

RELAY OPTION FOR CCI GAS AND CO DETECTORS

Your CCI detector is equipped with a RELAY OPTION - follow these instructions

IMPORTANT- DISCONNECT ALL POWER BEFORE WIRING

These instructions are divided into two parts. The first part is for the electrician who understands relays and how they are connected. The second part is detailed for the those who need more information about relays.

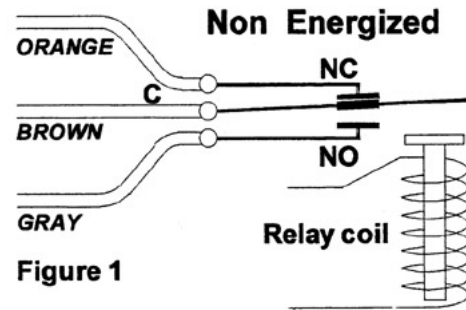


Figure 1

The detector: Refer to the detector instructions for Operation and Installation of the detector. The following instructions refer to the connection of the relay only. The relay shown in these illustrations is located in the detector. The color of the wires are shown as they are connect to the relay. This relay may not be serviced or replaced. Call CCI for service information.

Connections - for the electrician:

The relay contacts are isolated from all conductive paths of the detector. The maximum isolated voltage is 600 volts. The relay contacts are rated at 2 amps inductive. If greater current is required, use this relay to drive a larger relay with the current ratings you require. Remember, motors have inrush current. Your contact current ratings must be more than the peak (inrush) current. Shown above is the relay configuration. The relay is shown in its non energized position.

The energized position occurs when gas is detected. Upon completion of your connections, be sure to tape off or cut off any unused wires extending from the detector. If connected in such a way that the relay controlled device should be deactivated in the event of power failure to the detector, the device should be powered from the same power source as the detector.

Connections - detailed description:

A relay is a device which relays data. The energy used to activate the relay is isolated from the data which the relay will control. The maximum voltage which can be applied between the detector's supply voltage and the data on the relay contacts is 600 volts. The contact current rating is the maximum current or power which can be switched through the relay. You must know the current drawn by the device which will be controlled by the relay. Electric motors have inrush current which is the added current to start the motor turning. This is the peak current and must be less

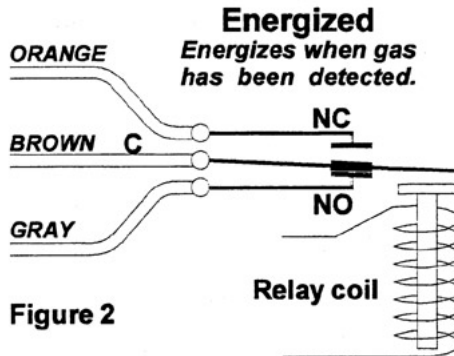


Figure 2

than the current ratio of the relay contacts. When the relay is activated, electric current passes through the coil of an electromagnet in the relay causing a magnetic field to pull a contact plate, switching it from one contact to another contact. This causes one electric circuit to be opened and another electric circuit to be closed. In the normal (non-energized) position the 3 closed circuit is called NC (Normally Closed) and the open circuit is called NO (Normally Open). The center contact which moves to change the circuit is called C (Common). The circuits in a relay are called poles. Figure 1 shows the relay in its non-energized state. Figure 2 shows the relay in its energized state. Note how in the non-energized state the circuit is closed from the NC pole to the C pole. When energized in figure 2, the circuit is opened from the NC pole to the C pole and closed from the C pole to the NO pole. When gas is detected the relay is energized. The industrial standard for this type of relay configuration is known as a "C configuration relay".

Relay Connections: The relay may be connected to cause an event when gas is detected, or interrupt an event when gas is detected. Figure 3 shows a typical connection to start a small fan when gas is detected. The power to the fan is normally interrupted between the relays NO pole and the C pole. When gas is detected the relay is closed and the fan will start to air out the effected area. Figure 4 shows a typical connection to light a light bulb when conditions are safe (no gas is detected). When gas is detected the relay is closed, opening the circuit from the relays NC pole to the C pole. These two circuits may be combined to cause the fan to start and the light to cease lighting when gas is detected.



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Relay specifications:

Configuration: C
Contact ratings: 2 amps inductive
Contact material: Silver
Relay casing: Hermetically sealed

Wiring connections to start a fan when gas has been detected.

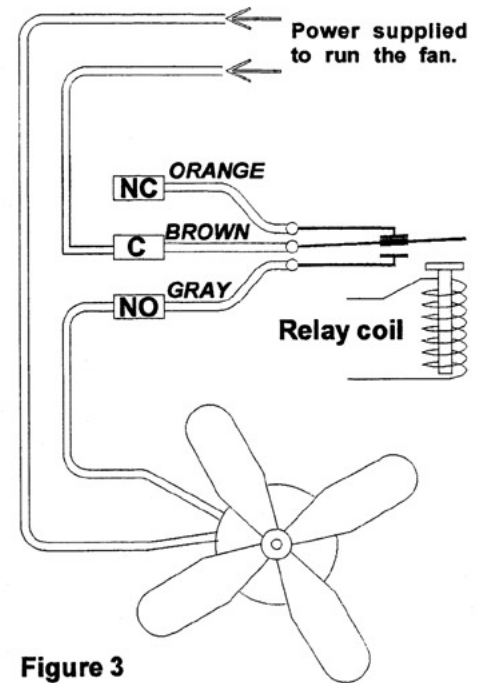


Figure 3

Wiring connections to turn a light bulb off when gas has been detected.

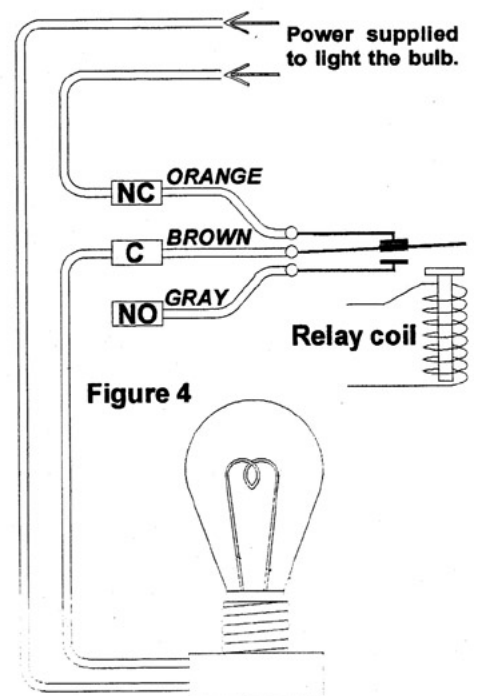


Figure 4