

# Leakfrog

## Meter Leak Analyser



Halma Water Management



### Introduction

Leakfrog provides an innovative and highly cost effective method of detecting Customer Side Leakage (CSL) by monitoring the minimum flow rate.

The low cost device can be quickly connected to a pulsed output meter and displays the maximum time interval between pulses. The reasons for unexpected water usage can then be investigated, leading to reduced water consumption.

No programming is required during installation, and the long battery life means that the unit can be deployed permanently if required. Leakfrog allows large volumes of minimum flow data to be collected simply and efficiently using existing IT infrastructure such as handheld meter reading devices.



4 YEAR BATTERY LIFE

LOW COST UNIT

USER FRIENDLY DESIGN

DIGITAL

### Features

- Indicates leakage, wastage and flow
- Custom LCD display indicates interval between pulses, leak size, unit activity and other data
- Easy integration with existing meter reading cycle and systems
- Low cost, facilitating volume installations in homes
- Clips directly onto Elster V210 meters using integrated reed switch
- Can be connected to all pulse meters with additional pulse lead
- Long battery life
- Single user control - no set up required
- IP68 - submersible
- Rugged and lightweight
- Easy to deploy and collect
- Easy to interpret

### Benefits

- Enables water to be saved by identifying leakage and wastage
- Improves customer service by reducing property damage caused by undetected leaks
- Enables total water balance within a District Meter Area (DMA)
- Enables reporting and compliance targets to be met
- Allows capital deferment (eg. of reservoirs)
- Increases security of supply
- Improves conservation performance



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Company is ISO 9001 Registered No.06134A

A HALMA COMPANY

FLOW MEASUREMENT

DATA LOGGING

LEAK DETECTION

PRESSURE MANAGEMENT

## PRODUCT SPECIFICATION

<b>Sensor Input Option</b>	Digital x 1	Input 1: The device has a button to reset the unit. Input 2: The device attaches to pulsed output meters and records pulses via an integral magnetic reed switch assembly.
	Type	Custom 4 digit LCD Display
<b>Display Features</b>	Display Interval	"0000" to "9999" seconds
	Operating Modes	<p><b>Output 1: 0000</b> – Initially after reset.</p> <p><b>Output 1: 0001</b> – to indicate that the time between pulses is less than 2 seconds since reset.</p> <p><b>Output 1: 0002 - 9998</b> – value in seconds displayed of the maximum time stored between pulses since reset.</p> <p><b>Output 1: 9999</b> – value in seconds displayed when the maximum time between pulses is equal to or greater than 9999 seconds since reset.</p> <p><b>Output 2:</b> Maximum interval pending (arrow symbol). In the case where the unit has sampled and reported an interval and is currently counting a longer interval the unit indicates that it is in the state of sampling the current largest gap between pulses.</p> <p><b>Output: 2 ON</b> is indicated by an arrow symbol in the top right hand corner of the display.</p> <p><b>Output: 2 OFF</b> otherwise.</p> <p><b>Output 3: Heartbeat.</b> A "frog" shaped heartbeat (cycle time approximately 1 second) is displayed in the top left hand corner of the display to indicate that the unit is currently monitoring for the maximum interval between pulses.</p> <p>The Heartbeat will:</p> <p><b>Output 3: STATIC</b>, (on or off) when the flow rate is 1 pulse per second (+/- 10%)</p> <p><b>Output 3: FLASHING</b> After the reset button has been pressed.</p> <p><b>Output 3: OFF</b> when the unit is displaying 9999 seconds.</p> <p>Output 4: Continuity check. The unit displays a square wave shaped 'continuity' check symbol in the bottom left hand corner of the display indicating the state of the internal reed switch.</p> <p><b>Output 4: ON</b> when the meter's pulsed output unit is under the sensor, forcing it to be closed.</p> <p><b>Output 4: OFF</b> in all other cases.</p>
<b>Physical</b>	Dimensions	90 x 50 x 30mm
	Construction	Polycarbonate
	Weight	270g
	Operating Temp	-10 to +70 C, (-5 to +160F)
	Ingress protection	IP68 submersible
	Power	Lithium thionyl chloride cell operational for 4 years under normal operating conditions
Operation	Single sealed push-button operation for reset	

HWM reserve the right to change the specification of any product without prior notice.



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