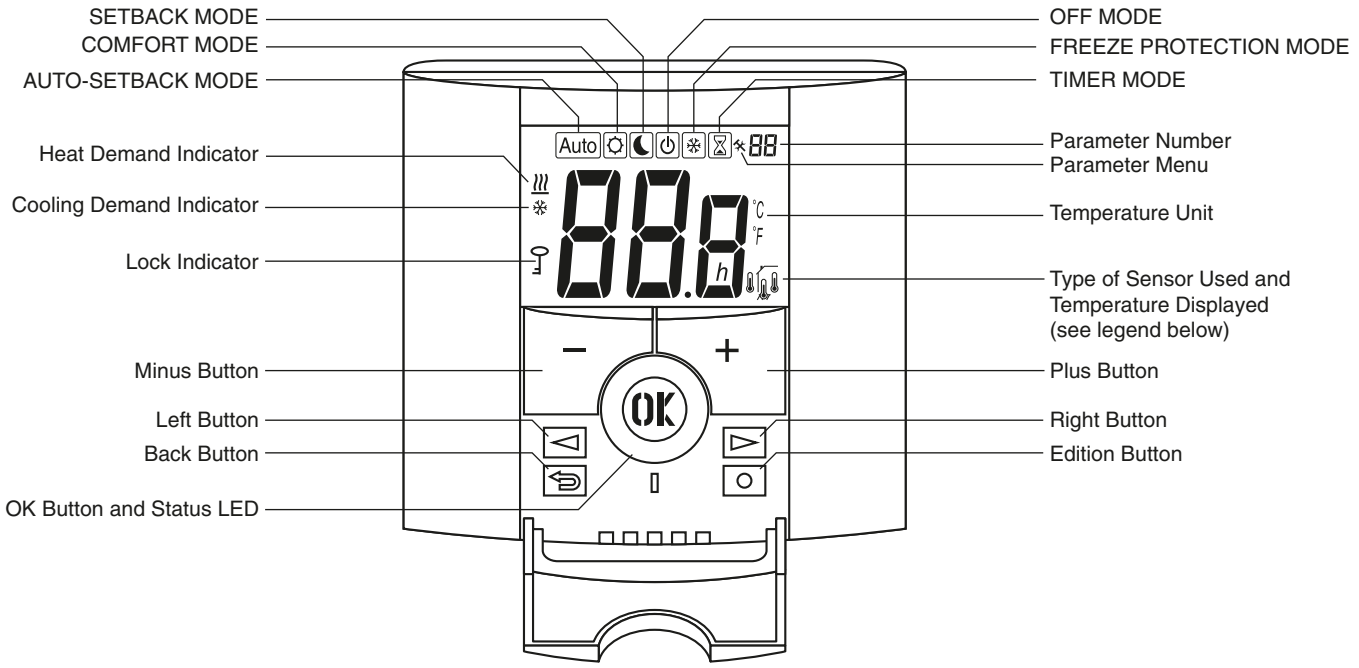

Status LED
Solid Red (when backlight is lit up) = heating demand
Solid Green (when backlight is lit up) = cooling demand
Flashing Red = sensor error
Flashing Green = waiting for input

Regulation = Internal or external ambient sensor.

Regulation = Floor sensor.

Regulation = Internal sensor with floor limitation.

View of the external sensor temperature.

Technical Information

Measured temperature precision	0.1°C (or 0.2°F)
Operating temperature	0 to 40°C (or 32 to 104°F)
Setting temperature range	5 to 37°C by 0.5°C step (or 41 to 99°F by 0.5°F step)
Regulation characteristics	Proportional Integral regulation or Static differential (see Installer Parameters L646544N)
Electrical protection	Class II - IP30
Power supply	24 Vac +/- 10%
Output	TRIAC output 24 VAC, 72 W max. (8 actuators)
External sensor (sold separately)	NTC (10K Ohms)

The **46544 HeatLink Digital Thermostat** is a 24Vac electronic thermostat designed to provide accurate temperature control of hydronic floor heating systems. Features include:

- Large 2" (50 mm) backlit LCD display, with a large temperature display.
- Proportional plus Integral (PI) controlled temperature regulation. Proportional moves quickly to the desired setpoint and slows down when the desired setpoint is near. Integral compensates the proportional offset (overshoot) and stays close to the setpoint. Output signal is either Pulse Width Modulation (PWM) or Hysteresis (on/off).
- Fast switching between modes; temperature setpoint is adjustable at the press of a button.
- Accepts timer signal for automated setback operation (requires 46643 Timer Thermostat or 46673 Heat/Cool Thermostat).
- Floor warming functionality is available through NTC terminal by adding an optional 10K floor sensor; the sensor acts as a floor temperature limiter (min / max floor temperatures are adjustable in the Parameter Menu).

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USA Fax: 1-800-869-6098

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Mounting Location

- Mount the thermostat at 5' (1.5 m) from the floor
- Mount on inner walls only, and at least 2' (0.6 m) away from any outer wall. Avoid entrances.
- Mount away from any direct heat sources like: air vents, radiators, and lights.
- Avoid Moisture, it is damaging to electronics, so avoid installing in areas that would contain high humidity or condensation (e.g. bathrooms or greenhouses).
- Do not cover or enclose, allow for proper air circulation, to get a good measurement of the current air temperature.

Installation

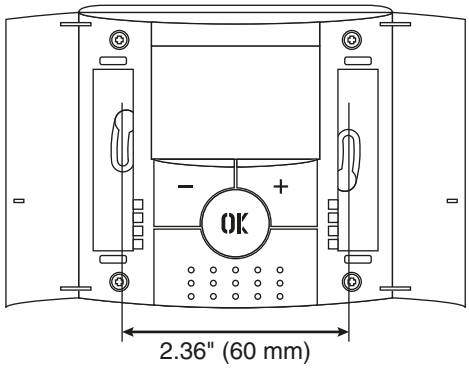
① Loosen the Wiring Terminals screws, connect the wires to each of the terminals as per the wiring diagram, and tighten the screws.

The terminal block can be removed to make wiring connections easier.

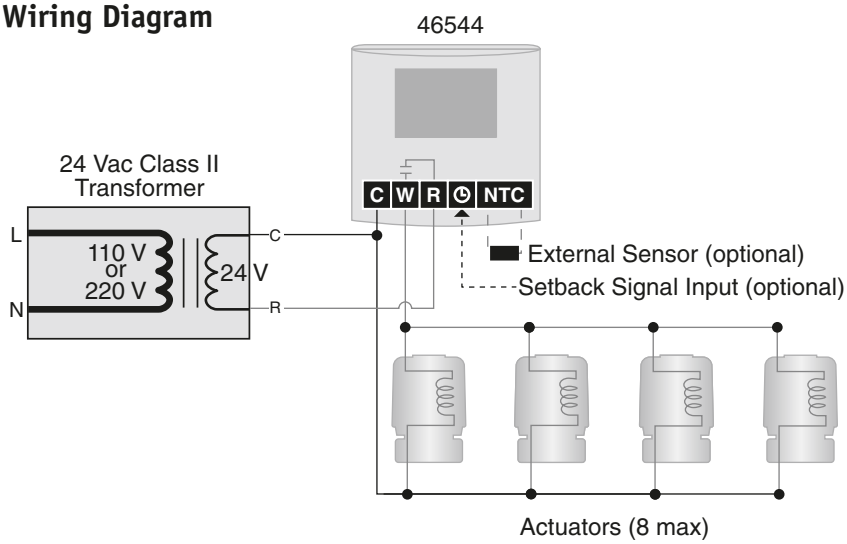
② Open the side panels to expose the screw holes.

③ Mount the thermostat using the supplied screws.

④ Close the side panels.



Wiring Diagram



Color-coded Wiring Scheme

Wire	FAS105 (red jacket) StatLink® default
C	green
R	blue
W	red
◷	black

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User Operation

PRESS ◁ OR ▷ to cycle through the modes.

Auto ☼ ☾ ⏻ ❄ ⧗

Comfort mode (Default)

In comfort setpoint mode, the temperature is set to a comfortable level, the default is **21°C (70°F)**. This mode is ideal for occupied areas. To change the comfort setpoint temperature (while in comfort mode):

PRESS − OR + The Current Setpoint Temperature will blink and can be changed.

After 5 seconds the setpoint will be set and the measured temperature will return.

Auto ☼ ☾ ⏻ ❄ ⧗

Setback mode

In setback mode, the temperature is set lower to conserve energy, the default is **17°C (63°F)**. This mode is ideal for areas that are unoccupied. To change the setback temperature (while in setback mode):

PRESS − OR + The Current Setpoint Temperature will blink and can be changed.

After 5 seconds the setpoint will be set and the measured temperature will return.

Auto ☼ ☾ ⏻ ❄ ⧗

Auto-setback mode

(Requires a timer setback signal)

In auto-setback mode, the 46544 operates automatically between comfort mode (☼ blinking) and setback mode (☾ blinking) according to the schedule of a timer thermostat (46643 or 46673).

Auto ☼ ☾ ⏻ ❄ ⧗

Off mode

Use this mode in case you need to switch off your system.

When the display is off, press the “OK” button to display the current temperature for a few seconds.

To restart your system, select a different mode.

Warning: Use this mode with caution, your system can freeze.

Auto ☼ ☾ ⏻ ❄ ⧗

Freeze Protection mode

In Freeze Protection mode: instead of simply turning the system off, this thermostat prevents freezing by maintaining a user adjustable fixed temperature (see user parameter 06 “HG”).

This mode is ideal for unoccupied buildings (e.g. holidays).

Auto ☼ ☾ ⏻ ❄ ⧗

Timer mode

The Timer mode allows you to adjust the temperature for a set period of time without changing your normal settings.

PRESS − OR + The Current Setpoint Temperature will blink and can be changed.

PRESS OK This will change to the Duration setting.

PRESS − OR + The Duration will blink and can be changed.

The icon will blink and the number of hours/days remaining is shown until the end of the period.

At the end of the period the thermostat will automatically change to Comfort mode.

If you want to stop the Timer function early, change the duration to “no”.

Lock Function

Use this function to prevent changing of the settings.

To activate the lock function:

1. Press and hold the ⮌ “back” button, then press the ○ “edition” button.
2. The Lock Indicator will be shown.

To deactive the lock function:

1. Press and hold the ⮌ “back” button, then press the ○ “edition” button.
2. The Lock Indicator will be disappear.

Information Function

Use this function to quickly view all current temperatures. This function is available in all modes.

Repeatedly press the ⮌ “back” button to “scroll” between the current setpoint, measured ambient temperature, and floor temperature (if floor sensor is connected).

In all modes, if a floor sensor is installed, 🌡 blinking indicates that the floor temperature is outside the limits set by the ***FL.L*** and ***FL.H*** parameters.

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User Parameter Menu

To access the User Parameter Menu:

1. In any thermostat mode, press and hold the ○ "edition" button for 10s.
2. Press the ◁ "left" or ▷ "right" buttons to cycle through the parameters.

To see or adjust a parameter value:

1. Press the OK "OK" button.
2. Use the − "minus" or + "plus" buttons to adjust parameter value.
3. Press the OK "OK" button to set the adjustment.

Exiting the User Parameter Menu

- After 30 seconds of inactivity the thermostat will automatically exit the menu.
- Press the ⮌ "back" button.
- Use the ◁ "left" or ▷ "right" buttons to navigate to parameter 10 and press the OK "OK" button.

Parameter		Description	Range	Default
01	**dEG**	Select the temperature unit.	**"°C"** = Celsius **"°F"** = Fahrenheit	**"°C"**
04		Internal sensor calibration; displays measured temperature. Adjust to show "actual" internal sensor temperature. The calibration should only be done after 1 day of system operation with the same set temperature as follows: Put a thermometer in the room at the same height as the thermostat and check the thermometer temperature in the room after 1 hour. When you enter the calibration parameter "no" is displayed to indicate no calibration has been made. Enter the thermometer temperature using the "minus" or "plus" buttons. The message "YES" should be displayed; the value will be stored in the internal memory. If you need to erase a calibration press the "back" button. The old value will be erased and the message "no" will be displayed. Note: Only the heating controlled by the thermostat must be used during calibration.	**"no"** = no calibration **"YES"** = calibration applied 5.0 to 37.0°C 41°F to 99.0°F	**"no"**
05		External sensor calibration; displays measured temperature. Adjust to show "actual" external sensor temperature. If no sensor is detected, no adjustment can be made. Follow the calibration prodedure as described in parameter 04.	**"no"** = no calibration **"YES"** = calibration applied 5.0 to 37.0°C 41°F to 99.0°F	**"no"**
06	**HG**	Freeze protection setpoint.	0.5 to 10.0°C 33°F to 50.0°F	**10°C** **50°F**
08	**CLr**	Resets all parameters to factory defaults. PRESS & HOLD "OK" Button for 5 seconds to reset all installer parameters.		
09		Displays the firmware version.		
10	**End**	Exits the user parameter menu.		

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