HotSense™ Ultrasonic High Temperature Transducers (UHT)

Minimise operational risk and maximise productivity with enhanced asset intelligence

Ultrasonic transducers for 0° measurements ideal for thickness, corrosion and erosion monitoring for use in applications across **refining**, **oil & gas**, **energy**, **nuclear**, **aerospace** and **process sectors**.

Keywords: corrosion, erosion, in-service monitoring, hazardous environments, ultrasonics, high-temperature, radiation

ionix
ADVANCED TECHNOLOGIES
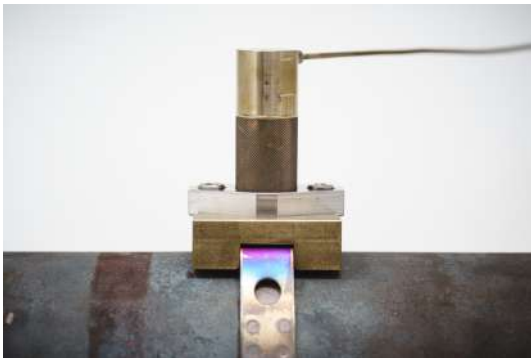
HOTSENSE™

- The original, truly high temperature transducer by the Ionix HPZ piezo ceramic.
- Continuous in-service, on-stream monitoring up to 600°C [1,112°F].
- Permanent or temporary installation in the most extreme environments.
- Wide operating temperature range for continuous in-service, on-stream, monitoring applications.
- On-stream installation and calibration with integrated reference block for reliable data.
- Highest sensitivity in class provides highest accuracy and precision for the most challenging measurement conditions.
- Intrinsically safe certified to Zone 0 for use in the most hazardous locations.

DEPLOYMENT

- Install on live plant in minutes with a single tool.
- Weld-free sensor mounting options for pipes - Ionix clamps are safe to use and can be readily removed.
- Welded stud deployment option for vessels. Compatible with legacy stud mountings.
- Manual or automated data collection options available.

SOLUTIONS

- Fixed UT sensors provide increased measurement precision & collection frequency for reliable and real-time corrosion trending supporting RBI & FFS programmes.
- Optimise Asset Integrity and Performance Management (AIM / APM) Programmes with accurate and reliable wall loss data.
- Maximise production margins and reduce operational costs with data driven process insights.
- Data collection using standard UT flaw detectors with Measurement Hub. Autonomous data collection and data direct to desk wirelessly.

hotsense® | Powered by **ionix**
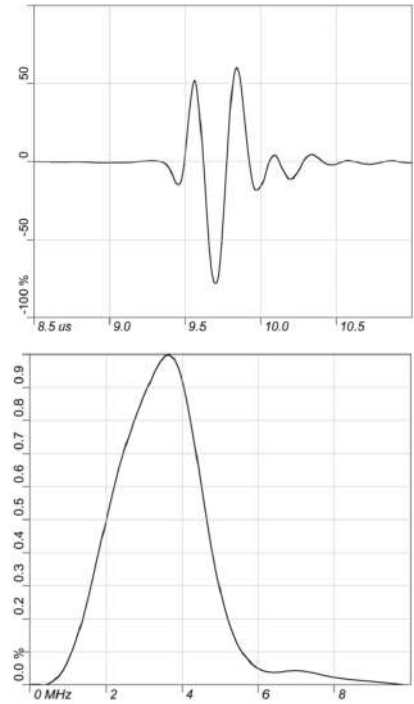
HotSense™ UHT

ISO 9001 Certified ExVeritas
UKAS MANAGEMENT SYSTEMS 8613
IEC.
IECEx

STANDARD TRANSDUCER SPECIFICATION

PARAMETER	VALUE	UNIT
Operating Temperature	-200 to +600 / [-328 to +1,112]	°C / [°F]
Delay Line Material	304 Stainless Steel - Passivated	-
Delay Line Length	Up to 75 / [3"]	mm / [in]
Alternative delay line options on request		
Ruggedisation	Certified to IP 66/68 Stainless steel construction	-
Standard cable length	1 m MIMS + 2 or 15 m RG316	-
Connector Type	Lemo 00 receptacle	-
Acoustic characteristics certificate of conformity to ISO 22232-2 supplied with each unit		
Transducer Centre Frequency	3.25	MHz
-6 dB Bandwidth	80	%
Signal to Noise Ratio	>20	dB

For use with Measurement Hub manual and Caliperay automated monitoring solutions
Also compatible with UT flaw detectors and thickness gauges

Other variations available via special request.
For other specification requirements please contact our sales team.

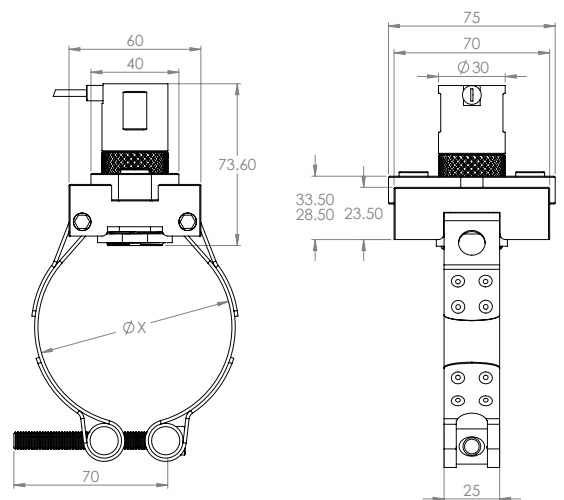## STANDARD DEPLOYMENT SPECIFICATION

PARAMETER	VALUE	VARIABLES
Mounts/Clamp Materials	316 Stainless Steel - Passivated	
Standard Pipe Clamp Sizes	NPS 2" to NPS 32"	Other sizes available on request
Standard Stud for Vessels	M8 x (40-60 mm)	
Standard Stud Spacing	52.5 to 70mm	Custom installation equipment available on request for legacy or nonconformal stud spacings
Stud Torque Resistance	>20 N.m	Welded Deployments
Total Mass (Deployed)	1.0 - 1.4 kgs	Other sizes available on request

Flexible integration and monitoring system options. Can be used with a wide range of flaw detectors, local, remote or wireless data collections systems for WirelessHART, Cellular and LoraWAN.

Measurement resolution from 0.01 mm

Contact Ionix to order, for further information or to find a solution for your application

TYPICAL ULTRASONIC RESPONSE

CERTIFICATION

(Ex) II 1 GD Ex ia IIC T* Ga / Ex ia IIIC T* Da
CE UKCA IP 66/68

To see HotSense™ in action or for hints & tips scan the QR code