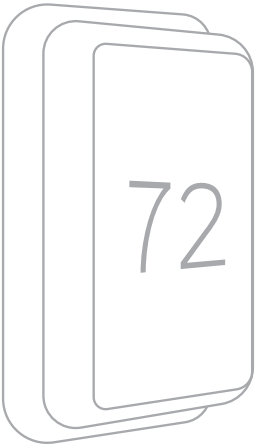
Honeywell Home

T10 Pro Smart Thermostat with RedLINK

Programmable Thermostat

Professional Install Guide



THX321WF2001W depicted. Other models may vary.

Package Includes:

- T10 Pro Smart Thermostat
- UWP™ Mounting System
- Honeywell Standard Installation Adapter (J-box adapter)
- Honeywell Decorative Cover Plate – Medium: Size 5-11/64" X 5-1/2" X 11/16" (131.4 mm x 139.7 mm x 17.5 mm)
- RedLINK Wireless Indoor Air Sensor (QTY 1)
- Screws and Anchors
- Professional Install Guide
- Getting Started Guide

Compatibility

- Compatible with most heating, cooling, and heat pump systems
- Required: 24 VAC power (“C” wire)
- Does not work with electric baseboard heat (120-240V)
- Does not work with millivolt systems
- Android or iOS smartphone or tablet

Customer assistance

WEB customer.honeywell.com

PHONE 1-800-633-3991

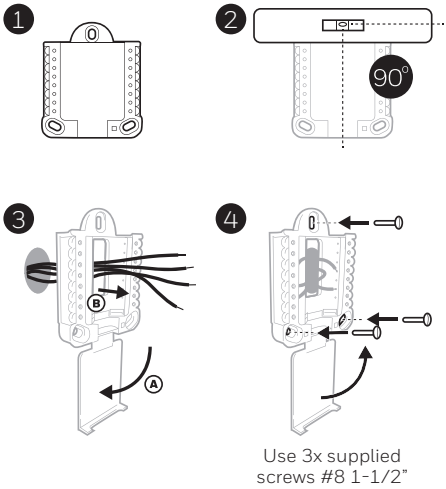
33-00423-03

UWP Mounting System installation

1. Open package to find the UWP. See Figure 1.
2. Position the UWP on the wall. Level and mark hole positions. See Figure 2.

   Drill holes at marked positions, and then lightly tap supplied wall anchors into wall using a hammer.

   – Drill 7/32” holes for drywall.
3. Pull the door open and insert wires through wiring hole of the UWP. See Figure 3.
4. Place the UWP over the wall anchors. Insert and tighten mounting screws supplied with the UWP. Do not overtighten. Tighten until the UWP no longer moves. Close the door. See Figure 4.

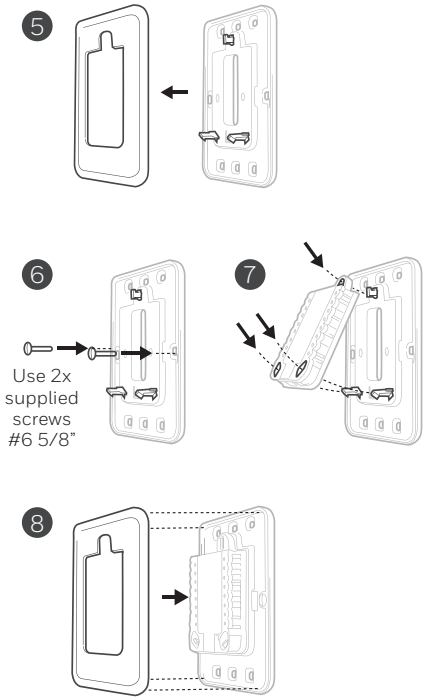


Optional Decorative Cover Plate installation

Use the **Optional Cover Plate** when:

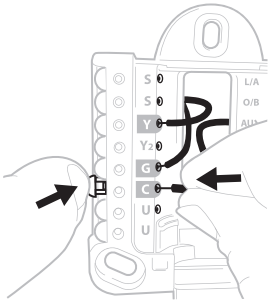
- Mounting the thermostat to an electrical junction box
- Or when you need to cover paint gap from the old thermostat.

5. Separate the Junction Box Adapter from the Cover Plate. See Figure 5.
6. Mount the Junction Box Adapter to the wall or an electrical box using any of the eight screw holes. Insert and tighten mounting screws supplied with Cover Plate Kit. Do not overtighten. Make sure the Adapter Plate is level. See Figure 6.
7. Attach the UWP by hanging it on the top hook of the Junction Box Adapter and then snapping the bottom of the UWP in place. See Figure 7.
8. Snap the Cover Plate onto the Junction Box Adapter. See Figure 8.



Wiring UWP

Push down on the tabs to put the wires into the inner holes of their corresponding terminals on the UWP (one wire per terminal) until they are firmly in place. **Gently tug on the wires to verify they are secure.** If you need to release the wires again, push down the terminal tabs on the sides of the UWP.



This wiring is just an example, yours may vary.

Terminal designations

Conventional Systems		Heat pump systems	
Terminal	Description	Terminal	Description
S/S	Input for a wired indoor, outdoor sensor	S/S	Input for a wired indoor, outdoor sensor
Y	Compressor Stage 1	Y	Compressor Stage 1
Y2	Compressor Stage 2	Y2	Compressor Stage 2
G	Fan Relay	G	Fan Relay
C	24VAC Common wire from secondary side of cooling transformer (if 2 transformers)	C	24VAC Common wire from secondary side of cooling transformer
K*	Connect to K on Wire Saver Module	K*	Connect to K on Wire Saver Module
U/U**	Relay for humidifier, dehumidifier, or ventilator	U/U**	Relay for humidifier, dehumidifier, or ventilator
A		L/A	Connect to compressor monitor
W	Heat Stage 1	O/B	Changeover valve for heat pumps
W2	Heat Stage 2	Aux	Backup Heat
		E	Emergency Heat
R	24 VAC Heating transformer	R	24 VAC Heating transformer
Rc	24 VAC Cooling transformer	Rc	24 VAC Cooling transformer

* The THP9045A1098 Wire Saver Module is used on heat/cool systems when you only have four wires at the thermostat and you need a fifth wire for a common wire. Use the K terminal in place of the Y and G terminals on conventional or heat pump systems to provide control of the fan and the compressor through a single wire—the unused wire then becomes your common wire. See THP9045 instructions for more information.

** See note on Wiring U terminals on the following page.

Setting Slider Tabs

Set R Slider Tab, see Figure 9.

- Use built-in jumper **(R Slider Tab)** to differentiate between one or two transformer systems.
- If there is only one R wire, and it is connected to the **R**, **Rc**, or **RH** terminal on the old thermostat, set the slider to the **up** position **(1 wire)**.
- If there is one wire connected to the **R** terminal and one wire connected to the **Rc** terminal, set the slider to the **down** position **(2 wires)**.

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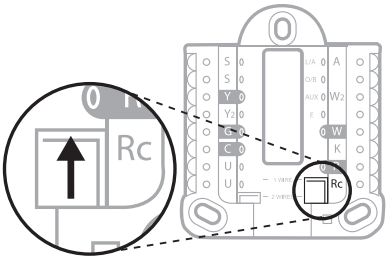

Set U Slider Tab, see Figure 10.

- Use built-in jumper (U Slider Tab) for IAQ device.
- When the **U Slider Tab** is in the down position **(2 wires)** the U contacts are a dry set of contacts.
- If your IAQ device is powered by the cooling transformer, move the **U Slider Tab** to the up position (1 wire). When this is done, the lower U terminal is internally jumped to the Rc terminal. In this application, you would hook up one wire from your IAQ device to the upper U terminal and the other to the common side of the cooling transformer. The 1 wire setting is most commonly used when using a fresh air damper for ventilation or using low speed fan for dehumidification.
- See wiring examples on the next page.

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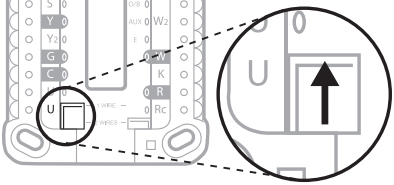

Whole house humidifier, dehumidifier, or ventilator

Using U Slider Tab

Wired to humidifier, dehumidifier or ventilator with built-in transformer.

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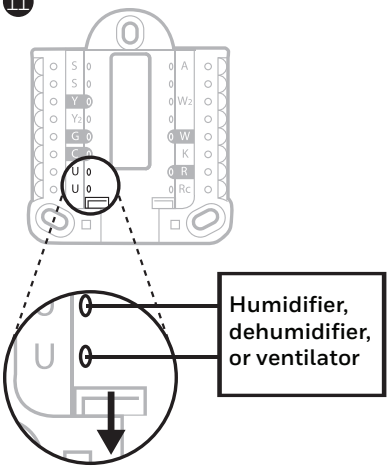

Wired to fresh air damper powered by furnace transformer.

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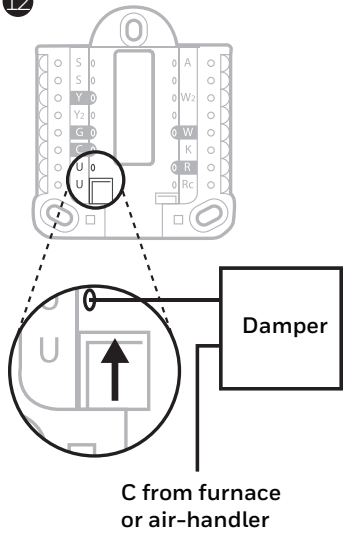

Wired to humidifier, ventilator, or damper powered by external transformer

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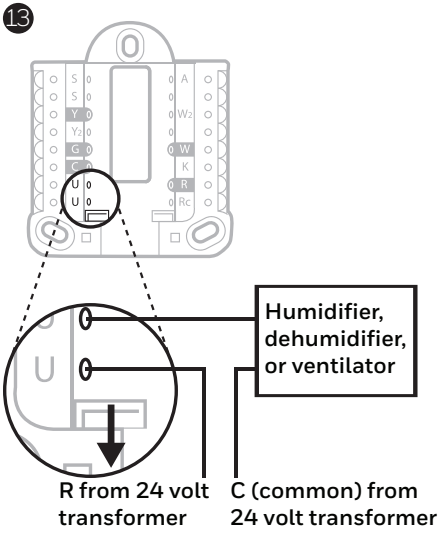

Wired to low speed fan terminal on HVAC for dehumidification

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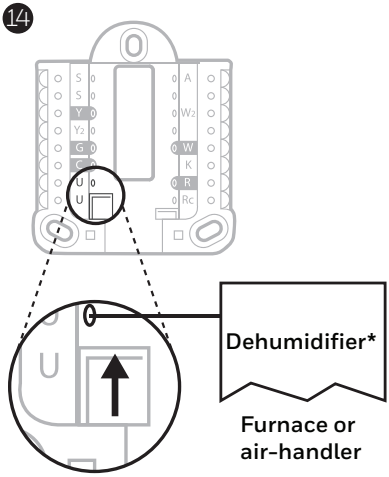


* Label for this terminal varies by equipment

Wiring

NOTES:

1. Use 18- to 22- gauge thermostat wire. Shielded cable is not required.
2. Set the R Slider Tab on the UWP to the up position (1 wire) for 1 transformer systems or the down position (2 wires) for 2 transformer systems. See "Setting Slider Tabs" on page 4.
3. Set the U Slider Tab as shown in the diagrams on page 4.

Conventional systems

1H/1C System (1 transformer)

R	Power
Rc	[R+Rc joined by Slider Tab]
Y	Compressor contactor
C	24VAC common
W	Heat relay
G	Fan relay

1H/1C System (2 transformers)

R	Power (heating transformer)
Rc	Power (cooling transformer)
Y	Compressor contactor
C	24 VAC common from cooling transformer
W	Heat relay
G	Fan relay

2H/2C System (1 transformer)

R	Power
Rc	[R+Rc joined by Slider Tab]
Y	Compressor contactor (stage 1)
C	24VAC common
W	Heat relay (stage 1)
G	Fan relay
W2	Heat relay (stage 2)
Y2	Compressor contactor (stage 2)

Hot Water Relay Panel

R	Power
Rc	[R+Rc joined by Slider Tab]
W	Heat Relay
C	24VAC common

NOTE: If the panel does not provide 24 volts AC at R and C, set the slider to down position and wire a separate transformer to Rc and C.

Heat-only System with Fan

R	Power
Rc	[R+Rc joined by Slider Tab]
C	24VAC common
W	Heat relay
G	Fan relay

Cool-only System with Fan

R	Power
Rc	[R+Rc joined by Slider Tab]
Y	Compressor contactor
C	24VAC common
G	Fan relay

Heat pumps systems

1H/1C Heat Pump System

R	Power
Rc	[R+Rc joined by Slider Tab]
Y	Compressor contactor
C	24VAC common
O/B	Changeover valve
G	Fan relay

2H/2C Heat Pump System

R	Power
Rc	[R+Rc joined by Slider Tab]
Y	Compressor contactor (stage 1)
C	24VAC common
O/B	Changeover valve
G	Fan relay
Y2	Compressor contactor (stage 2)
L	Heat pump fault input

2H/1C Heat Pump System

R	Power
Rc	[R+Rc joined by Slider Tab]
Y	Compressor contactor
C	24VAC common
O/B	Changeover valve
G	Fan relay
Aux	Auxiliary heat*
E	Emergency heat relay*
L	Heat pump fault input

3H/2C Heat Pump System

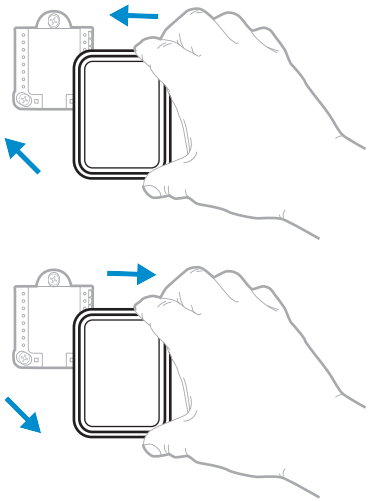
R	Power
Rc	[R+Rc joined by Slider Tab]
Y	Compressor contactor (stage 1)
C	24VAC common
O/B	Changeover valve
G	Fan relay
Aux	Auxiliary heat*
E	Emergency heat relay*
Y2	Compressor contactor (stage 2)
L	Heat pump fault input

NOTE: Do **NOT** use **W** for heat pump applications. Auxiliary heat must wire to **AUX** or **E**.

* If you do not have separate wires for the Aux and E terminals, connect the wire to the Aux terminal.

Mounting thermostat

1. Push excess wire back into the wall opening.
2. Close the UWP door. It should remain closed without bulging.
3. Align the UWP with the thermostat, and push gently until the thermostat snaps in place.
4. If needed, gently pull to remove the thermostat from the UWP



Installer setup

The display will walk you through equipment setup, connecting to wireless sensors and connecting to Wi-Fi.

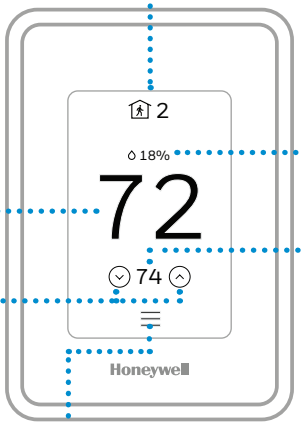
How to use your thermostat

The screen will wake up by pressing the center area of the displayed temperature.

Indoor Temperature
Displays the current indoor temperature.

Current Priority
Displays the type of priority and number of rooms being prioritized.

Indoor Humidity
Displays the current indoor humidity.



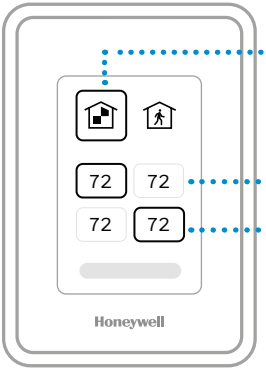
Adjust Temperature
Touch the up and down arrows to set your desired temperature.

Menu
Contains features such as mode, fan, schedule, priority, and other thermostat settings.

Desired Temperature
Displays the desired temperature.

How to use Priority

Priority creates an average temperature in your home based on specific rooms. This allows you to prioritize comfort where you want it.



Selected Rooms
Rooms you manually select create an average temperature in your home.

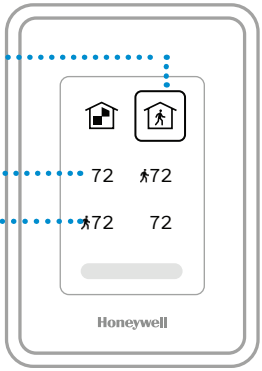
Unselected Room
Will not contribute to the average temperature.

Selected Room
Will contribute to the average temperature.

Active Rooms
Rooms with detected motion are automatically selected to create an average temperature in your home.

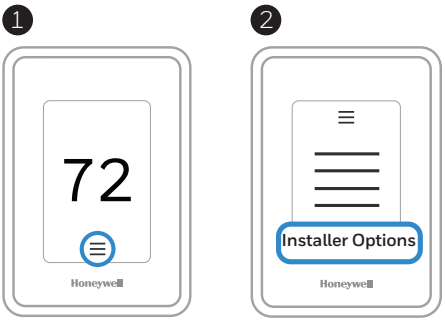
Room without Activity
No motion is detected. Will not contribute to the average temperature.

Room with Activity
Motion is detected. Will contribute to the average temperature.



How to find more options

1. Touch the menu button.
2. Scroll up and down for more options.



Menu options include

Installer Setup

- System type
- IAQ control (hum, dehum, vent) reminders

Installer Test

- Turn on heat, cool, or IAQ equipment

Devices & Sensors

- View, add, or remove RedLINK indoor sensors
- Identity wireless sensors
- Add wireless sensors Device Information

Thermostat Information

- MAC ID number
- IP address
- Date code
- Model number
- Build date
- Stat app
- Firmware version
- Stat app boot #
- Hardware

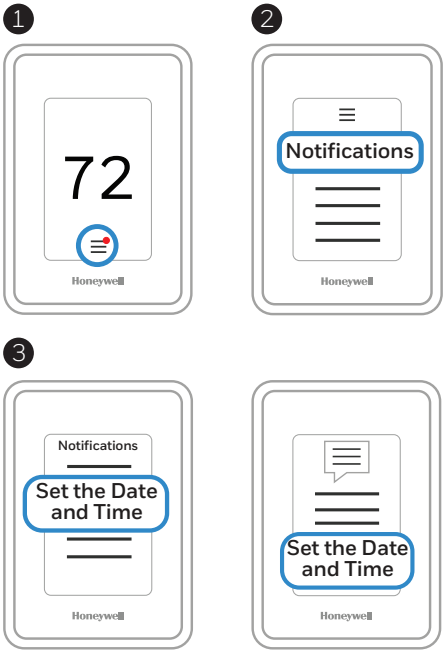
Dealer Information

Finding date code (pass code) for installer setup.

Open the **Menu** icon, and choose **Thermostat Information**. Write down date code.

Alerts and notifications

1. The red dot above the Menu icon indicates an active alert or notification. Touch the **Menu** icon to view active Alerts & Notifications.
2. Touch **Notifications** to open this menu.
3. Touch the alert message to see more information about the alert.



Troubleshooting

Screen is blank	• Check circuit breaker and reset if necessary. • Make sure power switch at heating and cooling system is on. • Make sure furnace door is closed securely.
Screen is difficult to read	• Check setting in **MENU**/ **Preferences** / Inactive backlight brightness or Inactive sleep backlight brightness
Heating or cooling system does not respond	• Touch **MENU** to go to system mode. Set to heat. Make sure the heat setpoint is above the room temperature. • Touch **MENU** to go to system mode. Set to cool. Make sure the cool setpoint is below the room temperature. • Check circuit breaker and reset if necessary. • Make sure power switch at heating & cooling system is on. • Make sure furnace door is closed securely.
Temperature settings do not change	Make sure heating and cooling temperatures are set to acceptable ranges: • Heat: 40 °F to 90 °F (4.5 °C to 32.0 °C) • Cool: 50 °F to 99 °F (10.0 °C to 37.0 °C)
"Cool On" or "Heat On" is flashing	• Compressor protection feature is engaged. Wait 5 minutes for the system to restart safely, without damage to the compressor.
Aux heat runs in cooling	• For heat pump systems, verify there is not a wire attached to W on UWP systems. See "Heat pumps systems" on page 7.
Cool runs with a call for heat	• For heat pump systems, verify there is not a wire attached to W on UWP systems. See "Heat pumps systems" on page 7.
Heat runs with cooling	• Verify there is not a wire attached to W for heat pump systems. See "Wiring" on pages 6-7.

CAUTION: ELECTRICAL HAZARD
Can cause electrical shock or equipment damage. Disconnect power before beginning installation.

CAUTION: EQUIPMENT DAMAGE HAZARD
Compressor protection is bypassed during testing. To prevent equipment damage, avoid cycling the compressor quickly.

CAUTION: MERCURY NOTICE
If this product is replacing a control that contains mercury in a sealed tube, do not place the old control in the trash. Contact your local waste management authority for instructions regarding recycling and proper disposal.

Specifications

Temperature Ranges
Heat: 40 °F to 90 °F (4.5 °C to 32.0 °C)
Cool: 50 °F to 99 °F (10.0 °C to 37.0 °C)

Operating Ambient Temperature
32 °F to 120 °F (0 °C to 48.9 °C)

Shipping Temperature
-20 °F to 120 °F (-28.9 °C to 48.9 °C)

Operating Relative Humidity
5% to 90% (non-condensing)

Physical Dimensions in inches (mm) (H x W x D)
T10 PRO Wi-Fi Thermostat:
4.9" x 3.7" x 0.93" (125.4 x 94.1 x 23.68)

UWP Mounting System (included):
2-9/32" x 2-13/64" x 2-43/64" (58 x 56 x 10)

Standard Installation Adapter (included):
3-29/32" x 3-57/64" x 21/32" (99 x 99 x 17)

Decorative Cover Plate – Medium (included):
5-11/64" x 5-1/2" x 11/16" (131.4 x 139.7 x 17.5)

Decorative Cover Plate – Large (THP2400A1068):
6-7/64" x 6-7/64" x 9/32" (155 x 155 x 7)

Electrical Ratings

Terminal	Voltage (50/60Hz)	Running Current
W Heating	20-30 Vac	0.02-1.0 A
(Powerpile)	750 mV DC	100 mA DC
W2 (Aux) Heating	20-30 Vac	0.02-1.0 A
E Emergency Heat	20-30 Vac	0.02-0.5 A
Y Compressor Stage 1	20-30 Vac	0.02-1.0 A
Y2 Compressor Stage 2	20-30 Vac	0.02-1.0 A
G Fan	20-30 Vac	0.02-0.5 A
O/B Changeover	20-30 Vac	0.02-0.5 A
L/A Input	20-30 Vac	0.02-0.5 A
U	20-30 Vac	0.02-0.5 A

Power Consumption
3 VA

5-year limited warranty

For Warranty information go to
http://customer.honeywell.com

Regulatory information

FCC REGULATIONS
47 CFR § 15.19 (a)(3)
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.

47 CFR § 15.21 (USA only)
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

47 CFR § 15.105 (b)
See **https://customer.honeywell.com/en-US/support/residential/codes-and-standards/FCC15105/Pages/default.aspx** for additional FCC information for this product.

IC REGULATIONS
RSS-GEN
This device complies with Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions:
1. This device may not cause interference; and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

The product should not be disposed of with other household waste. Check for the nearest authorized collection centers or authorized recyclers. The correct disposal of end-of-life equipment will help prevent potential negative consequences for the environment and human health.

resideo

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