

# NON-TOUCH FLUSHING CONTROLS FOR WC'S

## ECO EW221R - INFRA SENSE SENSORS

eco-logic uk

ECO-Logic Infra Sense sensors are a hygienic 'Non Touch' solution to flushing WCs without hand contact to conventional levers or push buttons. ECO-Logic WC Flushing Systems use pressurised or tanked water systems or ECO Pipetanks and do not require cisterns behind each WC. This allows a flexible positioning of the sensor, separate to the water supplies. The sensors are mounted in chrome finished wall or deck mounted discs or plates, and can be installed in the best position for the user.

### Range

#### 1. ECO Controllers (type. tr.) with integrated transformers and solenoid flushing valve

- **Disc Mounted Sensors**

ECO EW221R-tr(D50) – 50mm conduit for panel installation  
 ECO EW221R-tr(D50) – 150mm conduit for wall installation

- **Plate Mounted Sensors**

ECO EW221R-tr(PL85/85) –screwed plate

**Valve Options:**

ECO 35P (35mm)  
 ECO 28P (28mm)  
 ECO D8 (35mm)  
 ECO D4 (28mm)

#### 2. ECO Controllers (type. bc.) using separate mains-reduced power transformers

- **Disc Mounted Sensors**

ECO EW221R-bc(D50) – 50mm conduit for panel installation  
 ECO EW221R-bc(D50) – 150mm conduit for wall installation

- **Plate Mounted Sensors**

ECO EW221R-bc(PL85/85) –screwed plate

#### 3. ECO Mains Power Transformers for Multiple WC Flushing Installations (with battery backup if mains power fails)

**ECOTrans (230v/6vDC)**

ECOTrans-2 powers 2 ECO IR(bc) Controllers  
 ECOTrans-3 powers 3 ECO IR(bc) Controllers  
 ECOTrans-4 powers 4 ECO IR(bc) Controllers

**ECOTrans(50Hz)**

ECOTrans50 can interlink upto 8 ECO IR(bc) Controllers



Infra Sense disc

### Function

The user flushes the WC by moving the hand close to the sensor disc, the sensor then activates the controller to open/close the appropriate solenoid valve. Management can adjust flush time duration and flush delays on the Controller. Sensor range adjustments can also be made.

### Features

- Non Touch sensor
- Variable sensor range (up to 150mm max)
- Choice of sensor housing (disc or plate)
- Single or multiple WC control options
- 6v power technology. Battery power option
- Rapid repeat flushing (dependent on system)
- Optional Blockage Alert sensor system
- Optional Lockout systems
- Compliant with water regulations
- Works with various flushing systems, Pressurised, Tanked or ECO Pipetanks

### Benefits

- Easy to use
- Hygienic 'Non Touch' sensor with range adjustment
- Safe 6volt power technology
- Integrated transformer packages for simple installation
- Rapid repeat flushing for busy toilets
- Optional**
- Blockage Alert Sensor with remote alarm and reset control prevents flooding and contamination.
- Lockout systems prevent misuse & vandalism

### ECO-Logic Controllers and Sensors

Each ECO-Logic Infra sense sensor links to its own Controller which can set flush times, mode of operation and sensor range adjustments.

**Reduced Mains Power:**

- **Type tr. Controller** Each has an integrated transformer (230/6vDC).
- **Type bc. Controller** Each has a mains-reduced adaptor to a remote ECOTrans transformer.

**Battery Power:** Battery power available, but installation advice is a requirement.

**Flush Times:** Flush time/volume settings are set on the controller to meet all WC pan designs, water pressures and water regulations. Each sensor/controller is setup individually.

**Flush Mode:** WC activation is not interruptible, but re-flush delays are optional.

**Blockage alert: (Optional)** A separate ECO-Logic controller capable of connecting several WC waste pipes. If a blockage is detected, the controller prevents further flushing of that WC and sets off an alert signal and alarm. A reset button restores the flush function when the blockage is cleared. All alerts, LED signals and reset buttons can be remotely linked to a maintenance office or BMS system.

**Lockout System: (Optional)** This isolates the controller and sensors to prevent flushing, assisting maintenance and helps prevents misuse.

# NON-TOUCH FLUSHING CONTROLS FOR WC'S

## ECO EW221R - INFRA SENSE SENSORS

# eco-logic uk

### Installation Notes

An Infra Sense WC Flushing System is supplied as: IR Sensor, ECO Controller with cable/connectors, solenoid valve(s) and instructions

#### Electronics

The Controller uses reduced-mains power (230v/6vDC) either from integrated ECO transformers, or from remote ECO transformers suitable for controlling a range of WC's (see drawings on page 3).

Cable trunking runs from IR sensors to the Controller, then to solenoid valves. The 4 core screened cable connection between sensor and controllers should not exceed 1.5m. Connector is DNC4 pin plugged into the controller. Remotely fitted ECO Transformers can be sized to power 2-10 Infra Sense Controllers. Transformer details on PS-TR15.

#### Plumbing

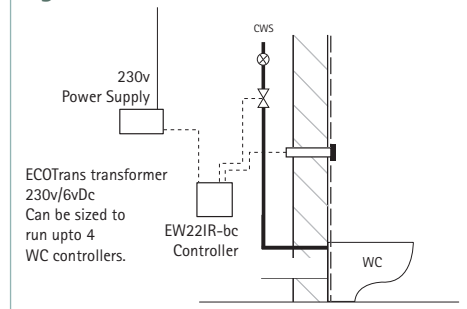
ECO Solenoid Valves are supplied for installation on the cold water supply to the WC pan. Valve size depends on water pressure (see chart). ECO Flushing systems do not use cisterns, but are supplied from pressurised, direct fed, remotely tanked or ECO pipetank systems. These make for easier installations, less pipework and potentially lower costs. If supplied from pressurised or direct fed systems, or remote tanks that supply other cold water outlets beside WC's, a pipe interrupter fitting needs to be installed 300mm above the WC spill over (ECO part 256A - 025 WC).

Allow for maintenance access to the solenoid valve and isolation fittings

### Solenoid Valve Chart (WCs)

ECO35P (0.05 to 1 bar) c/w isolation/flow adjuster  
 ECO 28P (0.5 to 6 bar c/w isolation/flow adjuster  
 ECO D8 35mm (0.05 - 3 bar) Low Pressure  
 ECO D4 28mm (0.05 - 3 bar) Low Pressure  
 ECO D4 28mm (0.35 - 6 bar) High Pressure

Fig 1 INSTALLATION WITH IR CONTROLLERS - TYPE bc



### Technical Information

Control & Sensor Materials	ABS white plastic box & Infra Red Sensors in brass
Sensor Type	ECO Infra Red
Operating Voltage	6vDC
Power Source	* ECO Battery 1.3 AH Lithium Cell 6vDC * ECO Reduced-Mains Transformer (230vAC/6vDC) with automatic Battery Backup
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	28mm or 35mm (see chart)
Valve Body Material	Polyamide plastic ECO 35P/28P or DZR brass ECO D8/D4
Cable Connection	
• Sensor	4 core screened DNC 4 pin plug
• Solenoid	2 core 0.5mm <sup>2</sup> to BS21824
Flow Rate	Pressure dependent
All valves are WRAS approved. Water Regulations Schedule 2, Section 9, Para 25.	

#### Related Product Sheets

Non Touch WC sensor	ECO Trans sense (EW23CT)	W18
One Touch WC sensor	ECO Touch Sense & React (EW21TS/TA)	W19
ECO Flushing systems	Mains pressurised	W10
	Tanked	W11
	Pipetank	W13
	230v/6vDC and 50HZ	TR15
ECO Transformers	230v/6vDC and 50HZ	TR15
Secure Sanitaryware	Heavy Duty Polymer	POL16
	Stainless Steel	ELC17
Other Fittings	1"/1 1/4" Lever Action Isolation Valve	
	Backflow Prevention ECO 256A -025 WC	

### 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](http://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.
- Spares advice on individual products and installations are provided in maintenance guides.
- Maintenance requirements are low, but warranties are dependent on fittings installed in accordance with ECO-Logic instructions.
- Battery life usually between 3 - 6 months. For Infra Red products, the battery in ECO transformers should last up to 10 years, depending on usage.
- 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

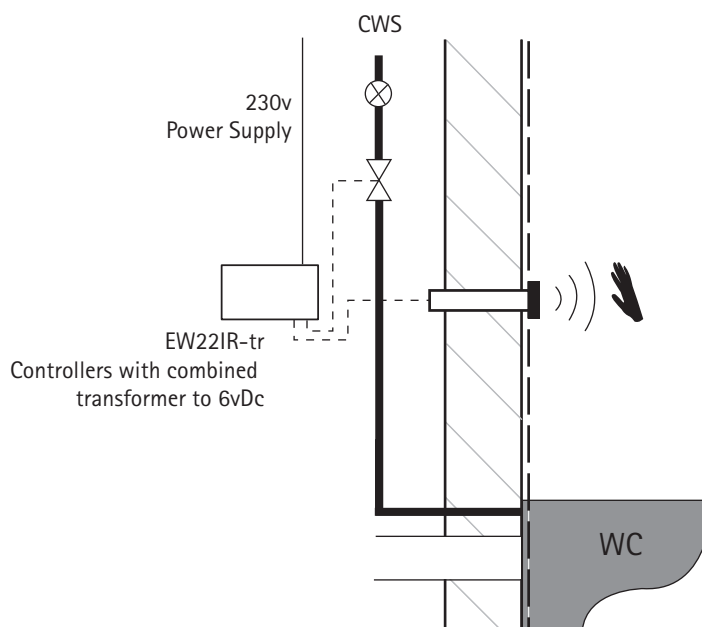
T. +44 (0)121 766 3016 F. +44 (0)121 766 3064

E. [info@ecologicuk.com](mailto:info@ecologicuk.com) W. [www.ecologicuk.com](http://www.ecologicuk.com)



Fig 2

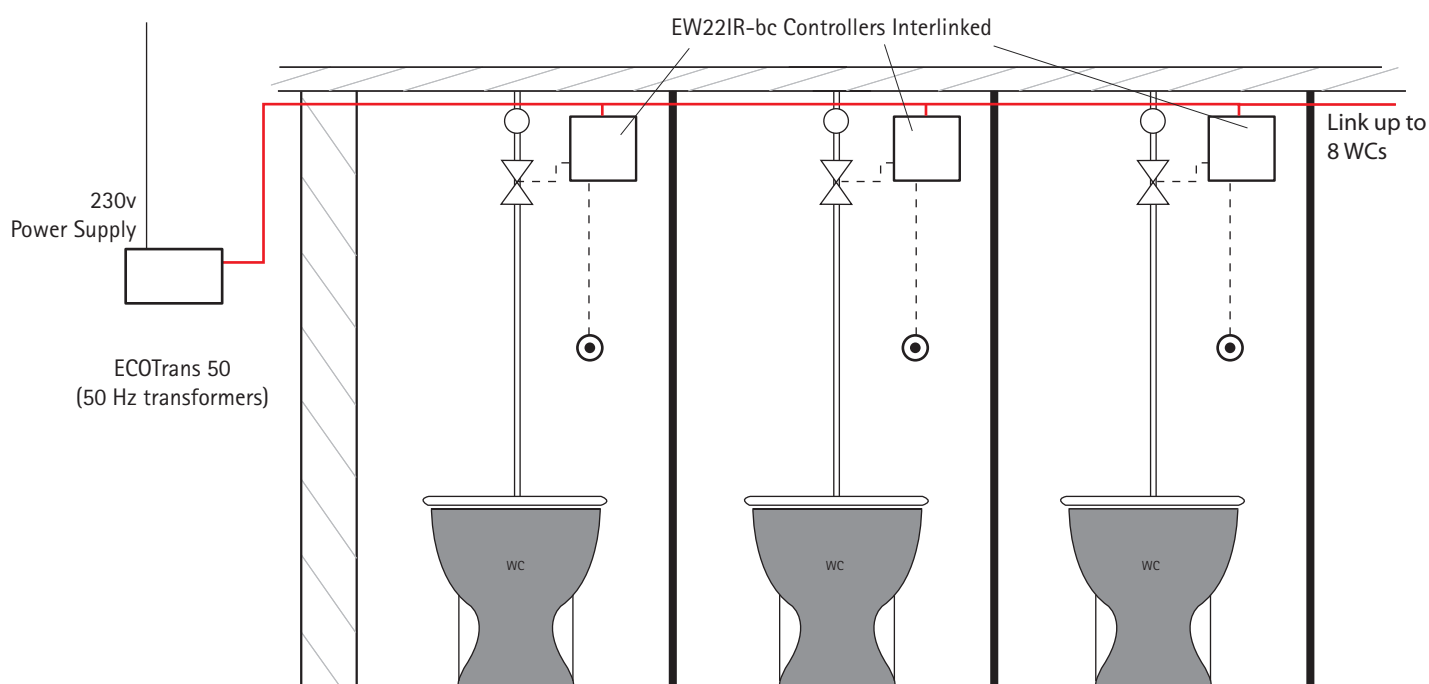
### INSTALLATION WITH IR CONTROLLERS - TYPE tr



**Note:** CWS to WC may need additional fittings, depending on flushing water supply or flush valves used.

Fig 3

### ALTERNATIVE INSTALLATION WITH IR CONTROLLERS - TYPE bc POWERED BY ECOTRANS 50 (50HZ) TRANSFORMER



**Note:** CWS to WC may need additional fittings, depending on flushing water supply or flush valves used.