

### Overview

- The Common Maker provides a common connection 'C' for Wi-Fi and powered thermostats.
- A common connection allows the thermostat to operate without batteries or "power stealing" circuits.
- The Common Maker is compatible with all 24VAC heating and cooling systems.

### Electrical Safety

- This product should only be installed by a qualified technician.
- Requires a Class 2 transformer providing 23-28VAC.
- The total connected load must not exceed 2 amps.
- The connected load cannot operate at more than 30VAC (not designed for direct connection to 120VAC equipment).
- To avoid risk of electrical shock or equipment damage, disconnect power before beginning installation.

### Sender Installation

The Sender is the smaller component and has purple, white, and black wires. It is installed inside the wall behind the thermostat.

1. Remove the thermostat from its base.
2. The thermostat base will have wires running into the wall through a small hole. If this hole is not big enough to fit the Sender, enlarge the hole.
3. Find the wiring diagram for your system (pages 2-4) and connect the wires accordingly.
4. Place the Sender in the wall. It will hang by its wires and does not require any mounting.
5. Place the thermostat back on its base.

**Note:** The Sender will produce a small amount of heat while operating. Keep the Sender wires as long as possible to maximize the distance between the Sender and thermostat. Do not install the Sender in insulated walls.

### Receiver Installation

The Receiver is the larger component and has purple, white, black, and red wires. It is installed near the furnace, boiler, air handler, zone valve, or zone controller. It should be placed in the equipment cabinet or a location without exposure to liquids or high temperatures.

Follow the relevant wiring diagram for your system (pages 2-4) and connect the wires accordingly. Additional wiring diagrams may be found at [www.fast-stat.com](http://www.fast-stat.com).

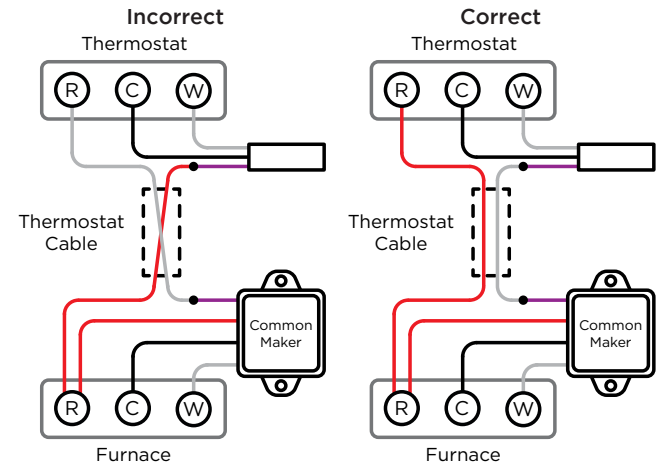
### Testing

After the Common Maker has been installed, check to see if it is functioning properly by following these steps:

1. Check that the thermostat will power on.
2. Use the thermostat to turn on the heating system, and ensure that the heating system turns on.
3. Use the thermostat to turn off the heating system, and ensure that the heating system turns off.

### Troubleshooting

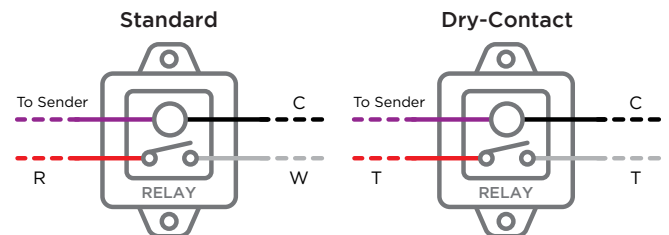
1. Measure the transformer voltage to ensure it is between 23-28VAC. If it is outside this range the Common Maker may not work as intended.
2. If the thermostat has power but the Common Maker will not activate the equipment, try reversing the wires in the thermostat cable.



3. At the thermostat base, place a jumper wire between the 'R' and 'W' terminals. This should cause the heating system to start. If the heating system does not start, the thermostat cable or Common Maker may be faulty.
4. Disconnect the Sender and bring it to the location of the Receiver. While keeping the Receiver connected to the equipment, connect the Sender and Receiver purple wires together. Then apply 24VAC to the Sender white wire. The relay in the Receiver should energize. If the relay does not energize, the Common Maker may be faulty.

### Internal Wiring

When the Sender has 24VAC applied to its white wire, it will energize the relay in the Receiver, and complete the circuit between the Receiver red and white wires. In most installations, this will connect the 'R' and 'W' terminals on the furnace.



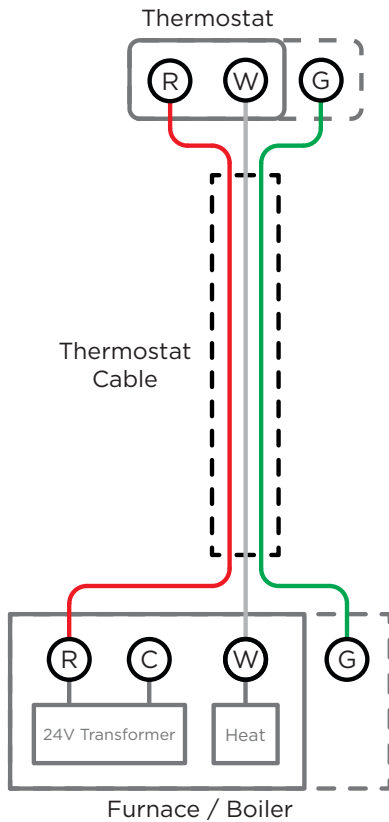
The Common Maker also supports dry-contact switching. In this configuration, the two 'T' terminals are electrically isolated from the thermostat transformer.

### Contact Us

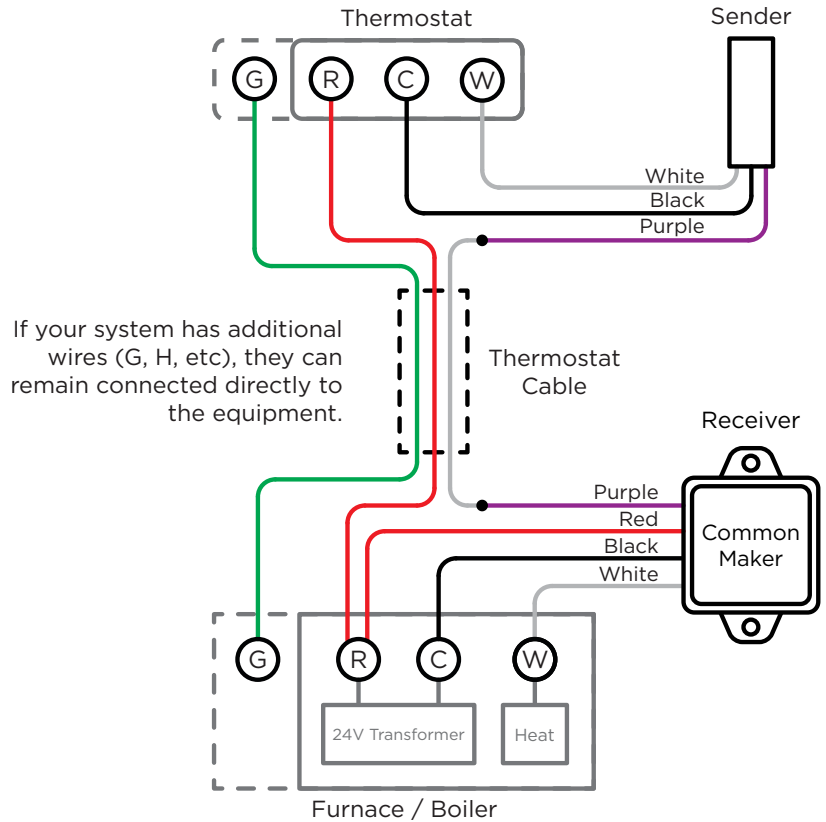
For installation assistance, our technical support line can be reached at 1-800-775-4750, 9am-5pm PST, or emailed at [info@nordictech.ca](mailto:info@nordictech.ca)

## A Typical Installation for Furnaces and Boilers

Before

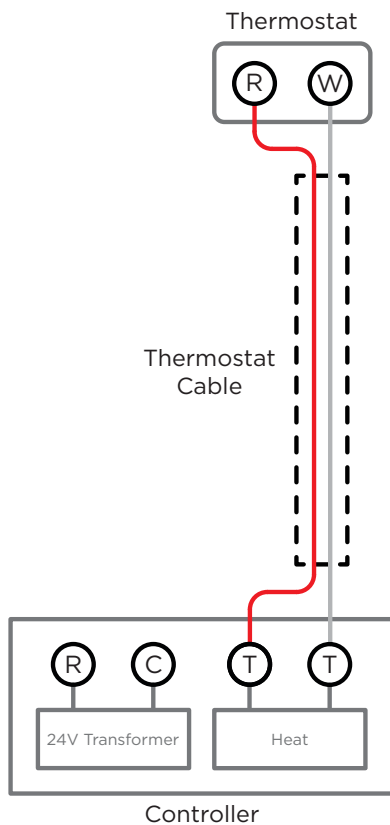


After

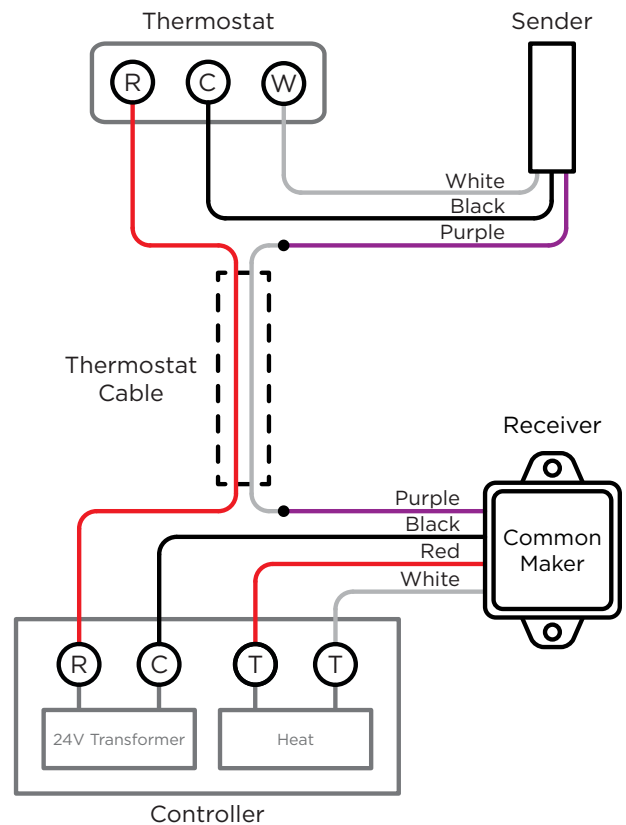


## B Dry Contact Switching with Internal Transformer

Before

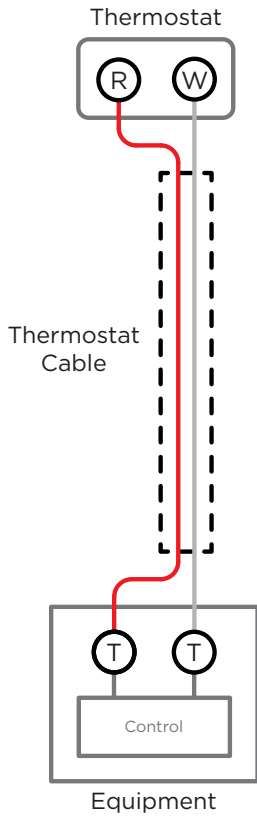


After

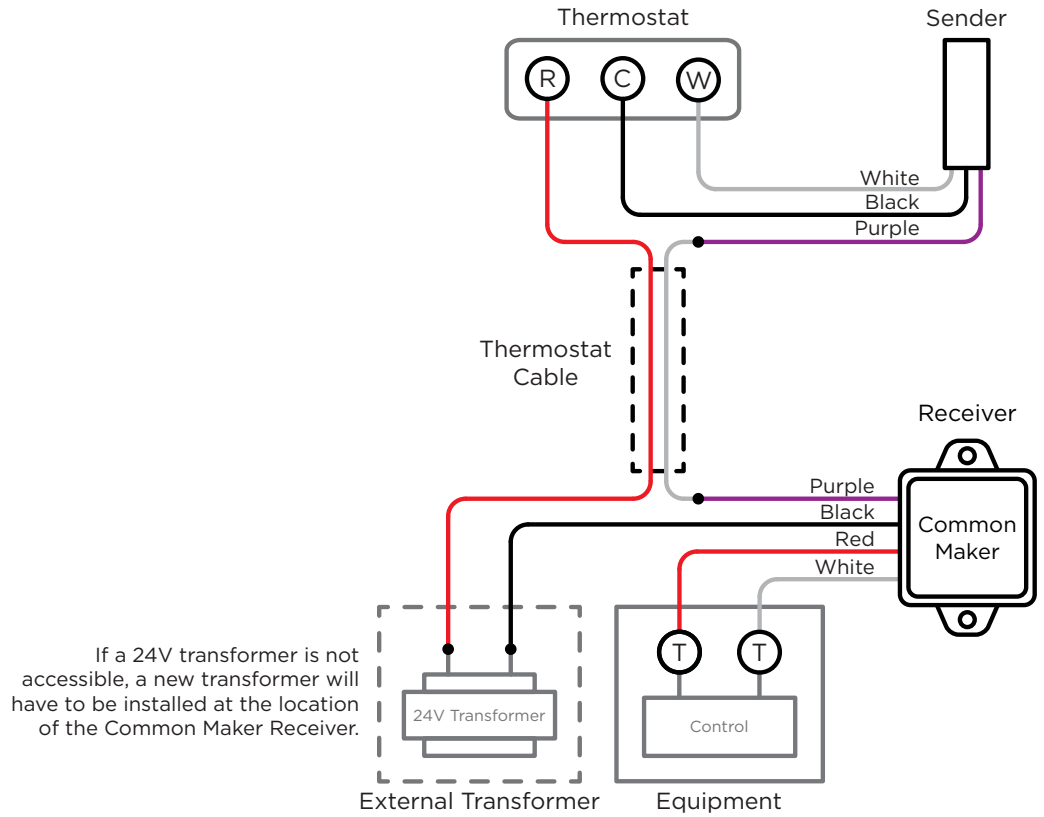


## C Dry Contact Switching with External Transformer

Before

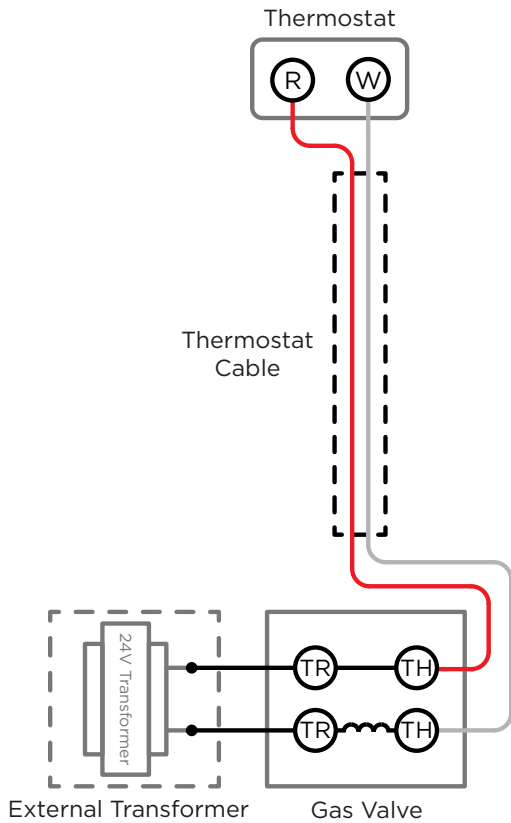


After

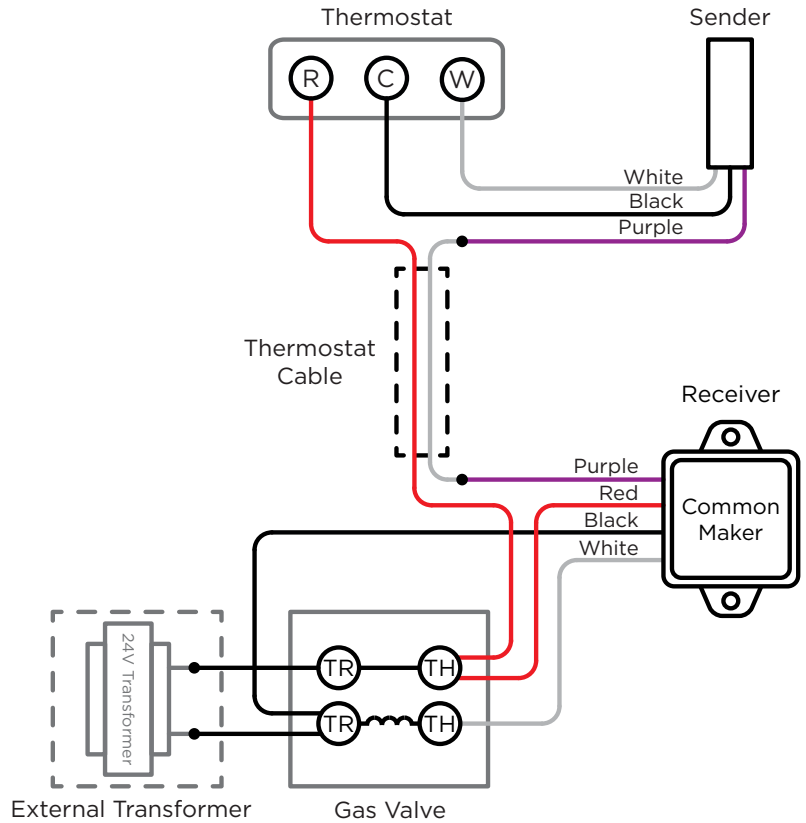


## D Directly Connected Gas Valve

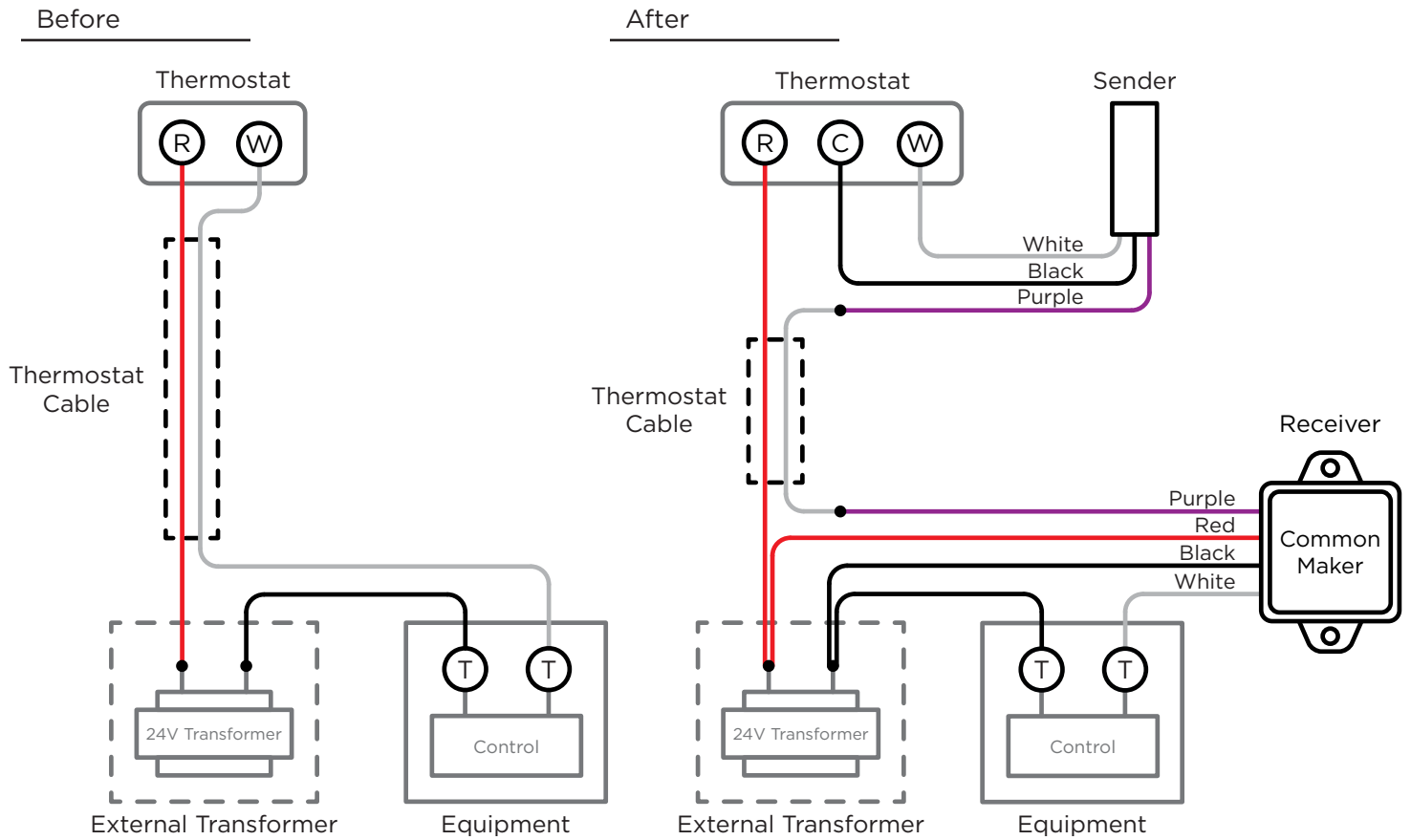
Before



After



## E Externally Powered Equipment



## F Zone Valve with Z-TV-W Aquastat (Varies by manufacturer - see [www.fast-stat.com](http://www.fast-stat.com) for additional wiring diagrams)

