

SENSELEC[®] INFRA-RED CONTROLS

Electronic controls
which help prevent
water wastage and cross
contamination in shared
washroom and toilet
facilities.



The Safety Valve Specialist

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Water savings explained

Increasing demand for water from limited resources has provoked awareness for the need to control wastage, not only to reduce the cost of our water supply and disposal but also to limit the effects that such water consumption has on the environment in which we live. To control this, it is imperative that we try to conserve as much water as we can whilst carrying out our daily routines of washing, cooking and bathing. Water efficiency and water conservation are quickly becoming a key feature of system design, particularly emphasised in the revision of part G of the building regulations, which stipulates a water usage limit of 125 litres per person per day.

Reliance Water Controls offers a wide range of water saving devices which can be installed in either domestic or commercial properties to help limit daily water consumption.

Use of such water saving devices can attract the award of points by the British Research Establishment – Energy Assessment method (BRE-EAM): this means that this type of system complies with the environmental control for energy efficiency, which is part of the building regulations part I and considered by developers as an increasingly important issue when designing and planning a project.

In commercial water systems, there is generally a higher risk of water wastage than in domestic systems, due to abuse and vandalism which can occur with water fittings in public places. Stories of vandals plugging up sinks, turning on taps full bore until water floods into hallways in schools, sport centres, cell blocks, etc are all too common.

Water is regularly wasted in all houses and public areas. How much is wasted is hard to calculate – however, consider this:

- A dripping tap could waste as much as 90 litres in a week
- Brushing your teeth with the tap running wastes almost 9 litres a minute
- Taking a five minute shower instead of a bath saves up to 400 litres a week

If you multiply these numbers by the amount of households and commercial properties in the UK, it is clear that a huge amount of water could be saved each year. Whilst that does not mean to say that the public are to blame for all water wastage – there are numerous underground water pipes which leak and waste water every day and which need to be tackled by water companies and the government – it still represents a huge potential saving of unnecessary water use.



With this in mind, organisations have set up schemes to help people benefit from using water efficient products: for example, the Water Technology List provides information on water-saving products which qualify for up-front tax relief. Products included on this list have been independently tested by Defra and the ECA to ensure that only items which meet with their performance criteria are accepted.

Avoid cross contamination

Infection from cross contamination can be a serious and health-threatening problem in shared facilities. The infra-red activation of Reliance's Senselec® IR range allows the user to flush and wash without touching the controls or outlet at all.

A no-touch, 'hands-free' system of operation is of value in many environments, and particularly in healthcare premises, of course, where the risks and potential consequences of cross contamination are at their greatest.

Senselec® IR Shower Controls

A range of wall and panel mountable IR shower controls for use where water control and hygiene are of high concern. The sensor sends a micro-second long pulse to the solenoid valve when a presence is detected within the sensing field. The solenoid then opens and closes for a pre-programmed time period of 2 minutes (unless the user moves away in less time, then the shower will shut off). The solenoid valves are a magnetically latching type, which means that they use only a very small amount of energy each time they open and close.

Product Range

Battery Operated

- SENS 250 150 Senselec® IR Shower Package, Cross Wall 150mm Fitting, Vortex Spray
- SENS 250 155 Senselec® IR Shower Package, Cross Wall 150mm Fitting, Grid Spray
- SENS 250 160 Senselec® IR Shower Package, Panel Mount 50mm Fitting, Vortex Spray
- SENS 250 165 Senselec® IR Shower Package, Panel Mount 50mm Fitting, Grid Spray

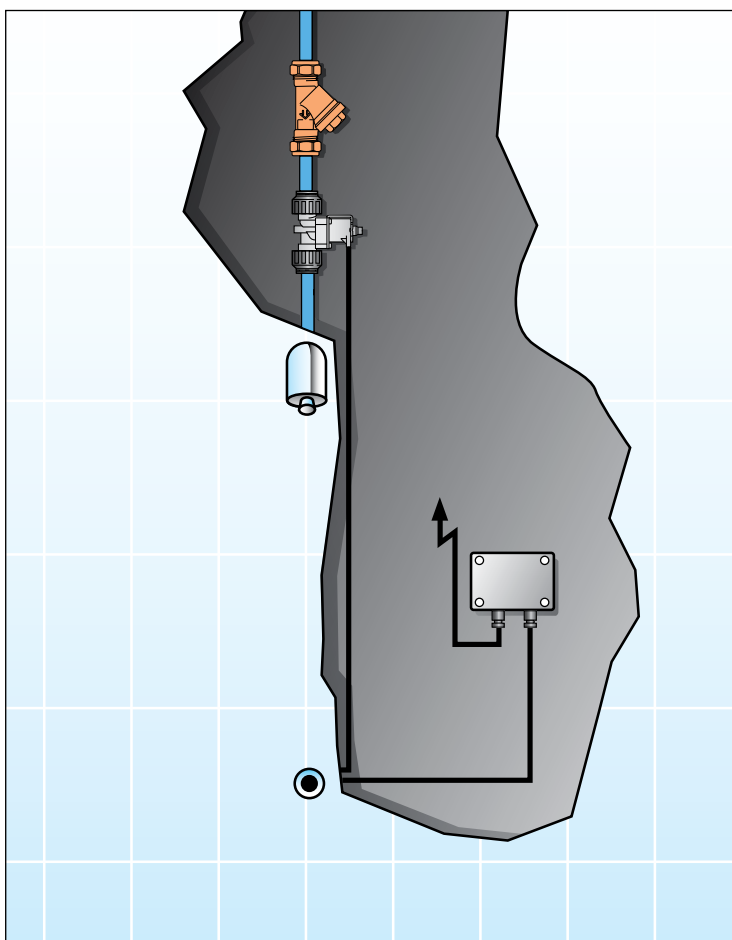


Stabilised Mains Power Supply

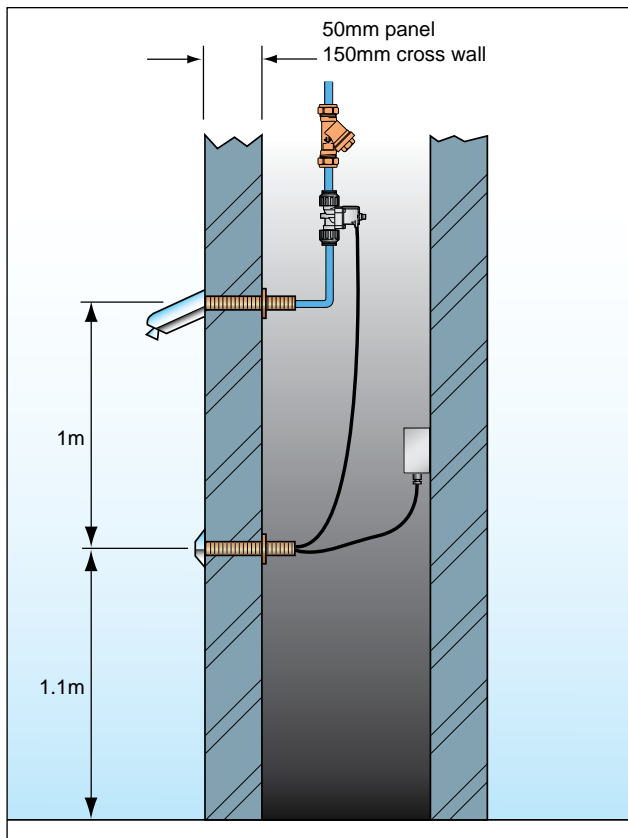
- SENS 251 150 Senselec® IR Shower Package, Cross Wall 150mm Fitting, Vortex Spray
- SENS 251 155 Senselec® IR Shower Package, Cross Wall 150mm Fitting, Grid Spray
- SENS 251 160 Senselec® IR Shower Package, Panel Mount 50mm Fitting, Vortex Spray
- SENS 251 165 Senselec® IR Shower Package, Panel Mount 50mm Fitting, Grid Spray



Typical Installation



Typical Installation



Specifications

Minimum operating pressure	0.5 bar (grid spray)
Minimum operating pressure	1.0 bar (vortex)
Maximum operating pressure	5.0 bar
Maximum water temperature	70°C
Power supply	6 Volts
Typical consumption	28µA
Maximum consumption	40µA
Adjustable detection range	50mm - 250mm
Factory detection setting	50mm
Detection angle	8°
Running time	2 mins
Valve pulse time	20ms
Length of supply wire	2.9 metres
Length of solenoid wire	2.9 metres
Flow regulator	8 lpm

Standards

BSEN 15091

Approvals

WRAS Solenoid Valve 0610050

Senselec® IR WC Controls

The Senselec® IR WC controls are designed to supply a flush of water to a WC pan using a standard cistern with an electronic flush valve, with integral overflow, which is activated by breaking the sensing field of the IR beam.

This WC control has a unique flush control system which ensures that water only enters the cistern when the flush valve is closed, so that an exact measure of water is used each time for flushing. If the WC is not used within a 12-hour period, the unit will automatically flush once to maintain hygiene. Activation by IR sensor helps to prevent cross contamination, as it allows hands-free operation; this is of particular value in healthcare premises, where a continuously high standard of hygiene is a top priority.

Product range

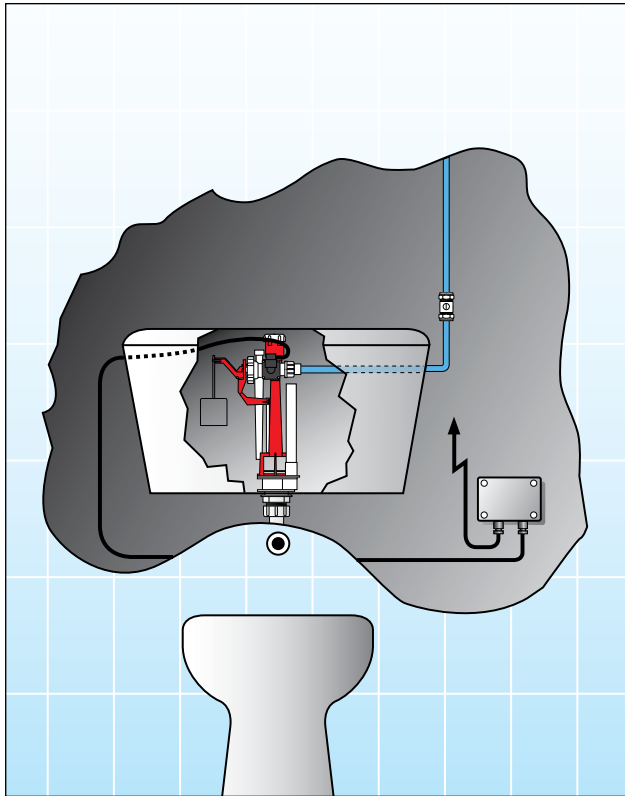
Stabilised Mains Power Supply

SENS 251 170 Senselec® IR WC Cross Wall 150mm

SENS 251 175 Senselec® IR WC Panel Mount 50mm



Typical Installation



Specifications

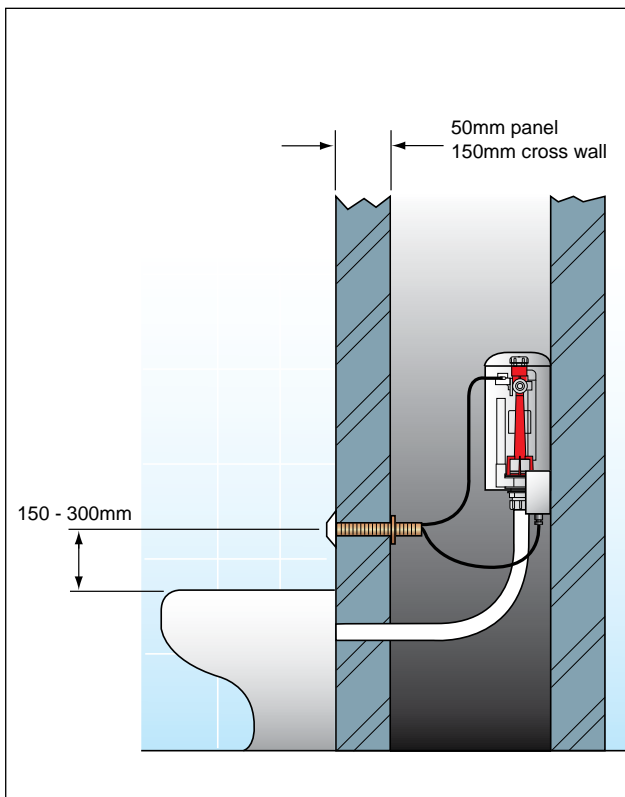
Minimum operating pressure	0.5 bar
Maximum operating pressure	6.0 bar
Power supply	6 Volts
Typical consumption	28 μ A
Maximum consumption	40 μ A
Adjustable detection range	200mm - 600mm
Factory detection setting	400mm
Detection angle	8°
Duration to activate	2 seconds
Duration of flush	7 seconds
Valve pulse time	20ms
Length of supply wire	2 metres
Length of solenoid wire	2 metres

Standards

BSEN 15091

Approvals

WRAS Flushing Valve 0809329



Senselec® IR Urinal Controls

Senselec® IR urinal controls are designed to supply a flush of water to a urinal using a solenoid valve and a type DC backflow preventer® to comply with the water fittings and water regulations 1999 requirements regarding protection against class 5 backsiphonage risks. This configuration allows the installer to connect the solenoid valve feeding the urinal directly to the mains water supply, eliminating the need for a separate feed cistern or a separate dedicated water supply. The solenoid valve is activated by breaking the field of an infra red sensor. The field of the sensor must be broken for at least 5 seconds to activate, and once the user has moved away for at least 3 seconds the urinal automatically flushes for 5 seconds. If the urinal is not used within a 12 hour period the unit will automatically flush once to maintain hygiene.

Product range

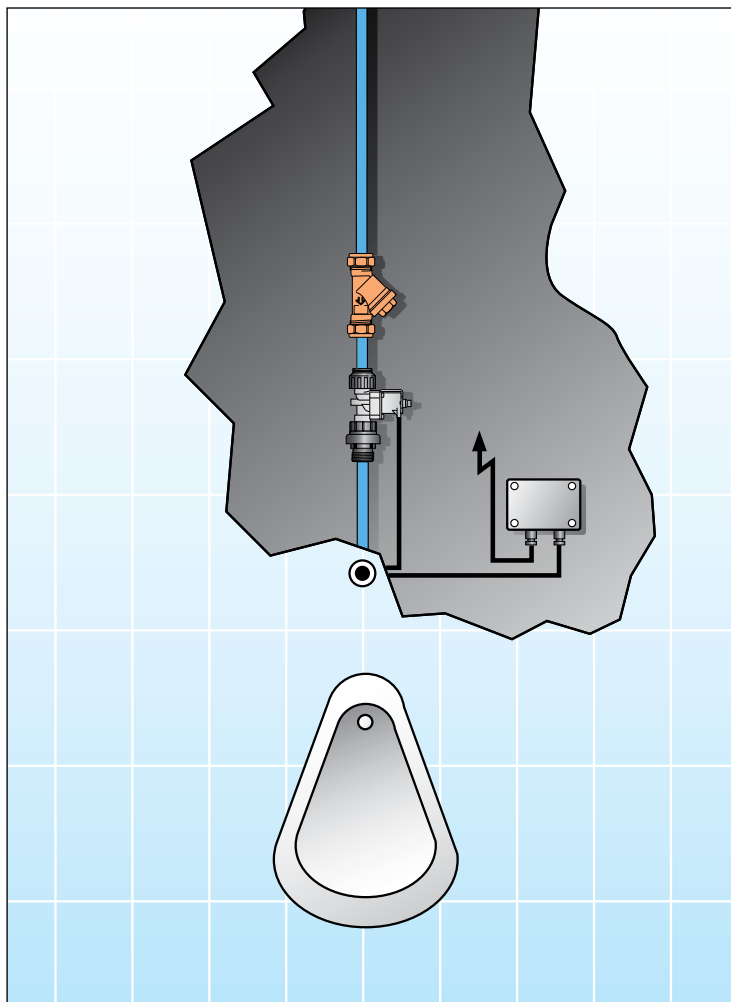
Battery Operated

- SENS 200 060 Senselec® IR Urinal Control, Cross Wall 150mm Fitting
- SENS 200 065 Senselec® IR Urinal Control, Panel Mount 50mm Fitting

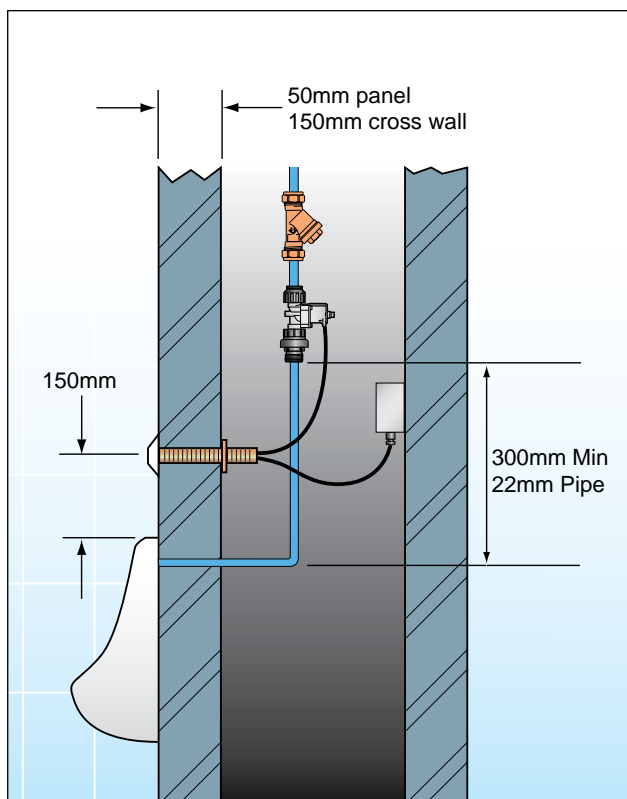
Stabilised Mains Power Supply

- SENS 201 060 Senselec® IR Urinal Control, Cross Wall 150mm Fitting
- SENS 201 065 Senselec® IR Urinal Control, Panel Mount 50mm Fitting

Typical Installation



Typical Installation



Specifications

Minimum operating pressure	0.5 bar
Maximum operating pressure	5.0 bar
Maximum water temperature	70°C
Flow regulator	6 lpm
Power supply	6 Volts
Typical consumption	28µA
Maximum consumption	40µA
Adjustable detection range	200mm - 600mm
Factory detection setting	400mm
Detection angle	8°
Duration to activate	2 seconds
Duration of flush	7 seconds
Valve pulse time	20ms
Length of supply wire	800mm
Length of solenoid wire	800mm

Standards

BSEN 15091

Approvals

WRAS Solenoid Valve 0610050

WRAS DC Backflow Preventer 0812303

Senselec® Ceiling Mounted Urinal Controllers

Senselec® ceiling mounted urinal controls are controlled by a PIR (Passive Infra-Red) sensor mounted in/on the ceiling, which is used to fill a urinal cistern. It has been designed to reduce the amount of wastage that can occur when a urinal is in constant use. The PIR sensor works by sensing the movement of a body. After the user has been detected, the PIR will then wait 30 seconds and fills the cistern with a set amount of water. As it is feeding a cistern it can be used for single or multiple urinals. After 6 hours of inactivity the device will enter hygiene mode and allow a set amount of water into the cistern: this keeps the traps wet and reduces odour problems.

Product range

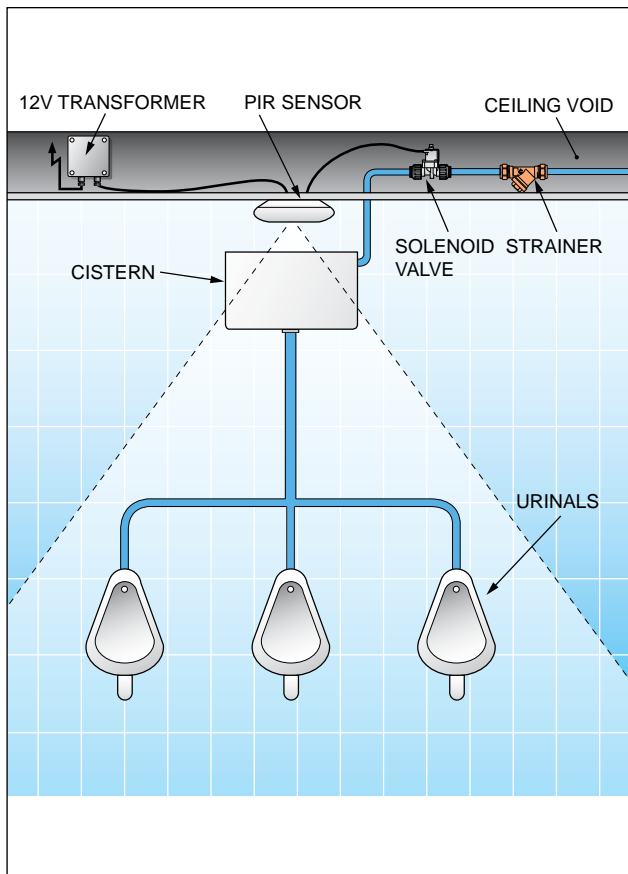
Stabilised Mains Power Supply

SENS 200 070 Surface Ceiling Mounted Passive IR Urinal Sensor

SENS 200 075 Recessed Ceiling Mounted Passive IR Urinal Sensor



Typical Installation - Surface Mounted



Specifications

Minimum operating pressure	0.5 bar
Maximum operating pressure	10.0 bar
Maximum water temperature	75°C
Power supply	12 Volts
Typical consumption	900mA
Sensor detection distance	6 metres
Detection angle	35°
Duration to activate	1 - 20 seconds
Valve pulse time	20ms
Length of supply wire	1.9 metres
Length of solenoid wire	2.9 metres

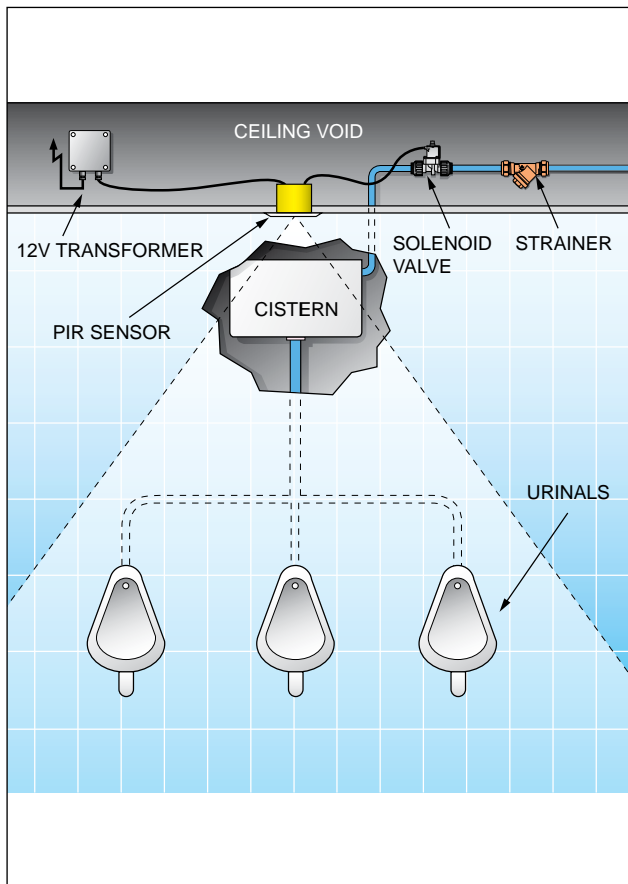
Standards

BSEN 15091

Approvals

WRAS Solenoid Valve 0610050

Typical Installation - Recessed



Senselec® Systemguard

The Senselec® Systemguard is designed to protect washroom facilities in commercial environments when unused for extended periods. The infra-red control system will shut down a solenoid valve or valves on the supply pipe to the washroom if no movement is detected within the sensing area for a pre-determined time period. In this way any leakage from a terminal fitting will result in a minimal waste of water.

Product range

Stabilised Mains Power Supply

- SENS 200 090 Recessed Ceiling Mounted System Shut Down Pack
- ZSOL500010 ½" FBSP 12V Normally Closed Solenoid Valve
- ZSOL500015 ¾" FBSP 12V Normally Closed Solenoid Valve
- ZSOL500020 1" FBSP 12V Normally Closed Solenoid Valve



Specifications

Minimum operating pressure	0.5 bar
Maximum operating pressure	10.0 bar
Maximum water temperature	75°C
Power supply	12 Volts
Typical consumption	900mA
Sensor detection distance	6 metres
Detection angle width	45.5°
Detection angle length	42°
Valve pulse time	20ms
Length of supply wire	1.9 metres
Length of solenoid wire	2.9 metres
Adjustable detection time range	6 - 60 minutes

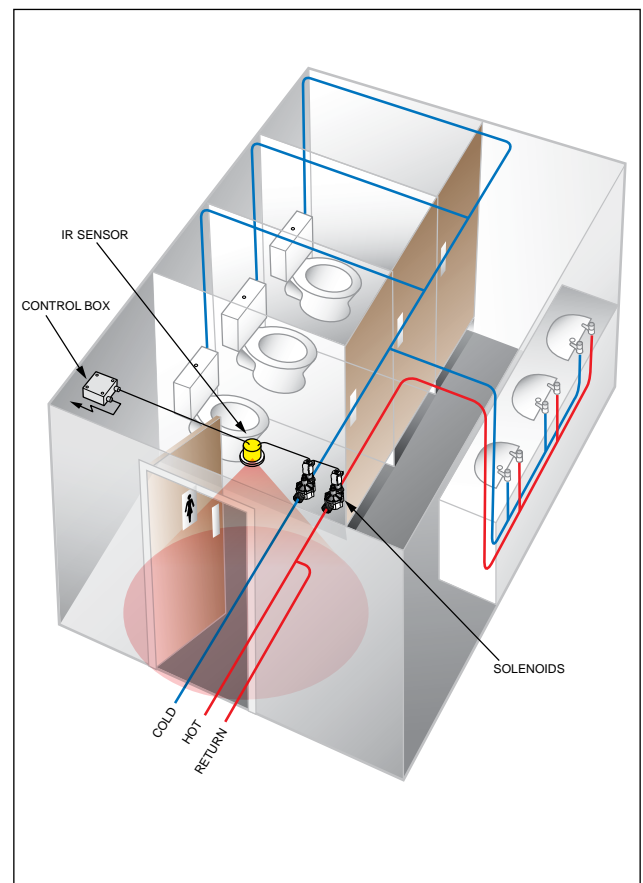
Standards

BSEN 15091

Approvals

WRAS Solenoid Valve 0610054

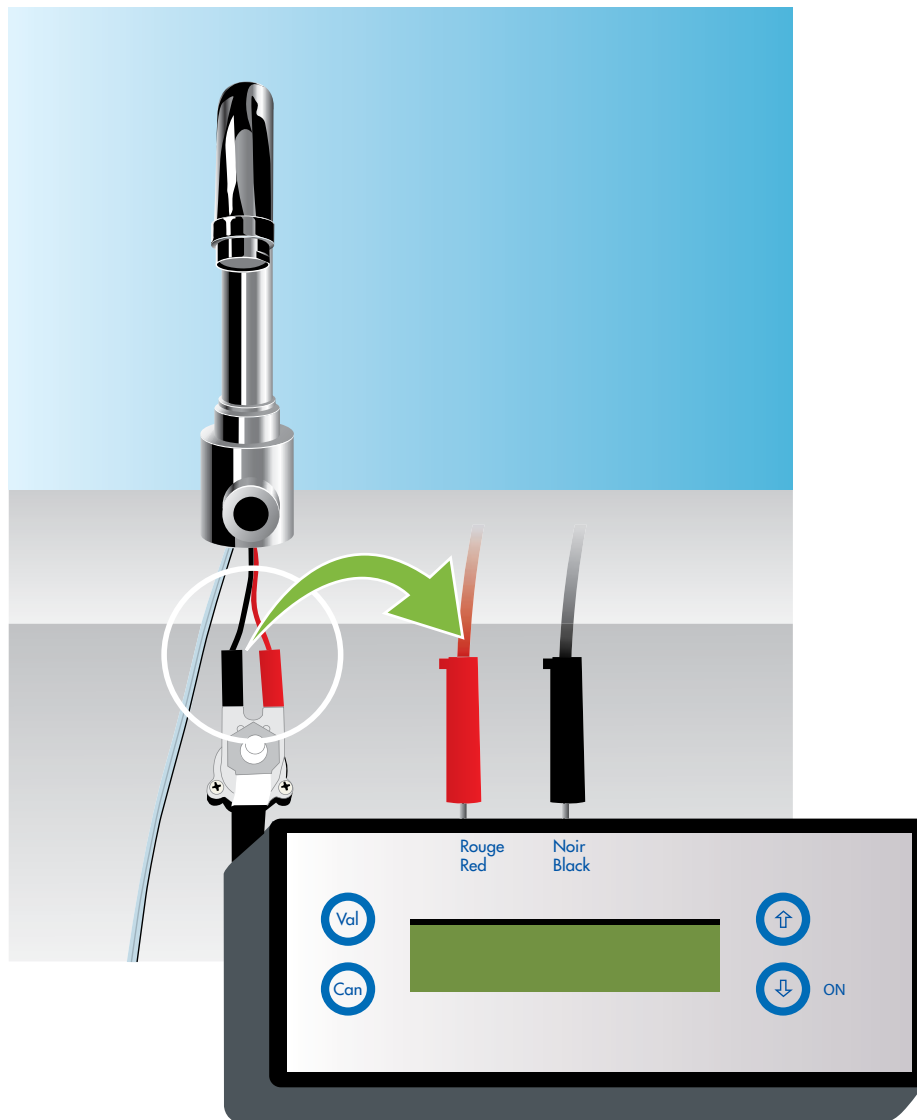
Typical Installation



SENS 250 000 - Senselec® Wired Remote Control

The remote control gives the installer the ability to accurately set up the product and to monitor usage. Functions include: monitoring the number of operations completed by the tap or control, the setting of the detection distance, the comfort interval, security settings, the hygiene flush interval and many more. The remote control is powered by a replaceable 9 volt battery.

To use the remote control simply disconnect the cable connections from the solenoid valve and re-connect them to the terminals on top of the remote control.



When the remote control is turned on, four core menus are presented which allow the user to select language, monitoring functions, sensor type and parameter. Having selected one of the core menus, sub menus are presented that can be selected to monitor the operation of the tap or control, or to change the operation parameters.

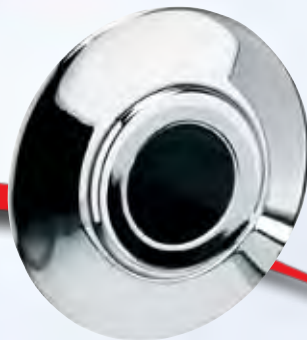
One of the parameters that can be changed is that of the hygiene flush which is normally in the inactive mode for the standard control set up but can be set to be active at a 6, 12 or 24 hourly interval with the flow set for any duration between 10 to 180 seconds. In addition to this the detection range, comfort timeout and safety timeout can also be set.

Note: - Wired remote control is only suitable for showers, wall mounted urinals and WC controls.

Infra-Red Spares

ZSOL500001	15mm pushfit magnetic 6V Solenoid Valve
ZSOL500005	15mm pushfit normally closed 12V Solenoid Valve
ZSOL500010	½" FBSP normally closed 12V Solenoid Valve
ZSOL500015	¾" FBSP normally closed 12V Solenoid Valve
ZSOL500020	1" FBSP normally closed 12V Solenoid Valve
ZENS252005	IR Sensor for Urinal Control (not Ceiling version)
ZENS252010	IR Sensor for Shower
ZENS252020	IR Sensor for WC Control
ZENS252040	Systemguard PIR Sensor
ZENS252030	Surface Mounted Urinal PIR Sensor
ZENS252035	Recessed Urinal PIR Sensor
ZRAN252005	6V Transformer
ZRAN252010	12V Transformer
ZBAT252005	Spare Battery
ZBAT252001	Battery Box
ZCAB500030	30mm Connection Cable for linking two or more Solenoids
ZCAB500035	2900mm Connection Cable for linking two or more Solenoids

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