

Multilog 2

LTE-M & NBIoT-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.

Ideal for a wide variety of specialised applications, including monitoring PRV flow and/or pressure in a district or zone to assess demand, leakage and conformance, Multilog 2 contains our advanced modem (capable of connecting via LTE-M or NBIoT with 2G fallback, 3G or 2G).

Multilog 2 is an effective data logging solution and is available with support for WITS 1.3, delivering direct integration with WITS SCADA systems.



Key Features and Benefits

- **Telemetry:** NBIoT/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 HWM 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

Applications

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

Multilog 2 transmits data through an integral modem with 2G, 3G 4G, LTE-M (Cat-M1) and other NBIoT 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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Input Options

Digital	Uni- or bi-directional pulse Up to 64 pulses per second
Analogue	Internal Pressure Transducer. External pressure. 4-20mA (optional). 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) Leak noise, 0-10V, 0-1V, temperature or 4-20 mA variants
Serial Input	Proprietary serial interface for SonicSens 2 ultrasonic level monitors and third party devices like Serial Meters using Modbus, SDI12 and RS232

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/4G NBloT/LTE-M (Cat-M1) - contact HWM for available options 2G/3G/4G NBloT 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, 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	257H x 129W x 77D (mm) 10.1" x 5" x 3"
Construction	Die-cast aluminium enclosure, powder-coat spray painted
Weight	1.6kg (3.5lb)
Operating Temp.	-20 to +60°C (-5 to +140°F)
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 channels. 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



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MONITORING ASSETS, DELIVERING DATA, BRINGING CONTROL