Screened Cable	PUR - length to be specified with order
Mounting Threads	see: 'How To Order' table
Submersible Depth	100 metres max (10 bar)

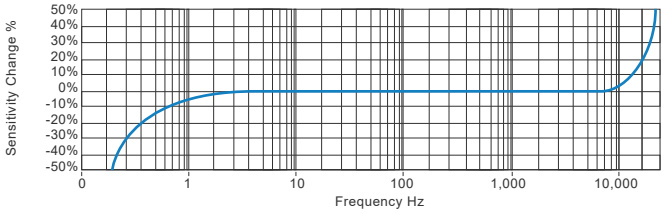
Electrical

Electrical Noise	0.1mg max
Current Range	0.5mA to 8mA
Bias Voltage	10 - 12 Volts DC
Settling Time	1 second
Output Impedance	200 Ohms max.
Case Isolation	>10^8 Ohms at 500 Volts

Environmental

Operating Temperature Range	-30 to 90°C
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.)

How To Order

Product Prefix	Product Series											
HS - Hansford Sensors	173 - Triaxial Industrial Vibration Sensor											
H	S	1	7	3	X	X	X	X	X	X	X	X

Extra Options (if required)
AL - Aluminium Material
F - Filtered

Sensitivity	Range	Resonant Frequency
010 - 10mV/g	±800g	20kHz (1,800kcpm)
030 - 30mV/g	±250g	19kHz (1,680kcpm)
050 - 50mV/g	±160g	18kHz (1,560kcpm)
100 - 100mV/g	±80g	17kHz (1,440kcpm)
250 - 250mV/g	±32g	16kHz (1,320kcpm)
500 - 500mV/g	±16g	15kHz (1,200kcpm)

Cable/Connector
01 - PUR

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

Hansford Sensors
Excellence in Vibration Monitoring

www.hansfordsensors.com
sales@hansfordsensors.com

HS-173 Premium Triaxial Accelerometer

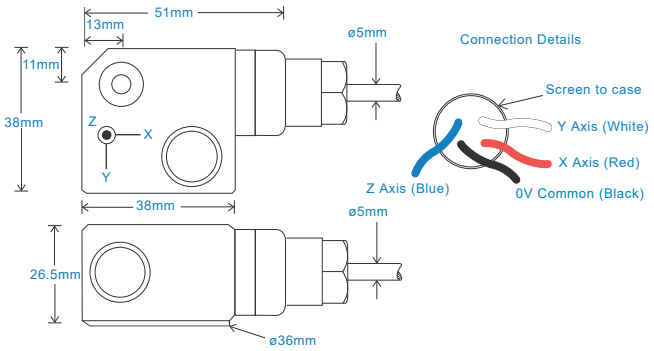
AC acceleration output via 4 Core Polyolefin HFFR

Key Features

- Output via three axes
- For use with data collector
- Resistant to oil

Industries

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



Technical Performance

Mounted Base Resonance	see 'How To Order' table (nominal)
	+3kHz for aluminium version
Sensitivity	see: 'How To Order' table ±10%
	Nominal 80Hz at 22°C per axies
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) ± 5%
	1.5Hz (90cpm) to 12kHz (720kcpm) ± 10%
	0.8Hz (48cpm) to 15kHz (900kcpm) ± 3dB
Isolation	Base isolated
Range	see: 'How To Order' table
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel unless specified Aluminium
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Weight	235gms (nominal) - Stainless Steel
	115gms (nominal) - Aluminium
Maximum Cable Length	1000 metres
Standard Cable Length	5 metres
Screened Cable	Polyolefin HFFR - length to be specified with order
Mounting Threads	see: 'How To Order' table
Submersible Depth	100 metres max (10 bar)

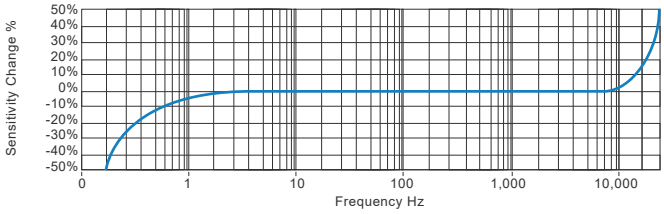
Electrical

Electrical Noise	0.1mg max
Current Range	0.5mA to 8mA
Bias Voltage	10 - 12 Volts DC
Settling Time	1 second
Output Impedance	200 Ohms max.
Case Isolation	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-55 to 130ºC
Sealing	IP68
Maximum Shock	5000g
EMC	EN61326-1:2013

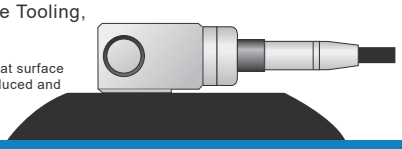
Typical Frequency Response (at 100mV/g)



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.)



How To Order

Product Prefix	Product Series											
HS - Hansford Sensors	173 - Triaxial Industrial Vibration Sensor											
H	**S**	**1**	**7**	**3**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**

Extra Options (if required)
AL - Aluminium Material
F - Filtered

Sensitivity		Range	Resonant Frequency	
010	- 10mV/g	±800g	20kHz	(1,800kcpm)
030	- 30mV/g	±250g	19kHz	(1,680kcpm)
050	- 50mV/g	±160g	18kHz	(1,560kcpm)
100	- 100mV/g	±80g	17kHz	(1,440kcpm)
250	- 250mV/g	±32g	16kHz	(1,320kcpm)
500	- 500mV/g	±16g	15kHz	(1,200kcpm)

Cable/Connector
37 - 4 Core Polyolefin HFFR

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

Hansford Sensors
Excellence in Vibration Monitoring

www.hansfordsensors.com
sales@hansfordsensors.com

TS1047.5

HS-173 Premium Triaxial Accelerometer

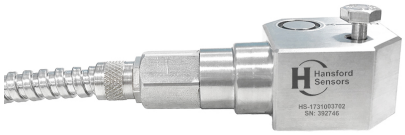
AC acceleration output via 4 Core Polyolefin HFFR with Protective Conduit

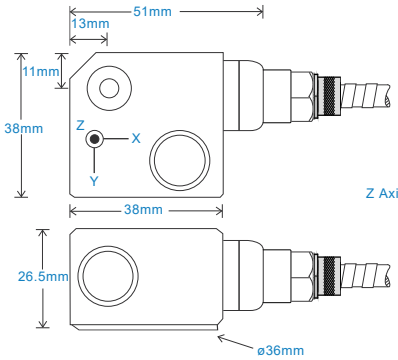
Key Features

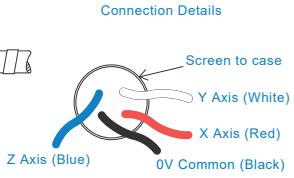
- Output via three axes
- For use with data collector
- Resistant to oil

Industries

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







Technical Performance

Mounted Base Resonance	see 'How To Order' table (nominal)
	+3kHz for aluminium version
Sensitivity	see: 'How To Order' table ±10%
	Nominal 80Hz at 22°C per axies
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) ± 5%
	1.5Hz (90cpm) to 12kHz (720kcpm) ± 10%
	0.8Hz (48cpm) to 15kHz (900kcpm) ± 3dB
Isolation	Base isolated
Range	see: 'How To Order' table
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel unless specified Aluminium
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Weight	235gms (nominal) - Stainless Steel
	115gms (nominal) - Aluminium
Maximum Cable Length	1000 metres
Standard Cable Length	5 metres
Screened Cable	Polyolefin HFFR - length to be specified with order
Mounting Threads	see: 'How To Order' table
Submersible Depth	100 metres max (10 bar)

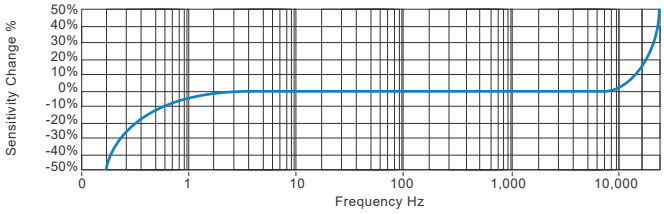
Electrical

Electrical Noise	0.1mg max
Current Range	0.5mA to 8mA
Bias Voltage	10 - 12 Volts DC
Settling Time	1 second
Output Impedance	200 Ohms max.
Case Isolation	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-55 to 130ºC
Sealing	IP68
Maximum Shock	5000g
EMC	EN61326-1:2013

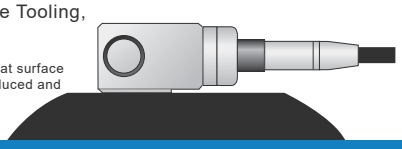
Typical Frequency Response (at 100mV/g)



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.)



How To Order

Product Prefix
HS - Hansford Sensors

Product Series
173 - Triaxial Industrial Vibration Sensor

H	S	1	7	3	X	X	X	X	X	X	X	X

Extra Options (if required)
AL - Aluminium Material
F - Filtered

Sensitivity / Range / Resonant Frequency

010	- 10mV/g	±800g	20kHz (1,800kcpm)
030	- 30mV/g	±250g	19kHz (1,680kcpm)
050	- 50mV/g	±160g	18kHz (1,560kcpm)
100	- 100mV/g	±80g	17kHz (1,440kcpm)
250	- 250mV/g	±32g	16kHz (1,320kcpm)
500	- 500mV/g	±16g	15kHz (1,200kcpm)

Cable/Connector
37C - 4 Core Polyolefin HFFR with Protective Conduit

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

Hansford Sensors
Excellence in Vibration Monitoring

www.hansfordsensors.com
sales@hansfordsensors.com

HS-173T Premium Triaxial Accelerometer

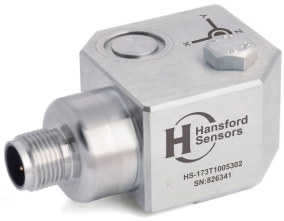
Three AC and temperature outputs via M12 Connector

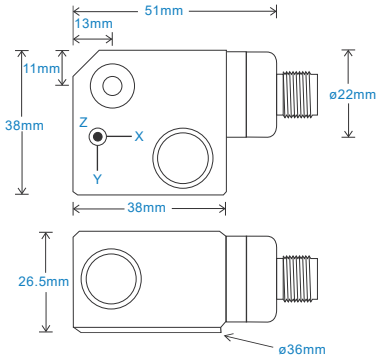
Key Features

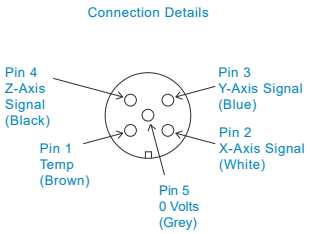
- Temperature Output
- Output via three axes
- For use with data collector
- Customisable features

Industries

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







Technical Performance

Mounted Base Resonance	see 'How To Order' table (nominal)
	+3kHz for aluminium version
Sensitivity	see: 'How To Order' table ±10%
	Nominal 80Hz at 22°C per axies
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) ± 5%
	1.5Hz (90cpm) to 12kHz (720kcpm) ± 10%
	0.8Hz (48cpm) to 15kHz (900kcpm) ± 3dB
Isolation	Base isolated
Range	see: 'How To Order' table
Temperature Output	10mV/ºC
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel unless specified Aluminium
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Weight	235gms (nominal) - Stainless Steel
	115gms (nominal) - Aluminium
Screened Cable Assembly	HS-AC303 - straight
	HS-AC032 - right angle
Mounting Threads	see: 'How To Order' table

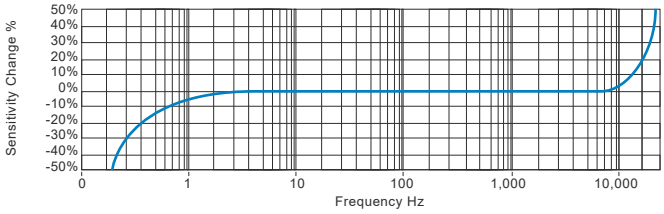
Electrical

Electrical Noise	0.1mg max
Current Range	0.5mA to 8mA
Bias Voltage	10 - 12 Volts DC
Settling Time	1 second
Output Impedance	200 Ohms max.
Case Isolation	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-55 to 150ºC
Sealing	IP67
Maximum Shock	5000g
EMC	EN61326-1:2013

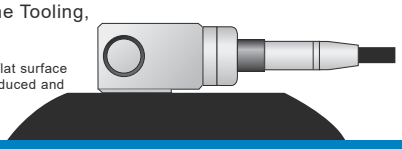
Typical Frequency Response (at 100mV/g)



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.)



How To Order

Product Prefix
HS - Hansford Sensors

Product Series
173 - Triaxial Industrial Vibration Sensor

H	S	1	7	3	T	X	X	X	X	X	X	X

Extra Options (if required)
AL - Aluminium Material
F - Filtered
RT - Temperature Output PT100
T - Temperature Output

Sensitivity	Range	Resonant Frequency
010 - 10mV/g	±800g	20kHz (1,800kcpm)
030 - 30mV/g	±250g	19kHz (1,680kcpm)
050 - 50mV/g	±160g	18kHz (1,560kcpm)
100 - 100mV/g	±80g	17kHz (1,440kcpm)
250 - 250mV/g	±32g	16kHz (1,320kcpm)
500 - 500mV/g	±16g	15kHz (1,200kcpm)

Cable/Connector
53 - 5 Pin 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

www.hansfordsensors.com
sales@hansfordsensors.com

HS-173HT Premium Triaxial Accelerometer

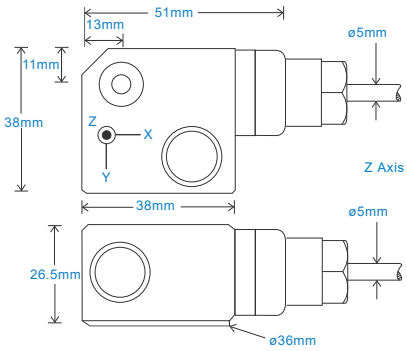
AC Acceleration and Temperature Output via 5 Core PTFE Cable

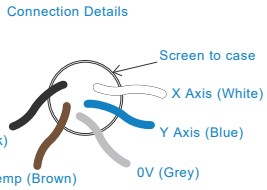
Key Features

- High Temperature
- Output via 3 axes
- For use with data collector

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 ±10%
	Nominal 80Hz at 22°C per axies
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) ± 5%
	1.5Hz (90cpm) to 12kHz (720kcpm) ± 10%
	0.8Hz (48cpm) to 15kHz (900kcpm) ± 3dB
Isolation	Base isolated
Range	see: 'How To Order' table
Temperature Output	10 mV/°C - 150°C
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Weight-Sensor Only	235gms (nominal) - Stainless Steel
Maximum Cable Length	1000 metres
Standard Cable Length	5 metres
Screened Cable	PTFE Cable - length to be specified with order
Mounting Threads	see: 'How To Order' table
Submersible Depth	100 metres max (10 bar)

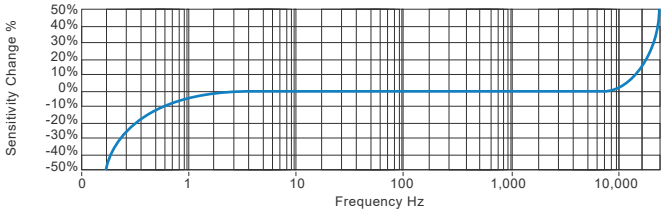
Electrical

Electrical Noise	0.1mg max
Current Range	0.5mA to 8mA
Bias Voltage	10 - 12 Volts DC
Settling Time	1 second
Output Impedance	200 Ohms max.
Case Isolation	>10^8 Ohms at 500 Volts

Environmental

Operating Temperature Range	-55 to 150°C
Sealing	IP68
Maximum Shock	5000g
EMC	EN61326-1:2013

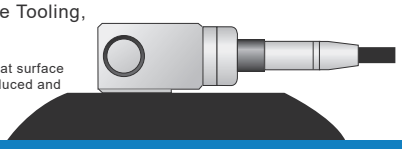
Typical Frequency Response (at 100mV/g)



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.)



How To Order

Product Prefix
HS - Hansford Sensors

Product Series
173 - Triaxial Industrial Vibration Sensor

H	S	1	7	3	H	T	X	X	X	X	X	X	X

Extra Options (if required)
F - Filtered
H - High Temperature
T - Temperature Output

Sensitivity	Range	Resonant Frequency
010 - 10mV/g	±800g	20kHz (1,800kcpm)
030 - 30mV/g	±250g	19kHz (1,680kcpm)
050 - 50mV/g	±160g	18kHz (1,560kcpm)
100 - 100mV/g	±80g	17kHz (1,440kcpm)
250 - 250mV/g	±32g	16kHz (1,320kcpm)
500 - 500mV/g	±16g	15kHz (1,200kcpm)

Cable/Connector
38 - 5 Core PTFE Cable
38C - 5 Core PTFE Cable with Protective conduit.

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

Hansford Sensors
Excellence in Vibration Monitoring

www.hansfordsensors.com
sales@hansfordsensors.com

HS-173HT Premium Triaxial Accelerometer

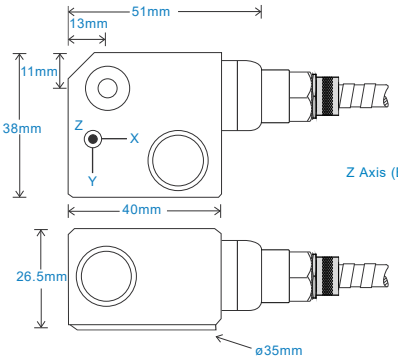
AC Acceleration and Temperature Output via 5 Core PTFE Cable with Protective Conduit

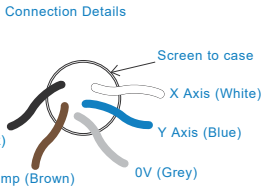
Key Features

- High Temperature
- For use with data collector
- Protective Conduit

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 ±10%
	Nominal 80Hz at 22°C per axies
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) ± 5%
	1.5Hz (90cpm) to 12kHz (720kcpm) ± 10%
	0.8Hz (48cpm) to 15kHz (900kcpm) ± 3dB
Isolation	Base isolated
Range	see: 'How To Order' table
Temperature Output	10 mV/°C - 150°C
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Weight-Sensor Only	235gms (nominal) - Stainless Steel
Maximum Cable Length	1000 metres
Standard Cable Length	5 metres
Screened Cable	PTFE Cable - length to be specified with order
Mounting Threads	see: 'How To Order' table
Submersible Depth	100 metres max (10 bar)
Conduit Material	Stainless Steel
Conduit Length	Conduit Length is approx. 0.5m shorter than the cable

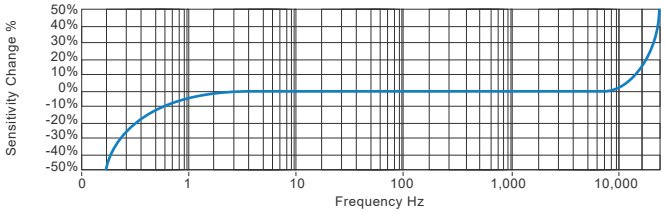
Electrical

Electrical Noise	0.1mg max
Current Range	0.5mA to 8mA
Bias Voltage	10 - 12 Volts DC
Settling Time	1 second
Output Impedance	200 Ohms max.
Case Isolation	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-55 to 150°C
Sealing	IP68
Maximum Shock	5000g
EMC	EN61326-1:2013

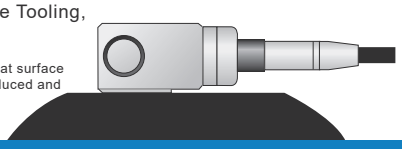
Typical Frequency Response (at 100mV/g)



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.)



How To Order

Product Prefix
HS - Hansford Sensors

Product Series
173 - Triaxial Industrial Vibration Sensor

H	S	1	7	3	H	T	X	X	X	X	X	X	X	X

Extra Options (if required)
F - Filtered
H - High Temperature
T - Temperature Output

Sensitivity		Range	Resonant Frequency	
010	- 10mV/g	±800g	20kHz	(1,800kcpm)
030	- 30mV/g	±250g	19kHz	(1,680kcpm)
050	- 50mV/g	±160g	18kHz	(1,560kcpm)
100	- 100mV/g	±80g	17kHz	(1,440kcpm)
250	- 250mV/g	±32g	16kHz	(1,320kcpm)
500	- 500mV/g	±16g	15kHz	(1,200kcpm)

Cable/Connector
38 - 5 Core PTFE Cable
38C - 5 Core PTFE Cable with Protective conduit.

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

Hansford Sensors
Excellence in Vibration Monitoring

www.hansfordsensors.com
sales@hansfordsensors.com

TS1011.3

HS-173RT Premium Triaxial Accelerometer

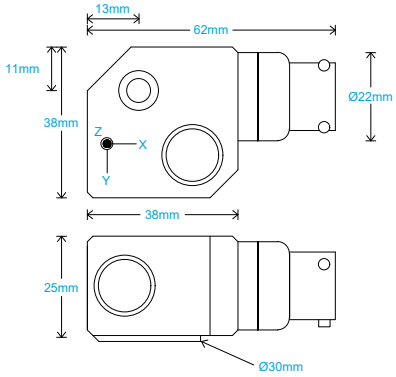
Three AC and PT100 temperature outputs via 6 Pin 62GB connector

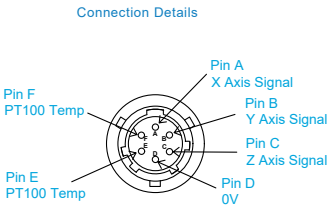
Key Features

- Temperature Output
- Output via three axies
- For use with data collector
- Customisable features

Industries

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





Technical Performance

Mounted Base Resonance	see 'How To Order' table (nominal)
	+3kHz for aluminium version
Sensitivity	see: 'How To Order' table ±10%
	Nominal 80Hz at 22°C per axies
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) ± 5%
	1.5Hz (90cpm) to 12kHz (720kcpm) ± 10%
	0.8Hz (48cpm) to 15kHz (900kcpm) ± 3dB
Isolation	Base isolated
Range	see: 'How To Order' table
Temperature Output	PT100 (-50°C to +500°C)
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel unless specified Aluminium
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Weight	235gms (nominal) - Stainless Steel
	115gms (nominal) - Aluminium
Connector	HS-AA125 Amphenol
	62GB-16F10-06SN
Mounting Threads	see: 'How To Order' table

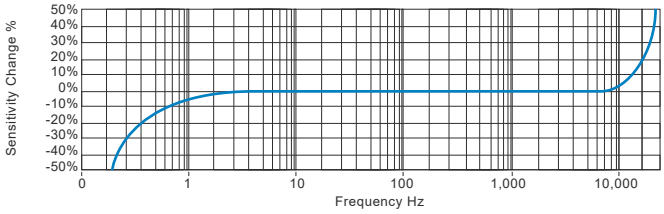
Electrical

Electrical Noise	0.1mg max
Current Range	0.5mA to 8mA
Bias Voltage	10 - 12 Volts DC
Settling Time	1 second
Output Impedance	200 Ohms max.
Case Isolation	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-55 to 130ºC
Sealing	IP67
Maximum Shock	5000g
EMC	EN61326-1:2013

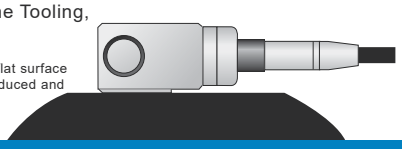
Typical Frequency Response (at 100mV/g)



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.)



How To Order

Product Prefix
HS - Hansford Sensors

Product Series
173 - Triaxial Industrial Vibration Sensor

H	S	1	7	3	R	T	X	X	X	X	X	X	X

Extra Options (if required)
AL - Aluminium Material
F - Filtered
RT - Temperature Output PT100
T - Temperature Output

Sensitivity	Range	Resonant Frequency
010 - 10mV/g	±800g	20kHz (1,800kcpm)
030 - 30mV/g	±250g	19kHz (1,680kcpm)
050 - 50mV/g	±160g	18kHz (1,560kcpm)
100 - 100mV/g	±80g	17kHz (1,440kcpm)
250 - 250mV/g	±32g	16kHz (1,320kcpm)
500 - 500mV/g	±16g	15kHz (1,200kcpm)

Cable/Connector
63 - 6 Pin 62GB

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

Hansford Sensors
Excellence in Vibration Monitoring

www.hansfordsensors.com
sales@hansfordsensors.com

HS-173I Premium ATEX Triaxial Accelerometer

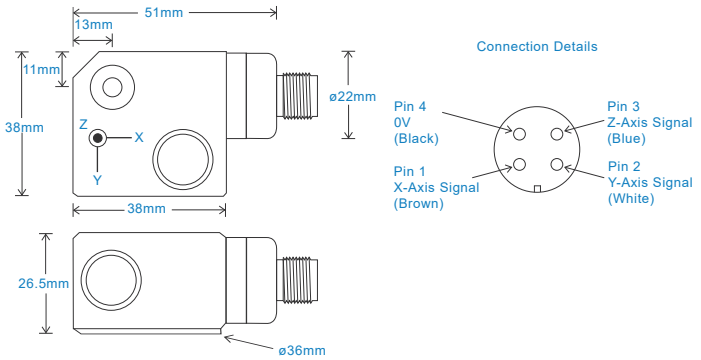
Three AC outputs via M12 Connector

Key Features

- Intrinsically Safe with European, USA and Australian approvals
- Output via three axies
- For use with data collector
- Customisable features

Industries

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



Technical Performance

Mounted Base Resonance	see 'How To Order' table (nominal)
	+3kHz for aluminium version
Sensitivity	see: 'How To Order' table ±10%
	Nominal 80Hz at 22°C per axies
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) ± 5%
	1.5Hz (90cpm) to 12kHz (720kcpm) ± 10%
	0.8Hz (48cpm) to 15kHz (900kcpm) ± 3dB
Isolation	Base isolated
Range	see: 'How To Order' table
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel unless specified Aluminium
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Weight	235gms (nominal) - Stainless Steel
	115gms (nominal) - Aluminium
Screened Cable Assembly	HS-AC010 - straight
Mounting Threads	see: 'How To Order' table

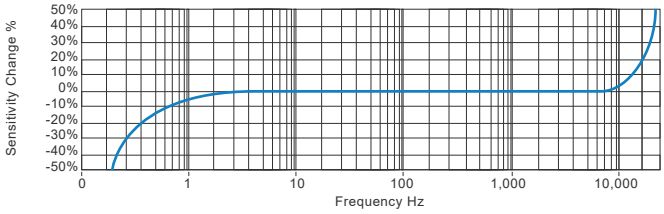
Electrical

Electrical Noise	0.1mg max
Current Range	0.5mA to 8mA
Bias Voltage	10 - 12 Volts DC
Settling Time	1 second
Output Impedance	200 Ohms max.
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

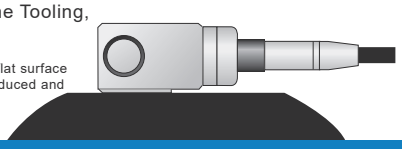
Typical Frequency Response (at 100mV/g)



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

710318

This product is certified in accordance with
UL 60079-0, 6th Ed, Rev. July 26, 2013
UL 60079-11, 6th Ed. Rev. September 6, 2013
CAN/CSA C22.2 No. 60079-0:15 Rev. October 2015
CAN/CSA C22.2 No. 60079-11:14
UL 913, 8th Ed. Rev. October 16, 2015

Hansford Sensors
Excellence in Vibration Monitoring

www.hansfordsensors.com
sales@hansfordsensors.com

HS-173I Premium ATEX Triaxial Accelerometer

Three AC outputs via M12 Connector

Intrinsically Safe Requirements

Certificate details: Group II and III	IECEx 18.0082X
	Baseefa18ATEX0130X
	Ⓔx II 1GD
	Ex ia II T6..T4
	Ex ia IIIC T135ºC Da
	Ex ia IIIB T102ºC...T131ºC Da
Certificate details: Group I	IECEx 18.0082X
	Baseefa18ATEX0130X
	Ⓔx I M 1
	Ex ia I Ma
	Ex ia IIIC T110ºC..T145ºC Da
Terminal Parameters Connector	Ui = 28V, Ii = 93mA, Pi = 0.65W
	Ci = 3.6nF
	Li= 0
500V Isolation	Units Will Pass A 500V Isolation Test
Standards Applied to Product	EN IEC 60079-0:2018
	EN 60079-11:2012
	IEC 60079-0 Edition 7 2017
	IEC 60079-11 Edition 6 2011
Barrier	1 x Pepperl + Fuchs Galvanic Isolator
	KFD2-VR4-Ex1.26 (BAS02ATEX7206)
	1 x MTL Zener Barrier MTL7728+ (BAS01ATEX7217)
	or Pepperl + Fuchs Zener Barrier
	Z728 (BAS01ATEX7005) or any other barrier that
	conforms with the terminal parameters

Certified Temperature Range	Ex ia IIC T6 Ga (-55°C ≤ Ta ≤ +69°C) (Gas)
	Ex ia IIC T4 Ga (-55°C ≤ Ta ≤ +104°C) (Gas)
	Ex ia IIIB T102°C Da (-55°C ≤ Ta ≤ +69°C) (Dust)
	Ex ia IIIB T131°C Da (-55°C ≤ Ta ≤ +98°C) (Dust)
	Ex ia IIIC T135°C Da (-55°C ≤ Ta ≤ +70°C) (Dust)
	Ex ia I Ma (-55°C ≤ Ta ≤ +104°C) (Dust)
Australia Approval Group I	IECEx ExTC 18.0032X
	Ex ia I Ma
	(-55ºC ≤ Ta ≤ +104ºC)
US/Canada Approvals	Certificate No. SGSNA/19/BAS/00005
	Cl I, II, III, Div 1, 2 Gr A-G T*
	Cl I Zn 0 AEx ia IIC T6...T4 Ga
	Cl II Zn 20 AEx ia IIIC T135ºC Da
	Ex ia IIC T6...T4 Ga
	Ex ia IIIC T135ºC Da
	Or
	Cl I, II, III, Div 1, 2 Gr A-D G and F T*
	Cl I Zn 0 AEx ia IIC T6...T4 Ga
	Cl II Zn 20 AEx ia IIIC T135ºC Da
	Cl II Zn 20 AEx ia IIIB T102°C...T131°C Da
	Ex ia IIC T6...T4 Ga
	Ex ia IIIC T135ºC Da
	Ex ia IIIB T102ºC...T131ºC Da
Control Drawing	M06-088-A

Special conditions of use: When a sensor is supplied with integral cable, this must be terminated in an enclosure providing at least degree of protection IP20.

Note: If the equipment is to be used in unusual environments or aggressive substances are likely to be encountered, contact the manufacturer to discuss suitability.

How To Order

Product Prefix
HS - Hansford Sensors

Product Series
173I - Premium Intrinsically Safe Triaxial Industrial Vibration Sensor

H	S	1	7	3	I	X	X	X	X	X	X	X

Extra Options (if required)
A - Australia (Group I)
G - SGS
I - Intrinsically Safe (Group II)
L - 316L Stainless Steel
M - Mining (Group I)
Y - 5% tolerance on sensitivity

Sensitivity		Range	Resonant Frequency	
010	- 10mV/g	±800g	20kHz	(1,800kcpm)
030	- 30mV/g	±250g	19kHz	(1,680kcpm)
050	- 50mV/g	±160g	18kHz	(1,560kcpm)
100	- 100mV/g	±80g	17kHz	(1,440kcpm)
250	- 250mV/g	±32g	16kHz	(1,320kcpm)
500	- 500mV/g	±16g	15kHz	(1,200kcpm)

Cable/Connector
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

www.hansfordsensors.com
sales@hansfordsensors.com

HS-173I Premium ATEX Triaxial Accelerometer

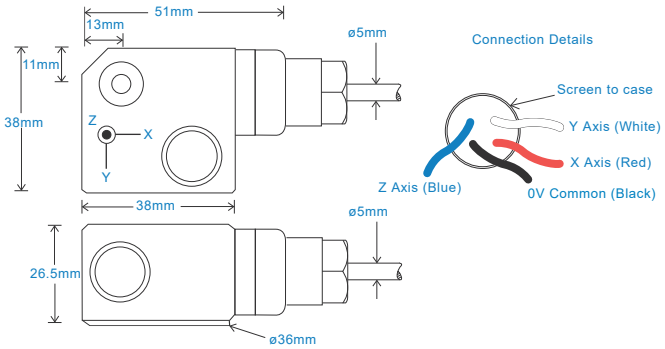
Three AC outputs via PUR cable

Key Features

- Intrinsically Safe with European, USA and Australian approvals
- Output via three axies
- For use with data collector
- Customisable features

Industries

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



Technical Performance

Mounted Base Resonance	see 'How To Order' table (nominal)
	+3kHz for aluminium version
Sensitivity	see: 'How To Order' table ±10%
	Nominal 80Hz at 22°C per axies
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) ± 5%
	1.5Hz (90cpm) to 12kHz (720kcpm) ± 10%
	0.8Hz (48cpm) to 15kHz (900kcpm) ± 3dB
Isolation	Base isolated
Range	see: 'How To Order' table
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel unless specified Aluminium
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Weight	235gms (nominal) - Stainless Steel
	115gms (nominal) - Aluminium
Maximum Cable Length	See certificate
Standard Cable Length	5 metres
Screened Cable	PUR - length to be specified with order
Mounting Threads	see: 'How To Order' table
Submersible Depth	100 metres max (10 bar)

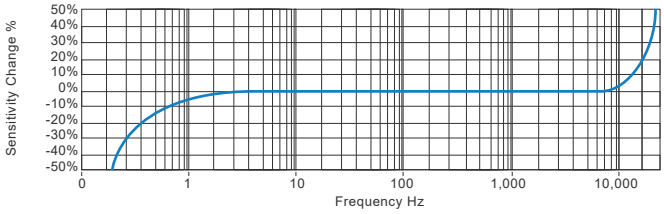
Electrical

Electrical Noise	0.1mg max
Current Range	0.5mA to 8mA
Bias Voltage	10 - 12 Volts DC
Settling Time	1 second
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

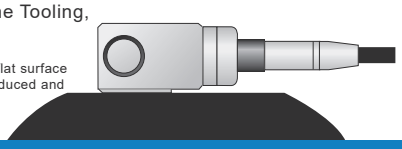
Typical Frequency Response (at 100mV/g)



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

710318

This product is certified in accordance with
UL 60079-0, 6th Ed, Rev. July 26, 2013
UL 60079-11, 6th Ed. Rev. September 6, 2013
CAN/CSA C22.2 No. 60079-0:15 Rev. October 2015
CAN/CSA C22.2 No. 60079-11:14
UL 913, 8th Ed. Rev. October 16, 2015

Hansford Sensors
Excellence in Vibration Monitoring

www.hansfordsensors.com
sales@hansfordsensors.com

HS-173I Premium ATEX Triaxial Accelerometer

Three AC outputs via PUR cable

Intrinsically Safe Requirements

Certificate details: Group II and III	IECExBAS 18.0082X
	Baseefa18ATEX0130X
	Ⓔx II 1GD
	Ex ia II T6..T4
	Ex ia IIIC T135ºC Da
	Ex ia IIIB T102ºC...T131ºC Da
Certificate details: Group I	IECEx 18.0082X
	Baseefa18ATEX00130X
	Ⓔx I M 1
	Ex ia I Ma
	Ex ia IIIC T110ºC..T145ºC Da
Terminal Parameters 10m of cable	Ui = 28V, Ii = 93mA, Pi = 0.65W
	Ci = 7.4nF
	Li= 7.2µH
Terminal Parameters 92m of cable	Ui = 28V, Ii = 93mA, Pi = 0.65W
	Ci = 38.3nF
	Li= 66µH
500V Isolation	Units Will Pass A 500V Isolation Test
Standards Applied to Product	EN IEC 60079-0:2018
	EN 60079-11:2012
	IEC 60079-0 Edition 7 2017
	IEC 60079-11 Edition 6 2011
Barrier	1 x Pepperl + Fuchs Galvanic Isolator KFD2-VR4-Ex1.26 (BAS02ATEX7206)
	1 x MTL Zener Barrier MTL7728+ (BAS01ATEX7217) or Pepperl + Fuchs Zener Barrier Z728 (BAS01ATEX7005) or any other barrier that conforms with the terminal parameters

Certified Temperature Range	Ex ia IIC T6 Ga (-55°C ≤ Ta ≤ +69°C) (Gas)
	Ex ia IIC T4 Ga (-55°C ≤ Ta ≤ +104°C) (Gas)
	Ex ia IIIB T102°C Da (-55°C ≤ Ta ≤ +69°C) (Dust)
	Ex ia IIIB T131°C Da (-55°C ≤ Ta ≤ +98°C) (Dust)
	Ex ia IIIC T135°C Da (-55°C ≤ Ta ≤ +70°C) (Dust)
	Ex ia I Ma (-55°C ≤ Ta ≤ +104°C) (Dust)
Australia Approval Group I	IECEx ExTC 18.0032X
	Ex ia I Ma
	(-55ºC ≤ Ta ≤ +104ºC)
US/Canada Approvals	Certificate No. SGSNA/19/BAS/00005
	Cl I, II, III, Div 1, 2 Gr A-G T*
	Cl I Zn 0 AEx ia IIC T6...T4 Ga
	Cl II Zn 20 AEx ia IIIC T135ºC Da
	Ex ia IIC T6...T4 Ga
	Ex ia IIIC T135ºC Da
	Or
	Cl I, II, III, Div 1, 2 Gr A-D G and F T*
	Cl I Zn 0 AEx ia IIC T6...T4 Ga
	Cl II Zn 20 AEx ia IIIC T135ºC Da
	Cl II Zn 20 AEx ia IIIB T102°C...T131°C Da
	Ex ia IIC T6...T4 Ga
	Ex ia IIIC T135ºC Da
	Ex ia IIIB T102ºC...T131ºC Da
Control Drawing	M06-088-A

Special conditions of use: When a sensor is supplied with integral cable, this must be terminated in an enclosure providing at least degree of protection IP20.

Note: If the equipment is to be used in unusual environments or aggressive substances are likely to be encountered, contact the manufacturer to discuss suitability.

How To Order

Product Prefix
HS - Hansford Sensors

Product Series
173I - Premium Intrinsically Safe Triaxial Industrial Vibration Sensor

H	S	1	7	3	I	X	X	X	X	X	X	X

Extra Options (if required)
A - Australia (Group I)
G - SGS
I - Intrinsically Safe (Group II)
L - 316L Stainless Steel
M - Mining (Group I)
Y - 5% tolerance on sensitivity

Sensitivity		Range	Resonant Frequency	
010	- 10mV/g	±800g	20kHz	(1,800kcpm)
030	- 30mV/g	±250g	19kHz	(1,680kcpm)
050	- 50mV/g	±160g	18kHz	(1,560kcpm)
100	- 100mV/g	±80g	17kHz	(1,440kcpm)
250	- 250mV/g	±32g	16kHz	(1,320kcpm)
500	- 500mV/g	±16g	15kHz	(1,200kcpm)

Cable/Connector
01 - PUR

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

Hansford Sensors
Excellence in Vibration Monitoring

www.hansfordsensors.com
sales@hansfordsensors.com

HS-173I Premium ATEX Triaxial Accelerometer

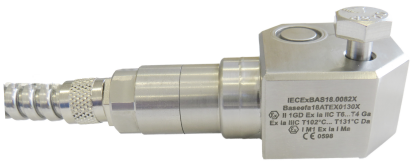
Three AC outputs via PUR cable with Protective Conduit

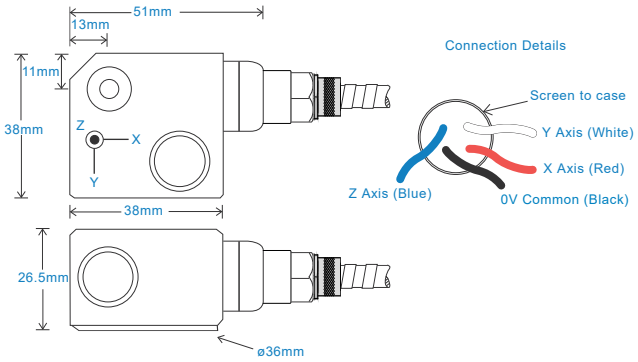
Key Features

- Intrinsically Safe with European, USA and Australian approvals
- Output via three axies
- For use with data collector
- Protective Conduit

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 ±10%
	Nominal 80Hz at 22°C per axies
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) ± 5%
	1.5Hz (90cpm) to 12kHz (720kcpm) ± 10%
	0.8Hz (48cpm) to 15kHz (900kcpm) ± 3dB
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	8Nm
Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Weight	235gms (nominal) - Stainless Steel
Maximum Cable Length	See certificate
Standard Cable Length	5 metres
Screened Cable	PUR - length to be specified with order
Mounting Threads	see: 'How To Order' table
Submersible Depth	100 metres max (10 bar)

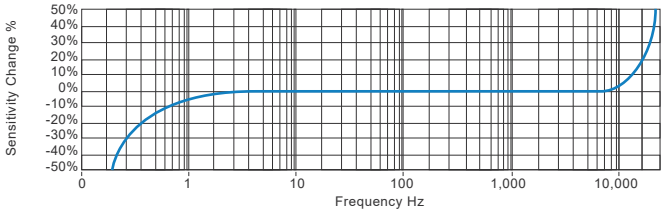
Electrical

Electrical Noise	0.1mg max
Current Range	0.5mA to 8mA
Bias Voltage	10 - 12 Volts DC
Settling Time	1 second
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

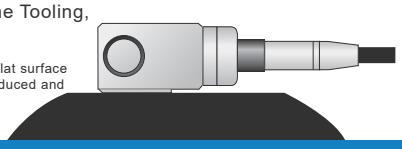
Typical Frequency Response (at 100mV/g)



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

710318

This product is certified in accordance with
UL 60079-0, 6th Ed, Rev. July 26, 2013
UL 60079-11, 6th Ed. Rev. September 6, 2013
CAN/CSA C22.2 No. 60079-0:15 Rev. October 2015
CAN/CSA C22.2 No. 60079-11:14
UL 913, 8th Ed. Rev. October 16, 2015

Hansford Sensors
Excellence in Vibration Monitoring

www.hansfordsensors.com
sales@hansfordsensors.com

HS-173I Premium ATEX Triaxial Accelerometer

Three AC outputs via PUR cable with Protective Conduit

Intrinsically Safe Requirements

Certificate details: Group II and III	IECExBAS 18.0082X
	Baseefa18ATEX0130X
	Ⓔx II 1GD
	Ex ia II T6..T4
	Ex ia IIIC T135ºC Da
	Ex ia IIIB T102ºC...T131ºC Da
Certificate details: Group I	IECEx 18.0082X
	Baseefa18ATEX0130X
	Ⓔx I M 1
	Ex ia I Ma
	Ex ia IIIC T110ºC..T145ºC Da
Terminal Parameters 10m of cable	Ui = 28V, Ii = 93mA, Pi = 0.65W
	Ci = 7.4nF
	Li= 7.2µH
Terminal Parameters 92m of cable	Ui = 28V, Ii = 93mA, Pi = 0.65W
	Ci = 38.3nF
	Li= 66µH
500V Isolation	Units Will Pass A 500V Isolation Test
Standards Applied to Product	EN IEC 60079-0:2018
	EN 60079-11:2012
	IEC 60079-0 Edition 7 2017
	IEC 60079-11 Edition 6 2011
Barrier	1 x Pepperl + Fuchs Galvanic Isolator KFD2-VR4-Ex1.26 (BAS02ATEX7206)
	1 x MTL Zener Barrier MTL7728+ (BAS01ATEX7217) or Pepperl + Fuchs Zener Barrier Z728 (BAS01ATEX7005) or any other barrier that conforms with the terminal parameters

Certified Temperature Range	Ex ia IIC T6 Ga (-55°C ≤ Ta ≤ +69°C) (Gas)
	Ex ia IIC T4 Ga (-55°C ≤ Ta ≤ +104°C) (Gas)
	Ex ia IIIB T102°C Da (-55°C ≤ Ta ≤ +69°C) (Dust)
	Ex ia IIIB T131°C Da (-55°C ≤ Ta ≤ +98°C) (Dust)
	Ex ia IIIC T135°C Da (-55°C ≤ Ta ≤ +70°C) (Dust)
	Ex ia I Ma (-55°C ≤ Ta ≤ +104°C) (Dust)
Australia Approval Group I	IECEx ExTC 18.0032X
	Ex ia I Ma
	(-55ºC ≤ Ta ≤ +104ºC)
US/Canada Approvals	Certificate No. SGSNA/19/BAS/00005
	Cl I, II, III, Div 1, 2 Gr A-G T*
	Cl I Zn 0 AEx ia IIC T6...T4 Ga
	Cl II Zn 20 AEx ia IIIC T135ºC Da
	Ex ia IIC T6...T4 Ga
	Ex ia IIIC T135ºC Da
	Or
	Cl I, II, III, Div 1, 2 Gr A-D G and F T*
	Cl I Zn 0 AEx ia IIC T6...T4 Ga
	Cl II Zn 20 AEx ia IIIC T135ºC Da
	Cl II Zn 20 AEx ia IIIB T102°C...T131°C Da
	Ex ia IIC T6...T4 Ga
	Ex ia IIIC T135ºC Da
	Ex ia IIIB T102ºC...T131ºC Da
Control Drawing	M06-088-A

Special conditions of use: When a sensor is supplied with integral cable, this must be terminated in an enclosure providing at least degree of protection IP20.

Note: If the equipment is to be used in unusual environments or aggressive substances are likely to be encountered, contact the manufacturer to discuss suitability.

How To Order

Product Prefix
HS - Hansford Sensors

Product Series
173I - Premium Intrinsically Safe Triaxial Industrial Vibration Sensor

H	S	1	7	3	I	X	X	X	X	X	X	X	X

Extra Options (if required)
A - Australia (Group I)
G - SGS
I - Intrinsically Safe (Group II)
L - 316L Stainless Steel
M - Mining (Group I)
Y - 5% tolerance on sensitivity

Sensitivity		Range	Resonant Frequency	
010	- 10mV/g	±800g	20kHz	(1,800kcpm)
030	- 30mV/g	±250g	19kHz	(1,680kcpm)
050	- 50mV/g	±160g	18kHz	(1,560kcpm)
100	- 100mV/g	±80g	17kHz	(1,440kcpm)
250	- 250mV/g	±32g	16kHz	(1,320kcpm)
500	- 500mV/g	±16g	15kHz	(1,200kcpm)

Cable/Connector
01C - PUR with Protective Conduit

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

Hansford Sensors
Excellence in Vibration Monitoring

www.hansfordsensors.com
sales@hansfordsensors.com