

ATEX MSFM LITE - PTI DEPTH MONITOR

IDEAL FOR MEASURING WATER DEPTH IN APPLICATIONS WHERE TRADITIONAL ULTRASONIC MEASUREMENT IS NOT APPROPRIATE SUCH AS WELLS, BOREHOLES, TURBULENT FLOWS AND CSO'S WITH HIGH SPILL POINTS.

HOW IT WORKS

It uses power saving technology developed by Detectronic to provide up to 5 years of battery life; significantly longer than competitive systems and more cost effective than traditional wired telemetry.

The MSFM Lite's two main components; the pressure transducer interface and 2G/3G/LTE-M1/NB-IoT capable data logger are connected by a minimum 10 metre cable.

The Pressure-Depth Sensor (PTI) allows measurement of water depth in applications where traditional ultrasonic measurement is not appropriate. Applications include:

- Turbulent/interrupted flow.
- Wells and boreholes
- CSO's with high spill points
- Weirs and flumes exposed to the elements
- Large range sites

The data is read and recorded by the MSFM Lite at predetermined logging intervals set by the user. Thanks to its custom-designed antenna, which improves signal sensitivity in underground locations, logged data is then transmitted via GSM/GPRS at user-selectable intervals (typically once an hour, once a day, once a week or once a month). Data can be transmitted direct to a host computer or viewed on Detectronics secure website.



Installation examples:



ULTRASONIC LEVEL MONITOR

KEY FEATURES

- IS certified (Europe and worldwide)
- Embedded 2G/3G/LTE-M1/NB-IoT remote data delivery
- Worldwide roaming data tariffs
- Up to 100m range and 100m cable length
- 5 years battery life for GPRS comms, logger and sensor
- Hi / low alarms with 'send latest data' feature. includes ability to send data to a local output (e.g. sampler)
- IP68/NEMA 6P construction
- Military specification connectors
- Custom internal hi-gain underground antenna
- External antenna option (for marginal signal sites)
- Calculated flow data available when used with flumes and weirs

TECHNICAL SPECIFICATION

PRESSURE TRANSDUCER INTERFACE (PTI)

Range: Anything between 0-3m and 0-100m
Accuracy: $\pm 0.1\%$ FS (dependent upon pressure range)
Resolution: ± 1.0 mm

DATA LOGGER AND GPRS/GSM COMMUNICATION

Memory: solid state 512K - 60K per channel (rotating store or store until full)
 Recording interval programmable between 1 minute and 1 hour
 2G/3G/LTE-M1/NB-IoT communication (worldwide compatibility)
Data transmission: GPRS - 15 minutes, hourly, daily, weekly, monthly at programmable intervals
Data logger power supply: 5 years typical life span internal lithium battery pack (user replaceable. Internal battery voltage logged as an additional channel of data)

ALARM DIAL OUT

High/ low threshold and profile alarms with 'send latest data' with alarm message

ENVIRONMENTAL

Operating temperature: -40°C to $+60^{\circ}\text{C}$
Protection: IP68 / NEMA6P
Connectors: IP68 Mil - Spec
Dimensions:
 MSFM Lite - L = 280mm x W = 150mm x D = 100mm
 PTI - dependent on transducer used
Weight: 3.5 kg (including sensor and 10m cable)

APPROVALS

MSFM S2.5T:
 Sira 19ATEX2255X
 II 1G
 Ex ia IIB T4 Ga
 Ta = -40°C to $+60^{\circ}\text{C}$

Pressure Transducer Interface (PTI)

Sira 14ATEX2027X
 II 1G
 Ex ia IIB T4 Ga
 Ta = -40°C to $+60^{\circ}\text{C}$