LIDoTT® Sensor

INTEGRATED MULTI-SENSOR FLUID LEVEL MONITORING

DETECTRONIC

PATENTED
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UNIQUE MULTI- SENSOR DEVICE DELIVERS CONSISTENT **HIGH QUALITY LEVEL DATA** ACROSS A WIDE RANGE OF OPERATING CONDITIONS AND SWITCHES SEAMLESSLY TO PROVIDE **CONTINUOUS DEPTH DATA** UNDER BLOCKAGE OR SURCHARGE CONDITIONS.

AFFORDABLE, **ACCURATE AND RELIABLE**

LIDoTT® integrates level, depth and temperature sensors into one compact device. **LIDoTT®** delivers high-quality data throughout **normal dry-weather** and **wet-weather** or **blockage induced surcharge conditions**.

DESIGNED FOR CONVENIENCE

LIDoTT® is simple to install and ultra-low maintenance by design. It requires no external atmospheric breather for its pressure-sensor.

The enclosure is moulded from a carefully selected, resilient, naturally self-cleaning plastic polymer and is submersible.

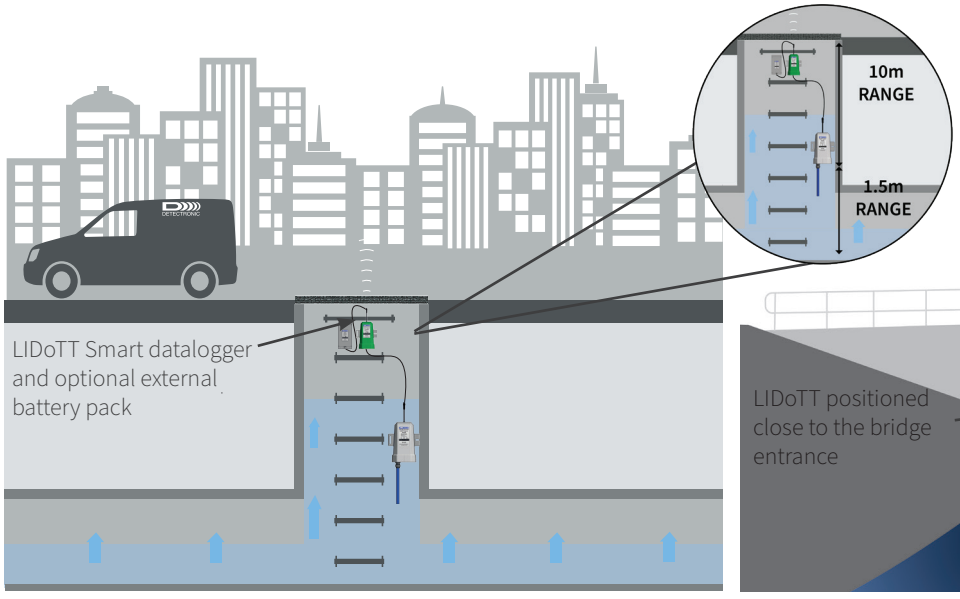
ATEX and IECEx certified
Zone 0

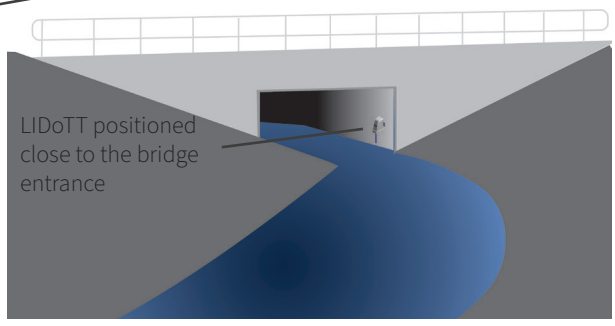
CONTINUOUS MEASUREMENT

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.

WIDESPREAD DEPLOYMENT

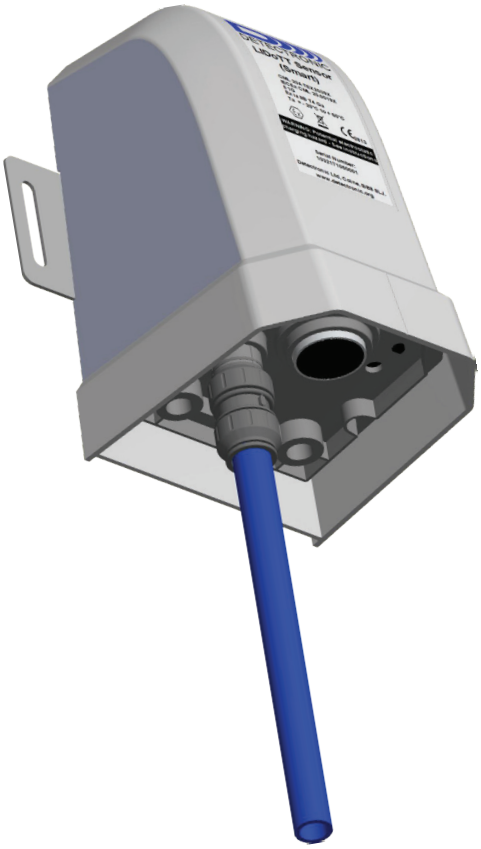
LIDoTT® is ideal for widespread deployment in sewer networks, in domestic sewer manholes and throughout other water courses.





Left: Sewer manhole
Right: Bridge with culverts

THREE SENSORS IN ONE



ULTRASONIC LEVEL

The LIDoTT® sensor reliably detects subtle changes in "normal" operating conditions – accurately delivering, for example, small silt-induced variations in Depth of flow.

"IN AIR" TEMPERATURE

Primarily used to calibrate distance measurement for changes in air density, temperature can optionally be delivered to the datalogger as a measured parameter.

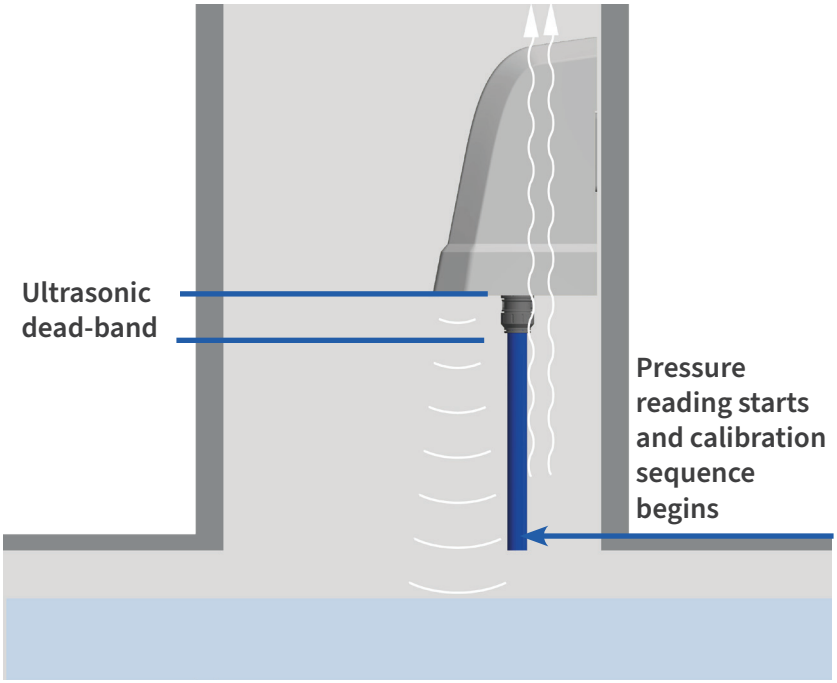
PRESSURE

With its 10m H_2O operating range, the pressure sensor deals with exceptional Depth measurement. **LIDoTT®** delivers seamless transition from Level measurement - using its Ultrasonic sensor, to Depth measurement – using its Pressure sensor. The pressure-sensor is activated and measures rising depth **before** the Ultrasonic sensor blanking distance (dead-band) is reached.

HOW IT WORKS

As the liquid level rises, the ultrasonic sensor is in charge. Once the level reaches the bottom of the pressure sensor, pressure reading starts and a calibration sequence begins.

By the time the level enters the ultrasonic dead-band, the calibration sequence is complete and the calibrated pressure sensor takes over, delivering **continuous, accurate depth data**.



DETECTRONIC

DATA COMMUNICATIONS

The **LIDoTT®** Sensor communicates using a number of serial protocols including **Modbus*** and will connect to many compatible data loggers.

- Real time monitoring helps you better understand your sewer network
- Automatic sensor switching enables continuous delivery of high quality network management data.
- Data logging device needs only a single depth recording channel.

*Available as a product variant

PRODUCT SPECIFICATION

ULTRASONIC LEVEL SENSOR

Type: Piezo-ceramic, temperature-compensated
Range: 0.000 - 1.500m
Accuracy: +/- 2mm

TEMPERATURE SENSOR

Type: High Precision CMOS Temperature device

PRESSURE SENSOR

Type: Isolated Silicon Diaphragm
Range: 0-10.000m
Accuracy: ±0.2% FS

ENVIRONMENTAL

Operating temperature: -20°C to +60°C.
Protection: IP68/NEMA6P.
Connectors: IP68 Mil - Spec.
Dimensions: 200mm(h) x 125mm(d) x 115mm(w)

APPROVALS

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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