

6

Option setup

**Important:** Changes to settings can only take place when power has been disconnected for at least 5 seconds.

On the board you will notice three in-line switches fitted to the right side of the DIP switches (Fig. 4). Only switch A is used.

Option switch A (when switched ON) provides two functions, a pre-flush and a purge option.

The pre-flush opens the valve for 1 second after the first 2 seconds of detection. This helps to prevent splashing by wetting the urinal bowl. After the pre-flush the timing continues.

The purge is initiated every 12 hours of non-use on either channel. This helps reduce smells from the urinal during periods of non-use.

**Settings:**

Switch A ON = Pre-flush plus purge

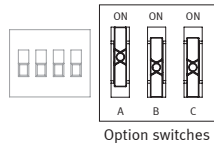
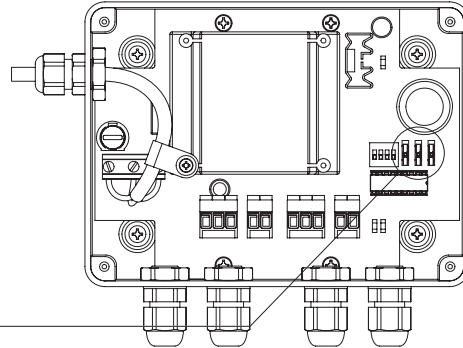


Fig. 4

Option switches



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Always isolate power when opening the control unit!

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Final stage:  
Time settings and basic operation

**Time settings:**

Whilst the unit is still powered down the time settings can be setup.

The numbers printed on the switches (1, 2, 3, 4) simply identify the switch number; the actual time settings available are shown below:

Switch 1 ON = 1 seconds  
Switch 2 ON = 2 seconds  
Switch 3 ON = 4 seconds  
Switch 4 ON = 8 seconds

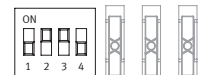


Fig. 5

DIP switches

Example above (Fig 5) shows switch 2 and 3 ON. This gives a total flush-time of 6 seconds

**Testing the sensors**

A test routine is included for verifying the operation of the sensors.

After installation of external equipment, the supply should be connected.

To put the unit into test mode set DIP switches 1-4 to the OFF position.

When power is applied LED's 2 and 3 (Fig 2) will switch on corresponding to an object within range. For example, if sensor 1 (left hand channel) detects an object in range then LED 3 (left hand LED) will be on as long as the sensor detects the object. Sensor 2 operates LED 2 as above. This routine helps to identify if the sensors are detecting unwanted objects.

**Operation:**

When a person comes into range of a sensor a counter starts and after 10 seconds it is determined that the person is an actual user.

When the person leaves the sensing range the corresponding valve is opened for the set flush-time. However, a 2 second delay is built into the counter to allow the person to leave the range and return after or before the 10 seconds without effect on the counter. This also means that the valve will not open for 2 seconds after the user has left the area.

Each of the two channels operates independently, but both use the same settings.

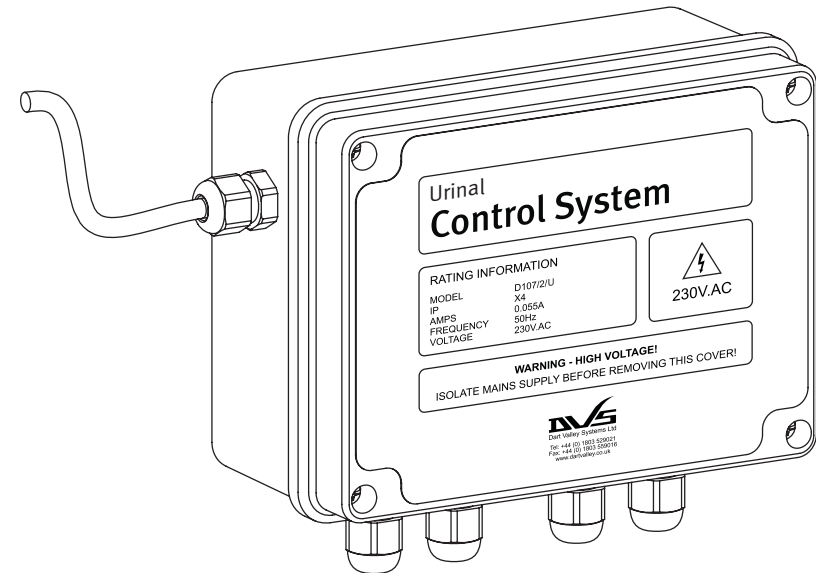


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## Urinal Control System

D107/2/U



**DVS**  
Dart Valley Systems

Tel: +44 (0) 1803 529021  
Fax: +44 (0) 1803 559016  
www.dartvalley.co.uk

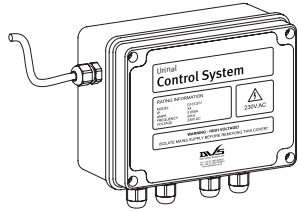
### Installation and Operating Instructions

# 1

## Safety first

It is recommended that the installation be carried out and checked by a qualified electrician in accordance with the latest electrical regulations.

These instructions relate to the use of the urinal control system only, any external or 'add-on' parts will be supplied with separate instructions.



D107/2/U - Urinal control system



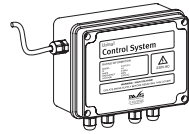
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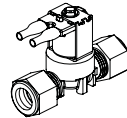
# 2

## Kit Contents

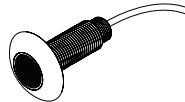
Your kit will include the following items:



Urinal control system



Solenoid Valve



Sensor

# 4

## Board Layout

- 1 Input connection - Sensor 1
- 2 Output connection - Valve 1
- 3 Input connection - Sensor 2
- 4 Output connection - Valve 2
- 5 Cable entry - Sensor 1
- 6 Cable entry - Valve 1
- 7 Cable entry - Sensor 2
- 8 Cable entry - Valve 2
- 9 Mains supply
- 10 Time setting switches
- 11 Option switches
- 12 LED 1 - For engineers/testing only
- 13 LED 2 - For engineers/testing only
- 14 LED 3 - For engineers/testing only
- 15 Fuse (Replace with exact same type)

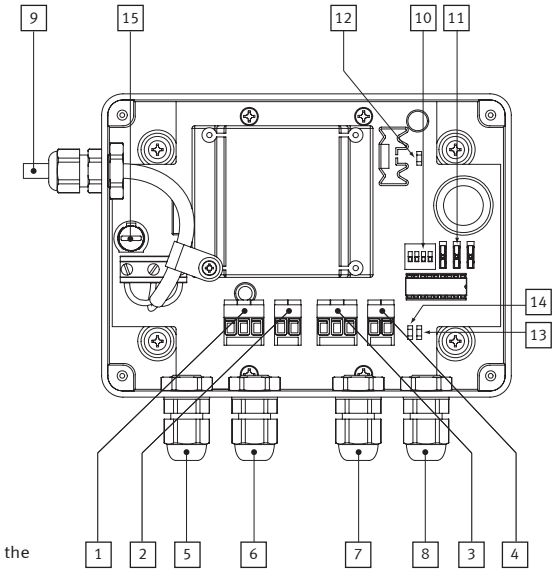


Fig. 2

DO NOT extend cables.  
DO NOT leave badly fitted cables.  
DO NOT allow slack cables to enter the transformer area.  
DO NOT interfere with the mains flex.  
DO check all cables and connections.  
DO ask for advice if/when necessary.



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# 3

## Typical Installation

The control unit should be located in a dry location and not exposed to dirt, dust or damp. The unit should be accessible when required, but not within easy general reach of unauthorised persons.

It will be necessary to make adjustments and service the control unit after installation, and in the future. Secure access areas and duct spaces are recommended.

The control unit is not designed for direct surface mounting into washroom areas. Never open the cover with the supply live.

The routes that cables will take when connecting external equipment to the control unit should also be planned at this stage.

Turn off the local water supply. Cut the supply pipe and purge any debris or swarf. Fit the solenoid valve ensuring joints are tightened and checked for leaks. In the event of very low or high water pressure the manufacturer can offer alternative solenoid valves under special request.

It is highly recommended that a water filter be fitted prior to the solenoid valve to ensure reliable operation (sold separately).

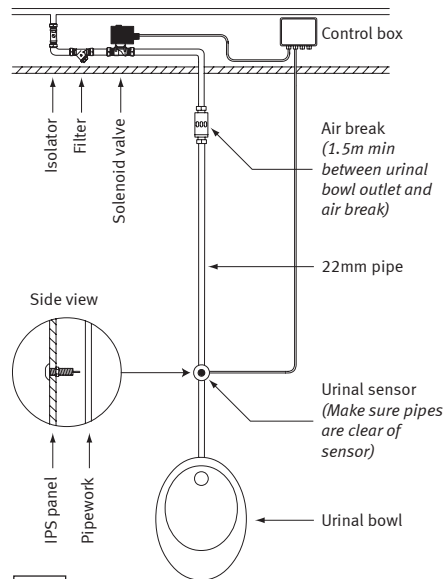


Fig. 1

# 5

## Fixing and Wiring

The unit should be securely fixed in a suitable location in a horizontal orientation, so that the front label is read correctly.

Remove lid to expose four fixing locations around the edge of the enclosure (see Fig. 3). These areas allow the fastening of the unit without removing the printed circuit board.

Drill through these marked areas away from the wall to avoid dust entering the control box, then hold control box in position against the wall and mark holes with a pencil. Remove box, drill and plug marked areas and fix the control unit with suitable fixings.

Connect the mains supply lead to a 230V ac supply via a fused spur, the fuse rating should be 3 Amps. The mains supply should NOT be initiated until all external equipment has been installed and wired.

Always read instructions supplied with external components and ensure that only the supplied equipment is connected to the control box.

Cables should enter the enclosure through the cable glands. Keep all connections tidy and do not allow cable to finish or hang in the transformer area.

It is recommended that each cable is fed through the relative cable gland into the enclosure; the cable can then be pulled out towards the fitter to allow the connector plugs to be fitted.

The connector plugs can be disconnected from the mating sockets when wiring external equipment, double check positions with the plug orientations as they only fit one way!

When each plug has been wired the cables can be pulled back through the cable glands, and the plug re-connected to the corresponding socket. Cables should not be left to torte or slack.

When all connections are made and checked, replace the lid and secure.

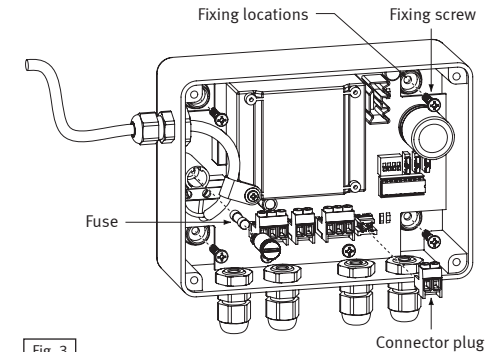


Fig. 3



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