

# TM Sensor

Thin, battery-free, ultrasonic thickness (TM) sensor designed to be permanently installed to the surface of pipework and vessels to provide reproducible thickness readings free of human-error. Each sensor comes with its own unique RFID for traceability and automated data management.

Inductosense offers the **standard TM sensor**, where the piezo crystal is in the centre of the sensor, or alternatively the **offset TM sensor**, where the piezo crystal is offset to the side for monitoring next to welds, etc.



**TM sensor (standard)**



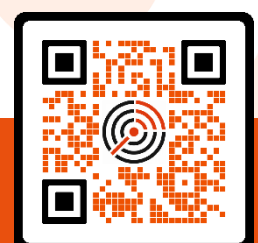
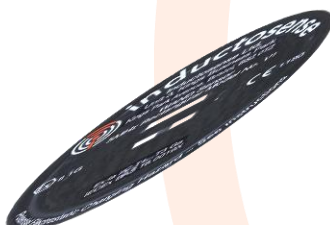
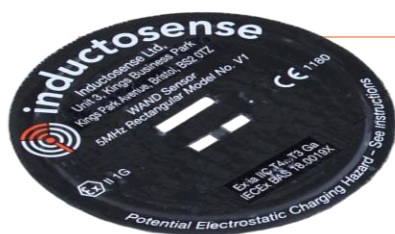
**TM sensor (offset)**

- ① **Low-profile and embeddable**
- ① **Battery-free – wirelessly powered up by the WAND data collection hardware**
- ① **ATEX/IECEX approved for Zone 0**
- ① **Install in a matter of minutes: sand surface, apply adhesive, secure, and then coat**
- ① **Each sensor comes with its own unique RFID**

# Specifications

The TM Sensor comes in two configurations based on the type of piezo crystal: **TMS-B** and **TMS-S**. Inductosense will recommend a design depending on the particular set of conditions such as temperature, material wall thickness, diameter, and curvature of the material.

Product code	TMS-B	TMS-S
Dimensions	65mm OD, 1mm thick	65mm OD, 1mm thick
Weight	6.5g	6.5g
Operating frequency	5MHz	5MHz
Minimum thickness	5mm	2mm
Maximum thickness	150mm	20mm
Minimum specimen diameter	90mm	50mm
Transducer active area	5 x 15mm	4 x 7mm
WAND-TMS stand-off	40mm	20mm
Minimum operating temperature	-40°C	-40°C
Maximum operating temperature	90°C	130°C
Sensor resolution	<0.05mm	<0.05mm
Coating	≤80°C STOPAQ wrap >80°C ceramic	
Certifications	Ex ia IIC T4...T3 Ga (Ta = -40°C to +130°C / +150°C)	Ex ia IIC T4...T3 Ga (Ta = -40°C to +130°C / +150°C)



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