



24-volt and 120-volt Current Sensing Relays

Installation Instructions

General Filters, Inc. 43800 Grand River Ave., Novi, Michigan 48375 • Phone: (248) 476-5100
Fax (248) 349-2366 • www.generalaire.com

Designed to interface with humidifiers and most heating and cooling systems.

It senses current rather than measuring voltage, making it more reliable. It is less expensive than using traditional flow switches, pressure switches or other types of relays. The relay installs around the blower motor's common lead and interface easily into the circuitry.

The current sensing relay case is constructed from high-impact plastic. The lead wire bracket is protected by a soft sponge insert, in order to prevent damage to the motor/blower wire and/or accidental contact with any metal.

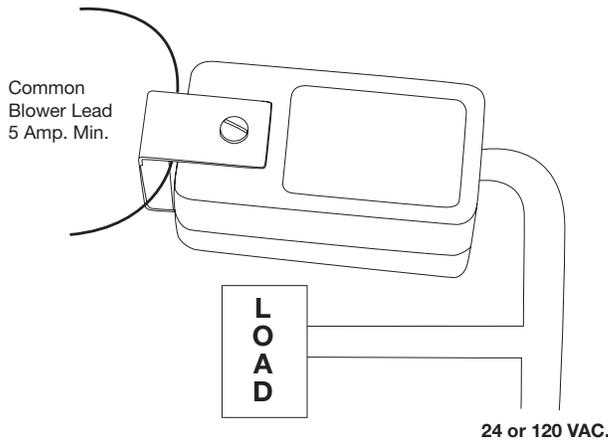
Important:

The wire lead bracket needs to carry a minimum of 5.0 amps for proper operation. If the current draw is less than 5.0 amps, wrap the lead wire around the bracket so that it passes between the bracket and relay housing two or more times.

Caution:

Turn off all power to the furnace motor circuit and cabinet.

GA50 24-volt and GA51 120-volt Current Sensing Relay

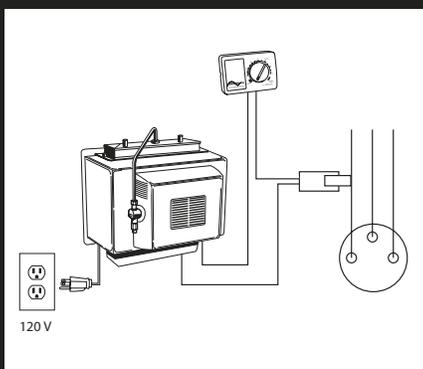


General Installation Procedures

- Follow the step-by-step instructions for mounting the General Filters humidifier, found in the humidifier installation manual. DO NOT connect the electrical, water supply or drain at this time.
- Please follow these wiring instructions:
 - Turn off electrical power to the furnace. Attach the current sensing relay around the common lead of the furnace blower motor. The relay must be located at least 3" from any transformer. Make sure, the relay's metal bracket does not touch any other metal. (See detail A)
 - Use a wire nut to connect one lead wire. Use a wire nut to connect one lead wire from the current sensing relay to one of the 24V wires from the humidifier. (X) (Additional wire length may be needed.)
 - Use a second wire nut to connect the remaining lead wire from the current sensing relay to the humidistat (Y).
 - To complete the circuit, use a third wire nut to connect the humidistat's second lead wire to the 24V lead from the humidifier (Z).
- Follow the instructions supplied with the humidifier to complete the installation.

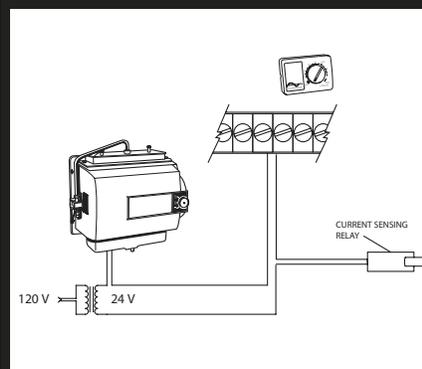
Model X Wiring Diagrams

GeneralAire Model 1137



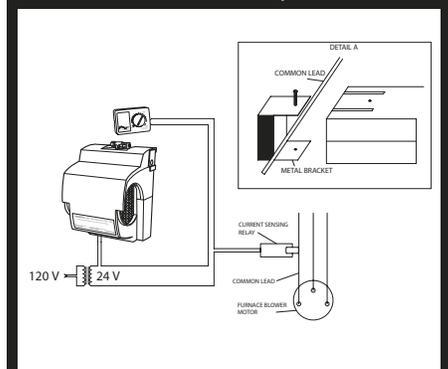
GeneralAire Fan Powered Humidifier

GeneralAire Model 1042 DME



GeneralAire Bypass with Temperature Compensating Auto Control

GeneralAire Models 1042 LH, 1099LH & SL16



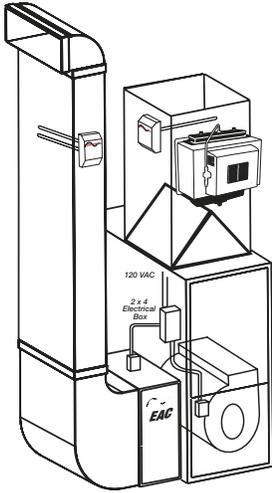
GeneralAire Bypass with manual control



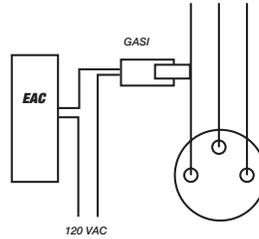
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Installation Instructions

Model Air Cleaner Installation



1. Install the air cleaner according to the manufacturer's instructions.
2. Install the GA51 on the common wire of the blower motor as shown in the diagram.
3. Open the main power junction box on the side of the furnace and run the leads of the GA51 relay into the junction box.
4. Connect the leads of the GA51 relay in series with one of the electronic air cleaner leads. Connect the remaining lead and ground wire. The 120 VAC source must be independent of the furnace blower motor.
5. Check all wire connections, close junction box and restore furnace to working order. Test proper functioning by observing that the air cleaner's indicator lamp turns on when the blower runs and turns off when the blower stops.



Checkout Procedures

1. Replace all safety devices.
2. Reconnect power to furnace.
3. Activate furnace blower motor.
4. Check load for operation. It should now be working properly. Check indicating lamp or other conditions showing that the load is receiving power.
5. Switch off the blower unit. The power to the device should shut off.
6. If the device is activated properly and turns off when the power through the common wire is removed, installation is complete.
7. If the device is not powered when the blower is turned on:
 - Ensure the device's power switch is in the "ON" position.
 - Recheck all wiring.
 - Check line fuses.
 - Confirm that five or more amps is flowing through the control wire. Wrap additional turns around the bracket if necessary.

Technical Specifications

24-volt and 120-volt Current Sensing Relay

	GA50 24-volt Model	GA51 120-volt Model
Voltage Range	21-24 VAC, 50-60 Hz	100-125 VAC, 50-60 Hz
Sensing Current	Minimum 5 amps	Minimum 5 amps
Operating Ambient Temperature Range	40°F - 104°F	40°F - 104°F
Dimensions		
Load Ratings	Maximum (12 watts) 0.50 amps Minimum (3 watts) 0.12 amps	Maximum (50 watts) 0.42 amps Minimum (3 watts) 0.03 amps