Cello CSO

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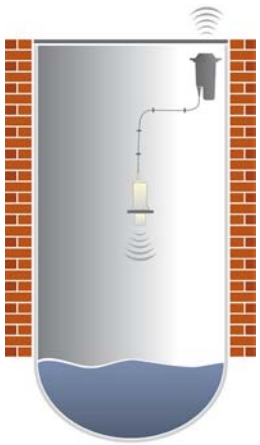
A simple solution providing remote monitoring in hazardous environments, used as an essential aid for temporary & permanent sewer level monitoring, capturing overflow events & early flood warning.

Cello CSO expands on Technolog's family of remote monitoring products, incorporating an ultrasonic level sensor with a battery powered GSM data logger, featuring sophisticated alarm regimes for detecting and immediately alerting of abnormal conditions.

Key Features

- Simple and easy to install
- Fully certified for explosive atmospheres (ATEX, zone 0)
- Remote data retrieval and configuration through PMAC software or web based, WaterCore platform
- Advanced profile and threshold alarms
- "Data on the web" option
- Internally powered > 5 years
- System housed in a fully waterproof enclosures (IP68 to 1 meter)
- Supports SMS and GPRS modes of communication
- Optional Water Industry Telemetry Standard (WITS) protocol compatible and verified



Technical Specifications

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CSO Probe specification

Input	Ultrasonic level measurement
Range	0.2 to 3m
Accuracy	+/-10mm
Temperature Sensor	Integrated, for temperature compensation of speed of sound
Beam Angle	12° at -3 dB boundary
Intrinsic Safety	**Certified Intrinsically Safe:** SIRA 12ATEX 2007X – EEx ia IIC T4 (Ta= -20 to +60°C) IECEx SIR 12.0001X – Ex ia IIC T4 (Ta= -20 to +60°C)
Environmental	**Operating temperature:** -20°C to +60°C **Ingress protection classification:** IP68 (1m / 24 hours)
Mechanical	**Dimensions (mm):** 217(h) x 82(w) x 88(d)

Cello I.S. Mk. 2 specification

GSM Modem	**Quad band:** 900MHz, 1800 MHz / 850MHz, 1900MHz. Integral antenna
Data Transmission	– SMS or GPRS. 15mins, 30mins, 1 hour, 1 day, 1 week or monthly at programmable date and time
Serial Port	**Type:** Full duplex, asynchronous **Data rate:** 1200, 2400, 4800, 9600 bps
Memory	**Size:** 128K, allocatable between channels as required (max 64K per channel)
Clock	**Type:** Crystal controlled calendar clock with leap year adjustment **Accuracy:** 100 seconds per month maximum error over operating temperature range **Synchronisation:** Option to synchronise clock to GSM network
Supply	**Life:** Typical battery life > 5 years depending on mode of use (15 minute logging rate / daily transmission) – Internally powered by a single internal lithium battery pack
Recording	**Interval:** Programmable between 1 minute and 1 hour **Data storage:** Rotating store, or store until full
Alarm Dial-Out	– High/low threshold and profile alarms – Option to update data on alarm and more frequently thereafter
Environmental	**Operating temperature:** -20°C to +60°C **Ingress protection classification:** IP68 (1m / 24 hours)
Intrinsic Safety	**Certified Intrinsically Safe:** SIRA 06ATEX2010X – EEx ia IIC T4 (Ta=-20 to +60°C) or EEx ia IIC T3 (Ta= -20 to +60°C) IECEx SIR 06.0003X – Ex ia IIC T4 (Ta= -20 to +60°C) or Ex ia IIC T3 (Ta= -20 to +60°C)
Mechanical	**Dimensions (mm):** 205(h) x 140(w) x 150(d)

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