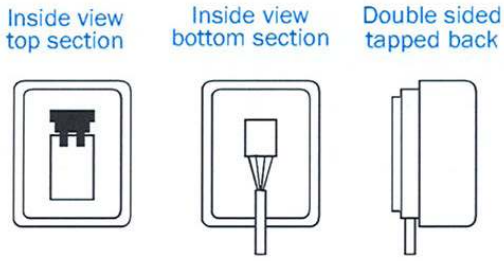
Thermostatic and Rain Controllers

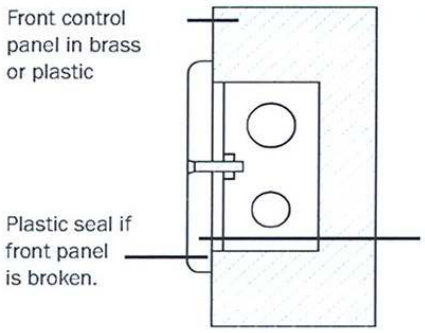
Rain Sensor Fitting Instructions.

The position of the rain sensor should be outside on the glass roof or glazing bar. Clean the surface and remove the double sided tape cover on the back of the bottom half of the box. (Press down firmly inside the box).
Make sure the cable exists downwards from the box. Take the top of the rain sensor and plug into the lid top where the gold pins stand up. The plug will fit either way round position. Run the cable back to the controller and secure cable with clips. See diag for board attachment of cable

Replacement Instructions For Worn Out Sensor Top.

Hold the bottom of the rain sensor with for finger and thumb and pull the top off, remove the plug and plug in the new top, fit the new top to the bottom.
The box is a standard two gang back box and measures 132mm x 71mm x 36mm deep. When fitting the back box into the wall it is most important to set the box back from the front of the wall by 10mm, as shown on the drawing, to allow room for the internal panel.





Steel back box fitted into wall. The box is a standard two gang back box and measures 132mm x 71mm x 36mm deep.

When fitting the back box into the wall it is most important to set the box back from the front of the wall by 10mm, as shown on the drawing, to allow room for the internal panel.

Auto mode

The open/close functions are controlled automatically in this mode. The preset high/low temperature settings and any rain activity, commands the controller.

Manual mode

The open/close functions are controlled manually in this mode. The high/low temperature settings and rain activity are ignored. You have total control of the open/close functions.

Lock mode (100J)

Lock is activated 30 seconds after the last button has been pressed. When the 'lock' is activated in 'manual' mode it is possible to view both open and close temperature settings as when 'locked' in the 'auto' mode. The lock light lights up when activated.

Unlock button sequence = buttons 2, 1, 3, 4. A maximum of 5 seconds is allowed for each button press in the unlocking sequence. If this time is exceeded at any point, the code will need to be re-entered from the start. Pressing a wrong button will also need re-entering the code from start.

Lock mode (100DM)

Lock is activated and deactivated by swiping the supplied magnet over the printed circle between the second and third operating button situated on the face plate. The lock light lights up when activated.

Rain sensor

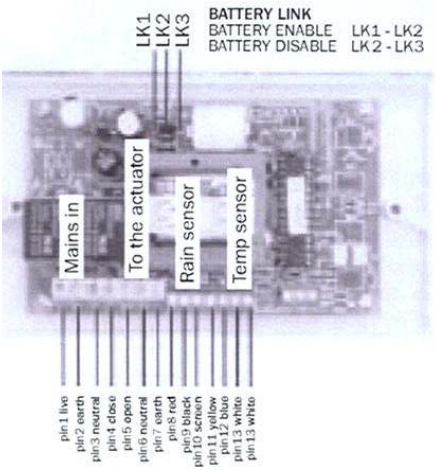
The rain sensor has a gold plated PCB which is placed outside at 45°, away from \walls etc. This needs to be accessible for regular cleaning to maintain performance.

Temperature sensor

This chrome probe is placed near or under the 100 series controller.

Contents

1 100 series type controller face plate and circuit board
1 Temperature sensor and cable
1 Rain sensor and 12m (approx) cable
1 Surface mount back box or flush mount back box



Pin	Description	Cable colour
Pin 1	Live	Brown
Pin 2	Earth	Yellow/green
Pin 3	Neutral	Blue
Pin 4	Actuator close	Varies
Pin 5	Actuator open	Varies
Pin 6	Actuator neutral	Blue
Pin 7	Earth	Yellow/green

Pin	Description	Cable colour
Pin 8	Rain sensor heator	Red
Pin 9	Rain sensor heator	Black
Pin 10	Rain sensor screen	No insulation
Pin 11	Rain sensor input A	Yellow
Pin 12	Rain sensor input B	Blue
Pin 13	Temperature sensor input	White
Pin 14	Temperature sensor input	White

Face plate	PCB identification	Description
Power	LED1	Power indicator
Rain	LED2	Rain detected
Auto/manual	LED3	Manual mode active
Lock	LED4	'Lock' mode active

ace plate dentification	PCB identification	Locked	Unlocked	Raining	Auto mode	Manual mode
ower	LED1	On	On	On	On	On
ain	LED2	X	X	On	X	X
uto/manual	LED3	X	X	X	Off	On
ock	LED4	On	Off	X	X	X

Face plate identification	PCB identification	Description
Open	SW1	View/set open temperature and manual open
Auto/man	SW2	Toggle between automatic and manual modes
Set+/-	SW3	Set open or close temperatures
Close	SW4	View/set close temperature and manual close

Lock Mode Test (100J)

The unit is in 'lock' mode ('lock' LED4 illuminated) at power on. The 'lock' function will activate in either auto or manual modes if no buttons have been pressed on the unit for approximately 30 seconds.

To unlock the controller, the unlock sequence must be entered. Press the buttons in the following order:

Visual	Button number
Auto/man	SW2
Open	SW1
Set	SW3
Close	SW4

Approximately 5 seconds is allowed for each button press. If the time from the previous button being pressed exceeds this, or the wrong button is pressed, then the sequence will have to be re-entered from the start.

Lock Mode Test (100DM)

The 'lock' function will activate or deactivate in either auto or manual modes if the magnet is swiped once over the face plate between the 2nd and 3rd button. ('lock' LED4 illuminates)

The SET+/-and AUTO/MAN switches are then disabled. The 'OPEN' and 'CLOSE' switches can be used to view temperature settings, but not change them.
Press 'OPEN' SW1 to view opening temperature.
Press 'CLOSE' SW4 to view closing temperature.

Unlock

When successfully unlocked, the 'lock' [LED4] will be extinguished and all buttons will be functional.

Auto/Manual Modes

Check that the unit toggles between automatic and manual modes by pressing AUTO/MAN' [SW2]. The 'AUTO/MAN' [LED3] turns on in manual mode and off in automatic.

Automatic Mode

- Enter automatic mode by pressing the 'AUTO/MAN' [SW2] button so that the 'AUTO/MAN' [LED3] is off.
- Set 'OPEN' temperature by pressing and holding the 'OPEN' button [SW1] while pressing the 'SET +/-' button to increment the temperature setting. Set the temperature to 22°C.
- Set 'CLOSE' temperature by pressing and holding the 'CLOSE' button [SW4] while pressing the 'SET +/-' button to increment the temperature setting. Set the temperature to 18°C.
- Warm the temperature probe so that temperature rises above 22°C. The actuator will begin opening upto 30 seconds after pressing. Power to the 'open' relay [RL2] will be cut after a further 30 seconds.
- Cool the temperature probe so that temperature falls below 18°C. The actuator will begin closing upto 30 seconds after pressing. Power to the 'close' relay [RL1] will be cut after a further 30 seconds.

100J

- Check 'lock' [LED4] comes on after 30 seconds without pressing any buttons. The 'AUTO/MAN' [LED3] should remain off.

Manual Mode

- Enter manual mode by pressing the 'AUTO/MAN' (SW2) button so that the 'AUTO/MAN' [LED3] is on.
- Press and hold 'OPEN' button [SW1] to fully open the actuator.
- Press and hold 'CLOSE' button [SW4] to fully close the actuator.

100J

- Check 'lock' [LED4] comes on after 30 seconds without pressing any buttons. The 'AUTO/MAN' [LED3] should remain on.

Rain Sensor Test (Automatic Mode Only)

- Enter automatic mode by pressing the 'AUTO/MAN' [SW2] button so that the 'AUTO/MAN' [LED3] is off
- Warm the temperature probe so that temperature rises above the open temperature (e.g. 22°C) so the actuator opens
- Spray water onto the rain sensor surface.
- The 'RAIN' led [LED2] will illuminate and the actuator will begin to close upto 60 seconds later.
- Leave the unit for a few minutes, with water on the sensor surface. Then dry off the sensor surface with a cloth and after approximately 30 seconds the 'RAIN' led [LED2] should turn off.