

### APPLICATION

The R182 and R882 Switching Relays are intermediate relays for 24V thermostat control of line voltage devices. The R482 Switching Relays are intermediate relays for 120 or 208/240V control of 120 or 240V devices.

The R182A,B; R482A, and R882A,F have spst switching. The R182B, R482B, and R882B have spdt switching. The R182C, R482C-E, and R882C have dpdt switching.

### 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 starting wiring to prevent electrical shock and equipment damage.

### MOUNTING

Mount relays vertically on a firm wall or partition near the device to be controlled, in a location easily accessible for installation and service (see Fig. 1 for dimensions).

NOTE: To reduce transformer hum and relay noise that are sometimes amplified by mounting surfaces of sheetmetal, plasterboard, and similar materials, place rubber or felt washers between the case and the mounting surface.

1. Position the relay and mark the screw holes.
2. Start a screw for the keyhole type mounting hole in upper right-hand corner. Screw it down to 1/8 inch [3.2 mm] from the mounting surface.
3. Hang the relay on the screw, position the case, and start the bottom screw; tighten both screws.

This is a legacy product document supported by Resideo. It is no longer manufactured

### WIRING

#### IMPORTANT

The terminals on these switching relays are approved for use with copper wire only.

All wiring must agree with applicable electrical codes and ordinances. Follow any instructions furnished with the controlled equipment.

Typical hookups are illustrated in Figs. 3 through 14. If two or more devices are to be controlled in parallel, their combined total current must not exceed the relay load rating.

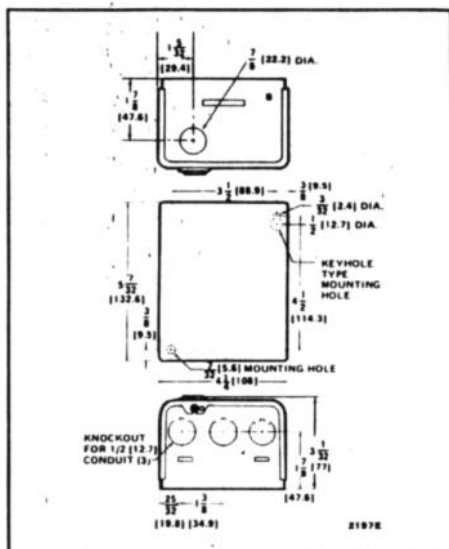


Fig. 1—Installation dimensions in inches (millimetres in brackets).

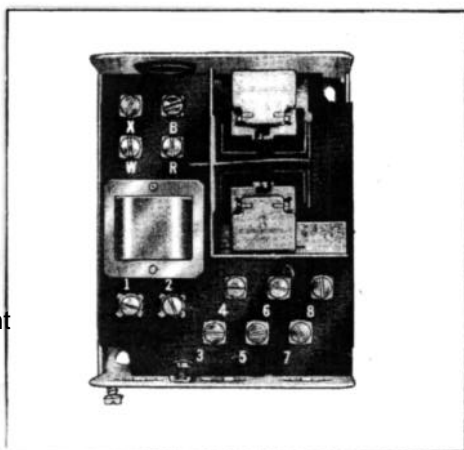


Fig. 2—R182C Switching Relay.

### IMPORTANT

The transformer on the R182C may overheat when used with a series 20 thermostat if the total resistance of the thermostat circuit exceeds 2.5 ohms. If the measured resistance of the thermostat (including thermostat wire and thermostat contact resistance) exceeds 2.5 ohms, add a 100 ohm, 10 watt resistor between the W and R terminals. Table I gives maximum thermostat wire runs; if longer runs are necessary, measure the resistance or add a 100 ohm, 10 watt resistor across terminals W and R.

TABLE I

AWG WIRE SIZE (NUMBER)	TOTAL WIRE LENGTH		LENGTH OF RUN TO THERMOSTAT (2 WIRES)	
	FEET	METRES	FEET	METRES
22	120	38.0	60	18.0
20	200	61.0	100	30.5
18	300	91.5	150	45.5
16	500	152.5	250	76.0
14	800	244.0	400	122.0

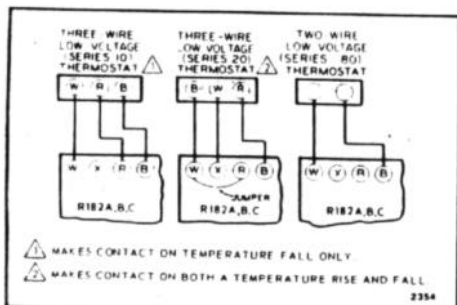


Fig. 3—Thermostat connections for R182A,B,C.

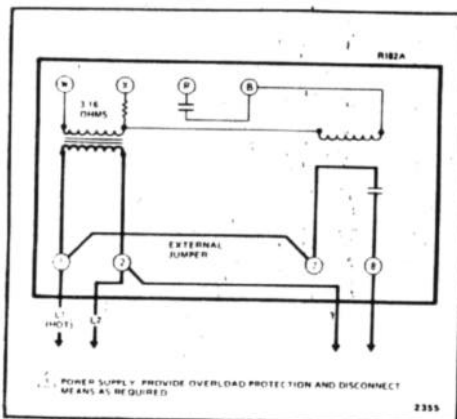


Fig. 4—Typical hookup for R182A. See Fig. 3 for thermostat connections.

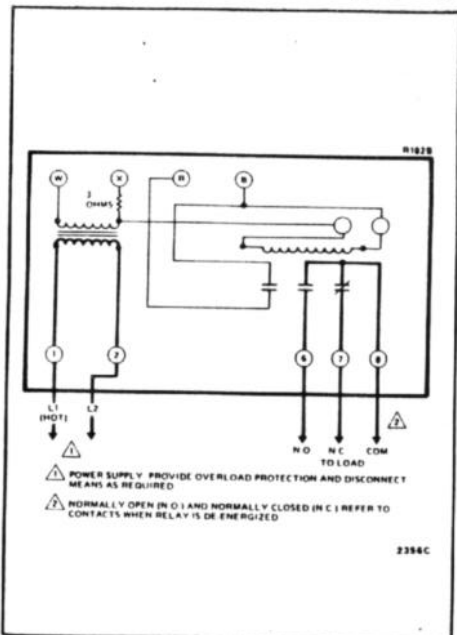


Fig. 5—Typical hookup for R182B. See Fig. 3 for thermostat connections.

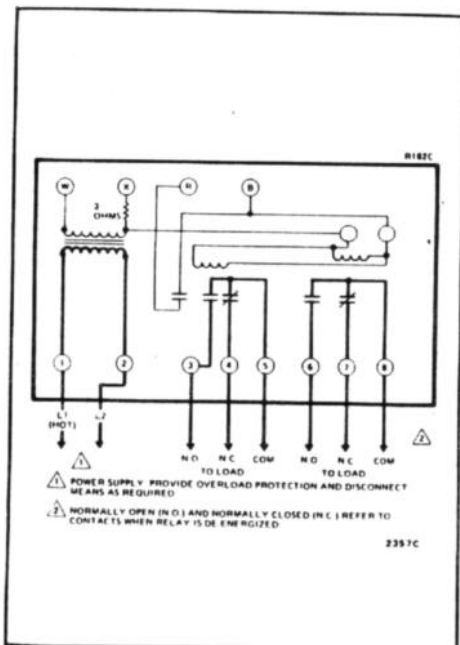


Fig. 6—Typical hookup to R182C. (Relay may be connected for spst, spdt, or dpst switching, if desired.) See Fig. 3 for thermostat connections.

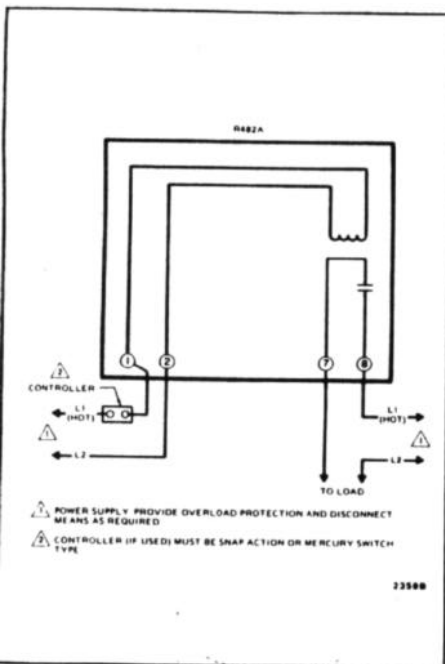


Fig. 7—Typical hookup for R482A.

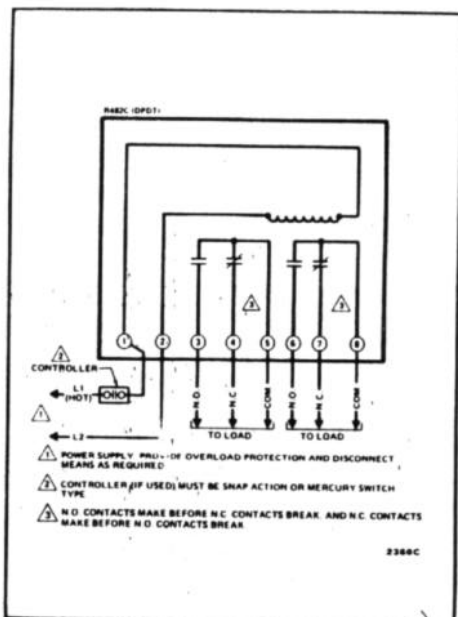


Fig. 9—Typical hookup for R482C, R482D is the same with the exception of overlapping relay contacts and contact ratings.

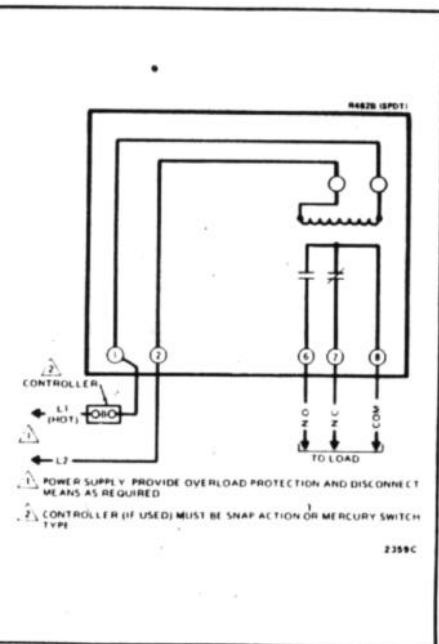


Fig. 8—Typical hookup for R482B.

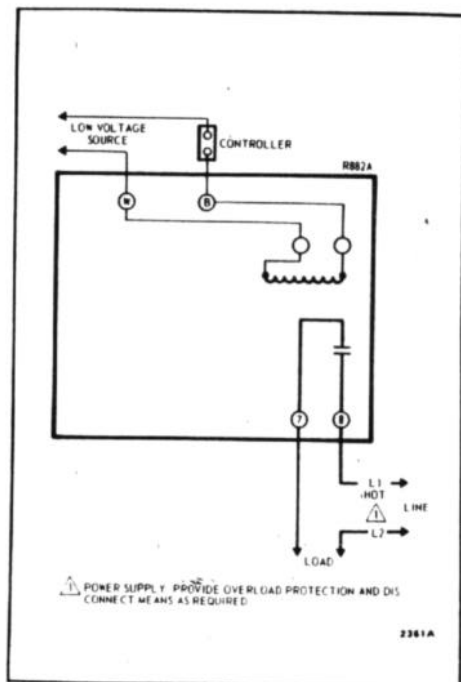


Fig. 10—Typical hookup for R882A.

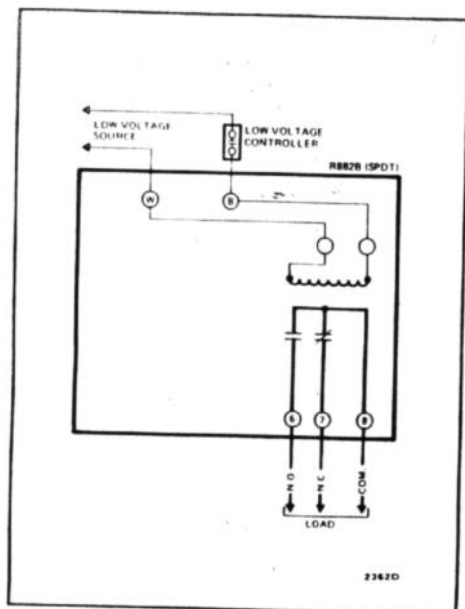


Fig. 11—Typical hookup for R882B.

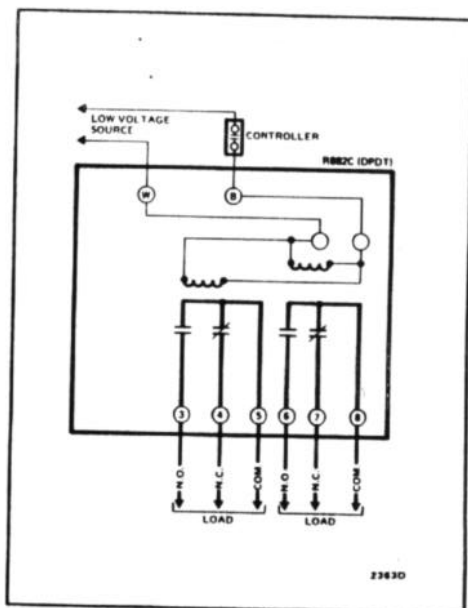


Fig. 12—Typical hookup for R882C.

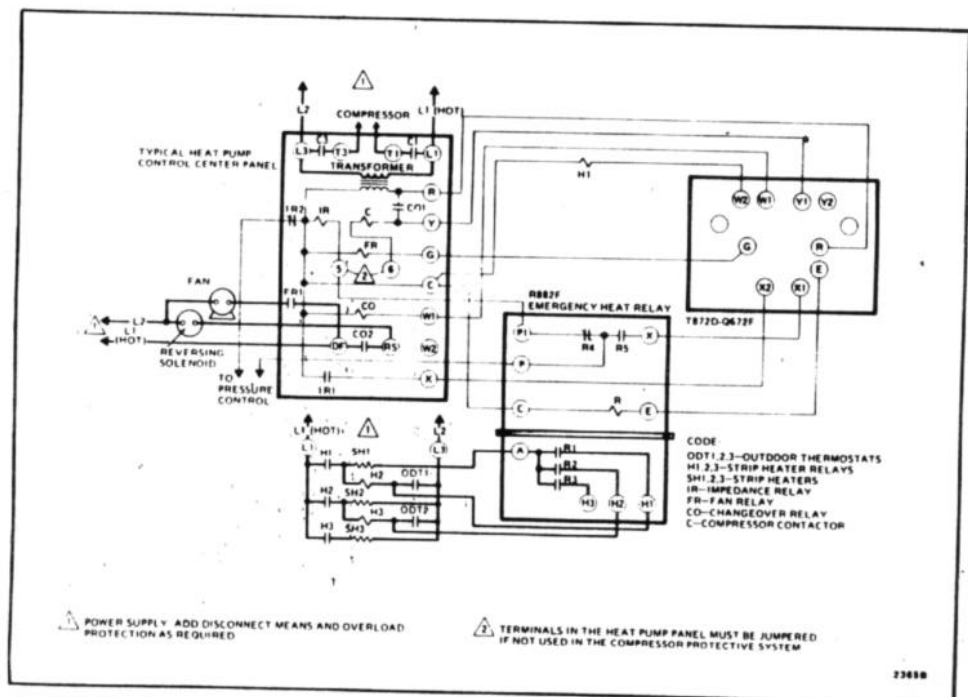


Fig. 13—R882F Emergency Heat Relay used with heat pump panel (with impedance relay). Auxiliary strip heater relay no. 1 is powered from the low voltage heat pump panel circuit. For internal schematic of T872D and Q672F, see Fig. 15.

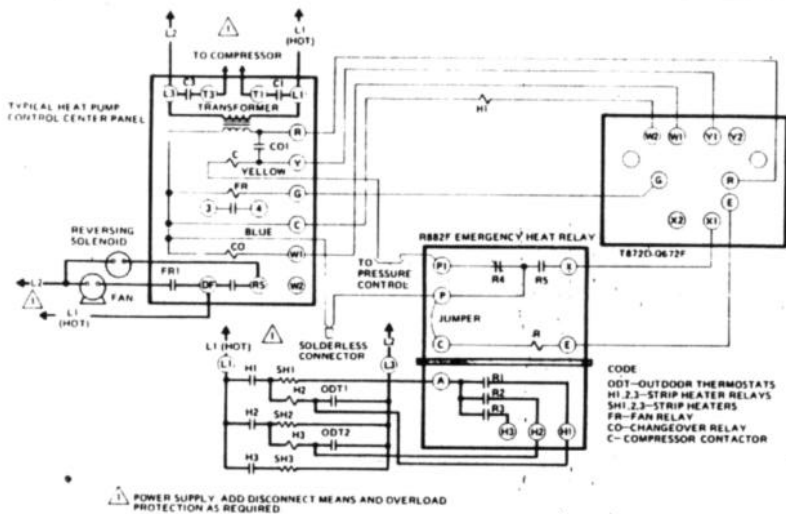


Fig. 14—R882F Emergency Heat Relay used with heat pump panel (without impedance relay). Auxiliary strip heater relay no. 1 is powered from the low voltage heat pump panel circuit. Strip heater relays 2 and 3 are powered from a separate line voltage source. For internal schematic of T872D and Q672F, see Fig. 15.

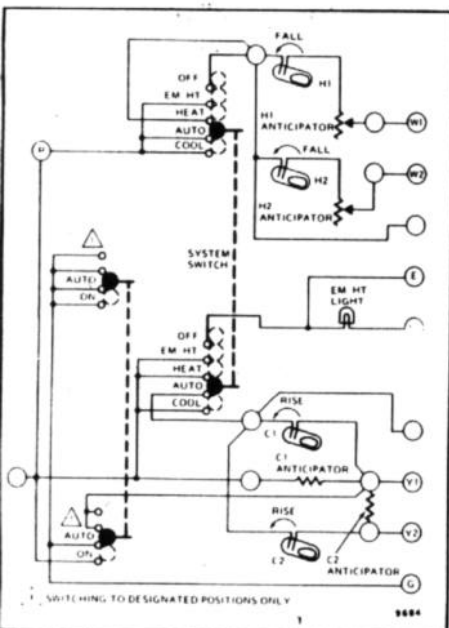


Fig. 15—Internal schematic for Q672F subbase with T872D thermostat.

#### SERVICE AND CHECKOUT

1. Never use oil on any part of the relay coil or contacts.
2. The cover should be kept on the relay during normal operation and removed only for service and checkout.
3. Relay contacts are arranged so that they close with a wiping action and are self-cleaning. The contacts may turn black after being in service for some time. This discoloration does not prevent proper operation.
4. After installation is complete, operate the relay and equipment through at least 1 complete cycle to make sure that the relay controls the equipment as intended.

Dear Customer,

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