

Howells Glazing Systems

[100J] Digital Control Panel with rain sensor & thermostat

230v / 110v / 24v Options

IDENTICAL TO 100DM PANEL, BUT DIGITAL CODE SWITCH TO UNLOCK INSTEAD OF MAGNETIC KEY FOB

(SEE WIRING INSTRUCTIONS FOR CODE)



Technical Specification

Power Supply Voltage	230v
Output Voltage	230v
Max Output Current	5 amps, upgrade to 20 amps
Max No. of Zones	1
Programmable Temperature Range	-19c to +60c
Colours	white
Overall Dimensions	Fits 2-gang steel or white plastic pattress box (50mm deep)
Temp Sensor	3m cable included
Rain Sensor	12m cable included
Mounting	flush or surface

Product Summary

- Fully automated and manual options
- Rain and temperature sensors
- Separate open and closing temperature settings
- Choice of flush or surface mounting
- Available in white. Upgrade to brass or chrome front plate
- Magnetic key lock
- Detachable rain sensor for easy cleaning
- Digital display
- Manual override
- Also available in 110v and 24v versions

(Digital Control Panel)

£ 275.00 + VAT

(Delivery Not Included)

OTHER AVAILABLE ACCESSORIES



Smoke Detectors



Rain Zones



TF Radio Control



7 Day Control



Wind Speed



Power House



Remote Alarm Switch



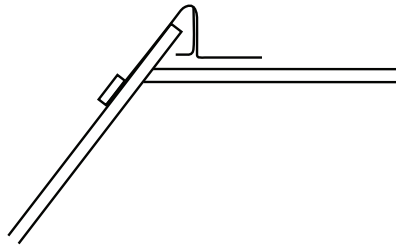
Group Command Station

Forge Lane, Cradley. Heath West Midlands. B645AL. Tel. 01384 820060 Fax. 01384 860150

Email:- sales@howellsglazing.co.uk Web:- www.howellsglazing.co.uk

100J

Thermostatic and Rain Controller



Rain Sensor Fitting Instructions.

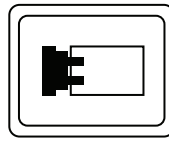
The position of the rain sensor should be on the glass roof or glazing bar. Clean the surface and remove the double sided tape cover on the back of the bottom half of the box. (Press down firmly inside the box).

Make sure the cable faces down. 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 down the roof and secure with clips. Make off the other end as the instructions for the unit.

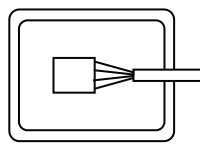
Replacement Instructions For Worn Out Sensor Top.

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 with the word top facing up.

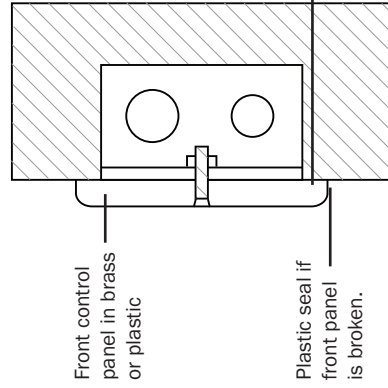
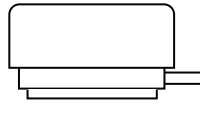
Inside view top section



Inside view bottom section



Double sided tapped back



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

Lock will be become active and the 'LOCK' led will illuminate when no buttons are pressed for 30 seconds.

Unlock button sequence **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. The controller will wait for 30 seconds after the high/low temperature threshold has been exceeded before the actuator will open/close. When rain is detected the 'RAIN' led will illuminate. When the sensor has dried off the 'RAIN' led will turn off after 30 seconds.

Manual mode

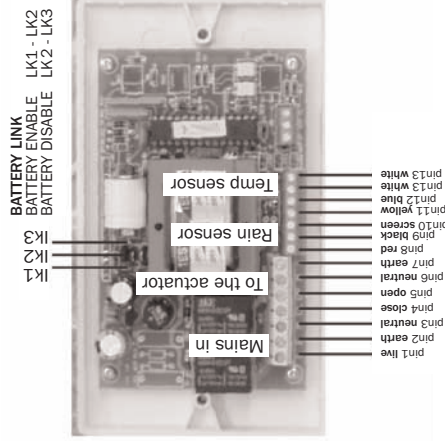
The open/close is controlled manually in this mode. The high/low temperature settings and rain activity are ignored. Lock is activated 30 seconds after the last button has been pressed. When the 'lock' is activated in 'manual' mode it is possible to view both open and close temperature settings as when 'locked' in the 'auto' mode.

Rain sensor

The rain sensor with a 50R heater is a gold plated PCB. Temperature Sensor Wiring does not concern the polarity. Readings are taken every second.

Contents

- 1 100J Controller face plate and circuit board
- 1 Temperature sensor and cable
- 1 Rain sensor and cable
- 1 Surface mount back box or flush mount back box



Face plate identification	PCB identification	Locked	Unlocked	Raining	Auto mode	Manual mode
Power	LED1	On	On	On	On	On
Rain	LED2	X	X	On	X	X
Auto/manual	LED3	X	X	X	Off	On
Lock	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

Temperature Module

Check that the temperature module displays the ambient temperature: - e.g. TEMP 20.0 °C

Check LK1 pins 1 and 2 are linked (see Fig one). This connects the on-board battery BT1 to the

module and charging circuit. If the temperature probe is not connected to the module, the following will be displayed: TEMP --- °C
The temperature module remains on.

Lock Mode Test

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. 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. (DEFAULT = ___ °C)
Press 'CLOSE' SW4 to view closing temperature. (DEFAULT = ___ °C)

Unlock

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.

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 30 °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 15 °C.

- Warm the temperature probe so that temperature rises above 30 °C. The actuator will open after approximately 30 seconds in unlocked mode and within a second or two in locked mode. Power to the 'open' relay [RL2] will be cut after a further 30 seconds.

- Cool the temperature probe so that temperature falls below 15 °C. The actuator will close after approximately 30 seconds in unlocked mode and within a second or two in locked mode. Power to the 'close' relay [RL1] will be cut after a further 30 seconds.

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

6.0 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. 30 °C). The actuator will open after approximately 30 seconds in unlocked mode and within a second or two in locked mode.

- Spray water onto the rain sensor surface.
- The 'RAIN' led [LED2] will illuminate and the actuator will close after approximately 30 seconds in unlocked mode and within a second or two in locked mode.

- 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.