2nd Floor, Highland House
43 Alexander Road, Westmead
Durban, South Africa
+27 (0)31 700 4143 +27 (0)31 700 4147
info@utility-systems.co.za

data logger

Microlog have developed an ultra-low cost solution for the logging of data generated by pulse output water meters. This device can be fitted to any meter which is equipped with a pulse output, and provides the user with a fully configurable memory device capable of logging large amounts of water for domestic and bulk meters.

The Microlog Data Logger is designed to provide a graphic representation of the rate of water usage through a water meter, so as to make water loss management and end user or consumer load profiling a simple exercise.

Features

The **Data Logger** is equipped with a Real Time Clock (RTC) which time stamps each meter pulse. This allows for detailed analysis of the flow through the meter and allows the water service provider to take synchronised readings of all metering points equipped with **Microlog Data Loggers**. Meter readings can be stored down to intervals of 1 reading per second and the device currently supports 50 000 readings. Once the memory capacity of the device has been reached, the **Data Logger** will overwrite the oldest recorded data with new data so as to always provide the most recent available data (First In First Out or FIFO).

The following table illustrates the memory capacity of the standard device with a capacity of 50 000 readings, assuming that the logger is continuously metered at the specified rate:

PULSES	DAYS	MONTHS
1 / MINUTE	30	1
15 / MINUTES	500	5
HOURLY	2 000	20

Logger Reading and Communications

The **Microlog Data Logger** communicates with Field Service Terminals (FST) or Notebook Computers using short range infrared communication protocol based on the IEC 61107 specification. The profile stored in the **Microlog Data Loggers** can be read simply by holding the communication interface to the **Logger**. Data is then downloaded directly to the FST, Notebook or PC for analysis.

data logger

Configuration and Reprogramming

Configuration of the **Data Logger** would typically include synchronising the time of the logger clock with the Field Service Terminal, setting the recording start time and duration and selecting the scaling factor required. Additional parameters such as recording Meter ID numbers, GPS location or address and recording any comment or narration specific to the exercise are also supported.

Configuration is undertaken by authorised FST using the **Microlog** Dash Board. The **Data Loggers** can be password protected to ensure security and integrity of the data and configuration. Downloading of profile data does not affect the logger settings and does not require password protection. The **Data Logger** can be reprogrammed at any time and does not require the logging service to be completed.

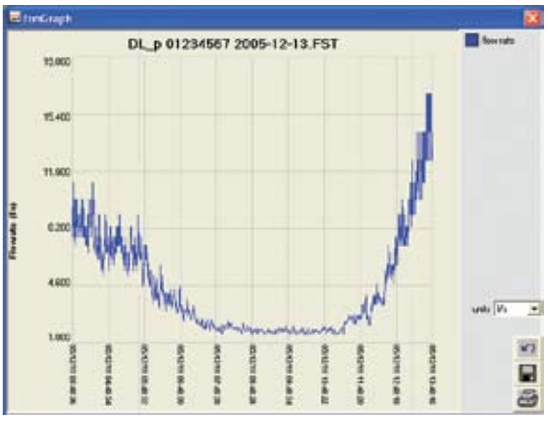
Software

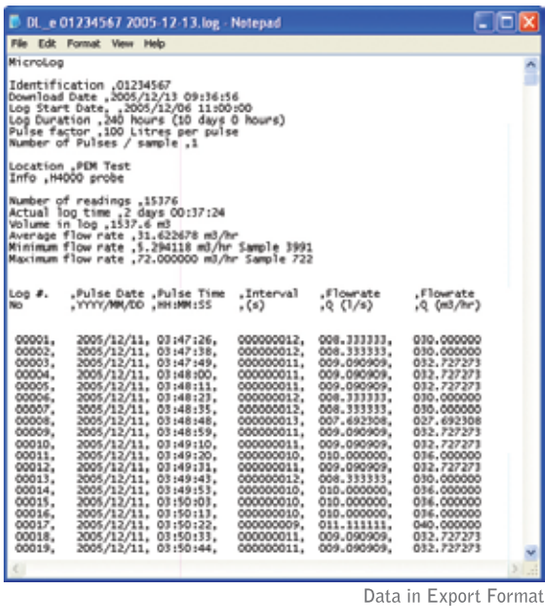
The simplicity of the device ensures that no proprietary software system are required to analyse the data. The **Microlog** software installed on the FST or Notebook computer provides for the option to export **Logger** data in a text file using a comma delimited file format.

The data can then be imported into almost any billing, GIS or CRM system, and can even be examined and graphically manipulated using Microsoft™ Excel or similar spreadsheet packages.

The **Microlog** software does provide graphic analysis tools.

Data in Graphic Format





Data in Export Format

Technical Specifications

LOG SIZE	
MINIMUM	Measure to 50 000 readings
LOG PROFILE	
INITIATION	Date/Hour/Minute
MODE	Continuous or Block
TIME STAMP RESOLUTION	1 Second
ACCURACY	+/- 1 Minute per month
LOG DURATION	
MINIMUM	4 Hours
MAXIMUM	5 years
PULSE PICKUP	
CONNECTION	2 Wire (potential free)
CONTACT TYPE	Normally open & normally closed
PULSE RATE	
MINIMUM	1 Pulse / 5 Years
MAXIMUM	100 Pulses / Second (pre-divider active)

PULSE SCALING FACTOR	
MINIMUM	0.1
MAXIMUM	100 000
HOUSING	
MATERIAL	Glass filled Nylon
CLOUR	Black
ENVIRONMENTAL	IP 68
STATIC	15 kV
POWER SOURCE	
BATTERY	3.2 V Lithium
LIFE	3-5 Years
COMMUNICATION	
EQUIPMENT	PC / Latop / Palmtop
MEDIUM	Infra-red
DATA RATE	9600 Bits/second
INFORMATION RATE	70 Readings/second
PROTOCOL	Proprietary