AquaGuard

Installation and Operation Manual

This manual describes the operation and use of the AquaGuard, please read it carefully before installation and retain it for future reference.

Features

The AquaGuard system comprises of an electronic valve and flow sensor assembly with a separate control box. The AquaGuard is designed to monitor water flow in a property and shut off the cold water supply in the event of:

- A pipe burst.
- A ruptured or fractured pipe.
- A low battery level in the unit.
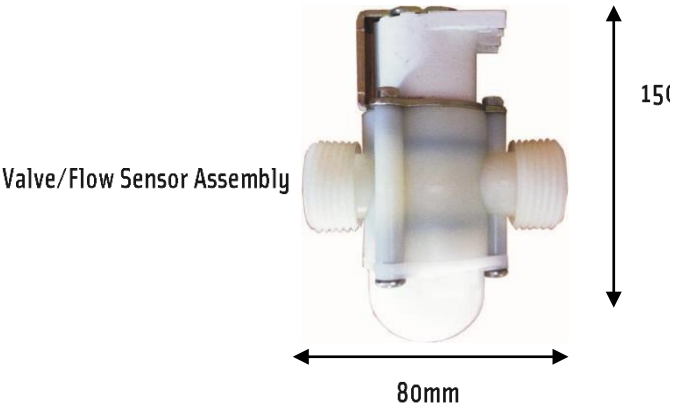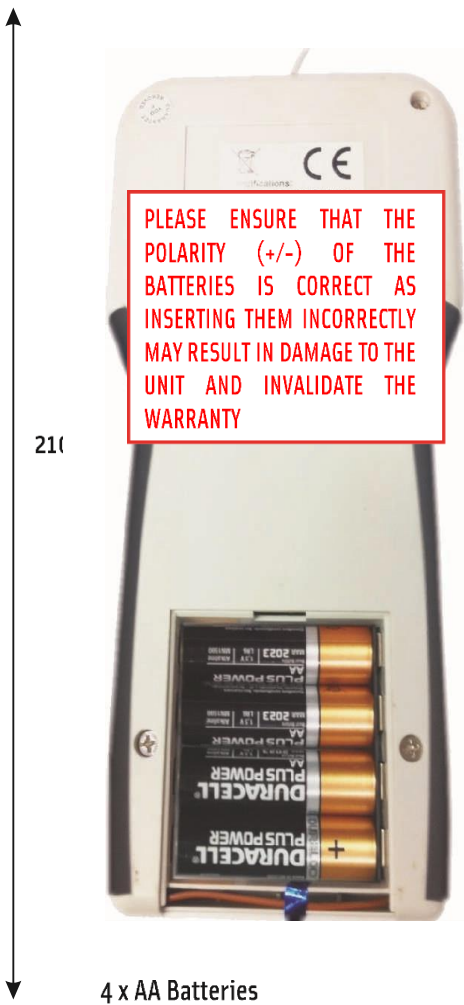- The property being unoccupied for longer than 24 hours (this is adjustable).

The system is powered by 4 x AA batteries (or 230V mains) and will under normal use, operate for 12 months before the batteries need to be changed.

Testing

The unit should be tested once every 6 months by using the 'Manual Close' facility (see Operation section). Check that the water supply is actually off by turning on a tap. Cancel the manual close (see Operation section) and check that a valid flow reading is displayed when a tap is turned on.

Note: The AquaGuard will run an automatic valve exercise routine every 28 days (this is adjustable), whereby the valve will be closed and then opened, this is to help prevent the valve from seizing.

SOS leak detection

AQUAGUARD

100mm

WRAS
APPROVED PRODUCT
CERTIFICATION MARK

C E

PLEASE ENSURE THAT THE POLARITY (+/-) OF THE BATTERIES IS CORRECT AS INSERTING THEM INCORRECTLY MAY RESULT IN DAMAGE TO THE UNIT AND INVALIDATE THE WARRANTY

210

4 x AA Batteries

Valve/Flow Sensor Assembly

150

80mm

The Valve/Flow meter assembly should be fitted into the cold water mains supply pipe immediately after the stop cock in a secure, indoor location. The assembly must not be located where there is a danger of freezing. The control unit should be mounted adjacent to the valve/meter assembly but in a location where it can be easily accessed.

The cable between the unit and the valve/meter assembly can be disconnected if the cable needs to be fed through a hole.

The valve/flow sensor comes with a 3/4" BSP male thread on each end. Please note that the body of the unit is made from fibreglass and great care should be taken not to over tighten the connectors when installing. It is recommended that a qualified plumber be used to fit this device.

Electrical terminals face this way

Direction of Water Flow
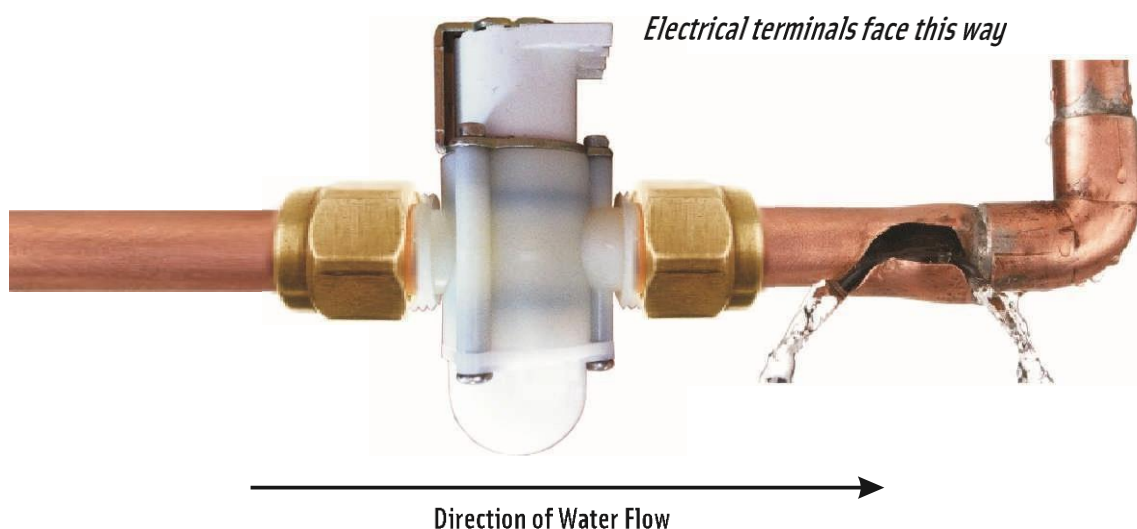
Remove the battery cover from the rear of the control box and insert four AA batteries. We recommend standard non-rechargeable batteries are used. Ensure that correct polarity is observed when inserting batteries. Next, turn on as many cold water taps as possible. Briefly press the 'SET' button to wake the 'default' display. Make note of the flow displayed on the screen. Press the set button and the flow at this time will be shown on the top line of the display. Make a note of this for setting the flow limit later.

Contrast Setting: With the display illuminated, press the SET button to adjust the contrast. This allows you to set the display for your environment – the lighter the area, the darker the contrast should be set. Simply press the + and – buttons to set. After a short time, the display will change to the normal screen. Press SET to store your desired value.

Maximum Flow Setting: Next, set the FLOW LIMIT. Use the + and – buttons to adjust this limit to just above the maximum flow value recorded. Press SET to confirm the value (display will show 'Saved OK').

Maximum Time Setting: Next, the display will show 'SET THE LIMIT'. This is how long the unit will allow any water to flow before it closes the valve. This should be set to around 5 minutes longer than it takes to fill a bath or take a shower and will vary depending on water pressure, type of household etc. Typically, this should be set to around 15 minutes. Again, use the + and – buttons to change or confirm.

Holiday Mode Setting: Next, set the Holiday Timer mode. The default setting is 24 hours. This means that if the AquaGuard doesn't detect any water flowing through in a 24 hour period, the valve will close. The + and – buttons can be used to change the number of hours before the valve closes. Zero will mean that the valve will not close regardless of elapsed time, 72 will mean it stays open for 3 days and nights. Press the SET button to confirm.

Valve Exercise Time Setting: You can select between 1 and 98 days by pressing the + and – keys to increment the number. A setting of 1 will exercise the valve every day and each increment will increase this by a day.

Press the SET button to confirm

Alarm conditions
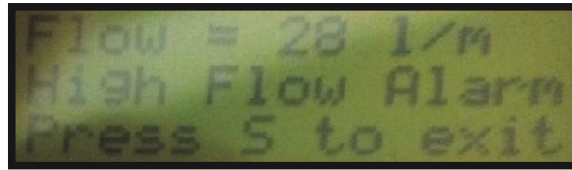
High Flow Alarm

The unit monitors the water flow every 30 seconds. If the flow measured exceeds the maximum set threshold, then it will immediately close the valve and display:

Flow = xx.x l/m where xx.x is the flow that caused the alarm.

HIGH FLOW ALARM

VALVE CLOSED / Press S to exit (alternating)

After 10 seconds, the unit will go back to sleep but pressing any key will wake it up and the same display will be seen. Every 30 seconds the unit will emit an alarm beep. To reset the alarm, press the S key until the valve re-opens.

Flow Time Alarm

The unit monitors the water flow every 30 seconds. If any flow above 2.0l/m is measured, it will start to increment the Flow Timer (this is displayed on the normal screen). When the timer reaches the set time, the unit will close the valve and display:

FLOW TIMER ALARM

VALVE CLOSED (Press S to exit)

After 10 seconds, the unit will go back to sleep but pressing any key will wake it up and the same display will be seen. Every 30 seconds, the unit will emit an alarm beep. To reset the alarm, press any key to wake the unit up and then press the S key until the valve re-opens.

Holiday Time Alarm

The unit monitors the water flow every 30 seconds. If no flow is measured, it will start to increment the Holiday Timer (this is displayed on the normal screen). When the timer reaches the pre-set hours, the unit will close the valve and display:

HOLIDAY MODE

VALVE CLOSED (Press S to exit)

After 10 seconds, the unit will go back to sleep but pressing any key will wake it up and the same display will be seen. Every 30 seconds, the unit will emit an alarm beep. To reset the alarm, press any key to wake the unit up and then press the S key until the valve re-opens.

Low Battery Alarm

When the batteries get low, the unit will emit a beep every 30 seconds. When the batteries get very low, the unit will close the valve and display:

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LOW BATTERY

VALVE CLOSED (Press S to exit)
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After 10 seconds, the unit will go back to sleep but pressing any key will wake it up and the same display will be seen.

Remove the rear cover and insert four new AA batteries. Ensure the batteries are fitted correctly. The unit will remember the flow and time settings so these do not need to be re-entered.

Manual Operation

Manual Open – To allow for car washing or garden watering, the unit can be put into Manual Open mode. Press any key to wake the unit up and then press and hold the + key until 'Manual Open' is displayed. The valve will now remain open for 60 minutes, even if the flow exceeds the set threshold. The remaining time is displayed on the screen. The timer can be reset to 60 by pressing the + key or cancelled by pressing the S key. When the timer expires, the unit will return to normal automatic operation.

Manual Close – When leaving the property empty or in an emergency, the unit can be put into manual close mode. Press any key to wake the unit up and then press and hold the – key until 'Manual Close' is displayed. The valve will now remain closed until the S key is pressed.

Problem	Action
Valve keeps closing as soon as I take a shower	Turn shower on and check flow reading. Set flow set point to just above value.
(As above)	Set time set point to just a little longer than you normally spend in the shower
Valve closes when washing the car or watering the garden	Use the manual open facility to override the alarm timer
No display on control unit when key pressed	Check batteries and fit new ones if required
I have no water and the unit will not respond to button presses	Check batteries and fit new ones if required

Environmental protection	IP65
Temperature range	Handset – 0°C to + 30°C Valve – 0°C to + 23°C
Supply Voltage	6vDC
Power Consumption	100mA max. Typ 1uA
Display	3 lines x 16 characters LCD
Flow meter	2 to 30l/min 3% accuracy
Flow Valve	22mm BSP
Approval	WRAS

Aqualeak Detection LTD hereby declares that this unit is in compliance with the essential requirements and other relevant provisions of the radio and telecommunications Terminal Equipment & TTE directive 1999/5/EC, the Low Voltage Directive 73/23/EEC and the EMC Ditective 89/336/EEC.

Anti-Static Handling

The alarm unit contains CMOS devices that could be damaged by static electricity. There are no user serviceable parts within the main enclosure of the alarm unit. However if the cover is removed then please observe anti-static precautions when handling the internal board. This includes storing the board in appropriate anti-static packaging and wearing a wrist strap when handling.

Battery

The unit contains batteries which can present a fire or explosion risk. Do not short circuit the battery or place on a metal surface where the battery terminals could be shorted. During shipment, the batteries are isolated from the board circuit and must be connected before using the unit, please refer to the installation section of this manual for details. Do not incinerate, expose to high temperatures, puncture, crush or otherwise damage the batteries.

End of Life

At the end of the products useful life it should be recycled as follows:
Remove cover and disconnect batteries. Recycle at licensed facility.
Remove circuit board and recycle at licensed facility.
Recycle plastic enclosure as ABS.
Recycle flow meter/valve assembly at licensed facility.

Packaging

Please ensure that should an alarm unit need to be returned to Aqualeak Detection, it is adequately packed, preferably in the original packing material.

Electromagnetic Compatibility (EMC) and other EC Standards

The Alarm Unit is classified as a component with regard to the European Community EMC regulations and it is the user's responsibility to ensure that complete systems using the unit are compliant with the appropriate EMC and other standards.

Technical Support

Aqualeak Detection will be able to provide assistance if you have any problems with this product. Please contact the support team.