SunStone™

electric underfloor heating

Model: P-Touch
Programmable Thermostat
Installation Guide & User Manual

This control has the following control functions:

TW (f2/f4/f8)

This exceeds the EcoDesign requirements for eUFH and towel rails as set out in Commission Regulation (EU) 2024/1103.

For more information

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TECHNICAL SPECIFICATIONS

Model	P-TOUCH-XXX (XXX indicates colour)
Purpose of control	Thermostat
Method of mounting control	Surface mounted
Type of disconnection	Micro-disconnection
Disconnection means	Type 1.B
PTI of insulating material	175
Period of electric stress across insulating parts	Long period
No. of cycles of actuation (M)	10,000
No. of cycles of actuation (A)	100,000
Control pollution degree	2
Glow Wire Test	Enclosure - 550°C / PCB - 850°C"
Rated impulse voltage	2500V
Operating Voltage	230 V AC; 50Hz
Protection Class	Class II ⧈
Max Load.	3680W/16A

IP Rating	IP21
Wire size	1.0-2.5 mm²
Programmable Temperature	5 - 40°C
Max. Ambient Temperature	0 - 50°C (T50)
Relative Humidity	5 - 90°C
Temperature Resolution	± 1°C
Sensors	Internal Air, Air/Floor Probe
Sensor type	NTC 10k @ 25°C, 3 meters long
Dimensions	87x87x39mm
Screen size	3”
Installation depth	Recommended: 50 mm Back Box; Minimum: 35mm Back Box
Compatibility	Electric & Water Underfloor Heating. Central Heating Systems

EcoDesign COMPLIANCE INFORMATION CARD

This control has the following control functions and exceeds the EcoDesign requirements for electric underfloor local space heaters and towel rails as set out in Commission Regulation (EU) 2024/1103: **TW (f2/f4/f8)**

This thermostat includes these control function codes and power consumptions:

Thermostat model					
P-TOUCH-BLK / P-TOUCH-WHT					
Control function code					
TW (f2/f4/f8)					
Power consumption					
Off mode	**Standby mode**			**Idle mode**	
$P_o \leq 0.5W$	$P_{sm} \leq 0.5W$	$P_{dsm} \leq 1.0W$	$P_{nsm} \leq 2.0W$	$P_{idle} \leq 1.0W$	$P_{nidle} \leq 3.0W$
		☑		☑	

Room temperature control power consumption

The control must include an off mode and/or a standby mode, in addition to an idle mode. The power consumption must comply with requirements for each mode where applicable.

In off mode	$P_o \leq 0.5W$	☐
In standby mode	$P_{sm} \leq 0.5W$	☐
	$P_{dsm} \leq 1.0W$ (if control has an active display in standby mode)	☑
	$P_{nsm} \leq 2.0W$ (if control has a network connection in standby mode)	☐
In idle mode	$P_{idle} \leq 1.0W$	☑
	$P_{nidle} \leq 3.0W$ (if control has a network connection)	☐

Type of heat output/room temperature control

TD	Electronic room temperature control plus day timer	☐
TW	Electronic room temperature control plus week timer	☑
	Other control options	
f2	Open window detection	☑
f3	Distance control option	☐
f4	Adaptive start control	☑
f7	Self-learning functionality	☐
f8	Control accuracy	☑

Control function codes

		Code of temperature control (TC)	Control functions							
			f1	f2	f3	f4	f5	f6	f7	f8
Type of temperature control	Single stage, no temperature control	NC								
	Two or more manual stages, no temperature control	TX								
	Mechanic thermostat room temperature control	TM								
	Electronic room temperature control	TE								
	Electronic room temperature control plus day timer	TD								
	Electronic room temperature control plus week timer	TW								
Control functions	Presence detection		1							
	Open window detection			2						
	Distance control option				3					
	Adaptive start control					4				
	Working time limitation						5			
	Black bulb sensor							6		
	Self-learning functionality								7	
	Control accuracy with CA < 2 Kelvin and CSD < 2 Kelvin									8

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INSTALLATION

1

Loosen the fixing screw located on the bottom of the thermostat, to remove the front panel.

2

Connect the thermostat according to the Wiring Instructions.

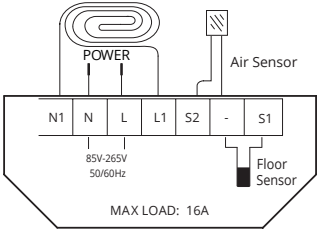
3

Install the back module into the wall box using the screws provided.

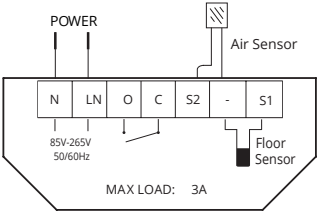
4

Align the top of the front panel and back module to reassemble the thermostat, reinstalling the bottom screw.

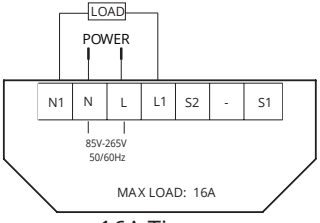
WIRING INSTRUCTIONS



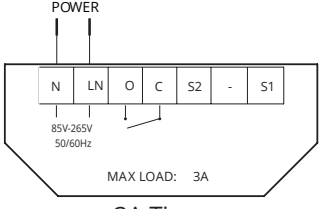
16A Electric Underfloor Heating



3A Water Underfloor Heating



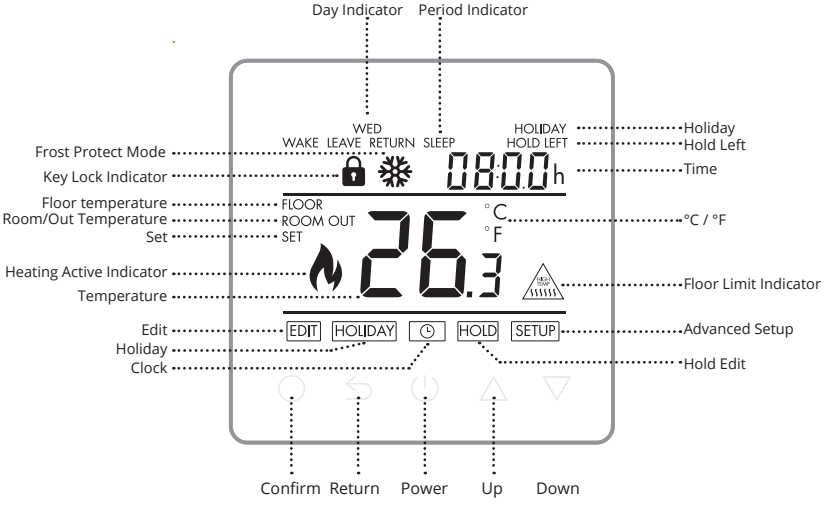
16A Timer



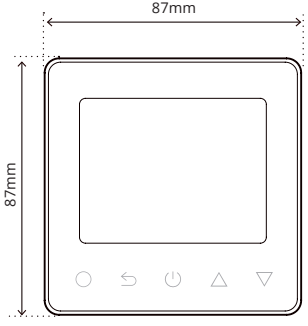
3A Timer

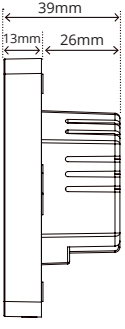
This product must be installed by a qualified electrician and comply with local regulations.

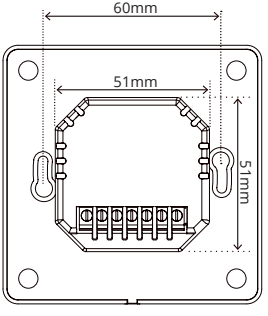
THERMOSTAT SCREEN AND SYMBOLS



DIMENSIONS







FUNCTION and OPERATION

The product can switch two control modes, one is thermostat mode and the other is timer mode.
Press ⏻ to turn On/Off
Press ○ and hold to enter mode selection. Press △▽to select mode.
01 - Thermostat Mode
02 - Timer Mode (Go to page 15)
Press ○ to confirm selection.

THERMOSTAT MODE

ON / OFF
Press ⏻ to turn On/Off.
Note: When frost protection is active, the thermostat will maintain the frost protection temperature when it is Off.

TEMPORARY OVERRIDE
The temporary override temp is only valid at the current event and it will not be saved. On the home screen, press △▽ to set temporary override temp. Press ○ to confirm and return to the home screen.

KEY LOCK
Lock all keys to prevent the settings from being changed.
On the home screen, press and hold ⮌ for 3 seconds to lock / unlock.

SET TIME
On the home screen, press ○ then the [⏲] will flash.
Press ○ to enter day setting and △▽ to set the day.
Press ○ to enter hour setting and △▽ to set the hour.
Press ○ to enter minute setting and △▽ to set the minute.
Press ○ to confirm and return to the day setting.
Press ⮌ twice to return to the home screen.

HOLIDAY MODE
In Holiday Mode, the thermostat will maintain the set temp until the holiday time ends. On the home screen, press ○ then [⏲] will flash.
Press △▽ to select [HOLIDAY].
Press ○ to enter holiday day setting.
Press △▽ to set holiday days.
Press ○ to enter temperature setting.
Press △▽ to set the temperature.
Press ○ to confirm and return to the home screen.
Double-press ⏻ to cancel holiday mode (or delete days).

HOLD MODE

In Hold Mode, the thermostat will hold the set temp until you cancel this mode.
On the home screen, press ○ then [⏲] will flash.
Press △▽ to select [HOLD] .
Press ○ to enter the hold On/Off setting and press △▽ to set hold On.
Press ○ to enter temperature setting and △▽ to set the temperature.
Press ○ to confirm and return to the home screen.

Change hold to Off or double-press ⏻ to cancel Hold Mode.

DEFAULT PARAMETERS

Day	Wake	Leave	Return	Sleep
Mon-Fri	07:00 22°C	08:30 19°C	17:00 22°C	22:00 19°C
Sat-Sun	08:00 22°C	08:30 22°C	17:00 22°C	22:00 19°C

EDIT SETTINGS

Edit Settings is where you set or amend your heating program or schedule. You can set different target temperatures for 4 time periods (Wake, Leave, Back, Sleep) each day from Monday to Friday, Saturday, and Sunday.

This is the mode the thermostat will follow if you do not choose Holiday Mode or Hold Mode.

On the home screen, press ○ then the [⏲] will flash.
Press △▽ to select [EDIT].
Press ○ to enter day selection of Edit Setting.
Press △▽ to select a day.
Press ○ to enter the event selection of the day.
Press △▽ to select an event.
Press ○ to select the event starting time.
Press △▽ to set the hour starting time
Press ○ to enter the minute setting.
Press △▽ to set the minute starting time.
Press ○ to enter the temperature setting.
Press △▽ to set the temperature.
Press ○ to confirm and return to the event selection of the day.

Press ⮌ or double-press ⏻ to return to the home screen.

ADVANCED SETTINGS

These are normally set by technicians during the initial installation.
On the Home screen, press ○ then the [⏲] will flash.
Press △▽ to select [SETUP].
Press ○ to enter advanced setting.
Each setting can be accessed by pressing ○ and parameters adjusting with .

No.	Name	Default	Ranges
1	Room temperature calibration	0.0°C	-5.0 - 5.0°C
2	Floor temperature calibration	0.0°C	-5.0 - 5.0°C
3	Frost protect function	ON	OFF / ON
4	Frost protect temperature	5.0°C	5.0-15.0°C
5	Sensor selection	01: Floor sensor	00: Room / 01: Floor / 02: Room+Floor / 03: Room out / 04: Room out + Floor
6	Floor temperature limit	30.0°C	20.0-50.0°C
7	Temperature unit	0.0°C	00: °C / 01: °F
8	Output delay	00:00s	00: 00s / 01: 30s / 02: 60s / 03: 90s
9	Temperature deviation	01: 1.0°C	00: 0.5°C / 01: 1.0°C / 02: 2.0°C / 03: 3.0°C
10	Reverse output	00: OFF	00: OFF / 01: ON
11	Schedule	01: 5+1+1	00: 7 / 01: 5+1+1
12	Adaptive function	00: OFF	00: OFF / 01: ON
13	Reset	00: NO	00: NO / 01: YES

PARAMETERS EXPLAINED

1. Calibrate the temperature detected by room sensor.
2. Calibrate the temperature detected by the floor sensor.
3. Turn frost protect On/Off (❄ displays when you turn off the thermostat).
4. Set the frost protect temperature
5. Select the control sensor(s) used
6. If using **02** Room + Floor setting above, this selects the floor limit.
7. Choose between displaying the temperature in °C or °F
8. Output delay duration helps average the output screen temperature
9. Deviation is the difference between actual and set temperatures - if deviation is 1°C, the heating will start when the actual temperature is 1°C below the set point and will stop when it is 1°C above the set point.
10. For cooling - when the set point is 1°C higher than the set temperature, the thermostat will disconnect the cooling system.
11. Schedule type selection: **00**: 7 days, set individually, **01**: weekdays share a schedule, while Saturday and Sunday are set individually.
12. After several days of use the adaptive function ensures that the required temperature is reached at the start of the next event. For example, if the temperature is set for 22°C at 7AM, it will start heating *before* 7AM to reach 22°C at 7AM, rather than start heating *at* 7AM.
13. RESET: All parameters are restored to default values as shown in the table.

OPEN WINDOW DETECTION FUNCTION

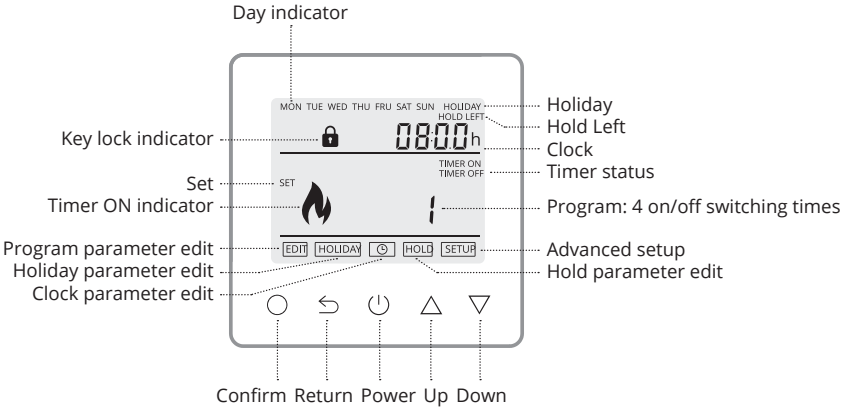
This function operates only when **room** sensor or **both** sensors is selected. When active, the thermostat will shut off automatically for 15 minutes to save energy if the room temperatures drops quickly due to an open door or window.

TROUBLESHOOTING CODES

E1 - Room sensor error
E2 - Floor sensor error
E3 - Room out sensor error

TIMER CLOCK MODE

When used as a timer, only the symbols shown below are used.



AUTOMATIC WEEKLY PROGRAM

When timer mode is used, the weekly program is executed by default.
The time clock offers three programming methods:

Weekday/Weekend Mode: 5+1+1

Allows 4 on/off times for weekdays and 4 on/off for both Saturday and Sunday.

7-Day Mode:

Each day has 4 on/off times that are individually set.

24-Hour Mode:

All days are programmed with the same on/off switching times.

DEFAULT PARAMETERS

DAY	TIME 1	TIME 2	TIME 3	TIME 4
Mon-Fri	06:00 - 08:00 ON	16:00 - 22:00 ON	--:--	--:--
Sat-Sun	08:00 - 10:00 ON	16:00 - 23:00 ON	--:--	--:--

No.	Advanced Settings
00	Programming: 7 Days
01	Programming: 5+1+1 Days
02	Programming: 24 Hours
03	Reset

EDIT SETTINGS

Setting or changing the timer parameters:
Press ○ then [⏲] will flash.
Press △ ▽ to select [EDIT] .
Press ○ to enter day selection and press △ ▽ to select a day.
Press ○ to enter the first on/off switch times and press △ ▽ to select a timer event.
Press ○ to select the event's starting time and press △ ▽ to select the end time.

HOLIDAY TIMING

During holiday timing, the timer is turned off.
Press △ ▽ to select [HOLIDAY] .
Press ○ to enter holidays days setting.
Set holiday days to zero or double-press ⏻ to cancel Holiday Mode.

ADVANCED SETTINGS

These are normally set by technicians during installation.
Press ○ then the [⏲] will flash, then press △ ▽ to select [SETUP] .
Press ○ to enter advanced setting where each parameter can be accessed and adjusted by pressing ○ and △ ▽ .

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