Multilog IS Flow

ATEX-certified Flow Survey Kit

Multilog IS Flow is our new ATEX/UKCA certified solution for flow surveys (with integrated remote telemetry) in wastewater pipes or open channels.

By combining proven Area Velocity 'Doppler' and highly-sensitive hydrostatic level sensors with our latest multi-input telemetry logger we have developed an advanced 'plug and play' flow monitoring package.

At the core of the system is our rugged Multilog IS data logger that has the capacity for multiple inputs and is supplied with a long-lasting internal battery and an ATEX external battery pack which power both the remote communication and the connected sensors.

Why choose Multilog IS Flow?

Wastewater networks are often classified as hazardous environments , so it is important that all monitoring equipment is UKCA/ATEX certified. Multilog IS Flow has Zone 1 UKCA/ ATEX certification, as well as an IP68 waterproofing rating, which ensures that the Multilog IS Flow offers a safe, reliable and effective solution for monitoring in a challenging sewer environment.

The Multilog IS Flow is fitted with two long-life lithium battery packs, which power the attached sensors and data telemetry for five years (dependent upon sample and transmission rate). The ATEX external battery pack is connected to the data logger using Mil. Spec. connectors and can be replaced on site in seconds.

Customers also choose the Multilog IS Flow for its reliable data delivery. Fitted with an advanced roaming SIM, the system is capable of connecting via the LTE-M, NB-IoT or 2G networks. Reliable telemetry is essential during flow surveys as it allows the user to remotely monitor sensor performance and data quality throughout the installation period. This information can be used to trigger cleaning or maintenance visits when/if required, providing significant advantages over systems which require manual data download.

Key Features and Benefits

- Ideal for permanent and short-term flow surveys
- Robust construction offers protection during installation, transport and storage
- Regular data transmission ensures confidence
- Latest specification NBIoT/LTE-M communication through roaming SIM, with 2G fallback
- IP68 rated, tested at 10m depth over a 24 hour period
- High specification Doppler and depth sensors deliver accuracy and reliability
- Multiple local or remotely configurable alarm options
- External battery pack with Mil Spec. connector allows for an extended operating lifespan and easy exchange
- Multiple different inputs and outputs available for additional sensors

MONITORING ASSETS, DELIVERING DATA, BRINGING CONTROL

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ATEX-certified Telemetry Flow Survey Kit

Logger Features

Sample Frequency	Variable logger sample rate from 1s to 24hrs (this may affect battery life and communication costs)
Dimensions	239H x 319W x 100D (mm) 9.4" x 12.6" x 3.9"
Construction	PC/ABS plastic enclosure
Weight	Maximum: 3.8kg (8.4lb)
Operating Temp.	-20 to +60°C (-5 to +140°F)
Ingress Protection	IP68 submersible
Power	Internal Battery: 7.2V External Battery: 10.8V
Memory	Standard recording: 1 million readings
Alarms	Multiple alarm options including Rate of Change, Profile, Minimum Night Flow and Threshold. Over 16 alarms per logger depending on channel configuration. Multiple alarm destinations can be set in DataGate.
Inputs	Up to 16 channels for various sensor connections

Input Options

Serial	HWM SonicSens 3 ultrasonic level sensor. Third party sensors using Modbus or SDI12 communication protocol. I²C interface.
Analogue	External pressure transducer (contact HMW for more details) Voltage (0-1V or 0-10V) Passive or active 4-20mA Temperature
Digital	Inputs for float switches, positional indicators, magnetic switches for state indication, outputs for the Control of Water Samplers or externally controlled sensors

Communication

Local	Bluetooth® connectivity for configuration using our mobile app
Internal Cellular Modem	Cellular modem supporting 2G/NBIoT/LTE-M (Cat-M1). SMS onward forwarding service available - contact HWM for available options. Multilog IS 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.

Velocity Sensor

Measuring Principle	DSP Doppler using twin 1 MHz transducers
Range	Bi-directional to 0.01 to 5m/s (0.03 to 16.4 ft/s)
Accuracy	± 2% of reading if V ≥0.5m/s ± 0.01 m/s (± 0.03 ft/s) if V <0.5m/s
Resolution	1 mm/s (0.003ft/s)
Minimum Fluid Level	15 mm (0.59") to 20 mm (0.79") above base of sensor, provided transducers fully wetted
Units	m/s or ft/s
Temp. Range	-20 to +60°C (-5 to +140°F)
Temp. Accuracy	± 0.5°C (± 0.9°F)
Temp. Resolution	0.5°C (0.9°F)
Speed of Sound Correlation	Fixed or variable
Operating Temp.	-20 to +60°C (-5 to +140°F)
Dimensions	19H x 46W x 122L (mm)
Weight	1.1kg (including cable)
Ingress Protection	IP68 / NEMA6
Rating	ATEX and IECEx certified to Zone 0

Depth Sensor

Measuring Principle	Typically mounted on DVP mounting plate, but can be located separately to suit installation
Range	0-150mBar or 0-350mBar. Other ranges and ATEX version is optional
Accuracy	0,1% FS
SonicSens	Contact HWM for information

Sensor Input

mV	Example: pressure sensor for level measurement
Serial Digital Interface	Example: conductivity measurement
4-20 mA	Example: mems tils transmitter, radar sensor
Digital	Example: float switch, rain gauge

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