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Briidea HTACC-02

Briidea HTACC-02 220V 240V Electric Heating Relay User Manual

Brand: Briidea | **Model:** HTACC-02

1. INTRODUCTION AND OVERVIEW

The Briidea HTACC-02 is an electric heating relay designed for use with 220V to 240V heating systems. It features a built-in 24V transformer, making it compatible with both 2-wire and 3-wire 24V thermostats. This all-in-one relay provides immediate activation for improved temperature control and comfort. It is intended as a replacement for various relay brands and is designed for easy installation on the side of an existing junction box.

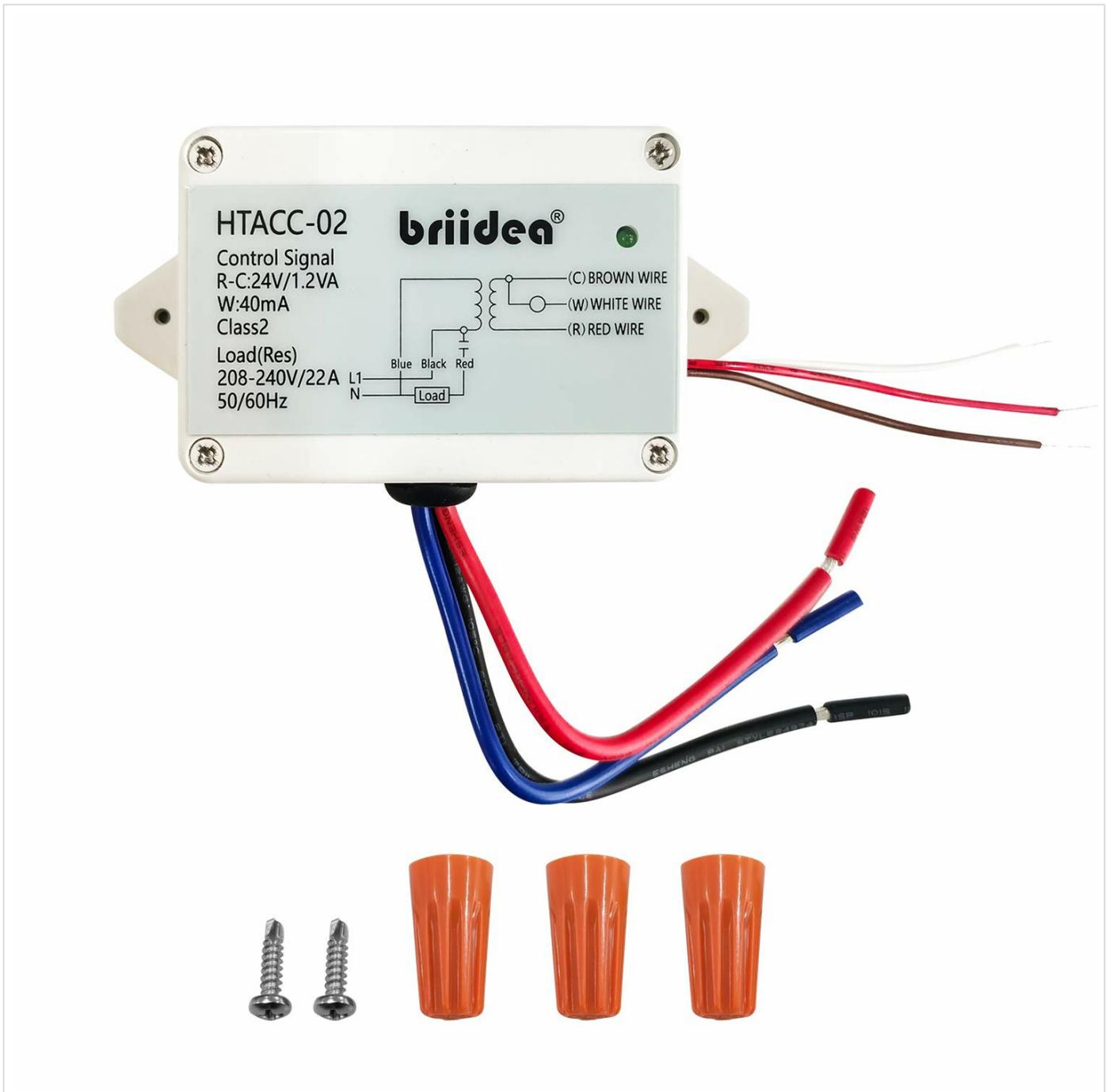


Image 1.1: The Briidea HTACC-02 Electric Heating Relay, showing its compact design, wiring terminals, and included installation accessories like wire nuts and mounting screws.

2. KEY FEATURES

- Compatible with 2-wire and 3-wire 24V thermostats.
- Integrated 24V transformer eliminates the need for an external power source for the thermostat.
- Suitable as a replacement for various heating relay brands.
- Provides immediate relay activation for precise temperature control.
- Designed for straightforward installation on the side of an existing junction box.

3. SPECIFICATIONS

Specification	Value
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Specification	Value
Model	HTACC-02
Input Voltage	208-240V AC, 50/60Hz
Load Rating	22A (Resistive)
Control Signal (R-C)	24V AC / 1.2VA / Class 2
Control Signal Current (W)	40mA
Ambient Operating Temperature	-20°C to 60°C (-4°F to 140°F)
Ambient Storage Temperature	-40°C to 80°C (-40°F to 175°F)
Humidity Limits	0 to 95% non-condensing
Terminal Wire Size	12 AWG
Mounting Type	Side of Junction Box Mount
Dimensions (L x W x H)	8.2 cm x 5.6 cm x 3.3 cm (approx. 3.2 x 2.2 x 1.3 inches)

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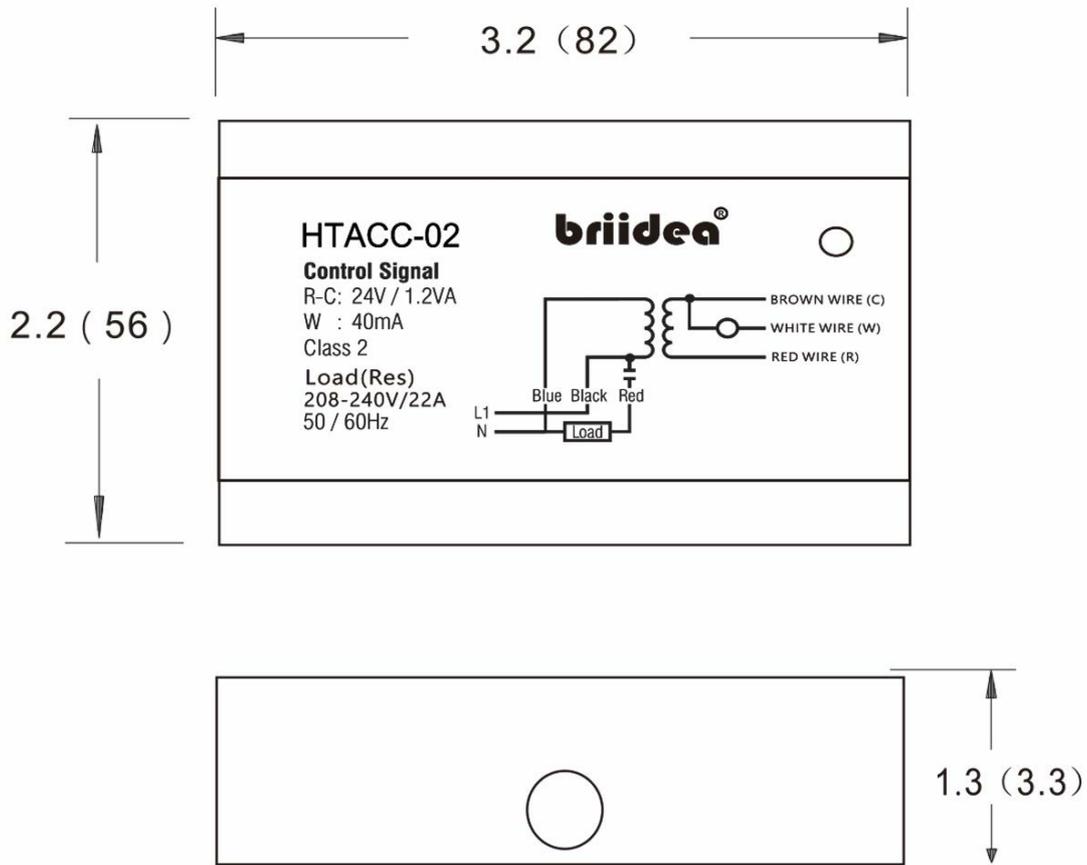


Image 3.1: Dimensional drawing of the Briidea HTACC-02 relay, showing approximate measurements in centimeters and inches.

4. SAFETY INFORMATION

WARNING: Risk of electrical shock. Installation and servicing must be performed by a qualified electrician or trained service personnel. Disconnect power before installing or servicing this device.

- Always turn off the main power supply at the circuit breaker before beginning any electrical work.
- Ensure all wiring connections are secure and comply with local electrical codes.
- Do not exceed the specified voltage and current ratings of the device.
- This device is designed for indoor use only, within the specified ambient temperature and humidity limits.

5. INSTALLATION

The Briidea HTACC-02 relay is designed for easy mounting on the side of an existing junction box. Follow these general steps and refer to the specific wiring diagrams for your thermostat type.

5.1 General Installation Steps

1. **Power Disconnection:** Turn off power to the heating system at the main circuit breaker. Verify power is off using a voltage tester.
2. **Mounting:** Mount the HTACC-02 relay to the side of the existing junction box using the provided screws. Ensure it is securely fastened.
3. **Wiring:** Connect the wires according to the appropriate wiring diagram below for either a 2-wire or 3-wire low-voltage thermostat.
4. **Secure Connections:** Use the provided wire nuts to ensure all connections are tight and insulated.
5. **Power Restoration:** Once all connections are secure and verified, restore power at the circuit breaker.

5.2 Wiring for a 2-Wire Low-Voltage Thermostat

This configuration is used when your thermostat only requires R (power) and W (heat call) connections and does not need a common (C) wire.

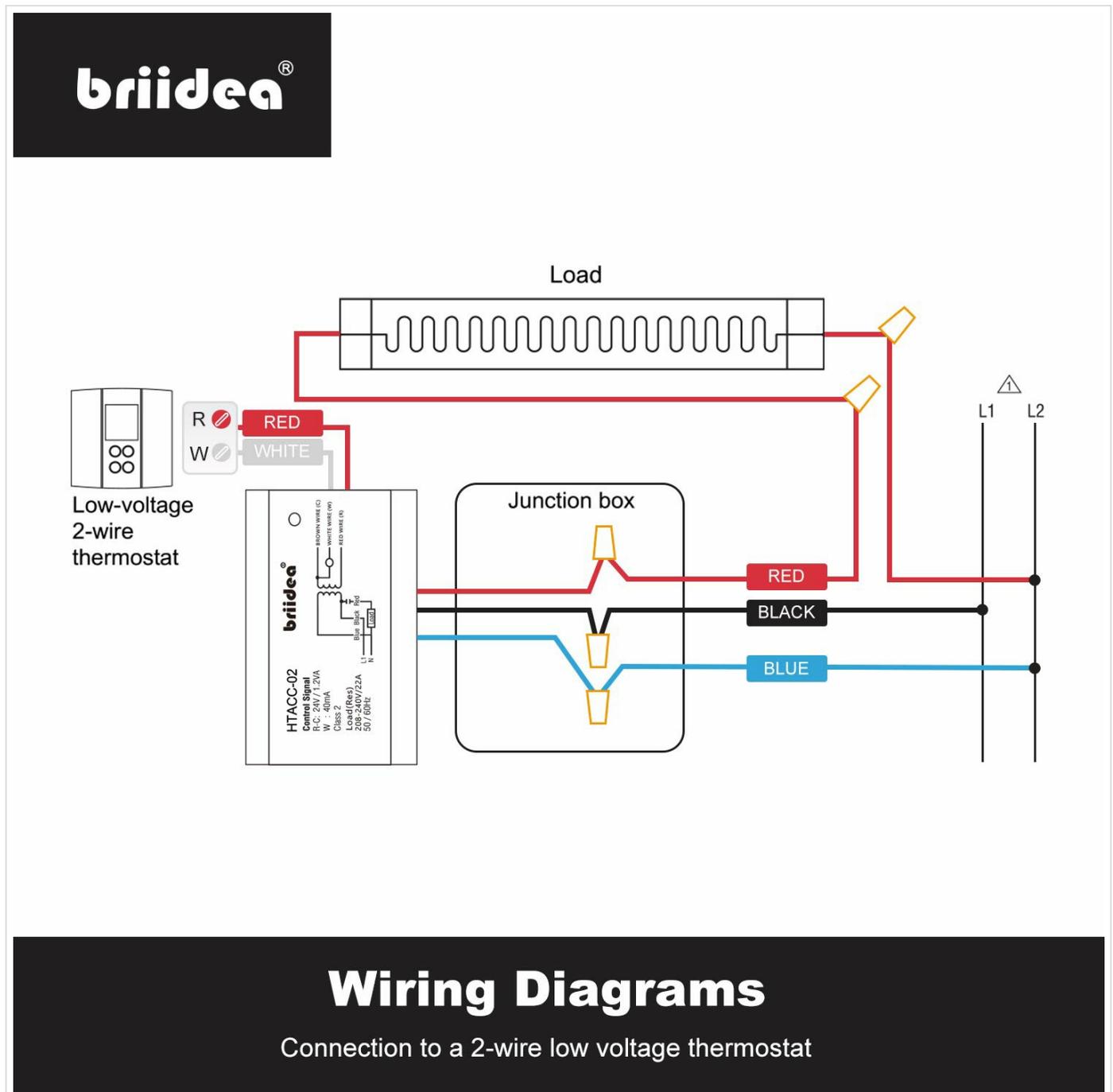


Image 5.2: Wiring diagram illustrating the connection of the HTACC-02 relay to a 2-wire low-voltage thermostat and a 240V heating load. The thermostat's R and W terminals connect to the relay's R and W wires, respectively. The relay's L1 and L2 terminals connect to the

240V power supply, and the Load terminals connect to the heating element.

5.3 Wiring for a 3-Wire Low-Voltage Thermostat

This configuration is used when your thermostat requires R (power), W (heat call), and C (common) connections for its operation.

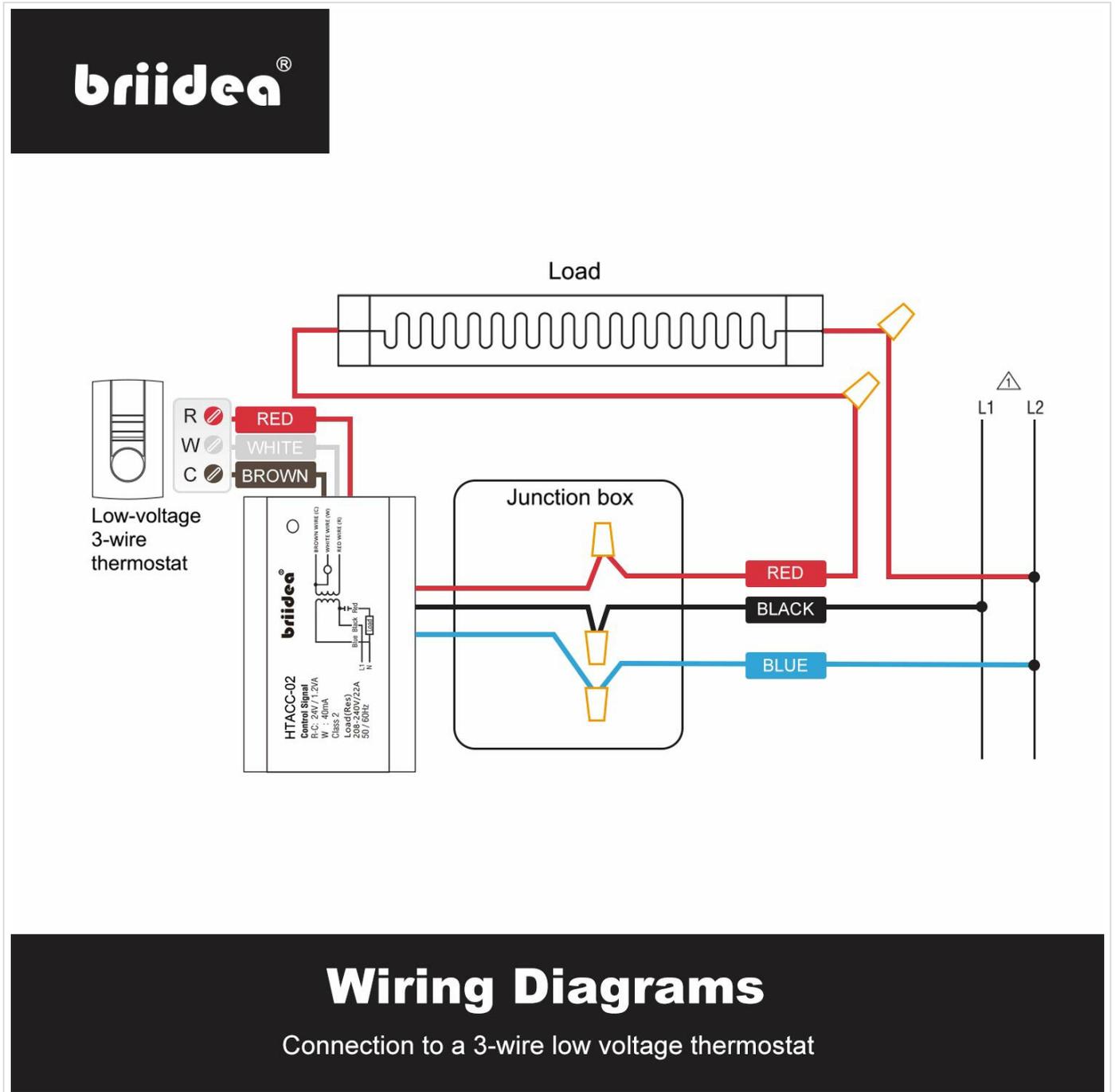


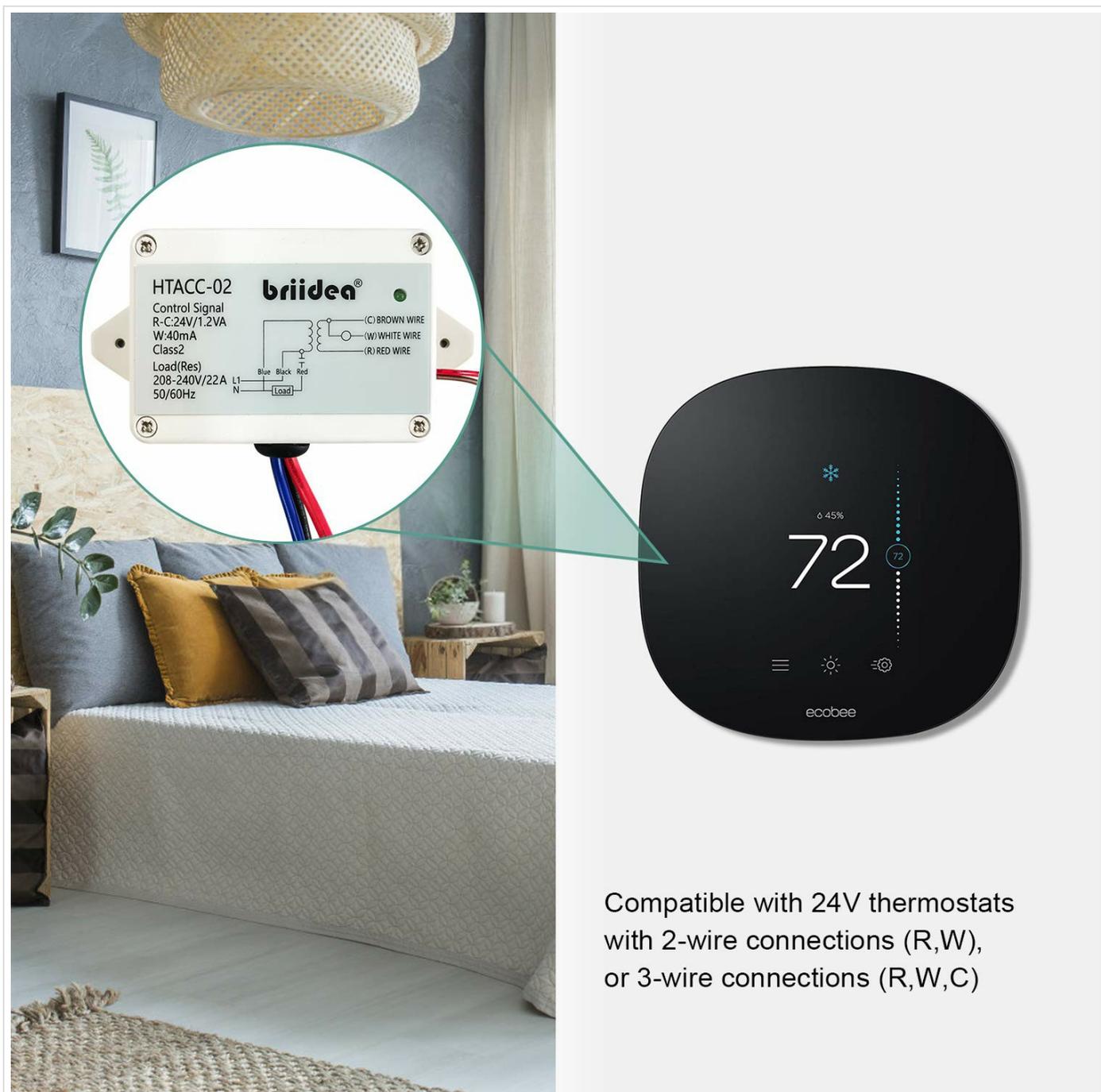
Image 5.3: Wiring diagram illustrating the connection of the HTACC-02 relay to a 3-wire low-voltage thermostat and a 240V heating load. The thermostat's R, W, and C terminals connect to the relay's R, W, and C wires, respectively. The relay's L1 and L2 terminals connect to the 240V power supply, and the Load terminals connect to the heating element.

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On/Off Switching Electric Heating Relay with Built-in 24 V Transformer



Image 5.4: An example installation showing the Briidea HTACC-02 relay connected to a Honeywell Home smart thermostat, demonstrating its compatibility and integration into a modern heating control system.



Compatible with 24V thermostats with 2-wire connections (R,W), or 3-wire connections (R,W,C)

Image 5.5: Another example installation, featuring the Briidea HTACC-02 relay connected to an Ecobee smart thermostat, highlighting its versatility with different 24V thermostat brands.

6. OPERATION

The Briidea HTACC-02 Electric Heating Relay operates automatically in conjunction with your 24V thermostat. When the thermostat calls for heat, it sends a 24V signal to the relay. The relay then closes its internal contacts, allowing 220V-240V power to flow to your heating appliance (e.g., baseboard heater). When the thermostat satisfies the temperature setting, it removes the heat call signal, and the relay opens its contacts, cutting power to the heating appliance.

The relay provides immediate activation, ensuring that your heating system responds promptly to thermostat commands.

7. MAINTENANCE

The Briidea HTACC-02 relay is designed for maintenance-free operation. However, periodic checks are recommended to ensure optimal performance and safety:

- **Visual Inspection:** Annually inspect the relay and its wiring for any signs of damage, loose connections, or

overheating (discoloration).

- **Dust Removal:** If installed in a dusty environment, carefully clean any accumulated dust from the relay's exterior to prevent potential overheating. Ensure power is disconnected before cleaning.
- **Connection Check:** With power disconnected, gently check that all wire connections remain secure.

Do not attempt to open or repair the relay. Refer all servicing to qualified personnel.

8. TROUBLESHOOTING

If you experience issues with your heating system after installing the Briidea HTACC-02 relay, consider the following troubleshooting steps:

- **No Heat:**
 - Check if the circuit breaker for the heating system is tripped.
 - Ensure the thermostat is set to a temperature above the current room temperature and is calling for heat.
 - Verify all wiring connections are secure according to the installation diagrams.
 - Check for a green LED light on the relay. If it's not illuminated when the thermostat calls for heat, there might be an issue with the 24V control signal or the relay itself.
- **Continuous Heat (Heater won't turn off):**
 - Ensure the thermostat is set to a temperature below the current room temperature and is not calling for heat.
 - If the relay's green LED remains on even when the thermostat is not calling for heat, the relay may be stuck in the closed position and require replacement.
 - Verify thermostat wiring for shorts or incorrect connections.
- **Thermostat Not Powering On:**
 - Ensure the 24V control wiring (R, W, C) from the relay to the thermostat is correctly connected.
 - If using a 3-wire thermostat, ensure the C (common) wire is properly connected.
 - Check for power at the relay's input terminals (L1, L2).

If these steps do not resolve the issue, contact a qualified electrician or the manufacturer for assistance.

9. WARRANTY AND SUPPORT

For warranty information or technical support regarding your Briidea HTACC-02 Electric Heating Relay, please refer to the documentation provided at the time of purchase or contact Briidea customer service directly. Keep your purchase receipt as proof of purchase.