

MULTILOG 2 | LTE-M & NBloT-enabled Multi-channel Data Logger



Multilog 2 is the highly advanced and versatile multi-channel data logger designed to monitor any combination of digital and analogue signals.

Monitor PRV (Pressure Reducing Valve) flow and/or pressure in a district or zone of a water network to assess demand, leakage and conformance, Multilog 2 contains an advanced modem (capable of connecting via LTE-M or NB-IoT with 2G fallback, 3G or 2G)

Multilog 2 data logging is available with support for WITS 1.3 (Water Industry Telemetry Standard), delivering direct integration with WITS SCADA systems.

Multilog 2 is utilized for Water Flow & Pressure Monitoring with devices such as Hydrophones.

Key Features and Benefits

- **Telemetry:** NB-IoT/LTE-based cellular communication standard with fallback 2G capability
- **Serial input option:** For connection to digital meters, SonicSens 3 level sensor, Modbus, SDI12, RS232, Badger/Sensus/Neptune serial meter interfaces
- **4 channel logging:** 8 or 16 channels available on request
- **Fast logging:** Primary logging to 1 second as standard - 25Hz for transient events
- **Alarm:** Full alarm functionality
- **Robust:** Rugged die cast aluminium case
- **True readings:** True Max and Min flow and investigation of pressure spikes
- **Pulse interval timing:** Smooths reading of infrequent pulses
- **External antennas:** Support improved signal strength (contact for more information)
- **Local data download:** 10 pin military plug connected to laptop or desktop PC
- **Fully waterproof:** The IP68 rating has been tested at 10m depth over a 24 hour period
- **Long-term monitoring:** 5 year battery life



- **Optional outputs:** Replicate inputs or trigger on alarm, allows operation of third party sensors, e.g. water samplers
- **WITS 1.3 protocol:** Support for WITS 1.3 delivering direct integration with WITS SCADA systems

Data Logging With Telemetry Benefit:

After installation, all firmware upgrades and programming changes are made remotely. As well as ensuring that changes can be made efficiently- this is also **cost-effective**, as it removes the need for additional site visits.

Multilog 2 transmits data through an integral modem with 2G, 3G 4G, LTE-M (Cat-M1) and other NBloT cellular options available.

An innovative feature of Multilog 2 is a secondary channel, enabling **additional fast logging down to 25Hz.**

Secondary logging can be **triggered on time schedule** and/or in response to an alarm condition being triggered. This is invaluable when more detailed investigation is required, such as pressure spikes and 'true' minimum night flow.

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Technical Specifications:

Input Options	
Digital	HWM SonicSens 3 ultrasonic level sensor and Leak Noise Sensor (LNS). Third party sensors using Modbus or SDI12 communication protocol.
Analogue	Internal pressure transducer. 0-20 bar / 0-200 meters head / 0-300psig, 0.1% repeatability / please note that the logger is calibrated to 10 bar as standard. (20 bar calibration must be specified at time of order if required) External pressure transducer (contact for more details), Voltage (0-1V or 0-10V), Passive or active 4-20mA Temperature
Serial Input	Uni- or bi-directional pulse Up to 64 pulses per second
Communication	
Local	Hi-speed USB for connection to hand held devices, Windows tablets, laptop or desktop PC
Internal Cellular Modem	Cellular modem supporting 2G/3G/NB-IoT/LTE-M (Cat-M1) with SMS backup where available - (contact for available options). 2G/3G/4G NB-IoT can send data down to every 15 mins, with appropriate battery pack
Accelerated dial-in	Dial-in rate is increased if alarm situation is triggered. Logger can accelerate dial-in at alarm level for multiple applications - including SonicSens 3, Flow, Pressure and other alarmed sensors.
Features	
Frequency	Variable logger sample rate from 1s to 24hrs (this may affect battery life and communication costs)
Logger/Site ID	7 alphanumeric characters. Readable factory set serial number in firmware
Dimensions (HXWxD)	257x129x77mm
Construction	Die-cast aluminium enclosure, powder-coat spray painted
Weight	1.6kg
Operating temp.	-20° to +60° C
Ingress Protection	IP68 submersible
Power	Typical 5 years (depending on settings and signal condition). External power connection for battery box and third-party devices
Memory	Standard recording: 2 million readings (optional up to 64 million readings and expandable HC SD card)
Fast Logging (secondary channel)	Secondary, fast channel supports sampling up to 25 Hz and record average, minimum, maximum, standard deviation or time interval between pulses (for data smoothing)
Pulse Interval Timing	Count and Event logging modes independent for both recordings. Pulse Interval Timing helps to smooth readings (e.g. leakage) in low flows by counting the time between each pulse (event mode). This is available in addition to totalling the pulses (count mode)
Alarms	Multiple alarm options including Rate of Change, Profile, Minimum Night Flow and Threshold. 16 alarms per logger. Can be programmed to auto dial up to 8 telephone numbers on alarm. Over 16 alarms per logger depending on channel configuration