DETECTRONIC

DATASHEET

ATEX MSFM LITE
COMBINED LEVEL/DEPTH SENSOR

SPECIFICALLY DESIGNED TO MEASURE COMBINED SEWER OVERFLOWS (CSO). IT CAN ALSO BE USED FOR REMOTE MONITORING OF RESERVOIR AND TANK LEVELS INCLUDING THOSE LOCATED IN POTENTIALLY EXPLOSIVE ATMOSPHERES.

HOW IT WORKS

Detectronic MSFM Lite uses power saving technology to provide over 5 years of battery life; significantly longer than competitive systems and more cost effective than traditional wired telemetry.

LIDoTT Sensor integrates level, depth and temperature sensors into one compact device. This provide a full range of level measurement under both normal and surcharged conditions.

Under normal conditions the depth of the flow is inferred from the measured distance between the ultrasonic sensor and 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 sensor to the water surface. Compensation for the effects of changes in air temperature is applied automatically.

When the sewer network is stressed during storm weather events or by blockages, the LIDoTT Sensor automatically switches sensor mode from ultrasonic (level) to pressure (depth) as the liquid level rises, seamlessly delivering high-quality network management data. This transition is transparent to the external datalogging device which needs only a single recording channel.

The data is read and recorded by the MSFM Lite at predetermined logging intervals set by the user. Logged data is then transmitted via it's 2G/3G/LTE-M1/NB-IoT capable modem (at user-selectable intervals (typically hourly, daily, weekly or monthly). Data can be transmitted direct to a host computer or viewed on Detectronics range of secure websites.

KEY FEATURES

- IS certified (Europe and worldwide)
- Embedded 2G/3G/LTE-M1/NB-IoT remote data delivery
- Worldwide roaming data tariffs
- Combined level sensor 11.5m range
- 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 SPECIFICATIONS

LIDoTT LEVEL SENSOR

Level Range: 0.000 - 1.500m
Accuracy: ± 2mm
Pressure Range: 0-10.000m
Accuracy: ±0.2% FS

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°C
Protection: IP68 / NEMA6P
Connectors: IP68 Mil – Spec
Dimensions:
MSFM Lite - 280mm(l) x 100mm(d) x 150mm(w)
LIDoTT - 200mm(l) x 85mm(d) x 80mm(w)
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°C

LIDoTT:
ATEX Zone 0 certified CML 20ATEX2039X
IECEx Zone 0 certified IECEx CML 20.0019X
II 1 G, Ex ia IIB T4 Ga. Ta= -20°C to +60°C

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