SLPBWIFI CONTROLLER

Installation & Control Guide for **SLPBWIFI** Wireless Controller

All electrical appliances produced by the Company are guaranteed for one year against faulty materials or workmanship. This applies only if the appliance has been used for purposes in accordance with the instructions provided and has not been connected to an unsuitable electricity supply, or subject to misuse, neglect, damage or modified or repaired by any person not authorized by us. This guarantee is offered to you as an extra benefit and does not affect your legal rights.

The correct electricity supply voltage is shown on the rating label attached to the appliance.

Reasonable care has been taken to ensure that this guide is accurate at the time of printing. In the interest of progress the Company reserve the right to vary specifications from time to time without notice.

CUSTOMER HELPLINE

Should you need any advice on the use of your new Consort product, please contact our Helpline:

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Operation hours: Mon to Thu 8.30am to 4.30pm | Fri 8.30am to 3.30pm

BS EN ISO 9001 Registered Company No FM12671

Please read this guide carefully and retain for future use and maintenance.

SLPBWIFI Wireless Controller Installation and User Guide

WARNINGS

- **Do NOT handle the appliance with wet hands.**
- **Do NOT use the appliance in workshops or rooms with high dust exposure.**
- **Do NOT cover or restrict any aperture.**
- **Do NOT use the appliance if damaged.**
- **Do NOT leave the appliance unattended where young children are present.**
- **Ensure that nothing is pushed into any aperture of this controller.**
- **Operating temperature range -10 to +40°C.**

1. Getting to know your SL wireless controller

The SLPB controller can control multiple heaters within its RF range. All heaters have to be installed in the same room as a SLPBWIFI. The RF range can be extended if necessary, see product code SLEXT.

When used without WIFI, the controller will only have basic on/off functionality.

When connected to WIFI, the controller offers 4 operating modes. The required mode can only be selected via the Consort Connect app.
Operating modes:

- Manual
- Frost protection
- Boost
- Automatic timer

There are 4 light indicators around the button showing status of the controller. These indicators can show one of four options listed below.

There is also a blue indicator light located in the bottom left corner of the controller. This will be flashing during connecting to the WIFI, and be solid when connected.

Heating Active - All four segments are solid green, heaters are producing heat.
Heating active in BOOST mode - All four segments are slow flashing green, heaters are producing heat.

Connecting to APP / WIFI - When the blue and green lights are rapidly flashing, the controller is in registering to WIFI and APP. This happens when the button is held within 10 seconds of powering the controller. Refer to section 'Pairing to the Consort Connect app' for more details.

Standby mode - After the heating is switched off, either double pushing the button, using the APP or because the target temperature has been reached, the LED segments change to red. After 5 seconds, the segments will switch off completely. The heating is off.

Pairing with heaters - When the yellow light is rapidly flashing, the controller is pairing with heaters. This happens when the button is held after the controller has been powered for 30 seconds. Refer to section 'pairing with heaters' for more details.

Open window detection active - All four segments are slow flashing yellow, heaters aren't producing heat.

2. Using the push button

Before connecting to WIFI and APP:

After the pairing with the heaters has been completed (see paragraph 3 for more details) The push button can be used to activate and deactivate heating. Push button briefly to activate heating, push again to deactivate heating. Temperature control isn't available.

After connecting to WIFI and APP:

After the pairing with the heaters, the WIFI and APP have been completed. (see paragraph 3 & 4 for more details) The function of the push button now changes. The push button can be now used to toggle between the BOOST MODE and mode selected by the APP. Press the button briefly to set controller to BOOST mode. Double press the button to return to the previous mode.

The BOOST mode is time limited to 15 minutes. After 15 minutes, the heating will revert to the previous operating mode set on the APP.

3. Pairing with heaters

In order to pair controller with heaters:

- Ensure the controller is powered and has been powered for more than 10 seconds.
- Power up the heater.
- Within 20 seconds, press and hold the button on the controller until the segments flash yellow. Alternatively select 'Send pairing signal' in the app settings menu.
- After the pairing is finished, the light segments will change to green.
- If the pairing was successful, the heater should emit heat. It can take up to 4 seconds.
- Depending on the operating mode, the appliance may switch off after 4 seconds.
- The heater is now ready to be used.

4. Pairing to the Consort Connect app

The controller is only compatible with a 2.4GHz WIFI network.

All internet routers support the 2.4GHz band, as it is an older standard and has maximum device compatibility. Routers also support 5GHz WIFI and are often set up to hide which frequency band is being used, combine both bands into a single network name, and assign the band automatically. A mobile phone could be automatically connected to the 5GHz network, and this will cause pairing issues. Routers usually have a setting that gives each band to have a different network name, which is configurable through the router's web interface. This allows the phone to unambiguously select the 2.4GHz network. For full pairing instructions, see section 9. Before pairing the App must be installed on your smart phone. The app is compatible with IOS and Android Smartphones. Go to the app store or play store and search :

Consort Connect

When the app asks for the WIFI make sure that the WIFI network and password are entered correctly – the app usually selects the right network, but you need to enter the password. Until you successfully pair a device to a network it does not remember the password, and if the password is entered incorrectly it doesn't specifically tell you that this is the problem.

Pairing the heater to the Consort Connect app.

1. Ensure the smartphone or tablet is connected to 2.4GHz WIFI network and the Bluetooth is enabled.
2. Within 10 seconds after powering the controller, press and hold the button until the green lights start flashing.
3. The Blue indicator should also be flashing.
4. Select the + symbol in the top right corner of the Consort Connect app
5. Select "Heater (BLE)"
6. The app will ask you to confirm the indicator is blinking rapidly.
7. If the blue indicator is flashing rapidly, tick the box and click 'Next'.
8. The app should show that one device has been found. Select the + symbol next to this device.
9. Enter the WIFI password on the app.
10. The heater will begin to pair to the app. This can take up to 60 seconds.
11. Once pairing is successful, the + symbol will be replaced with a tick.
12. Select 'Next' and the app should display 'Added successfully'. The controller is now paired and ready to be used with the app.

A solid blue light on the controller means the controller is connected to the internet.

5. How to control the product using the app

When you open the Consort Connect app, select the product you would like to control. This will bring you to the main control page where you can change the operating mode and temperature. The dial in the middle of the screen is used to adjust the temperature. The icons on the top of the screen are used to change the operating mode.

6. Manual mode

The temperature control feature will effectively maintain the set room temperature. The target temperature can be set using the Consort Connect app. The range is 4ºC - 35ºC. Once the room temperature reaches the set temperature, the indicators will change from green to red for 4 seconds before switching off completely. When the room temperature drops, heating will became active and the indicators will change to green.

7. Frost protection

Frost protection mode works the same way as manual mode, maintaining a target temperature from 4ºC - 15ºC. These two modes can be used together, by selecting manual mode at a higher temperature when heat is required and then selecting frost protection at a lower temperature when no heat is required.

8. Boost mode

Boost mode can be used to provide a boost of heat for a short period of time. When the button on the controller is pressed, boost mode is triggered for 15 minutes. Once the boost timer has expired, the controller will return to its previous operating mode.

9. Automatic mode

The Consort Connect app has a 7 day automatic timer. This can be set to switch the heater on/off automatically at certain times of day. Each day has 24 heating periods, each period must be set to a required temperature.

The timer has an automatic 'preheat period' which turns the heater on from 5-30 minutes before the automatic program begins. This time period can be set in the basic settings menu.

Information on how to set the automatic program can be found in the 'Setting the automatic timer' section.

10. Energy Consumption

Selecting the icon will load the Energy consumption screen how much power heaters connected to SLPBWIFI used in the previous 24 hour period, 7 day period, 4 week period and the last year.
The energy usage values are approximate. They are based on recording time the heaters are producing heat. The mains voltage and actual heater wattage aren't taking to account when calculating values.

11. Temperature Calibration

The temperature reading has been factory calibrated but if for any reason it needs adjusting (better accuracy required, to suit different position in the room etc.) the reading can be recalibrated in 0.5 degrees steps via the Consort Connect App. The calibration can be done +/- 2ºC of the original value.

12. Basic settings menu

To access the basic settings menu, select the settings icon from the main control page. In the settings menu, select the title 'basic' to access the basic menu. In this menu, you can view the wattage of the heater, adjust the temperature calibration and toggle open window detection, the occupancy sensor and self learning mode on/off. An SL pairing signal can also be sent from this menu. More information on this can be found in the section titled 'Pairing your SL heater'. There is also an option to disable all indicator lights on the controller. After pressing the button the controller will briefly show the status by enabling the light indicators for period of 4 seconds. The light indicators will be automatically enabled after activating WIFI pairing.

13. Naming the product in the Consort Connect app

Once the controller is linked with the app, it is given a generic name and the icon associated with it is a heater. These can both be changed.

To do this, when the controller menu is open (this is the menu you can control the product with) select the icon in the top right corner of the screen. Next, select the icon again. From this page, you can change the name of the controller and import an image to represent your product.

14. Open Window Detection

Ensuring you don't waste energy on heating the outside world, the controller is equipped with optional open / closed window detection. The controller recognises sudden drops in temperature when a window or a door is opened and turns the heating off to save energy. When the window is closed, the heater will automatically detect a temperature rise, and switch itself back on. Once enabled in the Consort Connect settings menu, the open window detection is fully automatic and does not require any human intervention to be activated.

Setting-up Open Window Detection

The system has been factory set to default time and temperature values. If necessary, all values can be adjusted. When the heating is on, open window detection sensor will automatically switch the heater off when it detects a fall in temperature of 2ºC in less than 10 minutes. If a temperature rise of 2ºC in less than 5 minutes is detected, the heater will switch itself back on. These parameters can be changed in the Consort Connect App. When viewing the heater settings in the app, select the 'open window detection' menu.

15. Automatic timer

The Consort Connect app has a 7 day automatic timer. This can be set to switch the heater on/off automatically at certain times of day.

Each day has 24 time periods, one period for each hour of the day. To set up your program, you must select the required temperature for each time period

To access the program page, select the icon. Tapping an hour slot will turn it grey and bring up 2 options. These are 'Delete' and 'Settings'. Tapping 'delete' will default the temperature for that slot to 4°C . Tapping 'settings' will allow a temperature between 4°C and 35°C to be selected.

Multiple hour slots can be selected simultaneously provided they are for the same day and they are in sequence. For example, if the program needed to be 22°C from 9am-5pm on Monday you would need to follow the steps below.

1. Select the box after 09:00 Monday (the box will turn grey)
2. Scroll down and select the box before 17:00 on Monday. All boxes from 09:00 up to 17:00 will turn grey.
3. Select the option 'settings' which appears next to the grey boxes.
4. Select a temperature of 22°C.
5. Tap 'Done'
6. All boxes between 09:00 and 17:00 will be set to 22°C and the heater will maintain this temperature during these times.

Repeat these steps for all time periods so that the heater runs as required.

16. Smart automation

The automatic program which is explained previously is only capable of switching the heating on/off in one hour increments, I.e. the heating could not be switched on at 10:30am, it would need to be either 10am or 11am.

The Smart automation feature which is also part of the app can offer a solution to this. It allows an unlimited number of programs to be set on every day of the week.

To use it, follow the steps listed below.

1. Open the Consort Connect app and select the 'Smart' option on the bottom of the screen.
2. Select the '+' symbol located in the top right of the screen.
3. Select the option 'Schedule'
4. Select 'Repeat' and choose the days which the program is required to run on.
5. Select an execution time. This is the time the program will be triggered.
6. Select 'Next'.
7. Select 'Run the device' and choose the device the program will control.
8. Select 'Mode' and then choose the operating mode the heater will switch to.
9. Select 'Name' to name the operation (optional).
10. Select 'Save'.

Repeat these steps for all automations required. A single time period would require two automations, one to switch the heater on, and one to switch the heater off.

You can activate/deactivate each individual automation without deleting it. To do this, from the main app screen select the 'Smart' option and use the toggle icon.

If automation function is used, the controller must set to FROST mode and automation set to switch to MANUAL mode.

17. Group control

The APP can be set for group control where it is possible to control multiple heaters/controllers at once.

To set it up, open the app, select a heater you want in the group and press the edit icon in the top right hand corner. Select create group and follow the instructions on the screen.

18. Self-learning function

This mode allows the SLPBWIFI to monitor occupancy patterns and predict when people are likely to use the room. Once a pattern is detected, the SLPBWIFI will add the pattern to the automatic timer. The learning mode will only switch the heater on automatically if the product is left in auto mode.

Occupancy sensor data is recorded in a week period. Time is divided into hour segments. Any occupancy detected during the hour counts as an 'occupied' segment in the data. There are 2 different learning mode options available, 2 weeks and 3 weeks. The default mode is the 3 week learning period. In this operating mode, if there are readings of occupancy at the same time and day 3 weeks in a row, then a pattern is detected and added to the automatic timer. In 2 week mode, only 2 consecutive weeks are required. The parameters can be viewed and changed via the app. To do this, enter the settings menu and select the title 'self-learning programme'.

After the self-learning function is enabled, the heater will start overwriting the existing time schedules immediately. It is recommended to leave the heaters in manual mode with occupancy sensor enabled for the period of 2 or 3 weeks to allow the time schedules to be recognised by the heaters.

18. Built-in Occupancy Sensor

In order to detect presence in the room, SLPBWIFI has a built in microwave sensor. For the occupancy detection to work correctly it is necessary to find the right settings for the sensor. This will minimise erroneous triggering.
All settings can be changed using the Consort Connect app. This can be done under the title 'Occupancy Sensor' in the settings menu.

There are 3 values which can be changed. These are the **sensitivity**, **responsiveness** and the **occupancy timeout**.

The value for **sensitivity** adjusts the point at which a disturbance counts toward the decision to trigger the heater. It is adjustable from 0 to 9 which adjusts the sensitivity. 0 is minimum sensitivity, 9 is maximum sensitivity. Setting sensitivity to the minimum setting (zero) disables the sensor.

The value for **responsiveness** is used to consider several readings before triggering occupancy. This value is also adjustable from 0 to 9, the higher it is set the less sensor readings are required to trigger occupancy. 0 is minimum responsiveness, 9 is maximum responsiveness.

The **occupancy timeout** is the length of time the heater stays on for without movement being triggered.

How does the microwave sensor work?
The occupancy sensor works differently depending on what operating mode is manually selected.

When in MANUAL mode, the microwave sensor will switch the heater into FROST mode automatically when the occupancy timeout is reached. The app display will then show 'Auto off'. When this is shown, the heater will switch back to manual mode automatically once movement is detected.

When in automatic mode, the heating will automatically switch off when the occupancy timeout is reached. It will then switch back on when movement is detected. The preheat function is unaffected by this and operates as normal.

19. Pin Lock feature

The lock feature allows locking 2 different aspects of the controller using a pin number. It is possible either lock the controller completely so that it cannot be tampered with, or only lock the WIFI pairing. Locking the WIFI pairing prevents people from pairing the heater to their smartphones unless they have the pin.

These settings can be implemented under the title 'Lock' in the settings menu.

To disable lock from the controller, hold down the button until it begins flashing green. The controller will begin a sequence of flashes. It will flash green, then flash red, then flash green and then flash red again. Each of these flashing sequences represent a different digit in the pin number. The number of times you press the button during each flashing sequence is entered as the number for that digit.

For example, if your pin number was set as 1234, the following sequence would unlock the controller.

1. Hold down the controller button
2. Controller will flash green, press the button once during this sequence
3. Controller will flash red. Press the button twice during this sequence.
4. Controller will flash green. Press the button three times during this sequence.
5. Controller will flash red. Press the button four times during this sequence.

This will result in the pin '1234' being entered, unlocking the controller. The controller will not lock again until manually done via the Consort Connect app.

NOTE: Once this pin has been confirmed, the lock cannot be removed without knowing the correct pin number.

The pin is NOT recoverable.

20. Choosing a position in a room

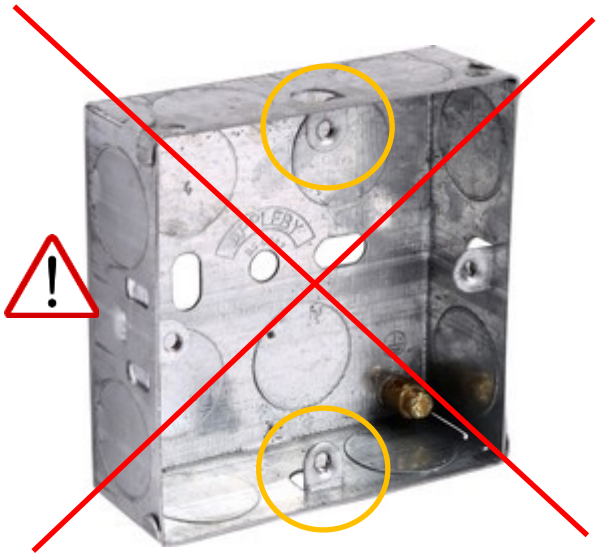
Before choosing position in the room check that WIFI signal is present in the area. The controller requires a good internet connection.

The SLPBWIFI controller must be fixed to the wall installed ideally in a plastic surface or recessed back box. Avoid areas with draught or direct sun. Do not position the controller above or close to the heaters or other heat sources. Damp areas or areas where SLPBWIFI can be mechanically damaged should also be avoided. Avoid installing the controller in areas where there are metal objects between the heater and the controller. This will reduce the RF range. Also installing the controller in a metal back box will affect the RF range. The RF range in ideal conditions can be up to 20m however this can be reduced when the signal is passing through the walls or other objects. The range can be also affected where the controller is mounted close to power cables, motors or equipment producing a strong electromagnetic field. If the temperature control feature is used it is necessary to use one controller for each room or zone.

21. Installation

The controller is designed to fit onto most single gang back boxes. When a metal box is used this must be earthed. The controller is powered by 230 - 240VAC 50Hz. The power consumption is less than 1W. The maximum size wire that can be used is 1mm2, this can be twin and earth or standard flex . Do not overtighten the connector screws. Take care not to damage the components when connecting the cables.

WARNING, the controller is not compatible with single gang metal back box with 4 fixing lugs.



22. Connection to the Main Supply

Electrical installation should be carried out by a competent installer in accordance with the latest edition of the IEE Wiring Regulations, (BS.7671), and any relevant Local Authority Bye-Laws.

This heater must be permanently connected to the electricity supply via a double pole switch having 3mm gap on each pole. There are no exceptions.

A switched Fused Connection unit to BS.1363. Part 4 is a recommended mains supply connection accessory to ensure compliance with safety requirements applicable to fixed-wiring installation.

Declaration Of Conformity

In accordance with UK Government Guidance.

WE HEREBY CERTIFY THAT THE APPLIANCES DETAILED HEREON HAVE BEEN INSPECTED AND TESTED, AND CONFORM TO THE REQUIREMENTS OF THE FOLLOWING UK STATUTORY INSTRUMENTS WHERE APPLICABLE:

Electrical Equipment (Safety) Regulations 2016 SI. 2016 1101
Electromagnetic Compatibility Regulations 2016 SI. 2016 No. 1091
Radio Equipment Regulations 2017 SI. 2017 No. 1206
The Restriction of use of Certain Hazardous Substances. SI. 2012 No. 3032
The Waste Electrical & Electronic Equipment Regulations 2013. SI. 2013 No. 3113
Security Requirements for 'Connectable Products' PTSI ACT 2022
The Product Security and Telecommunications Infrastructure (Security Requirements for Relevant Connectable Products) Regulations 2023

Transposed standards used:

- **BS EN 55014 (2016)**
- **BS EN 301489.1 & .3**
- **BS EN 300220 .1 & .2**
- **BS EN 60730.2.9**
- **BS EN 60335.1 (2012)**
- **BS EN 60335.2.30 (2009)**
- **ETSI BS EN 303645**
- **EN 50663 (2017)**
- **EN 60730-2-9 (2010)**
- **EN 60730-1 (2011)**
- **ETSI EN 300 220-1 V3.1.1 (2017-02)**
- **ETSI EN 300 220-2 V3.2.1 (2018-06)**
- **ETSI EN 301 489-1 V2.2.2 (2019)**
- **ETSI EN 301 489-3 V2.1.1 (2019)**

PART NUMBER AND DESCRIPTION OF APPLIANCE:	**SLPBWIFI**
NAME OF RESPONSIBLE PERSON:	**A C REYNOLDS**
POSITION:	**QUALITY ENGINEERING**
DATE:	**22/01/22**

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