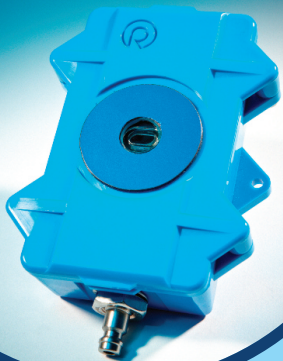




**Experts in Data Logging
& Environmental Monitoring**

Data Loggers (Portable)



Data Logging is a vital part of any water management strategy. It enables suppliers to gather important information on their network performance, from which they can plan network expansion, pressure zones and District Metered Areas.

Data Logging can be used to create network models, ensure regulatory compliance, measure leakage and verify the performance of Pressure Reducing Valves.

HWM manufacture the Radcom range of portable data loggers which enjoy an excellent reputation across the world for reliability and accuracy.

All Radcom loggers are completely waterproof, submersible and battery powered and will require no maintenance for at least five years. Each features a large internal memory and fast logging capability to ensure that it captures the data you need.

Pressure transient spikes are a major cause of bursts which can be very costly in terms of repair, water loss and supply interruptions. Conventional loggers do not log rapidly enough to identify these transients which can often only last seconds. Our **Pressure Transient** logger records data up to 25 times per second.

The **LoLog** range of loggers are highly flexible, cost effective and can be quickly programmed using our Radwin software to record flow and/or pressure. Each device incorporates a wide range of features including Pulse Interval Timing to establish accurate recording of minimum flow. They are equipped with multiple logging modes including "Cyclic Logging", "Stop when Full", "Start and Stop" and "Event Logging".

With a battery life expectancy of five years in normal use, and extended memory options the loggers can be left unattended until data is required for download, which can be performed on site via a USB lead or infra-red interface into a PC or PDA.



Data Loggers (Telemetry)

Radcom data loggers equipped with integral telemetry automatically send data in a variety of ways, including GPS, GRPS, SMS, Satellite or PSTN. Data can be sent at regular intervals (down to 15 minutes) for near real time monitoring and comprehensive analysis without the need for site visits to download the data manually.

LX has one or two digital flow input capabilities and one analogue input option which can be internal pressure, external pressure or 4-20ma.

MultiLog can be supplied with up to four inputs for monitoring any combination of digital or analogue signals. It is also available in an intrinsically safe ATEX approved housing designed specifically for use in hazardous and potentially explosive environments where combustible gas and/or dust may be of concern.

Both loggers are available in SMS and GPRS variants, and equipped with an external antenna to improve signal strength.

SMS telemetry can successfully operate in poor signal strength locations where other data communications may be difficult. We have developed advanced SMS data compression techniques to enable one daily SMS to send data from two channels of 15 minute sample rate recordings.

Recent advances in low cost GPRS telemetry have enabled us to introduce rapid data transmission and an innovative 'secondary channel' feature on the MultiLog which can log down to one second intervals. This is invaluable when more detailed investigation (such as pressure spikes and 'true' minimum night flow) is required.

All Radcom loggers are completely waterproof, submersible and designed to perform maintenance free for up to five years. An **external battery pack** can be used to maintain the five year battery life when transmitting data every hour, 30 minutes or 15 minutes.



Environmental Monitoring

Radcom products can monitor the environment in remote and inaccessible conditions.

Sonic Sens ultrasonic level or flow sensor is ideal for monitoring rivers, open channels, tanks and overflows. Intrinsically safe ATEX rated systems are available for use in sewers and other hazardous areas.

Low power electronics provide up to five years battery life at a two minute sample rate and an intelligent self diagnostic mode and echo loss alarm minimize the need for site visits. The versatile sensor is easily mounted and can connect to a Radcom data logger to transmit data and alarms to an office PC or mobile phone to enable immediate analysis, investigation and action.

Senator+ is a multi channel data logger designed to monitor flow, pressure, level and other water quality parameters in remote locations with no mains power or mobile phone coverage.

Batteries are recharged by a solar panel and the unit uses a satellite modem for data communications, making it ideal for use at reservoirs, treatment works, pumping stations and other remote assets.

The logger can be supplied with up to nine inputs for monitoring up to 4 digital, 4 analogue and 1 serial signal, and will require no maintenance for at least five years.



Data Analysis



We have developed sophisticated reporting systems to collect and display data from our Radcom range of loggers quickly, securely and reliably. Comparing current data with historical data enables the user to clearly identify unexpected consumption and trends, from which action can be taken to make savings.

Radwin is a market leading software support solution for Radcom loggers. It is used to set up loggers and download data, and can control and monitor critical systems.

The software provides easy to use but extensive data analysis options with advanced graphical presentation. Data can also be displayed in table format and quickly exported into third party software if required.

DataGate is a secure web hosted data server designed to receive large volumes of SMS/GPRS data traffic from multiple telemetry loggers. Data can be received quickly, securely and reliably from all mobile networks, and exported easily into software packages or third party reporting systems for further analysis.

DataGate offers a safe, convenient and cost effective way to collect and store data. Logger alarms can be sent to multiple users automatically to enable prompt action to be taken, and detailed message transmission information enables diagnostic investigation if required.

HWM Online is a secure web based reporting tool that provides immediate access to flow data received in DataGate. The website presents meter data as a graphical display and in table format which can then be exported as a .csv file or converted into a spreadsheet.

Historical data can be compared with current results, thereby identifying water losses and calculating savings.





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