

COPELAND

Sensi Equipment Interface Module (Indoor + Outdoor)

For use with Touch 2 smart thermostat





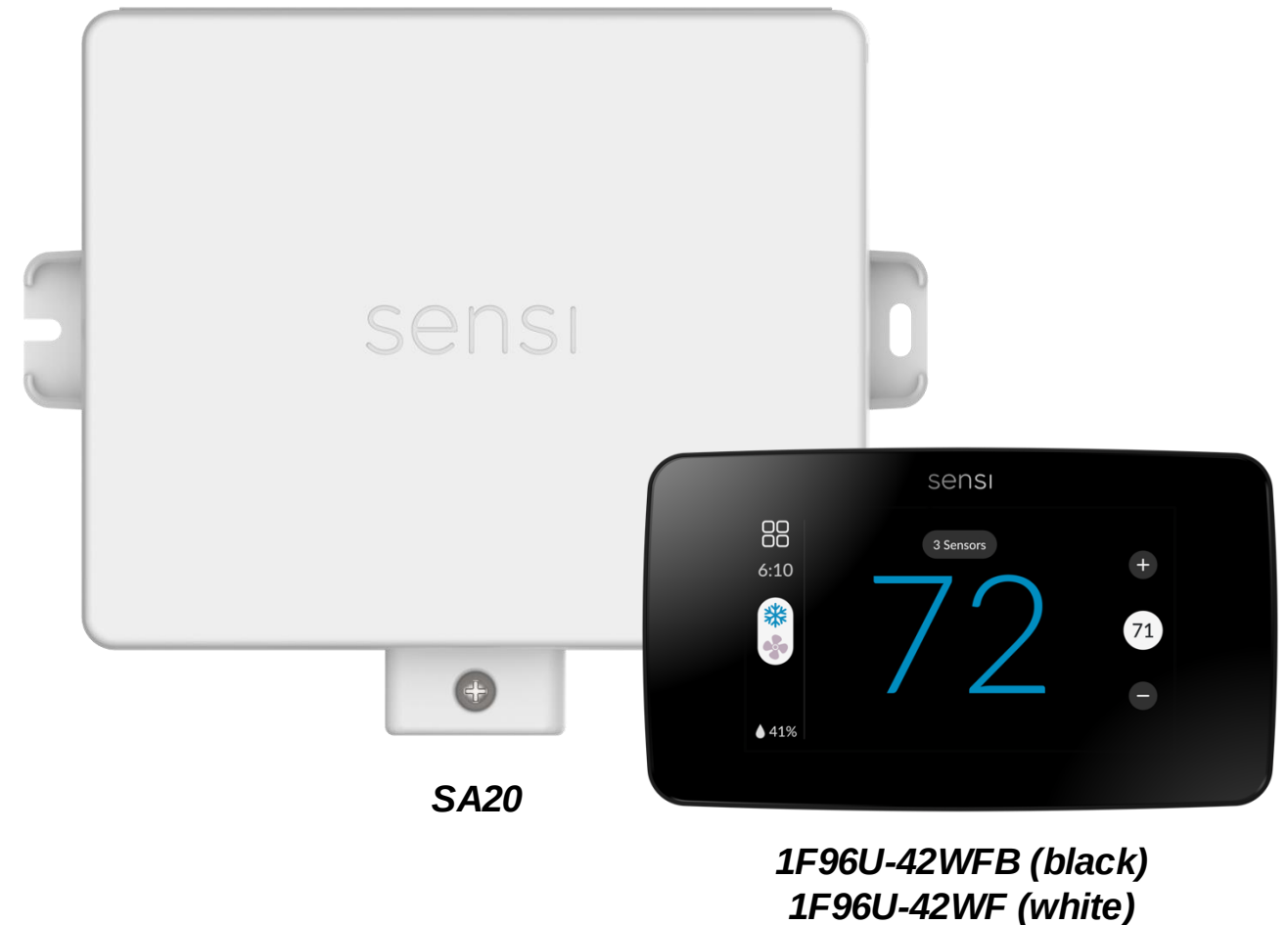
Business and Product Overview

Introduction

The Sensi Equipment Interface Module (Indoor + Outdoor) simplifies thermostat and heat pump installations by reducing the need to pull additional wires when doing a system upgrade. Plus, 3 universal accessory terminals to control all your IAQ products (humidification, dehumidification, ventilation) from one device.

Waterproof and durable, the Sensi EIM is made for indoor or outdoor use, again lessening the number of products you need to stock on your truck. The cover is tightly secured on the product, keeping a clean look without wires popping out.

Compatible with any Sensi Touch 2 smart thermostat.



Award-winning Sensi smart products

The award-winning Sensi smart lineup keeps homeowners connected to comfort and keep you connected to your customers.

A Brand You Can Trust

Sensi is highly-rated by customers for its simplicity. Our smart thermostats are ENERGY STAR® certified and the first to receive the ENERGY STAR Partner of the Year Sustained Excellence Award in 2022.

Connect to Customers

Contractor branding in-app & smart alerts put your company information at your customers' fingertips. So, when they need service — you're just a tap away. Plus, connect with new customers through our Sensi Find A Pro tool.

Simple & Reliable

Easy installation saves time and money on jobs, no matter the skill level of the technician. Reduce callbacks with a high-quality product that is easy for the homeowner to use.



What makes Sensi different?

Easy to Install, Easy to Use

- #1 Rated smart thermostat mobile app
- Compatible with majority of home HVAC systems
- Backed by 100 years of HVAC expertise



Our Privacy Promise to Customers

- **SENSI DOES NOT** use your smart thermostat activity for targeting or advertising purposes.
- **SENSI DOES NOT** sell your personal data to anyone, for any reason.
- Your thermostat settings are yours, and yours alone. **SENSI DOES NOT** make changes based on assumptions about your priorities.

79% of smart thermostat owners would switch to a different brand for more data privacy.

PRIVACY PROTECTION: For full details, review the Sensi Privacy Policy at sensi.copeland.com/en-us/legal. Note: if you sign up for a program with a third party, such as a utility or controller, details and terms for that program are between you and the third party, not Copeland, and may include additional data collection. Certain add-on services require additional data to operate as intended. These services are not required and are optional.

Why Sensi?

SUPER EASY!

Super easy to install! Took me literally 10 minutes!!! I just needed a basic on/off unit. I watched a video with suggestions to take a picture of the wires and label. Works just fabulous!

How did we live without it!

Got this for our home. So happy we did. We can control it from two phones, and our Alexa. So great. Before we arrive home, we can turn the heat up so we arrive home to a warm house!



Energy Star Partner
of the Year
2020 | 2021 | 2022



Dealer Design Awards
2014 | 2018 | 2019



First Smart
Thermostat to win
JD Power Award



Best Overall
Smart Thermostat
2017 | 2018 | 2019 | 2020

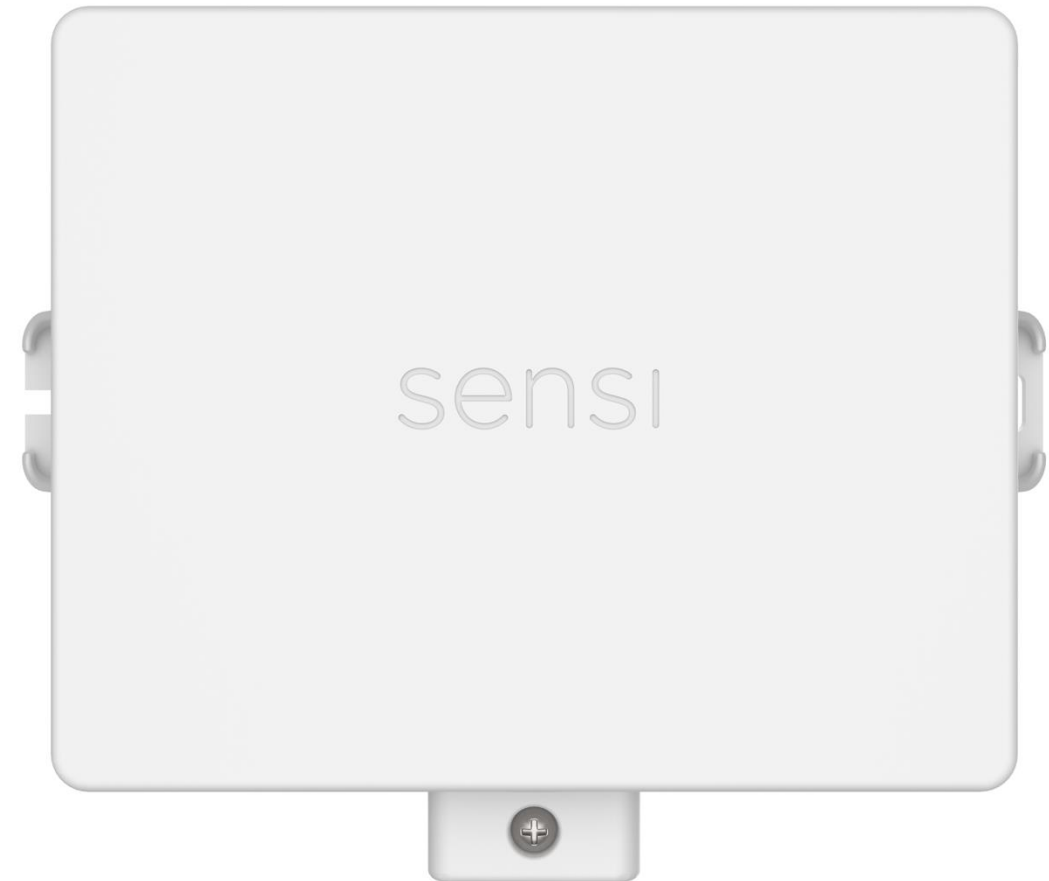


Best Connected
Thermostat
2022

Sensi Equipment Interface Module (Indoor + Outdoor)

Features

- Works with Sensi Touch 2 smart thermostat
- Simplified install without pulling additional wires
- Sensi Connect sub-GHz technology offers long range connectivity between products with less interference
- Three universal accessory terminals for IAQ control
- Same module for both indoor (EIM) and outdoor (ERM) applications



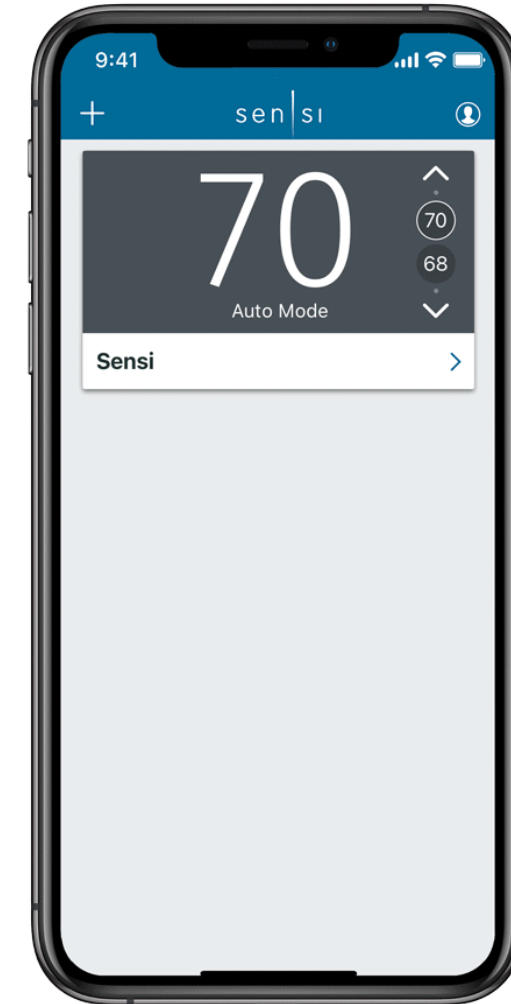
Sensi Partner Program Overview: Benefits

Use Contractor Mode to automatically add your digital branding to every Sensi smart thermostat you install, keeping you top of mind when a customer needs maintenance or service. Your branding will also be on monthly usage reports, service alerts, mobile app and service reminders.

EASY Steps to Register a Thermostat:

1. Download the Sensi App and sign into your Sensi account.
2. Press and hold the Sensi logo at the top of the app dashboard for five seconds. If you don't already have a Sensi Partner Program account, tap Become a Sensi Partner. If you already have an account, tap OK.
3. Tap Contractor Mode at the top of the dashboard.
The first time you use Contractor Mode, the Sensi app needs to find the company information that you supplied when you registered at sensi.copeland.com/en-us/support/contractor-mode. Enter the phone number used to register to proceed.
4. Select **Register a Thermostat** and scan the code on the **back** of the thermostat.

That's it! You can register additional thermostats or select **Back** to return to the **Contractor Mode** menu.



Click [here](#) or scan this QR code to sign up today!

Sensi Family Overview



SENSI SMART THERMOSTATS

Easy install for you, upgraded features and convenient comfort for your homeowners.

The award-winning Sensi smart thermostats keep homeowners connected to comfort and keeps you connected to your customers. Sensi Partners get access to program benefits including homeowner leads, contractor branding, custom literature and free online training. Choose from Sensi smart thermostat, Sensi Touch smart thermostat Sensi Touch 2 smart thermostat. Sensi Touch 2 now works with Sensi room sensors and outdoor sensors.

Sensi room sensor

RS01-SG
RS03-SG (3-pack)

Sensi Touch 2 smart thermostat

Available in black and white
1F96U-42WFB, 1F96U-42WF

Sensi Touch smart thermostat

Available in black, white and silver
1F95U-42WFB, 1F95U-42WF, 1F95U-42WFS

Sensi smart thermostat

1F87U-42WF



SENSI MULTIPLE THERMOSTAT MANAGER

Light commercial solutions for simple comfort control

Sensi Multiple Thermostat Manager gives facility managers the power to control all their Sensi thermostats in one place.

Why Switch to Sensi?

- Easy to use – reduces callbacks
- Universal system compatibility – Sensi accommodates most HVAC system types
- Uses the highest rated smart thermostat app in the industry
- Award-winning brand



**SENSI SUPPORT WHEN
& WHERE YOU NEED IT**

SUPPORT TEAM HOURS
Monday-Friday 7am-7pm (CST)
Saturday-Sunday 8am-5pm (CST)
888-605-7131

Leveraging Copeland's HVAC Expertise

OVER 100 YEARS of HVAC experience

MAJORITY OF RESIDENTIAL HVAC SYSTEMS feature Copeland parts

ONE IN FIVE HOMES in the U.S. has an Copeland thermostat

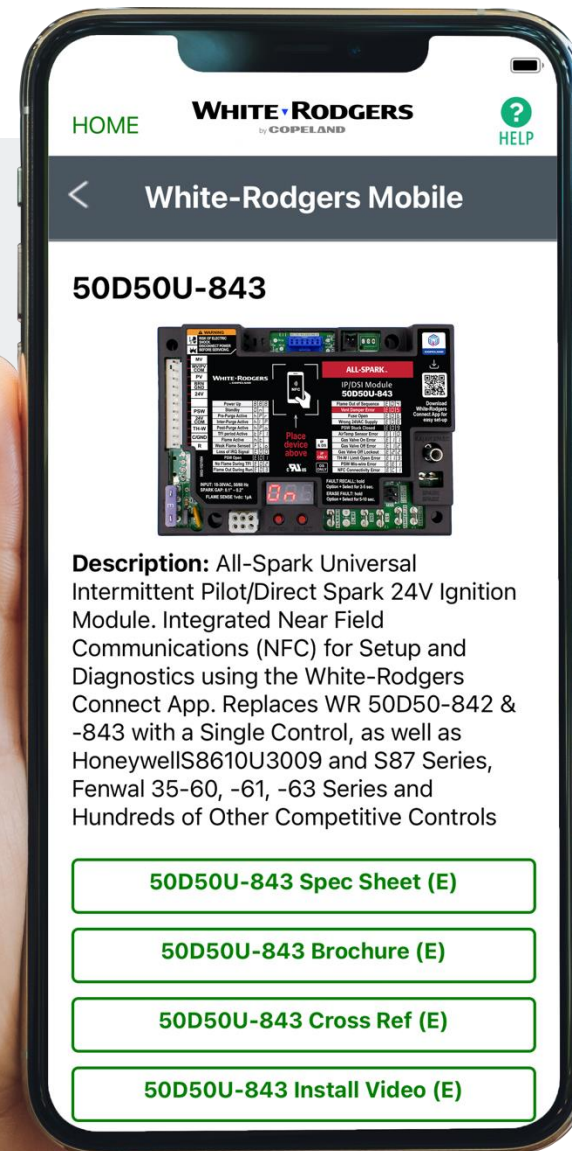
SECOND-LARGEST MANUFACTURER of residential thermostats in the U.S



WR Mobile App

Find the right part while on the job.

Search by OEM, Competitor and White-Rodgers part numbers.



Your on-the-go resource for:

- Complete cross reference
- Product information and spec sheets
- Installation information and videos
- Wiring diagrams
- Select product by features
- Priority technical support

WR Mobile App

Search for “WR Mobile” in both Apple and Google Play Stores

Desktop Version

Access the online version [HERE](#)



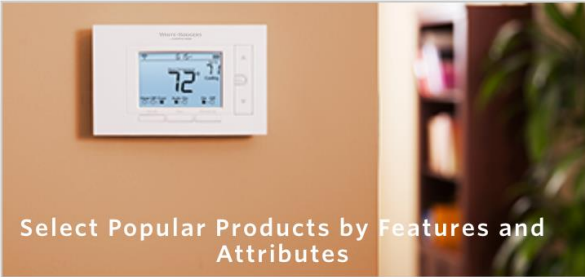
White-Rodgers Cross Reference

Go to: <https://webapps.copeland.com/wrproductselector/>

- Enter the Model Number or click on: Search Replacement Heating Controls by Major OEM Brand

COPELAND**WHITE-RODGERS™**

White-Rodgers Cross-Reference and Product Information



Select Popular Products by Features and Attributes



Search Replacement Heating Controls by Major OEM Brand



Technical Overview

Sensi Equipment Interface Module at a glance



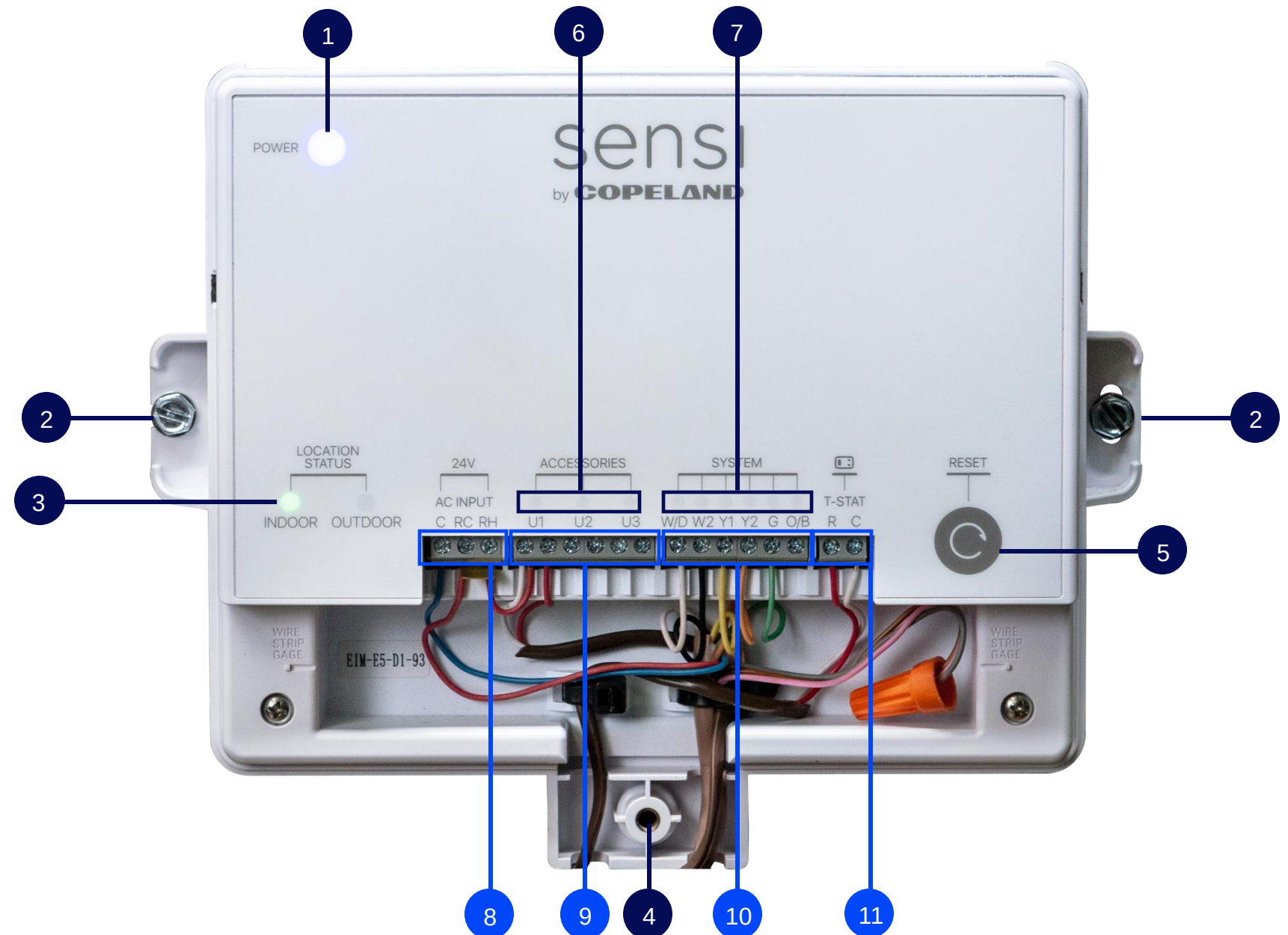
- Universal (Single Stage, Multi-Stage, Heat Pump compatible)
- Professional 5-year warranty on SA20 (EIM), SK20B (EIM + Touch 2 bundle)

Terminal Designations

24V			ACCESSORIES								SYSTEM								T-STAT			
CRCRH			U1U1U2U2U3U3								W/DW2Y1Y2GYO/B								RC			
Model	Program Options			Max Stages Heat/Cool			Applications				Power Source		Selectable Performance Features							Comfort & Convenience Features		
Model Number	Wi-Fi Control Smart Home Compatible	7 Day	Non-Programmable	Conventional	Heat Pump	Gas/Oil/Electric	3 Wire Zone	Multivolt	PTAC Compatible	Battery	Hardwired (24 V)	Auto Changeover	Circulating Fan	EMR/Early Start Program	Temperature Limits	Keypad Lockout	Humidity Control	Dual Fuel Control	Remote Sensor	Filter Change Reminder	Auto DST Adjust	Permanent Memory
SA20 SK20B	✓	✓	✓	2/2	4/2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Sensi Equipment Interface Module

- 1 Power Indicator Light
- 2 Mounting Tabs
- 3 Application LED Light Indicator
- 4 Cover Fastener
- 5 Reset Button
- 6 Accessories LED Light Indicator
- 7 System LED Light Indicator
- 8 24V/AC Input Terminals
- 9 Accessories Terminals
- 10 System Terminals
- 11 24V Power to Thermostat



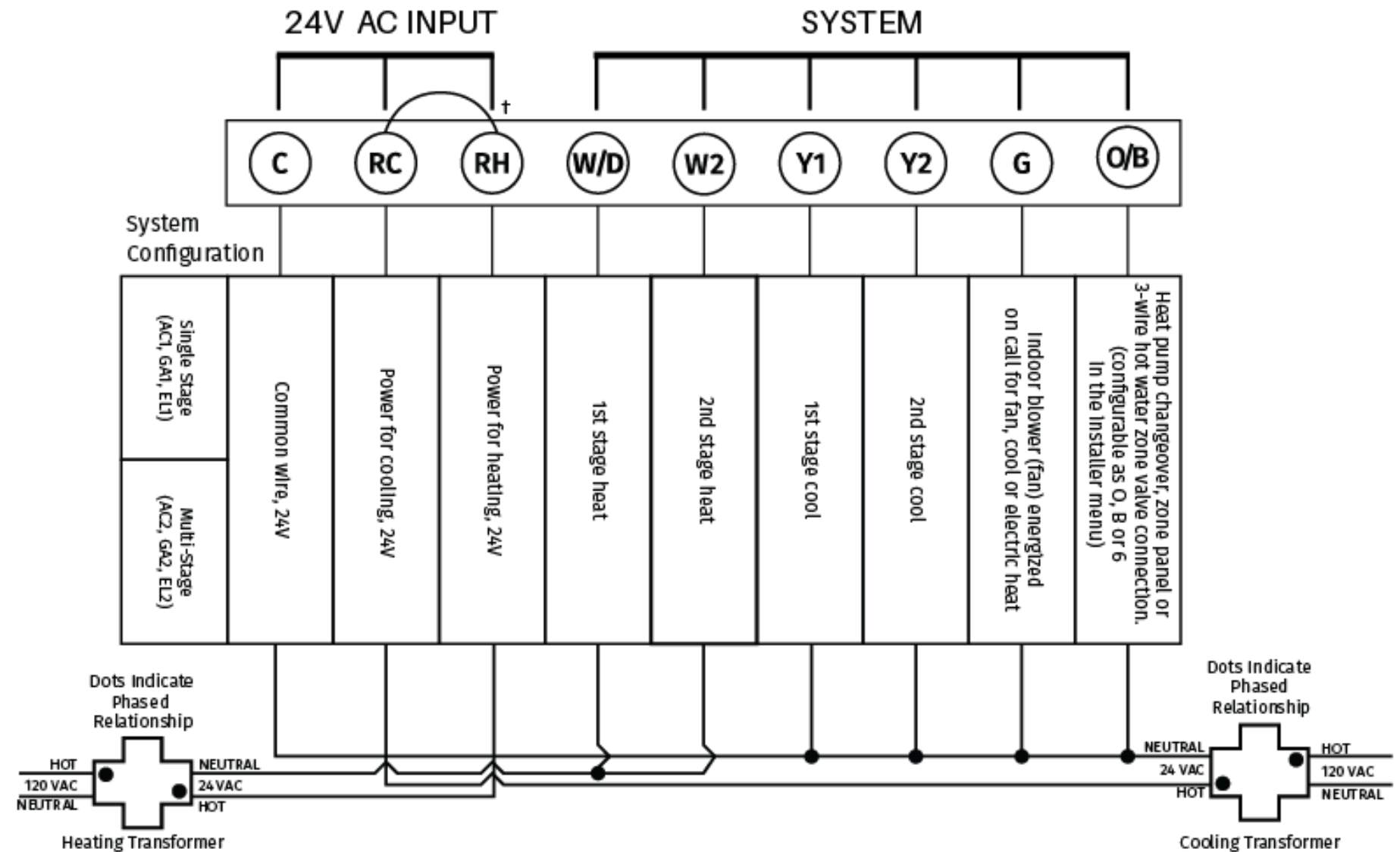
Sensi Equipment Interface Module Connections

Terminal Descriptions

Terminal	Conventional System Connection	Heat Pump System Connection
RC	Power for cooling, 24V	Power for cooling, 24V
RH	Power for heating, 24V	Power for heating, 24V
C	Common wire, 24V	Common wire, 24V
U1-U3	Accessory terminals	Accessory terminals
W/D	1st stage heat	1st stage auxiliary/emergency heat
W2*	2nd stage heat or dehumidifier	2nd stage auxiliary/emergency heat or dehumidifier
Y1	1st stage cool (compressor)	1st stage heat and cool (compressor)
Y2	2nd stage cool (compressor)	2nd stage heat and cool (compressor)
G	Indoor blower (fan)	Indoor blower (fan)
O/B	Heat pump changeover, zone panel or 3-wire hot water zone valve connection. (configurable as O, B or 6 in the installer menu)	Heat pump changeover (reversing valve) connection (configure as O or B in the installer menu)
R	Common wire, thermostat	Common wire, thermostat
C	System power, thermostat	System power, thermostat

EIM Wiring Guide – Conventional Systems

Typical wiring of a conventional system with up to 3-stage heat and 2-stage cool with two transformers

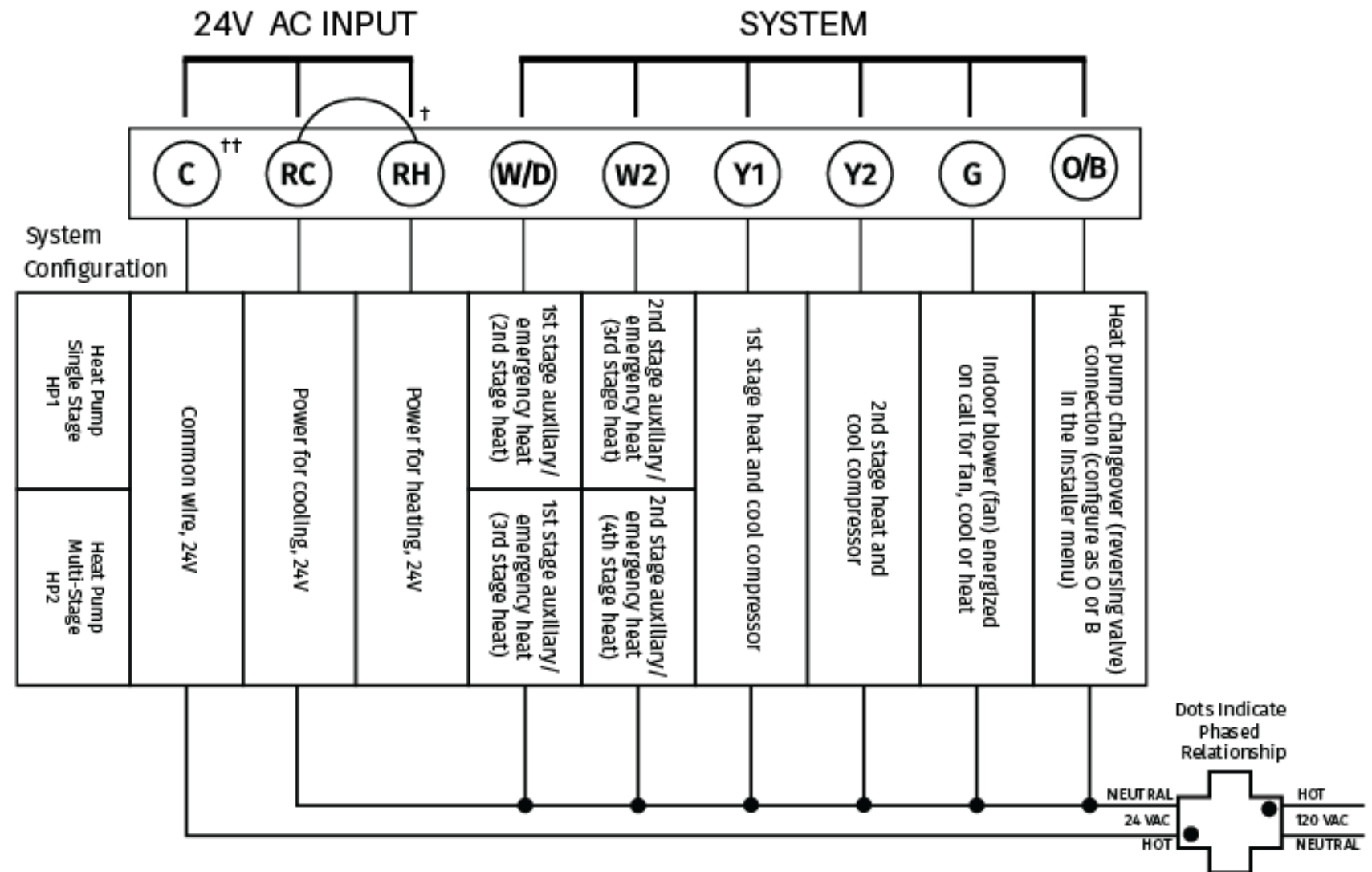


*Two transformers systems (separate RC and RH wires), Remove the jumper wire between RC/RH, located on the EIM control.

EIM Wiring Guide – Heat Pump Systems

Typical wiring of a heat pump system with up to 4-stage heat and 2-stage cool with one transformer

- 1 Remove jumpers if using separate transformers.
- 2 The changeover valve will be labeled O if energized in cool or B if energized in heat.
- 3 The auxiliary heat stage(s) are labeled differently on different heat pump air handlers. Most heat pumps applications only have one stage of auxiliary heat.



*Jumper wire between RC/RH, located on the EIM control.

EIM Wiring Guide

Wiring Humidification, Dehumidification and Ventilation

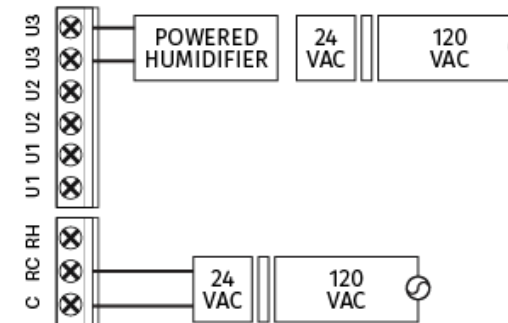
U terminals can be used for humidification, dehumidification or ventilation.

- 1 Any combination of relays (U1, U2, U3) can be used. They are set in the thermostat
- 2 Wire the U relay to the low speed fan for dehumidification control at the equipment. The EIM relay can be set to be normally-open or normally-closed in the thermostat installer setup

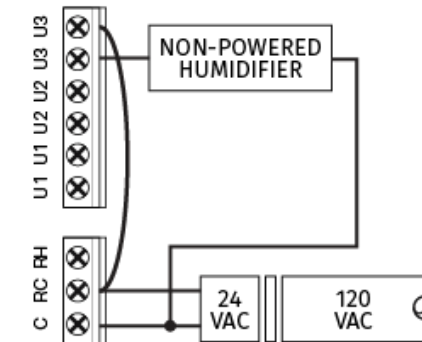
 Normally-open, dry contacts

 Normally-closed, dry contacts

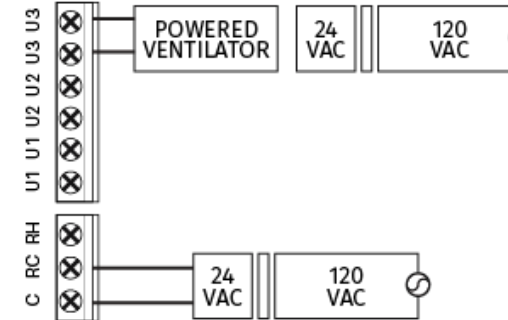
TYPICAL HOOKUP OF POWERED HUMIDIFIER



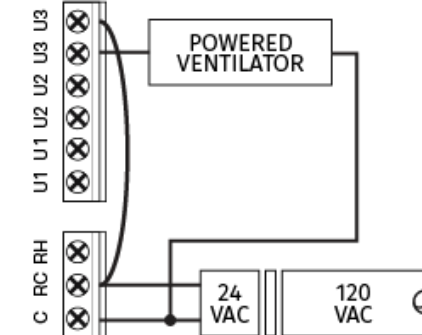
TYPICAL HOOKUP OF NON-POWERED HUMIDIFIER



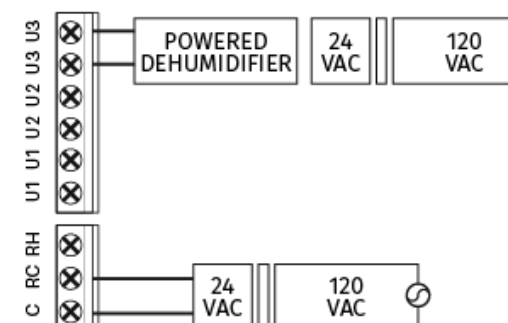
TYPICAL HOOKUP OF POWERED VENTILATION



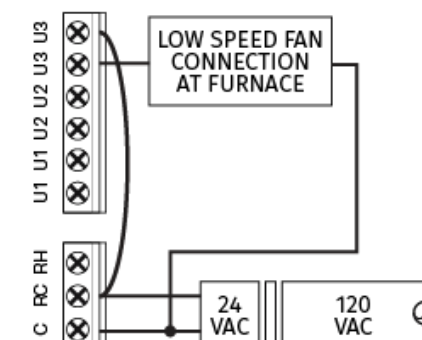
TYPICAL HOOKUP OF NON-POWERED VENTILATION



TYPICAL HOOKUP OF POWERED DEHUMIDIFIER
(WHOLE HOUSE DEHUMIDIFIER)



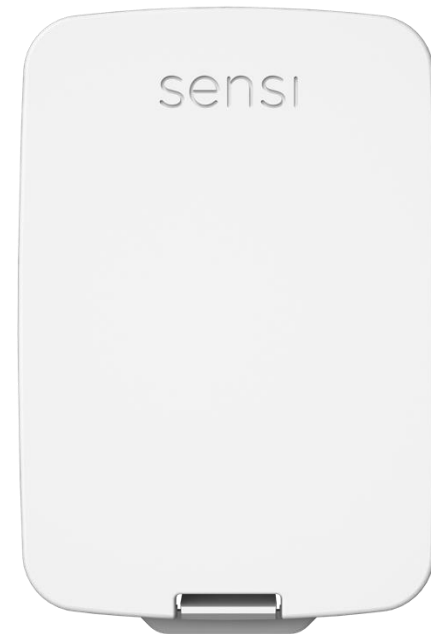
TYPICAL HOOKUP OF VARIABLE SPEED BLOWER
FOR DEHUMIDIFICATION IN LOW SPEED



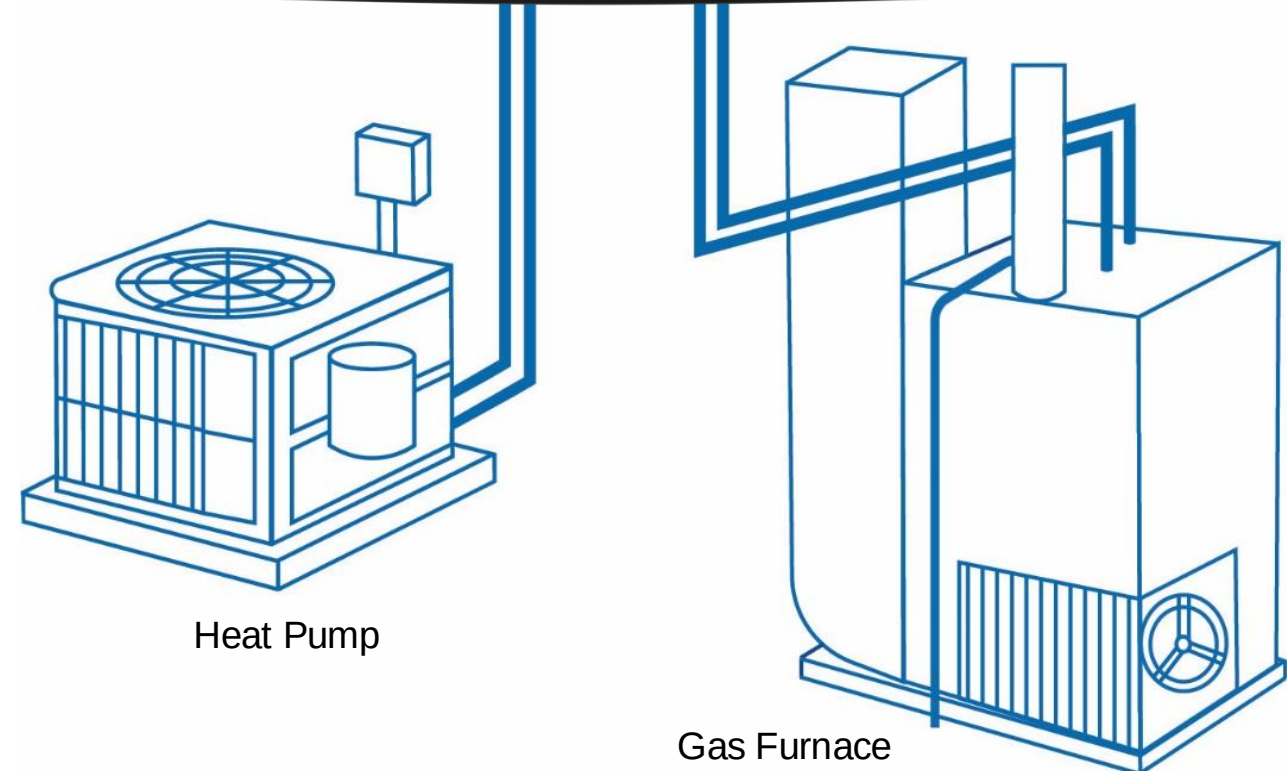
Sensi Outdoor Sensor/Dual Fuel

Dual fuel systems combine a heat pump and gas furnace. Sensi Touch 2 has four ways to control balance point and aux lockout:

- Sensi Dual Fuel logic
- Sensi outdoor sensor
- Internet/zip code
- EIM built-in temp sensor



Outdoor Sensor



Heat Pump

Gas Furnace

Competitive Features Comparison



Sensi EIM (indoor or outdoor)



RedLink EIM



RedLink EIM (Indoor)



RedLink ERM (Outdoor)



Sensi Touch 2



Focus Pro



VisionPro 8000



Prestige IAQ



T10+

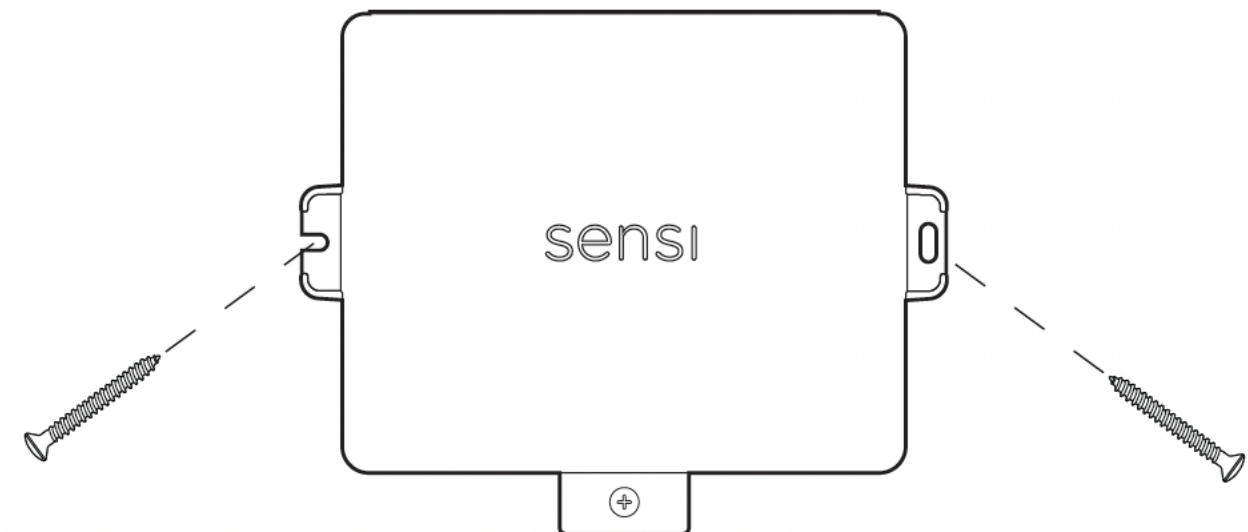
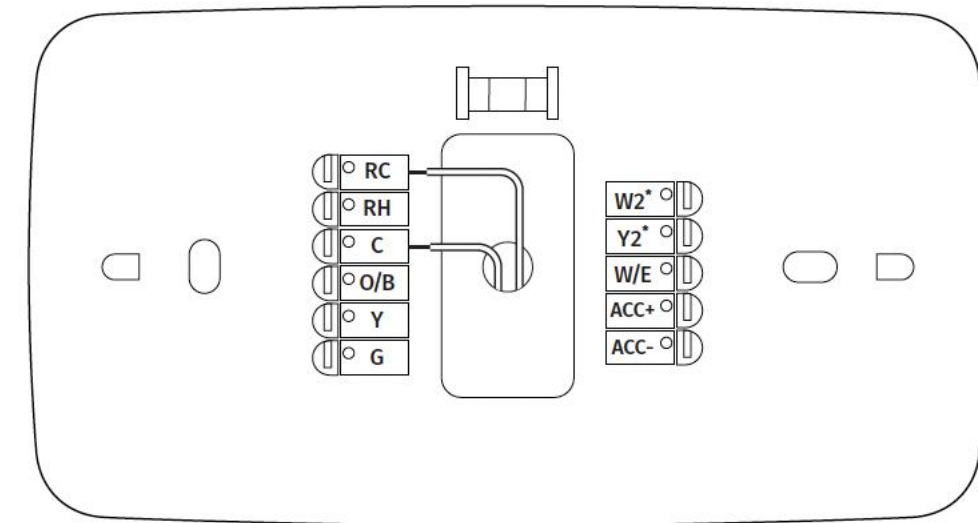
Stages	4H/2C HP 3H/2C Conv	3H/2C HP 2H/2C Conv	4H/2C HP 3H/2C Conv	4H/2C HP 3H/2C Conv	4H/2C HP 3H/2C Conv
Dual Fuel	Yes	Yes	Yes	Yes	Yes
IAQ Control	Hum, Dehum, Ventilation	None	Hum, Dehum, Ventilation	Hum, Dehum, Ventilation	Hum, Dehum, Ventilation
Sensors	Outdoor & Indoor (wireless)	Outdoor (wireless) RAS (wired)	Outdoor & Indoor (wireless) 4 Inputs (wired sensors or dry contact devices)	Outdoor & Indoor (wireless) 4 Inputs (wired sensors or dry contact devices)	Outdoor & Indoor (wireless) 4 Inputs (wired sensors or dry contact devices)
Communication	WiFi 900Mhz	WiFi via Gateway RedLINK (900MHz)	WiFi via Gateway RedLINK (900MHz)	WiFi via Gateway RedLINK (900MHz)	WiFi RedLINK (900Mhz)
Programming	Touchscreen	Buttons	Touchscreen	Touchscreen	Touchscreen
Thermostat Power	2-wire (or wall outlet – future)	2-wire or batt	2-wire or batt	2-wire	2-wire



Installation Overview

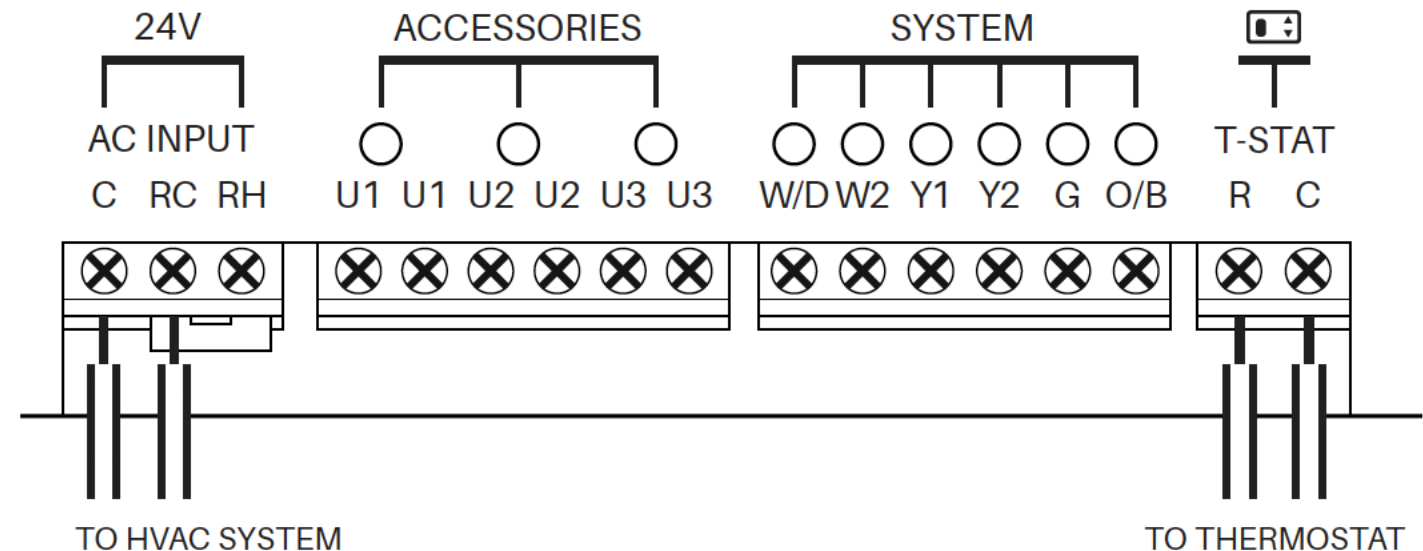
Mount the Thermostat & EIM

1. Turn off system power.
2. Mount your Sensi Touch 2 smart thermostat on the wall (if it is not there already), install a wire to the C terminal and another wire to either RC or RH terminal of the Sensi Touch 2 smart thermostat .
3. Using screws and anchors, mount the EIM near the HVAC equipment, or on the equipment itself.



Wire the EIM

1. Remove the cover to the EIM.
2. Install wires coming from the thermostat to the R and C terminals (under T-STAT)
3. Install power wires coming from the HVAC system to the C and RC or RH terminals (under 24V).*
4. Install wires for the HVAC system and Accessories based on the wiring diagrams provided.
5. Power back on the HVAC system.



*Remove jumper if using separate transformers

Connect EIM to Touch 2

1. When the Touch 2 is powered back up, Select **Menu** in the top left corner
2. Press **Advanced Setup**
3. Press **EIM**
4. This will display the EIM Configuration options. Press **Add**
5. Select if the EIM is being used **indoors** or **outdoors**



1



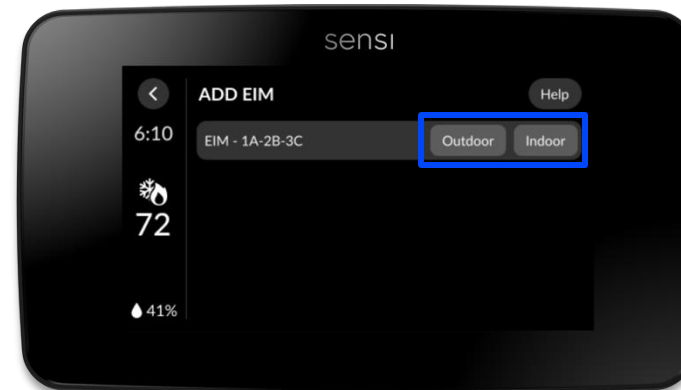
2



3



4



5

Configure Additional Accessories

1. Select **Menu**
2. Press **Advanced Setup**
3. Press **HVAC Equipment**
4. This will display the EIM Configuration options. Press **Configure**
5. Press **Additional Accessories**
6. For each accessory (hum, dehum, vent) that you wired to the EIM, **select** the terminal identifier next to it



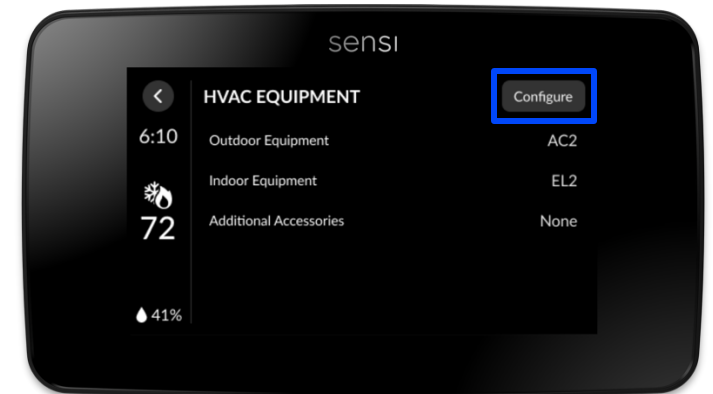
1



2



3



4



5



6

System Troubleshooting

Symptom	Possible Cause	Corrective Action
EIM status LED light solid red	EIM is not connected	Press and hold the RESET button to restart the pairing process. Once the pairing process has started, the LED light will be flashing green. Once pairing process is complete, the LED light will be solid green.
EIM not connecting to Sensi Touch 2 smart thermostat	1. EIM may be located too far from the thermostat 2. EIM signal is experiencing interference	Move the EIM closer and/or to a location that it gets better signal strength.
No Heat/ No Cool/ No Fan/ Blank Display (common problem)	1. Blown fuse or tripped circuit 2. Furnace power switch to OFF 3. Furnace blower compartment door panel loose or not properly installed 4. Loose connection to thermostat or system	1. Replace fuse or reset breaker 2. Turn switch to ON 3. Replace door panel in proper position to engage safety interlock or door switch 4. Tighten Connection
No Heat	1. Heating System requires service or thermostat requires replacement	1. Diagnostic: Set Mode to Heat and raise the setpoint above room temperature. Within five minutes the thermostat should make a soft click sound and “Heating” should appear on display. This sound indicates the thermostat is operating properly. If the thermostat does not click, try resetting the thermostat. If the thermostat does not click after being reset, contact your heating and cooling service person or place of purchase for a replacement. If the thermostat clicks, verify the heating system is operating correctly.
No Cool	1. System not set to Cool 2. Loose connection to the thermostat or system 3. Cooling System requires service or thermostat requires replacement	1. Diagnostic: Set Mode to Cool and lower setpoint below room temperature. Same procedures as diagnostic for “No Heat” condition except set the thermostat to Cool and lower the setpoint below the room temperature. There may be up to a five minute delay before the thermostat clicks in Cooling if the AC Protection feature is on.
Heat, Cool or Fan Runs Constantly	Possible short in wiring, thermostat, heat, cool, or fan system.	Check each wire connection to verify they are not shorted or touching other wires. If the condition persists, try resetting the thermostat.

Wi-Fi Troubleshooting

Symptom	Possible Cause	Corrective Action
No Wi-Fi Icon	1. Lost Wi-Fi credentials	1. Put Sensi in Wi-Fi setup mode and reconnect to Wi-Fi.
X Icon or X and Wi-Fi	1. Unsuccessful Wi-Fi connection 2. Lost connection 3. Wi-Fi router incompatibility or high firewall setting 4. Servers down	1. Incorrect home network password; retry with correct credentials. 2. Signal strength or interference. Reposition router and turn off additional devices until the cause is isolated. 3. Power cycle router off then on. Check router compatibility online at sensi.copeland.com and use recommended Wi-Fi settings. 4. Check server status online.
App Error	1. Cannot Create Secure Connection/Unable to connect to Sensi Network 2. Can't Connect to Sensi in Wi-Fi settings 3. Provisioning Error 4. Configuration Error 5. Authentication Error 6. Network Scan Error	1. Check the security code is entered correctly, turn off mobile Data, turn off network switch, force close app, forget networks, ensure the correct path has been selected, reboot thermostat and phone, and reset Network Settings on the phone. 2. Spinning icon, reset phone and thermostat. 3. Reset router, phone, and thermostat. Make sure router security has recommended settings. Try another device. 4. Hard reset the thermostat and force close the app. 5. Check that the home Wi-Fi Network Password is correct. Forget network password and reconnect. 6. SSID needs to be reformatted to eliminate 'non-standard' characters or symbols.

Sensi Support

Available 7 days a week.

sensi.copeland.com/en-us/support

support@sensicomfort.com

888-605-7131

Mon.–Fri. 7am–7pm, Sat. –Sun. 8am–5pm (CST)



Our commitment to you

Reliable product with over 100 years of industry experience.

More cross references than the competition at comparable prices.

Trusted by more OEMs than any other brand.

Simple and fast installation through innovative technology and product features.

Contractor tools and support to ensure success.



COPELAND

Thank you.