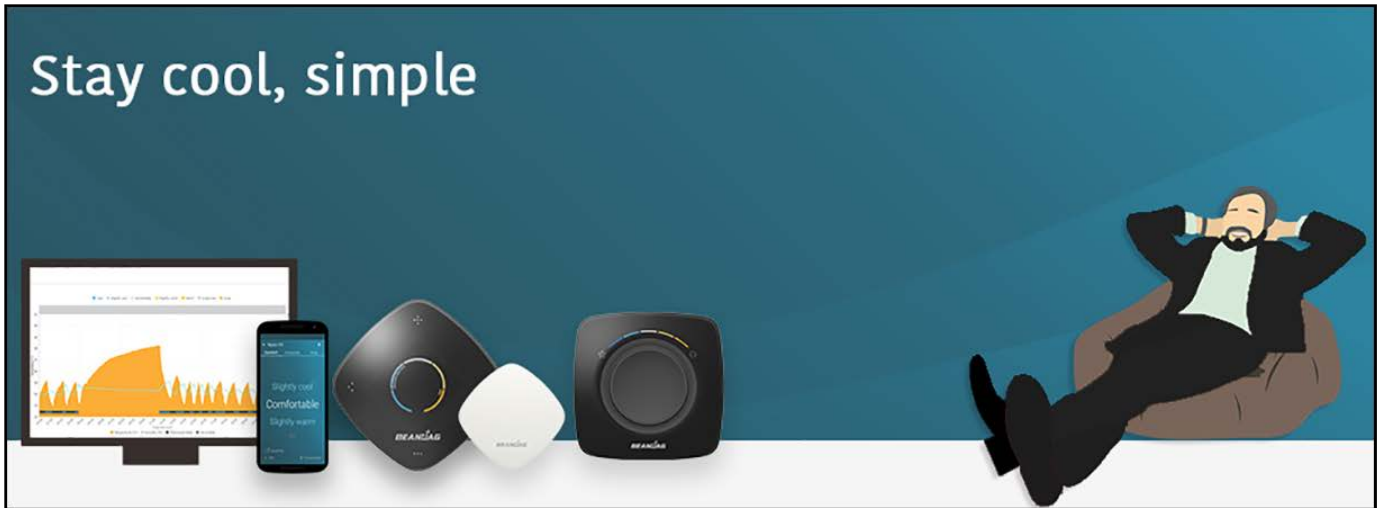




# Beanbag Cool solution User manual



**User Manual**  
**BGX701-201-R01**

Copyright © 2019-2020, SIHPL. All rights reserved. E&OE.

Beanbag Cool is a registered trade name of Secure Meters Ltd.

Other product names are trademarks or registered trademarks of their respective owners.

## Table of Contents

<b>1</b>	<b>Important</b>	<b>5</b>
<b>2</b>	<b>Audience and Use</b>	<b>6</b>
2.1	Acronyms and Abbreviations	6
<b>3</b>	<b>Before you begin</b>	<b>7</b>
<b>4</b>	<b>The Beanbag Cool Solution</b>	<b>9</b>
4.1	Beanbag thermostat 500 series (for DX systems) overview	9
4.2	Beanbag thermostat 600 series with Beanbag Temperature Sensor 110 (For FCU systems) overview	10
4.3	Beanbag Cool mobile app overview	10
4.4	Beanbag Cool web app overview	10
<b>5</b>	<b>Beanbag thermostat 500 series– Features and functions</b>	<b>11</b>
5.1	Product overview	11
5.2	Beanbag thermostat 500 series product label information	11
5.3	Main features	12
5.4	User functions	12
5.4.1	Turning the cooling unit ON/OFF locally (after commissioning)	12
5.4.2	Selecting the desired band	13
<b>6</b>	<b>Beanbag thermostat 600 series with temperature sensor– Features and functions</b>	<b>14</b>
6.1	Product overview	14
6.2	Beanbag thermostat 600 series product label information	16
6.3	Main features Beanbag thermostat 600 series	17
6.4	Main features Beanbag temperature sensor 110	17
6.5	User functions - Beanbag thermostat 600 series	17
6.5.1	Turning the cooling unit ON/OFF locally (after commissioning)	17
6.5.2	Setting the mode and selecting the desired band	18
6.5.3	Replacing the sensor battery	18
<b>7</b>	<b>Technical specifications- Beanbag thermostat 500 and 600 series</b>	<b>20</b>
<b>8</b>	<b>Beanbag cool system types</b>	<b>22</b>
<b>9</b>	<b>Beanbag Cool mobile app – Features and functions</b>	<b>23</b>
9.1	Main features	23
9.2	User interface	24
9.3	Beanbag Cool mobile app user functions	29
9.3.1	Create a new system	29
9.3.2	Add a device to the system	30
9.3.3	Transfer system ownership	30
9.3.4	Inviting a new user	31
9.3.5	Turn the cooling unit ON/OFF	32
<b>10</b>	<b>Beanbag Cool Web app – Features and functions</b>	<b>33</b>

10.1	Signing in to Beanbag Cool web app .....	33
10.2	Knowing the Beanbag Cool web app .....	34
10.2.1	Beanbag Cool Home Page .....	34
10.2.2	The system dashboard .....	35
10.3	Devices .....	36
10.3.1	Turn the thermostat device ON/OFF remotely .....	36
10.3.2	Set mode in the device remotely .....	36
10.3.3	Change comfort band (Comfort mode) .....	37
10.3.4	Change temperature set point and fan speed (Customise mode).....	38
10.3.5	Change set point temperature (Away mode) .....	38
10.3.6	View trends remotely .....	39
10.3.7	Configure device remotely .....	40
10.3.8	Searching devices .....	41
10.4	Scheduling .....	42
10.4.1	Creating a schedule .....	42
10.4.2	Copy Schedule.....	44
10.5	Settings.....	46
10.5.1	Transfer system .....	46
10.5.2	Rename system .....	47
10.6	User management .....	47
10.7	Inviting a new user.....	47
10.8	Logging out from the Beanbag Cool application .....	49
<b>11</b>	<b>Device settings via mobile/web app .....</b>	<b>50</b>
<b>12</b>	<b>FAQ (Frequently asked questions) .....</b>	<b>51</b>

## 1 Important

1. No part of this manual or its contents may be published, distributed, scanned or copied, in electronic form or otherwise, without prior written consent of Secure Meters Ltd.
2. While we have made every effort to minimise errors, some may exist. We request feedback from users in this regard and undertake to correct such errors wherever possible.
3. Secure Meters Ltd. reserves the right to alter the features or specifications mentioned in this document without prior notice.
4. Local best practice and regulatory stipulations must always be observed, even if they are not referred to directly in this document. In addition, safety precautions recommended for installation of electrical equipment should be strictly adhered to.
5. Observe local safety norms when disposing of the product (if applicable), and any batteries (if applicable), at the end of their life, to ensure that they do not enter the household waste stream.

## 2 Audience and Use

This user manual is intended for users involved in managing, monitoring and maintaining their dispersed cooling systems (both DX and FCU types) using the Beanbag Cool solution. Beginning with a solution overview, the detailed features and functions of each component are explained in the document. The installation and commissioning of the Beanbag Cool solution are not within the scope of this document, however, references to relevant documents have been provided.

Some of the users of this user manual may include:

- Building owners who want to monitor and control their dispersed cooling systems
- Facility managers involved in the administration of cooling systems in hotels, hospitals, schools and commercial premises etc.
- Service and maintenance personnel involved in the upkeep of cooling systems
- Consultants/System integrators

**Note:**

This is not an exhaustive list and other users may refer to this document as required.

### 2.1 Acronyms and Abbreviations

Abbreviation	Description
AC	Air conditioning
OEM	Original equipment manufacturers
IR	Infrared
DX	Direct expansion
FCU	Fan coil unit
BLE	Bluetooth low energy
ISP	Internet service provider

### 3 Before you begin

We assume you already have a Beanbag Cool solution installed and commissioned for your cooling systems. If not, listed are the broad steps to install and commission the Beanbag Cool solution

- 1) **Identify the cooling system and the suitable Beanbag Cool variant. Refer the [Beanbag thermostat 500 series](#) and [Beanbag thermostat 600 series QIGs](#)**
- 2) **Set up your Wi-Fi network (For recommendations see below)**

#### **Recommended Wi-Fi network and router settings for use with Beanbag Thermostat**

The Beanbag thermostats work on **2.4 GHz** Wi-Fi range We recommend the following:

- Use a fixed-base router
- Enable 2.4 GHz range and set 802.11 B/G channel on the router
- Configure a dedicated SSID for Beanbag Cool on router / AP
- Choose an SSID
  - With a unique name
  - minimum 5 characters
  - no special characters
- Choose a password with at least 8 characters
- Set the SSID broadcast to Disabled or Hide for enhanced security
- Select the channel which is least congested.
- Each router supports a definite no of device connections. We strongly recommend not exceeding that number.

#### **Important:**

- Set the Wi-Fi security to Open/WPA/WPA2
- Ensure that the Wi-Fi signal strength is greater than (-) 60 dBm on the device for better connectivity. Signal strength less than (-) 60dBm level may lead to disconnection of device.
- Use of mobile hot spot for monitoring / control of thermostat is not recommended, as it may lead to frequent disconnection of the device from the network, especially when multiple devices are connected to the same hot spot

#### **If your network uses a firewall:**

- Make sure your settings do not restrict the device from communication.
- You must by-pass the Thermostat MAC ID on the firewall. This can be managed in two ways:
  - Bypass the MAC ID directly in the Firewall and ISP controller, if any.
  - Ensure that Beanbag Cool is bypassed as **Device** with port access enabled.and not as **Subscriber**.
  - Ping the assigned IP to verify the connection with the thermostat device. Check for the sent and received data bytes to ensure that the device has internet access.
  - Create a dedicated subnet and configure it in the Firewall

### **Recommended tools**

- App for network health check
- Bandwidth/speed-Wi-Fi analyser
- Signal strength speed test net

### **Good to know**

- 1) Data consumption- Approx 0.5 MB per device per day
- 2) Wi-Fi bandwidth – approximately 5 Kbps per device
- 3) Number of connections (Optimal) per access point- depends on the type of router installed. May lead to frequent disconnections, as number increases beyond the specified limit.

**Note:** The numbers specified above are indicative only. Real time calculations may vary with usage

<b>Platform specifications</b>	
<b>Supported OS for Mobile app</b>	<b>Supported browsers for Web app</b>
<ul style="list-style-type: none"><li>• Android – Lollipop (version 5.0) and above</li><li>• Apple iOS -version 11.0 and above</li></ul>	<ul style="list-style-type: none"><li>• Google chrome - Version 69+</li><li>• Internet explorer- 10+ and Edge</li><li>• Mozilla Firefox- Version 62+</li></ul>

- 4) **Install and commission the devices** – Beanbag thermostat 500 thermostat series for DX type systems and Beanbag thermostat 600 series for FCU type systems
  - a. Download the Quick installation Guide (QIG) for [Beanbag thermostat 500 series](#) and/or [Beanbag thermostat 600](#) series and install as instructed.
  - b. Download the mobile app, create your account and commission the devices as instructed in the [500](#) and [600](#) series QIGs
- 5) **Transfer system ownership/Invite new user** - After commissioning is complete, follow the instructions to transfer the system/invite the relevant user by sending an invitation as instructed in the mobile/web app. Refer section 9.3.3 and 10.5.1
- 6) **Login to the system**- The relevant owner/user will enter the login credentials in the Web/mobile app and accept the invitation on the mobile app Home page to access the system.



## 4 The Beanbag Cool Solution

The figure below explains how different components interface with each other in the Beanbag Cool solution.

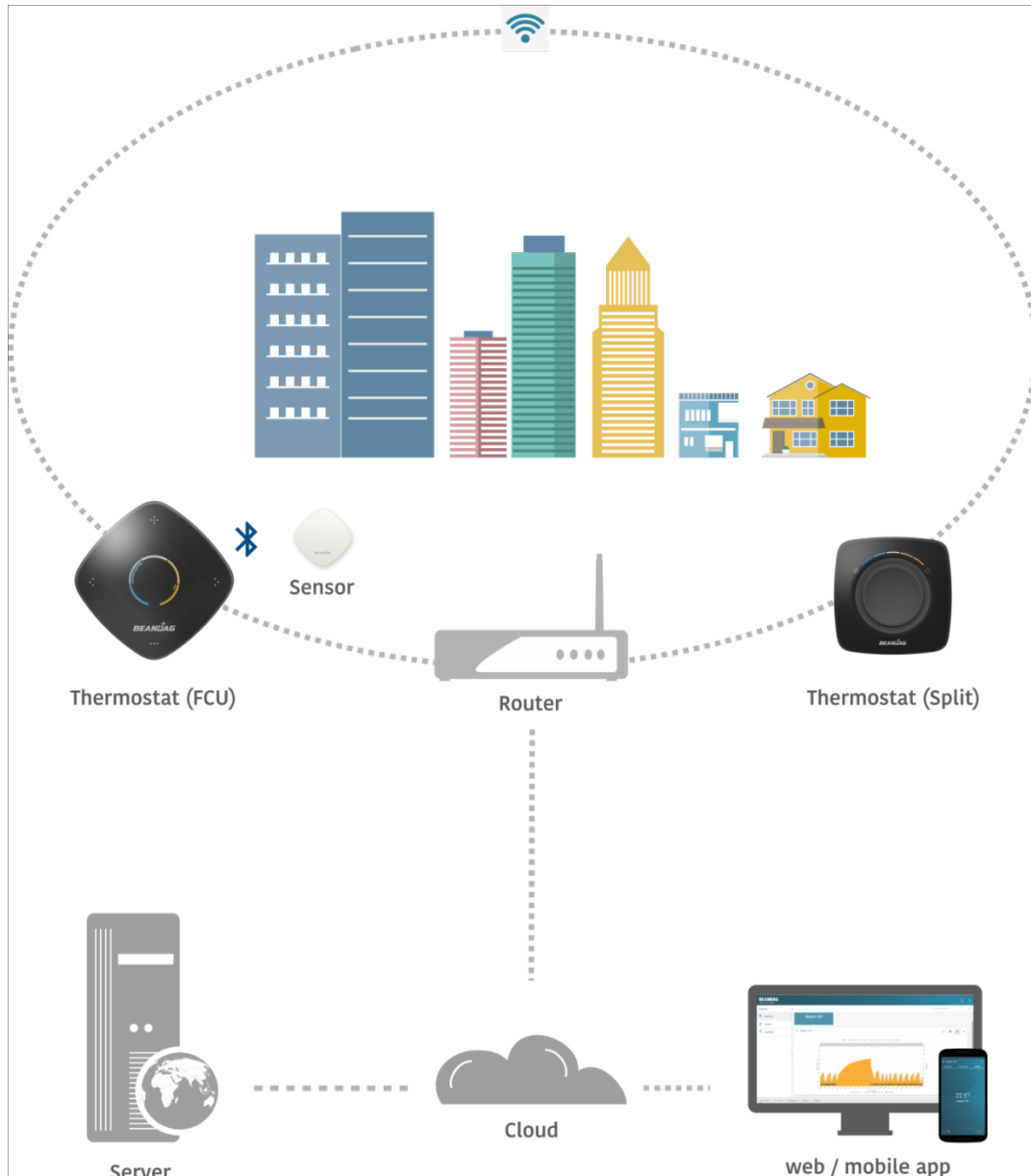


Figure 1: Beanbag Cool typical deployment

### 4.1 Beanbag thermostat 500 series (for DX systems) overview

This device will work with any Split, window and cassette type air conditioners that have an IR remote with display.\*

This is a mains-powered product. To commission, you need the Beanbag Cool app on a Bluetooth enabled Smart phone with Internet connectivity over Wi-Fi. Once commissioned, the Thermostat:

1. Can be operated locally to control the cooling system associated with it on IR.
2. Can be operated remotely using the mobile app /Web app with Internet to control the cooling system associated with it.

**Note:**

There is a provision for an external sensor, which if purchased separately, can be paired with the Thermostat over BLE during the commissioning process or later. Refer section 6.4 for details.

For details, refer section: [Beanbag thermostat 500 series– Features and functions](#)

\* It cannot be commissioned with:

- Cooling units that do not have a remote or remote without display
- Ducted Split AC systems

## 4.2 Beanbag thermostat 600 series with Beanbag Temperature Sensor 110 (For FCU systems) overview

This is a mains-powered device and has different variants compatible with the following system types:

- i. ON/OFF valve
- ii. ON/OFF valve with key tag input
- iii. 0-10 V modulating valve

An external sensor is also part of this package. To commission it you need the Beanbag Cool app on a Bluetooth enabled Smart phone with Internet connectivity over Wi-Fi. The external sensor must be paired with the Thermostat over BLE during the commissioning process. Once commissioned, the Thermostat:

1. Can be operated locally to control the cooling system associated with it.
2. Can be operated remotely using the mobile app /Web app with Internet to control the cooling system associated with it.

The external sensor is a battery-powered device that senses the ambient condition in its vicinity and communicates with the Thermostat over BLE.

For details refer section [Beanbag thermostat 600 series with temperature sensor– Features and functions](#)

## 4.3 Beanbag Cool mobile app overview

The Beanbag Cool mobile app works with iOS and Android based smart phones. It enables easy and secure commissioning of the devices over Wi-Fi. Using the app on your Internet enabled Smartphone; you can monitor and control your dispersed cooling systems, from anywhere, at any time.

For details refer section [Beanbag Cool mobile app – Features and functions](#)

## 4.4 Beanbag Cool web app overview

The Beanbag Cool web app offers control and monitoring of your dispersed cooling systems via Internet from a centralised location (that may be within or outside of the premises, where the systems are installed). The app is accessible at: <https://cooling.beanbag.online/>. You can also view the temperature and humidity trends of your device that help you analyse your usage patterns over a period of 24 hours (resets at midnight). For supported browsers refer section [Before you begin](#)

For detailed features, refer section [Beanbag Cool Web app – Features and functions](#)

**Notes:**

1. If you already have an existing account for the Beanbag Cool mobile app, you can login to the Web app using the same credentials.
2. The details about different beanbag cool systems and subscriptions is available under section [Beanbag cool system types](#)

## 5 Beanbag thermostat 500 series– Features and functions

This section covers the following:

- [Product overview](#)
- [Beanbag thermostat 500 series product label information](#)
- [Main features](#)
- [User functions](#)

### 5.1 Product overview

The Beanbag thermostat 500 series of thermostats is designed with a **Comfort** mode to deliver optimal thermal comfort through five band settings - **Cool**, **Slightly cool**, **Comfortable**, **Slightly warm** and **Warm**. After commissioning, the device will start in the default **Comfortable** band; and can be changed as required by rotating the dial. (See Figure 2). Whichever band you choose, the Thermostat automatically adjusts the AC to keep you comfortable at all times.



Figure 2: Beanbag thermostat 500 series user interface

### 5.2 Beanbag thermostat 500 series product label information

The following figure shows information available on the back cover of the Beanbag thermostat 500 series:

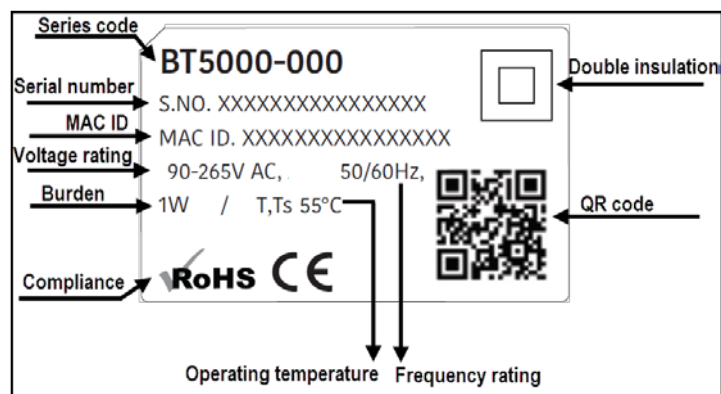


Figure 3: 500 series thermostat product label

### 5.3 Main features

Feature	Description
Comfort mode	Five bands to deliver thermal comfort
Simple commissioning	Four-step IR code learning and can easily integrate with your existing Wi-Fi network
User-friendly interface	Smooth-dial setting selection with coloured LED indicators
Convenience	Configure, control and monitor multiple dispersed cooling systems with Beanbag Cool mobile / web app
Security	WPA2 security and cryptographic protocol (TLS1.2) ensure data privacy and authenticity
Energy efficiency	Automatically switches to <b>Economy</b> setting (if enabled), when DG supply source is detected
	Provision to set the min band range within the <b>Comfort</b> mode
	Provision to enable / disable local control
Compatibility	With most DX systems (window/split/cassette) having display on IR remote. For details refer section 4
Standalone	In the event of Internet/network failure, the device continues to function in Standalone mode as configured. Standalone means that primary functions related to control of cooling units is not impacted but control and monitoring from a remote location will not be available via the mobile/Web app.
Alerts	Low battery alert for external sensor, if paired (Beanbag Temperature Sensor 110) on mobile/web app.

### 5.4 User functions

#### 5.4.1 Turning the cooling unit ON/OFF locally (after commissioning)

Press the button at the top of the Thermostat as shown in the example Figure 4.

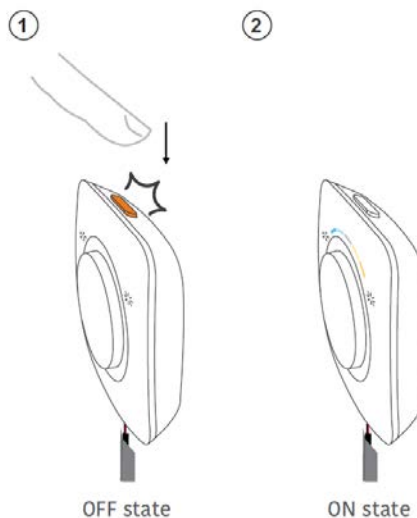


Figure 4: LED state when cooling is OFF/ON

**Notes:**

- We recommend having the AC and Thermostat on the same power source.
- When you turn OFF the AC unit through the button at the top of the Thermostat or through the mobile/web app, the orange LED (at the top) of the thermostat glows but all other LED are turned OFF. The status of the AC unit is reflected as OFF on the web/mobile app. However, the thermostat remains functional and can still be controlled and monitored using the web/mobile app.
- When you turn ON the AC unit through the button at the top or through the mobile/web app the LED indicators of the selected mode glow. The device status is shown as ON in the mobile/web app.

5.4.2 Selecting the desired band

**To select the desired band, do the following:**

- 1) As you start to rotate the dial all the LEDs will glow at once and the LED of the currently set band will start flashing. Rotate (on either side) to select the new band as shown in example Figure 5.

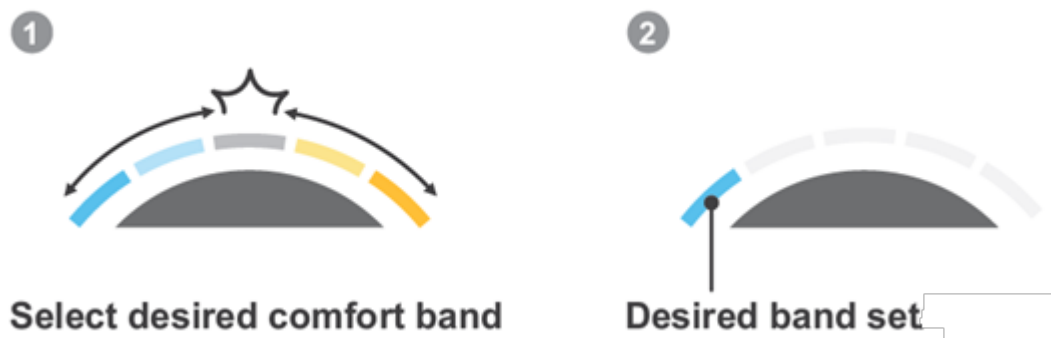


Figure 5: Selecting the band

- 2) Once the desired temperature band is selected, stop rotating the dial. The corresponding LED will flash for 5 seconds and then remain lit. All the other LEDs will be turned off.

## 6 Beanbag thermostat 600 series with temperature sensor– Features and functions

This section covers the following:

- [Product overview](#)
- [Beanbag thermostat 600 series product label information](#)
- [Main features Beanbag thermostat 600](#)
- [Main features Beanbag temperature sensor 110](#)
- [User functions](#)

### 6.1 Product overview

The Beanbag thermostat 600 series is designed with the following modes:

- **Comfort mode** - to deliver optimal thermal comfort through five band settings - **Cool, Slightly cool, Comfortable, Slightly warm** and **Warm**. After commissioning, the device will start in the default **Comfort mode** with **Comfortable** band. If you wish to change the band setting, refer Figure 6. Whichever band you choose, the Thermostat automatically adjusts the AC to keep you comfortable at all times.

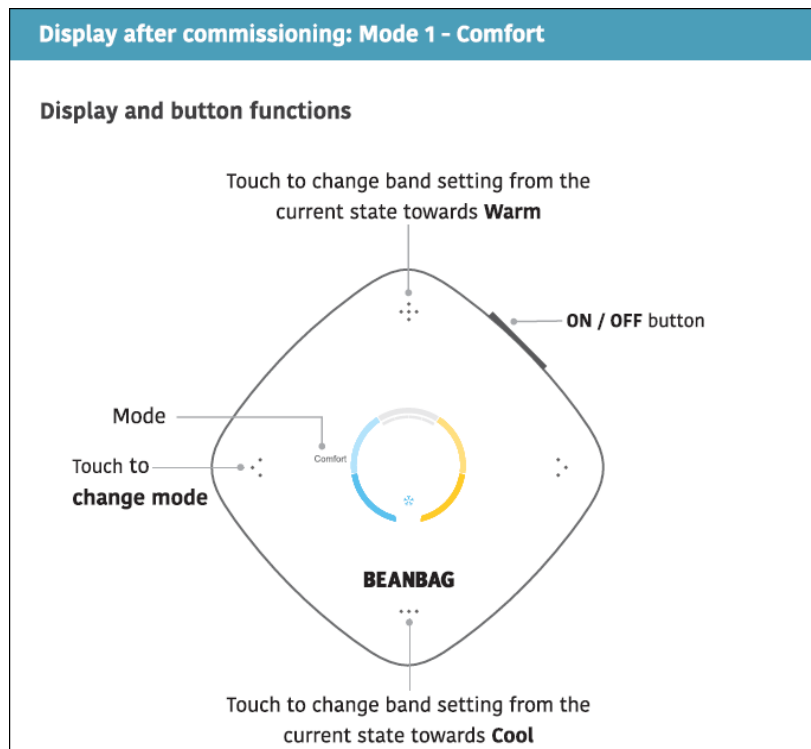


Figure 6: Thermostat 600 series display and user interface- Comfort mode

- Customise (manual) mode** – In this mode the device functions like a conventional thermostat and allows you to set the desired temperature and fan speed manually. For details, refer Figure 7. Once set, only the set point temperature is displayed on the screen, after the default timeout.

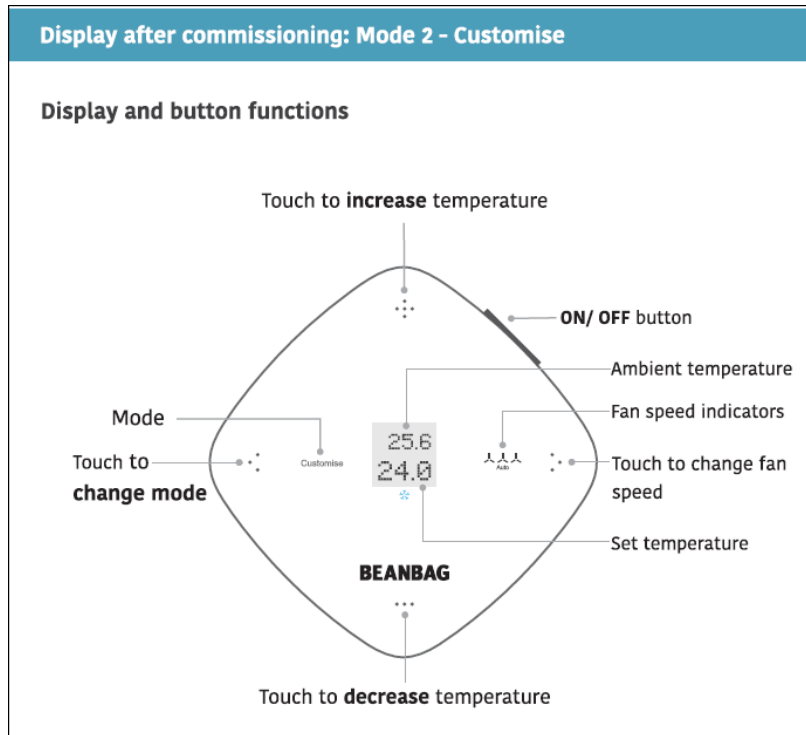


Figure 7: Thermostat 600 series display and user interface - Customise mode

- Away mode**- Switch to Away mode, when moving out. This will maintain a fixed preset temperature and circulation of air in the room to protect your assets. In this mode, you cannot change any settings on the Thermostat locally, but the temperature set point can be changed using the mobile/web app. For details, refer Figure 8.

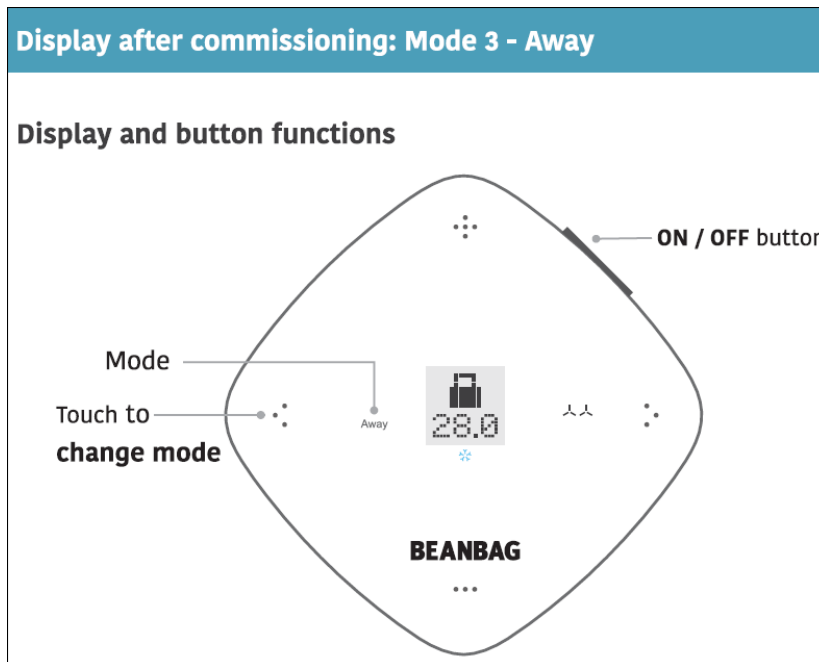


Figure 8: Thermostat 600 series display and user interface - Away mode

## 6.2 Beanbag thermostat 600 series product label information

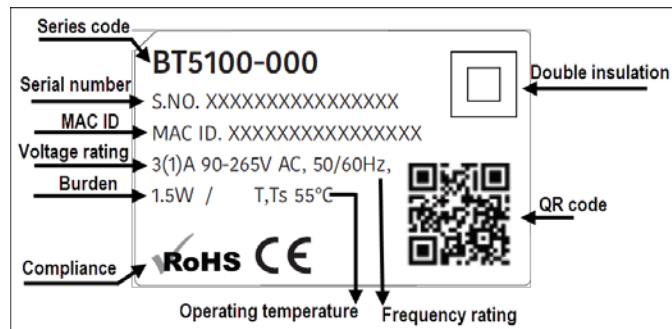


Figure 9: Thermostat 600 series (90-265 V) product label

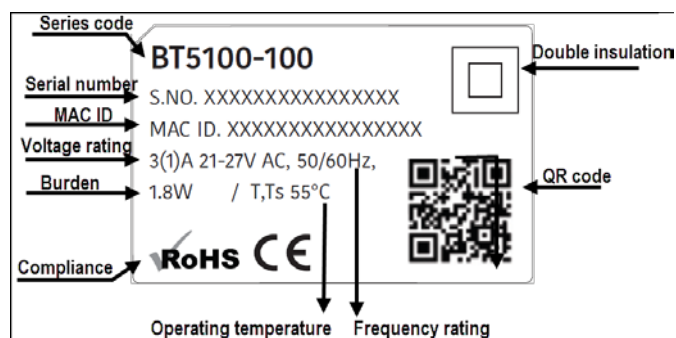


Figure 10: Thermostat 600 series (21-27 V) product label

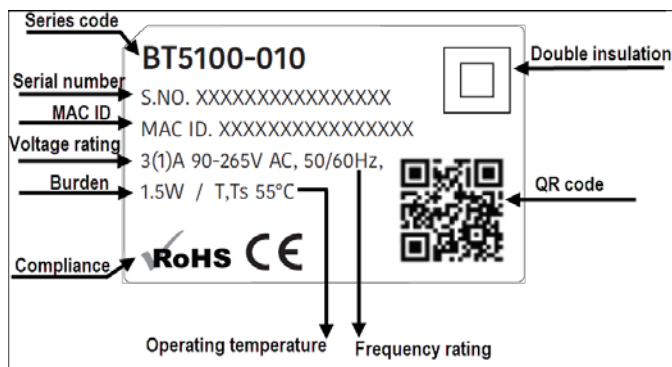


Figure 11: Thermostat 600 series –key tag input variant product label

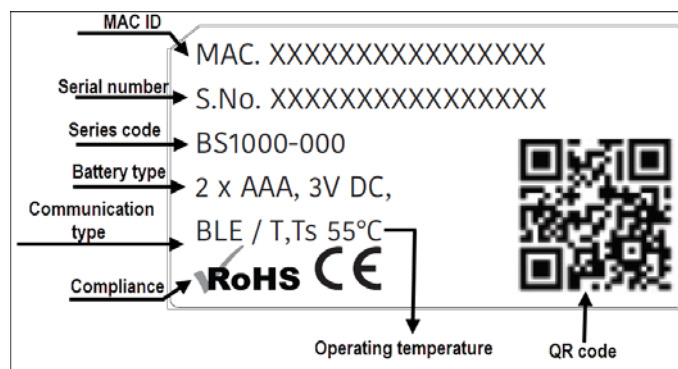


Figure 12: External sensor product label



### 6.3 Main features Beanbag thermostat 600 series

Feature	Description
Mode options	Comfort, Customise (manual) and Away
Simple integration	Easily integrates with your existing Wi-Fi network
User-friendly interface	Coloured LCD display for easy readability, touch keys for easy navigation
Convenient control	Configure, control and monitor multiple dispersed cooling systems with Beanbag Cool mobile / web app
Security	WPA2 security and cryptographic protocol (TLS1.2) ensures data privacy and authenticity
Energy efficiency	Automatically switches to Economy setting (if enabled), when DG supply source is detected
	Provision to set the min range within the <b>Comfort</b> and <b>Customise</b> modes.
	Provision to enable/disable local control
	<b>Away</b> mode
Compatibility	Works with the majority of existing and new FCU systems
Alerts	Low battery alert for external sensor on device/mobile/web app.
Standalone	In the event of Internet/network failure, the device continues to function in Standalone mode as configured.

### 6.4 Main features Beanbag temperature sensor 110

Feature	Description
Personalised comfort	Accurately senses the ambient conditions in its vicinity and dynamically communicates data to the Thermostat on BLE to provide you complete thermal comfort.
Compact and flexible	Occupies very little space and can be mounted on a wall or placed on a table top or flat surface.
Alerts	Low battery alert for external sensor available via web and mobile app.
Compatibility	Works with both Beanbag thermostat 600 and Beanbag thermostat 500 series of thermostats.
Easy to commission	Can be paired with the Thermostat via the mobile app.

### 6.5 User functions - Beanbag thermostat 600 series

#### 6.5.1 Turning the cooling unit ON/OFF locally (after commissioning)

Press the ON/OFF button on the Thermostat as shown in example Figure 13.

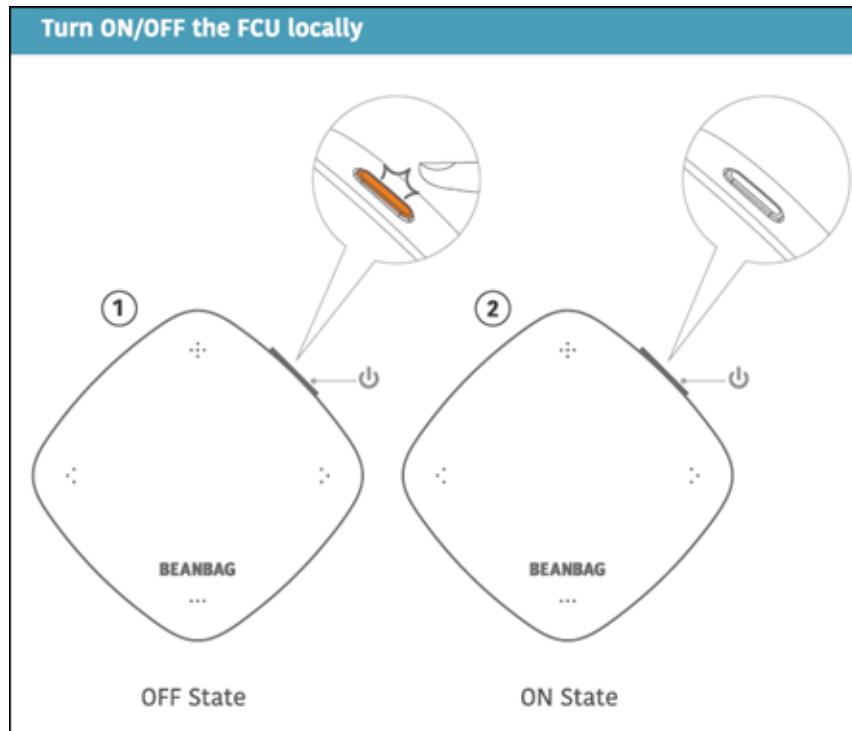


Figure 13: State of Thermostat LED when cooling is OFF/ON

**Note:**

When you turn OFF the AC unit through the button at the top of the Thermostat or through the mobile/ web app, the orange LED (at the top) of the thermostat glows and the display is turned OFF. The status of the AC unit is reflected as OFF on the web/mobile app. However, the thermostat remains functional and can still be controlled and monitored using the web/mobile app.

When you turn ON the AC unit through the button at the top or through the mobile/ web app the display will be turned ON. The device is shown as ON in the mobile/web app.

6.5.2 Setting the mode and selecting the desired band

Refer section [Product overview](#)

6.5.3 Replacing the sensor battery

The process to insert the sensor battery is described in the Beanbag thermostat 600 Quick installation guide. This section describes the procedure to replace the sensor battery at the end of their life. We strictly recommend observing local safety norms when disposing of the batteries.

- 1) At the back of the device, locate the sealing notch and then pull the battery cover off.

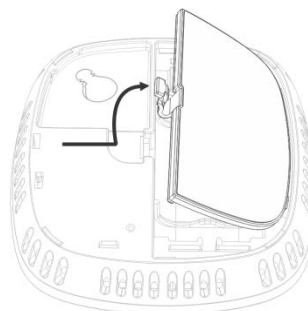


Figure 14: Pull out sensor battery cover

- 2) Insert a pair of AAA batteries, making sure the polarity is correct.

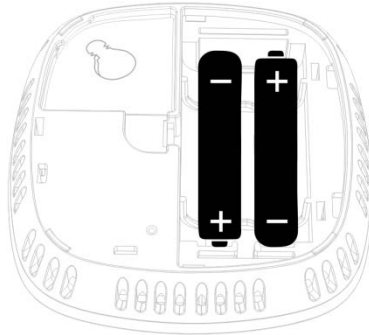


Figure 15: Insert the batteries

3) Slide the cover back in position

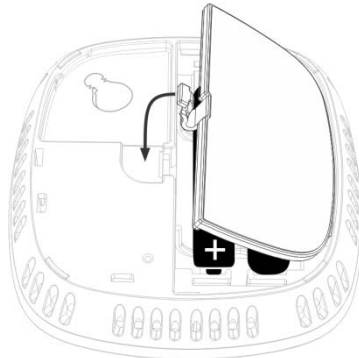


Figure 16: Slide back cover

4) Click to seal the notch and close the cover.

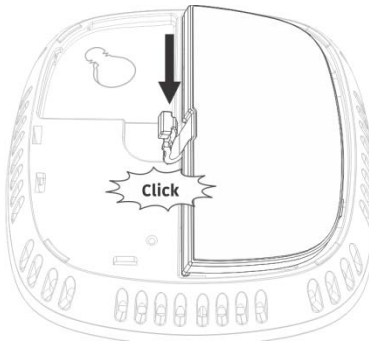


Figure 17: Click the notch to seal cover

## 7 Technical specifications- Beanbag thermostat 500 and 600 series

<b>Electrical</b>		
Power supply	230 V variant	90 - 265 V, 50 - 60 Hz
	24 V AC variant	21-27 V, 50 - 60 Hz
Output	230 V variant	3 Amp Max.
	24 V AC variant	0-10 V
Software class	Class A	
<b>Radio</b>		
Radio-type	Wi-Fi and BLE [Wi-Fi: IEEE 802.11 B/G, 20 MHz, 2.4 GHz ISM band, Supports IEEE 802.11	
Operating frequency	2.4 GHz	
Receiver category	Category 3	
Power class	Class B	
RF range	<100 m, line of sight for Wi-Fi, <30 m, line of sight for BLE	
<b>Mechanical</b>		
Dimensions (mm)	Beanbag thermostat 500 series- 96x96x28 (HXWXD)	Beanbag thermostat 600 series- 105x105x35 (HXWXD)
Weight	Beanbag thermostat 500 series- 104 grams (approx.)	Beanbag thermostat 600 series-160.5 grams (approx.)
Display	Beanbag thermostat 500 series- coloured LED indicators	Beanbag thermostat 600 series- coloured LCD display
Mounting	Beanbag thermostat 500 series- key-hole wall mount	Beanbag thermostat 600 series- Snap-fit wall mount
Case material	Flame-retardant polycarbonate (PC FR)	
<b>Environmental</b>		
Impulse voltage rating	Cat II, 2.5 kV	
Enclosure protection	IP30	
Pollution degree	2	
Operating temperature range	0°C to +50°C	

Storage temperature	-20°C to +70°C
Environmental humidity range	10 to 95%
Set-point range	18°C to 30°C
<b>Compliance</b>	
Standards	EN 60730-1, EN 60730-2-9, Radio ETSI EN 300 328

<b>Beanbag Temperature Sensor 110 specifications</b>	
Size (mm)	72(H) x72(W) x 20(D)
Battery	Two AAA size batteries with 1.5 V rating each (included), Up to 5-year battery life
Weight	58 grams (approx.)
Communication type	BLE
Communication range	Up to 10 meters from the Thermostat. (Range can vary depending on your home's construction, wireless interference and other factors)
Operating temperature	0° to 50°C
Compliance	<ul style="list-style-type: none"> <li>• EN 301 489-1 (Radio EMC)</li> <li>• EN 301 489-17 (Radio EMC broad band data transmission)</li> <li>• RoHS Directive</li> <li>• EN 300 328- 2.4 GHz wideband</li> </ul>

## 8 Beanbag cool system types

The Beanbag Cool mobile/web app allows users to create one free account, to host a maximum of 10 devices and four users. If subscribers wish to add more devices, they will need to purchase an yearly subscription.

- Free subscription- Users will be able to access all the features of the mobile/Web app for 10 devices with four users (including owner) only.
- Paid subscription- Users can add as many devices as required. The number of users can be extended as per agreement. If the subscriber wants multiple systems with more than 10 devices, they need to subscribe separately for each or as per agreement. A paid subscriber still has the privilege of one free subscription. After the subscription period is over, access to the paid system and devices will cease, but the devices will continue to work in standalone mode

**Notes:**

If a free subscriber wishes to have a second system installed on mobile/web app, the free system first needs to be converted to a paid one.

No subscribers can have more than one free account on their respective logins.

## 9 Beanbag Cool mobile app – Features and functions

This section covers the following:

[Main features](#)

[User interface](#)

[Beanbag Cool mobile app user functions](#)

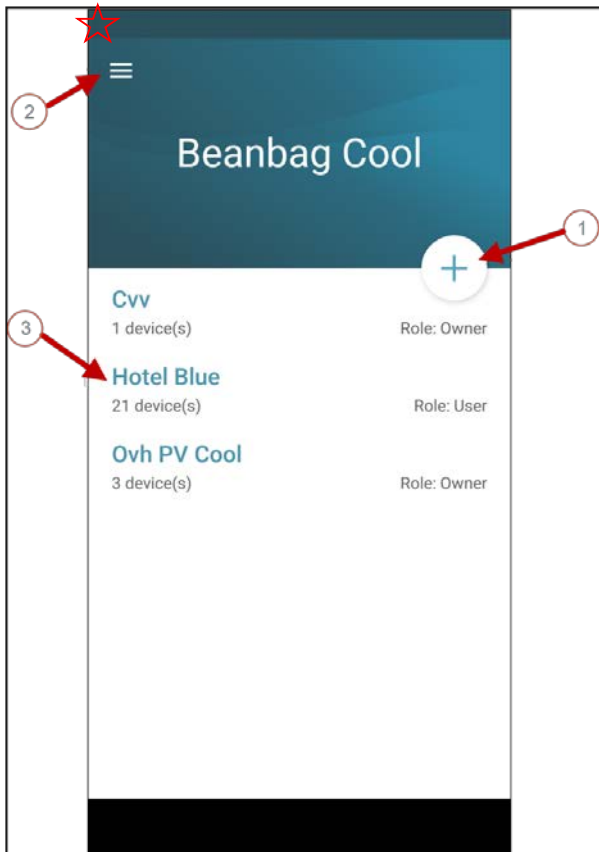
### 9.1 Main features

Feature	Description
Easy commissioning	An intuitive interface to easily commission the thermostats and integrate them with your existing Wi-Fi networks
Unified control and monitoring	A single app provides control and monitoring of multiple cooling systems, at dispersed locations, anytime and from anywhere via Internet
Compatibility	iOS and Android
User-friendly interface	Interactive and simple settings for user, system and device management, easy navigability
Role based user management	Simple process for transfer of ownership/user rights
Drilled down monitoring	Configuration, monitoring and control available at device level
Notifications	External sensor battery low (if external sensor is paired), communication failure with device or sensor, User request status (pending or rejected) <b>Note:</b> We recommend changing the batteries of the external sensor within 15 days of receiving the low battery alert.

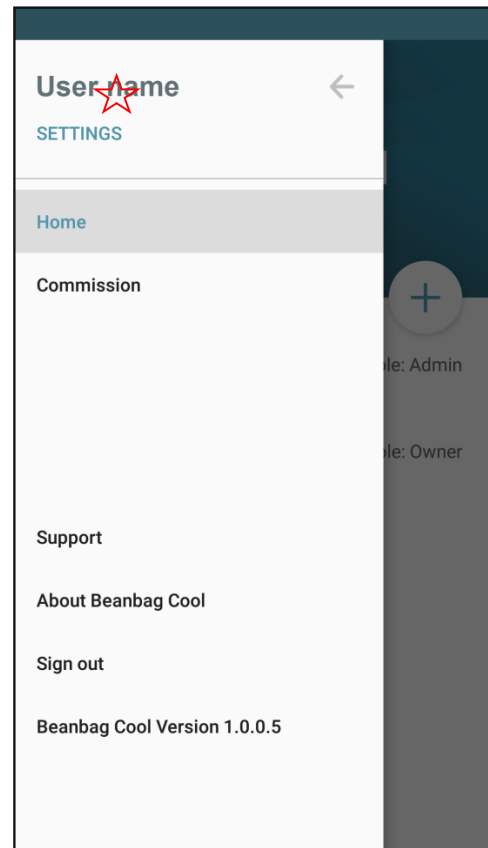
## 9.2 User interface

### The Beanbag Cool home page and system interface

#### System home screen



#### App settings screen

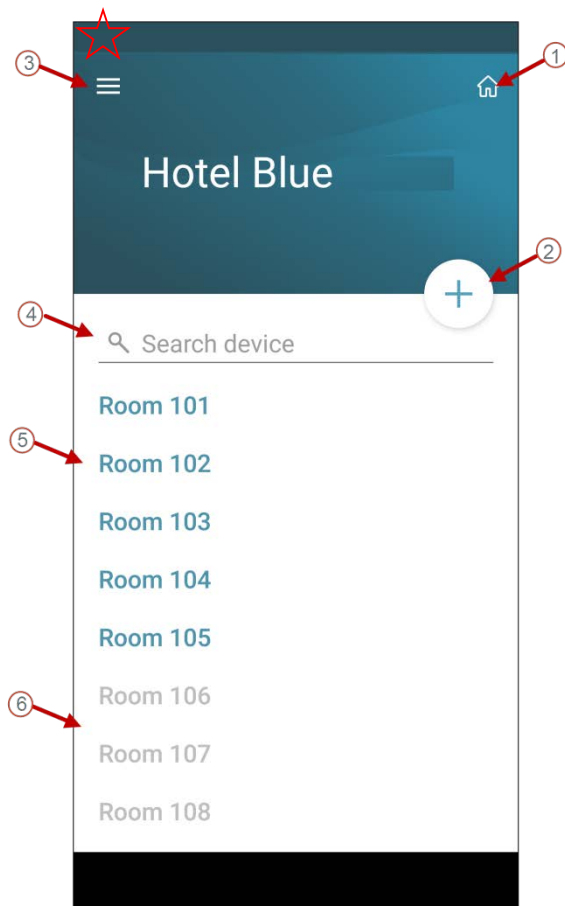


- 1 - Tap to create a new system
- 2 - Tap to view app settings
- 3 - Tap to view/ modify system details

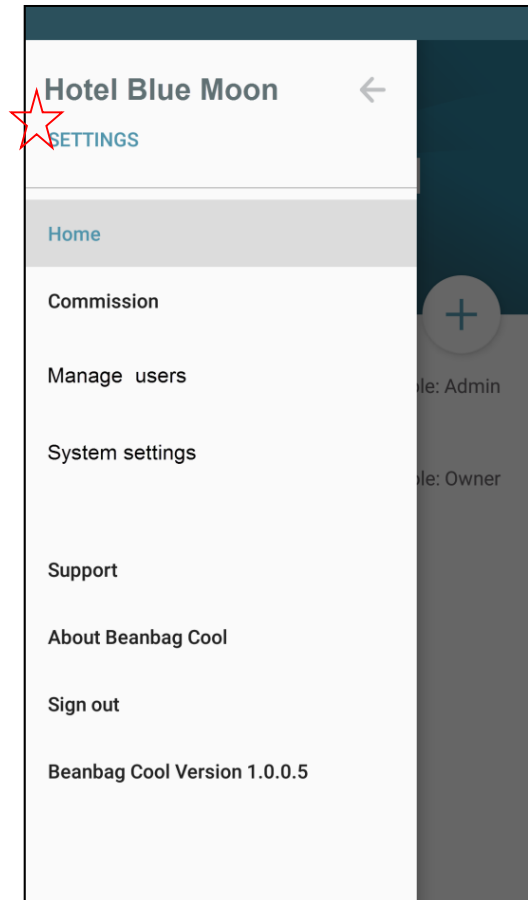
Figure 18: Mobile app homepage and app settings



## System interface



## Settings



- 1 - Tap to access homepage
- 2 - Tap to add a new device to the system
- 3 - Tap to view settings
- 4 - Enter device name and tap Search device
- 5 - Tap to view/modify device details
- 6 - Disconnected devices

Figure 19: Mobile app system interface and settings

### Example device interface (Comfort mode)



Figure 20: Device interface- Comfort mode

Example device interface (Customise mode)

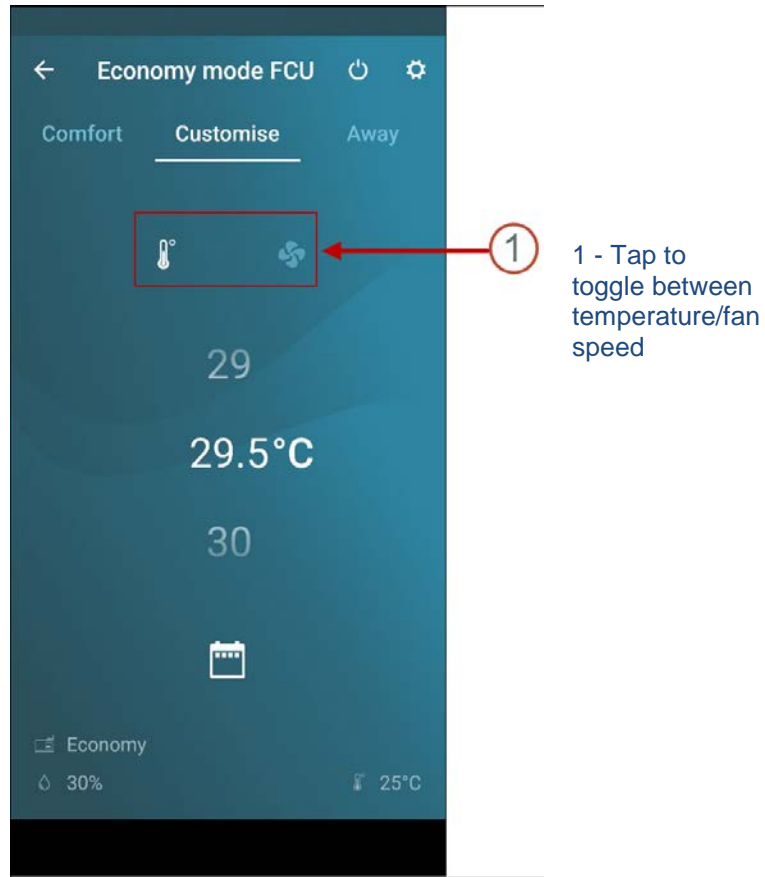
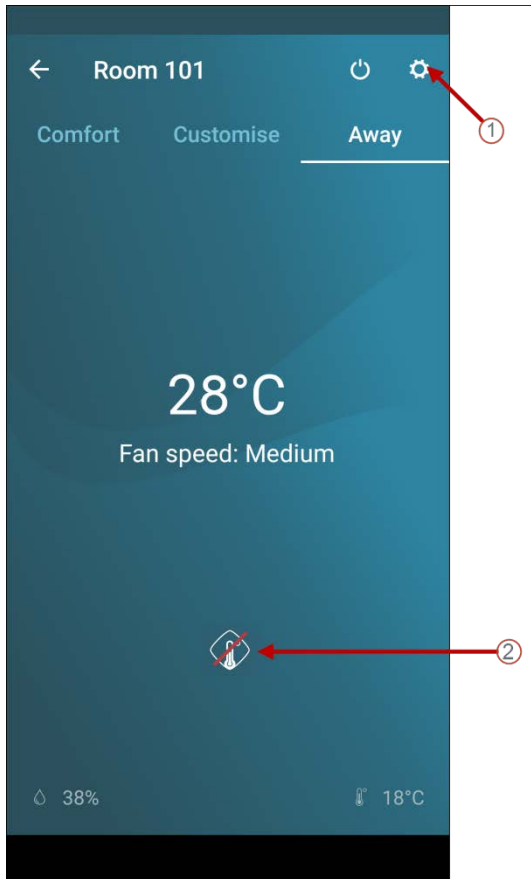


Figure 21: Device interface- Customise mode

### Example device interface (Away mode)



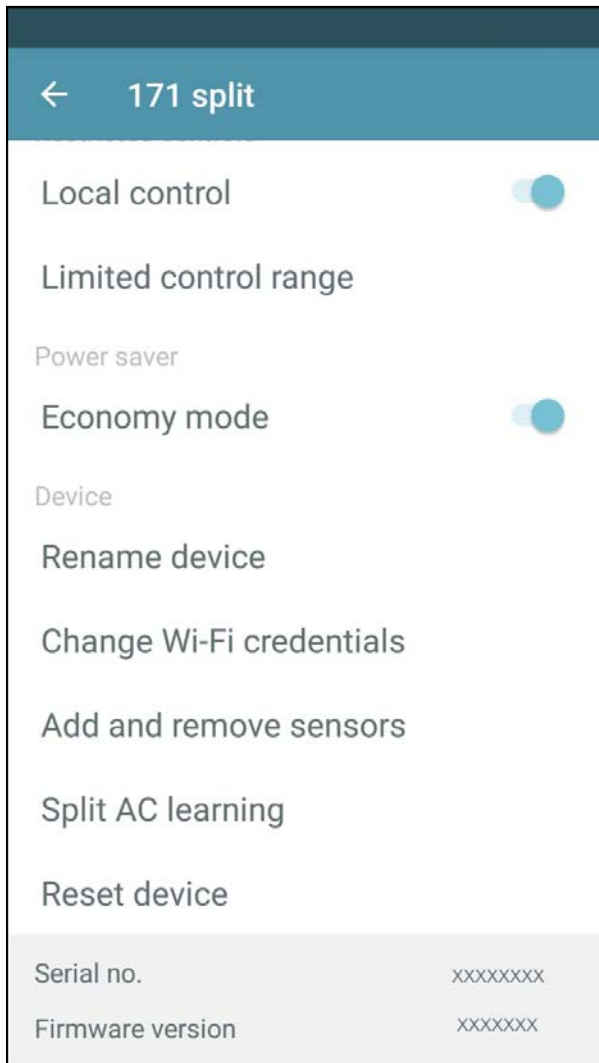
### Device interface key tag input (Unoccupied state)



- 1- Tap to view device settings
- 2 – Communication error icon- Displayed when there is an error in communicating with the external sensor

Figure 22: Device interface- Away mode and Keytag variant (unoccupied state)

### Device settings (500 series)



### Device settings (600 series)

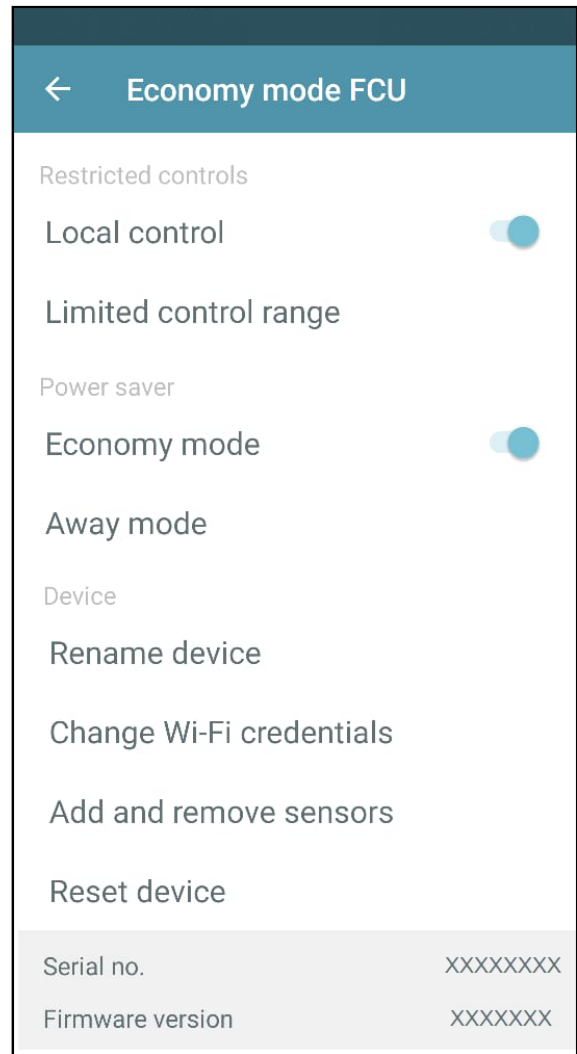


Figure 23: Device settings

## 9.3 Beanbag Cool mobile app user functions

This section covers the following information:

- [Create a new system](#)
- [Add a device to the system](#)
- [Transfer system ownership](#)
- [Turn the cooling unit ON/OFF](#)
- [Inviting a new user](#)

### 9.3.1 Create a new system

**To create a new system, do the following:**

- 1) On the Home page, tap the add icon button. Refer Figure 18
- 2) Next follow the instructions to complete the commissioning process.

### 9.3.2 Add a device to the system

**To add a device, do the following:**

- 1) Tap the system under which you want to add the device.

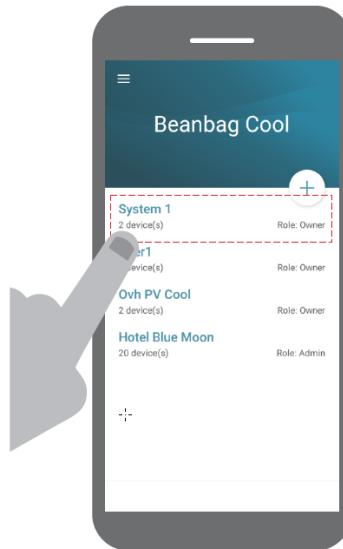


Figure 24: Access system

- 2) Tap the **icon** and follow the instruction to complete the process.

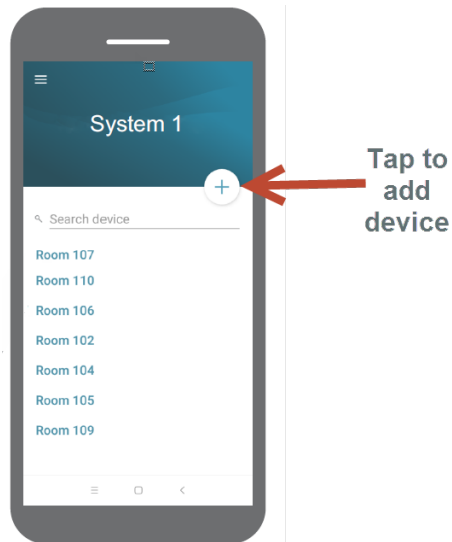


Figure 25: Adding device within a system

### 9.3.3 Transfer system ownership

Once the devices are commissioned in a system, it must be transferred to the system owner.

**To transfer the system ownership, do the following:**

- 1) Under **Settings**, tap **System settings**> **Transfer system**



Figure 26: Transfer system ownership

2) Next follow the instructions to complete the process.

**Note:**

The user who transfers the system (usually installer/one who commissions the system) is automatically provided with admin privileges to assist the new system owner with post installation support activities. If and when required, the new owner, to whom the system was transferred, can remove the admin from the user list by clicking **Settings> Manage users**.

9.3.4 Inviting a new user

**To invite a new user for a system, do the following:**

1) Under **Settings**, tap **Manage users**.

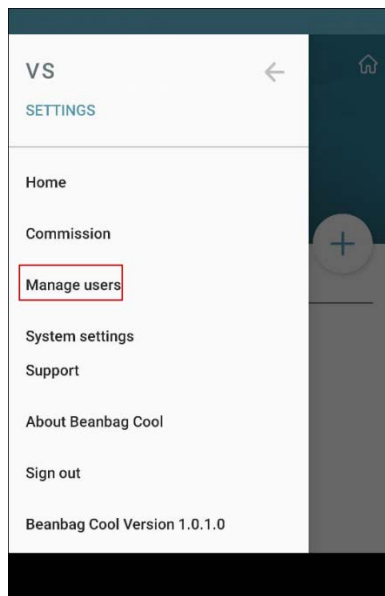


Figure 27: Manage users

2) Next follow the instructions to complete the process.

**Note:**

To view details about User management refer section 10.6

### 9.3.5 Turn the cooling unit ON/OFF

To turn your cooling ON/OFF remotely, tap the **icon** as shown below:



Figure 28: Turning the device ON/OFF



## 10 Beanbag Cool Web app – Features and functions

This section covers:

- [Signing in to Beanbag Cool web app](#)
- [Knowing the Beanbag Cool web app](#)
- [Devices](#)
- [Settings](#)
- [User management](#)
- [Inviting a new user](#)
- [Logging out from the Beanbag Cool application](#)

### 10.1 Signing in to Beanbag Cool web app

To Sign in, do the following:

- 1) Open the Beanbag Cool website URL <https://cooling.beanbag.online/> in the browser.
- 2) The Beanbag Cool Sign in screen is displayed as shown in Figure 29.

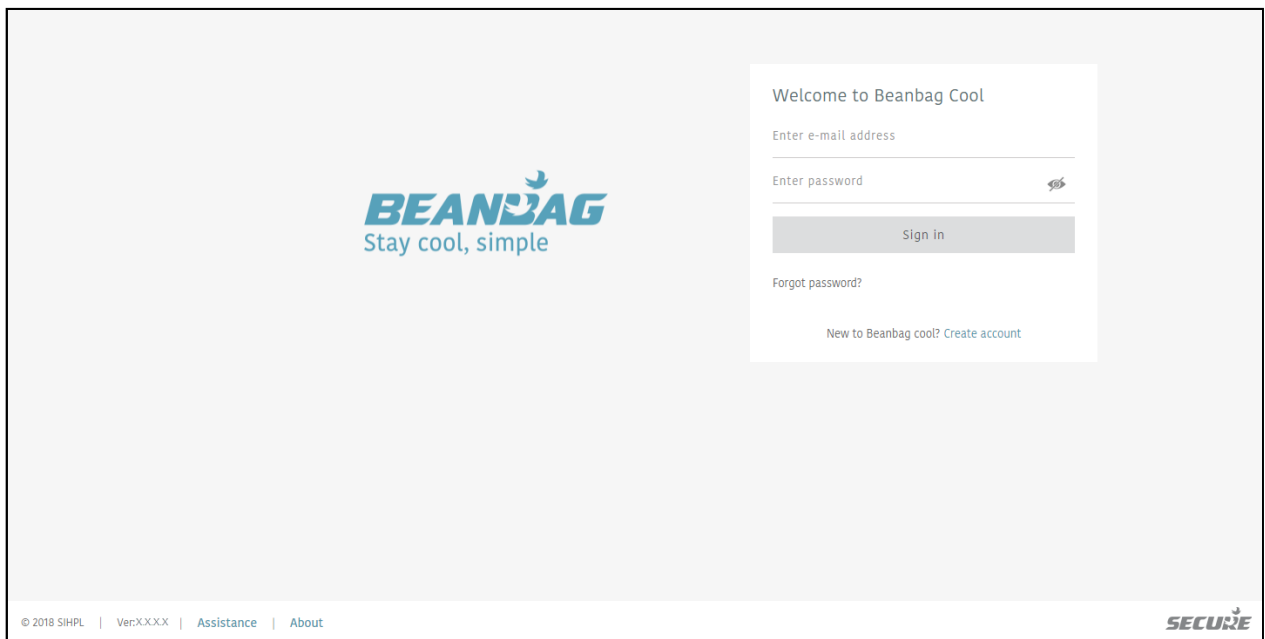


Figure 29: Beanbag Cool login screen

- 3) Enter the login credentials (same as of your mobile app) in the respective textboxes and click **Sign in** as shown in Figure 30.

Welcome to Beanbag Cool

Enter e-mail address  
User 1@gmail.com

Enter password  
.....

Sign in

Forgot password?

New to Beanbag cool? [Create account](#)

Figure 30: User name and password entered for login

4) The Beanbag Cool dashboard page appears after you login.

**Note:**

You will need to create an account if you are a new user. Click the **Create account** link and follow the instructions. Ensure to use a valid e-mail, as the OTP will be delivered on your registered e-mail ID.

## 10.2 Knowing the Beanbag Cool web app

This section will familiarise you with the:

- [Beanbag Cool Home Page](#)
- [The system dashboard](#)

### 10.2.1 Beanbag Cool Home Page

The Beanbag Cool Home page is the first screen that is displayed after you login to the application. It is the central navigation area that allows you to navigate to the available systems.

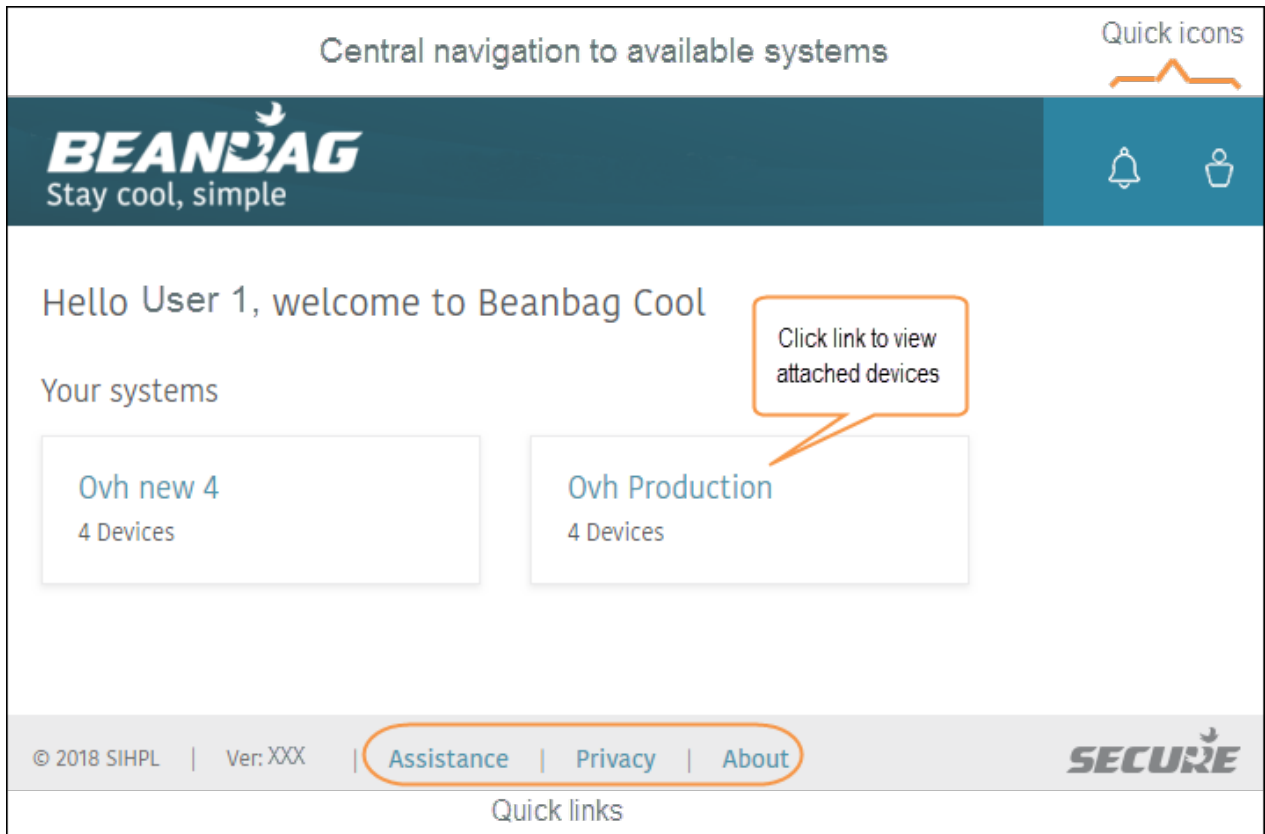


Figure 31: Beanbag Cool home page illustrated

## 10.2.2 The system dashboard

When you click a system link as shown above, the system dashboard page appears. An example dashboard is shown below.

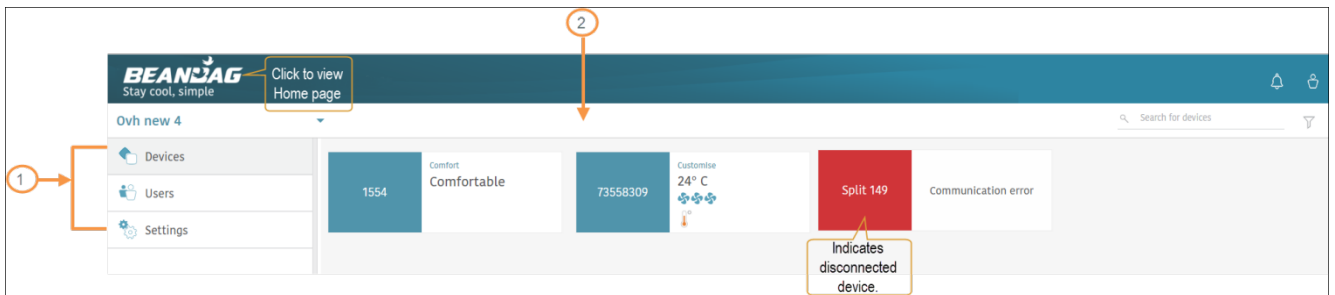


Figure 32: Beanbag Cool system dashboard

- The menu: This is marked as **1** in Figure 32
- The device status panel: This is marked as **2** in Figure 32

The system dashboard is described below:

In the left pane, the following three menus are available:

- **Devices** – This is the default view. Click to view the status of the devices in the system.
- **Users** – Click to invite new users to the system and to view the role of current users.
- **Settings** – Click to view the settings. The following options are available: **Rename system** and **Transfer system**.

## 10.3 Devices

This section covers the following user functions:

### 10.3.1 Turn the thermostat device ON/OFF remotely

**To do so, do the following:**

- 1) On the Devices status panel, click the device you wish to access. An example screen is shown for a Beanbag thermostat device below:

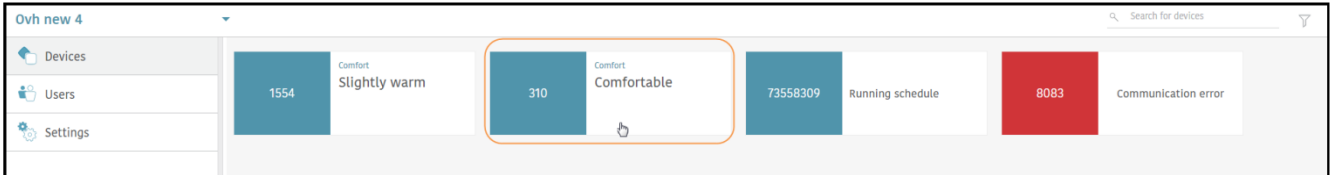


Figure 33: Turning ON the thermostat

- 2) The device control panel appears. Click the Power icon as shown below to remotely turn ON/OFF the device.

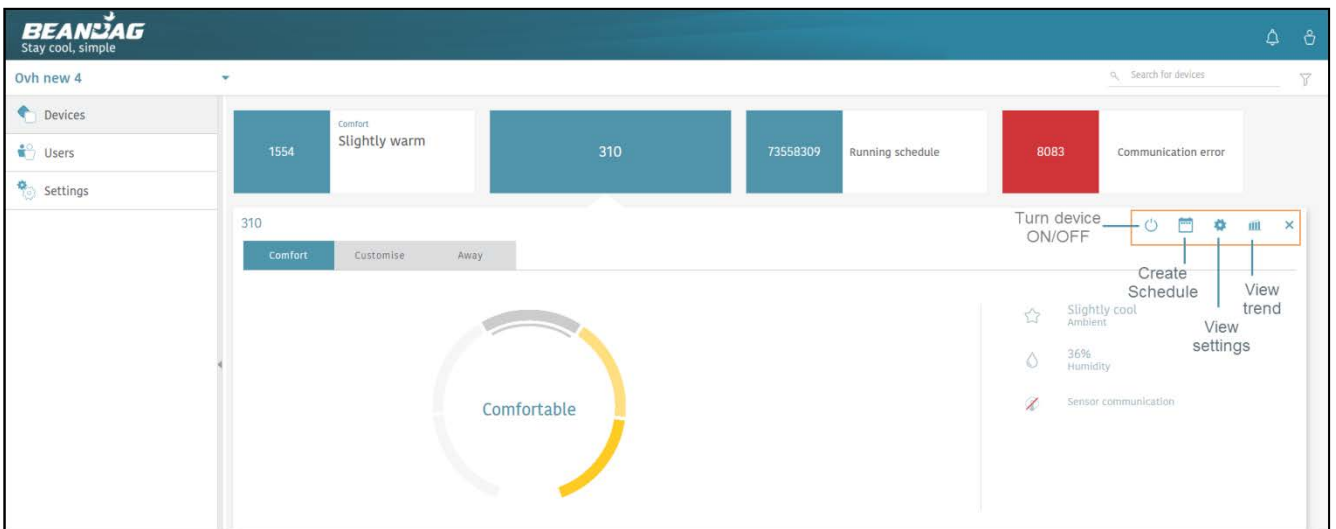


Figure 34: Device status and settings

### 10.3.2 Set mode in the device remotely

**Do the following:**

- 1) On the Devices status panel, click the device you wish to access.
- 2) At the top, click the mode you wish to set. An example screen is shown below.

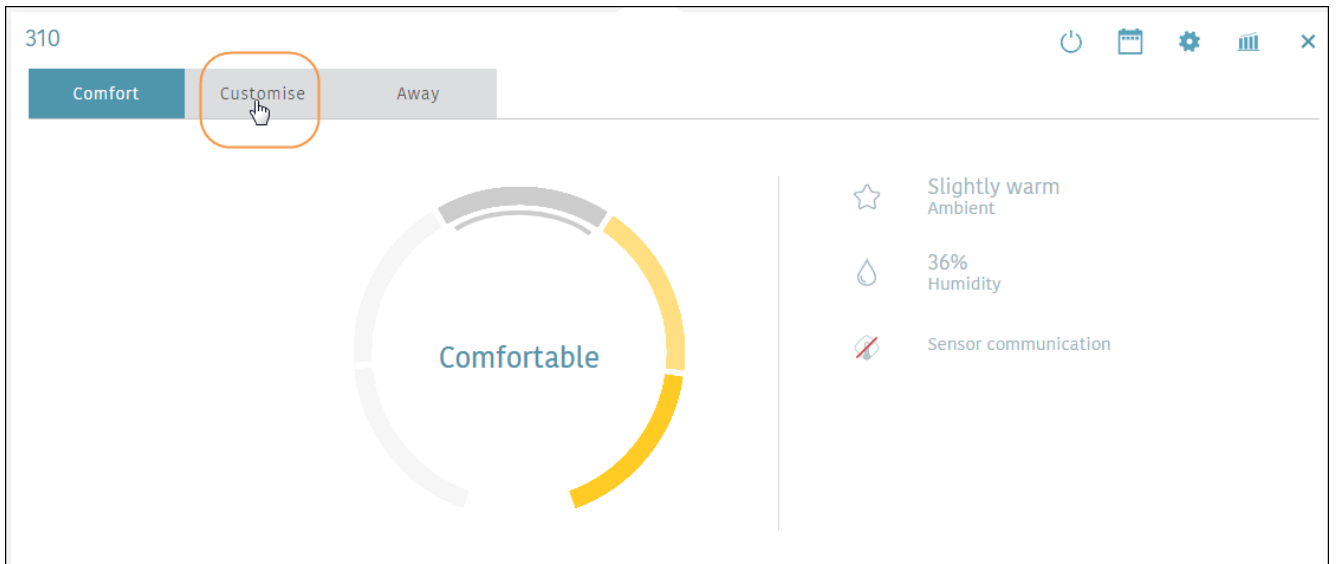


Figure 35: Setting mode

- 3) A confirmation message as shown in the example screen below will appear. Click **Yes, Continue** to proceed.

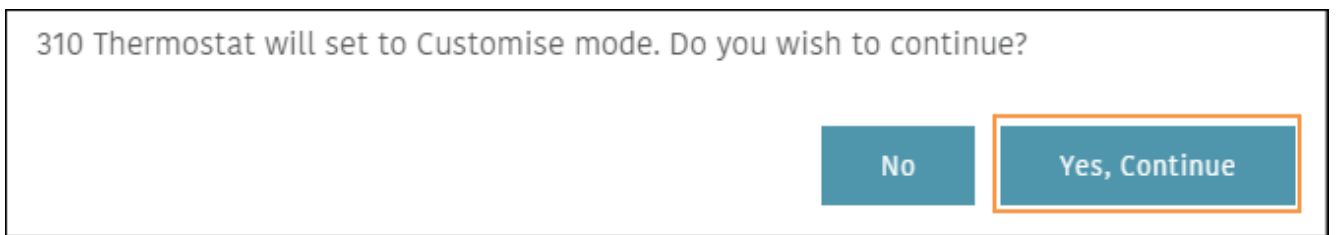


Figure 36: Confirmation

- 4) The mode is changed to the desired mode.

### 10.3.3 Change comfort band (Comfort mode)

- 1) On the Devices status panel, click the device you wish to access.
- 2) In the device control panel, click the comfort band you wish to set. An example figure is shown below.



Figure 37: Setting comfort band

3) If the band is set, it is indicated with a line under it, as shown in example figure below:



Figure 38: Comfort band set

### 10.3.4 Change temperature set point and fan speed (Customise mode)

**Do the following:**

- 1) On the Devices status panel, click the device you wish to access.
- 2) In the device control panel, make the required changes. An example screen is shown below.

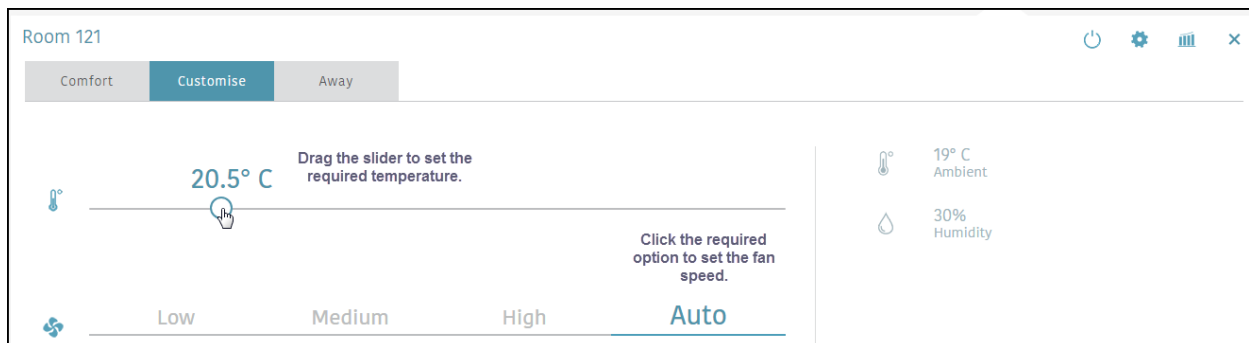


Figure 39: Customise settings

### 10.3.5 Change set point temperature (Away mode)

The preset temperature for Away mode can be modified under device settings.

- 1) On the Devices status panel, click the device you wish to access.
- 2) Click the device settings icon.

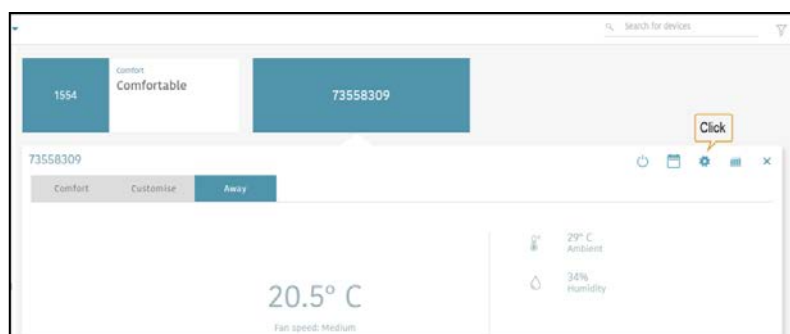


Figure 40: View settings

3) Under device settings, click the **Away mode** option

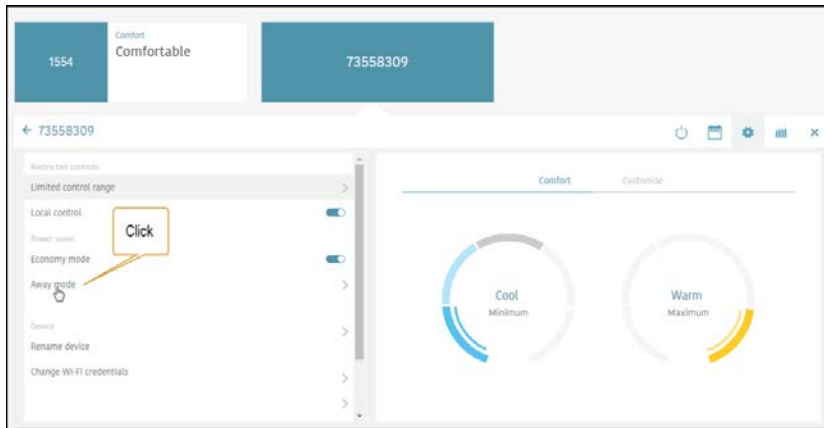


Figure 41: Away mode settings

4) The settings appear in the right pane. Make the required changes. An example is shown below.

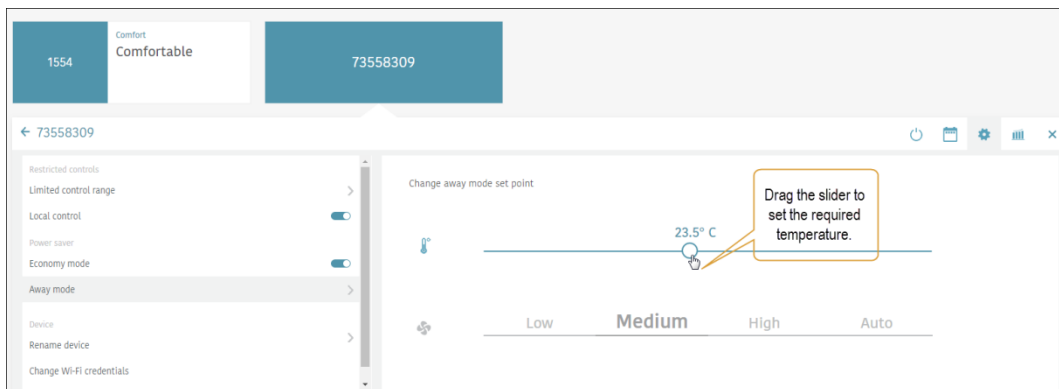


Figure 42: Modifying temperature settings-Away mode

### 10.3.6 View trends remotely

With the Beanbag Cool Web app, you can view various trends including RH% and temperature values over a period of 24 hours. It resets at midnight.

**To view the trends, do the following:**

- 1) On the Devices status panel, click the device you wish to access.
- 2) At the top, click the **Trend** icon. An example screen is shown below.

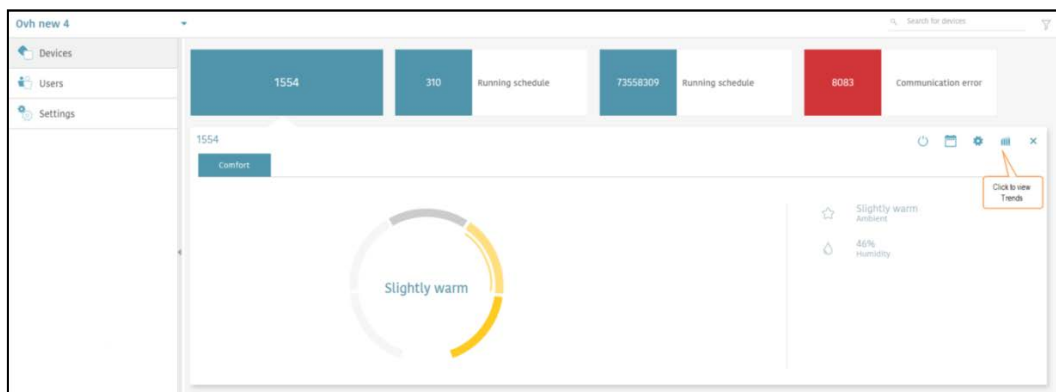


Figure 43: Viewing trends

3) A trend graph is generated based on your usage pattern for the current day. An example screen is shown below. When you mouse over the graph, you can view the different information.



Figure 44: Trends example

### 10.3.7 Configure device remotely

- 1) On the **Devices status** panel, click the device you wish to access.
- 2) At the top, click the Settings icon. An example screen is shown below.

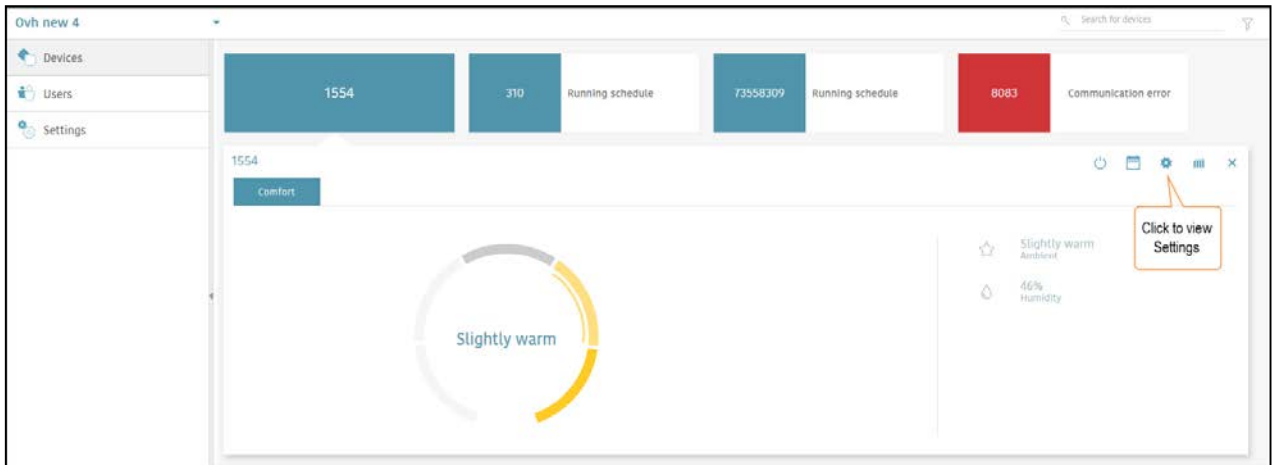


Figure 45: Viewing device settings

- 3) The settings panel appears. An example screen is shown below:

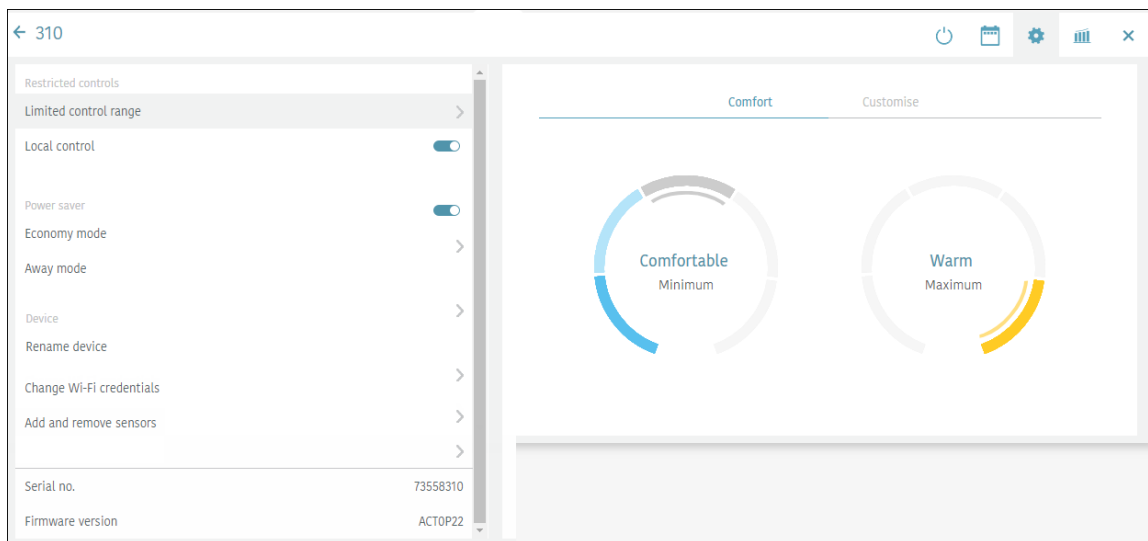


Figure 46: Device settings



4) Make the required settings. The device settings are explained under section [Device settings via mobile/web app](#).

### 10.3.8 Searching devices

When logged-in, the **Search** option helps you find a specific device attached with the system. Additionally, you can apply the following **Filters** to search required devices.

Filter	Description
Device state	Let's you filter devices that are either turned ON or OFF
Power saver	Let's you filter devices that are running on <b>Economy</b> setting
Alerts	Let's you filter devices that with Low battery and communication error
Mode wise	Let's you filter devices running on a specific mode/band
Local control	Let's you filter devices that are either enabled or disabled for local control

**To search a device, do the following:**

On the **Devices** status panel, enter information in the Search field and press **Enter** on the keyboard. A list of devices that contain the searched term opens. An example is shown below.

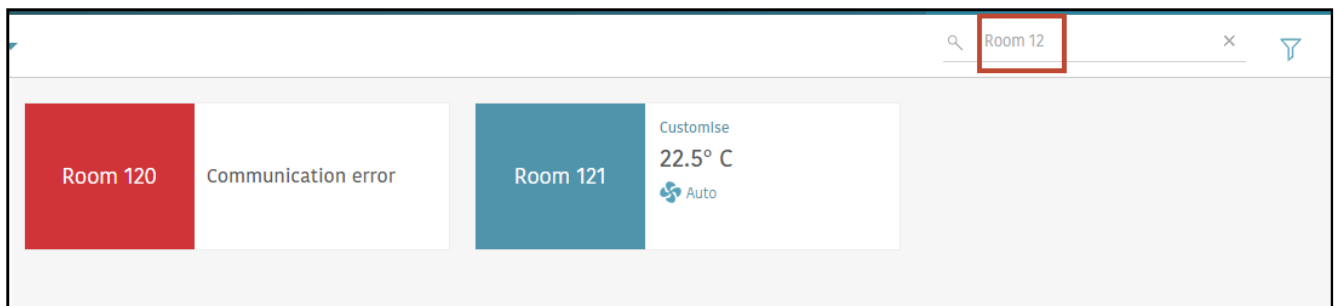


Figure 47: Searching devices

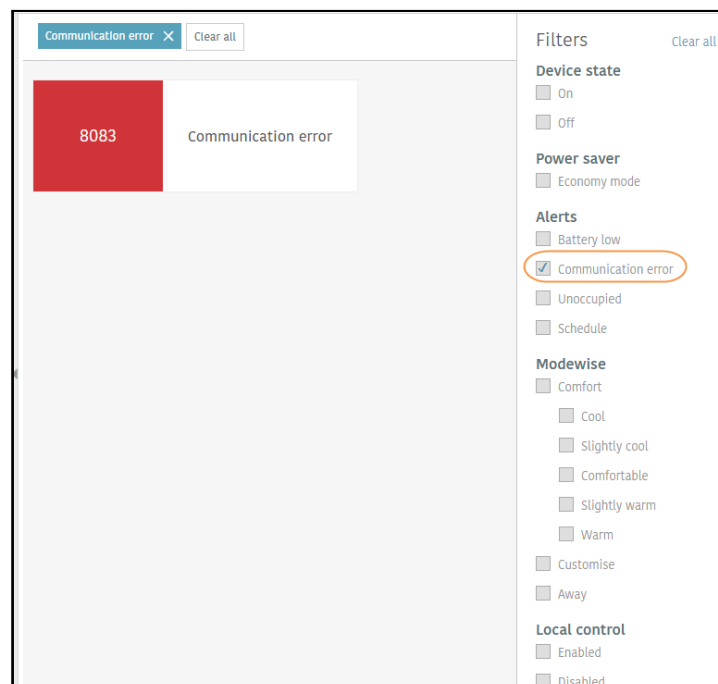


Figure 48: Filtering devices

## 10.4 Scheduling

This feature is available for Beanbag thermostat 500 and 600 series, without key tag variants only.

### 10.4.1 Creating a schedule

The Web app allows you to set custom schedules (for Comfort and Away mode) in the Thermostat for each day of the week (you can create up to seven independent schedules). The schedule must be set for all week days.

**To create a schedule, do the following:**

- 1) Click the device for which you want to create a schedule.
- 2) Click the schedule icon at the top.

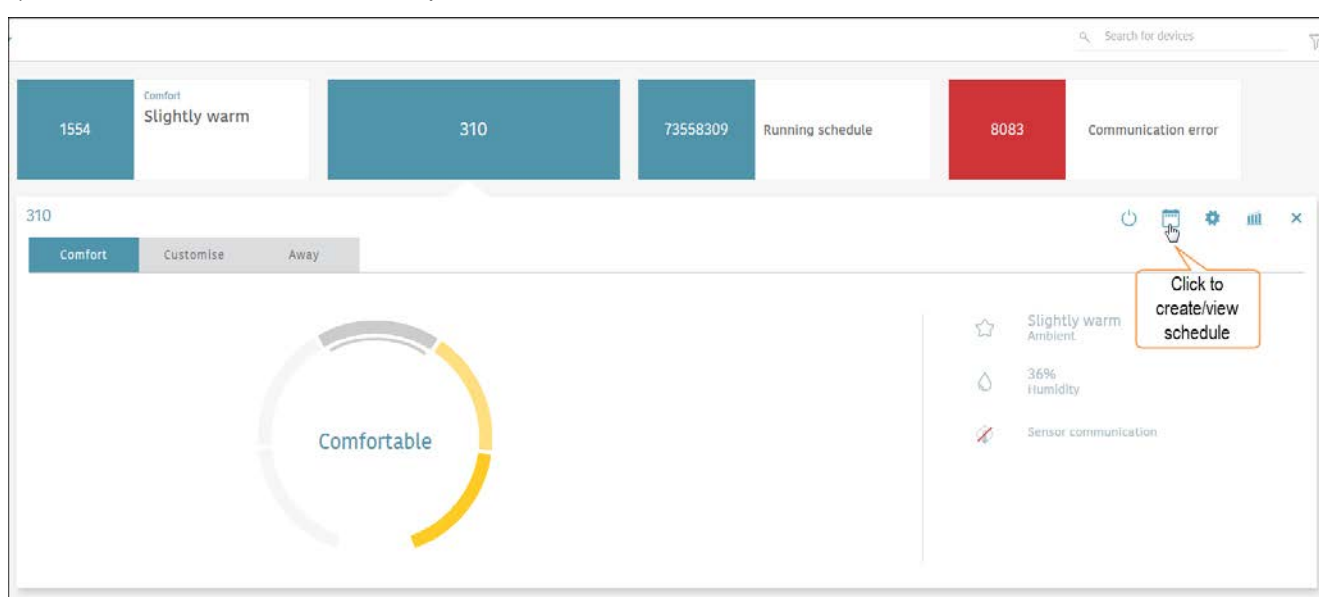


Figure 49: Create schedule

- 3) A 24 hour duration bar appears to set the weekly schedule.



Figure 50: Schedule bar

- 4) Select the days for which you want to set a specific schedule. You must choose at least one day to set the schedule.

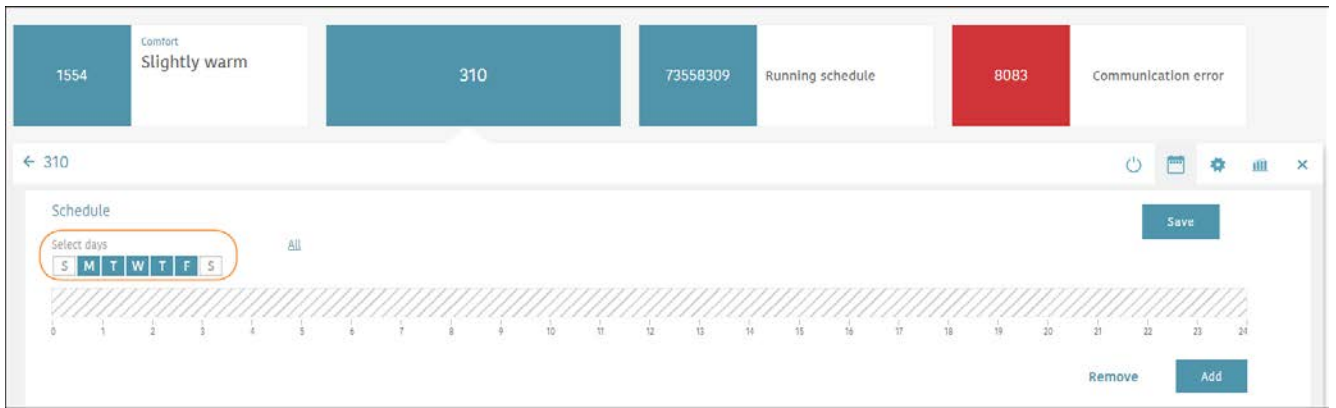


Figure 51: Selecting weekdays for Schedule

- 5) Select the time interval to schedule the device for operation in **Comfort** or **Away** mode. To set the interval, click in the bar and drag the slider to select the start and end time. By default, when you set an interval, you schedule the thermostat to operate in the Comfort mode. However, if you wish to change the mode to **Away** or **OFF**, simply click in the bar and select the required option. The example screen shows that the device will operate in Comfort mode (retaining the band setting in the device at that time) on Monday until Friday from 00:00 hrs to 6:00 hrs, and then again from 13:00 to 15:00 hours; followed by 18:00 until 24: 00 hours. The device will switch to **Away** mode from 6:00 until 13:00 hrs and again from 15:00 until 18:00 hours.

**Note:**

If you make changes to a running schedule that is set to **Away/OFF** and is scheduled to continue past the midnight of the current day, the changes made will be overwritten at midnight and the schedule will be reset to **Away/OFF** in accordance with original schedule settings.

For example, if a schedule for Away/OFF is supposed to run from 19:00 hours on Saturday until 19:00 hours on Monday, and you change the mode to Comfort or Customise at 20:00 hours on Saturday, the device will auto reset to Away/OFF mode after 24:00 hours on Saturday.

- 6) In the same way set the schedule for the remaining days.

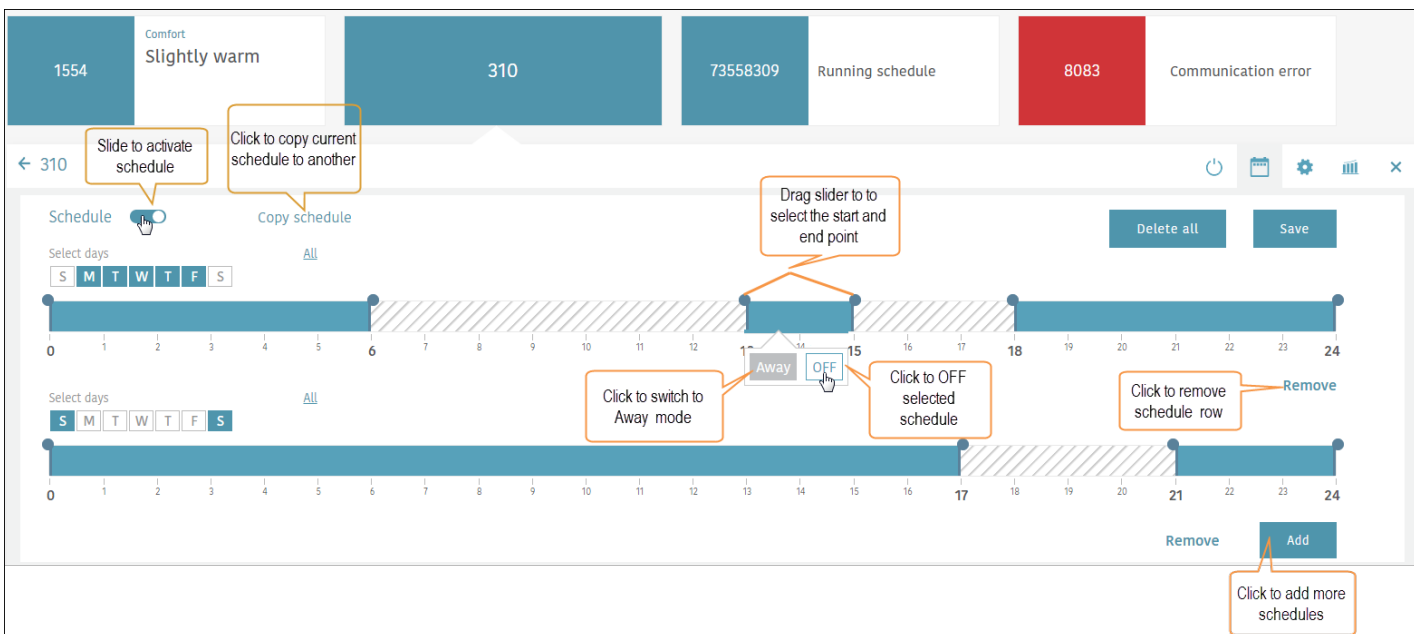


Figure 52: Schedule added

**Notes:**

- You can set a maximum of 6 time intervals across the 24 hour duration.
- If you have selected the wrong time interval in a schedule, click in the block and select OFF on the popup menu.
- For the unselected time intervals in the schedule, the cooling systems will remain turned OFF.
- Modifications applied to a running schedule via the device or the mobile/web app will override the previous settings for that time interval only.

7) After you have created the weekly schedule click **Save**.

8) Slide the **Schedule** button to activate the prepared schedule. The schedule will not be implemented unless you activate it.

### 10.4.2 Copy Schedule

You can copy a specific schedule for a device and apply it to other devices. This eliminates the need to recreating schedules again. To copy a schedule, do the following:

- 1) Select the device whose schedule you want to copy and click the **Schedule** icon to view the schedule.
- 2) On the copied device, schedule will be automatically enabled.

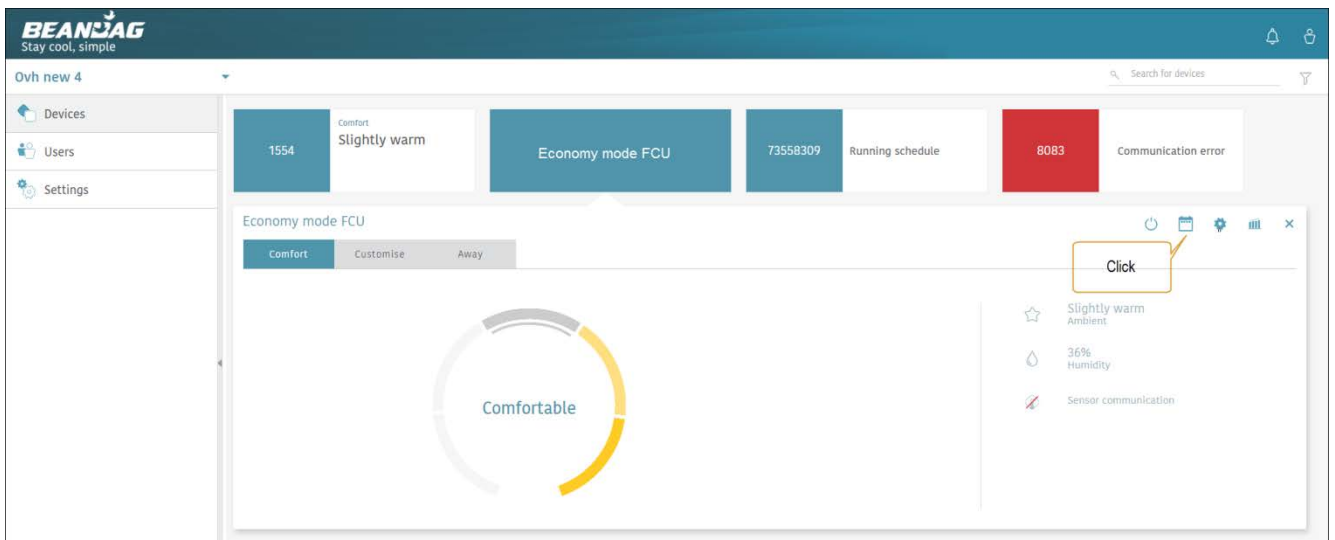


Figure 53: View schedule

3) Click the **Copy Schedule** hyperlink.



Figure 54: Copy schedule

4) Select the device to which you want to apply the copied schedule. An example is shown below.

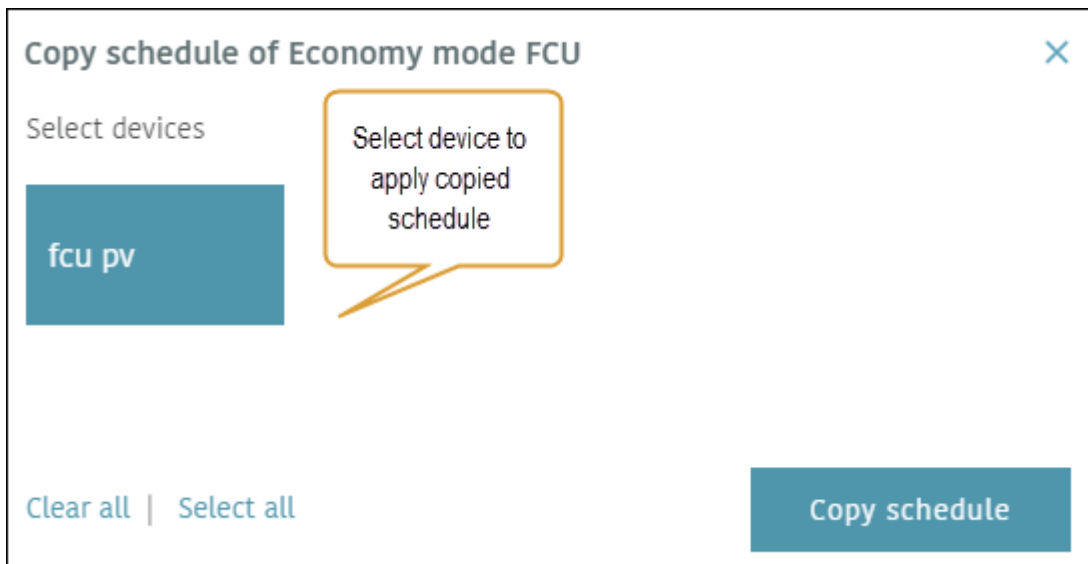


Figure 55: Select device to apply copied schedule

5) A confirmation message appears when the schedule is copied.

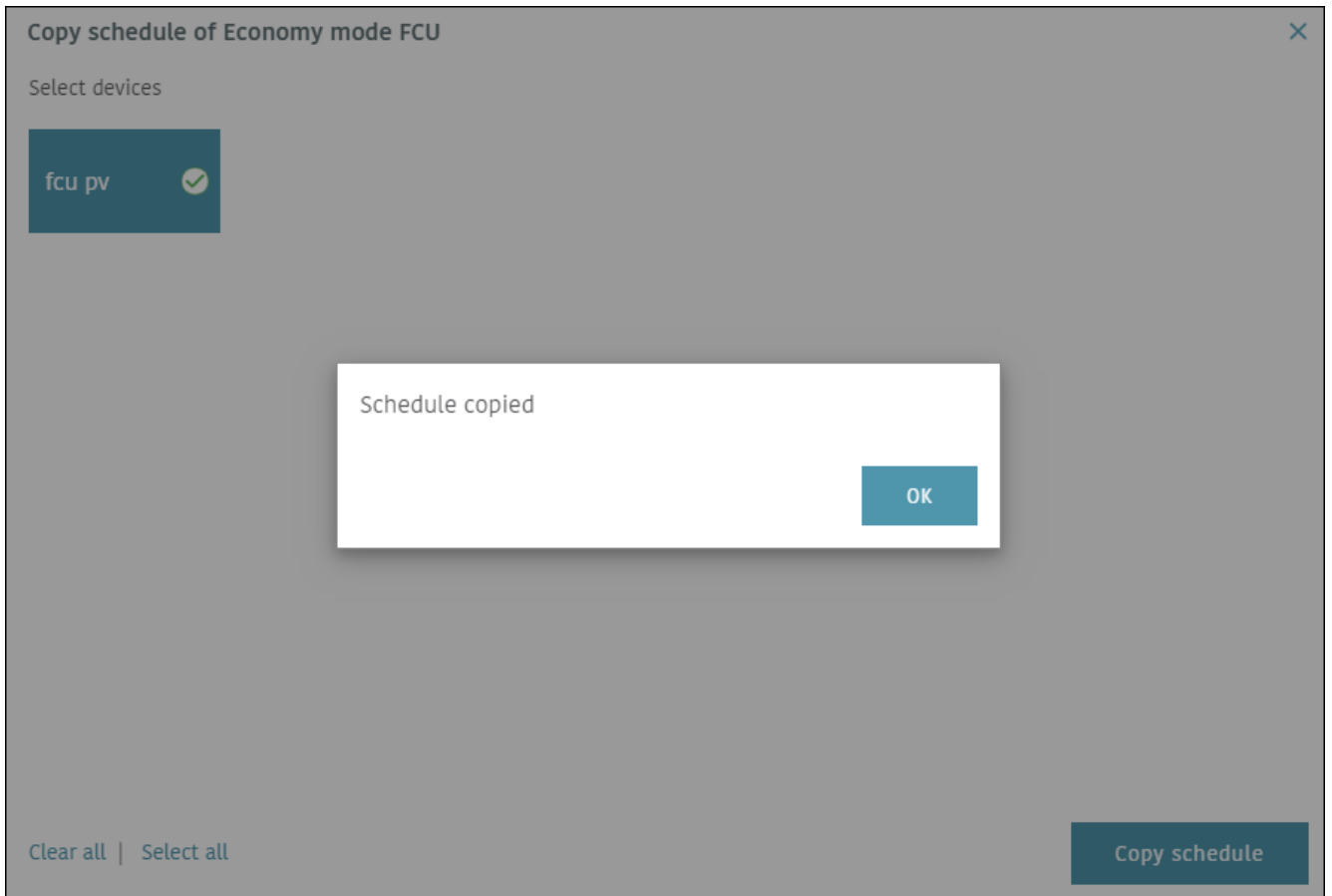


Figure 56: Schedule copied

## 10.5 Settings

The Settings menu in the left pane has the following options:

### 10.5.1 Transfer system

**To transfer the system ownership, do the following:**

- 1) Click **Settings** in the left pane and further click **Transfer system**.
- 2) Next follow the instructions to complete the process.
- 3) When done, click the **Send request** button. An example screen is shown below.
- 4) \*ensure that the email, whom the system is to be transferred, is registered and have working Beanbag Cool app.

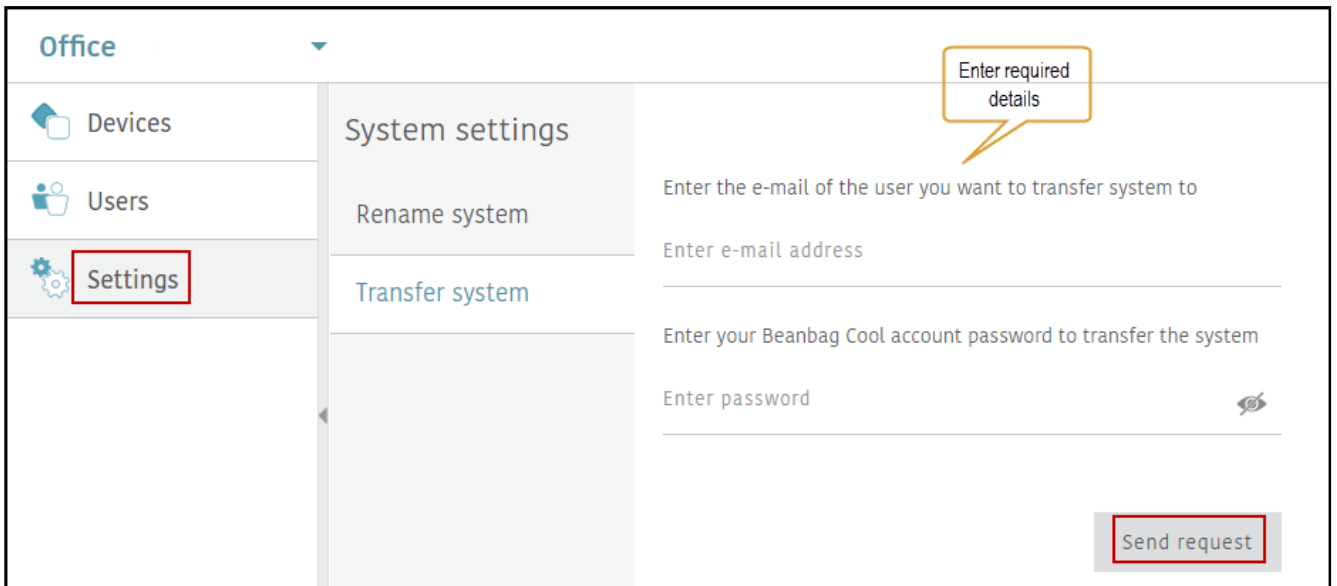


Figure 57: Transfer system

### 10.5.2 Rename system

**Do the following:**

- 1) Click **Settings** in the left pane and further click **Rename system**.
- 2) Enter the new name and click **Save**. An example screen is shown below.

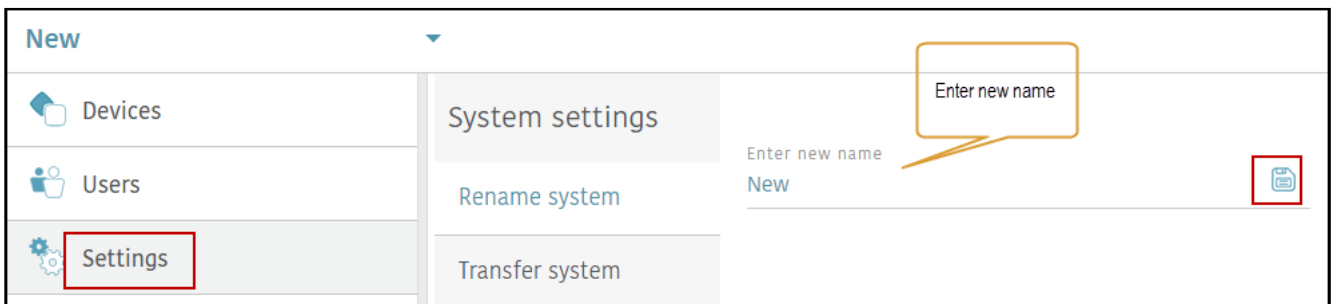


Figure 58: Rename system

## 10.6 User management

User Management is concerned with inviting new users and assigning roles to users/revoking privileges. Beanbag Cool supports the following user types:

**Owner-** An owner is the user who creates the system and has the privileges to transfer the ownership, invite new users (admin/user), modify, revoke and delete user roles in addition to add, control and monitor the devices in the system and rename the system.

**Admin-** An admin is the user authorised by the system owner and has the privileges to invite new users, modify, revoke and delete user roles, and configure device settings in addition to control and monitor the devices in the system.

**Users-** Users have restricted privileges such as viewing the user list and controlling devices. They cannot configure/modify the device settings.

### 10.7 Inviting a new user

**To invite a new user, do the following:**

- 1) On the homepage click the system for which you want to invite a new user.
- 2) In the left pane, click **Users**. A screen similar to the one below appears. Click the **Invite users** button at the top right.

**Note**

The e-mail of new user, who is to be invited must be registered with a working Beanbag Cool app.

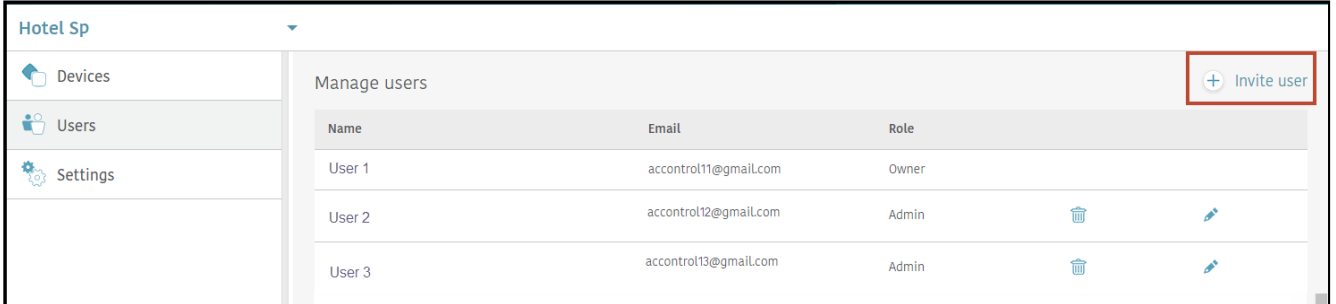


Figure 59: Inviting user

- 3) The **Invite user** dialog box appears. Enter the e-mail address and select the required role of the user who has a Beanbag account. Next click the **Send** button.

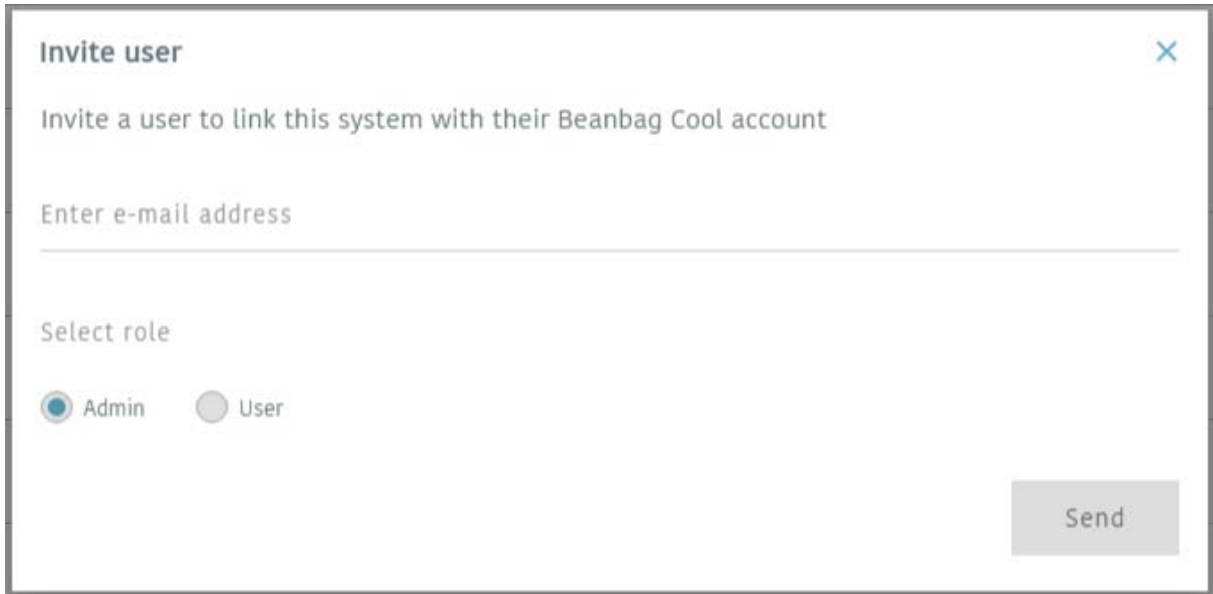


Figure 60: User details

- 4) A confirmation message appears. The user list updates with a pending request as shown below.

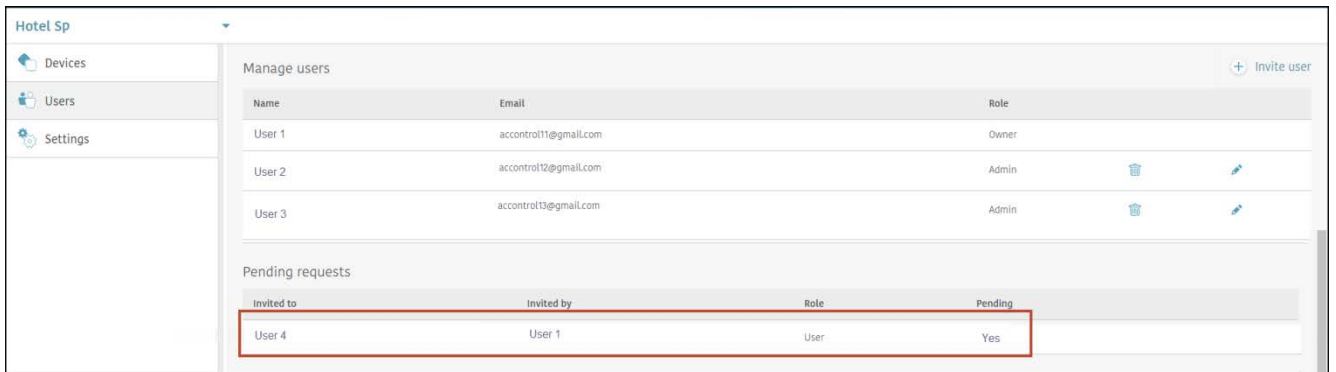
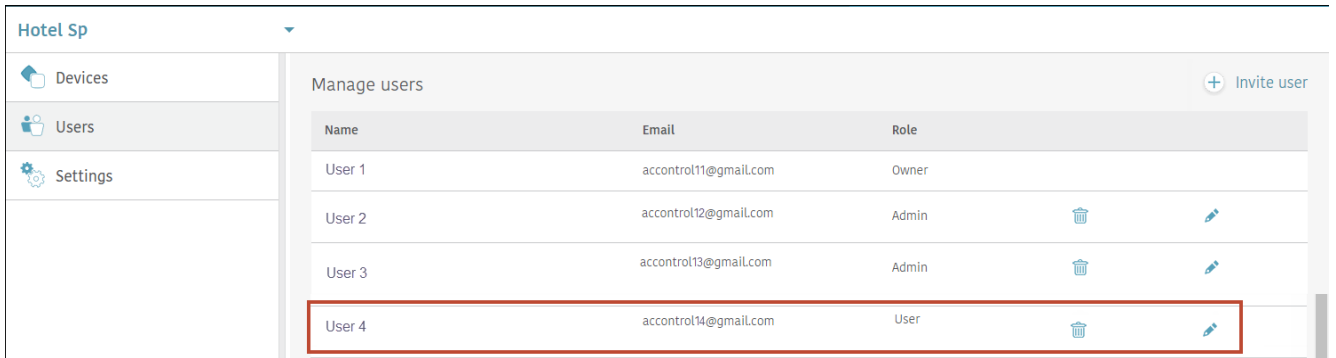


Figure 61: Pending user request



5) When the user accepts the request, the user list is automatically updated as shown below.




Name	Email	Role		
User 1	accontrol11@gmail.com	Owner		
User 2	accontrol12@gmail.com	Admin		
User 3	accontrol13@gmail.com	Admin		
User 4	accontrol14@gmail.com	User		

Figure 62: User added

## 10.8 Logging out from the Beanbag Cool application

This section describes the procedure to log out from the Beanbag Cool application when access is no longer needed.

**To log-out of Beanbag Cool, do the following:**

- 1) On the Beanbag Cool home page, click the  icon at the top.
- 2) On the drop down that appears, click **Logout**.

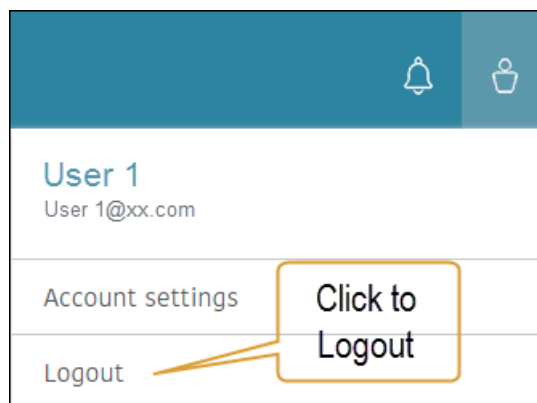


Figure 63: Logout

- 3) You will be directed to the Login page again.

## 11 Device settings via mobile/web app

Set/modify in Thermostat	What?	Thermostat/System behaviour
Local control	Enable or disable	If disabled, user cannot change any settings on the Thermostat locally. The device can still be controlled and monitored via mobile/Web app.
Limited control range	In comfort mode – The selection of minimum band range from <b>Comfortable</b> to <b>Cool</b>	The user operating the Thermostat locally can only select a comfort band, within the configured range.  Once set, the cooling unit operates within the configured range only.
	In Customise mode- The selection of minimum temperature range from <b>24</b> degrees to <b>18</b> degrees Celsius.	The user operating the Thermostat locally can only set the temperature, within the configured range.  Once set, the cooling unit operates within the configured range.
Economy mode	Enable or disable	Beanbag Cool automatically switches to Economy setting (if enabled), when DG supply source is detected.
Away mode	The default Set point is 28 degree and can be modified as desired. The fan speed is fixed as 'Medium'.	The Thermostat controls the cooling unit to operate on the set temperature, when the room is unoccupied.
Rename device	Rename the device and save updated information.	The device is renamed in the system.
Change Wi-Fi credentials	Modify existing credentials for system access	The Wi-Fi credentials are updated in the system.  <b>Notes:</b> <ul style="list-style-type: none"> <li>The offset interval for switching of Wi-Fi network will be displayed on the mobile app.</li> <li>You must change the device Wi-Fi credentials prior to changing the router credentials or else the devices connected to the system will go offline.</li> </ul>
Add and remove sensors	Pair a new sensor with the thermostat device. Remove a paired sensor.	The sensor is paired/unpaired with the device.
Split AC learning ( 500 series only)	Make the thermostat learn AC control commands via the mobile app.	The thermostat learns commands for AC control.

**Note:** If Internet connectivity is lost, the commissioned Thermostats will continue to function in Standalone mode. However, control and monitoring will not be available via the mobile/Web app.

## 12 FAQ (Frequently asked questions)

**Q1.** What are the different types of network systems in a typical IT environment?

**A1.** Typically, there are 4 types of network systems as described below:

- **Open:** This type of system is usually non-secured and can be accessed via a Wi-Fi hotspot on a mobile phone without the need for a password. It is not recommended to use such a system.
- **Password secured system:** To access this type of a system, you require a user name and password for the respective SSID. (SSID is the name of network assigned by the owner of the network). Your home Wi-Fi network is the most common example of such a system.
- **AAA authentication (firewall protection): secured system-** This is a secure system and access to the Wi-Fi network is controlled via a secondary firewall layer. So when you click on the Wi-Fi settings in your mobile phone, the SSID of this network appears as **Open** network. However, when you click on the network to connect, you are asked to enter the Login ID and Password (provided by the system owner) or asked to register your mobile number for the generation of OTP. You will usually find this kind of system at hotels, airports and railway stations etc.
- **AAA authentication and controller secured system:** In addition to AAA authentication, a system may have an added security of a controller such as **Nomadix** or **Ruckus**.

**Q2.** What should I do if the Beanbag thermostat is unable to connect with the customer Wi-Fi network?

Try the following to troubleshoot the issue:

- 1) Check the network type. If the network is an AAA authentication (firewall protection) type, you will have to ask the customer IT team to bypass the MAC IDs provided on all the thermostat devices prior to commissioning them. Once, bypassed, the device will not ask for the Wi-Fi password, at the end of commissioning process.
- 2) Bypassing the MAC ID is necessary and must be done, ideally before the commissioning process. However, if you are commissioning the device first when the MAC ID's have not yet been bypassed, do the following:
  - I. Connect to the customer network using their SSID username but without the password, through a Wi-Fi hot spot from a mobile (Not the one used for commissioning Beanbag cool thermostat)
  - II. Next connect the mobile (used to commission the thermostat) to the mobile hotspot of the first mobile (not with the customer's Wi-Fi). Complete the commissioning of the device and turn off the mobile hotspot. The device will attempt to connect to the available Wi-Fi network, with the same SSID (in this case, it will be the Wi-Fi of the customer), with which it was commissioned. Be careful to provide the exact SSID name or else you will get an error.

**Note:**

Please ensure that the Beanbag thermostat is bypassed as '**device**' in the firewall and not as a subscriber or other option.

- 3) If the customer network system is protected with AAA authentication and controller type, the MAC ID will need to be bypassed in both the firewall and the controller. Unless, the device MAC ID is bypassed at both, internet access will not be granted to the Beanbag thermostat. The customer may have to approach his ISP (networking service) provider for the same.

**Note:**

Please ensure that the Beanbag thermostat is bypassed as '**device**' in the firewall and not as a subscriber or other option.

**Secure Meters Ltd**

Pratapnagar Industrial Area

Udaipur 313 003

India

p: + 91 294 2492300

f: +91 294 2492310

**Australia**

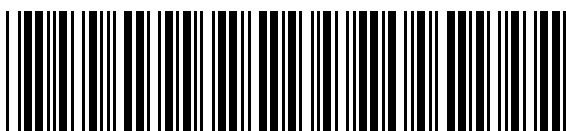
[sales\\_australia@securemeters.com](mailto:sales_australia@securemeters.com)

**UAE**

[sales\\_middleeast@securemeters.com](mailto:sales_middleeast@securemeters.com)

**India, SE Asia, Africa**

[sales\\_india@securemeters.com](mailto:sales_india@securemeters.com)



BGX701 - 201

