

Standard model (with remote solenoid valve)

Installation instructions

These instructions are for installing the shower controller with the solenoid valve cut in to the water supply pipe, preferably in the riser pipe after mixing of hot and cold water. It can be fitted to the hot water pipe only or, alternatively two solenoid valves can be fitted, one in the hot and one in the cold pipe but that requires a special order heavy duty timer and power pack.

If it is difficult to gain access to these pipes, we can supply an easy retrofit model which locates the solenoid valve at the shower head.

To fit the box

- The box should be fitted at approximately eye level for optimum visual and audible performance. It should not be subjected to excessive water splashing on it. Select a flat surface on the wall to inhibit water penetration.
- Draw a horizontal line where the box is to be located and mark screw holes at 69mm centres for the lower holes. Drill the wall to take the 6 gauge s/steel screws or the plastic star plugs provided.
- Mark the position of the top mounting hole and drill the wall at that point.
- Within the triangle formed by the three mounting screw holes, drill a hole through the wall at least 9 mm diameter.
 TIP: Be aware of water pipes when drilling around the shower area. Damage can be expensive.
- Bring in the power lead through the hole and run a "figure 8" lead through to the solenoid valve.

Plug the power into the socket on the printed circuit board. Squeeze plug and socket between two fingers and thumb to ensure that the plug is fully home. About 3mm of the plug will remain outside the socket (See Fig 1).

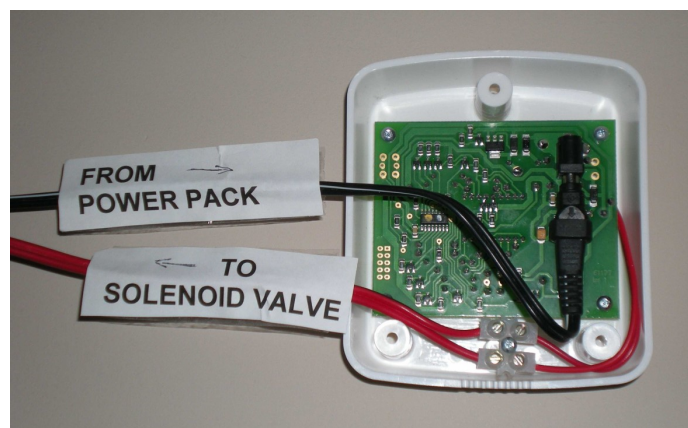


Figure 1

The display will light up. If not, remove the plug and reverse the connection. Do not seal the hole in the wall or the breather holes in the bottom of the box.

- Screw the box to the wall. Back off each screw about ¼ turn. If you over tighten, the box can distort and that will cause the Start button to operate permanently. When satisfied that all is working well, fit the plastic "blanking" caps

Electrical

- The SELV 12 V DC Power Pack is double insulated and complies with AS1044 (Approval No. A/13542EA). It can be located behind the shower wall near the water supply pipes or in the roof cavity above the shower and is permanently switched on.
- The shower controller box should be fitted on a flat wall to comply with IPX5 standard.
- The power pack comes with a 1.2m lead and a 2.1mm DC plug on the end.
- The PCA circuit is polarity conscious. That is; it will not operate if the positive and negative are reversed. Squeeze the DC plug and socket between two fingers and thumb to ensure that the plug is fully home. The display will light up and should alternate between "05" and "02". These are the factory settings – 5 minute Shower time and 2 minute Waiting time between showers. It may be opportune to programme the controller now. (See programming instructions).
- The PCA output leads are terminated on a connector block. Run a figure 8 lead (17 gauge or 1mm minimum diameter conductors) from here to the solenoid as per Figs 1 and 2

Plumbing

HOT WATER SUPPLY MUST BE MAINS (OR EQUAL) PRESSURE.

To install solenoid valve

- Note the flow directional arrow on the body of the valve.
- The Solenoid valve must be fitted either in the riser pipe (after mixing), or in a cold climate it can be fitted only in the hot water pipe. In that case, the customer should be aware that cold water can still flow regardless of the state of the shower controller. If it is necessary to switch both hot and cold water before the mixing process but you will need a "special order" high output controller with additional solenoid valve and heavy duty power pack.
- Output leads from the shower controller should be crimped in the spade connectors at the solenoid valve

NOTE: Our standard solenoid valve is 20mm BSP male in, male out. If required, we can supply 15mm female in x 15mm male out.

Please note that no mechanical pressure can be applied to the plastic valve. The plumbing either side must be completely self supporting.

An optional brass valve can be supplied if required and is recommended where mechanical pressure will be exerted upon the valve.

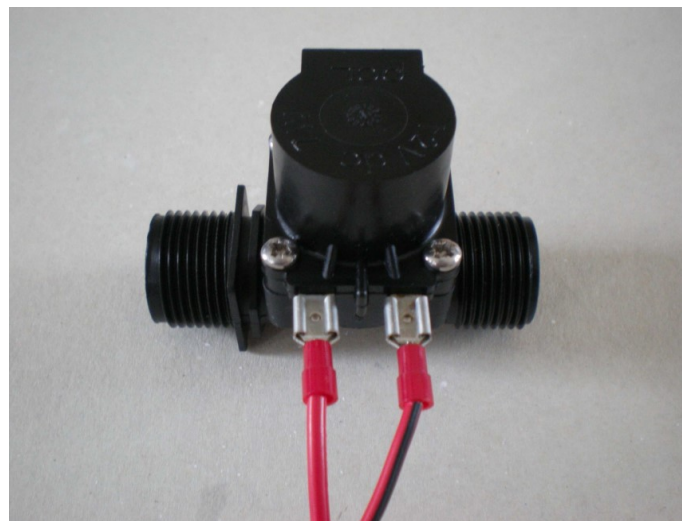


Figure 2

Programming

- To enter programming mode, disconnect power for 30 seconds minimum. After the initial **installation it may be necessary to remove power at the fuse box.**
- Within 2 minutes of re-connecting power to the timer, press the Start button and hold for 10 seconds. The buzzer will sound 2 beeps and the display will show "P1".
- Repeatedly press the button to cycle through the program options. When the desired shower setting is displayed, press and hold the button for approximately 4 seconds (holding for 10 secs will take you out of programming mode). To confirm your selection, the buzzer will beep when you release the button.

If you want to change the waiting (Lockout) time between showers, repeatedly press the button again to advance to the desired waiting time. Press and hold for 3 seconds. (Buzzer will not beep until you release the button).

- The display will flash on all settings except the currently selected options.
- Holding the button for 10 seconds will return the timer to Normal mode. Failure to press the button during any period of 30 seconds will also return the timer to Normal mode.
- See table below for cycling sequence.

The following table shows the shower and waiting time options relating to the display shown during programming mode:

DISPLAY	SHOWER	WAITING
P1	1 Minutes	
P2	2 Minutes	
P3	3 Minutes	
P4	4 Minutes	
P5	5 Minutes	
P6	6 Minutes	
P7	7 Minutes	
P8	8 Minutes	
P9	9 Minutes	
10	10 Minutes	
11	11 Minutes	
12	12 Minutes	
00	Disabled	(no shower)
L0	(no waiting)	Disabled
15		15 Seconds
30		30 Seconds
L1		1 Minute
L2		2 Minutes
L5		5 Minutes

Trouble Shooting

Screen blank

Check that 12 Volt power is reaching the circuit board. No display when power is connected suggests reversed polarity. Remove the plug from the socket on the circuit board, remove the back of that plug from the 2 pin socket on the end of the lead and reverse it. The centre of this plug should be positive with respect to the sleeve of the plug.

Beeper screaming

The Start button is extremely sensitive and any distortion of the polycarbonate box can cause the button to activate which puts the timer in Programming mode after 10 seconds. About 10 seconds after that, the beeper will "scream" continuously.

If that happens :

- Loosen each of the three screws that secure the box to the wall by one turn and test again.
- If that does not rectify the problem, remove the box from the wall and check the terminal block where the wires to the solenoid valve are connected. Remove the screw that secures that block to the box and test the unit with the block hanging free.
- If the symptoms persist, the solution is to fit hard plastic shims (200 micron) under each of the four mounting points of the electronic circuit board. We can supply these free of charge by express post if required or you can return the unit for warranty claim.

Cold water feeding back into hot system

If there is significant difference in pressure between hot and cold water, this can be a problem when the user leaves hot and cold taps turned on after the shower is finished.

That can cause back flow when there are multiple showers and the hot water is cooled by the cold coming from those open taps.

- One solution is to fit a one way valve in the hot feed to the shower.
- Another is to fit the solenoid valve in the hot feed pipe only rather than after mixing.
- Thirdly, you can order our heavy duty model which will drive two solenoid valves, one in hot and one in cold feed pipes. The heavy duty Power Pack will also be necessary.