

### APPLICATION

These R8239 Fan Centers provide low voltage control of line voltage fan motors and auxiliary circuits in heating, cooling or heating-cooling systems. The fan centers include an R8222 Relay and a NEMA type D, 38 VA transformer for powering 24 volt control circuits, except as noted in Table I.

The Q633A Plate-mounted Relay Receptacle is for mounting an R4222, R8222, R4228, or R8228 Relay and an AT72D Transformer. Q633A includes relay receptacle, cover, labels, leadwires, and 4 x 4 in. (102 x 102 mm) plate for outlet box mounting.

See Table 1 below for model specifications.

### CONTACT RATINGS: FOR BOTH N.O. AND N.C. CONTACTS R8239A,B,D—

	120 VAC	208/240 VAC
Full Load	12 A	6 A
Locked Rotor	60 A	35 A

Meets U.L. 3/4 hp requirement.

### PILOT DUTY RATINGS FOR R8239D ONLY:

Minimum—3 VA at 24, 120, 240 and 480 Vac.

Maximum—25 VA at 24 Vac; 125 VA at 120, 240 and 480 Vac.

Resistive—3 A at 277 Vac (0.75 power factor).

Powerpile (millivoltage)—The N.O. pilot duty contacts are rated for millivoltage applications: 0.25 A at 0.25 to 12 Vdc.

### RELAY COIL RATINGS FOR R8239A,B,D:

Inrush—20 VA maximum.

Sealed—9 VA.

Wattage—5 Watts.

Pickup voltage—Must pick up below 18 volts.

Voltage and frequency—24 Vac, 50/60 Hz.

TABLE 1—MODEL SPECIFICATIONS.

FAN CENTER ORDER NUMBER	RELAY	TRANSFORMER	SWITCHING	APPLICATION	COMMENTS
R8239A1052	Includes an R8222B Relay.	Includes a transformer with 120 V primary and 26.5 V secondary voltage.	Spdt	For single- and two-speed fan.	TRADELINE
R8239B1043	Includes an R8222D Relay.	Includes transformer with 120 V primary and 26.5 V secondary voltage.	Dpdt	For system with F50 Electronic Air Cleaner, humidifier and blower motor.	SUPER TRADELINE
R8239B1076	Includes an R8222D Relay.	Includes transformer with 120/208/240 V primary and 26.5 secondary voltage.	Dpdt	For system with F50 Electronic Air Cleaner, humidifier, and blower motor.	SUPER TRADELINE; 50 VA transformer.
R8239D1015	Includes an R8222U Relay.	Includes transformer with 120 V primary and 26.5 V secondary voltage.	Dpst (One power, one pilot duty)	For single-speed fan and pilot duty circuit (24 Vac or millivoltage).	TRADELINE
Q633A1007	Use with an R4222, R8222, R4228, or R8228 Relay.	Use with an AT72D Transformer.	Depends on the relay used.		TRADELINE

### INSTALLATION

#### WHEN INSTALLING THIS PRODUCT...

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings given in the instructions and on the product to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. After installation is complete, check out product operation as provided in these instructions.

### CAUTION

Disconnect power supply before beginning installation to prevent electrical shock or equipment damage.

### MOUNTING AND WIRING

#### R8239

NOTE: The fan center may be mounted in any position. Mounting with relay terminals pointing down will increase pickup voltage by 12 percent.

The R8239 mounts on a standard 4 x 4 in. [102 x 102 mm] outlet box.

All wiring must comply with local codes and ordinances.

Disconnect power before making wiring connections to prevent electrical shock or equipment damage.

Connect wiring in the outlet box according to the equipment manufacturer's instructions. If instructions are not available, refer to the instructions that follow.

1. Make primary connections to line voltage power supply. On multitap model, make sure you are using correct leads or terminals for available power supply. See Fig. 1.
2. On multitap model, insulate ends of unused leads by

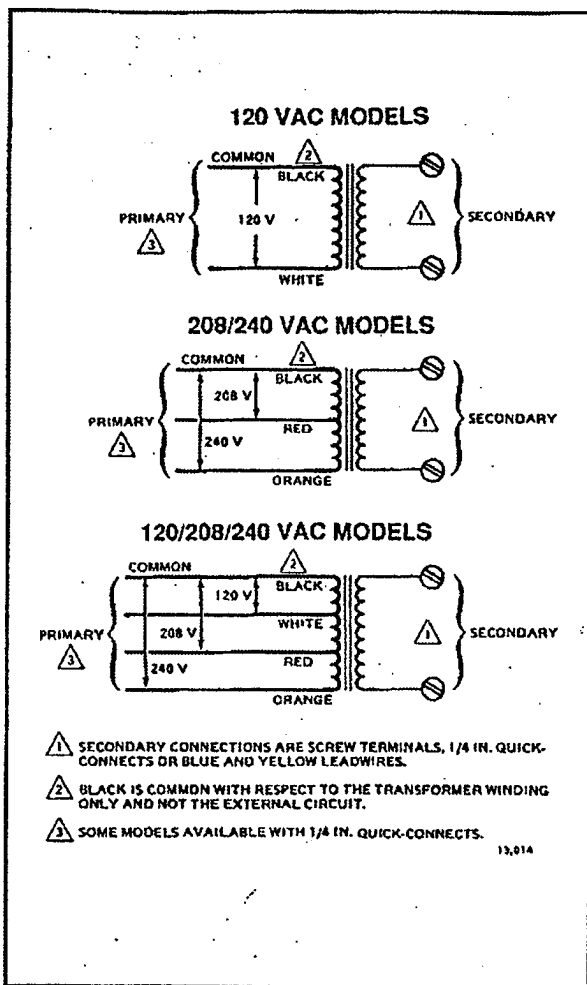


Fig. 1—Schematic for single and multitap transformers.

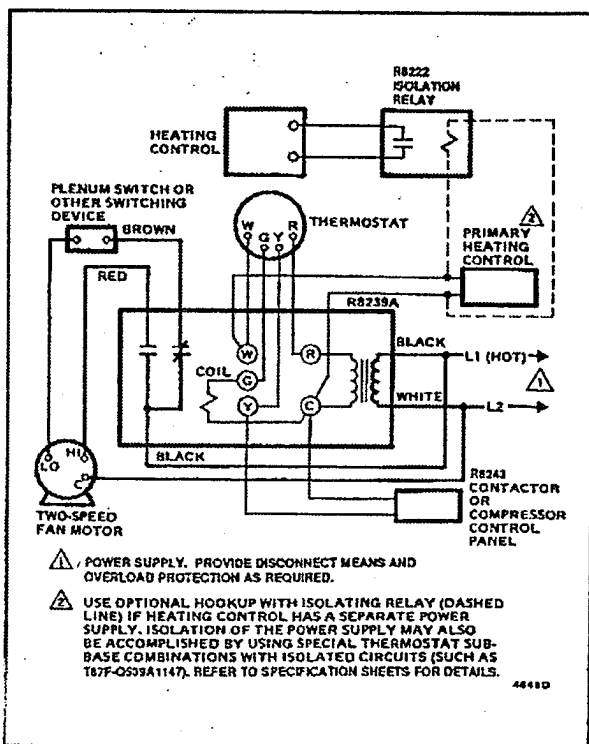


Fig. 2—Internal schematic and typical hookup for R8239A with two-speed fan in heating-cooling system.

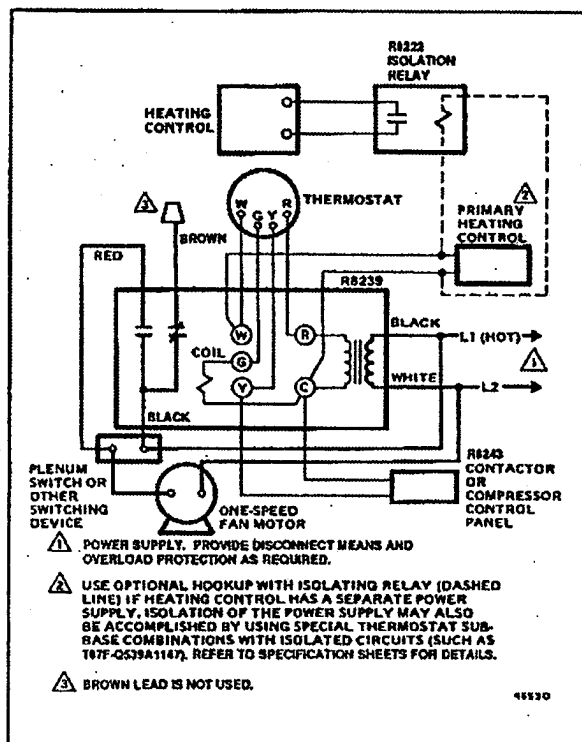


Fig. 3—Internal schematic and typical hookup for R8239A with single-speed fan in heating-cooling system.

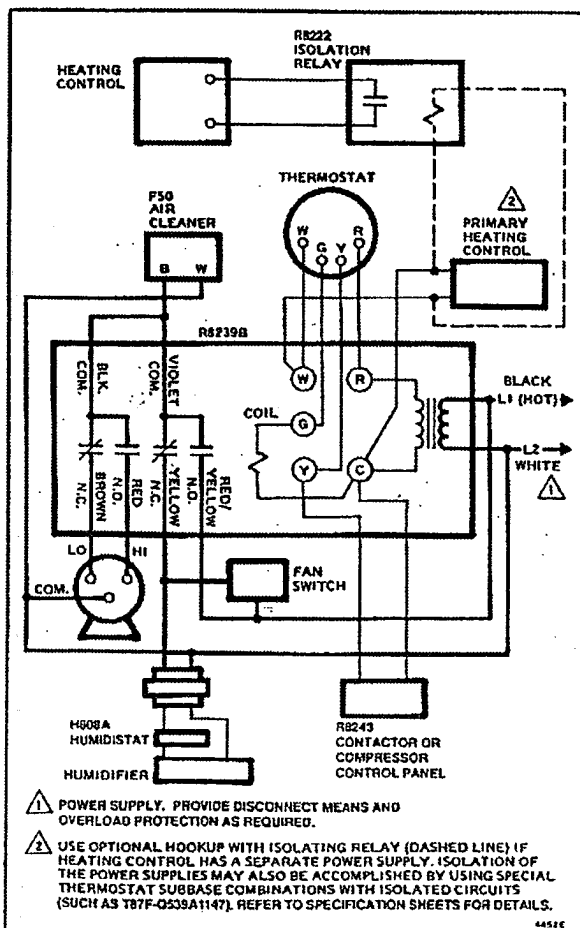


Fig. 4—Internal schematic and typical hookup for R8239B with two-speed fan in "Total Comfort" application with electronic air cleaner, humidifier and blower motor.

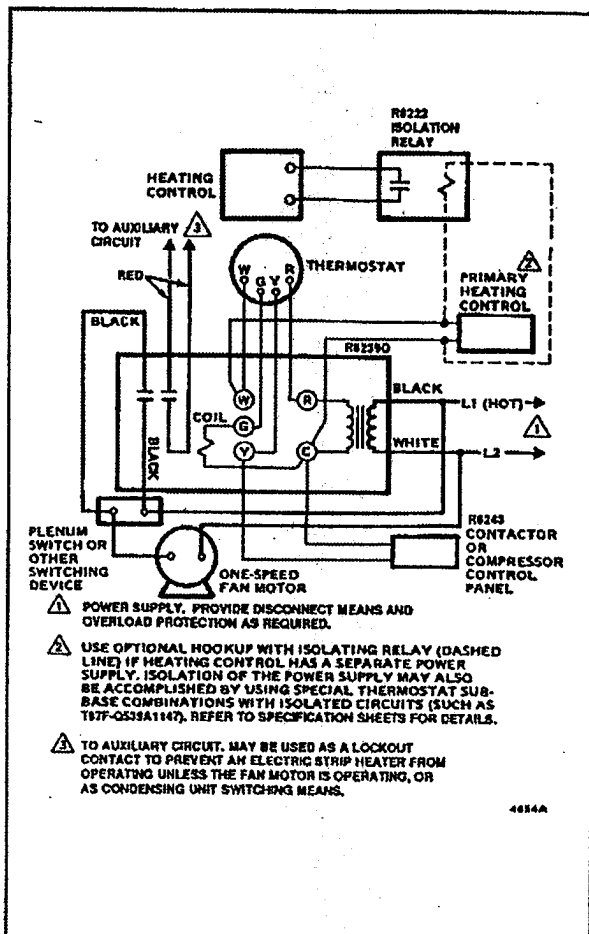


Fig. 5—Internal schematic and typical hookup for R8239D with single-speed fan in heating-cooling system and pilot duty contacts to power auxiliary circuit.

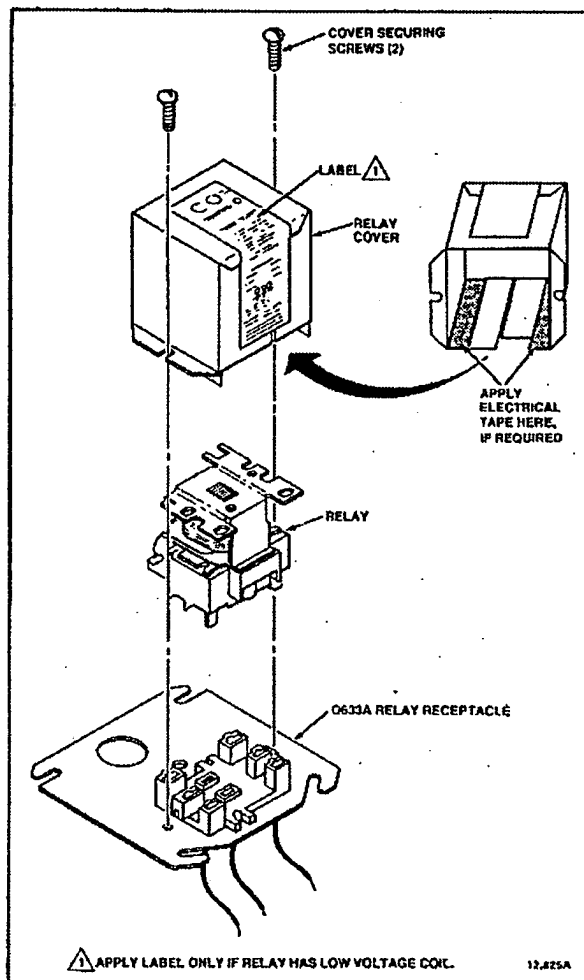


Fig. 6—Mounting and wiring relay to Q633A Relay Receptacle.

taping or capping with a solderless connector.

3. Make secondary connections to 24 Vac control circuit.

4. Refer to Figs. 2-5 for internal schematic and typical hookup diagrams.

When wiring is complete, fasten the fan center to the outlet box using the screws provided.

#### Q633A

On Q633A, select and mount the appropriate relay (see Table 1) and AT72D Transformer, if desired.

**NOTE:** If a relay with line voltage coils is used in the Q633A, apply electrical tape to the inside of the metal relay cover as indicated in Fig. 6.

Leadwires are provided with the Q633A to make relay connections in the box easier. Insert the required leadwires in the relay receptacle as follows:

1. Use Fig. 8 to determine the leadwires required for the relay and the desired application.

2. Align the tang on the leadwire quick-connect terminal with the small clearance slot in the terminal opening (see Fig. 7).

3. Push the leadwire terminal into the receptacle plate from the side stamped with the color code.

4. Press the terminal in until it locks in place.

Attach the relay cover and apply the label (low voltage models only) that identifies the relay used.

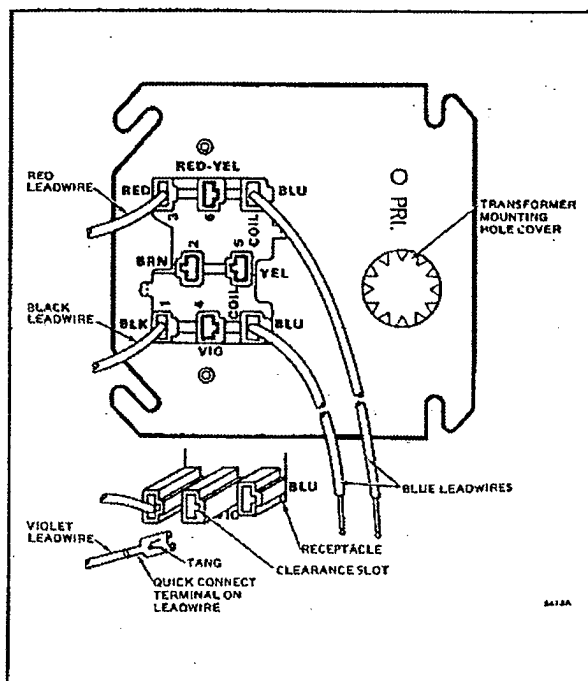


Fig. 7—Bottom of relay receptacle showing leadwire hookup.

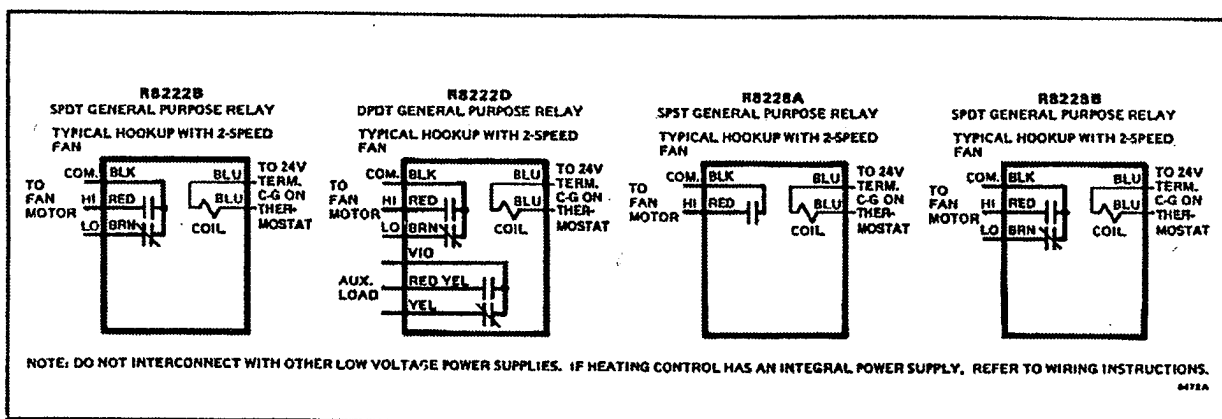


Fig. 8—Typical relay wiring hookups for Q633A Plate-mounted Relay Receptacle.

## CHECKOUT

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When installation is complete, operate the system at least one complete cycle (for both heating and cooling, if applicable) according to the manufacturer's instructions. Make sure system operates as intended.

### SERVICE

The relay in the R8239 Fan Center is field-replaceable. Refer to Table 1 for the appropriate replacement. To replace the relay, refer to Fig. 9 and proceed as follows:

1. Disconnect power supply before beginning replacement to prevent electrical shock or equipment damage.
2. Remove the two screws securing the cover to the relay.
3. Remove relay cover.
4. Remove the plug-in relay from the receptacle and replace with new relay.
5. Replace relay cover and two screws removed in step 2.

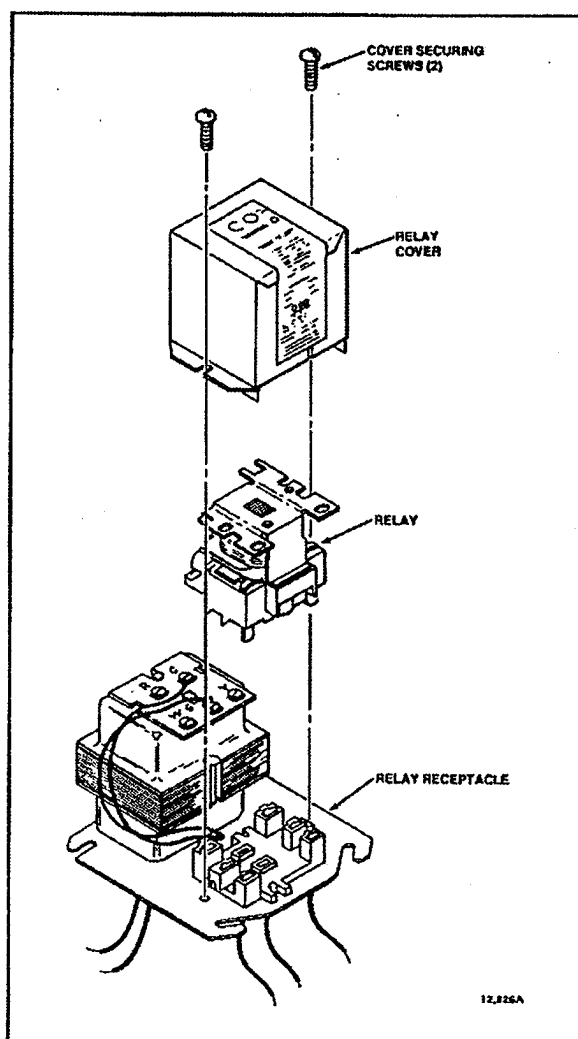


Fig. 9—Replacing the relay in the R8239 Fan Center.