

FAST-STAT Model 3000 Installation Instructions

Application

The FAST-STAT Model 3000 is designed to add additional control wiring between the thermostat and indoor unit or between the indoor unit and outdoor unit.

Before Installing This Product

1. Read Instructions. If you have any questions please contact our tech support line
2. This product is designed for use only on 24-volt AC circuits supplied by a Class 2 transformer.
3. This product is only to be installed by qualified technicians.
4. To avoid risk of electrical shock or equipment damage, disconnect power before beginning installation.

Sender Installation

When used to add wiring between the thermostat and indoor unit, the sender is installed in the wall space behind the thermostat. Enlarge the opening around the thermostat cable so that the sender can be inserted into the wall cavity. Once the connections to the cable and thermostat are completed, insert the sender into the wall cavity. The sender hangs by its leads and does not require any mounting.

When used to extend wiring between the indoor and outdoor units, the sender is connected to the indoor unit terminal strip or leads. It then hangs from the terminal strip or is grouped together with the other leads.

Receiver Installation

The receiver module is normally mounted inside the cabinet of the indoor or outdoor unit near the other controls. If there is no space inside the cabinet, the module may be located in any dry location without exposure to high temperatures or water.

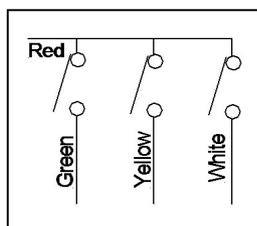
Wiring

1. See included **Installation Guides** for your application.
2. The power supply must be between 20 to 30 volts for proper operation. The total connected load must not exceed 2 amps. The connected load cannot operate at a voltage of more than 30 volts (not intended for line voltage control).

Sequence of Operation

The receiver has 3 normally-open relays, one each for the yellow, green & white wires. One side of each relay contact is connected to red wire which is then connected to the transformer "R" terminal. When any relay is energized, it will connect its load to the transformer "R" terminal.

A 24 volt input on the sender white wire will cause a 24 volt output on the receiver white wire. A 24 volt input on the sender green wire will cause a 24 volt output on the receiver green wire. A 24 volt input on the sender yellow wire will cause a 24 volt output on both the receiver green & yellow wires.

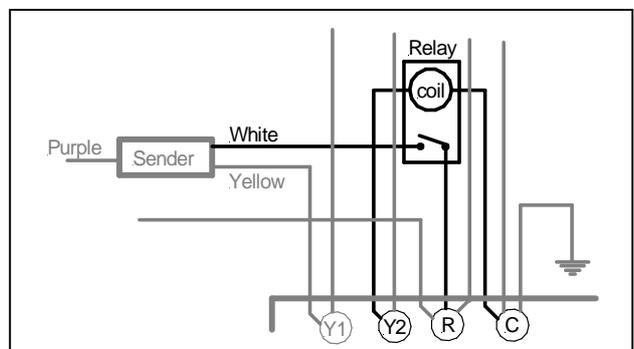


Troubleshooting – not operating

1. Check that there is 24 volts between the receiver red and black wires.
2. Check that the sender purple and receiver purple wires are connected together (and not crossed). If they are crossed, then a call for heating will provide cooling and a call for fan or cooling will provide heat.
3. At the receiver, join the receiver purple and red (red wire going to the sender) wires together. All 3 relays in the receiver should energize and switch on their connected loads. If the connected loads do not start, then measure the voltage from the receiver green, yellow & white wires to the transformer common. There should be a reading of 24 volts AC at each wire. If there is voltage at the yellow, green & white wires but the loads do not start, then check the wiring of the connected loads. If the receiver relays cannot be made to energize by this test, then the receiver may be defective.
4. If test #3 works OK but it doesn't operate when connected to the sender then join together the 2 wires from the cable that are connected to the sender red & purple wires. This should cause a 24 volt output on the receiver green, yellow & white wires (same as test #3). If the receiver relays do not energize during this test, then there is a problem with the cable that connects the receiver and the sender together.
5. If test #4 works OK but it doesn't operate when connected to the sender, then jumper transformer power "R" (sender red wire) to the sender green, yellow & white wires (one at a time). This should cause the loads connected to the receiver green, yellow & white wires to start. If this test fails, then the sender may be defective. If this test works then the FAST-STAT and the field wiring is OK. The problem may be a compatibility issue with the thermostat.

Troubleshooting – 2 stage compressor

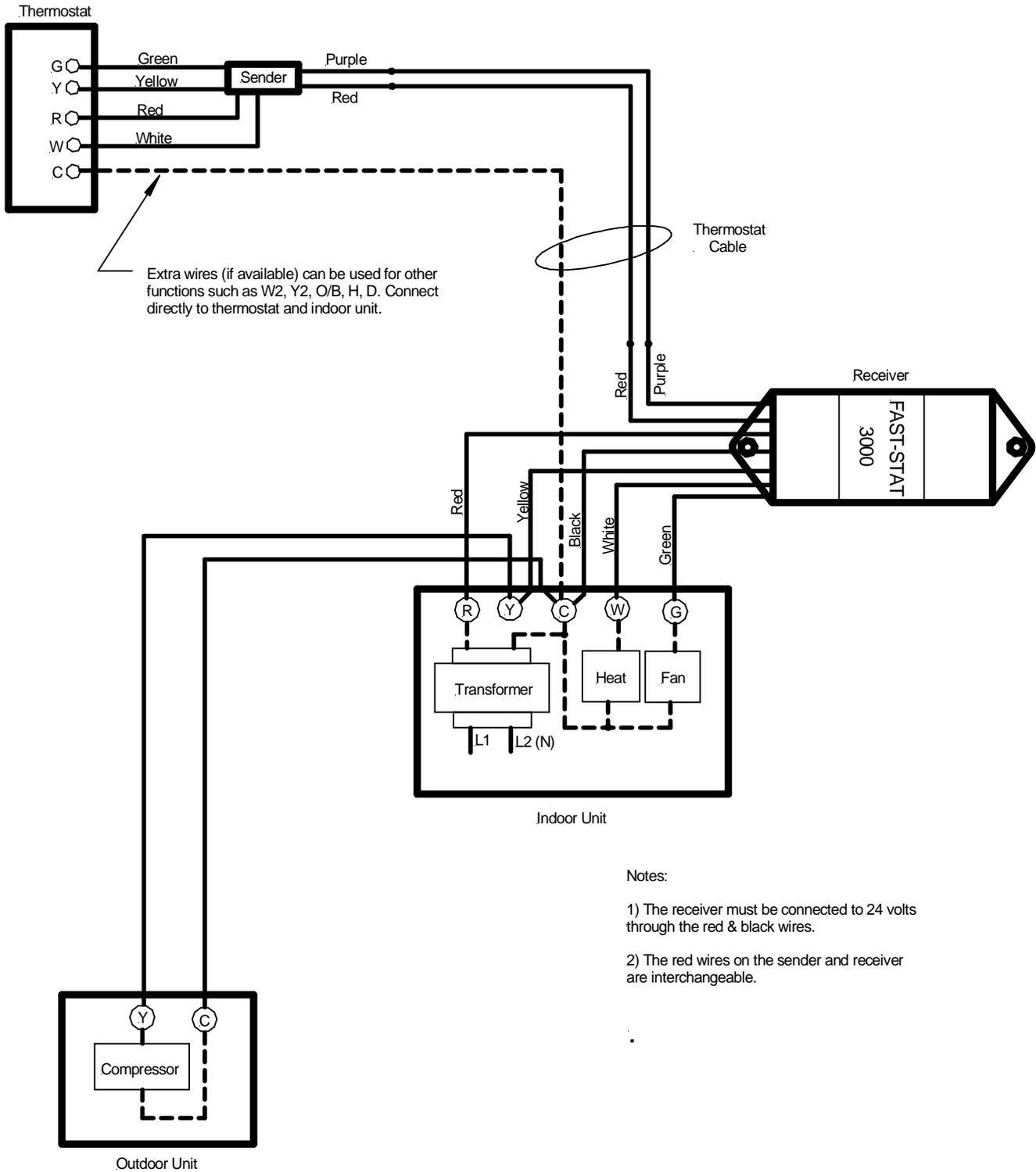
In some installations the indoor unit fan may operate in high speed when the outdoor unit is running in low speed. This is caused by the sender having a 12 volt DC voltage on the indoor unit Y2 terminal. Some furnaces or air handlers mistake this 12 volts DC for 24 volts AC and switch the fan into high speed. To correct this if it occurs add an isolation relay as follows:



Tech Support Line: 1-800-775-4750 ext. 3
Monday – Friday: 8:30am to 4:30pm (Pacific Standard Time)

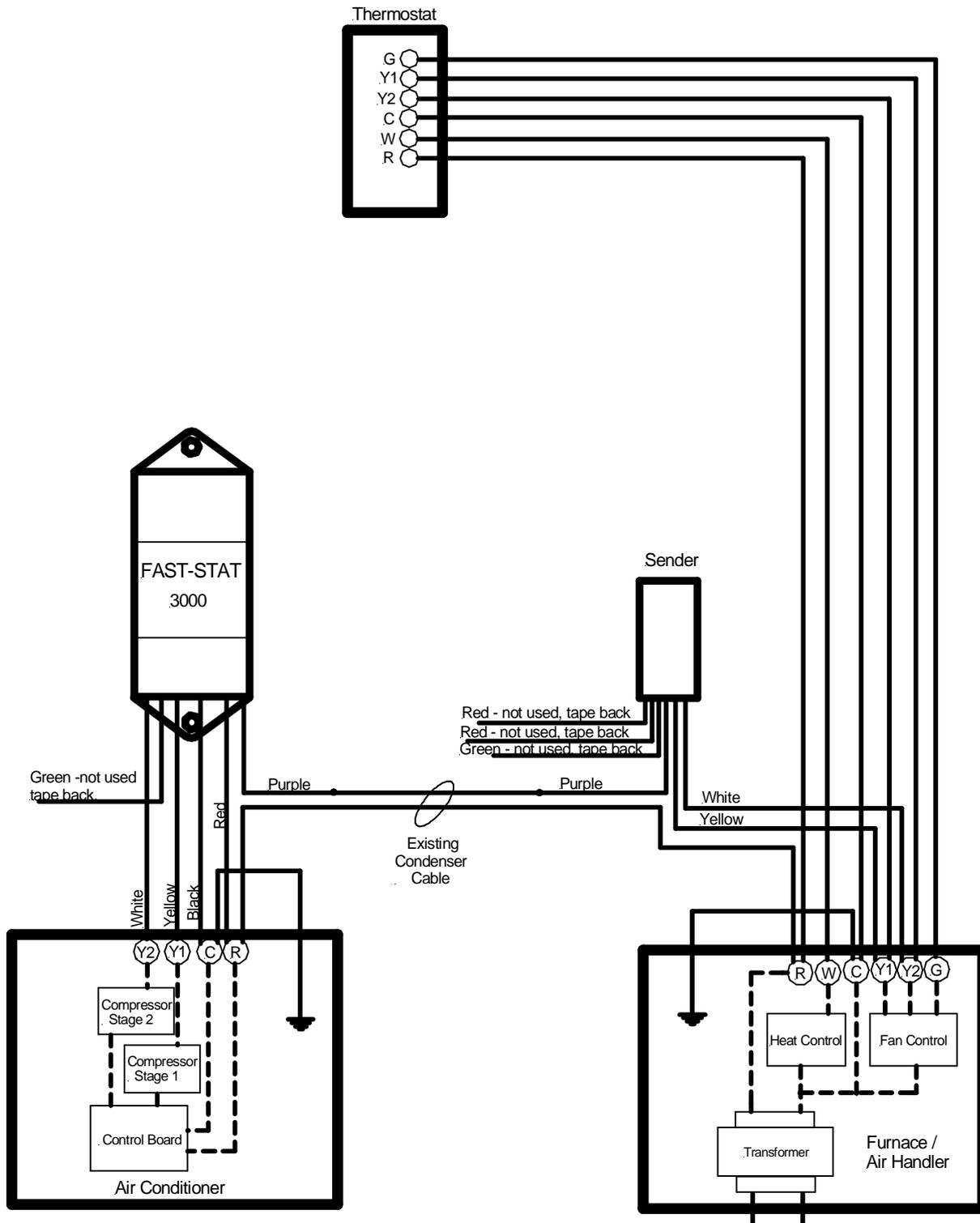
FAST-STAT Installation Guide A

Model 3000 used to extend wiring from thermostat.



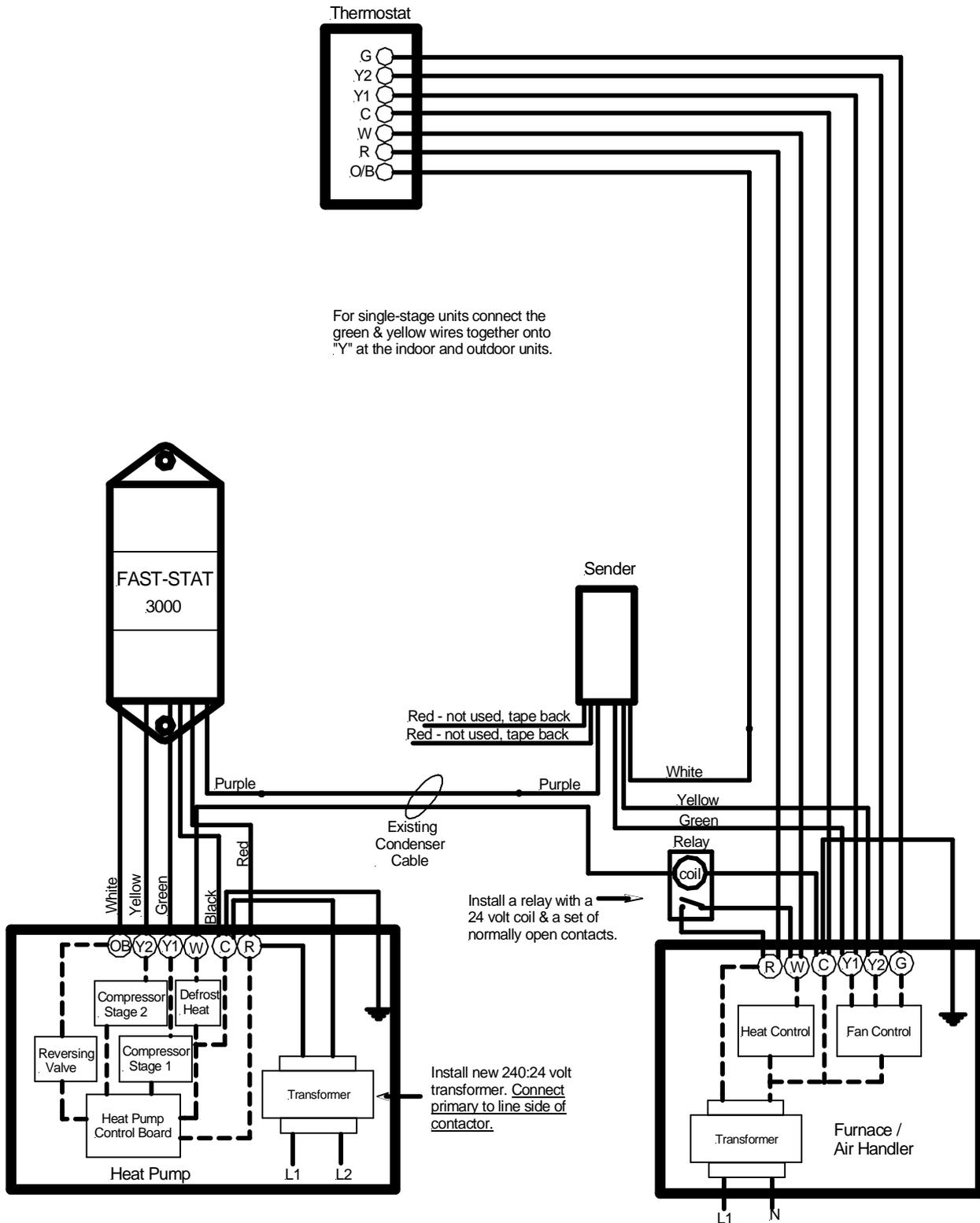
FAST-STAT Installation Guide B

Model 3000 used with a 2-stage air conditioner.
 "Grounded Commons" wiring method



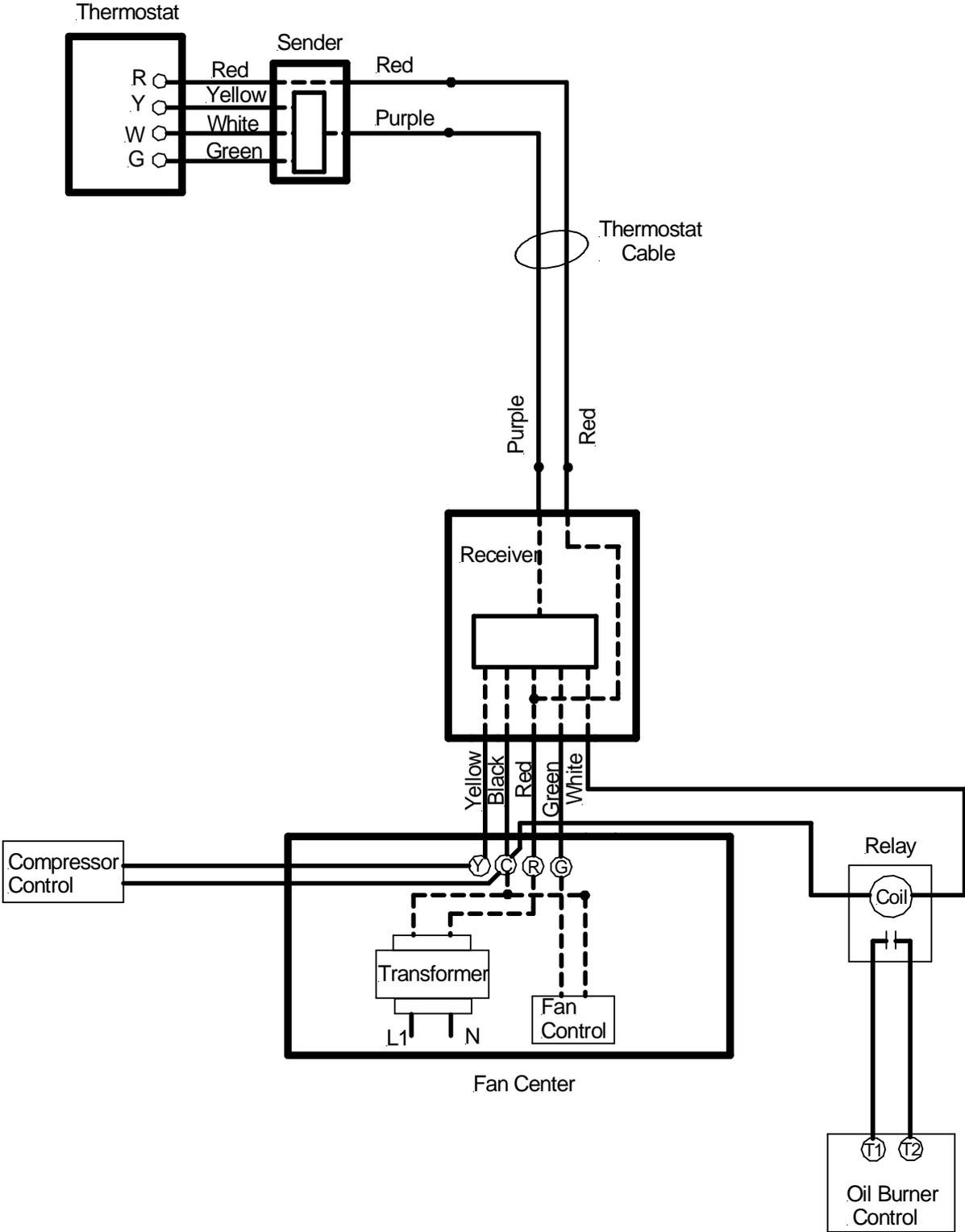
FAST-STAT Installation Guide C

Model 3000 used with a single or 2-stage heat pump.
 "Grounded Commons" wiring method



FAST-STAT Installation Guide D

Model 3000 used with 2-wire thermostat cable and oil burner furnace.



FAST-STAT Installation Guide E

Using 2 - Model 3000 on one system.

