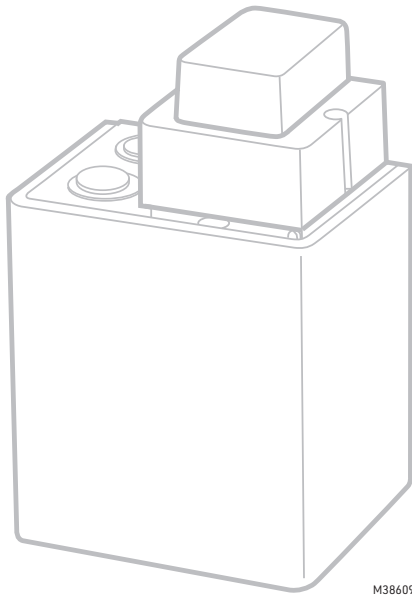




R856A, B, D Fan Centers

PRODUCT DATA



M38609

APPLICATION

R856 Fan Centers control an evaporator fan.

FEATURES

- **These fan centers are used with heating cooling thermostat and subbase combinations such as the T87-Q539, T872-Q672, or T834-Q634.**
- **All R856 Fan Centers provide line voltage spst, spdt, or dpst switching.**
- **R856B and D have integral 45 va transformer to supply low voltage power for the system.**
- **R856D includes a spst thermal delay relay to prevent short cycling the compressor motor.**
- **Low voltage terminal strip for thermostat and panel connections.**
- **Models available with dpst 20 amp contactor for switching heavy duty 240v loads.**

SPECIFICATIONS

Models:

R856A Fan Center – switching is spst normally open, spdt, or dpst normally open.

R856B Fan Center – switching is spst normally open, spdt normally open. Includes 45 va transformer.

R856D Fan Center – switching is spst normally open, spdt, or dpst normally open. Transformer and spst thermal delay relay.

ELECTRICAL RATINGS:

Spst and spdt models:

	Normally Open		Normally Closed	
	120V AC	240V AC	120V AC	240V AC
Full Load	14.0	8.0	10.0	7.0
Locked Rotor	84.0	48.0	60.0	42.0

Dpst models:

	240/277V	480V	600V
Full Load	20	12	12
Locked Rotor	100	60	50
Resistive	30	30	30

TRANSFORMER VOLTAGE:

R856A – 24v at 60 Hz.

R856B – 120 or 240v ac, 60 Hz (specify when ordering).

R856D – 120v ac, 60 Hz.

TRANSFORMER EXTERNAL LOAD:

R856 Fan Centers with transformers will operate the following Resideo relays and contactors with up to 300 feet of No. 18 gauge wire (150 ft. run):
 two R8230 or R8222 Relays;
 one R850 Contactor;
 one R8230 or R8222 Relay and one R850 Contactor;
 one R850 Contactor and one R8093 Thermal Delay Relay;
 one R8210, R8212 or R8214 Contactor;
 one R8210, R8212 or R8214 Contactor and one R8230 or R8222 Relay;
 one R8210, R8212 or R8214 Contactor and one R8093 Thermal Delay Relay or
 two R850 Contactors.



WIRING TERMINALS:

Color coded leadwires for line voltage loads; screw connections for low voltage wiring. Except R856B dpst models which have quick connect and screw terminals for up to No. 8 wire for line voltage loads.

RELAY COIL RATINGS:

	240/277V	480V
Sealed va	6 va	15 va
Inrush va	11 va	47 va
Sealed amps	0. 22 amp	0. 62 amp

FINISH: Gray enamel.

LISTING BODIES: R856A, B and D Fan Centers are listed by Underwriters' Laboratories, Inc. under File E4436, Guide Number XAPX.

DIMENSIONS: See Fig. 1.

REPAIR PARTS:

Relay – spst and spdt R851E1075
 Transformer – 116826A
 Contactor – dpst - R850B1617

INSTALLATION

! CAUTION

1. Installer must be a trained, experienced technician.
2. Disconnect power supply before making wiring connections to prevent electrical shock and equipment damage.
3. Always conduct a thorough checkout when installation is complete.

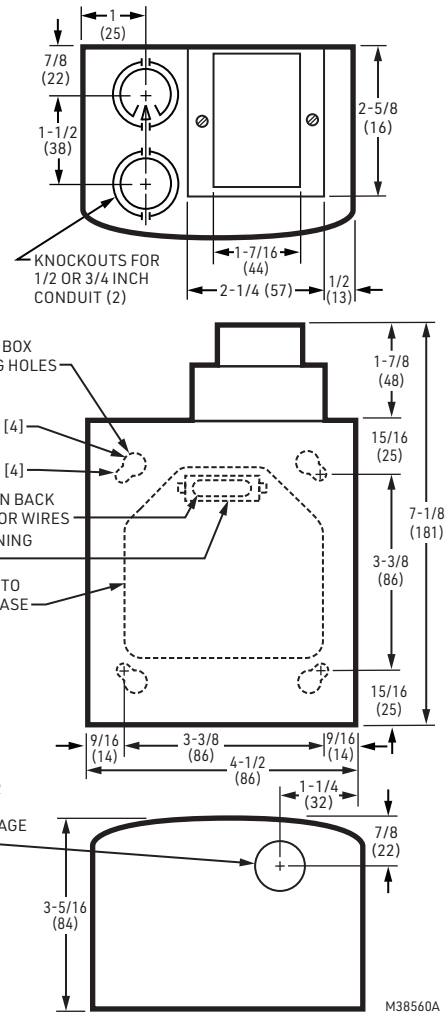


Fig. 1. R856 dimensions in in.

Location and Mounting

The R856 may be mounted on any flat surface or on a standard 4 inch square junction box. Remove the cover by squeezing the sides and pulling straight outward. Knockouts for 1/2 or 3/ 4 inch conduit are provided in the top of the fan center case. When mounting on a junction box, run line voltage wires through the slot provided in the back of the case. A 7/8 inch diameter hole for low voltage wiring is located at the bottom of the case. Use the rubber grommet provided to secure the low voltage wires.

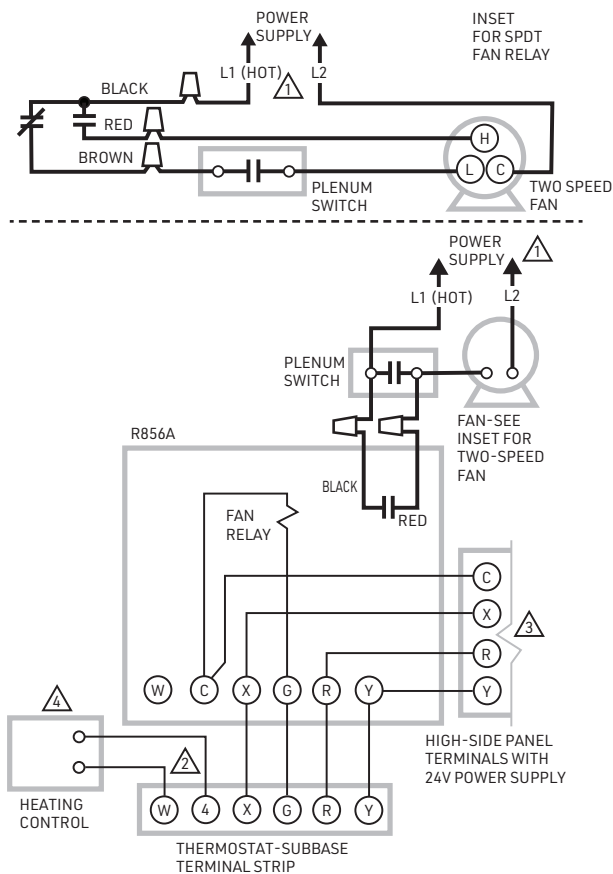
Use the case as a template, and punch or drill pilot mounting holes. Mount the R856 on a flat surface or the junction box with two screws provided.

WIRING

CAUTION
 Disconnect power supply to prevent electrical shock and equipment damage.

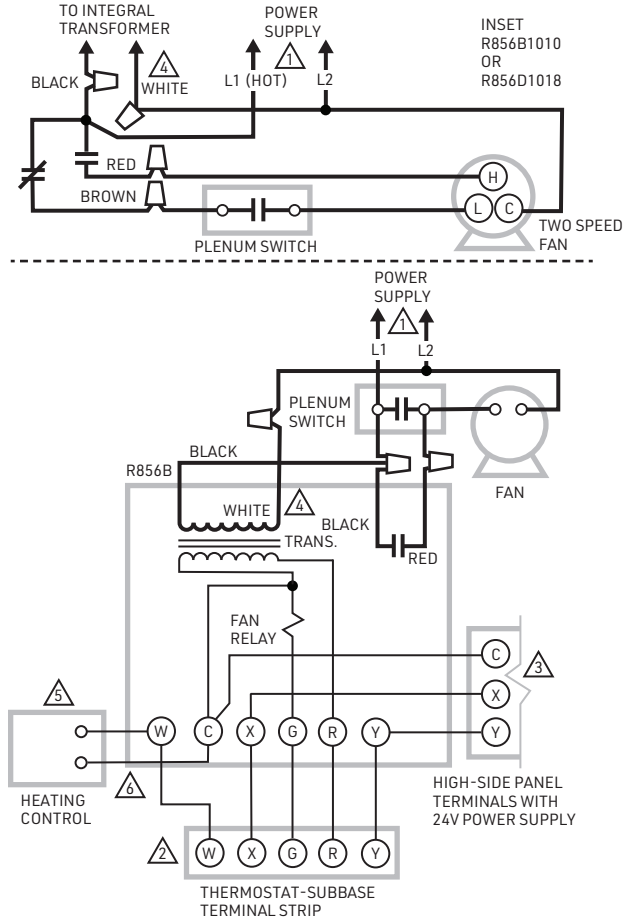
All wiring must comply with local codes and ordinances. Refer to information furnished by the system or equipment manufacturer and wiring diagrams for typical hookups and internal schematics.

After wiring is complete, place system into operation. Operate through one complete cycle to make sure equipment functions properly.



- ⚠️ PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.
 - ⚠️ T87-Q539 SHOWN, HOOKUPS TO OTHER THERMOSTAT-SUBBASES MAY BE SLIGHTLY DIFFERENT.
 - Ⓝ X TERMINAL IS USED TO POWER A SUBBASE INDICATING LIGHT WHEN THE IMPEDANCE RELAY IN THE HIGH SIDE PANEL PULLS IN.
 - ⚠️ HOOKUP SHOWN IS FOR HEATING CONTROL WITHOUT SEPARATE POWER SUPPLY. IF HEATING CONTROL HAS SEPARATE POWER SUPPLY, REFER TO WIRING WITH ISOLATION RELAY.
- M38564

Fig. 2. Typical R856A spst hookup diagram with internal schematic. Inset shows R856A with spot fan relay. For wiring with isolating relay, refer to Fig. 4.



- ⚠️ PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.
 - Ⓜ T87-Q539 SHOWN, HOOKUPS TO OTHER THERMOSTAT-SUBBASES MAY BE SLIGHTLY DIFFERENT.
 - Ⓝ X TERMINAL IS USED TO POWER A SUBBASE INDICATING LIGHT WHEN THE IMPEDANCE RELAY IN THE HIGH SIDE PANEL PULLS IN.
 - ⚠️ WHITE LEADWIRE FOR 120V MODELS. ORANGE LEADWIRE FOR 240V MODELS.
 - Ⓜ TOTAL EXTERNAL TRANSFORMER LOAD, 0.9 AMP AT 24V.
 - ⚠️ HOOKUP SHOWN IS FOR HEATING CONTROL WITHOUT SEPARATE POWER SUPPLY. IF HEATING CONTROL HAS SEPARATE POWER SUPPLY, REFER TO WIRING WITH ISOLATION RELAY.
- M38611

Fig. 3. Typical R856B spst hookup diagram with internal schematic. Inset shows R856B with spot fan relay. For wiring with isolating relay, refer to Fig. 4.

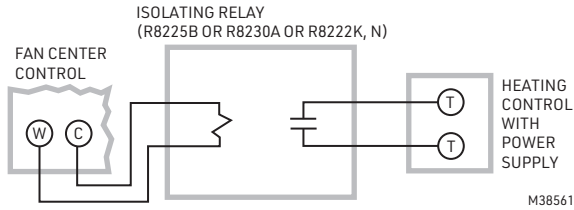
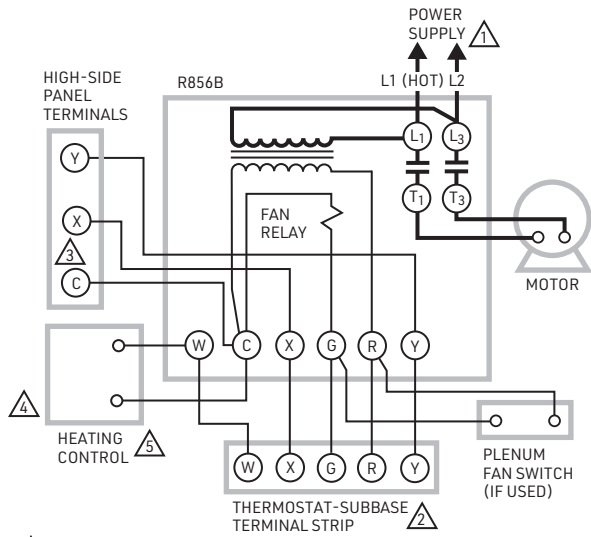


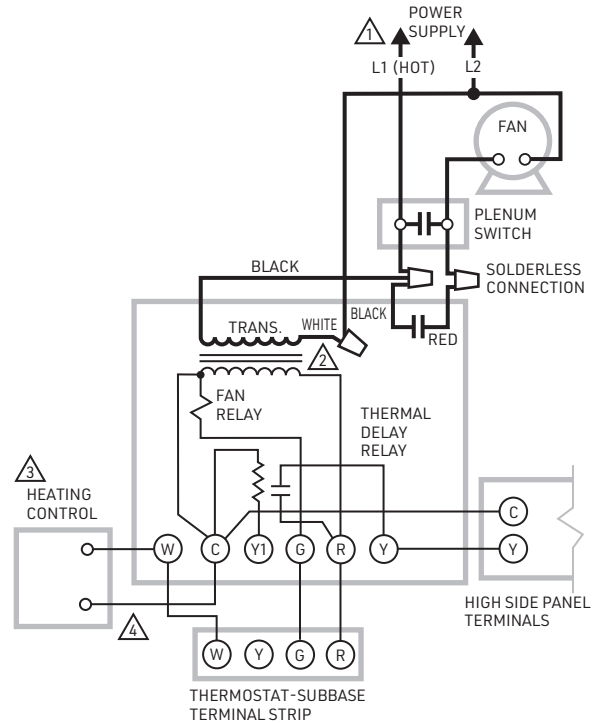
Fig. 4. Isolating relay added to prevent interconnection of heating control power supply with R856 transformer. Isolation of the power supplies may also be accomplished by using special thermostat-subbase combinations with isolated circuits such as T87FĀ-Q539A1147, T834A-Q634A1039, or T882-Q611A1037. Refer to applicable thermostat specification sheets for details.



- ⚠️ PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.
- ⚠️ T87-Q539 SHOWN, HOOKUPS TO OTHER THERMOSTAT-SUBBASES MAY BE SLIGHTLY DIFFERENT.
- ⚠️ X TERMINAL IS USED TO POWER A SUBBASE INDICATING LIGHT WHEN THE IMPEDANCE RELAY IN THE HIGH SIDE PANEL PULLS IN.
- ⚠️ TOTAL EXTERNAL TRANSFORMER LOAD, 0.9 AMP AT 24V.
- ⚠️ HOOKUP SHOWN IS FOR HEATING CONTROL WITHOUT SEPARATE POWER SUPPLY. IF HEATING CONTROL HAS SEPARATE POWER SUPPLY, REFER TO WIRING WITH ISOLATION RELAY.

M38562

Fig. 5. Typical R856B dpst hookup diagram with internal schematic. For wiring with isolating relay, refer to Fig. 4.



- ⚠️ PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.
- ⚠️ WHITE LEADWIRE FOR 120V MODELS. ORANGE LEADWIRE FOR 240V MODELS.
- ⚠️ TOTAL EXTERNAL TRANSFORMER LOAD, 0.9 AMP AT 24V.
- ⚠️ HOOKUP SHOWN IS FOR HEATING CONTROL WITHOUT SEPARATE POWER SUPPLY. IF HEATING CONTROL HAS SEPARATE POWER SUPPLY, REFER TO WIRING WITH ISOLATION RELAY.

M38563

Fig. 6. Typical R856D spst hookup diagram with internal schematic. Inset above Fig. 3 shows wiring R856D spot fan relay. Thermal delay relay prevents short cycling compressor. for wiring with isolating relay, refer to Fig. 4.



Resideo Technologies, Inc.
1985 Douglas Drive North, Golden Valley, MN 55422
1-800-468-1502

www.resideo.com 60-2171-01 M.S. Rev. 04-21 | Printed in United States