

# Rada Sense Mobile Application Guide



## IMPORTANT

**Installer:** This manual is the property of the customer and must be retained with the product for maintenance and operational purposes.

### User Guide

*Please leave these instructions with the user.*

*Showering perfection.*

**rada**



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## Introduction

The companion mobile app for Rada Sense allows the product to be set up and commissioned to the customer's specific requirements, should they deviate from the factory default settings. The app allows specific settings of the product to be configured as required and also allows the configuration and management of features such as the built-in duty flushing mechanism and thermal disinfection routines.

## System Requirements

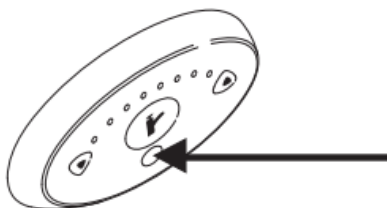
The mobile app is compatible with both iOS and Android platforms (see End User License agreement for more specific details regarding minimum operating system and hardware requirements).

## Installation

Download the Rada Sense mobile app from either the Apple App Store® or Google Play™ or scan the QR code using your mobile device.



## Getting Started

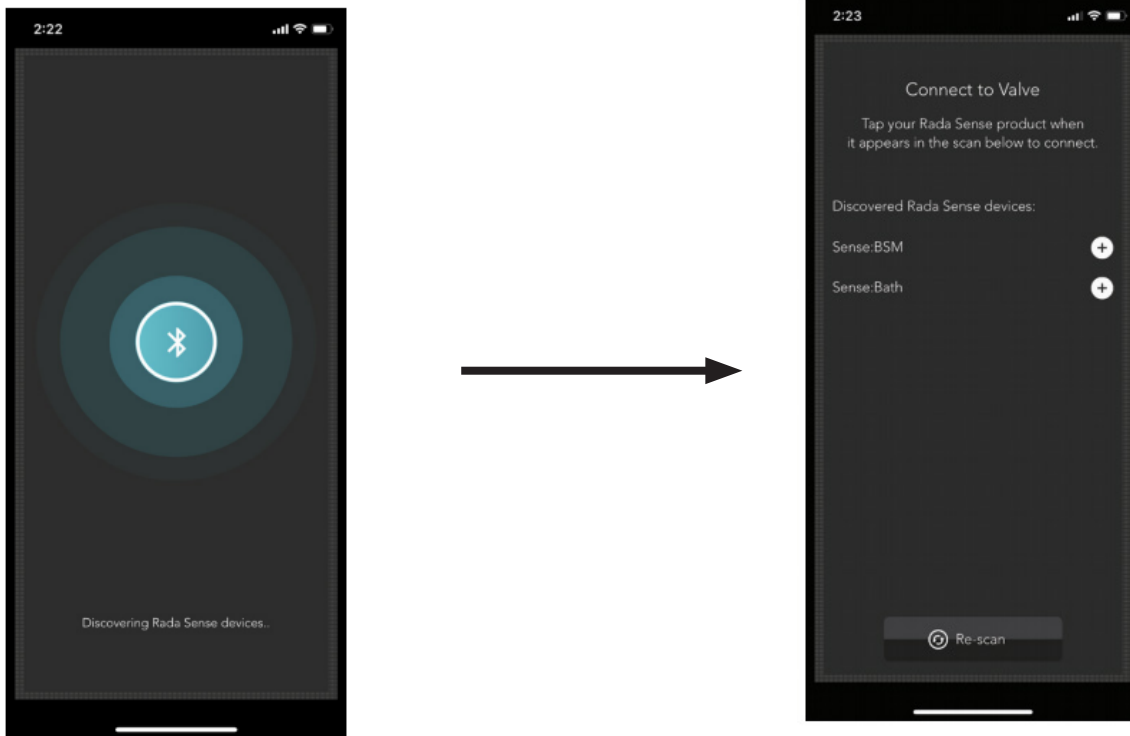


### Disable Control Panel

Disable the Control Panel with the magnetic key (Control Panel is disabled when the blue light flashes in the middle oval window under the outlet icon, indicated below). This puts the product into the Programming / Cleaning mode. Ensure Bluetooth connectivity is enabled on your mobile device then launch the Rada Sense app.

## Product Discovery

After launching the app, the local area will be scanned for compatible Rada Sense products that are in the Programming / Cleaning mode.



## Connecting to Product

### Login Screen

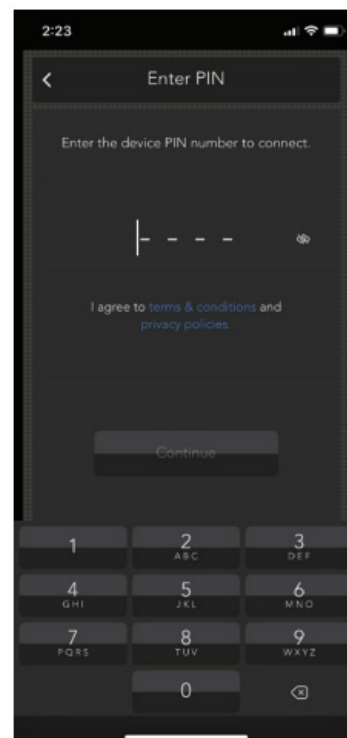
Enter default PIN of 2502 to connect to the Sense product.



Read "Terms & conditions" and "Privacy policies"



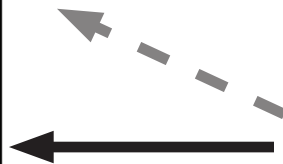
Tap on "Continue".



If the correct PIN is entered, your mobile device will establish a connection to the product.



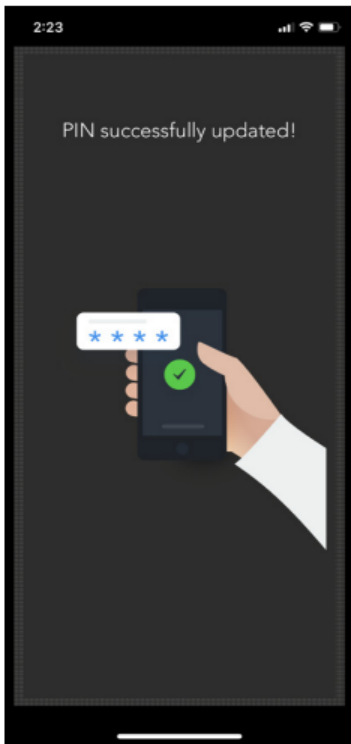
## Updating PIN



**1** Enter a new PIN or alternatively, tap "Skip".



**2** Tap on "Update PIN".



A screen will appear to advise whether the PIN change has been successful or not.

## Main Menu

Once connected to the Sense product, you will see the Main Menu as follows:

### Outlet 1/2

Depending on the product you are connected to (single or dual outlet), either one or both of the outlet options will appear. Select the relevant outlet to change the individual settings.

#### Note:

##### On Bath / Shower models:

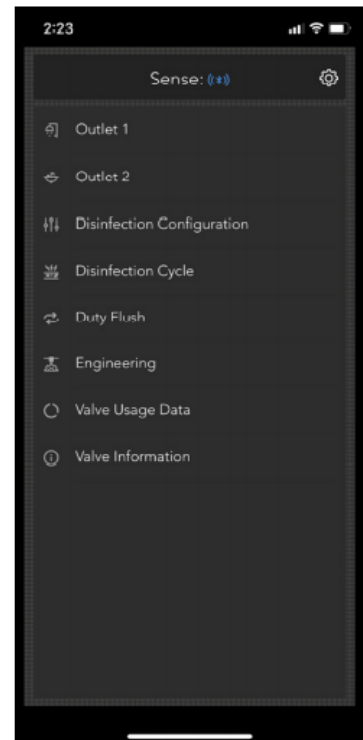
Outlet 1 = Shower

Outlet 2 = Bath

##### On Shower / Shower models:

Outlet 1 = Fixed Showerhead

Outlet 2 = Variable Showerhead



### Disinfection Configuration

Set parameters for a thermal disinfection cycle.

### Disinfection Cycle

Performs a disinfection cycle and displays the result and log graph of the last cycle.

### Duty Flush

Configures the parameters for the automatic duty flush of the product during periods of inactivity.

### Engineering

Provides information relating to servicing / diagnostics.

### Valve Usage Data

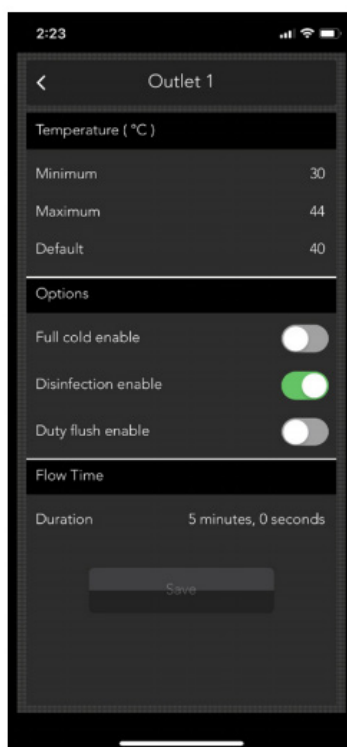
Provides statistics based on the use of the product.

### Valve Information

Displays embedded software configuration data and manufacturing data.

## Outlet

Both the Outlet 1 and Outlet 2 (if applicable) sub-menus display the following configurable settings:



### Minimum Temperature

Specifies the minimum user adjustable temperature limit.

### Maximum Temperature

Specifies the maximum user adjustable temperature limit.

### Default Temperature

Specifies the temperature at which the product will turn on by default.

### Full Cold Enable

If enabled, the user can select full cold water delivery e.g. for cleaning teeth in a basin application.

### Disinfection Enable

When enabled, allows a disinfection cycle to be performed on the outlet. If disabled, the outlet will be skipped during the disinfection cycle.

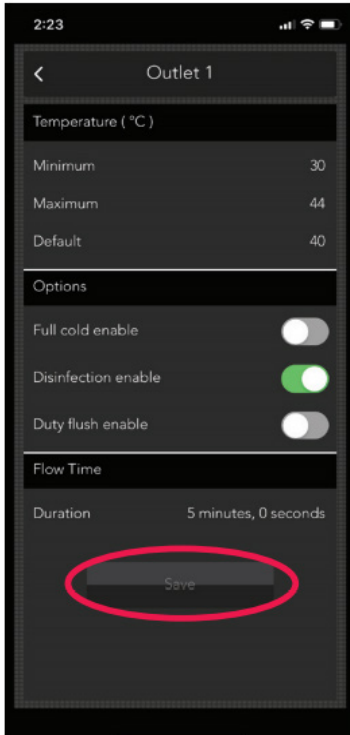
### Duty Flush Enable

When enabled, allows a duty flush cycle to be performed on the outlet. If disabled, the outlet will be skipped during the duty flush cycle.

### Flow Time Duration

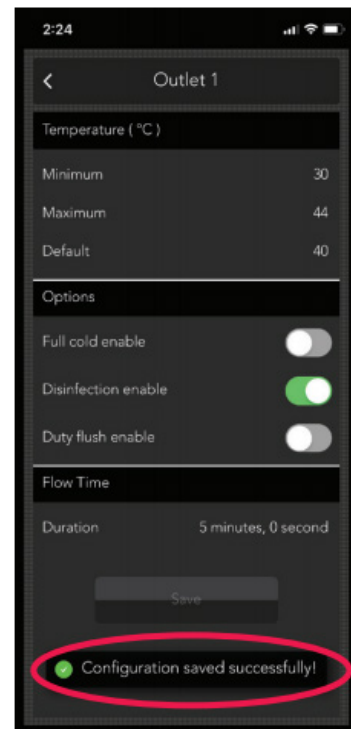
Configures the length of time the outlet should run for before automatically switching off.

# Configure Setpoints



- 1 Adjust the outlet settings as required for the outlet and tap “Save” to commit the changes to the product.

A notification as shown in the image (left) indicates that the product is successfully configured with new settings.



- 2



# Disinfection Configuration

The Disinfection Configuration sub-menu displays the configurable options for carrying out a thermal disinfection cycle.

## Type

A Standard disinfection will deliver hot water for the duration period specified, which must be above the Minimum Temperature specified. The Energy saving disinfection allows an Upper temperature limit to also be specified as well as the minimum limit. If the water temperature is between the Minimum Temperature and the Upper Temperature, the disinfection time is progressively reduced. The reduction is computed continuously and has the effect of halving the time for each 5°C increase above the Minimum Temperature. Should the temperature rise above the Upper Temperature then no further time reduction accrues.

## Minimum Temperature

The minimum temperature required to perform a successful disinfection cycle.

## Minimum Time

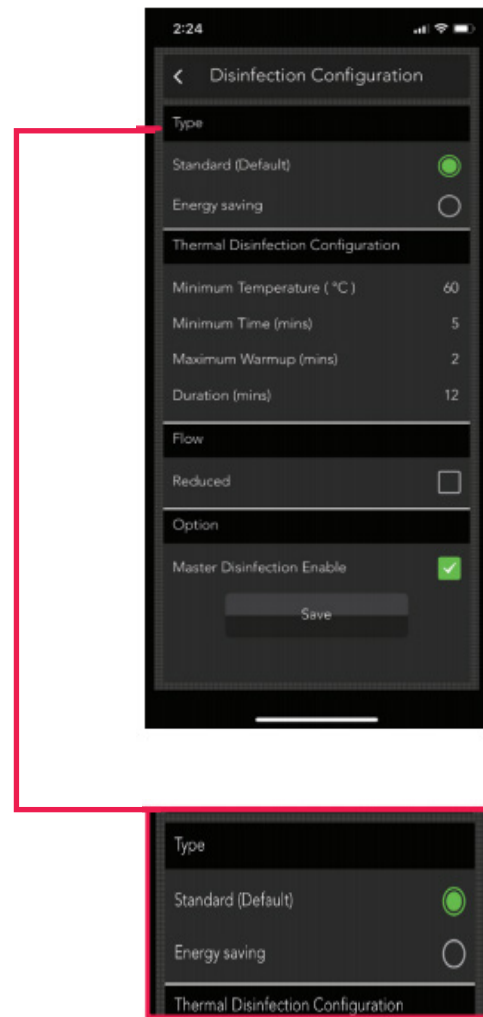
The minimum duration of the disinfection cycle.

## Maximum Warmup Time

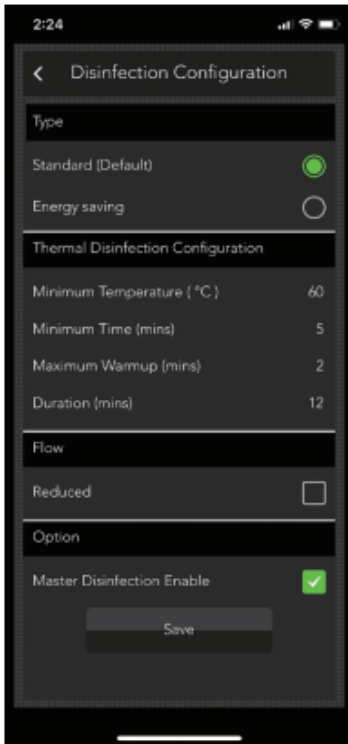
The maximum time allowed for the disinfection temperature to be reached. If the temperature is not reached within this period, then the disinfection will be canceled (if unsure, leave as default).

## Duration

The maximum duration of the cycle. If cycle is not completed within this period, then the disinfection will be canceled (if unsure, leave as default).



**Warning!** Time reduction is not permitted by some National / Local Regulations. If in doubt, select “Standard” settings.



### Flow Options

If checked, the reduced flow rate will minimize the volume of water utilised during the disinfection cycle to save resources.

**Important!** *This option should not be utilised on UK (T3) models.*

### Master Disinfection Enable

This option needs to be enabled in order to operate a thermal disinfection cycle. Disabling this option provides an extra level of security to prevent accidental triggering of a thermal disinfection cycle.

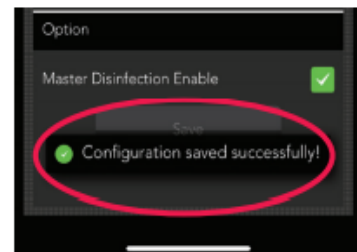
## Configure Setpoints

Adjust the disinfection settings as required for the product and tap “Save” to configure the desired changes to the product.

A notification as shown in the image (left) indicates that the product is successfully configured with new settings.

1

2



## Disinfection Cycle

The Disinfection Cycle sub-menu allows the user to commence a manual thermal disinfection cycle on the product to reduce the risk of a build-up of contamination and harmful bacteria within the product and pipework.



**Warning!** *The Disinfection cycle is not an automated process. It is activated by the supervisor manually and will raise the water temperature to exceed the safe level for bathing and will scald or even kill. It is therefore the responsibility of the supervisor to make sure the process is carried out correctly and safely.*

The following safety measures must be observed:

**The disinfection process is not to be initiated unless adequate systems are in place to ensure that the area is clear of any persons prior to and during the disinfection process.**

Please consult the national or local authority Legionella Legislation or Guidelines as appropriate for your country/area to see how the Thermal Disinfection process can be used to meet the required level of hygiene.

The disinfection cycle and its settings are controlled in the “**Disinfection Configuration**” sub-menu. Disinfection per outlet is enabled or disabled in the “**Outlet Configuration**” sub-menus.

## Thermal Disinfection

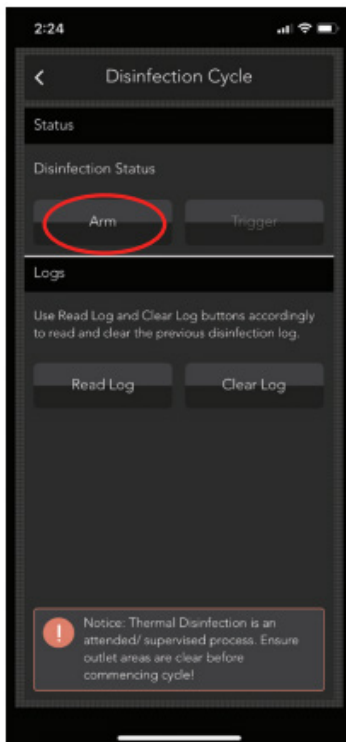
**IMPORTANT! PLEASE READ CAREFULLY.**

**DO NOT USE THE THERMAL DISINFECTION FEATURE IF THE HOT WATER SUPPLY CAN EXCEED 80°C (176°F)!**

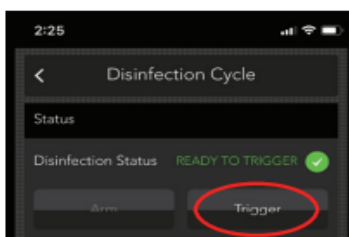
**THE MAXIMUM TEMPERATURE FOR DISINFECTION SETPOINT MUST BE 80°C (176°F)**

Prior to commencing a thermal disinfection cycle, ensure the product has been configured in line with local bylaws / regional legislation to ensure that the process conforms. The water flow during disinfection will be very hot and may scald on contact. The valve must be supervised throughout the disinfection process and no-one should come within 3m of the outlet.

**ALL RADA SENSE ALERTS AND ERRORS ARE DISABLED DURING THE PROCESS!**



- 1 Close all outlets in the system.
- 2 Tap the "Arm" button which prepares the valve to start disinfection.



- 3 The message "Ready to Trigger" will appear once the product has acknowledged the request. Tap "Trigger" to confirm and initiate the disinfection cycle within 30 seconds of arming. Failure to trigger will require the Arm process to be repeated.



4

A 10-second countdown will begin and water flow will commence when this reaches zero.

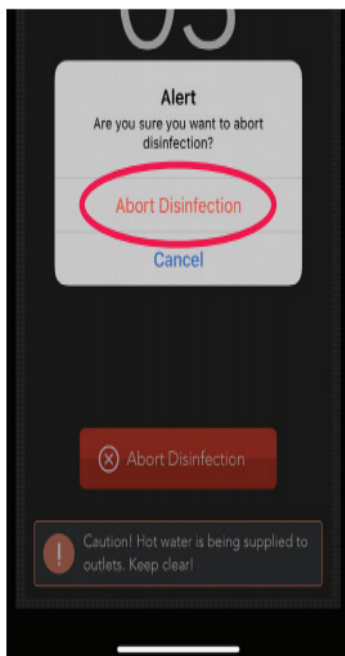
**Note:** *The control panel is enabled during disinfection. If any sensor is activated then the disinfection cycle is aborted.*



**Warning!** *For continued protection against legionella, thermal disinfection must be carried out on a regular basis. Please consult your national guidelines for details.*

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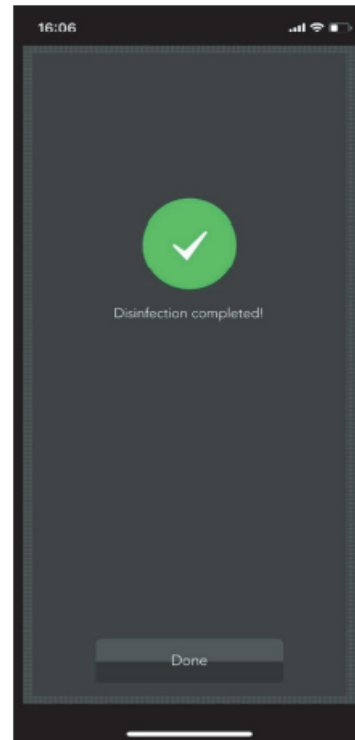
Tapping the “Abort Disinfection” button at any point (either during the countdown or once the disinfection has commenced) will stop the disinfection cycle immediately after tapping the confirmation pop-up as shown.



## Disinfection Logs



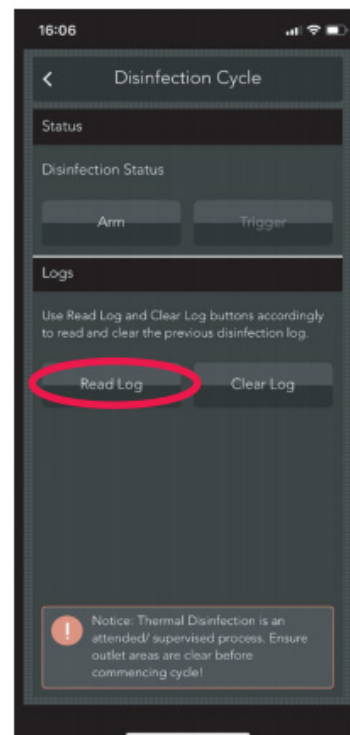
Once the product commences the Thermal Disinfection cycle, a circular bar will gradually fill to indicate progress.

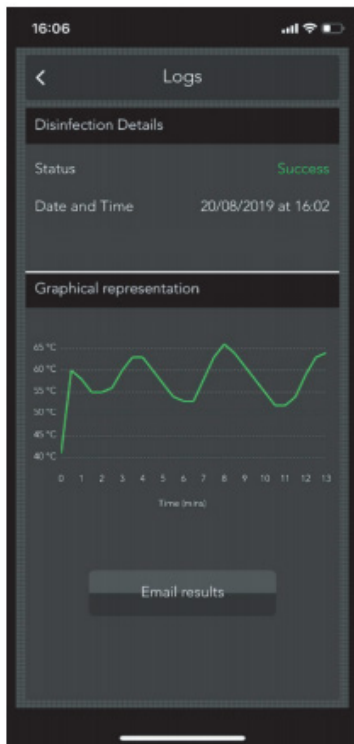


Upon completion, the confirmation screen will appear.

Upon completion, return to the “Disinfection Cycle” sub-menu and tap “Read Log”.

If you wish to delete the existing log data, tap “Clear Log”.





The summary report will appear indicating either a “Success” or “Fail” of the thermal disinfection cycle against the specified configured temperature limit. A date / time stamp will also be applied to the log. The log can be emailed from your mobile device for record-keeping purposes.

In the event of a “Fail”, ensure there is adequate hot water supplied to the valve for the period of time specified in the Disinfection Configuration and sufficient warmup time allowed for the water to get from the source to the product.

**Note:** *The product will only retain one thermal disinfection record which is over-written when a subsequent disinfection cycle is carried out. It is the responsibility of the supervisor to ensure disinfection logs are emailed/retained for proof of compliance.*

## Duty Flush

The duty flush sub-menu allows the user to configure a periodic flush of the product / pipework in periods of inactivity. This will help to mitigate the build-up of contamination and harmful bacteria within the product and pipework.

Unlike a thermal disinfection, the duty flush operates at a safe “blend” temperature rather than an elevated temperature so the risk of scalding is greatly reduced. For this reason, the duty flush can be allowed to operate unsupervised.

**Note :** *A duty flush routine does not negate the requirement to perform periodic thermal disinfections of the product.*

Please consult the national or local authority Legionella Legislation or Guidelines as appropriate for your country/area to see how the Thermal Disinfection process can be used to meet the required level of hygiene.

## Temperature

The temperature at which the outlets will flow water during the duty flush cycle. This will only be configurable between the minimum and maximum valve setpoints (see Configure Setpoints on page 10).

## Duration

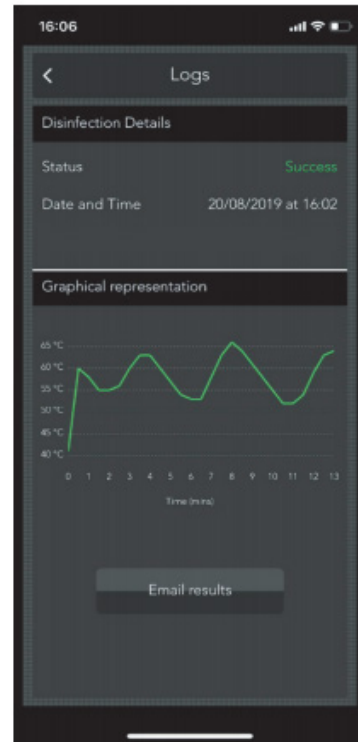
The length of time the outlet should flow water during the duty flush.

## Wait Time

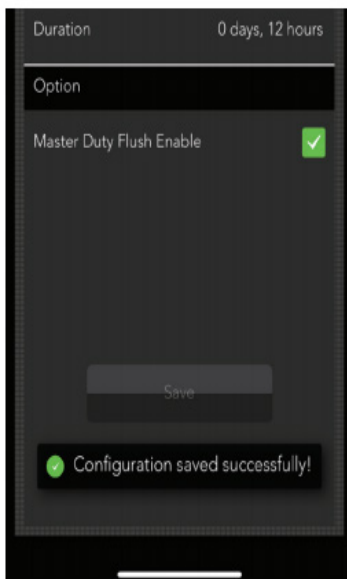
The period of inactivity between uses before the duty flush should operate.

## Master Duty Flush Enable

Allows the duty flush system to easily be enabled / disabled for all outlets. When disabled, no duty flushing will be performed on any outlet.



## Configure Setpoints

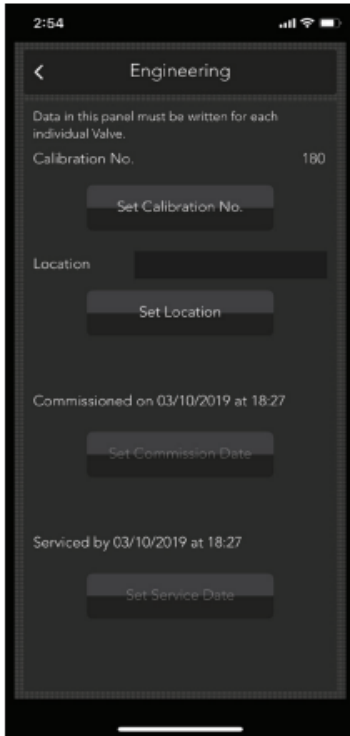


- 1 Adjust the duty flush settings as required for the product and tap “Save” to commit the changes to the product.
- 2 A notification as shown in the image (left) indicates that the product is successfully configured with new settings.



## Engineering

The Engineering sub-menu provides some additional functions and data related to the product.



Calibration Number



Enter calibration number.

**! Caution!** *The valve must be calibrated if either the mixing valve assembly or the DMV control PCB are replaced. The calibration number is required for optimum performance and this can be found on the mixing valve body as shown above.*

### Location

An alias / description of the location of the product can be entered in this field (max 16 characters). This alias will appear in the Bluetooth broadcast of the product during the search for products to make it easier to identify which product you are connecting to.

### Commissioning/Service Date

The dates the product was commissioned/serviced will appear in these fields here for record-keeping/diagnostic purposes.

## Valve Usage Data

The Valve Usage Data sub-menu provides detailed information with regards to the usage of the product throughout its life.

### Activations

The number of times the product has been operated (turned on) by the user via the control panel.

### Total Minutes

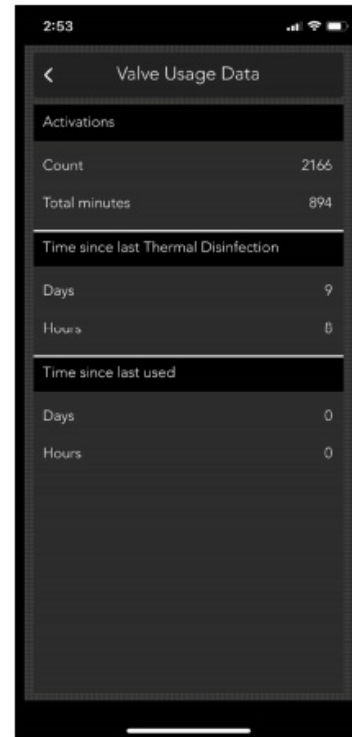
The total number of minutes the product has run for (delivered water to outlets).

### Time since last Thermal Disinfection

The number of days/hours that have elapsed since the last thermal disinfection cycle was run.

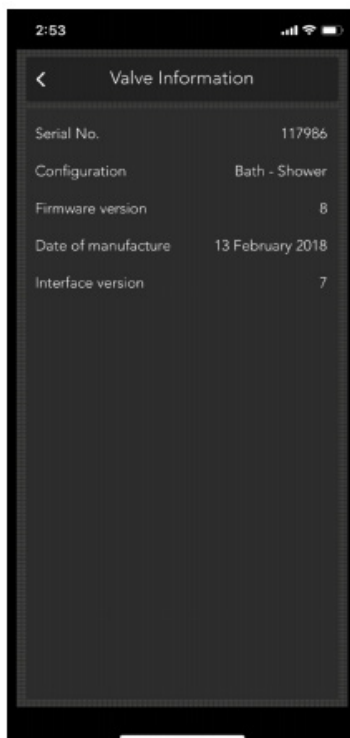
### Time since last used

The number of days/hours that have elapsed since the product was last operated by a user.



## Valve Information

The Valve Information sub-menu provides detailed diagnostic information of the product, useful for fault finding and traceability for servicing.



### Serial Number

The unique serial number of the DMV.

### Configuration

The variant configuration of the product depending on the application of the product e.g. Bath-Shower, Basin, Shower etc.

### Firmware Version

The version of the embedded firmware on the DMV PCB.

### Date of Manufacture

The date and time stamp that the DMV was manufactured.

### Interface Version

The version of the embedded firmware on the control panel (interface).

## App Settings

Tapping the  icon from the main menu will present the app settings screen as shown.

### Temperature Unit

Allows temperature unit to switch between °C and °F.

### Update PIN

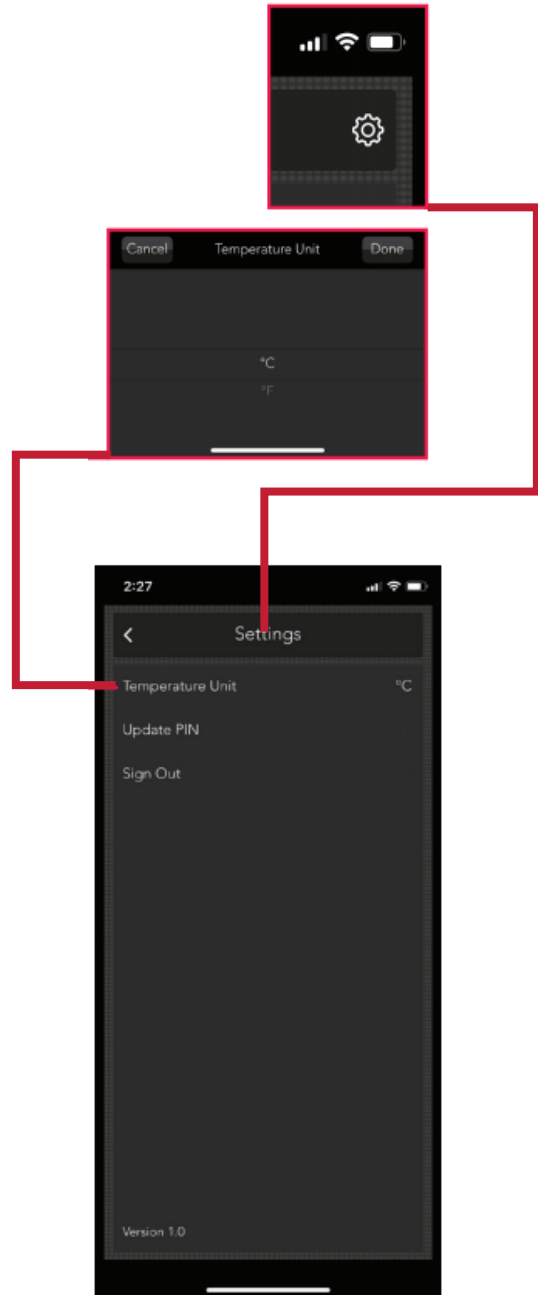
Allows the connection PIN number to be changed.

### Sign Out

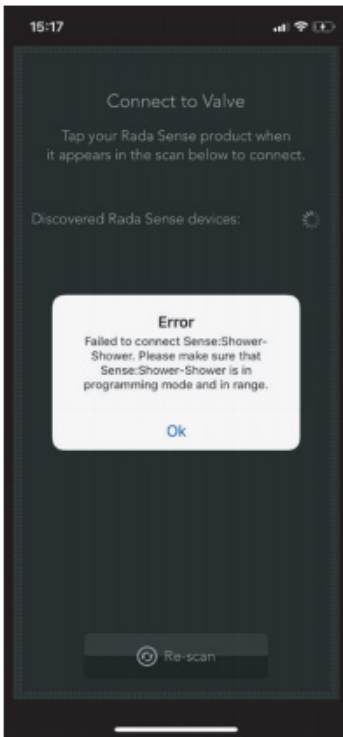
The sign out function will return you back to the initial product search screen and return the currently connected product back to normal operational mode.

### App Version

The version of the currently installed mobile app appears at the bottom left hand side of the app settings screen.



## Error Messages



**Symptom: “Error - Failed to connect xxx Please make sure that xxx is in programming mode and in range”**

Check the following:

- 1 Check power to product.
- 2 Sense product is in Programming / Cleaning Mode (see **page 5** for details) and ensure blue LED is flashing on the control panel.
- 3 Ensure mobile device is within 10 metre range in front of the control panel (clear line of sight).
- 4 Verify product is not in an error condition (flashing temperature LED combinations on front panel).
- 5 Replace control panel.

**Symptom: “Turn on Bluetooth”**

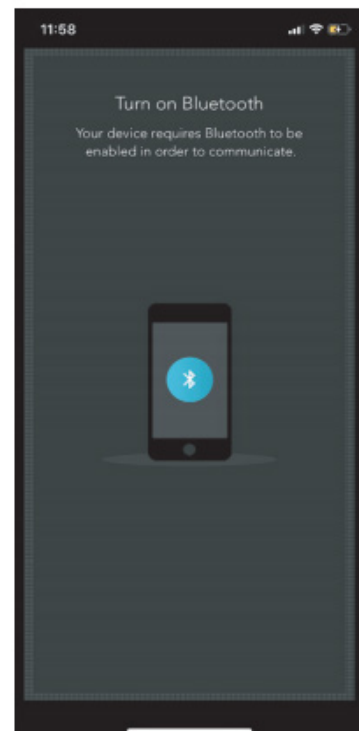
Check the following:

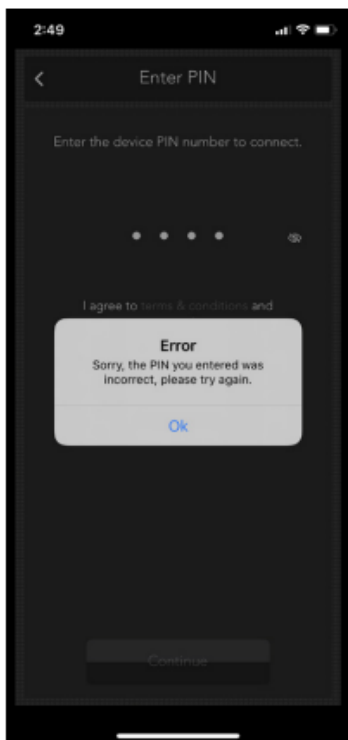
Verify Bluetooth connectivity is enabled on your mobile device.

Retry. If error persists, follow steps for error condition above “Failed to connect”.

1

2





**Symptom: “Error - Sorry the PIN you entered was incorrect, please try again”**

Check the following:

- 1 The default PIN number is 2502. If this does not work, check with the building/maintenance supervisor to find out whether this has been changed.
- 2 Contact Rada Customer Services (see back Page for contact details).

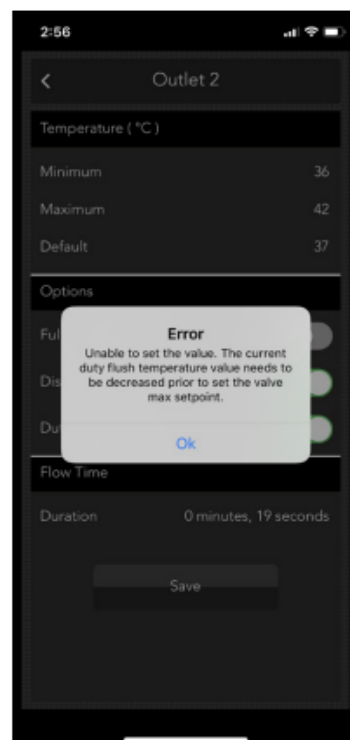
## Temperature Range Error Messages

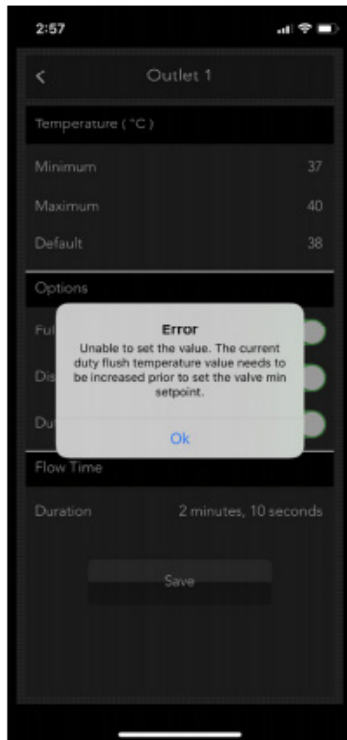
**Symptom: “Error - Unable to set the value. The current duty flush temperature value needs to be decreased prior to set the valve max setpoint.”**

Check the following:

When attempting to change the valve setpoint range (max), the app reads out the duty flush temperature setting. If this notification appears, reduce the duty flush temperature prior to adjusting the valve max setpoint.

1





**Symptom: “Error - Unable to set the value. The current duty flush temperature value needs to be increased prior to set the valve min setpoint.”**

Check the following:

- 1 When attempting to change the valve setpoint range (min), the app reads out the duty flush temperature setting. If this notification appears, increase the duty flush temperature prior to adjusting the valve min setpoint.

## Limited Warranty and Remedy

Armstrong International, Inc. (“Armstrong”) warrants to the original user of those products supplied by it and used in the service and in the manner for which they are intended, that such products shall be free from defects in material and workmanship for a period of one (1) year from the date of installation, but not longer than 15 months from the date of shipment from the factory, [unless a Special Warranty Period applies, as listed below]. This warranty does not extend to any product that has been subject to misuse, neglect or alteration after shipment from the Armstrong factory. Except as may be expressly provided in a written agreement between Armstrong and the user, which is signed by both parties, **Armstrong DOES NOT MAKE ANY OTHER REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.**

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### Special Warranty Periods are as follows:

Sense™ DMV is covered by a 5-years warranty against defects in materials or workmanship from the date of purchase/shipment. Armstrong reverses the right to either replace the complete product, certain components of product and/or replacement internal operating parts.

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