

Braeburn®

Smart Wi-Fi Universal Thermostats –
Installation & Wiring

Course T302

What we'll cover – Wi-Fi Thermostats:

Click the buttons to jump to each section.

Thermostat Models and Accessories

Installer Setup Instructions

Typical Wiring Configurations

Technical Assistance

BlueLink® Smart Wi-Fi Thermostat Models



Flexible 7320



Affordable 7300/7305



Economical 7205



- Low cost Smart Wi-Fi solutions compared to more expensive competitors
- **Economical** 7205 model, 3H/2C. Wi-Fi works with or without a common wire on most systems
- **Affordable** 7300, 2H/1C Wi-Fi 7305, 3H/2C Wi-Fi
- **Flexible** 7320, 3H/2C Wi-Fi model employs wireless indoor, outdoor and humidity sensors



Wireless Sensors – Model 7320



7330 Wireless Remote Humidity Sensor²

- Controls humidifier or dehumidifier
- Mounts directly to return air plenum
- 1 wireless remote humidity sensor can be connected
- 24 VAC Powered



7490 Wireless Remote Outdoor Sensor²

- Display outdoor temperature
- Use for heat pump balance point control
- 1 wireless remote outdoor sensor can be connected
- Requires 2 "AA" Lithium batteries (included)



7390 Wireless Remote Indoor Sensor²

- Sense temperature at remote location or average with thermostat
- Up to 4 wireless remote indoor sensors can be connected
- Front LED light shows sensor status
- Requires 2 "AA" Alkaline batteries (included)



Wired Sensors – Models 7300, 7305, & 7320

5390 Wired Remote Indoor Sensor

- Contemporary style for any decor
- For use with compatible Braeburn thermostats
- Sense range of 40° to 99°F

5490 Wired Remote Outdoor Sensor

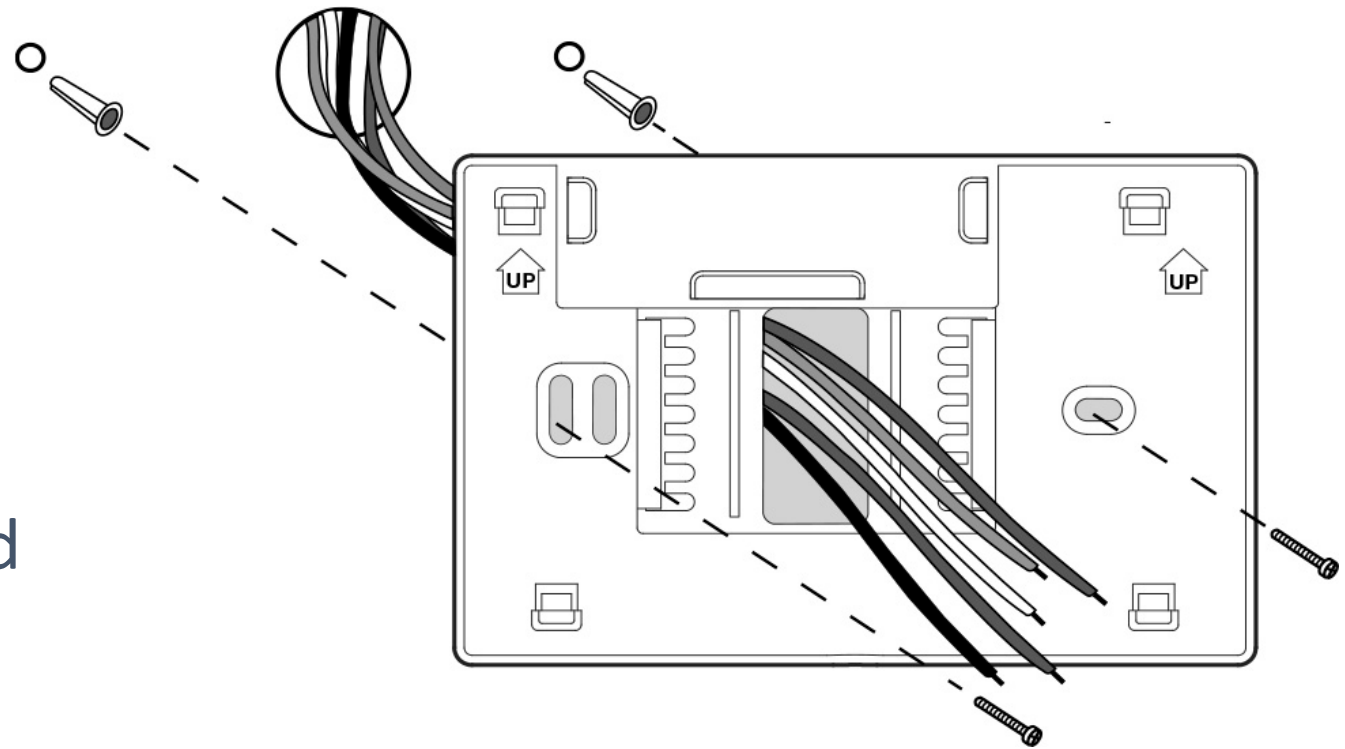
- Mounts outdoors up to 200 feet away
- Enables outdoor control functions on compatible Braeburn thermostats
- Sense range of -40° to 120°F

Installer Setup Instructions:

- Printed Installer and user instructions are included with each thermostat in:
- **English**
- **Spanish**
- **French**
- These instructions are also available online at: www.braeburnonline.com



1. Choose a wall location 4 to 5 ft above the floor in accordance with local codes that apply.
2. Remove the sub-base from the body of the thermostat.
3. Mount the sub-base as shown.
4. Drill 3/16" pilot holes in the mounting location. Use supplied anchors for drywall or plaster.



| Model | Staging | | Dual Fuel | Gas, Oil, Electric, Millivolt | Hydronic 2 or 3 Wire |
|-------|--------------|-----------|-----------|-------------------------------|----------------------|
| | Conventional | Heat Pump | | | |
| 7205 | 2/2 | 3/2 | Yes | Yes | 2 |
| 7300 | 1/1 | 2/1 | Yes | Yes | 2/3 |
| 7305 | 2/2 | 3/2 | Yes | Yes | 2/3 |
| 7320 | 2/2 | 3/2 | Yes | Yes | 2 |

Conventional Systems

Heat Only - Set to **11CONV** or **CONV 11**

| | |
|----|---|
| Rh | 24 v AC |
| W1 | Heat Relay |
| G | Fan Relay (if needed) |
| C | Optional 24v AC Transformer Common, required for Wi-Fi. |

1 Heat / 1Cool Single or Dual Transformer - Set to **11CONV** or **CONV 11**

| | |
|----|---|
| Rh | 24v AC (heating transformer) [1] |
| Rc | 24v AC (cooling transformer) [1] |
| W1 | Heat Relay |
| Y1 | Compressor Relay |
| G | Fan Relay |
| C | 24v AC Transformer Common, required for Wi-Fi [2] [3] |

[1] Remove jumper for dual transformer systems

[2] In dual transformer systems the common must come from the cooling transformer

[3] Model 7205 does not require a common for Wi-Fi with this system setup.

Hydronic Heat Only - Set to **11CONV** (Models 7300, 7305)

| | |
|----|---|
| Rh | 24 v AC |
| W1 | Zone Valve Power Close |
| V3 | Zone Valve Power Open |
| G | Fan Relay (if needed) |
| C | 24v AC Transformer Common, required for Wi-Fi [2] |

Hydronic Heat / 1 Cool - Set to **11HD** (Models 7300, 7305)

| | |
|----|---|
| Rh | 24 v AC heating [1] |
| Rc | 24 v AC heating |
| W1 | Heat Relay |
| Y1 | Compressor Relay |
| G | Fan Relay (if needed) |
| C | 24v AC Transformer Common, required for Wi-Fi [2] |

[1] Remove jumper for dual transformer systems.

[2] In dual transformer systems the common must come from the cooling transformer

2 Heat / 2 Cool Single or Dual Transformer - Set to **22CONV** or **CONV 22**

| | |
|----|---|
| Rh | 24 v AC (heating transformer) [1] |
| Rc | 24 v AC (heating transformer) [1] |
| W1 | Heat Relay Stage 1 |
| W2 | Heat Relay Stage 2 |
| Y1 | Compressor Relay Stage 1 |
| Y2 | Compressor Relay Stage 2, if needed |
| G | Fan Relay |
| C | 24v AC Transformer Common, required for Wi-Fi [2] [3] |

[1] Remove jumper for dual transformer systems.

[2] In dual transformer systems the common must come from the cooling transformer.

[3] Model 7205 does not require a common for Wi-Fi with this system setup.

HEAT PUMP SYSTEMS

1 Heat / 1 Cool - No Auxillary Heat - Set to *11HP* or *HP 11* **2 Heat / 2 Cool - No Auxillary Heat - Set to *32HP* or *HP 32***

| | |
|-----|--|
| Rh | 24 v AC |
| Rc | Connected to Rh with jumper wire |
| O/B | Reversing Valve, O - Cool Active, B - Heat Active |
| Y1 | Compressor Relay |
| G | Fan Relay |
| C | Optional 24v AC Transformer Common, required for Wi-Fi |

| | |
|-----|--|
| Rh | 24 v AC |
| Rc | Connected to Rh with jumper wire |
| O/B | Reversing Valve, O - Cool Active, B - Heat Active |
| Y1 | Compressor Relay Stage 1 |
| Y2 | Compressor Relay Stage 2 |
| G | Fan Relay |
| C | Optional 24v AC Transformer Common, required for Wi-Fi |

HEAT PUMP SYSTEMS

2 Heat / 1 Cool - With Auxillary Heat - Set to **21HP** (7300 Only)

| | |
|------|---|
| Rh | 24 v AC |
| Rc | Connected to Rh with jumper wire |
| O/B | Reversing Valve, O - Cool Active, B - Heat Active |
| Y1 | Compressor Relay Stage 1 (h/c) |
| W1/E | Auxillary Heat Relay Stage 2 |
| G | Fan Relay |
| C | Optional 24v AC Transformer Common, required for Wi-Fi |

2 Heat / 2 Cool - With Auxillary Heat - Set to **22HP** or **HP 22**

| | |
|-----|--|
| Rh | 24 v AC |
| Rc | Connected to Rh with jumper wire |
| O/B | Reversing Valve, O - Cool Active, B - Heat Active |
| Y1 | Compressor Relay Stage 1 (h/c) |
| W2 | Auxillary Heat Relay Stage 2 |
| E | Emergency Heat Relay [1] |
| G | Fan Relay |
| C | Optional 24v AC Transformer Common, required for Wi-Fi |
| L | Optional System Fault Monitor [2] |

2 Heat / 2 Cool - With Auxillary Heat - Set to **32HP** or **HP 32**

| | |
|-----|--|
| Rh | 24 v AC |
| Rc | Connected to Rh with jumper wire |
| O/B | Reversing Valve, O - Cool Active, B - Heat Active |
| Y1 | Compressor Relay Stage 1 (h/c) |
| Y2 | Compressor Relay Stage 2 (h/c) |
| W3 | (or Aux) Aux Heat Relay 3rd Stage |
| G | Fan Relay |
| C | Optional 24v AC Transformer Common, required for Wi-Fi |
| L | Optional System Fault Monitor [2] |

[1] Install a field supplied jumper between W2 and W1/E/W3 terminals if there is no separate emergency heat relay installed.

[2] If the L terminal is used, the 24 v AC common (C terminal) must be connected. Model 7205 excluded.

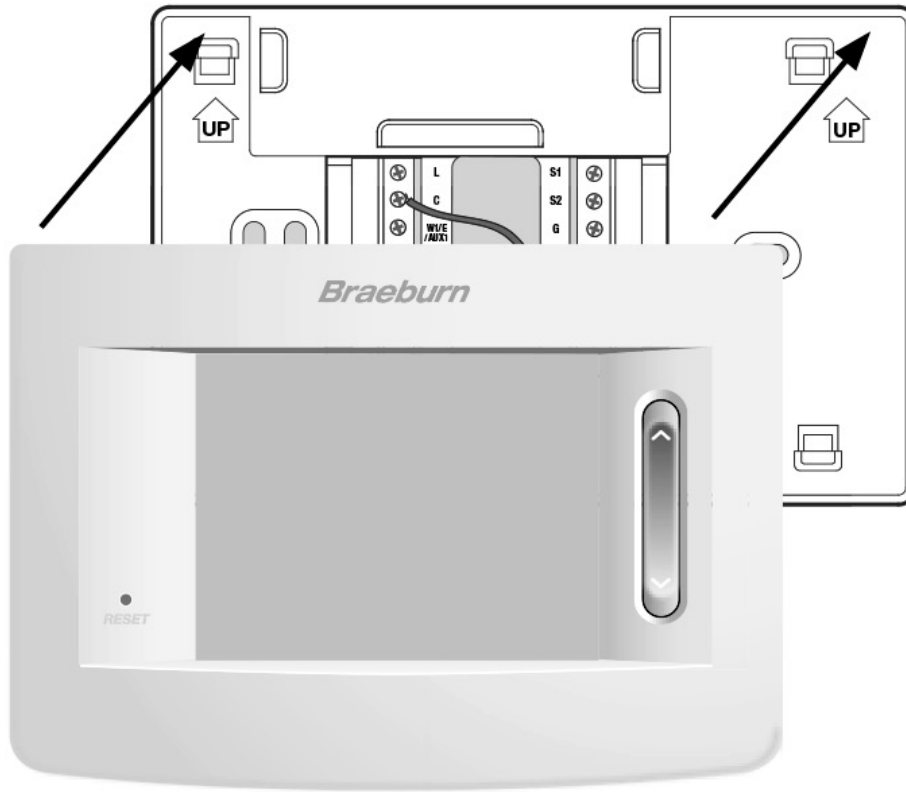
Note: Additional options are configured in the Installer Settings section

| | |
|----|---|
| S1 | Indoor or Outdoor Remote Sensor |
| S2 | [note 1, 3] |
| A | Economizer, Fresh Air or Output Control (7305 Only) |
| K | Share-a-Wire [®] Module [note2] |

[1] These terminals can be used to connect a Braeburn indoor or outdoor remote sensor.

[2] Can be used to share a wire on existing installations where a common connection (C wire) is required.

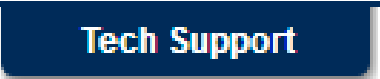
[3] 7205 excluded.



1. Line up the thermostat body with the sub-base.
2. Carefully push the thermostat body against the sub-base until it snaps in place.

3. Insert Quick Reference Card into slot on top of thermostat.



- Call: 866-268-8892
- Email: techsupport@braeburnonline.com
- Web: <http://braeburnonline.com>,
click on the Tech Support tab: 
- Select the thermostat model and click on Search as shown below:



Thermostat FAQ Search by Model

Select Model:



Braeburn® Quiz

**Thank you for taking this course.
Please take the quiz in the next
section.**