SENSOR® NETWORKS, INC
Inspection, Testing & Asset-Integrity Solutions

SensorScan®
DHT Series

HIGH-TEMP DUAL-ELEMENT TRANSDUCERS

FOR THICKNESS MEASUREMENTS AND GAUGING ON ROUGH OR CORRODED SURFACES

The SensorScan DHT series of ultrasonic transducers are general-purpose sensors for measuring the remaining wall thickness on rough metal ID and OD surfaces due to corrosion and/or erosion. These transducers can be used intermittently (50% duty cycle) over a wide temperature range from 0 to 932°F (-17.8 to 500°C) and continuously from 0 to 400°F (-17.8 to 204°C) depending on the transducer.

Typical applications include its use with common digital thickness gauges or flaw detectors on boiler/furnace tubes, pipes, tanks, vessels, structures and other safety-critical components at power plants, refineries, mid- and up-stream Oil & Gas assets, and chemical facilities.

specifications

	DHT-400	*DHT-410*
frequency	5 MHz (nominal)	7.5 MHz (nominal)
delay roof angle	5 degree (10 degree included)	5 degree (10 degree included)
connector type	MD #10-32 (2x) or MCX (2x)	MD #10-32 (2x) or MCX (2x)
contact diameter	0.440" (11.2 mm)	0.283" (7.2 mm)
min. and max thickness (steel)	Min.: 0.040" (1.0 mm), Max: 10" (254 mm)	Min.: 0.028" (0.7 mm), Max: 4" (102 mm)
continuous use temperature	400°F (204°C)	200°F (93°C)
maximum contact temperature	932°F (500°C) Intermittent	300°F (149°C) Intermittent
duty cycle	50% at 10 seconds (max recommended)	50% at 10 seconds (max recommended)
cable options	5 ft. (1.52m) standard & armored cable	5 ft. (1.52m) standard & armored cable
cable connector options	Lemo-00, Olympus- & Krautkramer-style gauge	Lemo-00, Olympus- & Krautkramer-style gauge
compatible instruments	38DL PLUS, 37DL PLUS, 36DL PLUS DMS GO, All Flaw Detectors	38DL PLUS, 37DL PLUS, 36DL PLUS DMS GO, All Flaw Detectors
Case	Delivered in hard-shell case for field use	Delivered in hard-shell case for field use

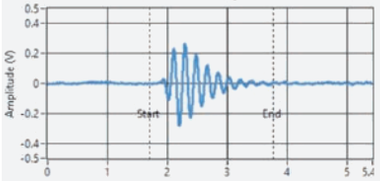
part numbers

	Transducer		Kits			
connector type	**DHT-400**	**DHT-410**	**DHT-400 +** Lemo-00 Connector Cable	**DHT-400 +** Olympus Probe Rec. Connector Cable	**DHT-410 +** Lemo-00 Connector Cable	**DHT-410 +** Olympus Probe Rec. Connector Cable
MD connector	*00-012543*	*00-013256*	*01-030180*	*01-030182*	*01-013870*	*01-013872*
MCX connector	*00-030003*	*00-013365*	*01-030181*	*01-030183*	*01-013871*	*01-013873*

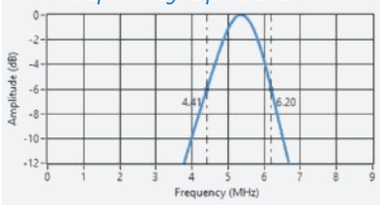
	Standard Cable Options (5ft.)				Armored Cable Options (5ft.)		
	Lemo-00 Connector	**BNC Connector**	**Olympus Probe Recognition Connector** (DHT-400 Only)	**Olympus Probe Recognition Connector** (DHT-410 Only)	**Lemo-00 Connector**	**Olympus Probe Recognition Connector** (DHT-400 Only)	**Olympus Probe Recognition Connector** (DHT-410 Only)
MD	*07-010245*	*07-036032*	*07-010246*	*07-010112*	*07-036033*	*07-036034*	*07-010114*
MCX	*07-036036*	*07-036038*	*07-036037*	*07-010113*	*07-036039*	*07-036040*	*07-010115*

DHT-400

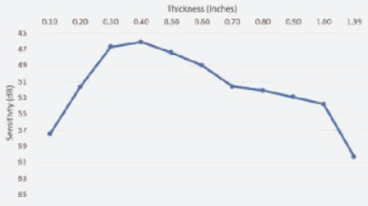
RF Waveform:
Backwall signal from 1" steel block



Frequency Spectrum

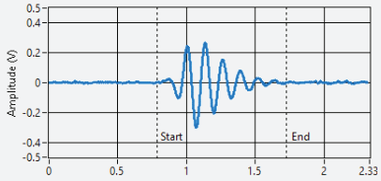


DAC Curve

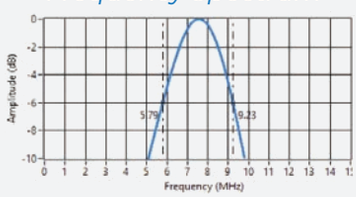


DHT-410

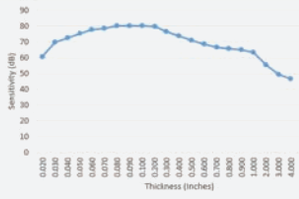
RF Waveform:
Backwall signal from 1" steel block



Frequency Spectrum

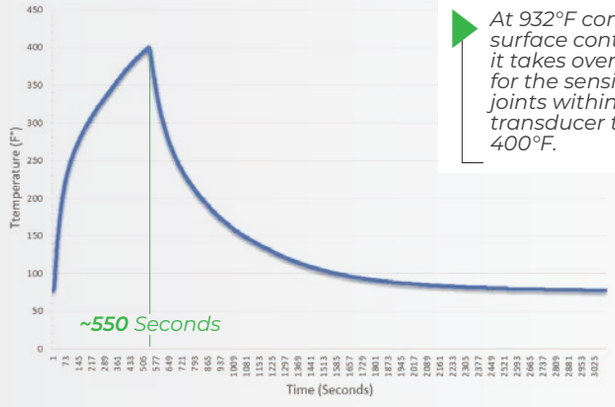


DAC Curve



Thermal-cycle testing

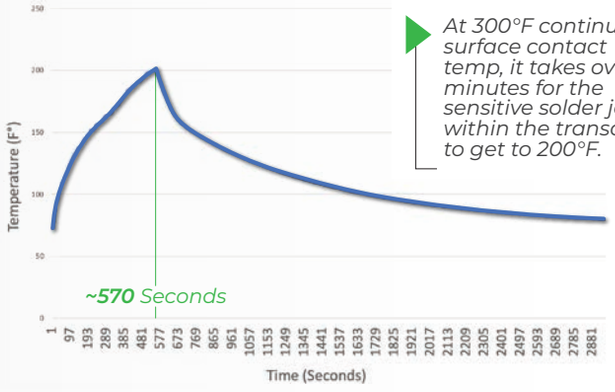
400°F Heat Up at 932°F



At 932°F continuous surface contact temp, it takes over 9 minutes for the sensitive solder joints within the transducer to get to 400°F.

DHT-400

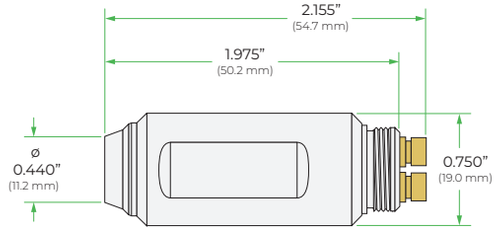
200°F Heat Up at 300°F



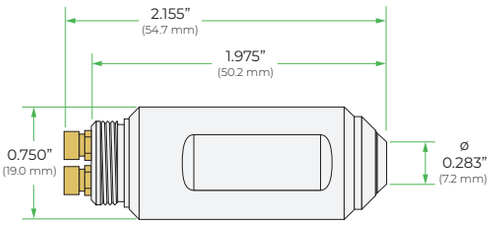
At 300°F continuous surface contact temp, it takes over 9 minutes for the sensitive solder joints within the transducer to get to 200°F.

DHT-410

DHT-400



DHT-410



**MCX connectors are snap-in and can swivel, preventing the risk of back threading.*

Ver. 2.0 - 08.29.23

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