

BACnet PTEC Unit Conditioner/Fan Coil Controller

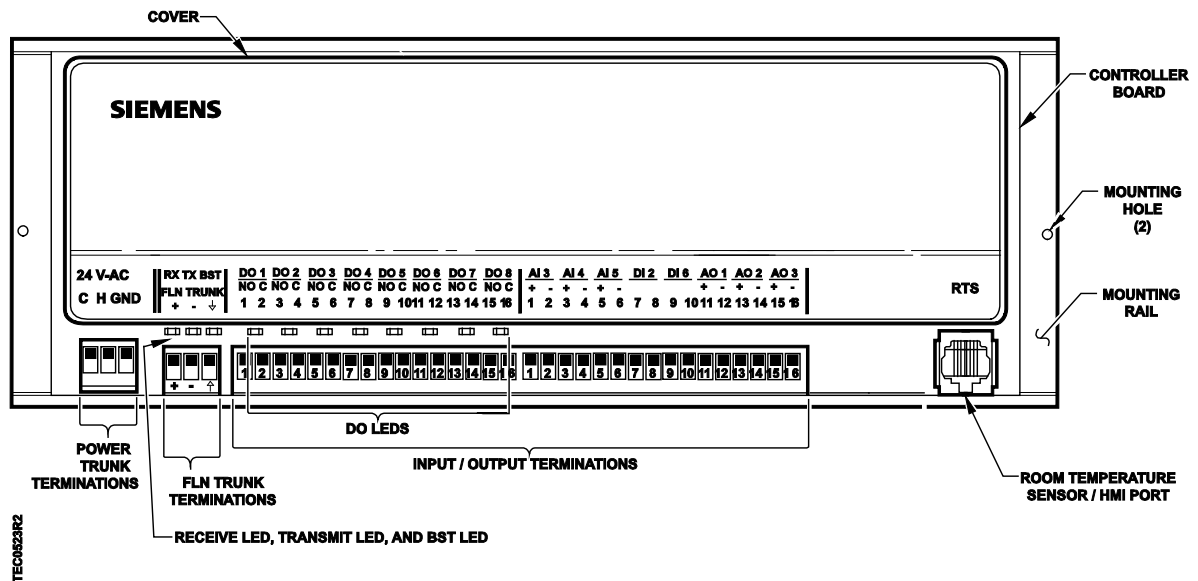


Figure 1. BACnet PTEC Unit Conditioner/Fan Coil Controller.

Control Applications

6540, 6541, 6550, 6551, 6552, 6553 and 6554

Product Description

These instructions explain how to field install or replace a BACnet PTEC Fan Coil Controller.

Product Numbers

BACnet PTEC Unit Conditioner/Fan Coil Controller 550-496P

Shipping cartons includes a controller assembly (controller board and cover), a mounting rail, and two self-tapping/drilling screws.



CAUTION:

Keep the unit in its static-proof bag until installation.

Accessories

540-658P25 (pack of 25) Low cost temporary temperature sensor that enables space control if the permanent room or duct sensor is not installed.

Warning/Caution Notation



WARNING:

Personal injury/loss of life may occur if you do not follow the procedures as specified.



CAUTION:

Equipment damage or loss of data may occur if you do not follow the procedures as specified.

Expected Installation Time

New controller installation	10 Minutes
Replacement (old controller has removable terminal blocks)	6 Minutes
Replacement (old controller does not have removable terminal blocks)	16 Minutes

NOTE: You may require additional time for database work at the field panel.

Required Tools and Materials

- Flat-blade screwdriver (1/8-inch blade width)
- Small flat-blade screwdriver
- Cabling and connectors
- Cordless drill/driver set

Prerequisites

- Wiring conforms to NEC and local codes and regulations. For further information refer to the *Wiring Guidelines Manual*.
- 24 Vac Class II power source available.
- Supply power to the unit is OFF.
- Any application specific hardware or devices installed.
- Room temperature sensor installed (optional).



If the controller is being installed on a box with 1 or more stages of electric heat, the 550-809 MOV with pre-terminated spade connectors must be installed across the manufacturer-supplied airflow switch. MOVs can be installed at the time the controller is factory mounted; coordinate with the box manufacturer prior to order placement. For field installation, see installation instructions 540-986.

Installation Instructions



All wiring must conform to national and local codes and regulations (NEC, CE, etc).

1. Secure the mounting rail (Figure 1) in the controller's desired location.
2. Place the ESD wrist strap on your wrist and attach it to a good earth ground.
3. Remove the controller from the static proof bag and snap it into place on the mounting rail.
4. Connect the FLN (Figure 2).
5. Connect the point wiring (see *Wiring Diagrams*).

3-WIRE FLN TRUNK

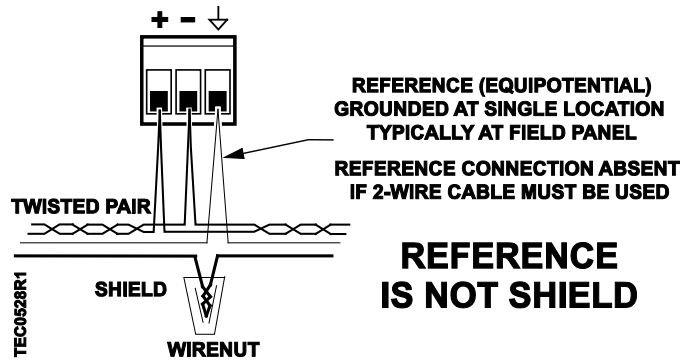


Figure 2. FLN Wiring.

6. Plug the room temperature sensor cable into the RTS port (Figure 1).
7. Connect the power trunk (Figure 3). DO NOT apply power to the controller without first consulting the specialist.

POWER TRUNK

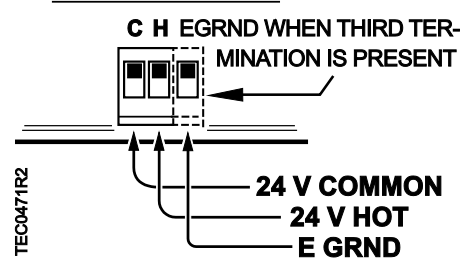


Figure 3. Power Trunk Wiring.



As a standard grounding procedure, ensure that 3" - 5" ground wire is connected directly on the common terminal on the secondary side of the 24 Vac transformer.

The installation is complete.

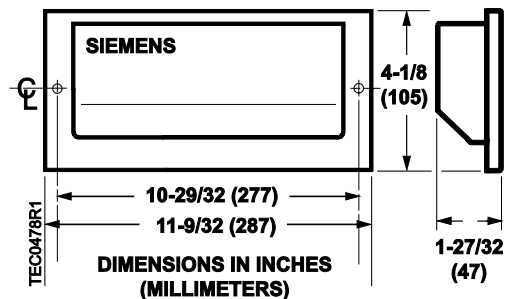


Figure 4. Dimensions.

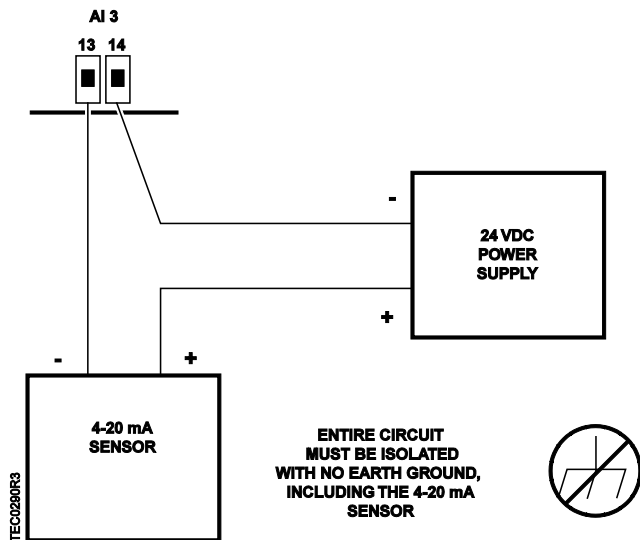
Wiring Diagrams



CAUTION:

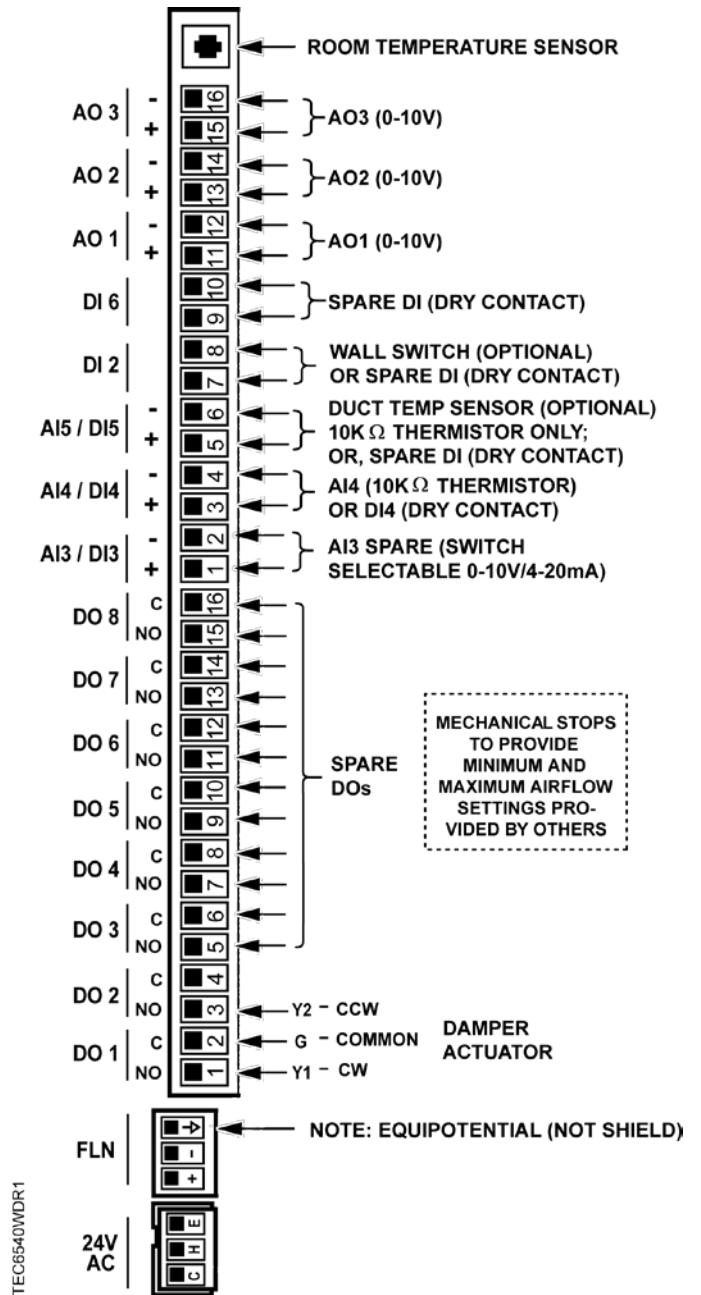
The controller's DOs control 24 Vac loads only. The maximum rating is 12 VA for each DO. Use an interposing 24 Vac relay module (such as 540-147) for any of the following:

- VA requirements higher than 12 VA
- Separate transformers to power the load
- Direct current (DC) power requirements

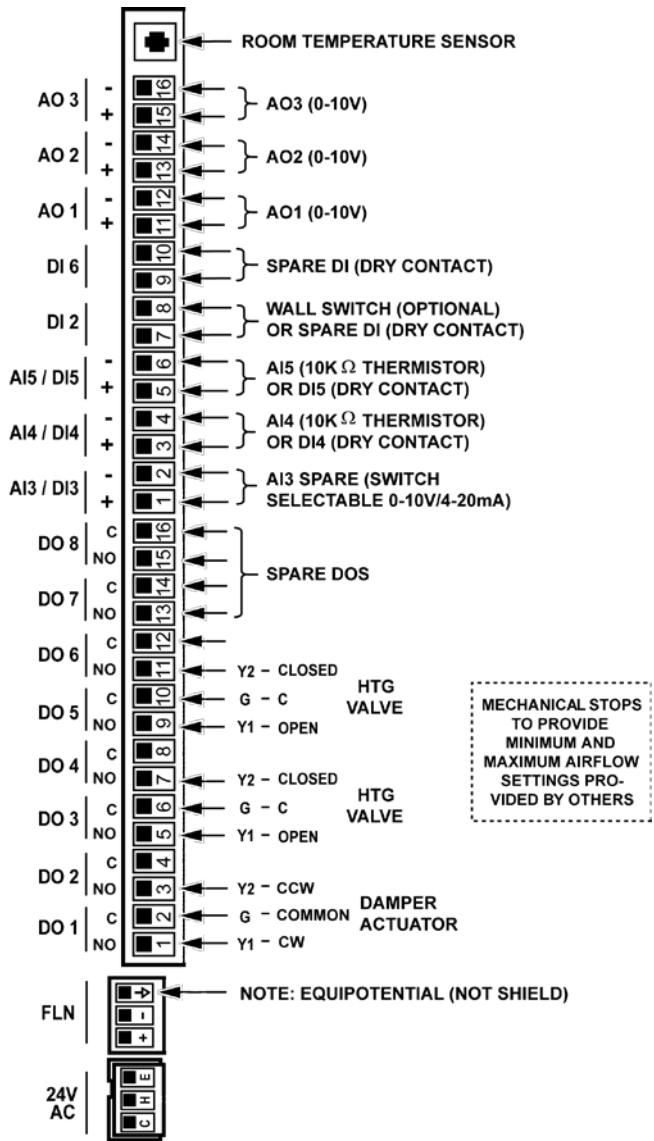


NOTE: You can NOT use the same transformer to power the controller and a 4-20 mA sensor. The 4-20 mA sensor requires a SEPARATE dedicated power supply.

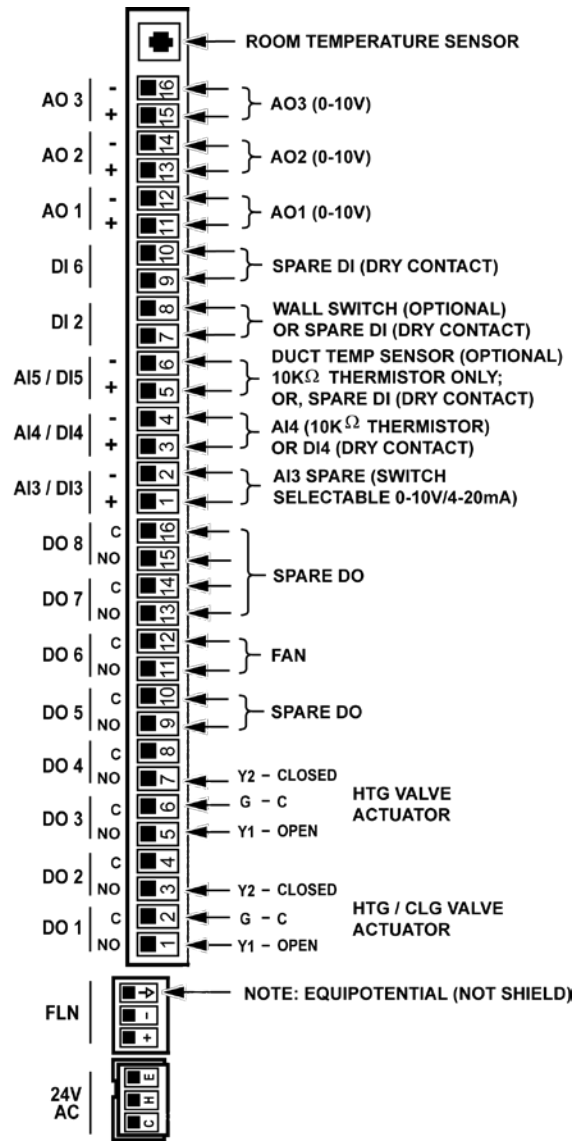
Figure 5. Spare AI wiring for 4 to 20mA sensor.



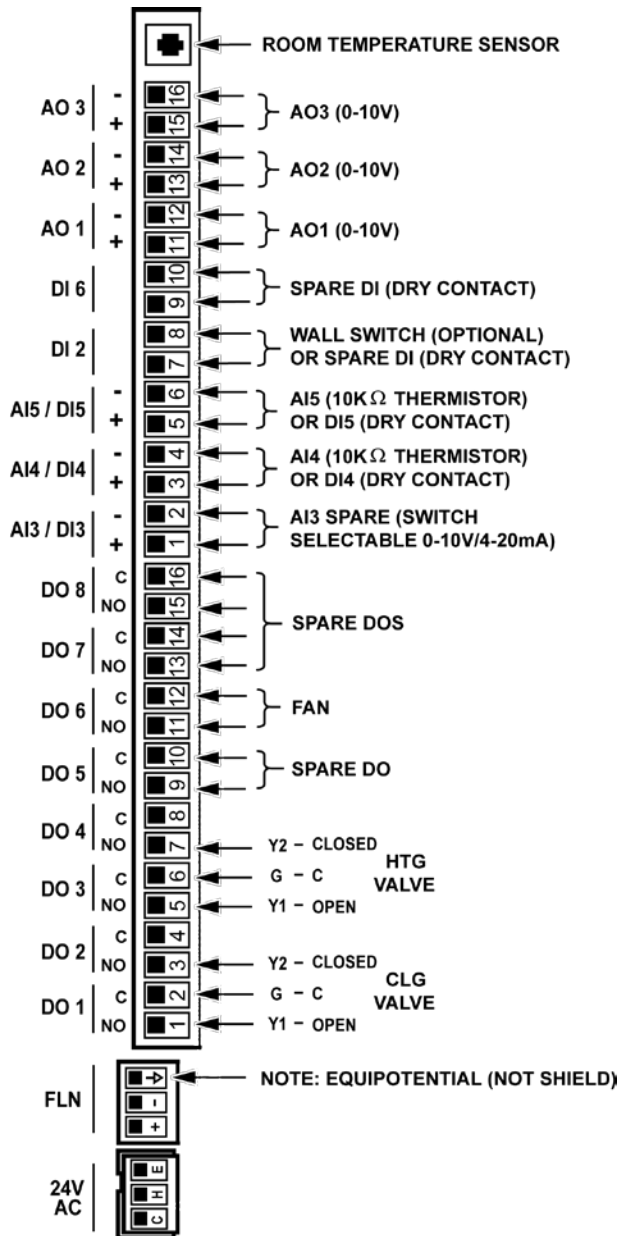
Application 6540 Variable Air Volume Pressure Dependent Cooling or Heating.



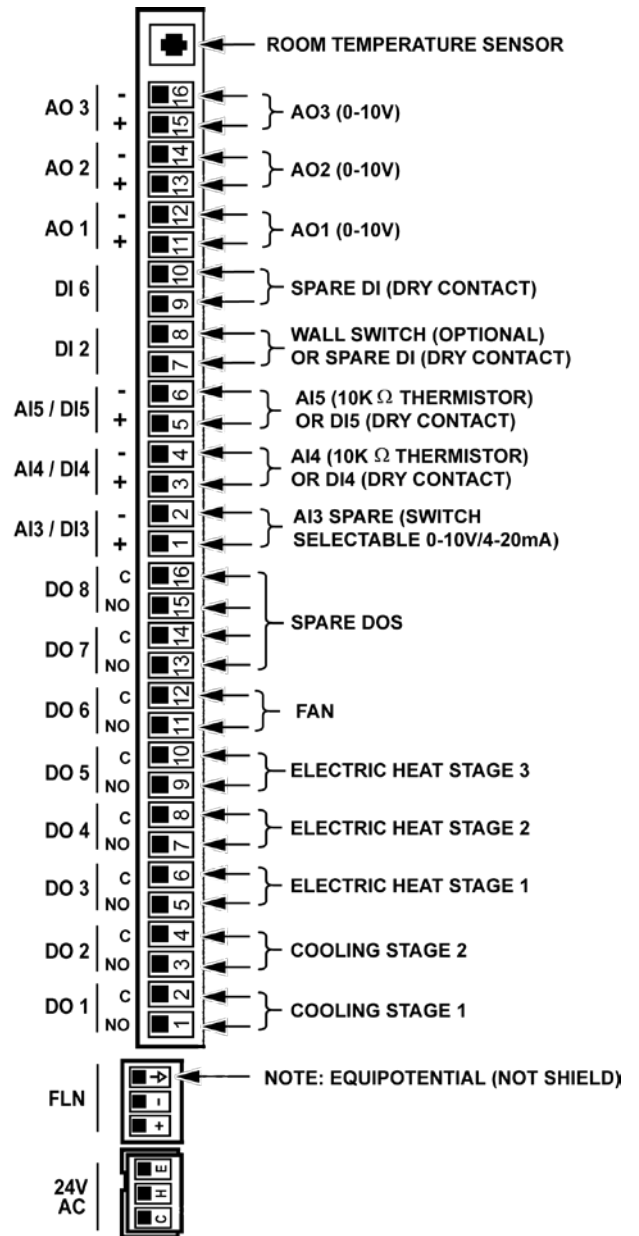
Application 6541 Variable Air Volume Pressure Dependent with Hot Water Reheat.



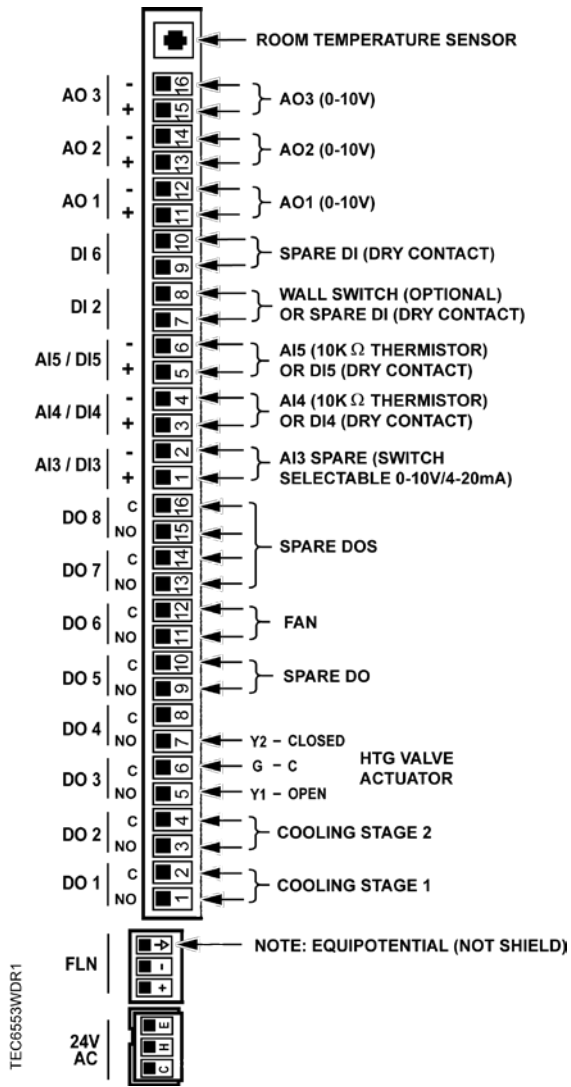
Application 6550 Two-Pipe Fan Coil Unit Cooling or Heating..



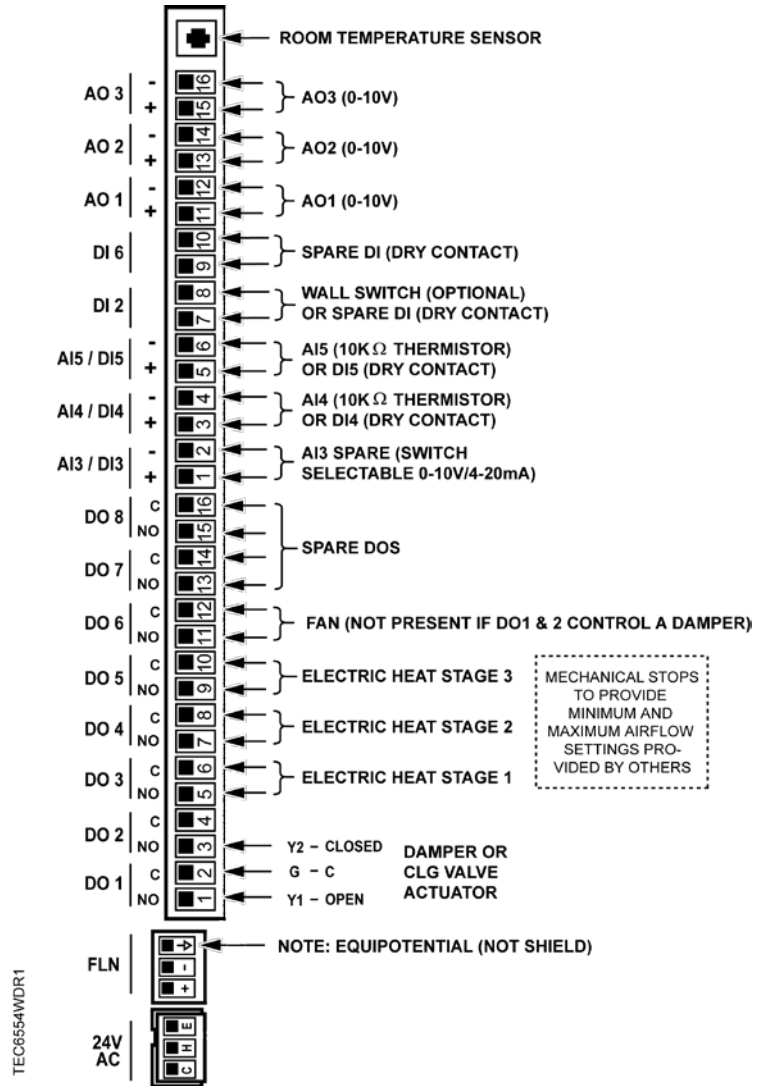
Application 6551 Fan Coil Unit Cooling and Heating with Fan.



Application 6552 Fan Coil Unit 2-Stage Cooling and Electric Heat.



Application 6553 Fan Coil Unit 2-Stage Cooling and Hot Water Heat.



Application 6554 Fan Coil Unit Cooling with Electric Heat.

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