AUTOMATIC FLUSHING CONTROLS FOR URINAL BOWLS
ECO EU13CT - TRANS SENSE SENSORS

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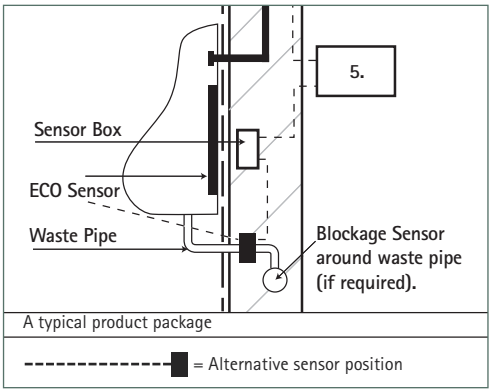
ECO-Logic Trans Sense sensor technology uses unique digital electronics to control automatic flushing of urinal bowls. The sensor is concealed behind the urinal bowl making it a very secure flushing system ideal for vandal-prone installations. The system requires very little maintenance and can adapt to virtually any flushing system or bowl design. It is very water efficient because it only flushes those urinals used and not the whole range.

Rear view of ECO Trans Sense Urinal Sensor/Controller



A typical product package

= Alternative sensor position

Range

ECO EU13CT

Concealed ECO Trans Sense Sensor Pack with 15mm Solenoid Valve

ECO EU13CT(BL)

As above, but with a Blockage Alert Sensor on the Controller

ECO EU13CT(BL) Remote

As above, but with a seperate Blockage Alert plate.

ECO EU13CT(BL) remote ECO-BMS

Blockage Alert signals onto BMS screen (Reset Switch retained on controller)

Features

- Only flushes the urinal bowl used
- High level of vandal resistance with concealed sensors and controls
- Hygienic Duty Flush is automatically activated if not used within 24 hours
- Wide range of flushing delays or 'flush per use' options
- Safe 6vDC power
- Long life lithium cell battery or reduced mains power options
- Fully adjustable times to suit installation

Benefits

- Works with most Pressure Flushing or Tank Fed Systems
- Highly secure fixtures
- Substantial water savings
- Excellent payback periods
- Low maintenance requirements
- ECO Blockage Alert helps prevent contaminated flooding

Function

Users activate the ECO-Logic sensors by simply using the urinal bowl. The bowl sensor and sensor box are connected by cables to the ECO Controller and onto the flushing valve. The flush volume and flush times, mode of operation and anti-tamper/lockout functions are set on the Controller to building management requirements. When activated, the flush valve opens and closes to the chosen settings. Flush times are simply set on the controller using rotary switches. Timing can reflect water pressure at discharge point, sanitaryware design and can be adjusted to meet changing water regulations.

An optional ECO Blockage Alert can be fitted to the WC/Urinal waste pipe which prevents flushing when a blockage is detected, avoiding flooding of contaminated water and maintaining hygiene standards. A warning light, alarm or BMS signal notifies management. After clearing the blockage, the system is restarted using a reset button.

ECO-Logic Controllers and Sensors

ECO Controllers provide the link between the sensors, valves and outlets. Flow/flush times, operational modes, temperature monitoring, lockouts and anti-tamper controls can all be set on the Controller. **Controller choice depends on several factors and early consultation with ECO-Logic is recommended.**

Single Controllers – some integrated with sensor.

Multi-Channel Controllers

- to control banks of the same item
- to control a number of different outlets. Typically in a bathroom with a WC, Basin and Shower.

Modular Controllers – offering total management control for accommodation or washrooms. Can include water, heating, lighting, communication, audio/visual and security systems. All with BMS links.

Installation Notes

Electronics

The ECO Trans Sense sensors use metal straps which are taped to the urinal bowl or waste pipe and connected to a small ECO sensor box behind each bowl (not more than 300mm away). When used the sensor box transfers the 'activated' signal to the ECO Multi-Channel Controller which can control up to 8 urinal sensors. Each sensor box is individually cabled to the Controller and when activated opens the appropriate solenoid to flush for the selected time. A pre-cut cable wiring loom for sensors, controller and valves is optional to save installation time and costs. Please seek advice before specifying.

Blockage Alert Sensors are secured around the urinal waste pipe and connect via the sensor box to the main ECO-Logic Trans Sense Controller. The Controller is fitted with a blockage alert indicator and reset switch, or connected to remote reset switches. With Trans Sense sensors, it is important that all metal in the room is earthed and that the rear of the sensing surface and ECO Sensors are securely fixed and in direct contact with each other.

Plumbing

ECO 15mm Solenoid Valves with compression fittings are installed on the cold water supply. If the cold water supply also serves other outlets then a pipe interrupter (ECO 256A-015) will be required, fitted 800mm above the urinal spreader (see drawings, on page 2). Supply from interrupter to spreader needs to be a 22mm flush pipe.

Alternative installation methods for multi-bowl installations can use a RPZ valve on the incoming CWS, dedicated to the urinals (see fig 2). The solenoid valve can be installed close to the urinal bowl spreader.

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FIG 1

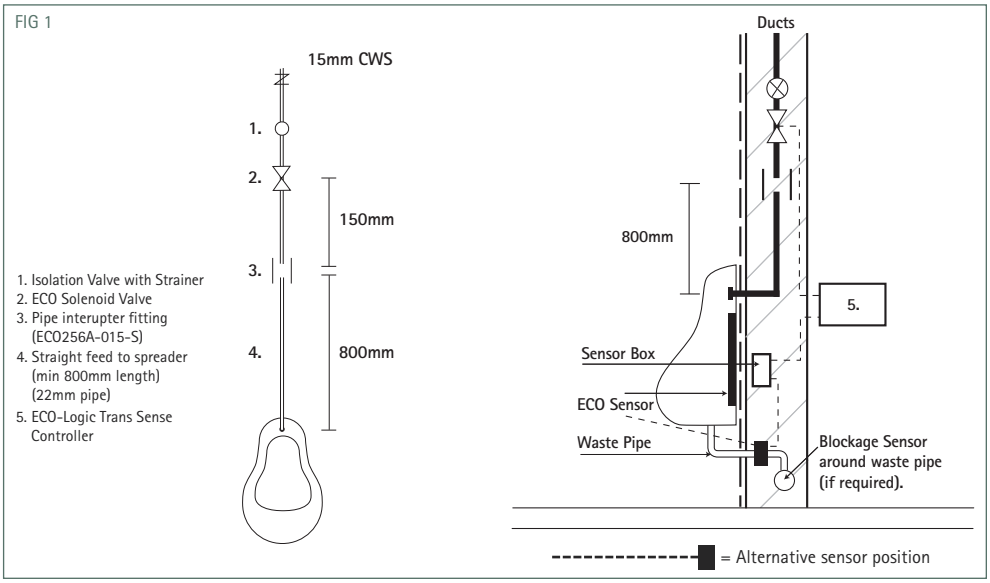
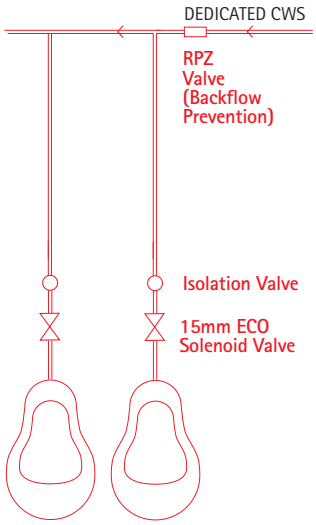


FIG 2



Technical Information

Control & Sensor Box Materials	ABS White Plastic Box & Metal Sensors
Sensor Type	ECO Trans Sense – capacitance
Operating Voltage	6vDC
Power Source	* ECO Battery 1.3 AH Lithium Cell 6vDC * ECOTrans Reduced-Mains Transformer (230vAC/6vDC) with automatic Battery Backup system
Flush Interval	Flush per use (reflush delays can be applied)
Flush Time	0.1 to 15.9 seconds (adjustable to requirements)
Blockage Alert Sensor	ECO Trans Sense - capacitance
Valve Type	Solenoid with magnetic latching coil (various)
Valve Connection	15mm
Valve Body Material	Polyamide plastic
Cable Type	3 core 0.5mm^2 to BS 21823Y
Flow Rate	Pressure dependent 0 - 8.5 litres per minute

All ECO 'P' range valves are WRAS approved. Water Regulations Schedule 2, Section 9, Para 25.

Related Product Sheets

• Flushing	Non Touch WC Flushing	W18
	PIR Automatic Flushing - cisterns	U12
	Direct Acting Flushing	U23
• Secure Sanitaryware	ECO Polymer	POL16
	ECO Stainless Steel	ELC17
• Transformers	ECOTrans (230/6vDC)	TR15
• Other Fittings	Backflow Preventor (256A - 015-S)	
	15mm Isolation Valve	

ECO-Logic provide solutions for:-

Handwashing • Bathfills • Showering • Flushing • Kitchens

Multi-Channel & Modular Controls for Ensuite Bathrooms & Washrooms

Secure sanitaryware • Lockout Systems • Shutdown Controls • BMS Links

Download at www.ecologicuk.com

Warranties

ECO-Logic Controllers and Sensor Electronics	2 years
ECO-Logic Solenoid Valves (Strainer Protected)	2 years
Brassware and other fittings	1 year

All ECO electronic products are designed, tested and manufactured in the UK to CE standards

Maintenance

- Replacement parts, batteries and service kits are available direct from ECO-Logic UK
- Allow access to Sensors, Solenoid Valves and ECO Controllers
- Spares advice on individual products are provided in ECO-Logic maintenance manuals.
- Maintenance requirements are very low. All product warranties are dependent on fittings being installed in accordance with ECO-Logic instructions.
- Battery life usually between 3 – 5 years (excluding Infra Red). Battery in ECOTrans transformers should last up to 10 years
- All ECO-Logic Controllers have a non-volatile memory which retain setup programmes if power is lost / switched off for maintenance.
- Solenoid Valves should be installed with service valves and strainers to allow inspection, and cleaning.

eco-logic uk
Elite House, 70 Warwick Street,
Birmingham B12 0NL
T. +44 (0)121 766 3016 F. +44 (0)121 766 3064
E. info@ecologicuk.com W. www.ecologicuk.com

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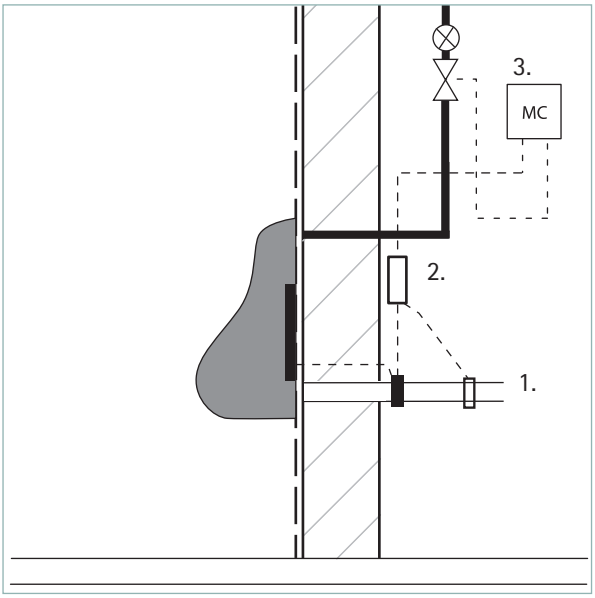


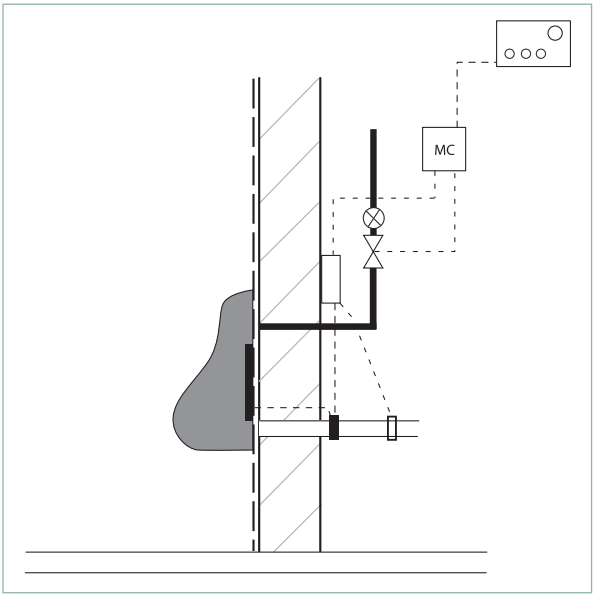
Blockage Alert Sensor

The ECO-Logic Blockage Alert Sensor System is designed to protect washrooms and bathrooms from damage and contamination from foul water flooding caused by blocked waste pipes. If a blockage is detected, the controller isolates the relevant sensor and solenoid valve, preventing further use of the flushing system until the blockage is cleared and reset.

Option 1 – ECO U13CT(BL)

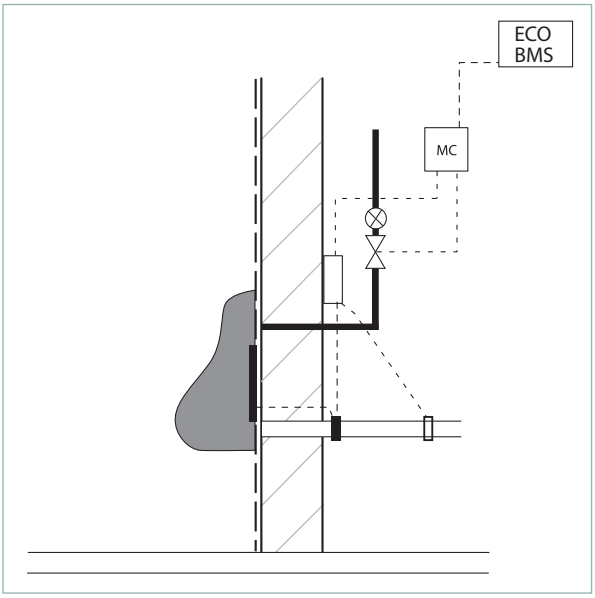
The blockage sensor (1) is wrapped around the waste pipe from each urinal and wired to the ECO Trans Sense Sensor box (2), which is then connected to the ECO-Logic Controller (3). Each urinal has its own sensor, sensor box and connections.

A blockage results in the affected WC system being isolated and a warning light on the control box flashes. After the blockage is cleared the isolation is lifted and reset by pressing the reset sensor mounted on the Controller.



Option 2 – ECO U13CT(BL) Remote

Largely as above, but the warning lights are held on a remote plate situated in the maintenance or management office. The reset button can also be installed onto the plate, but the relevant Controller will retain a reset sensor for local operation.



Option 3 – ECO U13CT(BL) Remote BMS

As Option 1, but the warning system is located within the ECO-Logic Building Management Control System and the computer screen flashes the blockage alert and relevant location.

After the blockage has been cleared, the isolation of the sensor/valve is lifted either by pressing the reset sensor on the controller, or by using the ECO BMS system.

Connection to other BMS systems will require additional software programming. Please consult ECO-Logic UK.