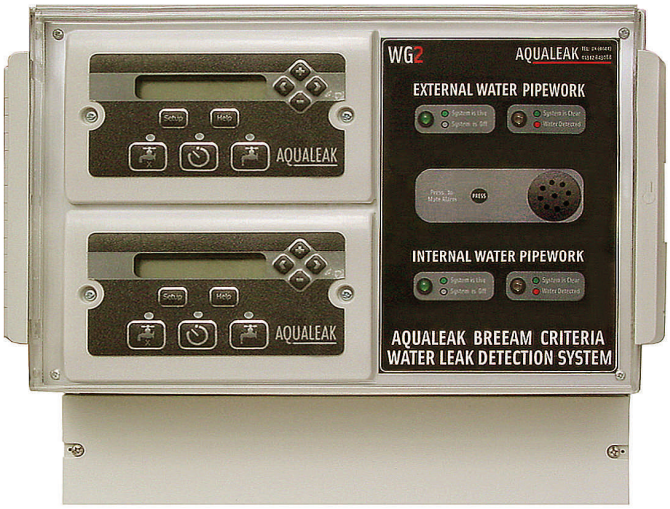
BREEAM WG2 SYSTEM

Turbine Sensor



WG2 System

BREEAM Credit Criteria specify that "One Credit is awarded where a Water Leak Detection System is specified or installed. " A conventional sensor cable or sensor probe type of Water Detection System (which we also manufacture) would not be suitable for this application, nor would it meet the BREEAM Criteria. Under BREEAM the system must be capable of identifying major leaks both inside and outside the building, and should cover all mains supplies to the building. As the WG systems use Turbine Water Meter Sensors, an additional BREEAM credit would be awarded under the Water Meter section.

To achieve the specified Criteria W03, BREEAM require two specific monitoring systems for this application. The first System monitors the flow of water between the boundary and the stop-cock in the building, i.e. the external supply pipe. The second System, fitted just after the stop-cock, would monitor for leaks within the building i.e. the internal pipework. For normal BREEAM requirements we would supply our two zone WG2 Control Unit which combines internal and external monitoring in one cabinet. Leak Detection sensing would be carried out by two Turbine Sensors, one external and one internal. For single pipe monitoring requirements, or for individual monitoring of specific pipes, the standard single zone WG 1 System would be sufficient.

The BREEAM WG System is comprised of three primary items: the WG Control Unit Type WG2, the two Display Modules and the two remote pulsed turbine Water Meters. The BREEAM WG2 Controller should be wall mounted adjacent to the stopcock and requires a mains power supply spur. The Control Unit should be linked by two 1mm sq copper 3 core (or 4 core) signal cables to the two Turbine Sensors. One Turbine Sensor should be fitted in the external Metering Pit, or in a pit at the property boundary, and the second Turbine Sensor just after the stopcock within the building. The cabling to the external Turbine can be laid in the water pipe trench. Subject to size, the Turbine Sensor has BSP threads or flanges at each end.

The WG System operates on the basis of monitoring the quantity of water flowing through the Turbine Sensor by counting the pulses emitted by the Sensor. The two modules will need programming for normal water usage and will only alarm if any abnormal water usage is detected. Parameters are adjustable for rate of water flows, days of the week and occupancy periods. As the BREEAM Criteria does not require water shut-off, no solenoid valve are provided with the system as standard. However if a valve was fitted, the system can then either turn off the water completely at a specified time, or can be set to switch off if a pre-set volume of flow is exceeded. The Controller can be provided with an integral timer which can provide shutoff in unoccupied periods. On excessive water flow being detected, the WG Controller as standard provides a signal to operate solenoid valve/s (where required) and a signal to link to an external alarm system (where required).

Under normal operating conditions the WG Controller shows two green lights: 'System is Live' and 'System is Clear'. When a water leak is detected, the screen on the Display Module flashes "LEAK DETECTED". The WG Controller System Clear lamp changes to red indicating Water Detected. Simultaneously the two Alarm Change-over Relays activate providing onward alarm signalling. The Horn would sound. Pressing the 'water on' sign on the Display Module facia will silence the Horn and will return the system to normal. If it is required that the 'alarm state' remains latched, pressing the Mute Alarm on the WG Controller instead will silence the Horn but will leave the alarm latched. When required, pressing the 'water on' sign on the Module facia will return the system to normal operation.

As previously mentioned, a second BREEAM Credit W02 is obtained "where a Water Meter with pulsed output is installed on all mains supplied to the building ". To allow water metering to be monitored by a BMS system, then we now provide as standard a "Pulse Splitter" - a Dual Pulsed Output system. The second pulsed output provides input to a monitoring system or BMS. Each pulse equates to 10L of water consumed.

The only connections required to the WG Controller are Mains Power, a link to the Water Meter, and to any output alarms. If a valve is fitted, connections are to valve terminals in the Controller. The Valve would require to be a latching 5VDC type available from T&D. Remote output alarms can be connected to Controller PCB Terminals marked ALARM. Both sets of Terminals are of the changeover type and are rated 240v AC 6amp. A RESET Relay rated 240V AC 2amp is provided which can be used by the BMS to 'time/date stamp' when the mute button had been pressed to indicate when the alarm was acted upon, or can be used to mute an external remote sounder.

Size WG1mm : 200W x 150H x 77D. Size WG2mm : 296W x 256H x 118D. Size of Turbine Sensors: subject to pipe diameter.

THORNE AND DERRICK UK – LEAK DETECTION
TEL: 0044 (0)191 490 1547 FAX: 0044 (0)191 477 5371
TEL: 0044 (0)117 977 4647 FAX: 0044 (0)117 477 5582
WWW.HEATTRACING.CO.UK
WWW.THORNEANDDERRICK.CO.UK
e-mail: northernsales@thorneandderrick.co.uk