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Water Leak Detection System to BREEAM Wat 02 & 03 Type BLDA-2



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

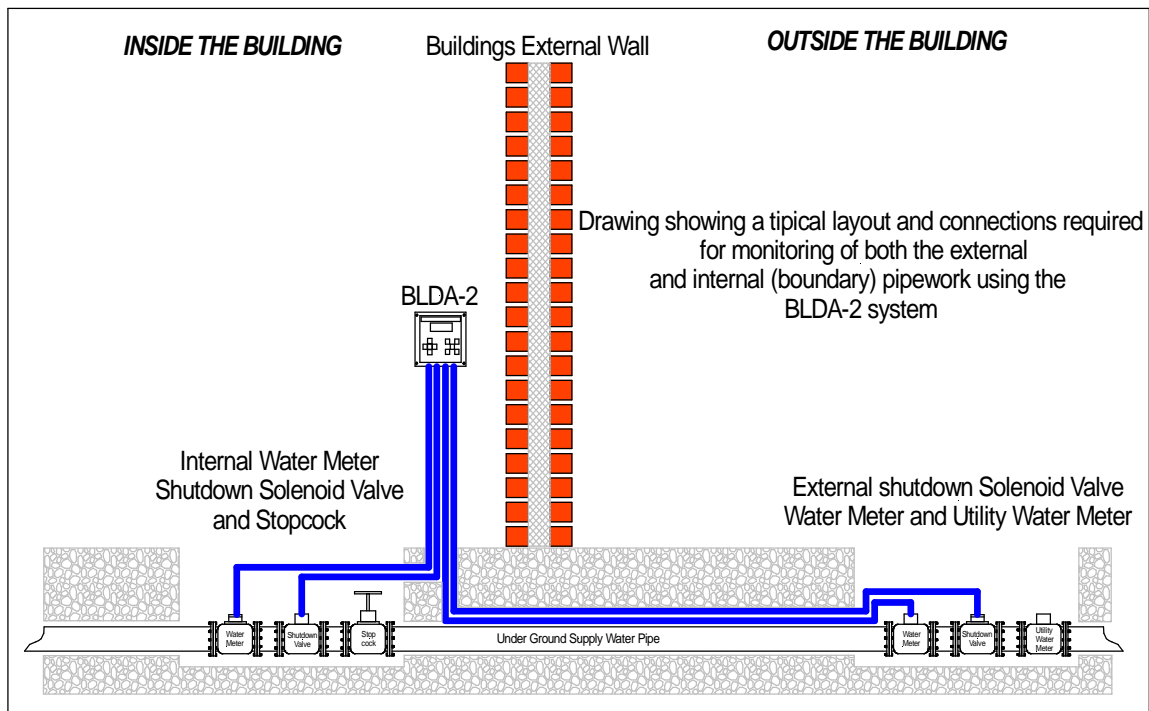
- 12 hour battery backup and power fault output relay to BMS
- Electrical socket sized remote audible and visual alarm unit for local alarm of a water leak



Bream 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 device 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.





Breem Water Leak Detection

Under Breem, one Credit is awarded where a Water Leak Detection System 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. Breem requires two specific monitoring systems, one to monitor the external water supply between the boundary and the buildings stopcock and a second fitted just after the buildings stopcock to monitor for leaks within the building. As our systems use pulsed water meters, additional credits can be claimed under the Water Meter section of Breem .

Will the unit Meet Breem Wat02 requirements?

The BLDA-2 system can be used for water monitoring. The aim of WAT02 is to manage and encourage reductions in water consumption. A pulsed water metre is required on all Water mains and on the supply to any building using more than 10% of the total water consumption. Both systems connects to the water metres and to the Building Management System to monitor the amount of water used.

Will the unit Meet Breem Wat03 requirements?

The system has been designed to meet WAT03. requirements and will raise an alarm when the water flow exceeds a pre-set maximum for a pre-set period of time. The alarm unit can identify different flow rates by programming high and Low Flow rates over different periods time. The system is fully programmable to suit the buildings water consumption, with the ability to avoid false alarms when higher volumes of water are needed.

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



Breem Water Leak Detection

Credits available under Breem Wat03

For One credit the following is required to demonstrate compliance

1. A leak detection system which is capable of detecting a major water leak on the mains water supply within the building and between the building and the utilities water meter.
2. The leak detection system is:
 - a. Audible when activated
 - b. Activated when the flow of water passing through the water meter/data logger is at a flow rate above a pre-set maximum for a pre-set period of time
 - c. Able to identify different flow and therefore leakage rates, e.g. continuous, high and/or low level, over set time periods
 - d. Programmable to suit the owner/occupiers' water consumption criteria
 - e. Where applicable, designed to avoid false alarms caused by normal operation of large water-consuming plant such as chillers.

For an additional one credit the following is required to demonstrate compliance

3. One of the following types of flow control device is fitted to each WC area/facility to ensure water is supplied only when needed (and therefore prevent minor water leaks):
 - a. A time controller i.e. an automatic time switch device to switch off the water supply after a predetermined interval
 - b. A programmed time controller i.e. an automatic time switch device to switch water on and/or off at predetermined times.
 - c. A volume controller i.e. an automatic control device to turn off the water supply once the maximum preset volume is reached.
 - d. A presence detector and controller i.e. an automatic device detecting occupancy or movement in an area to switch water on and turn it off when the presence is removed.
 - e. A central control unit i.e. a dedicated computer-based control unit for an overall managed water control system, utilising some or all of the types of control elements listed above

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