Read these instructions carefully before using this product.
Keep these instructions in a safe place for future reference.

AquaGuard Dual
Instruction Manual

Version 1.2

Document Information

Copyright

Publication

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All possible care has been taken in the preparation of this manual, but Aqualeak, its agents and distributors accept no liability for any inaccuracies that may be found. This manual reflects the state of the product at the publication date below, but further enhancements while in service may mean that the manual does not precisely reflect your system. Aqualeak reserves the right to make changes without notice both to this manual and the products which it describes.

Purpose

This document provides installation and operating instructions for the AquaGuard Dual Water Leak Detection System.

Symbols and Notices Used

Important information has been highlighted throughout this document using the following symbols:

Warning

See relevant section

Take note of this information

Important Safety Information has been highlighted throughout the Safety Information section using the following warning notices:

DANGER	WARNING	CAUTION	DAMAGE
Death / serious injury (irreversible)	Death / serious injury (irreversible)	Minor injury (reversible)	Damage to property
Immediate risk	**Potential risk**	**Potential risk**	**Potential risk**

Contact Details

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Contents

Tables

Figures

1 Safety Information

For your safety and the safety of others, please ensure that you read the Safety Information below, **before** you install or operate this product.

1.1 Intended Use

Only use this product for the intended purpose described in this manual.

1.2 Statutory Obligations

- ✓ Installation and maintenance must comply with all relevant local laws and regulations ('statutory obligations'), particularly concerning electrics, water supplies, and building regulations.
- ✓ Statutory obligations always override manufacturer documentation.
- ✓ It is the responsibility of the customer to conduct a Health & Safety risk assessment prior to installing and operating this product.
- ✗ This product should not be operated by children or persons with reduced physical, sensory or mental capabilities. Where necessary, such Persons should be given supervision by a qualified person responsible for their safety.
- ✗ **DO NOT** position the unit (including its power cable) where it may violate Fire or Health and Safety regulations (e.g. block fire exits or stairwells etc.).

1.3 Electrical Safety

⚠DANGER

RISK OF 230 VOLT ELECTRIC SHOCK

- ✓ ONLY qualified, competent and approved persons (e.g. 'electrical engineers') may undertake installations, repairs, or relocations of this product.
- ✓ The product must be earthed correctly.
- ✓ For **indoor use** only.
- ✓ Ensure that the building electrical system is compliant with Safety Regulations.

⚠WARNING

RISK OF DEATH OR SERIOUS INJURY

- ✗ **DO NOT** allow children or any other unqualified or unapproved persons to install, repair, clean, relocate, or otherwise interfere or tamper with the product.
- ✗ **DO NOT** immerse the unit or its peripherals in liquid.
- ✗ **DO NOT** install outdoors, near hot works, or where there is a danger of freezing.

1.4 Installation Safety

⚠DAMAGE

RISK OF DAMAGE

- ✓ Install the product on a **hard, solid, and level** surface.
- ✓ Follow the instructions provided in this manual. Where necessary, refer to the Aqualeak website (www.aqualeak.com) for contact and support information.

⚠CAUTION

RISK OF INJURY

- ✓ Be aware of any existing electrical (e.g. wiring), water (e.g. pipes), or other installations in the vicinity (including within or behind the surface used for mounting.
- ✓ Where applicable, this manual should be read in conjunction with manufacturer documentation for any components specified in the installation requirements of this manual.

1.5 Post-Installation Safety

Once installed:

1. Perform a test run to ensure normal operation.
2. Explain all safety precautions to the end user.
3. Provide a copy of this manual to the end user.

- ✓ It is the responsibility of the end user to supply this manual to any other subsequent users.
- ✓ All goods are sold subject to our 'Conditions of Sale'.
- ✓ As Aqualeak Detection Ltd. continuously improves products, they may be modified without notice. In such circumstances, this manual and other relevant documentation should be disregarded. Updated documentation will be produced, supplied with new product ranges and made available on request.

SAVE THESE INSTRUCTIONS

2 Product Overview

Ensure you have read the **Safety Information** in **section 1** before attempting installation or operation of this unit.

The **AquaGuard Dual Water Leak Detection System** is a standalone leak detection system designed to be integrated into larger Building Management Systems (BMS) and networks.

Designed for continuous operation with minimal human intervention, the AquaGuard Dual is also compatible with a wide variety of sensing technologies (sold separately) to detect the presence of water and other liquids.

The AquaGuard Dual is designed to monitor for water leaks in residential and commercial buildings. In addition, the AquaGuard Dual can shut off the cold-water supply in the event of:

***Figure 1**: AquaGuard Dual Water Leak Detection System*

- A pipe burst
- A ruptured or fractured pipe
- Loss of power
- The property being unoccupied for longer than 24 hours

Configuring the AquaGuard Dual allows the unit to be tailored to intelligently respond to a wide range of environments, situations and user requirements.

Features

- Capacitive touch interface
- User configurable (sensitivity adjustment, output control, and self-maintenance features)
- Hardwired combined valve and flow meter or separate valve and flow meter
- Multiple outputs
- Pattress or flush mountable; mains powered
- Back-up battery module available
- Audible and visual alarms
- Compatible with a large number of sensor types and ancillary devices
- CE compliant

Operation

In operation, the AquaGuard Dual continuously monitors the sensing equipment connected to it for both circuit integrity and the presence of water. If a leak or fault is detected, an audible alarm is activated, an LED illuminated, and, if connected, the AquaGuard Dual will report its alarm status to any connected device (BMS/SMS/beacon, valve) via its volt free contacts. Benefits of the AquaGuard Dual include:

- Continuous leak and cable break monitoring
- Automated water supply shut off
- Minimal human intervention required
- Reduced risks from flooding
- Built-in fault detection
- Manual override

2.1 Technical Specifications

AquaGuard Dual	Specification	Notes
Dimensions	146 x 86 x 69 mm	**Millimetres**. Width x Height x Depth
Weight	300 g	**Grams** (0.3 Kilograms)
Supply Voltage	100-240 VAC	**Volts / Alternating Current** 50-60 Hertz
Output Relay Voltage	250 VAC	
Output Relay Current	8 A	**Amps**. Maximum into resistive load
Relay Minimum Load	10 mA	**Milliamps**. At 5 VDC (Volts / Direct Current)
Leader Cable	Belden 9534	Belden 9534 EIA RS-232 Multicore Cable (4 Core, 24 AWG, 0.2 mm^2). Variable length.
Detection Response Time	1 second	
Alarm (Audible)	85 dB	**Decibels**. Within 0.6 m range
Alarm (Visible)	LED Indicator	Front panel
Operating Temperature (Control)	0 to +50˚C	**Degrees Centigrade**. Ambient temperature
Operating Temperature (Valve)	0 to +60˚C	
Operating Humidity	10 to 95%	Relative humidity (non-condensing) at 45˚C
Operating Altitude	0 to 3,000 m	**Metres**
Storage Temperature	-20 to +70˚C	
Input channels	1	
Maximum Sensor Cable Length	75 m (with maximum 20 probes)	Use recommended yellow Sensor Cable (SCY). Also requires End of Line (EOL) terminator.
Display	3 lines x 16 characters LCD	
Flow Meter Accuracy	2 to 30l/min 3% accuracy	
Flow Valve	¾" or 1" depending on model ordered	
Flow Valve Approval	WRAS	

Table 1: *AquaGuard Dual Technical Specifications*

2.2 Input-Output Connections

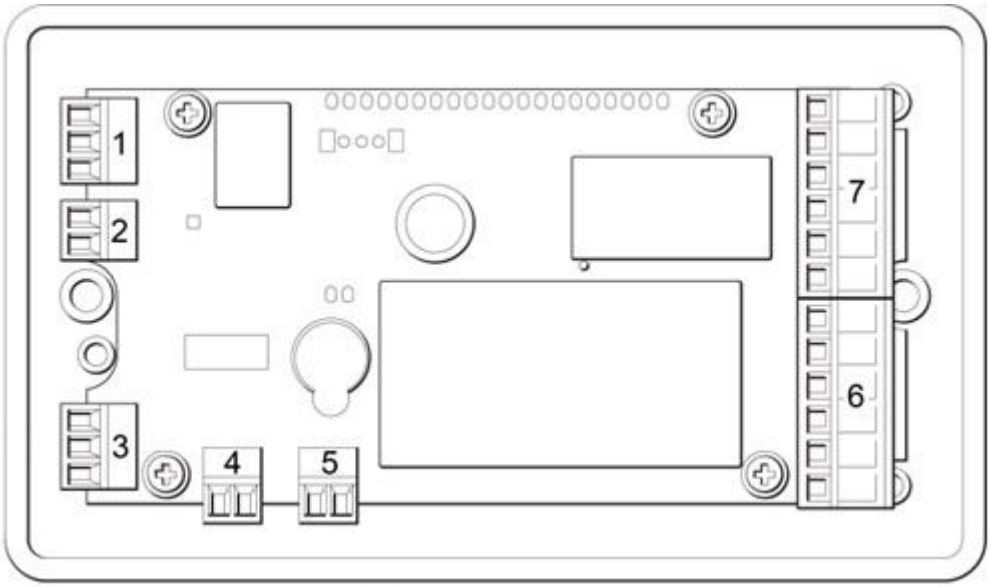


Figure 2: *AquaGuard Dual Input-Output Connections*

Item	Name	Notes	Relay Abbreviations
1	Common Alarm Relay	COM | NO | NC	**COM** = Common **NC** = Normally Closed **NO** = Normally Open
2	Battery Back-Up	Connection for optional battery backup unit	
3	Meter connections	SIG/Flow | GND | 5V	
4	Latching Valve Output	Red | Black	**Mains Abbreviations**
5	Sensor Input	Red | Black	**LS** = Live Supply **LL** = Live Loop **NS** = Neutral Supply **NL** = Neutral Loop **ES** = Earth Supply **EL** = Earth Loop
6	Mains Supply / Loop		
7	Alarm Relay 1 & 2	NO | COM | NC | NC | COM | NO-HL	

Table 2: *AquaGuard Dual Input-Output Connections*

3 Installation

Risk of electric shock and equipment damage! Ensure you have read the **Safety Information** in **Section 1** before attempting installation. The AquaGuard Dual can be either surface mounted with the supplied pattress, or flush mounted (back-box not supplied).

3.1 Unit Installation

3.1.1 Mounting

Mount the unit as follows:

1. Ensure the unit has been properly removed from its packaging.
2. Securely mount the supplied **pattress box** or an appropriate **flush mount alternative** in a suitable location, and make the cable entries as required.
3. Bring the **cables** through the pattress box or flush mount alternative to the unit **before** starting to make final connections.
4. Securely house the unit in the pattress box or flush mount alternative.

3.1.2 Power Connections

A competent person must power the AquaGuard Dual via an appropriate mains supply at a nominal **230V 50-60Hz**, from a **spur** with a minimum capacity of **8 Amps**. This supports switching power to external loads through the **8 Amp Double Pole Double Throw (DPDT) relay**.

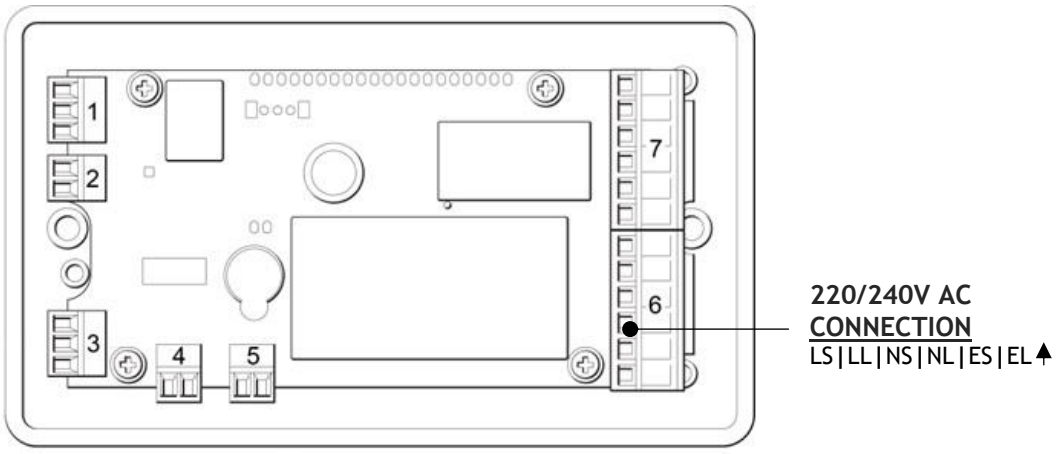


Figure 3: AquaGuard Dual Rear Panel Showing Electrical Power Connections

Connect power to the AquaGuard Dual as follows:

1. Route the **power cable** from the **unswitched fused spur** into the unit mount, using suitable containment/cable protection.
2. Connect the **power cable** (i.e. Live, Neutral and Earth) to the unit.

3.2 Valve/Flow Meter Assembly

The AquaGuard Dual can be used with separate valve and flow meters or a combined valve/flow meter. The selected 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 cables need to be fed through a hole.

The valve/flow sensor comes with a ¾" 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 overtighten the connectors when installing.

It is recommended that a qualified plumber be used to fit this device.

Fit the flow meter as follows:

1. Wrap the male thread of the flow meter in 16-18 wraps of PTFE tape and lightly smear a PTFE jointing compound (for example, Black Swan - Swan Seal or similar) over the top.

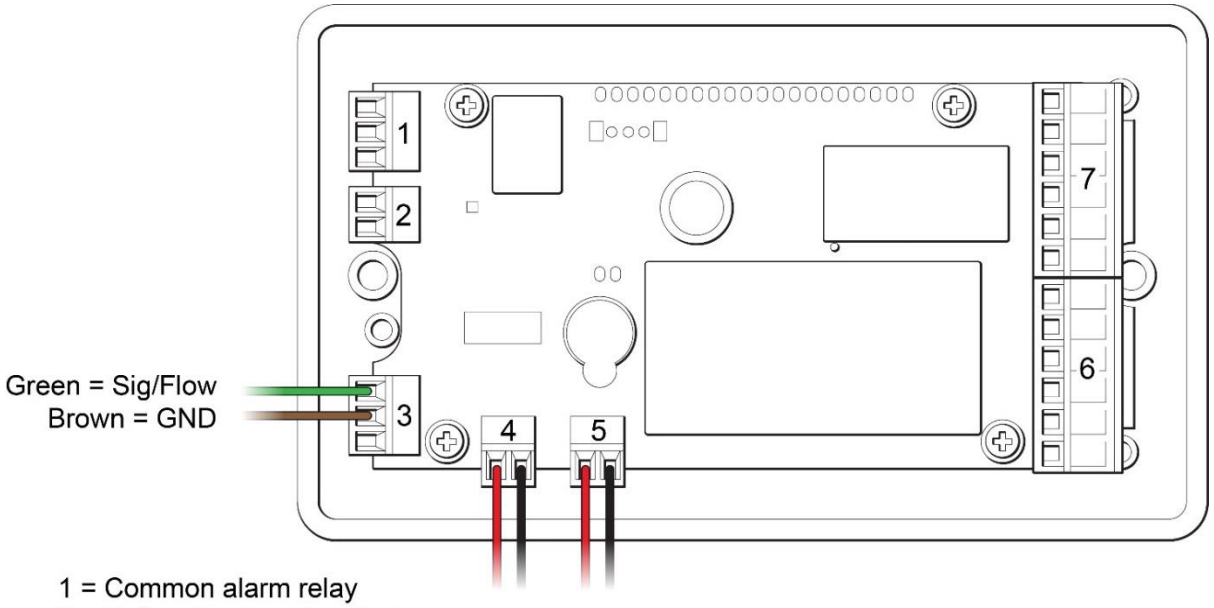
   Alternatively you can use Flomasta PTFE Paste and apply as per manufacturer's instructions.

2. Connect the flow meter onto solenoid, twisting it clockwise until you feel restriction, then tighten using a spanner. **Ensure not to overtighten.**

3. On the connection to the female thread of the solenoid valve, apply the same method as above used for the male thread, which connects into it.

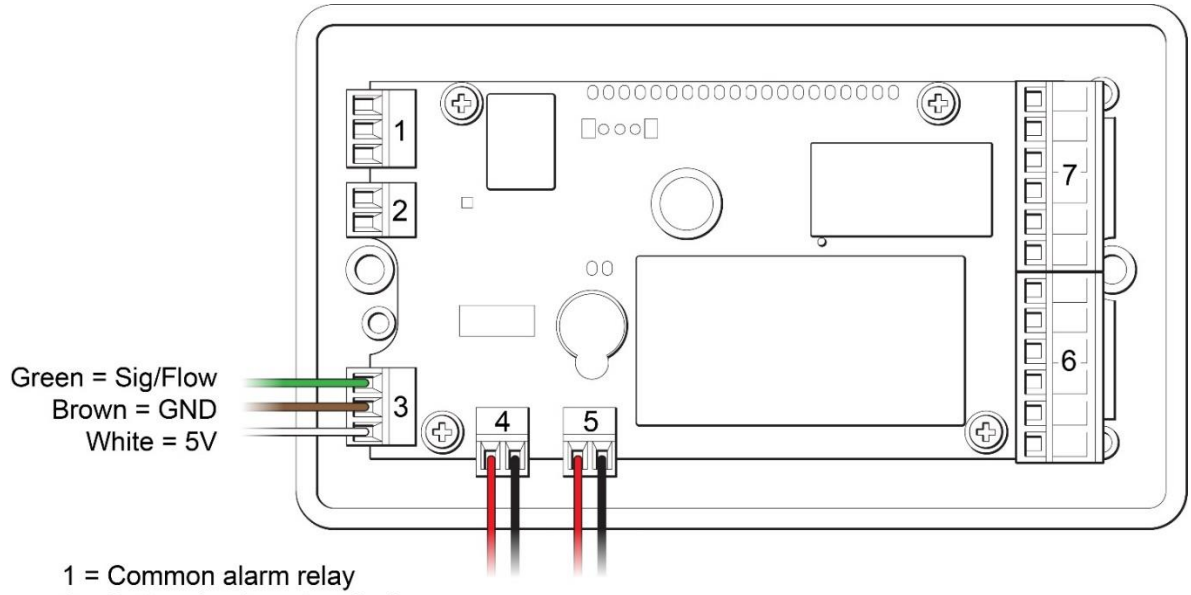
Use union of union on both sides is recommended by Aqualeak. On the male thread of the flow meter, use a union with fibre washer.

Refer to **Figure 4** for the connection diagram for a 22mm combined valve/meter, and **Figure 5** for connection to separate valve and meters.



1 = Common alarm relay
2 = Battery back-up terminals
3 = Meter input
4 = Latching valve (output)
5 = Sensor terminals (input)
6 = Mains power
7 = Alarm relay (leak alarm only)

Figure 4: Connecting to 22mm combined valve/meter unit



1 = Common alarm relay
2 = Battery back-up terminals
3 = Meter input
4 = Latching valve (output)
5 = Sensor terminals (input)
6 = Mains power
7 = Alarm relay (leak alarm only)

Figure 5: *Connecting to separate valve and meter*

3.3 Sensors and Relays

Regardless of sensor type or combinations of sensor types, there must always be an **end of line (EOL) terminating resistor** at the end of the sensing circuit to allow for **cable break monitoring** and **alarm reference set point**. The AquaGuard Dual relies upon a terminating resistor of value **47k ohms.**

The AquaGuard Dual should be **powered OFF** when making connections. Sensors should be installed so that they remain **accessible for maintenance**.

Multiple sensors and sensor types may be connected to the AquaGuard Dual. **Sensor cables** (SCY), for example, monitor for water along their full length and can be run in lengths between 1 and 100 metres; Sensor probes (ESD) monitor for water in their exact location only and can be connected in circuits of between 1 and 20 probes.

3.3.1 Sensor / Relay Connections

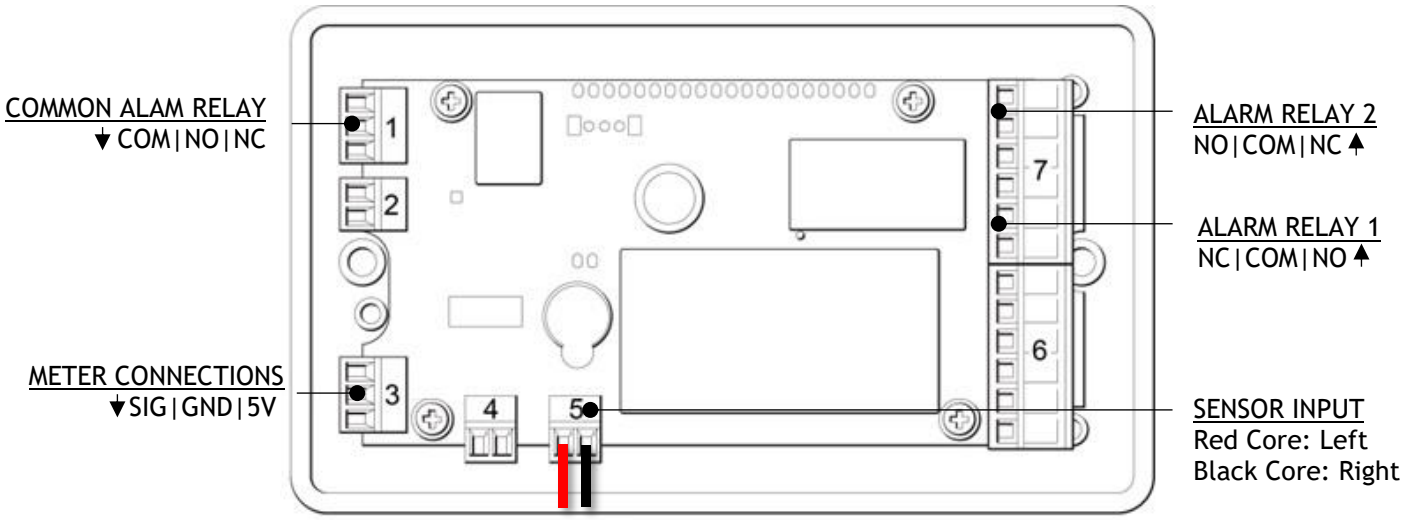


Figure 6: AquaGuard Dual Rear Panel Showing Sensor / Relay Connections

A. Connect Sensor Cable (SCY) using LC10C and End of Line

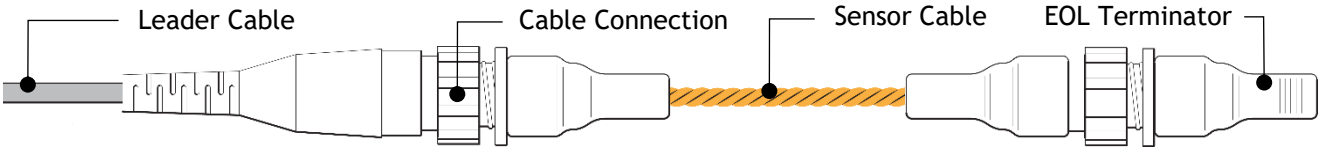


Figure 7: Sensor Cable Connection using Leader Cable (LC10C)

Connect the Sensor Cable using LC10C and End of Line (EOL) as follows:

1. Ensure that the unit is powered OFF. Connect the **leader cable** into the **sensor input terminal** on the unit. Do not connect the green or white cores (**Figure 6**).
2. Plug the opposite end of the **leader cable** into the **sensor cable** (**Figure 7**).
3. Once all sensor cables are connected (to a maximum total length of **100 metres**), plug the **End of Line (EOL) terminator** into the end of the last run of the **sensor cable**.

B. Connect Sensor Cable (SCY) using LC10/LCB100 and Start of Line

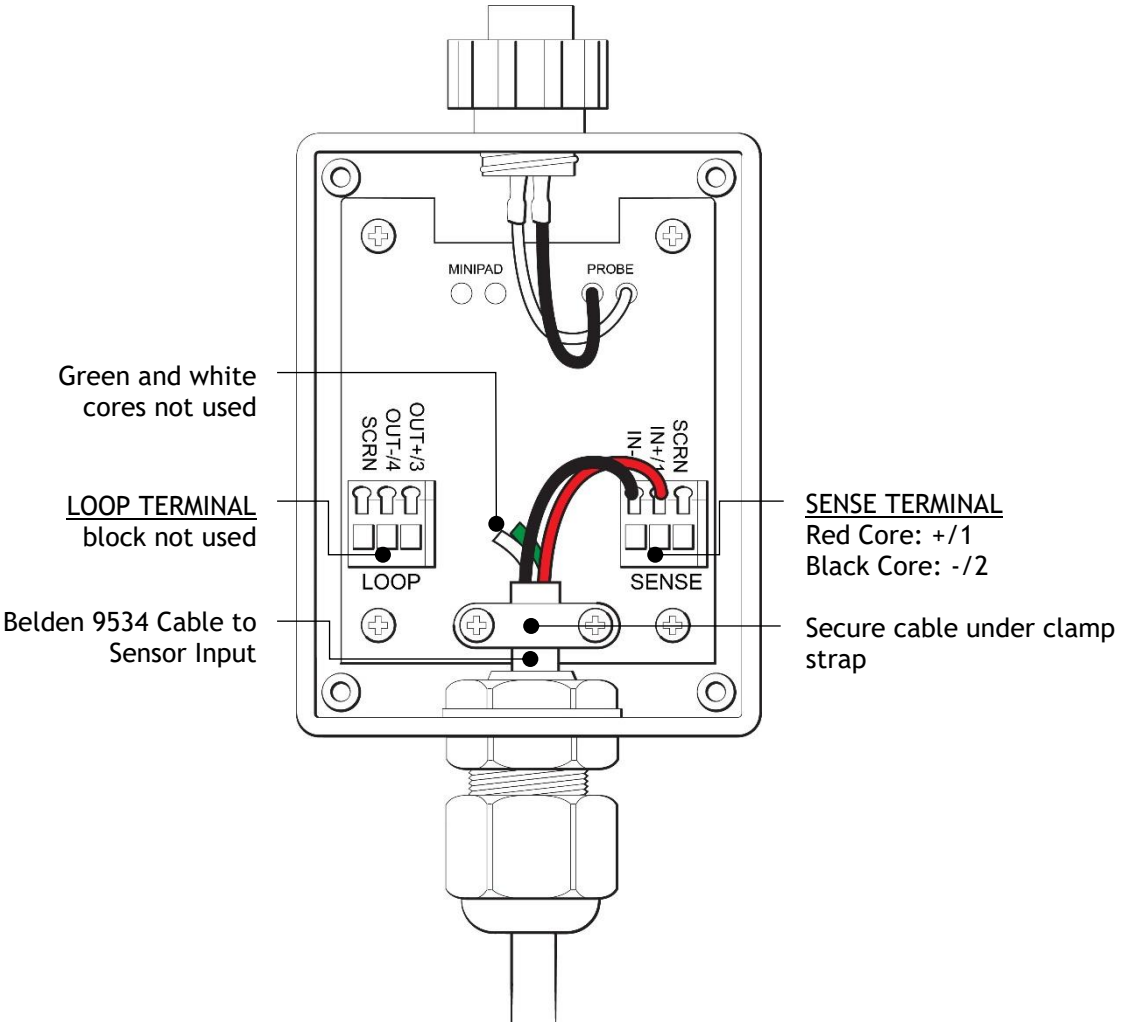


***Figure 8**: Sensor Cable Connection using LC10/LCB100 and Start of Line*

Connect the Sensor Cable using LC10/LCB100 and Start of Line (SOL) as follows:

1. Ensure that the unit is powered OFF. Connect the **leader cable** into the **sensor input terminal** on the unit. Do not connect the green or white cores (**Figure 6**).
2. Cable the opposite end of the **leader cable** in to the **Start of Line** (**Figure 8**).
3. Plug the **sensor cable** into the connection on the **SOL**.
4. Once all sensor cables are connected, plug the End of Line (EOL) terminator into the end of the last run of the sensor cable.

C. Connect a Single Environmental Sensing Device Sensor Probe

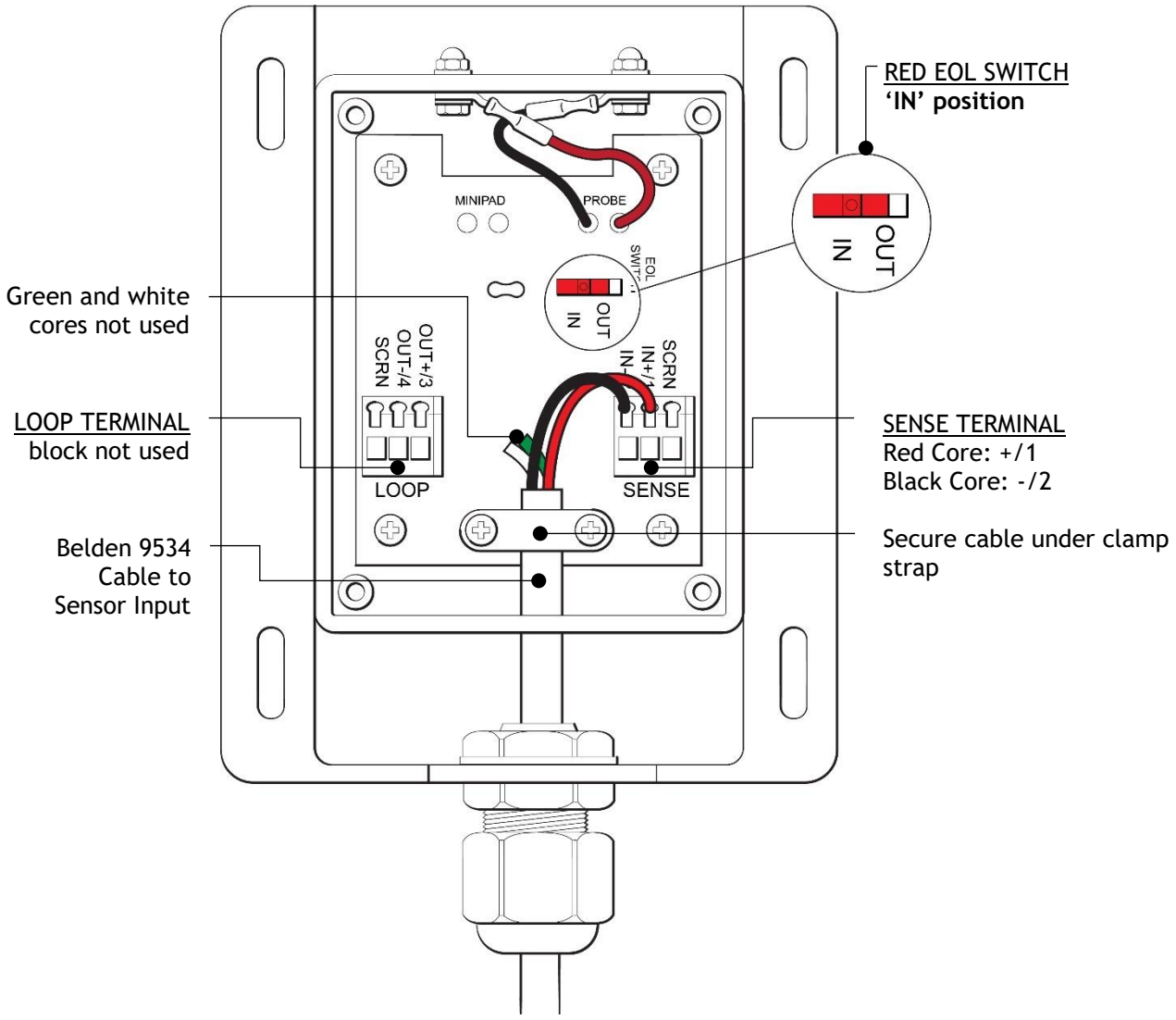


Figure 9: Sensor Cable Connection using Single ESD Sensor Probe

Connect a single ESD Sensor Probe as follows:

1. Ensure that the unit is powered OFF. Connect the **leader cable** into the **sensor input terminal** on the unit. Do not connect the green or white cores (**Figure 6**).
2. Connect the opposite end of the leader cable to the ESD probe, and ensure that the EOL Switch is set to the 'IN' position **(Figure 9)**.

D. Connect Multiple Environmental Sensing Device Sensor Probes as a Single Zone

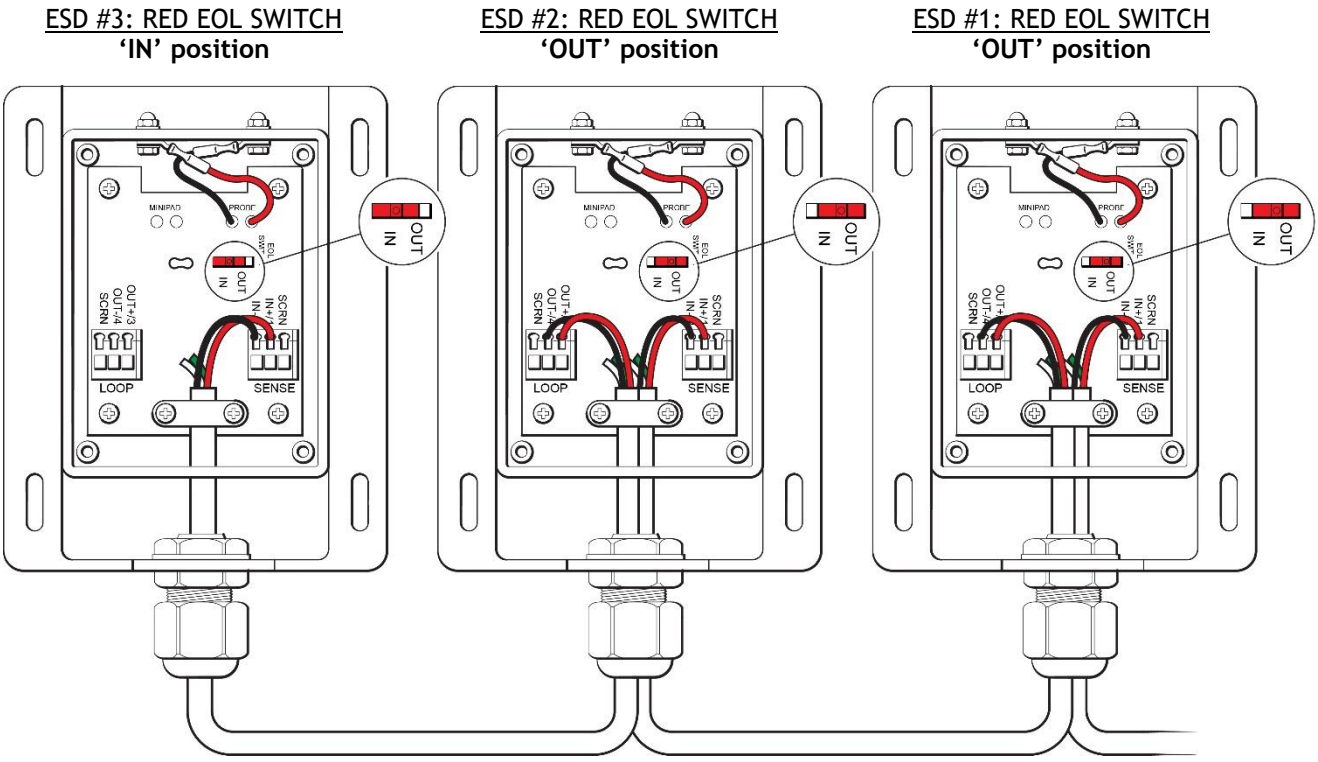


Figure 10: Connecting Multiple ESD Sensor Probes as a Single Zone

Connect multiple ESD sensor probes to a single zone as follows:

1. Ensure that the unit is powered OFF. Connect the **leader cable** into the **sensor input terminal** on the unit. Do not connect the green or white cores (**Figure 6).**
2. Connect the series of ESD probes. Ensure that all EOL switches except the last are set to the 'OUT' position; the last EOL switch should be set to the 'IN' position (**Figure 10**).

3.4 Ancillary Devices

3.4.1 Signalling to an Ancillary Device

The AquaGuard Dual can be connected to provide a signal to a range of ancillary devices such as a Building Management System (BMS) or Short Message Service (SMS) alarm unit.

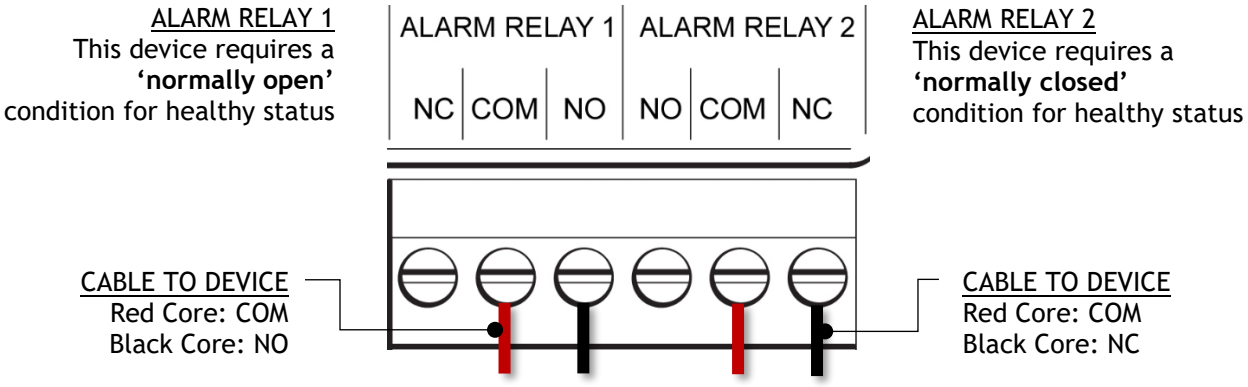


Figure 11: Connection for Signalling to an Ancillary Device

Connect the AquaGuard Dual to an ancillary device as follows:

1. Ensure that the unit is powered OFF. Refer to **Figure 6** to select the correct **relay** for the application.

Connect the relevant relay (**Figure 11**); core colours are for illustrative purposes only and may differ during application).

3.4.2 230V Output to an Ancillary Device

The AquaGuard Dual can be used to control powered ancillary devices such as a beacon or solenoid valve.

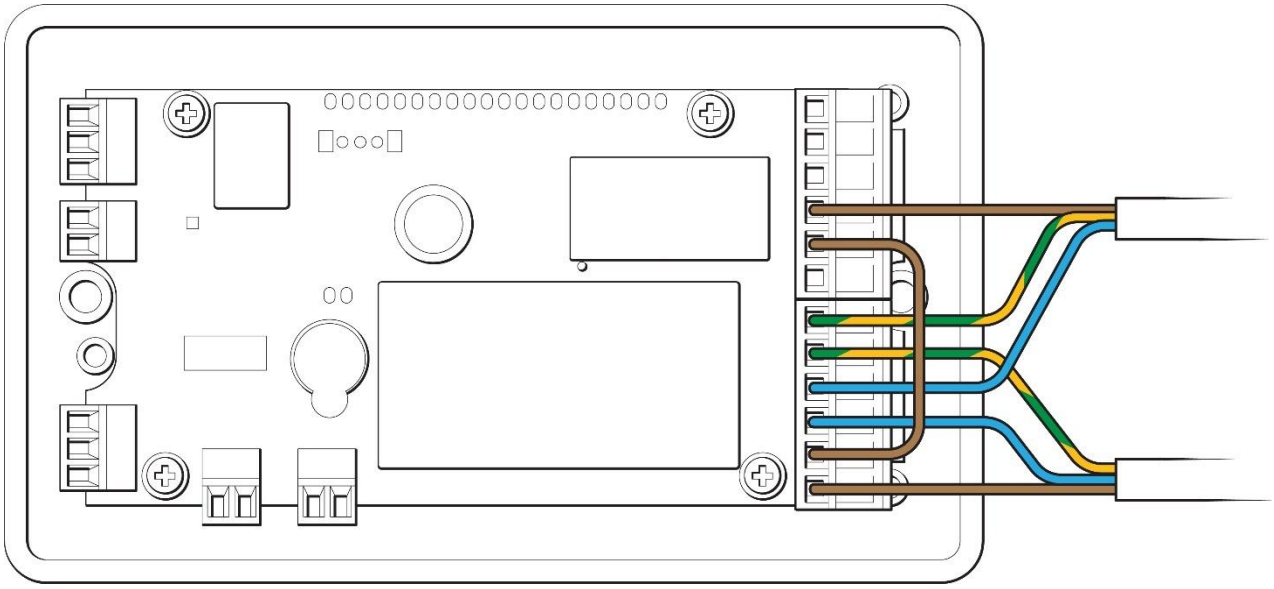


***Figure 12**: Using the AquaGuard Dual to Power a 230V Ancillary Device (Alarm Relay 1: Normally Open)*

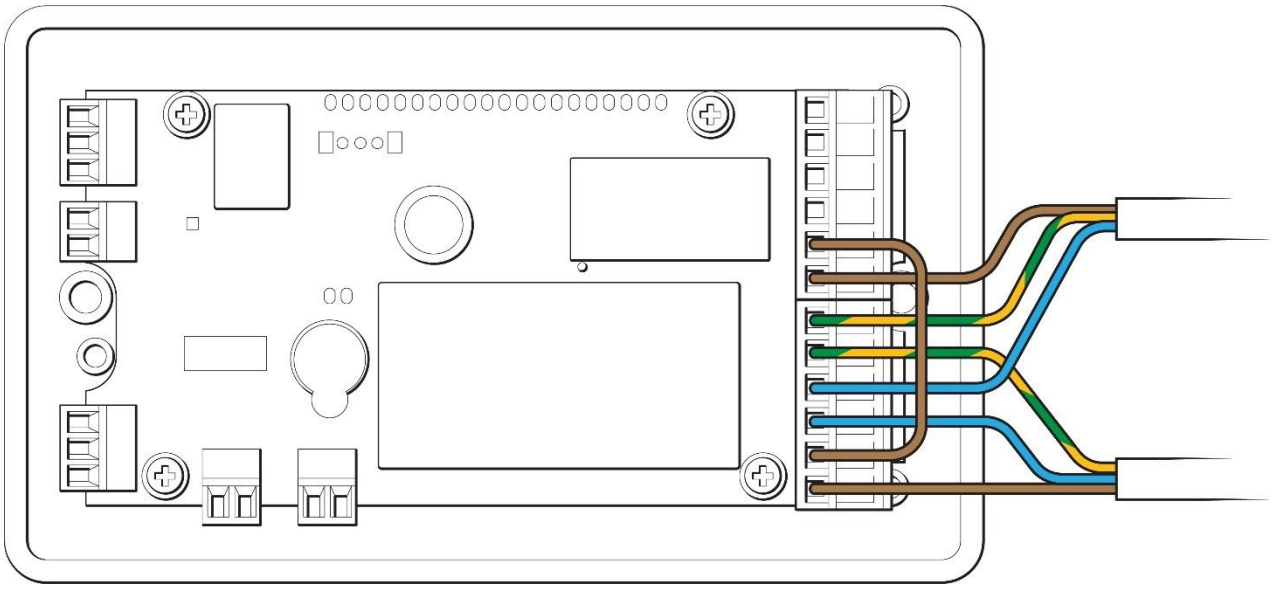


***Figure 13**: Using the AquaGuard Dual to Power a 230V Ancillary Device (Alarm Relay 1: Normally Closed)*

Use the AquaGuard Dual to power a 230V ancillary device as follows:

1. Refer to Section **2.2** and/or **3.3.1 (Figure 4)** to select the correct relay.
2. Wire the device. Wiring is dependent on the labelling of terminals and whether the device is normally open or normally closed (**Figure 12** and **Figure 13** show wiring for normally open and normally closed devices connected to Alarm Relay 1).

In order to limit the effect of potential electromagnetic interference on system performance from high indicytrance components, we strongly recommend that valves, whether purchased from Aqualeak or not, are installed with a snubber and be locally isolated. Snubbers can be purchased seperately from Aqualeak if required.

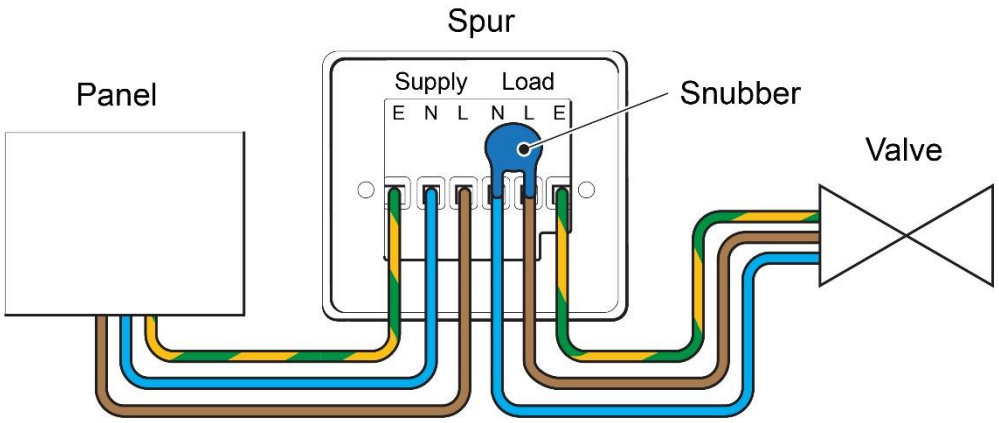


***Figure 14**: Snubber Installation*

4 Menu Settings

The three buttons on the front of the unit are used to access different menus ('Set') and adjust the various settings ('+' and '-').

In general terms, to access a menu, press 'Set'. Once in the required menu, press + or – to adjust the value, as required. Then press 'Set' again to save the value and move to the next menu.

4.1 Passcode Protection

The menu settings are passcode protected to ensure that only authorised people can adjust them.

When on the home screen (**Section 5**), press and hold the 'Set' button for four seconds. This will then prompt you to enter the four-digit passcode supplied to Engineers by Aqualeak. Enter each digit of the passcode by using '+' and '-' and press 'Set' to move from one digit to the next. Once all four digits are correctly entered, press 'Set' and access to all menu settings is given.

4.2 Contrast

This adjusts the contrast of the display.

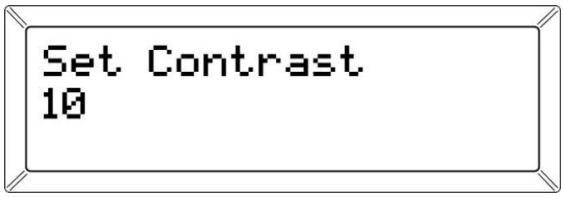


***Figure 15**: Contrast Adjusting Screen*

1. Press '+' and '-' to adjust the display contrast to the preferred level. The contrast of the display will automatically adjust in real time as you change the value.
2. Press 'Set' to save the value and move to the next menu option.

4.3 Maximum Flow Rate

This is the maximum flow rate that the unit will allow to flow through the meter at any given time. Once the flow reaches and/or exceeds this threshold, the valve will close.

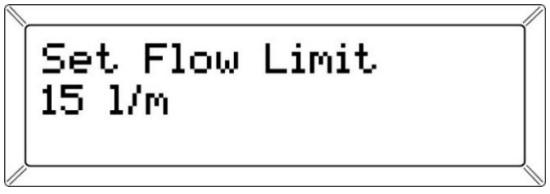


***Figure 16**: Flow Rate Setting Screen*

1. Use '+' and '-' to set the flow rate to the desired limit. This is adjustable in 1 l/m increments.
2. Press 'Set' to save the value and move to the next menu.

4.4 Maximum Time of Flow Rate

This is the maximum amount of time the AquaGuard Dual will allow a constant flow of water (at any flow rate below the maximum) to pass through the meter. Once this is reached and/or exceeded, the valve will close.

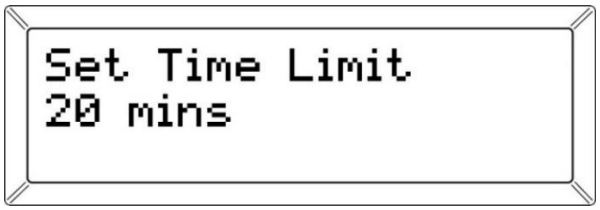


***Figure 17**: Time Limit Setting Screen*

1. Use '+' and '-' to set the time of flow rate to the desired limit. This is adjustable in 1-minute increments.
2. Press 'Set' to save the value and move to the next menu.

4.5 Holiday Mode Time

This menu is used to set the desired time for Holiday mode. If no flow passes through the meter at all during this amount of time, the valve will automatically close.

***Figure 18**: Holiday Mode Time Setting Screen*

1. Use '+' and '-' to set the Holiday mode timer to the desired limit. This is adjustable in 1-hour increments.
2. Press 'Set' to save the value and move to the next menu.

4.6 Valve Exercise Frequency

This is the frequency of when the system will automatically exercise the valve to ensure that it does not seize up.

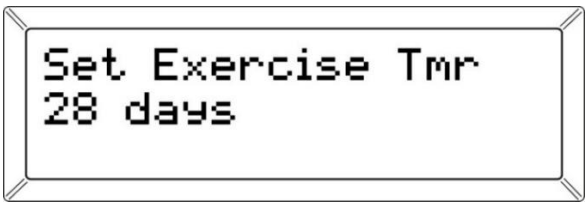


***Figure 19**: Valve Exercise Frequency Setting Screen*

1. Use '+' and '-' to set the frequency you would like the valve to automatically exercise to the desired limit. This is adjustable in 1-day increments.
2. Press 'Set' to save the value and move to the next menu.

4.7 Sensor Sensitivity

This setting adjusts the sensitivity of the sensing circuit to help avoid nuisance alarms.

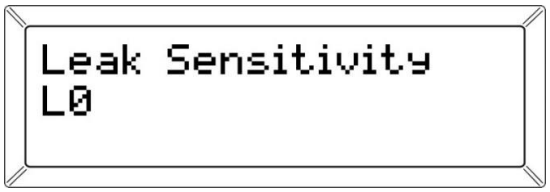


***Figure 20**: Sensitivity Setting Screen*

1. Use '+' and '-' to set the sensitivity to the desired limit. Five levels of sensitivity are available, with '0' being the least sensitive (a higher presence of water is required to activate the alarm) and '5' being the most sensitive.
2. Press 'Set' to save the value and move to the next menu.

4.8 Valve Type

Different types of valves can be connected to the AquaGuard Dual – a latching valve or a solenoid/motorised valve. A latching valve is not held open or closed and changes position when it receives a pulse. A solenoid valve is powered either open or closed and requires a constant power to hold it in position.

***Figure 21**: Valve Type Setting Screen*

1. Use + and - to set the valve type to the desired value. If a latching valve is being used the valve type must be set to 'Pulse' and if a solenoid/motorised valve is being used and is connected to the mains relay, then 'Latch' should be selected.
2. Press 'Set' to save the value and move to the next menu.

4.9 K Factor

The K Factor is the ratio of pulses to l/m and is used by the AquaGuard Dual to convert the pulses received into the correct flow rate.

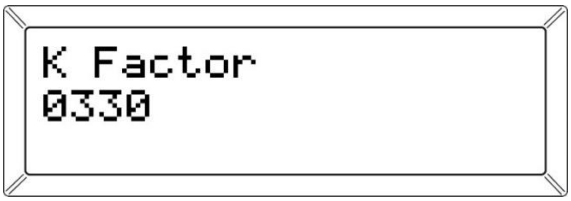


***Figure 22**: K Factor Setting Screen*

1. Use + and - to set the valve type to the desired K Factor.
2. Press 'Set' to save the value and move to the next menu.

The K factor for each meter is given in **Table 3**.

Meter Size	K Factor
22mm (combined meter/valve)	300
22mm (separate meter)	200
28mm	100

***Table 3**: K Factor Values*

4.10 Valve Voltage

The latching valves that can operate with the AquaGuard Dual can be either 6V or 12V. Use this menu to ensure that the correct valve voltage is selected.

***Figure 23**: Valve Voltage Setting Screen*

The latching Valve Voltage for available valves is given in **Table 3**.

Valve Size	Voltage
22mm (combined meter/valve)	6V
22mm (separate meter)	12V
28mm	12V

***Table 4**: Valve Voltage Settings*

1. Use + and - to set the valve voltage.
2. Press ‘Set’ to save the value and move to the next menu.

5 Operation

Ensure you have read the **Safety Information** in **Section 1** before operating this product.

When the AquaGuard Dual has been connected to the associated components and powered on, after a few seconds it will display the home screen, showing default settings, and the power LED will be solid green.

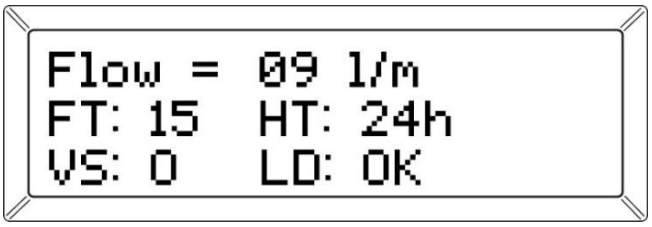


***Figure 24**: Home Screen*

Display	Description
Flow	Current Flow Rate
FT	Flow threshold (maximum flow of water that can flow before valve shuts)
HT	Holiday Time (amount of time there can be no flow before valve is shut)
VS	Valve Status
LD	Leak Detection (status of sensor circuit)

***Table 5**: Home Screen Key*

Once powered on, the AquaGuard Dual Leak Detector maintains a **background timing scheme** while continuously **monitoring sensor and sensitivity levels**. The unit continuously monitors connected **Aqualeak sensors** to determine if a **cable fault** or **leak** has occurred.

System status is displayed via **indicator LEDs** and **operation** is undertaken via **capacitive touch buttons** located at the front of the unit as shown in **Figure 25**.

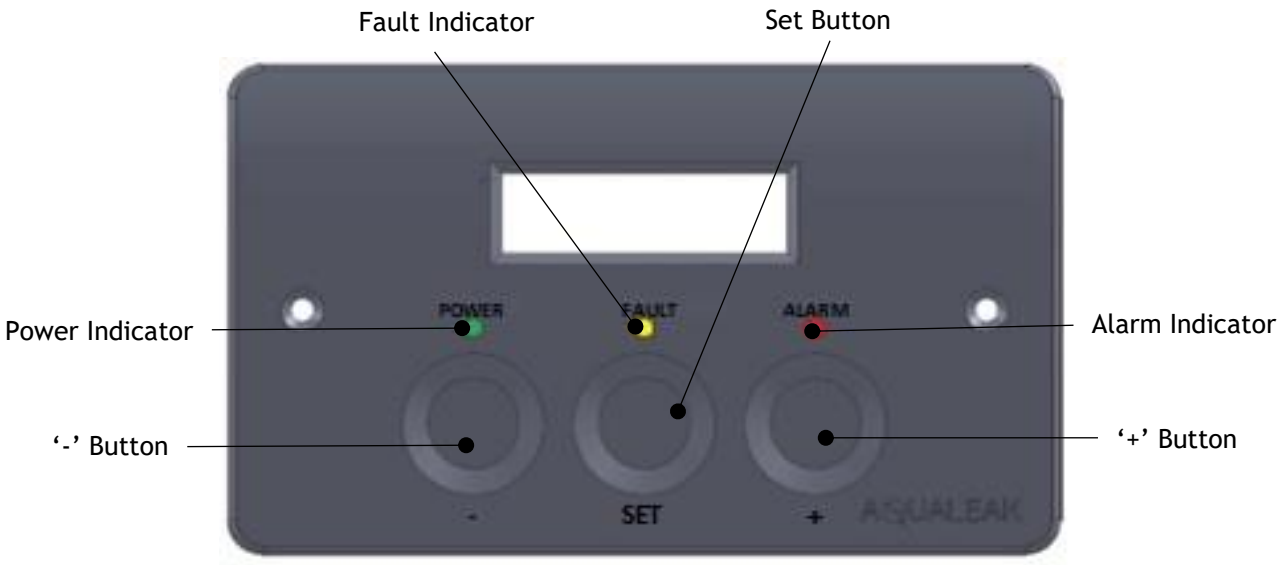


***Figure 25**: Front Panel of the AquaGuard Dual Water Leak Detection System*

AquaGuard Dual Indicator Mode	Description
Power	Standard monitoring mode.
Fault	Cable break detected.
Alarm	Leak detected.

***Table 6**: Indicator Modes*

5.1 Monitor Mode

Monitor Mode is the AquaGuard Dual standard mode of operation. The green Power LED will be lit in Monitor Mode.

5.2 Fault Mode

The AquaGuard Dual monitors the continuity of the sensing circuit. If a break in the circuit is detected the AquaGuard Dual will go into Fault Mode. An audible alarm will sound and the fault LED will flash amber. Once the fault is resolved the panel will automatically reset.

Please note that the valve does not close in the event of a circuit fault. In addition, there is no manual override to the Fault Mode alarm; it can only be stopped by resolving the fault.

5.3 Alarm Mode

When a threshold is exceeded, or the sensor comes into contact with water, the AquaGuard Dual unit will go into Alarm Mode. An audible alarm will sound and the alarm LED will flash red.

When the AquaGuard Dual is in Alarm Mode, press 'Set' to mute the alarm. The alarm LED will now be solid blue. Once the leak has been investigated and resolved, press 'Set' again to reset the unit. If the cause of the leak has been removed, the system will return to standard Monitoring Mode. If the leak condition is still present, the AquaGuard Dual will go back into Alarm Mode.

5.4 Manual Override

5.4.1 Manual Open

To allow for a known excess use of water, such as car washing or garden watering, the unit van be put into Manual Open mode.

To manually open the valve:

1. When in the home screen press '+'.
2. Press 'Set' to return to automatic Monitoring Mode.

The unit will ignore flow and time threshold settings whilst in manual open mode. After 1 hour, the unit will automatically return to Monitoring Mode.

5.4.2 Manual Close

When leaving the property or in an emergency, the unit can be put into Manual Close mode.

To manually close the valve:

1. When in the home screen press '-'.
2. Press 'Set' to return to automatic Monitoring Mode.

6 Maintenance

Ensure you have read the **Safety Information** in **Section 1** before undertaking maintenance.

6.1 Cleaning

✓ Clean the outside of the unit only. Use a dry, clean cloth.

✗ **DO NOT** use abrasive agents or solvents to clean the equipment.

7 Troubleshooting

The table below lists the most common problems and their solutions. If a problem cannot be solved then please call support on **+44 (0)1249 715698** or visit our website at www.aqualeak.com.

Problem	Possible Cause	Possible Solution
System does not power on	**Power cable** is incorrectly connected	Check the power cable. Review **Section 3.1.2.**
	Unswitched fused spur is faulty or inactive	Check fuses and power on the unswitched fuse spur. Review **Section 3.4.1.**
Sensor data is intermittent or inactive	Sensors not connected properly	Check Leader Cable and connections. Review **Section 3.3.1.**
Leak detected but no leak present	Sensors are touching something conductive	
	Sensitivity of the unit is set too high	
	Sensors have debris on them	Clean sensor cable.
Cable Fault detected	End of Line switch not engaged in ESD probe or EOL plug not installed in end of sensor cable	Connect resistor version of sensor at end of run. Review **Section 3.3.**
	Break in cable	Check cable. Review **Section 3.3.**
	Unsound connection(s) in cable	Check cable connections. Review **Section 3.3 and 5.2.**
	Faulty sensor or leader cable	Check cables. Review **Section 5.2.**
Valve keeps closing as soon as I take a shower	Flow sensor needs adjusting	Turn shower on and check flow reading. Set flow set-point to just above value. Review **Section 3.3.**
		Set time set-point to just a little longer than you normally spend in the shower. **Review Section 3.3.**
Valve closes when washing the car or watering the garden	Requires override	Use the manual open facility to override the alarm timer. Review **Section 3.3.**

***Table 7**: AquaGuard Dual Troubleshooting*

8 Warranty

The Aqualeak AquaGuard Dual Water Leak Detector has a **2 year back-to-base warranty** as standard, and a **5-year warranty when annually maintained by Aqualeak**.

The warranty is applicable from the original purchase date and includes repair or replacement if the product is defective. The following exclusions apply:

- ✕ If the system is purchased second hand. Only new products are covered.
- ✕ Persons not named as the original purchasers on the order information.
- ✕ Physical damage to the unit due to abuse, accident, neglect, or misuse. This includes:
  - Damage caused by water or other liquids.
  - Damage caused by connection to incompatible power sources.
  - Damage caused by connection to incompatible devices not manufactured by Aqualeak.
  - Damage caused by improper installation (i.e. not following the instructions provided).
  - Normal wear and tear.
  - Unauthorised attempts to repair, modify, or disassemble the item by unqualified persons.

For further information on our warranty and returns procedure, contact us on **+44 (0)1249 715698** or visit our website at www.aqualeak.com.

AQUALEAK

Only for EC countries:

Do not dispose of Master Unit and Outstations into household waste!

According the European Guideline 2002/96/EC for Waste Electrical and Electronic Equipment and its implementation into national right, measuring tools that are no longer usable must be collected separately and disposed of in an environmentally correct manner.