

Installation and user manual

Unisenza Plus - Thermostat













Unisenza Plus - Thermostat Installation and user manual

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EN 1 SAFETY WARNINGS

Pictograms used in this manual

To make reading clearer and more enjoyable, three types of symbols have been used in this manual to convey to the reader the meaning or importance of the information provided:



Hazard signs. Triangular framed shape. Indicate prescriptions relating to present or possible dangers.



Prohibition signs. Circular, barred frame. Indicate prescriptions relating to actions that must be avoided.



Mandatory signs. Full circle. Indicate information that is important to read and comply with.

Purpose of the manual

The purpose of this manual is to guide the qualified installer the installation, maintenance and proper and safe use of the equipment.



For this reason, it is mandatory for all personnel involved in the installation, maintenance and use of the equipment to read this manual.

Contact the Manufacturer if any points are unclear or difficult to understand.

This manual contains information regarding:

- Technical specifications of the equipment;
- Installation and connection instructions.

Intended use

The **Unisenza Plus Thermostat** is a **wireless room thermostat** with **Zigbee 3.0**. It offers two channels control outputs through the **Zigbee wireless** communications. The first channel can be used for programmable room temperature controls and the second channel is designed for a timer control of domestic hot water on/off.

Its features are:

- Large LCD display with backlight
- Have pairing features with compatible Unisenza Plus Receiver and Unisenza PLUS Electronic Thermostatic Head
- Support Heating, Cooling and Domestic Hot Water timer control (S-Plan, Y-Plan)

- Operation modes include Schedule, Manual, Temporary override, Boost, Holiday and Off with frost protection
- 7-day, 5/2-day or single-day programming options
- Optimum start/stop control strategies for energy efficiency
- Selectable TPI or Span control algorithm
- 2xAA batteries operated (batteries included)
- Two time channels for independent control of Heating/Cooling and/or Hot Water
- Zigbee and App controlled

Safety regulations

Before proceeding with any installation or use, it is necessary to thoroughly inspect the product. Make sure that all the information contained in this manual correspond exactly to the purchased equipment. In the event that differences are identified, it is necessary to contact the Manufacturer in order to obtain the assistance and specific technical information necessary to operate.



Read this manual carefully before the installation, use and maintenance of the product and keep it for any further future consultation by the various operators.



All installation, assembly, electrical connections to the mains and ordinary/ extraordinary maintenance must be performed **only by qualified personnel or technicians complying with the legal requirements**.

Installation, use or maintenance other than those specified in the manual may cause damage, injury or death, invalidate the warranty and relieve the Manufacturer of all liability.

Disconnect the equipment from the mains before installing or maintaining it.

Do not install the equipment outdoors. The product has been designed to be installed indoors, protected from bad weather, in places where the temperature is between 0 and +50 °C.

At the end of the installation it is necessary to instruct the user in the correct use of the equipment.

2 TECHNICAL DATA

Unisenza Plus Thermostat

Temperature Scale	°C or °F
Temperature Display Range	0°C - 45°C
Temperature Display Resolution	0.1°C o 0.5°C
Temperature Setting Range	5°C - 37°C
Temperature Setting Resolution	0.5°C
Temperature Measurement Accuracy	+/-0.5°C @ 0-40°C, +/-1.0°C other range
Firmware update	Over the air firmware update capability
Wireless Communication	Zigbee 3.0, 2.4GHz
Transmission Power	Zigbee: max 10 dbm
Power Supply	2 x AA-sized Alkaline Batteries
Operating Environment	Indoor, residential & commercial
Operating Temperature	0°C – 50°C
Storage Temperature	-20°C – 60°C
Operating/Storage Humidity	5-95% RH, non-condensing
Dimensions	119(W) x 97(D) x 28(H) mm
Ingress Protection Rating	IP30
Regulation	CE, UKCA
Environmental Requirement	RoHS compliance

The Unisenza Plus Thermostat complies with the following European directives:

- RED directive 2014/53/EU
- ROHS directive 2011/65/EU
- REACH (EC 1907/2006)

The Unisenza Plus Thermostat complies with the relevant UK Statutory Instruments:

- Electrical Equipment (Safety) Regulations 2016
- Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (SI 2012/3032)
- REACH ETC. (Amendment etc.) Regulations 2020 SVHC

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3 DIMENSIONS



4 PACK CONTENTS



- a. Wall mount bracket
- b. Unisenza Plus Thermostat
- c. 2 x AA-sized Alkaline Batteries
- d. Plate fixing screw
- e. Fixing wall plug for plate fixing

EN **5 OVERVIEW**

Unisenza Plus Thermostat



- 1. Display LCD
- 2. Operation mode button
- 3. Boost button
- 4. Confirm button
- 5. Button +
- 6. Button -
- 7. Menu / Back button
- 8. Battery compartment

Button usage

Button	Function
Menu / Back button	In Main screen: press to go to menu. In Menu: press to go back to main screen or previous menu, press and hold to go to main screen without saving the settings at any time.
Button -	Decrease parameter value / Moving on the menu in down direction.
Button +	Increase parameters value / Moving on the menu in up direction.
Buttons + and -	Long press Up and Down buttons for 4 sec – lock or unlock the thermostat.
Confirm button	Confirm Value / Go to next menu / Save settings. In menu: press and hold for 4 sec to go back to main screen with saving the settings at any time.
Boost button	Activate/Deactivate Boost (For Heating Only) with max. +9 hr Boost.
Operation mode button	Switch between Permanent Hold and Schedule.

Display icons



lcon	Description
	Text Bar (9 digits)
	Time
	Room Temperature/Set point
1 MON 2 TUE 3 WED 4 THU 6 SAT 7 SUN	Day of the Week (numeric or alphabetic display defined in set- tings)
)))	Demand Active (Heat / Cool)
	Schedule mode - Schedule mode icon with program number
	Temporary Override
Ju	Permanent Hold
8 🗮 🕂 + 8	Boost mode under schedule +Hr
	Heat Mode
※	Cool Mode
*	Off Mode
IÎ	Holiday mode
	Lock
~	Hot Water mode indicator
000	Hot Water Demand Active

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Auto Off On Boost	Hot Water Timer Operation mode: Auto, Always Off, Always On, Boost
ଡ଼	RF Connection indicator
<u>ے</u>	Internet Connection Indicator
	Low battery Status
T.	Set Point
\$	Setting

When OpenTherm is detected

lcon	Description
NNNNNNNNNN ^{°C}	"OT" and heating water temperature is displayed
Ä	OpenTherm boiler supports hot water function
000	OpenTherm boiler reports hot water is running
)))	OpenTherm boiler reports the flame is On

6 APPLICATIONS

Room Thermostat

The **Unisenza Plus Thermostat** can be used for the following system types through the integration with **HVAC** equipment or controllers on a **wireless Unisenza Plus network** with compatible clusters and attributes, such as **Unisenza Plus Receiver**.

- Central heating On/Off controls or OpenTherm
- Dual channels On/Off controls for central heating and domestic hot water timer
- Heat/Cool On/Off Control

Room control unit for Electronic Thermostatic Head

The device can also be used as the master room control unit when paired with **Unisenza PLUS Electronic Thermostatic Head**. In such use case, **Unisenza Plus Thermostat** is used as the room temperature sensor and setpoint interface for the paired **Unisenza PLUS Electronic Thermostatic Head**. A maximum of six **Unisenza PLUS Electronic Thermostatic Heads** can be paired to one room control unit.

7 DOWNLOAD THE APP



The management of the **Unisenza Plus Thermostat** is also possible through a dedicated APP that allows its configuration and the management of the devices you will pair.

In order to download the **APP**, you need to connect to the **STORE** of your device used for configuration and install the **Unisenza Plus**.

Or, again using the device, you can directly access the installation page using the following **QR codes**, again depending on the operating system.



8 NAMEPLATE



At the rear of the **Unisenza Plus Thermostat** there is a sticker **(A)** which indicates the device data.

QR code availability for future feature.

EN 9 INSTALLATION

Recommendations for a correct installation



Fixing the bracket to the wall



When fastening, be very careful not to use too much force when tightening the supplied screws.



During assembly, if any problems arise, contact the Manufacturer and request assistance.

Inserting the batteries

The Unisenza Plus Thermostat, to work, requires 2 AA alkaline batteries (included in the package).



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When installing the batteries, observe the correct polarity indicated in the battery housing. Reversing the polarity runs the risk of damaging the electronic regulator.

To insert the batteries proceed as shown.



Fixing the thermostat to the bracket



When fastening, be very careful not to use too much force when tightening the supplied screws.

During assembly, if any problems arise, contact the Manufacturer and request assistance.



Main screen operation



The LCD backlight is Off during stand by in normal operation. Press any key to turn on the LCD backlight before performing other user operations as descried below. The LCD backlight will be turned off automatically when no key press for 15 seconds.

Power up

The ignition of the **Unisenza Plus Thermostat** takes place by inserting the batteries in their housing, which has already been seen in the previous chapters.

Below what appears on the display.



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If "YES" was chosen at the "CONNECT" request, remember to activate the association mode in the Unisenza Plus Gateway, to do this consult the Gateway manual. If "NO" has been chosen, it will be possible to pair the device at a later time by accessing the menu: ADMIN SETTING→ CONNECTION→ NETWORK→ JOIN.

It is also possible to associate the thermostat from the **APP** using the "**ADD NEW DEVICE**" function.

If "YES" was chosen at the "PAIR" request, remember to activate the association mode in the device we want to associate, to do this consult the relative manual.

If "NO" has been chosen, it will be possible to associate the device at a later time by accessing the menu: ADMIN SETTING→ CONNECT→ ASSOCIATION→ ADD.

It is also possible to associate the thermostat from the **APP** by entering the thermostat settings menu.

Pairing to Unisenza Plus Gateway

With APP



The association between the **Unisenza Plus Thermostat** and the **Unisenza Plus Gateway** can be done through the system management **APP**.

To proceed with the association you need to have already installed and configured the Gateway.



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If you want to associate a **Unisenza Plus Thermostat** that was previously associated with another Gateway, it is necessary to perform a reset to the factory settings of the electronic regulator before making the new association.

Without APP



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The association between the **Unisenza Plus Thermostat** and the **Unisenza Plus Gateway** can also be made directly between the two devices.

To proceed with the association you need to have already installed and configured the **Gateway**.





If you want to associate a **Unisenza Plus Thermostat** that was previously associated with another Gateway, it is necessary to perform a reset to the factory settings of the electronic regulator before making the new association.

Pairing with other Unisenza Plus device (optional)



After the Unisenza Plus Thermostat joined a Unisenza Plus network, it can be paired with a Unisenza Plus Receiver or Unisenza Plus Electronic Thermostatic Head.

When pair with a receiver, the **Unisen**za Plus Thermostat heat demand will be passed to the receiver to interlock the boiler or the zone valve.

When the room thermostat is paired with a **Unisenza Plus Electronic Thermostatic Head**, the boiler interlock with the **Unisenza Plus Receiver** for the heat demand can be done via the thermostat. The thermostat will become a remote control to the **Unisenza Plus Electronic Thermostatic Head**. The room temperature measured by the thermostat will be used by the **Unisenza Plus Electronic Thermostatic Head**. The **Unisenza Plus Electronic Thermostatic Head** displays **U**, and the set point and mode control will follow the settings on the room thermostat.

A maximum of **six Unisenza Plus Electronic Thermostatic Heads** can be paired with a room thermostat. A maximum of total **sixteen Unisenza Plus Electronic Thermostatic Heads** or **Unisenza Plus Thermostats** can be paired with **Unisenza Plus Receiver**.



Pair device using App

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Pair device using the local interface



Change set point



The icon 🥢 flashes when Optimum Start/Stop is active or Valve Protection operates.

Change operation mode



Press **Operation Mode** button to switch between **Schedule/Tempo**rary override and **Permanent Hold mode**.

lcon	Mode	Explanation
ſſſ	Permanent Hold mode	The set point is kept constant regardless of the sched- ule. To modify the set point, use the + and - keys.
	Schedule mode	The set point is the one established in the programming and the number of the planning program is indicated.
	Schedule/Temporary override	The set point set in the programming is modified us- ing the + and - keys and remains active until the next programming arrives.



Temporary scheduling mode overrides the scheduling set point temperature and will remain active until the next scheduling time slot arrives. Subsequently the temperature will be the one established according to the planning on the **APP**.

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Boost - Set point

This mode allows you to temporarily change the set point of a schedule for a certain period of time.

To activate the **Boost** mode, proceed as follows:



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Once the operating period established for the Boost mode has elapsed, the device will automatically return to operating with the last mode that was previously selected.

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Change system mode (Heating&Cooling)





Cool mode is available only when **SYS TYPE** is **HEAT+COOL**. Press **Menu/Back button** to return to main screen.

Change Hot water operation mode (available only when SYS TYPE is "HEAT+DHW")

	000	45 M	SYS MODE HOT WATER SCHEDULE USER SET ADMIN SET LANGUAGE	HUT WHILE HUT WHILE 000 3
ITO		AUTO	Hot water operation follows schedule	AUTO
	CHOICE	HW BOOST	Hot water boost mode, select the boost from 1hr to 9hr (it returns to AUTO after boost)	
29	POSSIBILITY: AUTO HW BOOST	ALWAYS ON	Hot water is turned On	
4	ALWAYS ON OFF	OFF	Hot water is turned Off	

Press Menu/Back button to return to main screen.

Schedule setting

Schedule for different mode (HEATING, COOLING and HOT WATER) can be defined separately here. Three schedule program are available (7 DAY / SINGLE / 5+2 DAY).

			SYS MODE SCHEDULE USER SET ADMIN SET LANGUAGE	SS CHEILLE
ERTINO		HEATING	When SYS MODE is HEAT, temperature set point is set for each time slot	HERTING
+ 0 0 0	CHOICE POSSIBILITY:	COOLING	When SYS MODE is COOL, temperature set point is set for each time slot	
4	HEATING COOLING HOT WATER	HOT WATER	HOT WATER On/Off is selected for each time slot	5



MON TUE
TUE
WED
THU
FRI
SAT
SUN





Press Menu/Back button to return to main screen.

For hot water On/Off

580	x1 5 + 2 DAVS	x2	x2 7 DAVS	x3 SINCLE DAV
	MON	SAT	MON	MON
NOT TUE WED THU	TUE	SUN	TUE	TUE
FFI I	THU		THU	WED
+00	FRI		FRI SAT	THU
x1			SUN	FRI
x2 x3				SAT
				SUN
AND	SNS HILL SNN	HOUR + or -	SNO HILL WITH WITH WITH WITH WITH WITH WITH WITH	A A
So THE FORME THE FORME THE FORME THE FORME THE FORME	STAN THE THE THE THE THE THE THE THE THE THE	TER 100 00 6	STOP HILL THE BUT THE BUT THE THE THE THE THE THE THE THE THE TH	HOUR + or -





Repeat above procedure to set up to 3rd time slot.

Press Menu/Back button to return to main screen.

Key lock



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User setting



The editable settings are:

TIMEDATE	Time	12hr or 24hr display format
	Clock	Set hour and minute
	Date	Set year, month and day
	Dst	Daylight saving time on or off
	Time disp	Display time on device or not
	Week display	Weekday display by number or by word format
Temp unit		Select temperature display unit in celcius or fahrenheit
Tr calib		Temperature calibration (up to +/- 2.5 °C)
Optimize	Start	Set optimum start On or Off. When Optimum Start is On, thermostat may turn On HEATING earlier to achieve the set temperature at the time defined in the schedule
	Stop	Set optimum stop On or Off. When Optimum Stop is On, thermostat may turn Off HEATING earlier to achieve the set temperature at the time defined in the schedule
Frost sp		Define Frost Protection set point
Reset	Reboot	Perform a power cycle reset (all settings are kept unchanged)
	User	Reset user settings, SYS MODE and schedule back to default value. It returns to USER SET- TINGS screen after reset.

Press Menu/Back button to return to main screen.

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Admin setting



The editable settings are:

Temp disp		Select temperature display interval at 0.5°C(1°F) or 0.1°C (0.2°F).
Vlv prot		Select valve protection mode On or Off. If the relay is not turned On for a week, the thermostat will turn On the heat- ing to move the actuators for less than 3 minutes time, to avoid the valve getting stuck or jamming.
Control Select which control algorithm mode is used for room tempera- ture control	Tpi ufh	(available when SYS MODE is "HEAT"): algorithm designed for underfloor heating (for heating systems with high inertia).
	Tpi rad	(available when SYS MODE is "HEAT"): algorithm designed for radiator heating.
	Tpi elec	(available when SYS MODE is "HEAT"): algorithm for elec- tric heating (for heating systems that heat up quickly an cool down quickly).
	Span ¼° c (span ½° f)	Permanent deviation of temperature in P Mode.
	Span ½° c (span 1° f)	Permanent deviation of temperature in P Mode.
Min sp	Heat	Set minimum HEATING set point (5°C to 35°C).
	Cool	Set minimum COOLING set point (5°C to 35°C).
Max sp	Heat	Set maximum HEATING set point (5.5°C to 37°C).
	Cool	Set maximum COOLING set point (5.5°C to 37°C).

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Connect	Network Join	Join the thermostat to the gateway.
	Network Unjoin	Disconnect the thermostat from the gateway.
	Network Identify	Identify which gateway is connected.
	Pair State	Show number of paired device.
	Pair Identify	Select EU-ID (display the last 6 digit) of a Unisenza Plus device to identify.
	Pair Add	Pair a Unisenza Plus device to the thermostat.
	Pair Remove	Select EU-ID (display the last 6 digit) of a Unisenza Plus device to unpair.
Pin code	Disable	Disable the PIN code.
for access to the ADMIN SET menu	Enable	Enable the PIN code, and then SET a 4-digit PIN code. In case PIN code is forgotten, power reset the thermostat. Then within 2minutes from power on, use the manufacturer PIN code 0682 to access the ADMIN SET menu to set a new PIN code.
DEV info	Battery	Display battery level in percentage.
	RF range	Display the value of RSSI (Received Signal Strength Indica- tor) between thermostat and gateway. If the wireless con- nection is lost, a lost link message is displayed.
	Version	Display the software version of this thermostat
Sys type	Heat only	
	Heat + Dhw	Select one of the system type below.
	Heat + Cool	
Reset	Admin	Reset settings in the ADMIN SET menu (Joined network and paired Unisenza Plus device information is maintained).
	Factory	Reset everything back to the status same as the thermostat firstly unboxed. It displays "RESETTING" during the process and then reboots with default settings to finish the factory reset process.

Press Menu/Back button to return to main screen.

Language setting



Protection

High temperature limiting

If the room temnperature exceeds 41°C, all heating outputs will be turned off.

Temperature sensing error

If there is any sensor error on room temperature measurement, the thermostat will notify all related output devices to **turn Off**.

Error code display

An error code will be displayed on the text bar when error is detected.

When single error is detected, the error code is displayed directly on the text bar. When multiple errors are detected, text bar displays **XX ERRORS** while **XX** is the total number of error detected. Press **Confirm button** to display the first error code, then press "Up" or "Down" to view another error code.

Once the error is solved, the error code disappears accordingly.

The error code description is as below.

Error Code	Error Description	
ERROR 001	Lost link with the Unisenza Plus Gateway	
ERROR 003 - 014	Pair Unisenza Plus device fail	
ERROR 10X	Lost link with the Xth paired Unisenza Plus device	
ERROR 201	Lost link with Domestic Hot Water channel of the Unisenza Plus Receiver	
ERROR 301	OT Boiler Fault Code – Service request	
ERROR 302	OT Boiler Fault Code – Lockout-reset	
ERROR 303	OT Boiler Fault Code – Low water pressure	
ERROR 304	OT Boiler Fault Code – Gas/flame fault	
ERROR 305	OT Boiler Fault Code – Air pressure fault	
ERROR 305	OT Boiler Fault Code – Exceeding max. water temperature	
ERROR 40X	OT OEM Fault Code – Please check with your OT boiler instruction for error code meaning	

EN **11 MAINTENANCE**

Low battery

When the **Unisenza Plus Thermostat** detects low battery, **b** is displayed. Battery should be replaced as soon as possible.



Replace with new batteries and go through the adaptation process to resume normal operations.

Over-the-air (OTA) software update operation.

The **Unisenza Plus Thermostat** upgrades its software automatically when there is a newer version software available from the server.

A valid connection to the gateway and the Internet is needed to allow the **Unisenza Plus Thermostat** to download the new software image. All device functionality is maintained during the download and the update process, until the device restarts to update the new software. During the update process, the LCD displays the status on the digit with animation. A full digit "¹" is displayed after finishing the update.

All settings and paired devices information are retained after the update.

Cleaning



12 MANUAL DOWNLOAD AND UPDATES

Due to the requirement for continuous improvement, we constantly update the user manuals of our systems.

We therefore invite you to periodically check whether the manual in your possession is always the latest written version.

To do this, you can connect to the following internet address:

https://www.purmogroup.com/support

or by scan the **QR cod**e displayed below.



13 DISPOSAL AT THE END OF LIFE



Pursuant to art. 13 of Decree-Law No. 49 of 2014 "Implementation of the WEEE Directive 2012/19/EU on waste electrical and electronic equipment".

The mark of the crossed-out bin with a bar specifies that the product was placed on the market after 13 August 2005 and that at the end of its useful life it must not be collected with other waste but must be disposed of separately. All the appliances are made of recyclable metal materials (stainless steel, iron, aluminium, galvanized sheet metal, copper, etc.) in a percentage greater than 90% by weight. Make the equipment unusable for disposal by removing the power cable and any compartment or cavity

closing device (if any). It is necessary to pay attention to the management of this product at the end of its life by reducing any negative impacts on the environment and improving the efficiency of the use of resources, applying the principles of "polluter pays", prevention, preparation for reuse, recycling and recovery. Please note that the illegal or incorrect disposal of the product entails the application of the penalties provided for by current legislation.

Information on disposal in Italy

In Italy **WEEE** equipment must be delivered to:

collection centres (also called waste separation areas or platforms)

the Dealer where you buy new equipment, who is required to accept it free of charge ("one on one" collection).

Information on disposal in European Union countries

The EU **WEEE** equipment directive has been adopted differently by each country, therefore if you want to dispose of this equipment we suggest you contact the local authorities or the dealer to ask for the correct method of disposal.

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