

Waterguard

WATERGUARD S7 DUAL TECHNICAL SPECIFICATION

**PART OF THE WATERGUARD
SERIES 7 COMMERCIAL RANGE OF WATER LEAK
DETECTION EQUIPMENT**



WATER LEAK DETECTION EQUIPMENT INCLUDING COMPLETE BREEAM WAT02 COMPLIANCE

Internal only water leak detection for multi-use commercial buildings.

Designed to fully comply with BREEAM WAT02 assessment criteria for water monitoring and leak detection, the S7 Dual system will detect any minor and major water leak from 2 separate incoming mains with individual settings independent from each other.

This system will identify different flow levels using a pulse sensor sent to the control panel after every 1 or 10 litres of water flow, identifying leakage rates, e.g. continuous, high and/or low level, over set time periods with a self-learning audit function which monitors normal consumption.

The S7 Dual BREEAM compliant water leak detection system reduces consumption of potable water through the effective management and monitoring of a buildings water consumption, helping individuals and businesses meet their net zero carbon future targets. Multiple isolation valves can be added to protect against the damage and disruption caused by leaks.



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The controller is completely adaptable to suit the user's requirements and water usage with several adjustable parameters and operational features.

Adjustable Parameters

The S7 Dual can analyse water usage by volume per ½ hour, hour, guard period or 24-hour period. The system has two separate menus for perimeter setting and day to day operation, the operating and Guard menus. The Guard Menu is used to input user specific requirements as below:

- Maximum litre allowances in each guard period or per 24 hours.
- Maximum override time.
- Guard mode to suit buildings timetable.
- The building timetable.

The BREEAM logo is displayed in a bold, green, sans-serif font. The word "BREEAM" is followed by a registered trademark symbol (®).

Features and Benefits

- Activated when water flow is at a flow rate above a pre-set maximum for a pre-set time.
- Able to identify different flow and therefore leakage rates.
- Available for pipe sizes 15mm to 200mm.
- 12V DC and 230V AC versions available.
- Full events log for checking detailed activity.
- Fully programmable to suit the owner/occupiers' water consumption criteria.
- Override function to avoid false alarms.
- Schedule up to 3 manual overrides per day allowing up to 120 minutes of unlimited water.
- Audible and visible alarm when activated by a detected leak.
- An integrated back-up battery will continue to power the controller for many months in the event of a mains power loss.
- Power warning options: Mains fail, low battery, both, or none.
- Available with or without automatic shut off valves, valve requirement dependent on application.
- Connect to two valves as standard, unlimited valves can be connected when used in conjunction with an additional valve driver.
- Compatible with water meters with pulsed outputs of 1, 10 & 100 Litres per pulse.
- Meter readings visible from the controller with comparison data to show water going to ground when a boundary meter is connected.
- Output link available to BMS.
- Input link available to alarm system for automatic guard switching.
- Option to automatically switch guard level to high after 25 hours of no water use.
- Automatic audit function records maximum litres of water used in high and low guard periods.
- Audit can be used to automatically set system parameters.
- Option to automatically shut off water supplies outside operational hours.
- Connection available to booster/header tanks and pumps to isolate power in the event of a leak.
- Optional Waterguard Pulse Splitter allowing an additional pulse count to be sent to the BMS.
- Use in conjunction with the Waterguard PIR systems to isolate the water supply in frequented toilets and wet areas.

APPLICATIONS

The Waterguard S7 Dual was designed for multiple occupancy commercial buildings. These include retail buildings, industrial estates, logistic parks, and leisure centres. This system is also suitable during construction to separate the welfare supply from the man site and in hotels to separate the different facilities.

Visit our [projects page](#) to view case studies from clients and contractors who are already using the Series 7 range to protect their sites.

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INSTALLATION AND COMMISSIONING

This control panel which requires a mains power supply is usually wall mounted in the buildings plant room but can be installed anywhere that is accessible to hear and see the alarm output. The control panel is then linked to the water meter(s) using 2 core cable (not supplied), (1mm² up to 100 meters and 1.5mm² up to 150 meters).

Please note: Latching solenoid valves connected to the S7 Dual up to 2" have a maximum voltage of 6vdc and come equipped with a manual override. The Series 7 range is not compatible with any other solenoid valve.

It is important to update the system parameters and commission each time the building is expected to experience long term dramatic changes in water consumption. A dedicated telephone contact is available for assistance during this time. Onsite commissioning when a certificate from the manufacturer is required is available at an extra cost by one of our engineers when the building is operational.

TECHNICAL DATA

Waterguard S7 Dual: Only to be installed internally usually with the internal water meter. 500 metres max pulse circuit length. Lengths over 50m, cable should be grounded to prevent interference. Connect ground at controller end only.

Size (W x H x D)	145 x 85 x 50mm
Meter channels	1 or 2 channel
Valve channels	1 or 2 channel as standard. Unlimited isolation valves can be connected*
Power	12vdc 250mA/72 Mw (Transformer Included) or 100/230V AC, 50/60Hz, 0.15A
Volt free relay	24vdc, 1 amp
Burst power	840mW for 5 seconds
Rechargeable back up battery	AAA size, NiMH, 1.2V nominal, 850MaH
Initial back up battery charge time	Flat to full in 5 days
Expected battery life	5 year
Pulse output to BMS	1 or 2 channel*
Alarm output	Max switching voltage 30V, max switching current 100mA
Max operating pressure	16 bar when used with Waterguard valves and supplied water meters
Approvals	EMC Directive 2014/30/EU RoHS Directive 2011/65/EU. EMC EN 61000-6-3:2007+A1:2011 & EN 61000-6-1:2019 UKCA

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Valve(s): The Waterguard latching solenoid valves connected to the S7 Dual up to 2" have a maximum voltage of 6vdc and come equipped with a manual override. The S7 Dual is not compatible with any other solenoid valve.

15mm – 54mm solenoid	6vdc derived from the control panel
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50mm – 200mm valve driver output	150mS burst, capacity discharge, rated for 6V, 6W bipolar valve
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Water Meter(s): Compatible meters supplied are Itron Aquadis and Apatar Woltman ranges. Third party meters used must be capable of supplying a dedicated volt free pulse for volumes of 1/10/100 litre(s).

Meter input	Supplies 3V at 3mA, 20uS pulse at 2Hz
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For full technical data on compatible water meters and valves please visit the [S7 Dual Product Page](#).