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Water Leak Watch for Houses and Flats

This unit has been specifically designed as a flow based water leak detection system for houses or flats. The unit monitors the water flow entering the building, raise an alarm and turn off the water supply if any unusual water patterns are detected, thereby minimising the extent of the damage For more technical information see the “WLW Installation Manual”



Features

- 1/2"/15mm, 30 L/minute max flow and 3/4"/22mm, 60 L/minute max flow systems available
- Detects taps being left on, leaking or burst pipes, faulty tank valves & garden hose being left on.
- Limits damage caused to the building and personal property by water leaks
- Fully programmable to suite users requirements
- Real time display showing current water flow in litres per minute
- Displays current amount of water that has been flowing without a break i.e. constant flow
- Displays current volume of water used without interruption
- Optional water leak sensor turns off the water supply and alarms, if water touches the sensor
- Turns OFF the water and alarms, if the current water flow rate (L/Min) alarm setting is exceeded
- Turns OFF the water and alarms, if the volume of water used within a single flow is exceeded
- On screen push button to turn the water back on after an alarm
- Manual shutdown valve override switch to turn on the water if the valve becomes faulty
- Colour touch screen giving real time water flow patterns
- Holiday Mode, that reduces the alarm settings to minimum giving a high level of protection
- Sleep Mode, turns off the unit for up to eight hours allowing large volumes of water to flow
- Help page to give information about the devices operation
- Comprehensive instructions and explanation with each alarm page
- Current flow information displayed in barograph format with numerical value
- Solid state output contact for onward signalling



Water Leak Watch

Principle of Operation

Being fully programmable to suite user requirements, the alarm unit is connected to a flow sensor and water shutoff valve. All three items should be positioned as close as possible to the incoming water supply pipe with the flow sensor and valve fitted just after the internal stopcock. Designed to monitor the flow of water entering the building, flat or area, the unit raises an alarm and shuts of the water supply when the flow exceeds pre-set limits. Three flow patterns are monitored;

Current Flow

This is the amount of water in litres per minute flowing now. A higher than normal flow can indicate a burst pipe. This feature is updated every second and is designed to turn off the water supply within 3 seconds from the time the alarm trip point is exceeded.

Water flow without a break

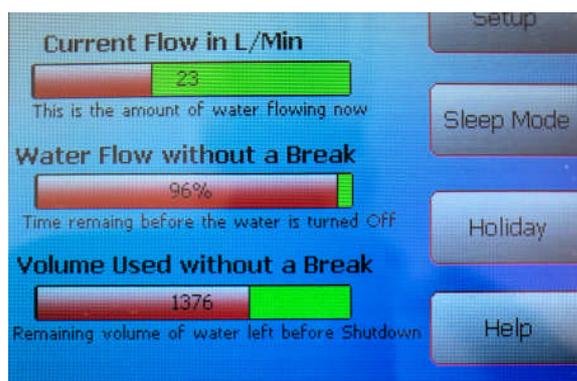
This is a measurement in hours that the water has been flowing without a break. In normal operation, water is consumed for short periods of time i.e., filling a bath can take 10 minutes, when the taps are turned off, the flow of water stops. This results in a period of no water flow, until the next call for water is made i.e., the toilet is flushed. In heavy flow periods, say first thing in the morning when its one shower after another, toilets being flushed, sinks being filled, the constant flow of water will occur for a longer period of time but will eventually stop. However, if the flow never stops, this would be an indication of a leaking pipe or a tap or garden hose being left on. As the system measure's in 3ml volumes, small leaks can be detected such as dripping taps, pipe fittings or radiators.

Volume used without a break

The unit measures the volume of water being consumed within a single flow period. Normally the highest water consumers would be item such as a bath or garden hose. Excessive water volume can indicate a burst pipe, or a tap or garden hose being left on.

Optional remote leak sensor

In addition to the flow monitoring, the system can be fitted with a standard water leak detection cable up to 5m long or spot sensor. As soon as water comes into contact with the cable or sensor, an alarm will be raised and the water turned off.



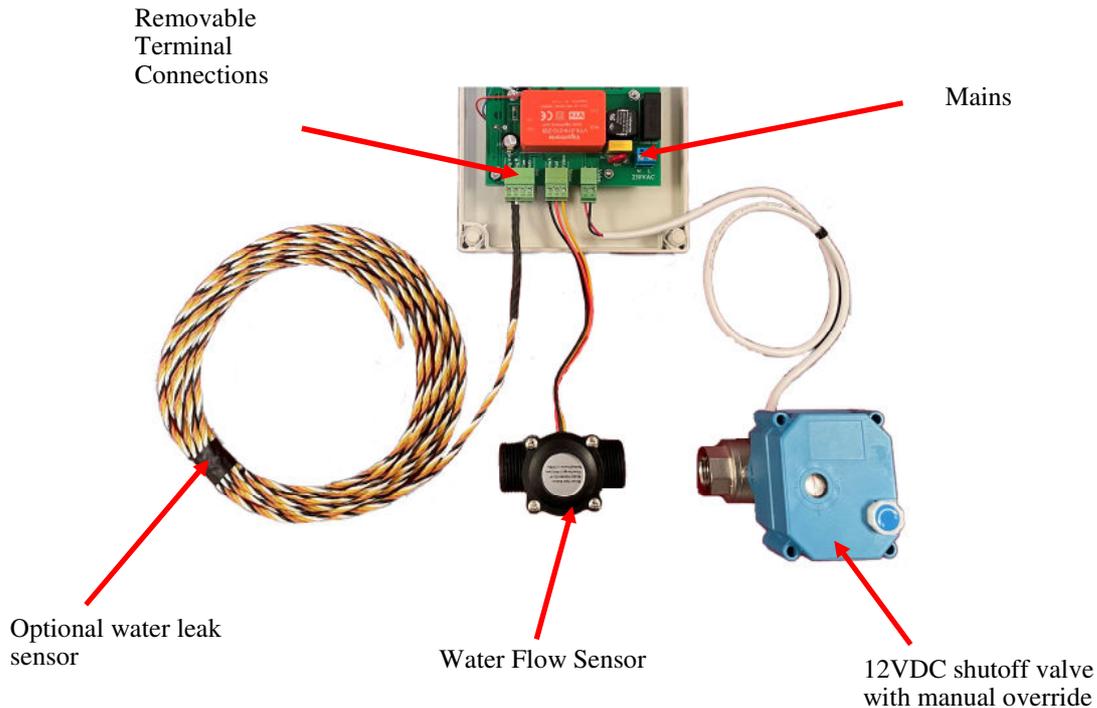
Explanation for the above screen

The display shows the current (real time) water flow is 23 litres per minute requiring it to rise by another 55% before going into alarm and shutting the water off. The constant flow is getting critical as it only requires another 4% before it goes into alarm and turns off the water. The current volume of water used within a single flow is 1,376 litres and requires a further 20% before it instigate an alarm and turns off the water supply.



Water Leak Watch

The unit requires a 230VAC 3A power supply and connecting to the water flow sensor , shutoff valve and if required water detection sensor. All connections with the exception of the mains supply is low voltage DC of the plugin terminal type to allow ease of wiring.



Specification

Housing type	ABS Plastic, Light grey
IP Rating	IP51
Mounting	Wall, or surface
Size	160mm wide x 180mm high x 60mm deep
Input power	50 Hz single phase 230VAC +/- 10%
Burden	< 12VA
Power termination	Internal 2 way terminal block
Flow sensor termination	Removable 3 way terminal block
Shutdown Valve termination	Removable 2 way terminal block
Optional water sensor termination	Removable shared 4 way terminal block
Alarm output contact	Removable shared 4 way terminal block
Voltage to water Sensor	3.3 VDC
Voltage to water shutoff valve	12 VDC
Display	320 x 240 pixel 2.8" colour TFT with touch screen
Access	Top, bottom , back or side
Maximum Flow 1/2" (15mm)	30 Litres per minute
Maximum Flow 3/4" (22mm)	60 Litres per minute
Minimum Flow 1/2" & 3/4"	1 Litre per minute
Maximum operating pressure	10 Bar
Maximum operating temperature	80°C
Water flow sensor fitting sizes	1/2" or 3/4" BSP
Shutoff valve fitting size	1/2" or 3/4" BSP