Wired Digital Timer Thermostat

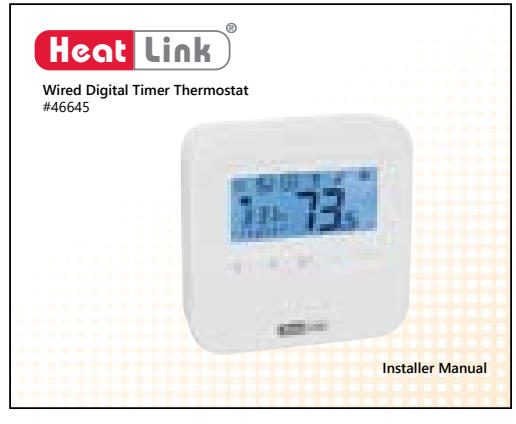
#46645

Installer Manual

Contents of the Box

46645 Thermostat

Mounting Hardware



Installer Manual

Product Compliance & Safety Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Product Compliance & Safety Information (continued)

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Product Compliance & Safety Information (continued)

Safety Information

Use in compliance with safety regulations. The unit is to be used for the control of room temperature inside the house.

Installation

This accessory must be fitted by a competent person, and installation must comply with the guidance, standards and regulations applicable to the city, country or state where the product is installed. Failure to comply with the relevant standards could lead to prosecution.

Product Description

Thank you for purchasing the HeatLink #46645 Thermostat. This thermostat is a device that lets you customize the heating and cooling of your home as needed.

This device is a stylish and accurate digital room thermostat that is fitted with a large easy to read LCD screen and one touch buttons. You can now simply adjust your home temperature as desired in order to create a comfortable home environment.

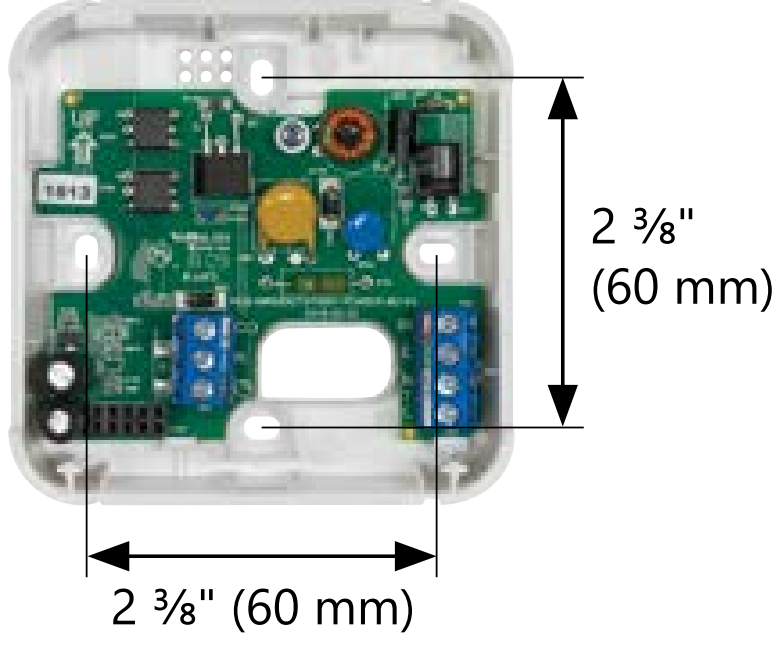
We hope you enjoy our product.

1. Mounting the Thermostat

Install the digital room thermostat roughly 5 ft (1.5 m) above floor level.

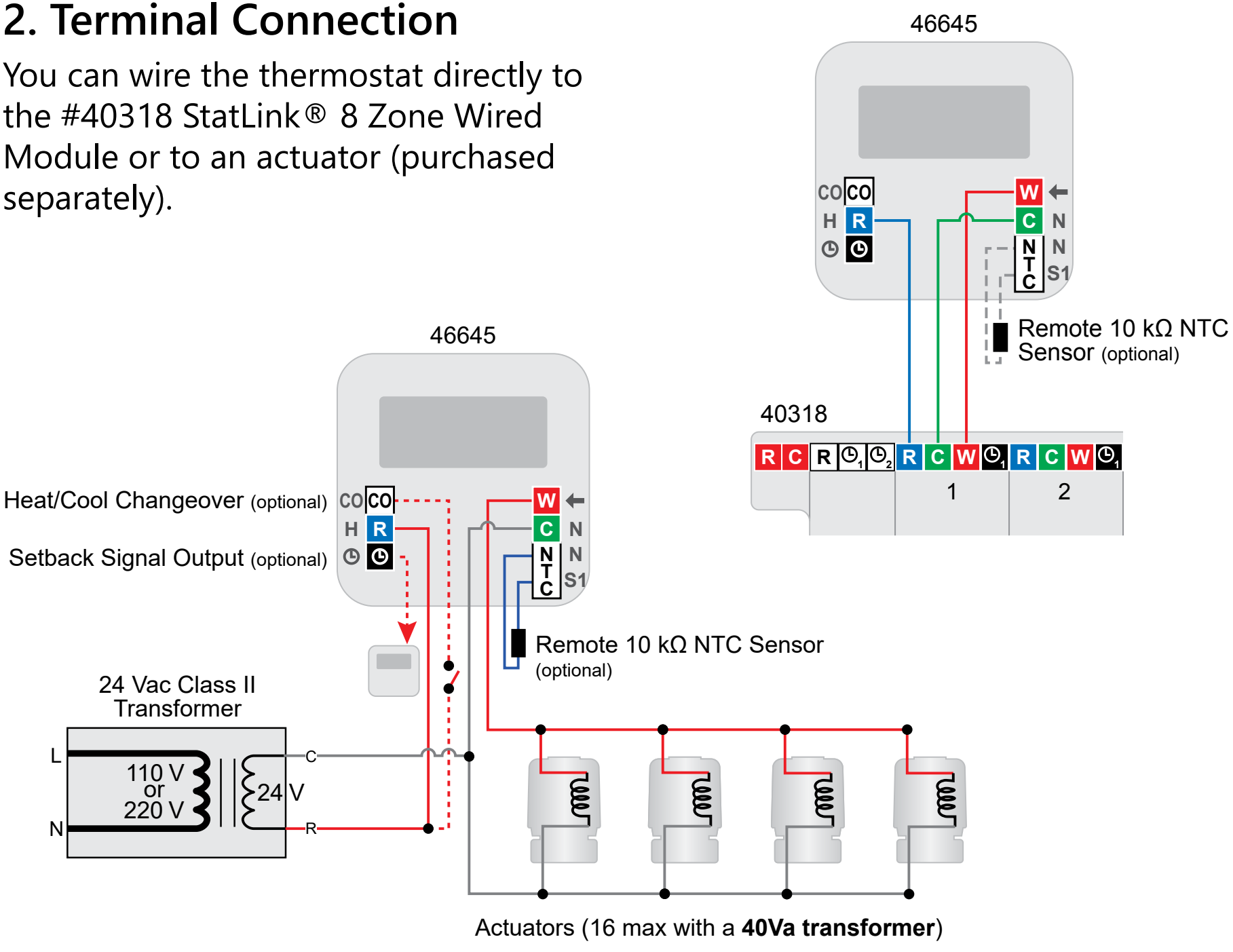
It should be mounted in a location where the thermostat is easily accessible and away from direct sunlight. You can mount the thermostat directly on the wall or you can install it on top of a wall-box.

Gently remove front housing



2. Terminal Connection

You can wire the thermostat directly to the #40318 StatLink® 8 Zone Wired Module or to an actuator (purchased separately).



3. Thermostat Icons

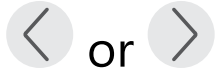
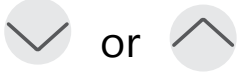
	BOX means to select mode. e.g. means Hi temp is selected means the Hi temp is not selected.
	Sun: High comfortable temperature
	Moon: Low comfortable temperature (setback)
	Indicates AUTO ON or AUTO OFF
	Indicates that the Party Mode is active
	Indicates that the Vacation Mode is ON.
	Frost Protection Indicator: Frost protection is active, not available in cooling mode.
	Heat Mode indicator: Indicates heating is running

3. Thermostat Icons (continued)

	Cool Mode indicator: The icon is flashing when cooling mode is active.
	Temperature indicator • Display the room temperature • Display the set temp To change the temperature display from °C to °F, go to Installer Mode and change d00 value to 1 (page 21).
	Temporary override indicator: The hand will appear until the next programs starting time.
	Floor protection indicator (d03 = 1; d04 = 1) The icon is flashing when heating of the zone has been halted to protect the floor from over-heating
1 2 3 4 5 6	Programs number indicator.
	Indicates the time.
1 2 3 4 5 6 7	Indicates the day of the week (1 = Monday)

4. Button Functions

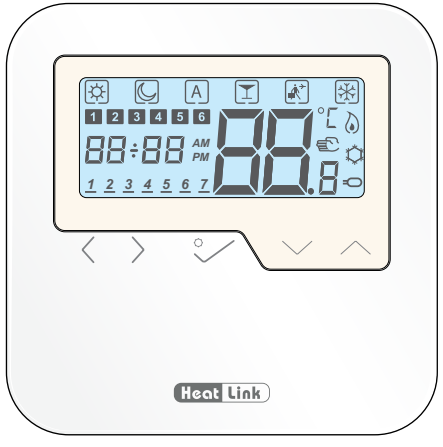
Press any key to activate the backlight and wake up the thermostat.

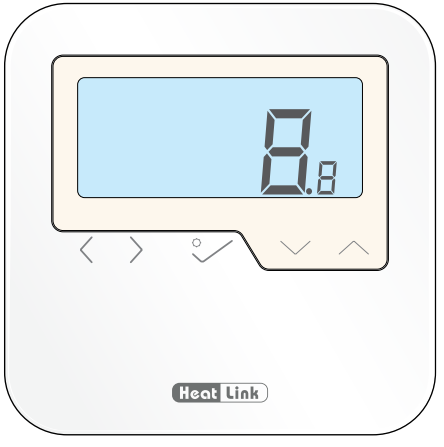
	Mode selection. Long press to return home without saving.
	OK key. Short press to confirm selection. Long press to save and return home. Long press to enter Temperature offset Heat/Cool.
	Decrease or increase value (e.g. Setpoint Temperature). Press and hold to change value faster.

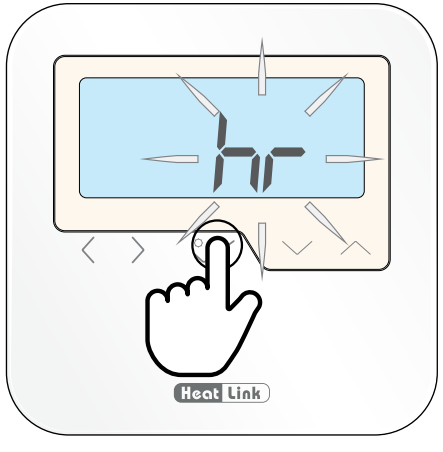
5. Setting Date and Time

When you first power up your device you will have to set up the date and time.

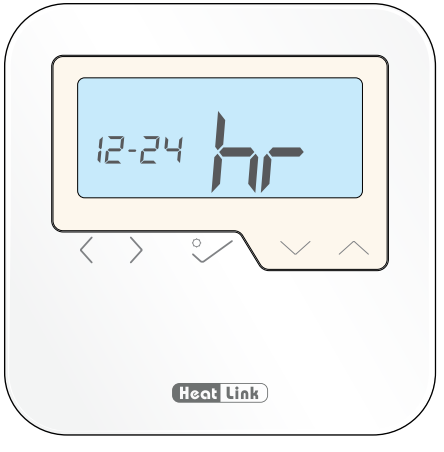
You can also access the date and hour by long pressing ✓. After that press › and ✓ to confirm.

① 

② 

③ 

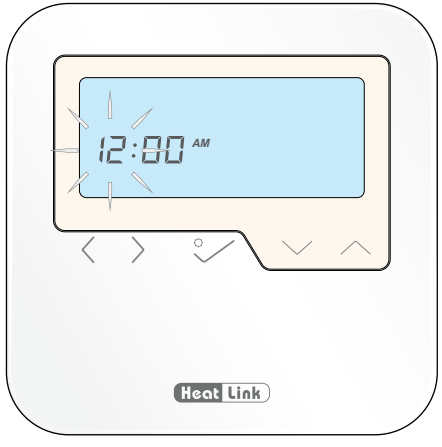
Press ✓ to confirm.

④ 

Press ‹ or › to choose 12/24 hr, then press ✓ to confirm.

5. Setting Date and Time (continued)

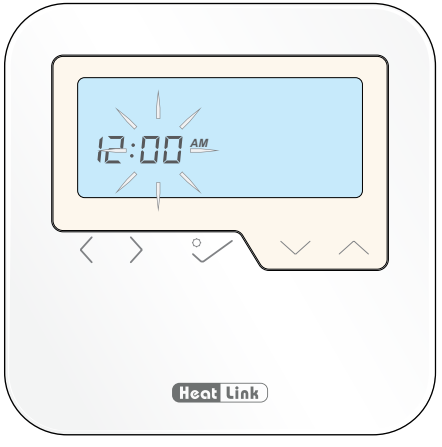
⑤



Set the hour by using ﹀ or ﹀.

Press ✓ to confirm.

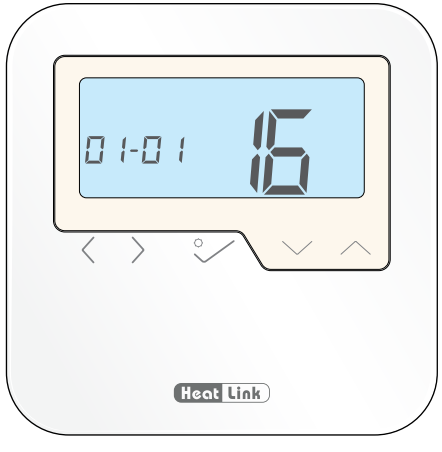
⑥



Set the minutes by using ﹀ or ﹀.

Press ✓ to confirm.

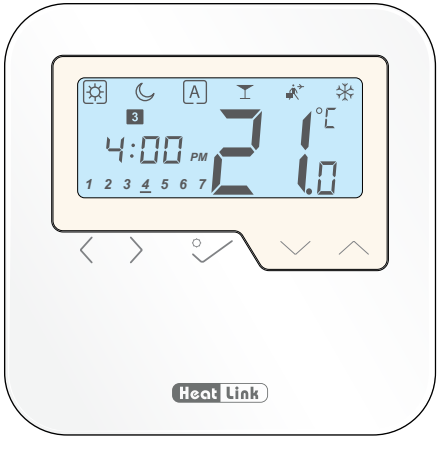
⑦



Set the date by using ﹀ or ﹀.

Press ✓ to confirm.

⑧

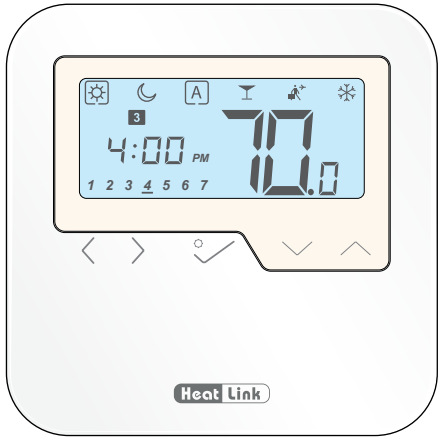


To change the temperature display from °C to °F, go to Installer Mode and change d00 value to 1 (page 21).

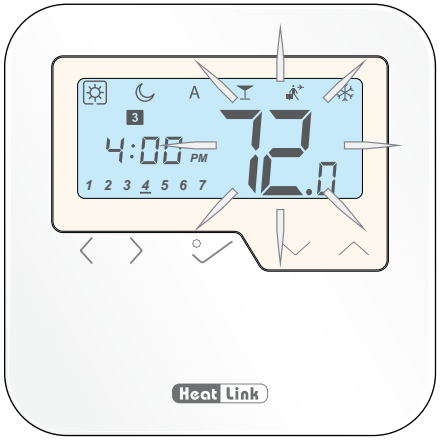
6. Setting the High Comfortable Setpoint

This setpoint is used for the Auto mode programs.

It is also used by Party Mode.

① 

Press ‹ or › to select ☼ Sun Mode

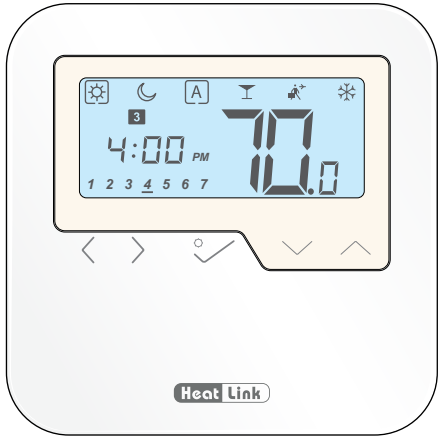
② 

Press ˅ or ˄ to select the setpoint for ☼ Sun Mode.

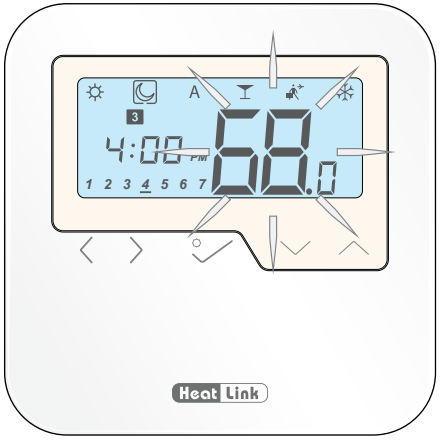
Press ✓ to confirm.

7. Setting the Low Comfortable (Setback) Setpoint

This setpoint is also used for the Auto mode programs.

① 

Press ‹ or › to select ☾ Moon Mode.

② 

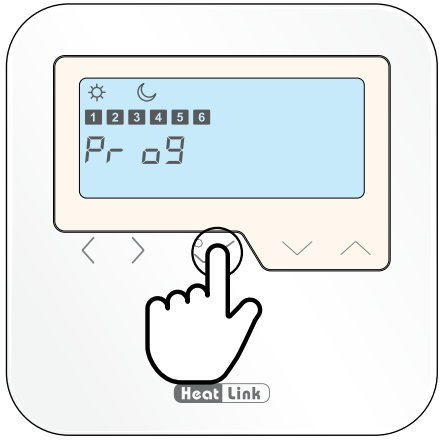
Press ﹀ or ﹀ to select the setpoint for ☾ Moon Mode.

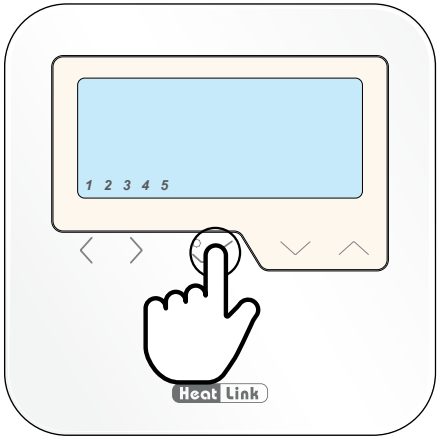
Press ✓ to confirm.

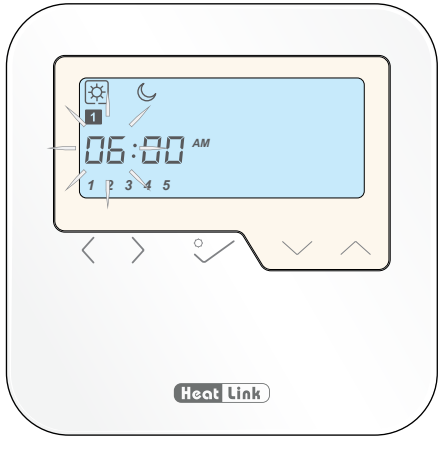
8. Setting Your Programs

You can customize your programs by long pressing when on the program screen.

If you want to select another Program Profile (from the available 5), please enter in Installer Mode, choose option d17 and after that select the desired program.

① 

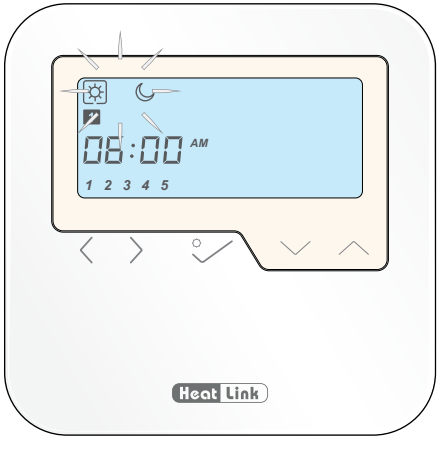
② 

③ 

Set the hour by using or .

Press to confirm.

Repeat the procedure for the minutes.

④ 

Select the desired program or by pressing or .

Press to confirm.

8. Setting Your Programs (continued)

You can select and customize any of the following programs:

Program Profile 1

5 days (Monday to Friday)			
Program	Program Time	Heat set point	Cool set point
1	6:00	Sun	Sun
2	9:00	Moon	Moon
3	16:00	Sun	Sun
4	23:00	Moon	Moon
5	--:--	–	–
6	--:--	–	–

2 days (Saturday to Sunday)			
Program	Program Time	Heat set point	Cool set point
1	7:00	Sun	Sun
2	12:00	Moon	Moon
3	--:--	–	–
4	--:--	–	–
5	--:--	–	–
6	--:--	–	–

Program Profile 2

5 days (Monday to Friday)			
Program	Program Time	Heat set point	Cool set point
1	6:00	Sun	Sun
2	22:30	Moon	Moon
3	--:--	–	–
4	--:--	–	–
5	--:--	–	–
6	--:--	–	–

2 days (Saturday to Sunday)			
Program	Program Time	Heat set point	Cool set point
1	7:00	Sun	Sun
2	12:00	Moon	Moon
3	--:--	–	–
4	--:--	–	–
5	--:--	–	–
6	--:--	–	–

8. Setting Your Programs (continued)

Program Profile 3

5 days (Monday to Friday)			
Program	Program Time	Heat set point	Cool set point
1	5:00	Sun	Sun
2	8:00	Moon	Moon
3	14:00	Sun	Sun
4	22:00	Moon	Moon
5	--:--	–	–
6	--:--	–	–

2 days (Saturday to Sunday)			
Program	Program Time	Heat set point	Cool set point
1	7:30	Sun	Sun
2	22:30	Moon	Moon
3	--:--	–	–
4	--:--	–	–
5	--:--	–	–
6	--:--	–	–

Program Profile 4

5 days (Monday to Friday)			
Program	Program Time	Heat set point	Cool set point
1	6:00	Sun	Sun
2	9:00	Moon	Moon
3	15:00	Sun	Sun
4	22:30	Moon	Moon
5	--:--	–	–
6	--:--	–	–

2 days (Saturday to Sunday)			
Program	Program Time	Heat set point	Cool set point
1	7:30	Sun	Sun
2	23:00	Moon	Moon
3	--:--	–	–
4	--:--	–	–
5	--:--	–	–
6	--:--	–	–

8. Setting Your Programs (continued)

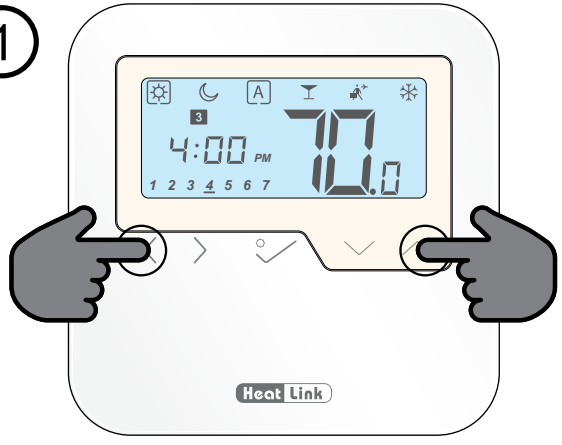
Program Profile 5

5 days (Monday to Friday)			
Program	Program Time	Heat set point	Cool set point
1	6:00	Sun	Sun
2	10:00	Moon	Moon
3	16:00	Sun	Sun
4	23:00	Moon	Moon
5	--:--	–	–
6	--:--	–	–

2 days (Saturday to Sunday)			
Program	Program Time	Heat set point	Cool set point
1	7:30	Sun	Sun
2	23:30	Moon	Moon
3	--:--	–	–
4	--:--	–	–
5	--:--	–	–
6	--:--	–	–

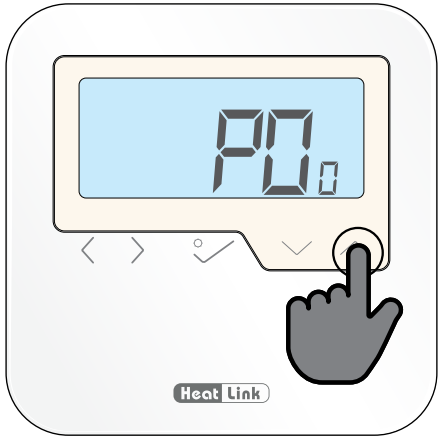
9. How to reset the thermostat

1



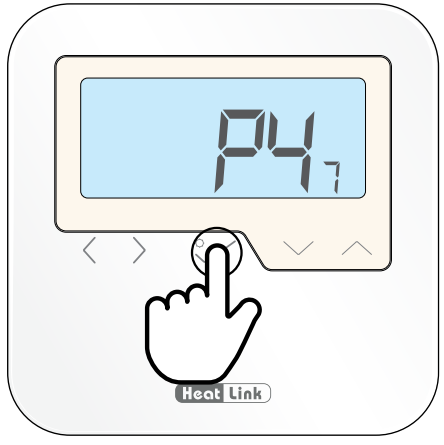
Press the indicated keys together for 3 seconds.

2



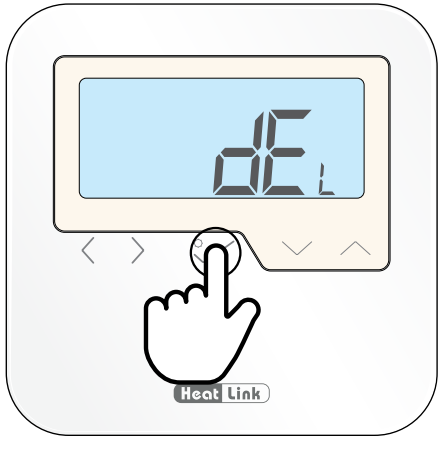
Select P47 if you want to reset to factory settings.

3



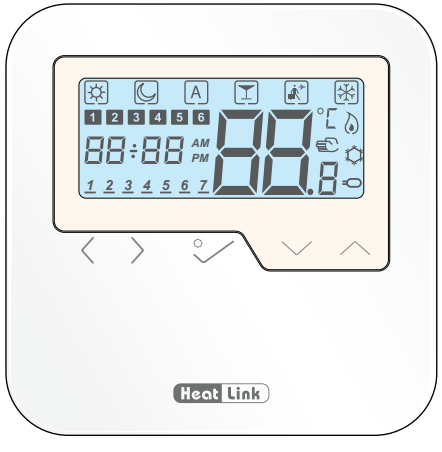
Press ✓ to confirm.

4



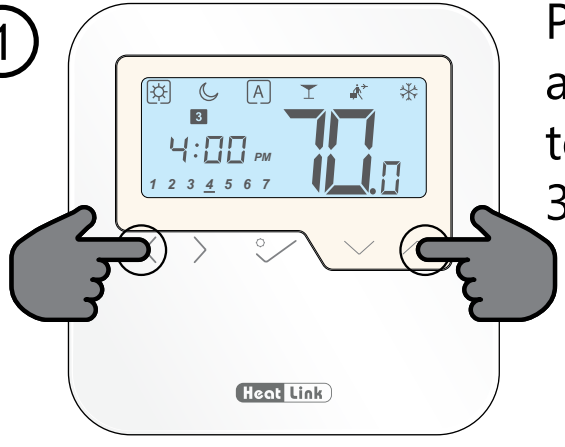
Press ✓ to confirm.

5

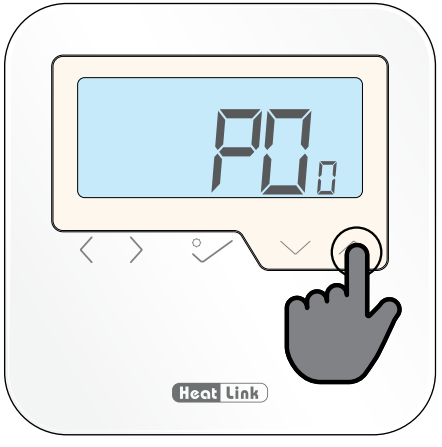


10. Installer Mode

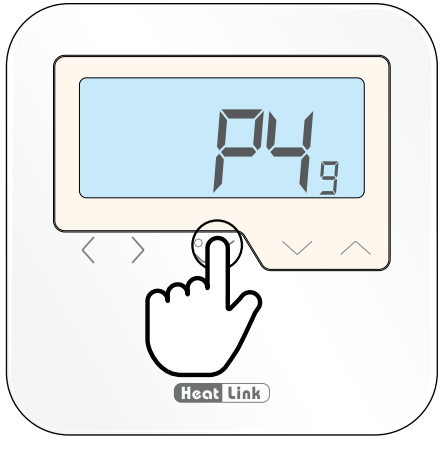
This function allows you to customize your thermostat as you desire. In order to do this please consult the tables on the next pages.

① 

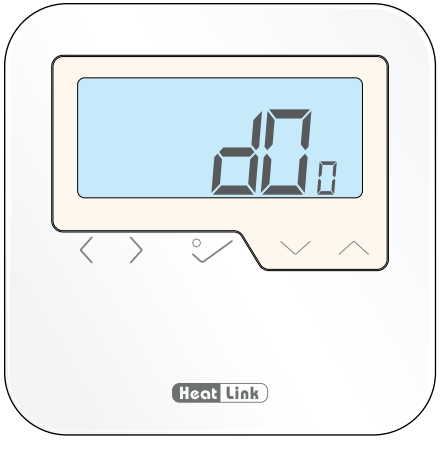
Press the left and up keys together for 3 seconds.

② 

Select P49 if you want to enter Installer Mode.

③ 

Press ✓ to confirm.

④ 

You have reached the Installer Mode. Select your option by using ‹ or ›. Press ✓ to confirm.

11. Functions explained

d##	Function	Values	Definition	Default
d00	Select °C/°F	0	°C	0
		1	°F	
d01	Heating Control	0	PWM (pulse width modulation)	0
		1	On-Off 0.9°F (±0.45°F) On-Off: 0.5°C (±0.25°C)	
		2	On-Off 1.8°F (±0.9°F) On-Off: 1.0°C (±0.5°C)	
d02	Room Temp Offset	26.5°F to 37.5°F (-5.5°F to 5.5°F) -3.0°C to +3.0°C	Offset room temp measuring error (in 0.9°F / 0.5°C)	32°F (0°F) 0.0°C
d03	Remote Sensor (S1/S2)	0	Remote sensor not connected	0
		1	Remote sensor connected	
d04	Remote Sensor Type (d03 must be set to 1)	0	The remote sensor is used to read the air or floor temperature. The thermostat's internal sensor will no longer operate.	0
		1	The remote sensor is used for floor protection, and the air temperature is measured by the thermostat's internal sensor.	
d05	Cooling Control	1	On-Off 0.9°F (±0.45°F) On-Off: 0.5°C (±0.25°C)	2
		2	On-Off 1.8°F (±0.9°F) On-Off: 1.0°C (±0.5°C)	

11. Functions explained (continued)

d##	Function	Values	Definition	Default
d07	Valve Protection	0	Disable	1
		1	Enable	
d08	Frost Setpoint	41.0–62.5°F 5.0–17.0°C		41.0°F 5.0°C
d09	12/24 Hour Format	0	12hr	1
		1	24hr	
d11	Daylight Savings Time (DST)	0	Off	1
		1	On	
d12	Max. Heating Setpoint	41.0–95.0°F 5.0–35.0°C		95.0°F 35.0°C
d13	Min. Cooling Setpoint	41.0–104°F (A4) 5.0–40.0°C		41°F 5.0°C
d14*	Floor Sensor Protection Limit (heating high limit-HL)	52–113°F (B3) 11–45°C	Turn off relay output when flow sensing temperature is above protecting limit, step is 0.5°C (0.9°F)	80.5°F 27°C
d15*	Floor Sensor Protection Limit (heating low limit-LL)	43.0–104°F (A4) 6–40°C	Turn off relay output when flow sensing temperature is below protecting limit, step is 0.5°C (0.9°F)	50°F 10°C
d16*	Floor Sensor Protection Limit (cooling)	43.0-113°F (B3) 6–45°C	Turn off relay output when flow sensing temperature is below protecting limit, step is 0.5°C (0.9°F)	43.0°F 6°C

*d14, d15, d16 shown if d03 = 1 and d04 = 1.

11. Functions explained (continued)

d##	Function	Values	Definition	Default
d17	Preset program selection	1–5	Select one of the five default programs. Once selected, the default program will overwrite the present program. Selected default program can be edited by the user in the User Setting Mode.	1
d18	Heating/Cooling Mode	0	No Connection	0
		1	Connection	
d19	Cooling Blocked (shown if d18 = 1)	0	Cooling Allowed	0
		1	Cooling Disabled	
d20	Actuators loading selection for different temperature compensation	1–5	1 to 5 actuators loading	1

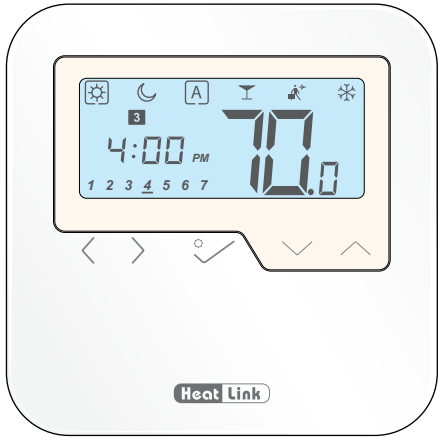
12. Cooling Blocked

When the thermostat is set on Cooling Disabled (d19-->1) it will block the cooling function for single rooms until the device will receive the heating command. During the periods of cooling blocked no special indicator will be displayed on the LCD screen. Ice flake will also be turned off.

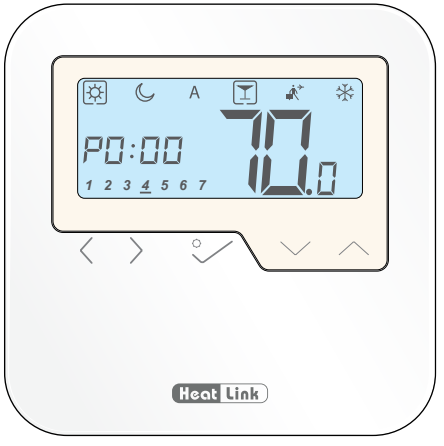
Note: d19 will be available only if d18 is set on 1 (Heat/Cool Mode selection Connected).

13. Party Mode

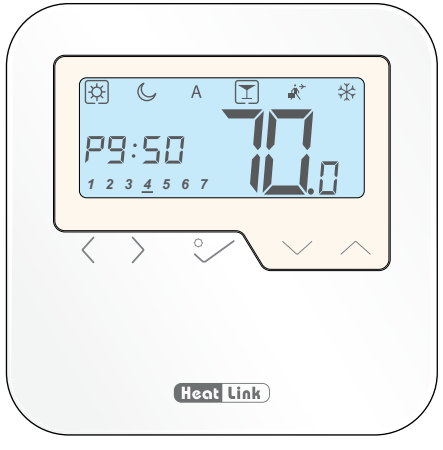
Party Mode temporarily overrides Auto and uses the High Comfortable Setpoint.

① 

Press ‹ or › to select Party Mode.

② 

Press ⌄ or ⌃ to select the time for Party Mode.

③ 

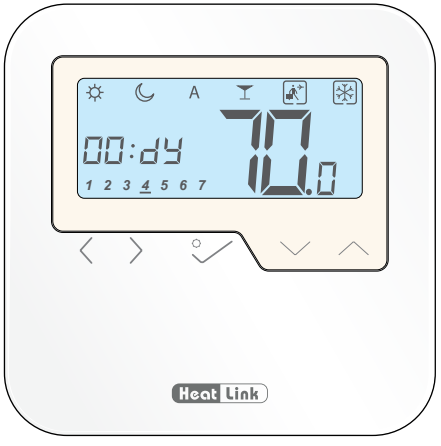
The maximum time allowed on the Party Mode is 9 h 50 min and can be set from 0-10 min.

If you want to exit Party Mode, press ‹ or › to move the ☐ (box) to a different program.

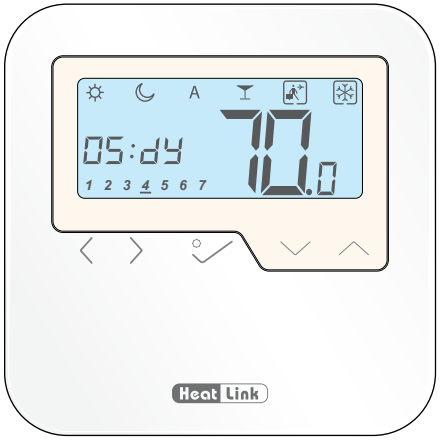
Once Party Mode ends, the countdown automatically resets to 0, and the thermostat goes back to Auto Mode.

14. Vacation Mode

Vacation Mode overrides Auto and uses the Frost Protection Setpoint.

① 

Press ‹ or › to select Vacation Mode.

② 

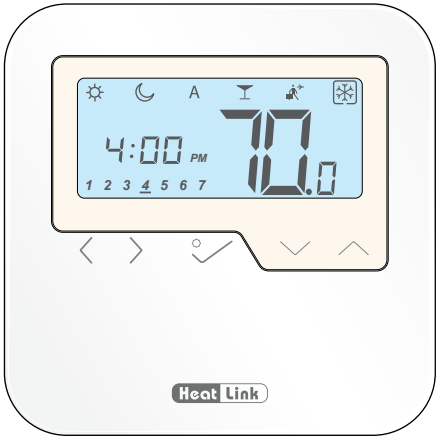
Press ˅ or ˄ to select the number of vacation days.

If you want to exit Vacation Mode, press ‹ or › to move the ☐ (box) to a different program.

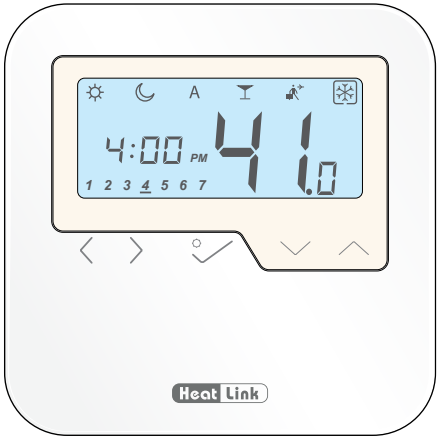
Vacation Mode ends when it reaches day 0. After that the device goes back to Auto Mode.

15. Frost Mode

Frost mode is used to protect from freezing, and can be set from 5ºC to 17ºC (41ºF to 62.5ºF). When selected, it will continue until another mode is selected.

① 

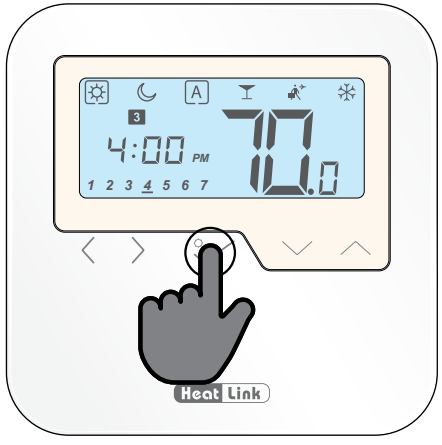
Press ‹ or › to select Frost Mode. Press ✓ to confirm.

② 

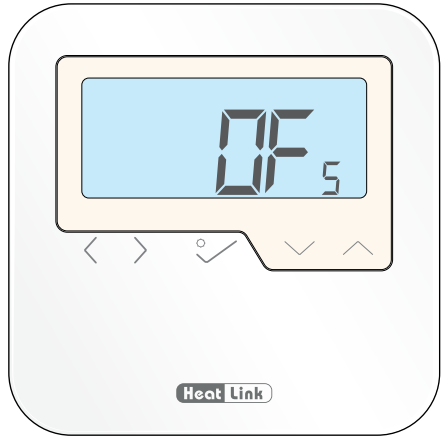
Press ˅ or ˄ if you want to change the Frost Mode temp. Press ✓ to confirm.

If you want to exit Frost Mode, press ‹ or › to move the ☐ (box) to a different program.

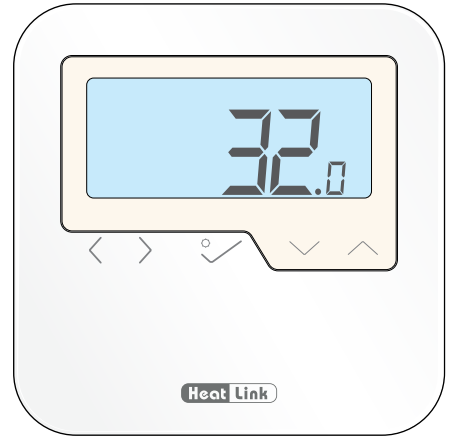
16. Temperature Offset

① 

Long press ✓ to order to enter Setting Mode.

② 

Press › 2 times.
Press ✓ to select.

③ 

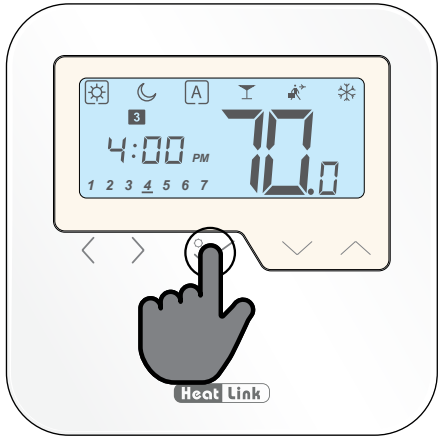
Press ⌄ or ⌃ to adjust.
Press ✓ to confirm.

Value Shown	°F offset
26.5	-5.5°F
28.0	-4°F
30.0	-2°F
31.0	-1°F
32.0	0°F
33.0	+1°F
34.0	+2°F
36.0	+4°F
37.5	+5.5°F

The Temperature Offset can be set at any value between 26.5 (-5.5°F) and 37.5 (+5.5°F) (-3°C to +3°C).

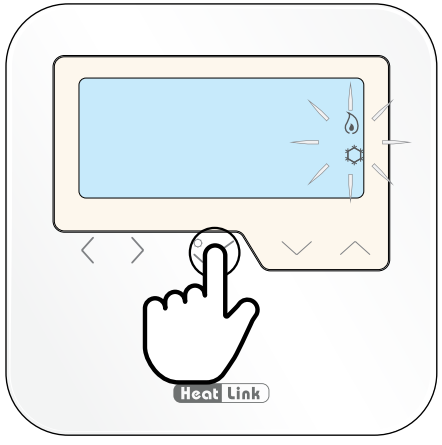
17. Heat or Cool Mode

①



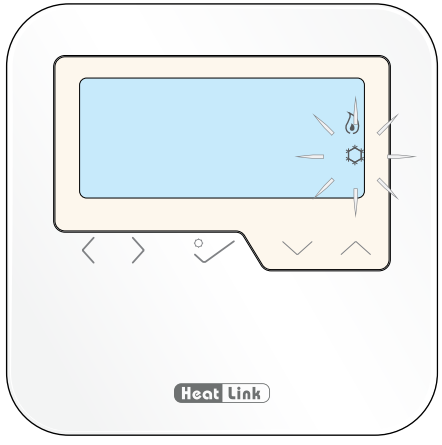
Long press ✓ to order to enter Setting Mode.

②



Press › three times.
Press ✓ to select.

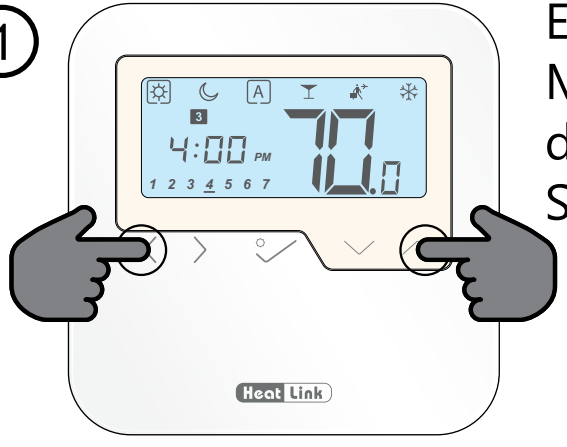
③



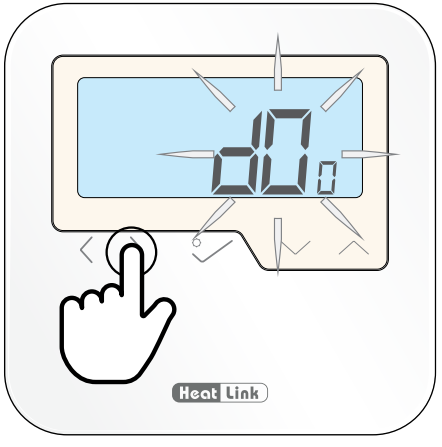
Press ⌄ or ⌃ to select.
Press ✓ to confirm.

18. Setup Remote Sensor

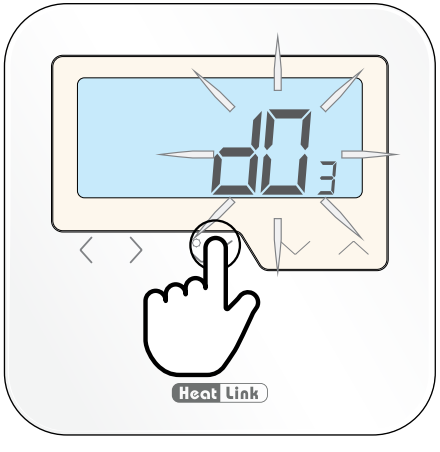
Use these steps to set up the remote sensor for your thermostat. For the sensor wiring diagram see Section 2.

① 

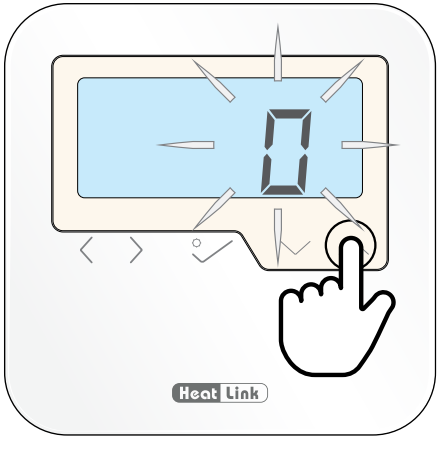
Enter Installer Mode as described in Section 10.

② 

Use the right arrow ⟩ to select d03.

③ 

Press ✓ to confirm.

④ 

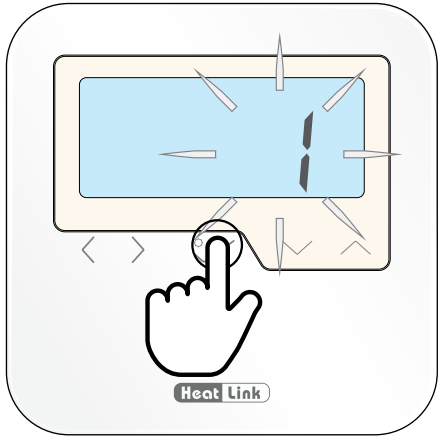
Use the up arrow ⟨ to select “1”.

0 = no sensor

1 = remote sensor connected

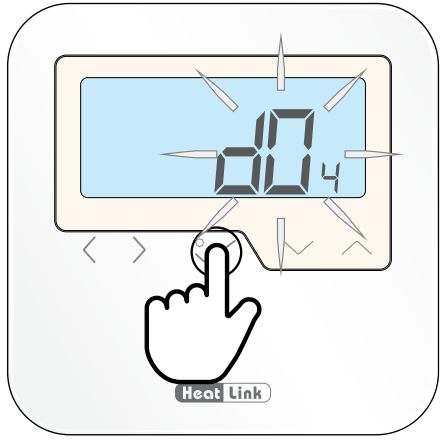
18. Setup Remote Sensor (continued)

⑤



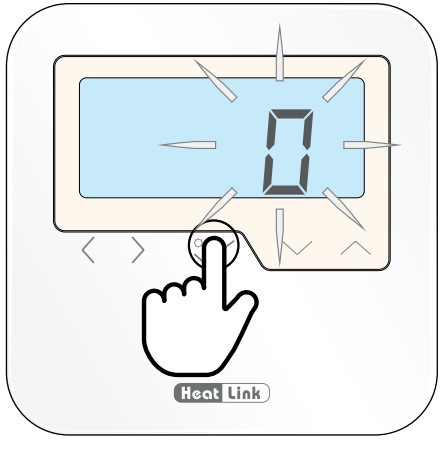
Press ✓ to confirm.

⑥



Press ✓ to select d04.

⑦



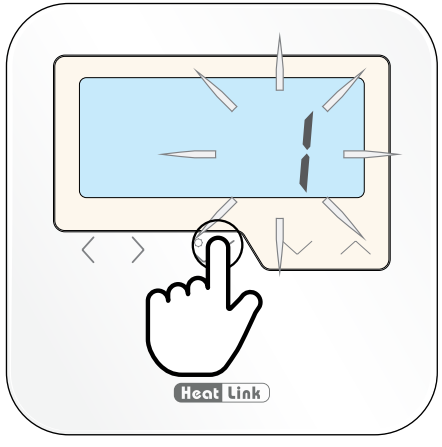
To use the remote sensor as an air or floor sensor, press ✓ to confirm “0”. The thermostat’s internal sensor will no longer operate. Skip to step 10.

OR

To use the remote sensor for floor protection, press the up arrow ^ to select “1”. Proceed to the next step.

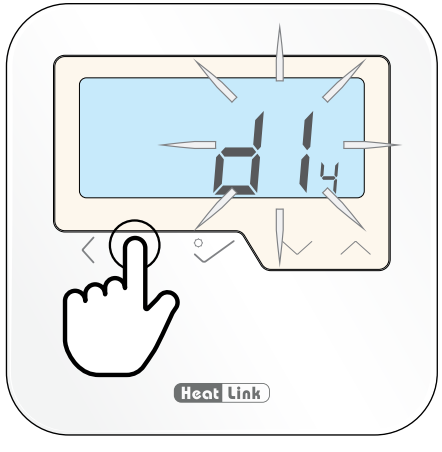
18. Setup Remote Sensor (continued)

⑧



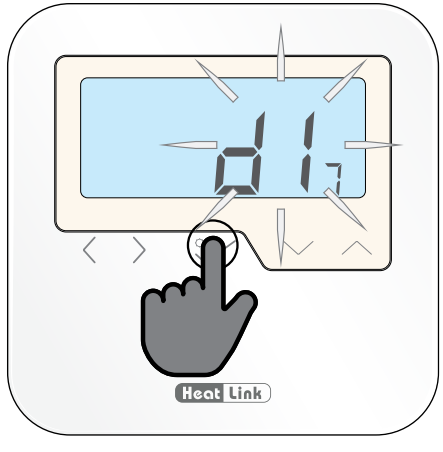
Press ✓ to confirm and set the remote sensor for floor protection. The air temperature will be measured by the thermostat's internal sensor.

⑨



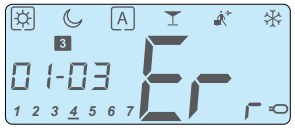
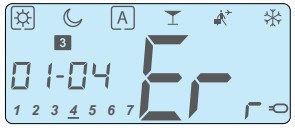
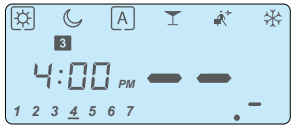
To set the floor sensor protection limits use functions d14, d15, and d16 (see table on pg 23 for details).

⑩



Once you have completed your changes, hold ✓ for 3 seconds to exit to the main screen.

19. Thermostat Error Codes

Error	Screen	Settings	Meaning
03		d03 = 1 d04 = 1	Remote sensor open
04		d03 = 1 d04 = 1	Remote sensor short
Temperature showing as dashes		d03 = 1 d04 = 0	Remote sensor open or short

20. Technical Data

Model:	46645
Voltage	24 VAC, ±10 %, 50/60 Hz
Operating performance	24 V, 18 W
Temperature Moon	Adjustable
Temperature range	41–95°F (5–35°C)
Span	±0.9°F or ±0.45°F (±0.5°C or ±0.25°C)
Storage temperature	-4°F to 140°F (-20°C to +60°C)
Ambient temperature	32°F up to 113°F (0°C up to 45°C)
Degree of protection	IP 30
Conformity according to	FCC and IC
Housing material	PC, V2
Color	RAL 9010 pure white
Connection	Screw terminal
Weight	0.28 lb net / 0.38 lb gross (0.13 kg / 0.17 kg)
Pulse-width-modulation (PWM)	Yes
Profile Modes	3 (Sun, Moon, Automatic)
Heating and Cooling	Yes, manual or via external switch
Parameter adjustment	Yes, in Installer Mode
Remote sensor	Yes, 10 kΩ NTC sensor
Dimensions	3.34" × 3.34" × 0.98" (85 × 85 × 25 mm)

www.heatlink.com

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L646645 Wired Digital Timer Thermostat Instructions