

# Wire Identification

## Audience

Professional Installers and Support Agents

## Summary

While a set industry standard is in place as a guideline for wiring thermostats, including color codes, it may not be relevant to every install. It is important to know your wires before installing a Zen Thermostat, as relying on color isn't always sufficient. To ensure that wires are installed correctly, it is best to take a photo of the existing wiring. This confirms original wiring, even though the industry standard and corresponding colors may not be relevant. It is also important to photograph the wiring coming from the thermostat to the HVAC unit, to ensure the control board wiring matches the thermostat wiring.

**\*\*\*The most important step for recalling your wiring is to take a photo of the existing wiring.**



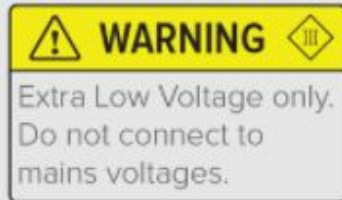
Wire	Color	Wire Logic
C	Blue/ Black	Common wire may be unused by your existing thermostat
R	Red	24 VAC power from the furnace's transformer
Rh	Red	24 VAC (dedicated to heat call)
Rc	Red	24 VAC (dedicated to cooling call)
G	Green	Fan
W / W1	White	Heat
Y/ Y1	Yellow	Cooling/Air Conditioner
O or O/B	Orange	For energizing the reversing valve during COOL mode
B or O/B	Blue	For energizing the reversing valve during HEAT mode
W2	*Color may vary	Second stage heat source, AUX or E (Emergency)
Y2	*Color may vary	Second stage cooling

To check for compatibility of your existing wiring to a Zen Thermostat, it is also important to check the gauge/size of the existing wiring. If the wiring is above 18 gauge, a Zen Thermostat may not be compatible.

### 3. Safety check

Is your system labeled 120V-240V?  
If so, your system is high voltage and is NOT compatible with ZEN.  
If you're unsure, please contact your home automation provider or HVAC installer.

Do you see thick wires with wire-nuts?  
If you do, your system is high voltage and is NOT compatible with ZEN.  
If you're unsure, please contact your home automation provider or HVAC installer.



### Exception and Escalations

If the above behavior persists and the items require assistance from Zen support, the service person or installer will collect the following information related to the Zen Thermostat on site.

- Photo of the originally installed thermostat wiring
- Photo of the wiring connected to the wall plate
- Photo of the back of the Zen Thermostat showing the serial number
- Remove the Zen Thermostat from the wall and on the back of the Zen Thermostat body the serial number is listed on a sticker at the side of the device

Send the photos to [support@zenecosystems.com](mailto:support@zenecosystems.com) and continue the escalation with Zen support.