

ATEX MSFM LITE ULTRASONIC LEVEL MONITOR S2U

Detectronic's MSFM Lite Ultrasonic Level Monitor is specifically designed to measure Combined Sewer Overflows (CSO). It can also be used for remote monitoring of reservoir and tank levels including those which are located in potentially explosive atmospheres.

Certified to ATEX/IEC Ex Zone 0.

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 ultrasonic sensor and GSM/GPRS data logger are connected by a 10 metre cable. This allows the sensor to be positioned directly above the measured surface, with the data logger located just under the chamber cover or other suitable location.

HOW IT WORKS

The depth of the flow is inferred from the measured distance from the ultrasonic sensor to the surface of the flow.

This distance is calculated by measuring the time taken for the ultrasonic pulses to traverse the return path from the probe to the water surface.

Compensation for the effects of changes in air temperature is applied automatically.

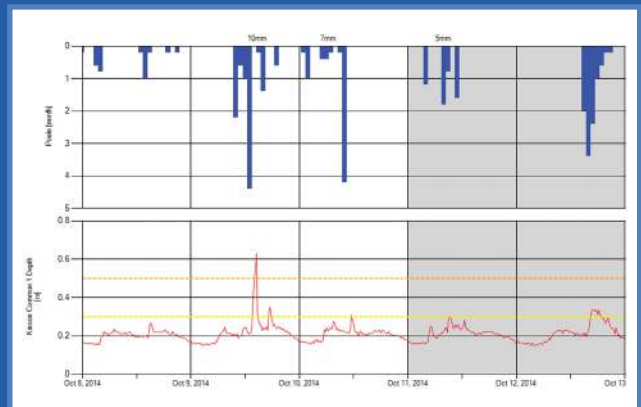
An optional PTI Pressure-Depth Sensor allows measurement of water depth where the ultrasonic probe is not appropriate.

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).



WWW.DETECDATAPRO.COM



For more information about the MSFM Lite and Detectronic, please call: **+44 (0)1282 449 124** or email: info@detectronic.org or **SCAN THE CODE**

ATEX MSFM LITE

ULTRASONIC LEVEL MONITOR S2U

FEATURES

- IS certified (Europe and worldwide)
- Embedded GPRS remote data delivery
- Worldwide roaming data tariffs
- Ultrasonic level sensor 3m range
- Pressure transducer interface multiple ranges
- 2 spare logger channels (e.g. rainfall/float/intruder)
- 5 years battery life for GPRS comms, logger and sensor
- Hi/low alarms with 'send latest data' feature
- Hi/low alarms with 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)



TECHNICAL SPECIFICATION

CSO Ultrasonic Level Sensor

Range: 0.0m to 3.0m (with 200mm deadband)

Accuracy: $\pm 0.25\%$ FS

Main Beam Angle: 10° (-3dB)

Optional Depth Sensor (PTI) Pressure Transducer Interface

Ranges available between 0-3m and 0-100m

Accuracy dependent upon pressure range, typically $\pm 0.1\%$ F.S.

Resolution: ± 1.0 mm

Data Logger and GPRS/GSM Communication

Memory: solid state 128K - 60K per channel

(rotating store or store until full)

Recording interval programmable between 1 minute and 1 hour

GSM/GPRS communication (worldwide compatibility):

900MHz, 1800MHz integral antenna (worldwide except North America)

850MHz, 1900MHz integral antenna (North America)

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)

Alarm Dial Out

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

Additional I/O

2 analogue/digital input channels

1 pulse output

Environmental

Operating temperature: -20°C to $+60^\circ\text{C}$

Protection: IP68 / NEMA6P

Connectors: IP68 Mil - Spec

Dimensions:

MSFM Lite - L = 280mm x W = 150mm x D = 100mm

CSO Probe - L = 280mm x W = 80mm x D = 85mm

Weight: 3.5 kg (including sensor and 10m cable)

Approvals

SIRA 12 ATEX 2110X Ex II 1G Ta -40°C to $+60^\circ\text{C}$

IEC Ex SIR 12.0044X Ex ia IIB T4 Ga Ta -40°C to $+60^\circ\text{C}$

Approvals (Ultrasonic Depth Probe)

SIRA 12 ATEX 2259X Ex II 1G Ta -20°C to $+60^\circ\text{C}$

IEC Ex SIR 12.0111X Ex ia IIC T4 Ga Ta -20°C to $+60^\circ\text{C}$

GSM Communication Certification

IC: 2417C-SL6087

FCC ID: N7NSL6087

Detectronic systems and products are certified and audited to the following standards:



Detectronic Limited
Regent Street
Whitewalls Industrial Estate
Colne, Lancashire BB8 8LJ

T: 01282 449 124
F: 01282 692 002
E: info@detectronic.org
W: www.detectronic.org



Working in partnership
to **reduce flooding**
and **prevent pollution**



SUPPLY

INSTALL

MAINTAIN

MONITOR

ANALYSE

REPORT