TECHNOLOG

Cello - 8 Channel SMS/GPRS Data Logger

- Fully integrated SMS/GPRS Data Logger
- Each channel independently selected for digital or analogue inputs
- Two channels may be dedicated for high resolution 4-20mA inputs / flash powering external / 4-20mA loops (factory configured)
- Self powered for > 5 years
- UK Water Industry Telemetry Standard (WITS) compatible
- On-demand data retrieval option
- 15 minute, 30 minute, 60 minute, daily data transmission using frequent data mode
- "Data on the web" option
- Threshold and profile alarms

Cello is a family of GSM data logging devices for water, gasand electricity applications. over 250,000 of Cellos havebeen installed throughout the world and Cello has become an industry standard for remote monitoring.

Cello has a custom designed aerial to maximise GSM signal in underground locations. Cello can be connected to pulse output meters and/or pressure tappings and records data at intervals between 1 second and 1 hour (user-programmable).

Cello has sophisticated alarm regimes for detecting and immediately signalling abnormal conditions. Cello supports high and low alarms on each channel. Additionally, profile alarms can be configured to follow daily data profiles. In the event of an alarm, Cello can be programmed to automatically send data more frequently.

Data sent by the Cello can be collected via several methods, including:

- ■ Technolog's proprietary software installed onto a local host PC
- ■ Technolog's resilient twin data centre
- ■ Technolog's WaterCore web based software

Alarms from the Cello in the field can be forwarded to the relevant field support staff by text message or emails.

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Technical Specifications

Standard Universal Cello

Inputs ⸻ Number of channels: 8

Channel types: Voltage, event, state, count, frequency (independently selected on each channel)

Input impedance: >300k

Input protection: Protected against reverse connection and over voltage

Voltage input: Range 0 to 2.5 volts, 0.01 volt accuracy and resolution

Event input: Switch closure or logic pulse, date and time of event stored, resolution 1 second or 10 seconds

State input: Switch closure or logic state. On state change, date, time and new state are stored, resolution 1 second or 10 seconds.

Count input: Switch closures or logic pulses, maximum rate Channel 1, 4, 5, 6, 7, 8 = 10 per second, Channel 2 and 3 = 45 per second (Counted over and recorded at preset intervals). 16,000 maximum per logging interval

Frequency input: Switch closures or logic pulses, maximum frequency 16 kHz, programmable sampling period of 1 to 250 seconds, independent of recording rate. Resolution 0.01% maximum

Outputs ⸻ 2 independent digital outputs for transducer power control and alarm signaling (0 and 3 volt levels, active low, 100k output impedance)

1 fixed output for "open collector" signal bias (3 volts, 33k output impedance)

Universal Cello 420

Inputs ⸻ Number of channels: 8

Channel types: 2 channels dedicated to 4-20mA (High or Low resolution) loops, remaining 6 channels specifications as per Universal Cello

Measurement accuracy: Dependent on the accuracy of external sensor equipment connected to the loop

Logger accuracy: Better than +/- 0.1% full scale

Logger resolution: Better than 0.02% (High resolution version); Better than 0.7% (Low resolution version)

Outputs ⸻ 2 number switched 12 Volt 'flash' power supplies for powering 4 - 20mA loops (i.e. external level sensors)

General Specifications

GSM Modem ⸻ Quad band: 900MHz, 1800 MHz / 850MHz, 1900MHz - Integral antenna

Serial Port ⸻ Type: Full duplex, asynchronous

Data rate: 1200, 2400, 4800, 9600 bps

Memory ⸻ Type: Solid state

Size: 128K, allocatable between channels as required (max 64K/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 ⸻ Type: Internally powered by a replaceable lithium cell (Internal back up cell maintains logging and local communications when main battery pack is discharged)

Life: Typical battery life > 5 years depending on mode of use

Recording ⸻ Recording interval: Programmable between 1 second 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 ambient temperature: -20°C to +50°C

Protection classification: IP68 (submersion at 1m depth for > 24 hours)

Connectors ⸻ Military specification, compatible with to MIL-C-26482

Mechanical ⸻ Dimensions: 191mm x 140mm x 150mm

Weight: 1 kg

Suitable for use in water meter boundary boxes: Ebco, Atplas, Fusion Meters, Talbot. (For others, please contact Technolog.)

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