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Made In Britain

Water Leak Detection System for internal & boundary water metering to BREEAM Wat 01, 07 & 08 for existing and WAT 02 & 03 for New Buildings

Standard Features

- **Fully programmable to suit users requirements**
- **Constant Flow Alarm, initiates an alarm and turns off the water if the water flow is constant**
- **Two adjustable monitoring levels, Occupied (High Flow) and Unoccupied (Low Flow)**
- **Programmable flow monitoring periods for both High and Low flow periods**
- **Water meter reading, Max & Min flow counters. BLDA-2 unit also includes Boundary loss counter**
- **Audible and visual warnings for High Flow, Low Flow. BLDA-2 system also includes boundary loss**
- **Easy to navigate display system and one time setup procedure**
- **Back lit, four line alphanumeric display to show clear readings and alarms**
- **High flow alarm volt free contact for remote alarm monitoring**
- **Low flow alarm volt free contact for remote alarm monitoring**
- **Boundary alarm volt free contact for remote alarm monitoring (system BLDA-2 only)**
- **Water shutdown valve control Volt free contacts to allow any shutoff valve to be used**
- **Inhibit alarm / shutdown time period facility - to allow occasional known high volume water**
- **Shutdown valve override facility**
- **System will interface with either Reed Relay or Solid State water meter pulses**
- **Input water meter pulses can be set to 1, 10 or 100 litres per pulse**
- **Solid state output meter pulse provided for remote monitoring by a BMS**

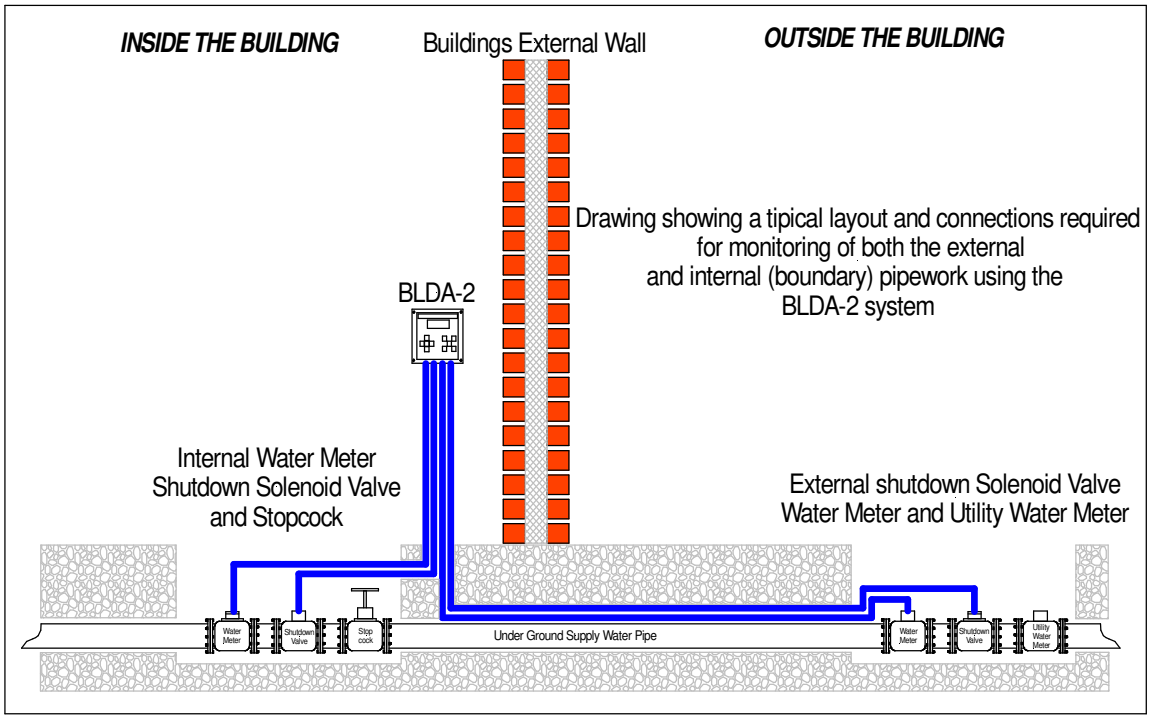
Optional Equipment

- **12 hour battery backup and power fault output relay to BMS**
- **Electrical socket sized remote audible and visual alarm unit for local alarm of a water leak**

Breeam Water Leak Detection

Principle of Operation

Being fully programmable to suite users requirements, the alarm unit is connected to two water meters installed in the main water supply pipework. One meter to be positioned as the pipe enters the building, the other at the start of the supply pipe. Optional water shut off valves can be provided to stop the flow of water in the event of an alarm. Meters can be existing but must be fitted with a devise that will give a pulse output proportional to the flow rate and can be either 1, 10 or 100 litres per pulse. The systems monitors the flow of water through the buildings internal meter and external meter. This monitoring raises an alarm and can if required shut of the water supply when a continuous flow of water passes through the internal and or external water meter that exceeds a pre-set maximum amount of allowable water for a pre-set period of time. By setting realistic flows and time periods any increase above the user defined settings will be detected and can be dealt with thereby saving water and limiting damage caused by a major leak.



Breeam Water Leak Detection

Under Breeam, credits are awarded where a water leak detection system or water consumption monitoring is specified or installed. The system must be capable of identifying major leaks both inside and outside the building, and should cover all water supplies to and within the building and between the building and the external utility meter.

How will the BLDA-2 meet Breeam requirements ?
Under BREEAM Technical Manual version 6.0.0 for existing (In-Use) buildings and Technical Manual version 6.0.1 for new constructions, credits can we awarded provided certain water monitoring and control equipment are provided.

Existing (In-Use) buildings.
The BLDA-2 meets the requirements of and conforms to BREEAM WAT 01, water monitoring, WAT 07, water leak detection.

New Construction buildings.
The BLDA-2 meets the requirements of and conforms to BREEAM WAT 02, water monitoring and WAT 03, water leak detection.

The BLDA-2 complies to WAT 01 (In-Use) and WAT 02 (new build) by using a water meter with a pulsed output to record the volume of water passing through it during high and low usage periods i.e. high flow period, 7.00am to 8.00pm, low flow period 8.00pm to 7.00am. Fully adjustable independent high / low flow period setting for each day of the week are provided giving user flexibility and maximum control. Not only does the unit record the total usage of water as an on going tally, but give the maximum volume of water during the two flow periods. If required, the unit can also provide a water meter pulse output for use by BMS or other monitoring systems. The system conforms with WAT 03 (new build) and WAT 07 (In-Use) by setting limits on the volume of water that can flow during the high and low flow periods i.e. high flow period, 7.00am to 8.00pm, low flow period 8.00pm to 7.00am. Once the volume limit is exceeded the unit will instigate an audible and visual warning and advise the BMS by closing its volt free alarm contact. In addition a water shutoff device can be provided, this being a ball valve to give maximum water flow when open, will turn off the supply when the system detects a flow of water that exceeds its adjustable maximum flow settings. In addition to the maximum flow, the BLDA-2 monitors water flow for constant, unbroken flow of water. If the unit detects that water has flowed for a period of time without a break i.e. a leak, the unit will setup an alarm and turn off the water supply via the valve.

Installation

The alarm unit is wall mounted and requires a 230VAC 5amp fused supply. The alarm unit should be linked to the pulsed water meters by a 1mm² conductor 2 core screened cable up to a maximum 400 meters away. Pulsed water meters usually have BSP thread connections up to 50mm, above 50mm PN16 flanged connections are used. If shutoff valves are required they should be installed just after the water meters. Additional connections can be provided to a Building Management System, Remote alarms or Texted Messaging Systems for the following;

1) High Flow Alarm
2) Low Flow Alarm
3) Boundary Alarm
4) Water Meter 1 output pulses to remote water flow counter, PLC or BMS
5) Water Meter 2 output pulses to remote water flow counter, PLC or BMS
6) Remote 12VDC Beacon
7) Remote SMS text messaging system

Breeam Water Leak Detection

Internal Clock
The internal clock can be adjusted from internal push buttons and has both leap year and British summer time compensation.

Maximum size of water meter
Any size of water meter can be used providing it has a 1:1, 1:10 or 1:100 pulsed output.

Specification

Housing type	ABS Plastic, Light grey
IP Rating	IP60
Mounting	Wall, or surface
Size	180mm wide x 180mm high x 80mm deep
Input power	50 Hz single phase 230VAC +/- 10%
Burden	< 12VA
Power termination	Internal 3 way terminal block
Voltage to pulsed water Meter	12 VAC
Water meter Pulse interface	Volt free Relay contact or solid state relay
Selectable Pulse Rates	1, 10 or 100 litres per pulse
Maximum input pulses per second	12
High Flow Alarm Output	Volt free changeover contacts rated at 1A, 30VDC
Low Flow Alarm Output	Volt free changeover contacts rated at 1A, 30VDC
Boundary Loss Alarm Output	Volt free changeover contacts rated at 1A, 30VDC
Meter 1 (internal) shutdown Valve Control	Volt free changeover contacts rated at 3A, 230VAC
Meter 2 (External) shutdown Valve Control	Volt free changeover contacts rated at 3A, 230VAC
LCD Display	4 x line 4mm high, 20 character back lit in white LED light
Time Clock	Adjustable real time clock with battery backup
Access	Top, bottom , back or side