Programmable thermostat display (PTD)
SCD100-000

User Manual

BGX701-294-R02

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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 Know your PTD (Programmable Thermostat display)

The Secure PTD is a battery operated, wireless device which enables independent control of your heating and hot water. It can measure and control up to 4 zones (3 heating + 1 hot water or 4 heating). Designed for comfort and convenience, it comes with an intuitive interface and powerful features such as single click Home-Away, Boost, Scheduling, Optimum start/stop and Service interval etc. Programming it is easy and quick and you can create separate schedules for each zone for a perfect heating experience. With a guaranteed 12 year battery life, it is an ideal replacement for wired thermostats with limited functionality.

The main features of the PTD include:

- Real time status of your hot water and heating zones
- One-click Home-Away function with convenient mode settings
- Easy and intuitive 7 day programming for hot water and heating control with facility to copy and edit schedules
- Ease of adding or replacing heating control devices
- Instant alerts about low battery in associated zone sensor, communication errors and service reminders
- Provision for boosting hot water or holding the desired temperature

2.1 Know your Home screen

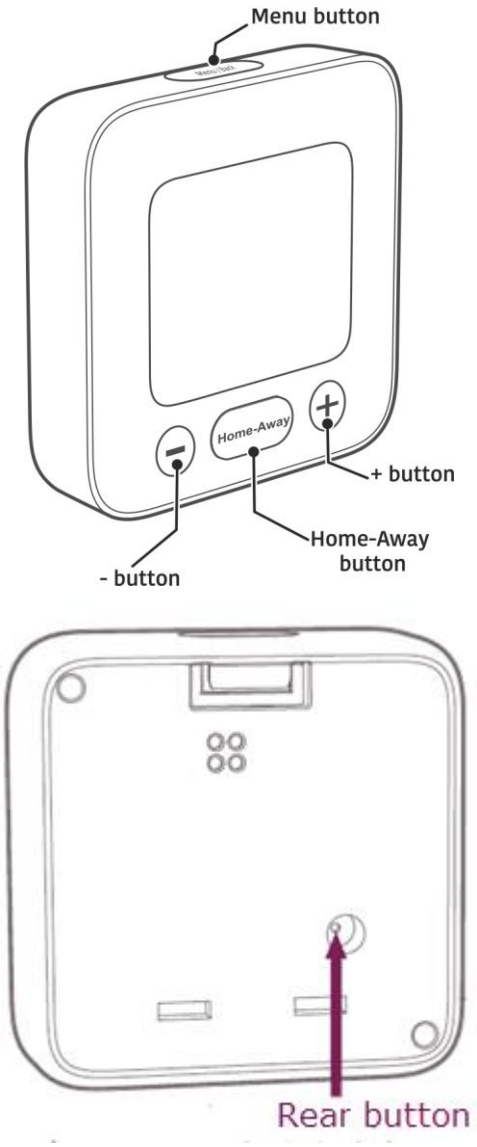
Once your PTD is installed and commissioned, it displays the home screen. This is the central space from where you can navigate to different menus (according to which the display changes). An illustration is provided below:

2.2 Symbols you may see on the PTD

	Indicates that your boiler is On
	Indicates that Hot water is On
	Indicates low battery

	The PTD is connected by a radio signal with the receiver. This icon indicates the communication signal strength
⚠	Indicates a warning notification
	Indicates that the button lock has been activated to avoid unintentional setting changes

2.3 Know the buttons and their functions

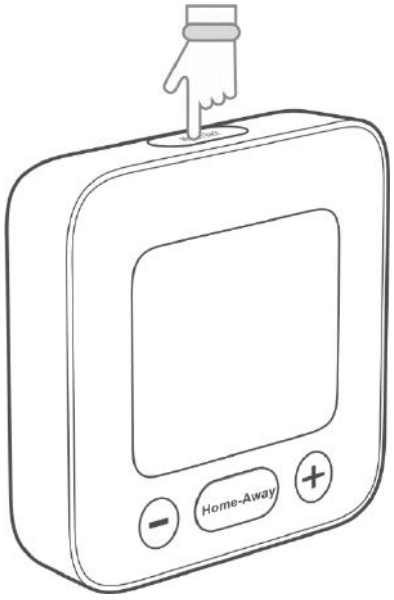


Button	Function
Rear button	**Press** To wake up the device before initial setup. **Note:** The device is shipped in deep sleep mode to save battery.

Menu/back button	**This is a single press button with dual functions. Press it :** • To enter the main menu • To return back to a previous menu from within a submenu/selection
Home-Away button	**This is a single press button with dual functions. Press it:** • To switch between modes (Home/Away) • To enter a setting/option and to confirm a selection
+ button	**Press** • To increase the target temperature, date and time • To navigate between different menus/menu items in the forward direction **Long Press** Fast forward the selection of temperature, dates and time in forward direction
- button	**Press** • To decrease the target temperature, date and time • To navigate between different menus/menu items in the backward direction **Long Press** Fast forward the selection of temperature, dates and time in the backward direction

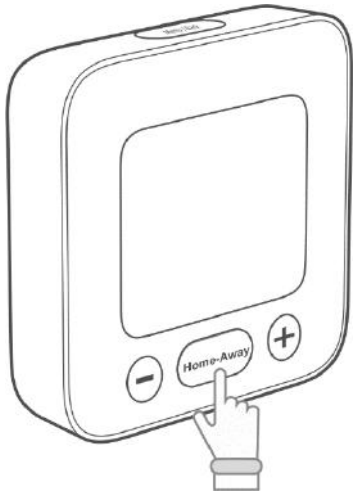
2.4 Menu navigation- General instructions

1. Press the **Menu/back** button at the top centre
   - To enter the main menu
   - To return back to a previous menu from within a submenu/selection

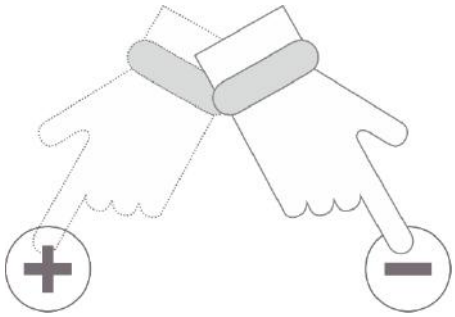


2. Press the **Home-Away** button at the bottom centre to

- To switch between modes (Home/Away)
- To enter a setting/option and to confirm a selection



3. As required, press the plus or minus buttons, until the required menu, selection, temperature, date or time appears



2.5 Activating the display backlit

The PTD display backlit will illuminate for 4-5 seconds whenever any button is pressed. If no further buttons are pressed, it will automatically turn off in order to save battery life. To make the display backlit come on again, press any button on the PTD.

3 Understanding the menus and their functions

The PTD has various menus that allow you to control and monitor your heating in an efficient manner. Additional sub menus are available within each menu that help you specify useful settings. The following menus are available:

Menu	Task
Change Zone menu	Adjusting the zone temperature
Boost menu	Applying Boost
Hold menu	Applying Hold
Schedule menu	Creating schedules
Summer mode	Applying the summer mode
Warning	Understanding Warning messages
Settings	Settings (Viewing and applying)
Advance settings	Advance settings (Viewing and applying)
Installer settings	Installer settings (Viewing and applying)
Display Config	Display Config (Viewing and applying)

3.1 Change Zone menu

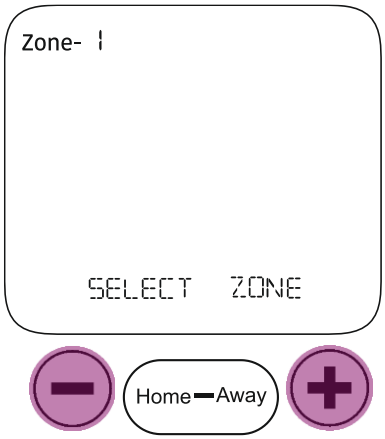
The **Change Zone** menu lets you:

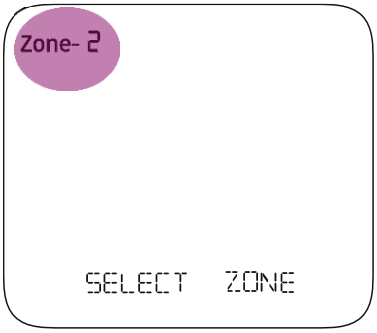
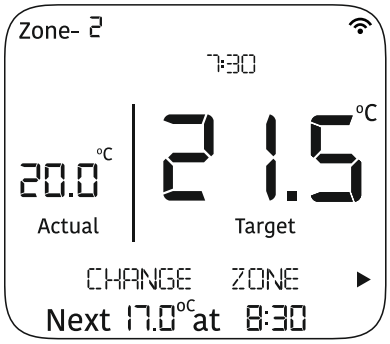
- Switch between different zone views (if you have more than one)
- Temporarily adjust the target temperature of a zone to suit your current needs. The temporary override will only last until the next scheduled set point is reached.

The default view is of the zone in which the PTD has been installed. You may need to change the view, if you wish to apply various settings to other zones.

3.1.1 Adjusting the zone temperature

To temporarily override a zone schedule, do the following:

1	If you have a single zone-combi boiler just use the +/- buttons to alter the target temperature For multi zone systems, press the top menu button and navigate to the Change zone menu (This is the default menu. If required press +/- until you reach the menu) **Note:** Some of the illustrations below may vary depending on the receiver you are controlling. Please note that for a 2-channel receiver, the hot water is associated with zone 1, whereas for a 4-channel, it is associated with zone 3.
2	The **Select Zone** screen appears
	
3	Press + or – until the required zone is displayed.

	
4	Press +/- to adjust the zone temperature as required. The temperature will increase/decrease by 0.5 degrees at each press.
5	An example screen after temperature has been adjusted is shown below.
	 **Note:** Override will be automatically cancelled at the beginning of the next scheduled period.

3.2 Boost menu

The Boost menu can be used to can turn on hot water for a fixed duration, irrespective of the hot water scheduled state. This function will only be available if a hot water channel is associated with:

- Zone 1 on a Two- channel receiver
- Zone 3 on a Four-channel receiver

3.2.1 Applying Boost

The steps to apply Boost are described below:

1	Press the top menu button and navigate to the **Boost** menu (if required press +/- until you reach the menu)
2	Press + or – to select the Boost duration and then confirm. The following options are available. • Boost for 1 hour • Boost for 2 hours • Cancel Boost (if Boost is already applied) • Exit
3	An example screen with Boost applied is shown below.

Notes:

- Boost will be cancelled when **Away** mode is applied.
- When the boost duration finishes, your schedule will go back to its previous setting
- To cancel boost early, press the **Cancel Boost** option.

3.3 Hold menu

You can activate the **Hold** function for holding the heating at a desired target temperature for a chosen time duration. (1, 2, 3 or 4 hours or until hold is cancelled). You can also readjust the target temperature to a new desired value even after hold is applied.

3.3.1 Applying Hold

To setup the Hold function, do the following:

1	Press the top menu button and navigate to the **Hold** menu (If required press +/- until you reach the menu)
2	Press + or – to select the Hold duration and then confirm. The following options are available. • Hold for 1 hour • Hold for 2 hours • Hold for 3 hours • Hold for 4 hours • Hold until Cancel (if Hold is already active)
3	An example screen with Hold applied is shown below.

3.4 Schedule menu

Your PTD comes with a pre-set schedule for 6 time periods to suit most of your needs and save energy. (See table below).

Weekday		Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
Monday to Friday	Time	6:00 AM	8:30 AM	11:30 AM	1:30 PM	5:00 PM	10:00 PM
	Target temperature	20°C	18°C	20°C	18°C	21°C	15°C
Saturday and Sunday	Time	7:00 AM	10:00 AM	11:30 AM	1:30 PM	5:00 PM	11:00 PM
	Target Temperature	20°C	19°C	21°C	18°C	21°C	15°C

However, you can make alterations to in accordance with your preferences and personal comfort.

The PTD enables you to create independent schedules for

- Zone heating (Setting the target temperature)
- Hot water heating (Time based On/Off)
- Wired thermostats (Time based On/Off)

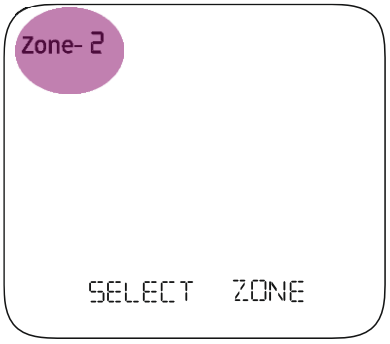
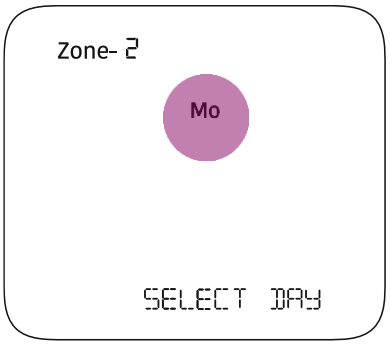
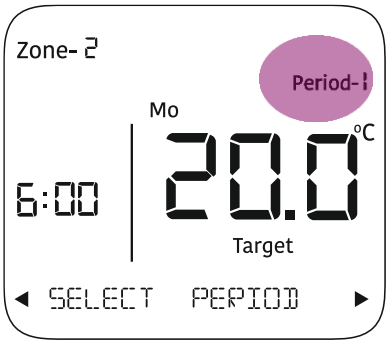
Using it you can create:

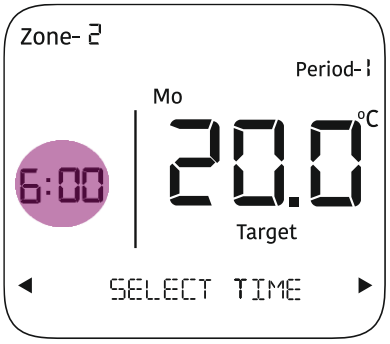
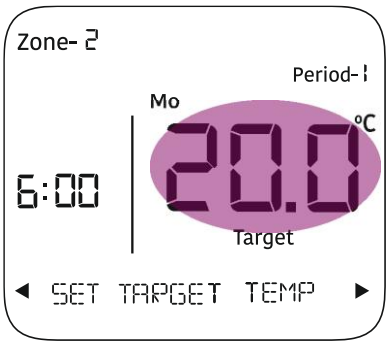
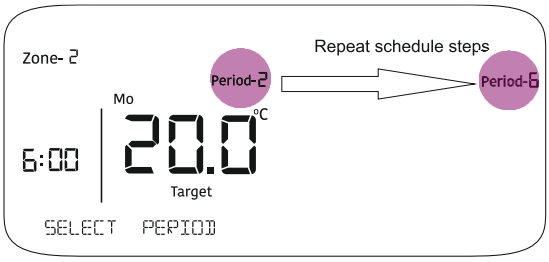
1. A weekly schedule
2. Separate schedule for weekdays and weekend
3. Independent schedules for each day of the week

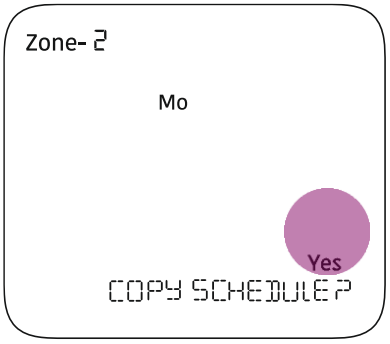
3.4.1 Creating schedules

To create a schedule do the following:

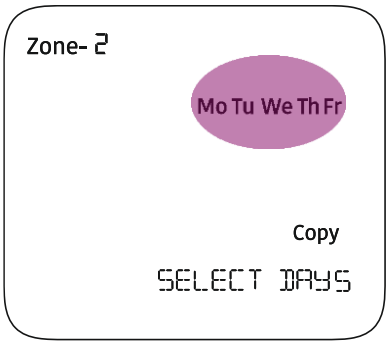
1	Press the top menu button and navigate to the **Schedule** menu (If required press +/- until you reach the menu) and then confirm.
2	Press + or – until the required zone is displayed for which to create the schedule and then confirm.

	
3	Press + or – until the required day is displayed for which to create the schedule and then confirm.
	
4	Press + or – until the required period is displayed and then confirm.
	
5	Press + or – until the required time is displayed and then confirm. **Note:** Depending on the pre-configured time format (24 or 12 hrs.), you may have to select the hour/minute/AM or PM.

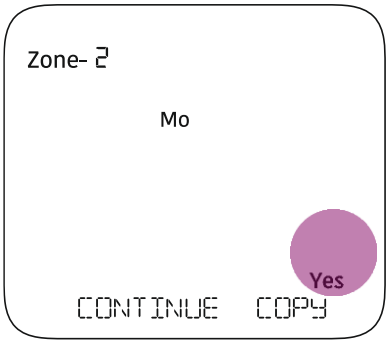
	 **Notes:** • The minimum time interval that can be defined for a period is 10 minutes. • The last period of the day will cover the remaining time of the day till the start time of next day (first period).
6	Press + or – until the required Target temperature is displayed and then confirm.
	 **Note:** Adjustments can be made in a steps of 0.5 resolution at each step.
7	Repeat the steps (4 to 6) for remaining periods (Or as necessary)
	
8	Once a day is programmed, this information can be copied and applied to the remaining (or selected) days of the week. Select **Yes** to copy the schedule.



9 Press +/- to select required or all remaining days for which you want to copy the schdeule and then confirm.

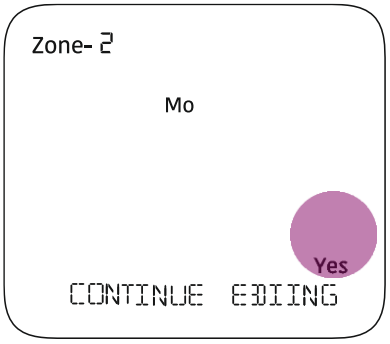


If required, you can continue copying the schedule for other days (Repeat day selection with +/- buttons as necessary)



Note:

After the copy cycle is completed, the **Editing** cycle is initiated. If required, you can continue editing the schedule. (Repeat day selection with +/- buttons as necessary)



Overriding a schedule

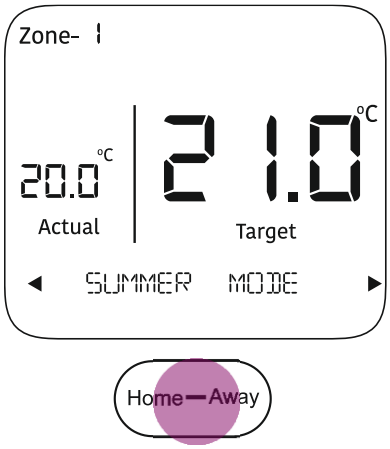
1. If you perform a Boost operation, the running schedule will be overridden for the duration until Boost persists.
2. If you modify the temperature setpoint while a schedule is running, the modified change will persist only till the end of the running schedule period. At the start of the next period, the settings will switch as scheduled.
3. If the Hold feature is applied, all schedule settings will be either on hold for the duration specified or permanently stopped until hold is cancelled.

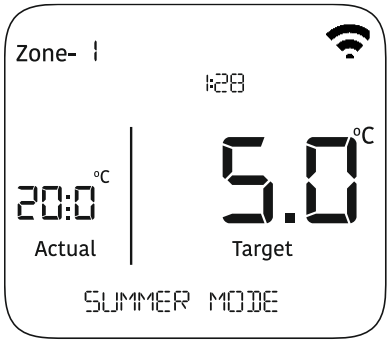
3.5 Summer mode

Switch to this mode if you want your heating to come on only when the temperature drops below the pre-set frost protection temperature. (Default is 5 degrees but it can be changed under **Settings**). This can help protect against damage to the heating system caused by extreme low temperatures. Hot water will run as per schedule in summer mode, wired device timer will remain in off state.

3.5.1 Applying the summer mode

To apply summer mode, do the following:

1	Press the top menu button and navigate to the **Summer mode** menu (If required press +/- until you reach the menu)
	
2	Select the ENABLE SUMM MODE option and then confirm. **Note:** The DISABL SUMM MODE option will appear if Summer mode is already applied.
3	An example screen with Summer mode applied is shown below.

3.6 Warning

Warnings are important notifications that need your attention. These appear on the homepage accompanied by a blinking ⚠ symbol. Details of a certain warning can be checked under the **Warning** menu. The description of some warning messages is tabulated below:

3.6.1 Understanding Warning messages

Warning	**Description**
SERVICE DUE	Indicates that the PTD service is due. **Note:** If the device is not serviced in time, you may not be able to control your heating or only partial control will be available, depending on the settings configured by your installer.
LOW BATTERY	Indicates that the battery of the main PTD is low and the unit will need replacing.
LOW BATTERY- Z (X)	Indicates that the battery of the zone PTD or THS is low. **Notes:** 1. Battery replace procedure is provided under section: Replacing Temperature humidity sensor (THS) batteries 2. If the PTD battery is low, the unit will need replacing.
COMMS ERROR	Indicates that the main PTD is unable to establish communication with the receiver.
COMMS ERROR- Z(X)	Indicates that the heating control device in a particular zone is unable to establish communication with the receiver.

3.7 Settings

This section only describes the different settings. The process to navigate to the **Settings** menu and apply a setting is the same as described for other menus. The same general button instructions apply as discussed under section Menu navigation- General instructions

Set/modify in PTD		What?	Thermostat/System behaviour
Modify pre-set value for **Away** temperature		The default setpoint is 11 degree centigrade and can be modified as desired.	The PTD controls the heating to operate on the set temperature, when the room is unoccupied.
Frost protection		The default setpoint is 5 degree centigrade and can be modified as desired.	These settings ensure that your heating will come on only if your temperature drops below the configured setpoint.
Heat mode		Economy or Comfort (default)	These settings ensure that you are always comfortable at all times and energy usage is optimised in the best possible way.
Optimum Start		Enable or disable	The PTD analyses the temperature rise and fall pattern and determines how long it will take for your zone to heat up to the target temperature. Accordingly it turns the heating on a bit earlier to achieve that temperature at the scheduled time.
Optimum Stop		Enable or disable	The PTD analyses the temperature rise and fall pattern and accordingly turns the heating off a bit earlier than the scheduled time, although ensuring that a comfortable temperature is always maintained. This effect may not be noticeable but is a great measure to save energy and bring down your fuel expenses.
Edit Date/Time	Edit date	Set the current date by making adjustments to the date – Year/Month/Day Refer section Adjusting the date and time settings for details	The PTD will function according to the set date
	Set time format	Set the time format. You have the option for 12 or 24 hour clock setting. Refer section Adjusting the date and time settings for details	The PTD will function according to set time
Add sensors		This option enables you to attach a new external temperature sensor with a zone in the heating system. Refer section Adding a temperature sensor	The sensor is added to the system

Add wired device	This option enables you to attach a wired device with a zone in the heating system.	The wired device is added to the system

3.8 Advance settings

This section describes how to use advanced settings. The process to navigate to the **Advance settings** menu and apply a setting is the same as described for other menus. The same general button instructions apply as discussed under section Menu navigation- General instructions

To access the options grouped under this menu, you require the User or Owner PIN. By default the PIN is set to **1854**. To change it according to your preference, use the **Change PIN** option. If you lose your PIN, contact the support team at support@securemeters.com

Limit user control		
Set/modify in PTD	**What?**	**PTD system behaviour**
Limited temperature range	The selection of minimum (Set lower limit) and maximum (Set upper limit) temperature range. The default values are 5 degrees (Min) and 30 degrees (Max) centigrade.	Once set, the heating operates within the configured temperature range only.
Local control	Enable or disable	If disabled, you will not be able to adjust the target temperature of any zone.
Set fuel type		
Set/modify in PTD	**What?**	**PTD system behaviour**
Fuel type	The available options you can choose from include: **Gas, Electricity (ELEC),** and **Oil**	The Receiver takes action on the boiler (On/Off) based on the fuel type selected in the PTD.
Factory reset – Reset the device back to factory settings.		
Reset system	All user settings/configurations in the receiver, PTD and associated devices are removed.	System components reset to default settings.
Reset PTD	User settings and configuration is removed from PTD device	Product resets to default settings
Change PIN	Let's you change PIN according to preference	Advance settings can be accessed through new PIN.

3.9 Installer settings

This section describes how to use installer settings. The process to navigate to the **Installer settings** menu and apply a setting is the same as described for other menus. The same general button instructions apply as discussed under section Menu navigation- General instructions

To access the options grouped under this menu, you require the Installer PIN. Once received, you can change it according to your preference, using the **Change PIN** option. If you lose your PIN, contact the support team at support@securemeters.com

Set/modify in PTD	What?	PTD system behaviour
Service interval	This setting enables installers to set the service interval timer on the PTD as a reminder for when the boiler needs servicing. This is critical for gas safety reasons and to be complaint with yearly service regulations. The default **service due days** is set at 365 days. You can set an interval between 30 to 465 days prior to service due date. The default **Warning interval** is set at 30 days. You can set the warning interval alert between 30 to 100 days prior to service due date.	As configured, the PTD will remind you with a warning alert when service is due.

Important note:

All other options under installer settings are the same as under Advance settings.

3.10 PTD information

The following information can be viewed in this menu.

- PTD MAC address
- PTD serial number
- PTD firmware version
- Receiver MAC address

3.11 Display Config

The following display settings can be applied to the PTD:

Time only	Only current time of each zone will be displayed on the home screen.
Humidity only	Only humidity percentage of each zone will be displayed on the home screen.
Time + humidity	Both time and humidity values of each zone will be displayed on the home screen.
None	Neither time nor humidity values will be displayed on the home screen.

4 System modes

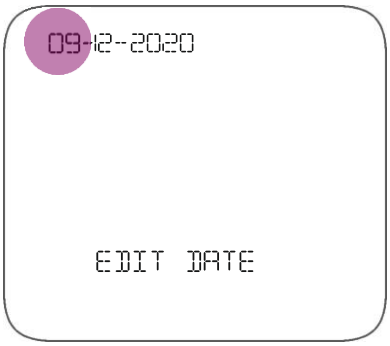
Your PTD has 3 different heating modes: **Home**, **Away** and **Summer**

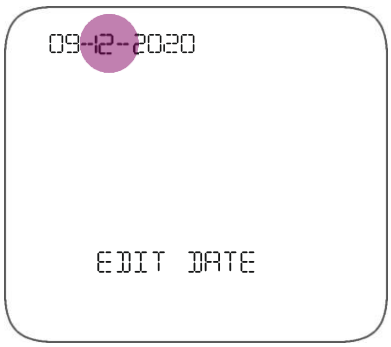
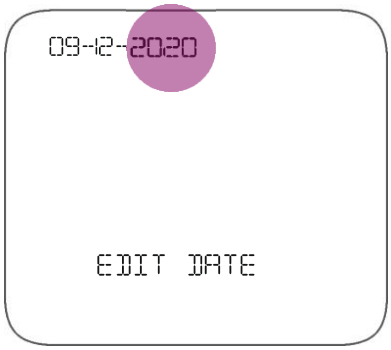
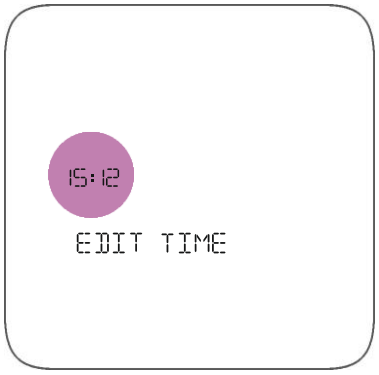
Mode	Description	Switching/Setting
Home	This is the default mode in which the PTD follows the heating, hot water and timer schedules applied by the user. In this mode, the temperature set point and boost settings can be changed locally on the PTD as well as through the mobile app.	Press the **Home-Away** button to toggle between the two modes.
Away	This is the mode to use, when you are moving out of your home. In this mode, the PTD will maintain a fixed pre-set temperature. Heating, timer and hot water (including boost) schedules will not work in Away mode, until cancelled.	
Summer	Switch to this mode if you wish to restrict heating control in all defined zones to frost protection mode. In this mode, all heating and timer schedules will stop however, hot water will continue to work (including boost functionality). You cannot change heating and timer settings on the PTD or mobile app but hot water and boost settings can be modified.	Refer section Applying the summer mode to set the device in Summer mode.

5 Appendices

5.1 Adjusting the date and time settings

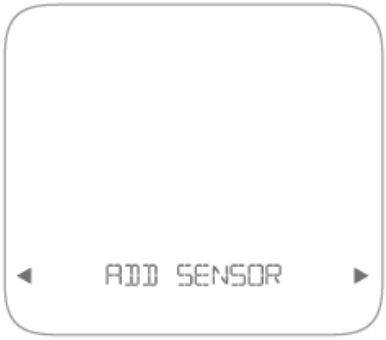
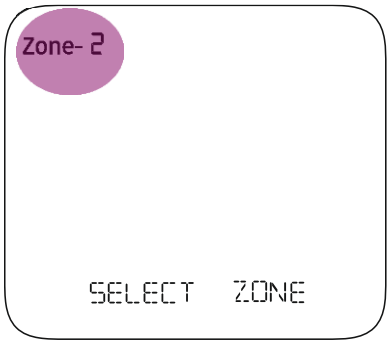
The process to edit the date and time settings is described below.

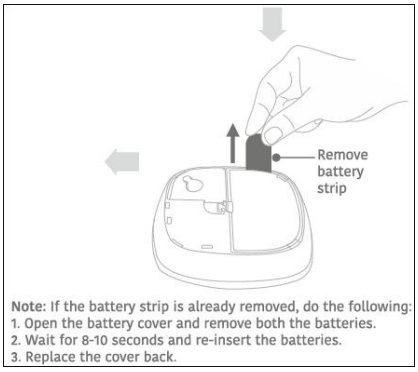
1	Press the top menu button and navigate to the **Settings** menu (If required press +/- until you reach the menu)
2	Press the +/- buttons until you reach the **Edit Date/Time** submenu and then confirm.
3	The **Edit Date** screen appears with the day flashing. Press +/- to adjust the day and then confirm. (Long press the +/- buttons to advance the day more quickly.)
	
4	Next the month starts flashing. Press +/- to adjust the month and then confirm. (Long press the +/- buttons to advance the day more quickly.)

	
5	Next the year starts flashing. Press +/- to adjust the year and then confirm.
	
6	Next set the required time format and confirm. The following options are available • 24 hour format • 12 hour format Based on the chosen format, the Edit time screen will appear. The below example is for 24 hours format. Press +/- to adjust the time in hours and minutes and then confirm. (Long press the +/- buttons to advance the time more quickly.)
	

5.2 Adding a temperature sensor

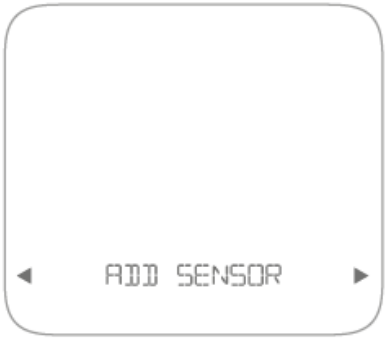
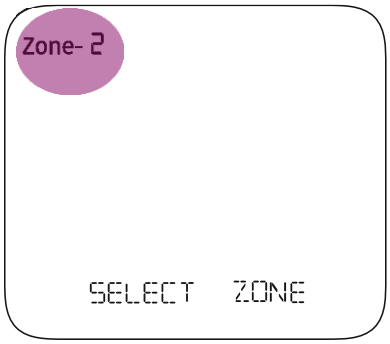
The process to add a sensor is described below.

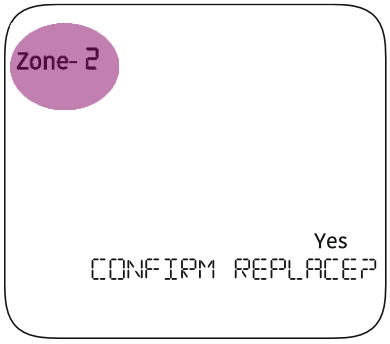
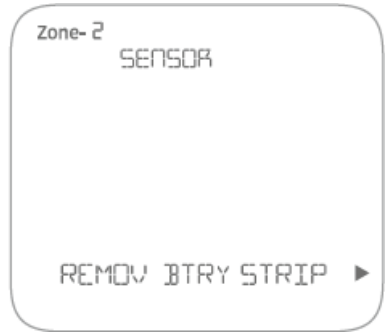
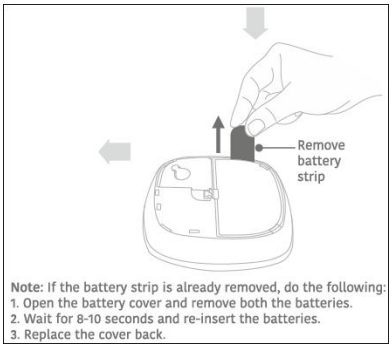
1	Press the top menu button and navigate to the **Settings** menu (If required press +/- until you reach the menu).
2	Press the +/- buttons until you reach the **Add sensor** submenu and then confirm.
	
3	Select the required zone and then confirm.
	
4	Follow instructions and then confirm.

	  
5	Confrim the serial number of the sensor to be added.
6	The sensor is paired.

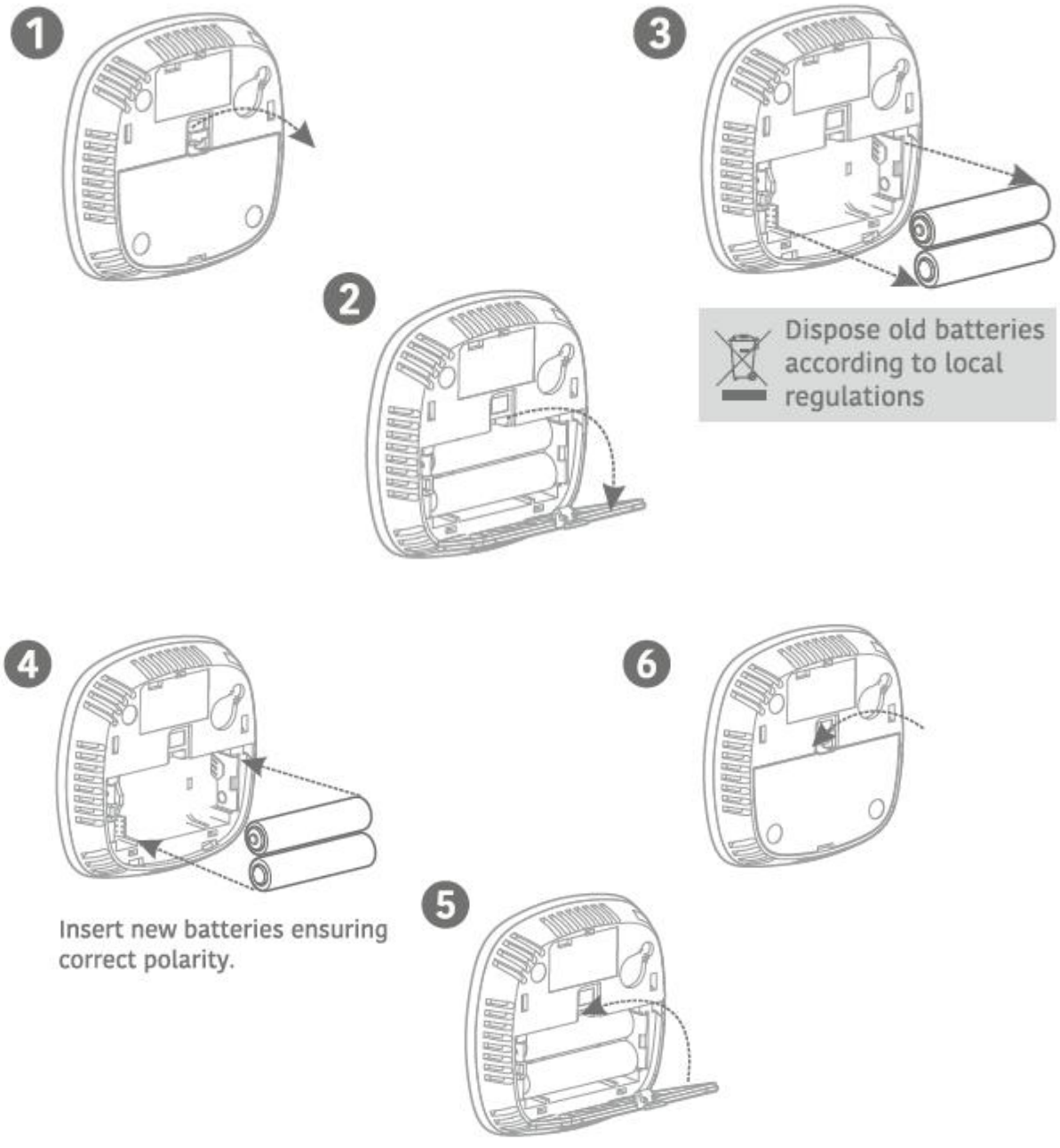
5.3 Replacing a temperature sensor

The process to replace a sensor is described below.

1	Press the top menu button and navigate to the **Settings** menu (If required press +/- until you reach the menu)
2	Press the +/- buttons until you reach the **Add sensor** submenu and then confirm.
	
3	Press +/- to select the required zone whose sensor you want to replace and then confirm.
	
4	Confirm to proceed.

	
5	Follow instructions and then confirm.
	 
6	Confrim the serial number of the sensor to be replaced.
7	The new sensor is paired.

5.4 Replacing Temperature humidity sensor (THS) batteries



6 Notes

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