

MACURCO GAS DETECTORS

4S1D-1-BR

INSTALLATION & OPERATING INSTRUCTIONS

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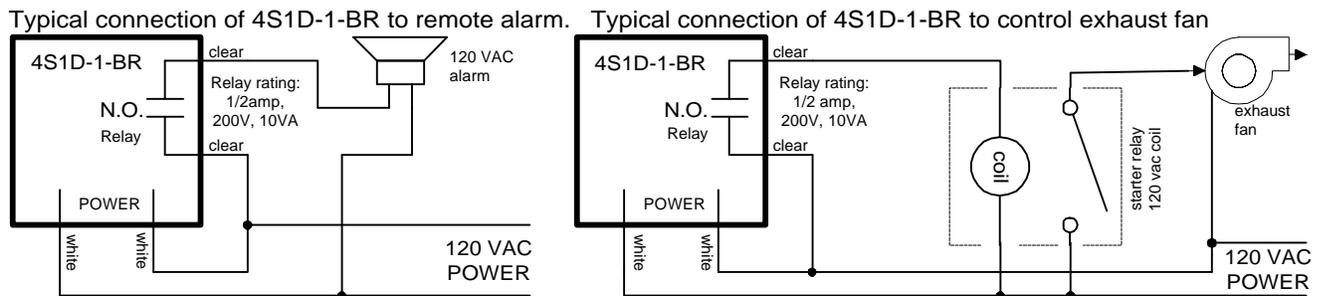
GENERAL INFORMATION

The 4S1D-1-BR is a gas detector that provides an alarm to dangerous levels of various combustible gases. See the data sheet for a list of gases that can be detected. The standard calibration is to 20% of LEL (Lower Explosive Level) of a mixture of Methane (natural gas) and air. The 4S1D-1-BR will also alarm at about 20% of LEL of Propane, Butane and LP Gas. To detect the complete list of gases on the data sheet will normally require a special calibration, for a nominal charge. However, the following gases can be detected with the standard calibration: Acetylene, Gasoline fumes and Lacquer thinners.

The 4S1D-1-BR unit has an 85db buzzer and dry contact relay set to be hard wired in a double gang box.

NOTE: . The internal dry contact relays are rated for maximums of 0.5 Amps, 200 Volts, or 10 VA.

Figure 1.



LOCATION

The unit on average can cover about 900 sq. ft. The coverage depends on air movement in the room or facility. Locate the unit high if the gas of concern is lighter than air, such as natural gas (methane). If the gas of concern is heavier than air; such as butane, propane, alcohols or gasoline; mount the detector relatively low. Extra detectors may be needed near any areas where people work or the air is stagnant.

The location selected should not be near a corner, as this can be dead air space. It is not recommended to place gas detectors in kitchens or bathrooms because of various chemicals or vapors that are used in these areas.

INSTALLATION

At the 4 X 4 electrical box connect the 6" white power cord to 120 VAC. Also connect the clear 6" cord to the device to be switched. *Note relay rating on data sheet.* After all wiring is done mount the unit to the double gang electrical box.

OPERATION

When power is first applied to the detector, it will go through a warm-up period of about two minutes. The unit has an internal delay that prevents alarms during the warm-up period. The green light will blink on and off during the two-minute delay period, and will glow brightly, continuously afterwards. The push-button switch resets the 2-minute delay. Once the unit is fully operational (the green light on continuously) test the unit by directing gas from an *un-lighted* butane cigarette lighter into the detector near the green light. The buzzer will alarm, and the relay will close if it is so equipped. (The alarm sound is a high frequency buzzer that is on continuously for about 2/3 of a second and off for about 1/3 of every second.) The unit will automatically turn off the buzzer and open the relay once the air clears. However, the push button switch may be pushed to reset the two-minute delay and silence the buzzer and open the relay while the air clears.

The detector should be tested regularly, about every 6 months, by using gas from an un-lighted cigarette lighter, as detailed above.

TROUBLE SIGNAL

The 4S1D-1-BR is a supervised system. The 4S1D-1-BR has a trouble signal to indicate problems in the gas-sensing element. This is a short beep about once a second, indicating your detector may be in need of service.

ALARMS DUE TO NORMAL ACTIVITIES

Various fumes and gases from normal products such as cleaning agents and cosmetics can cause the 4S1D-1-BR to alarm. Most aerosol spray cans contain combustible propellants that can cause alarms. Cooking odors can also cause the 4S1D-1-BR to alarm. The 4S1D-1-BR data sheet has a list of the gases that can cause alarms.

If such an alarm occurs, push the button on the detector, which will silence the alarm for two minutes, while allowing the air to clear.

SENSOR POISONS

The gas-sensing tip in the detector is designed with extreme sensitivity to the environment. As a result, the sensing function of the tip may be deteriorated if it is exposed to a direct spray from aerosols such as paints, silicone vapors, etc., or to a high density of corrosive gases (such as hydrogen sulfide, sulfur dioxide) for an extended period of time.

SERVICING OF UNIT

The 4S1D-1-BR does not require regular maintenance. The unit uses a self-purging semi-conductor sensor that has a 7-10 year life expectancy. All maintenance and repair of products manufactured by Macurco, Inc. are to be performed at the Macurco manufacturing facility. Macurco does not sanction any third-party repair facilities.

LIMITED WARRANTY

The 4S1D-1-BR gas detectors are warranted to be free from defective material and workmanship for a period of two (2) year from the date of installation. If any component becomes defective during the warranty period, it will be replaced or repaired free of charge, if the unit is returned in accordance with the instructions below. This warranty does not apply to units that have been altered or had repair attempted, or that have been subjected to abuse, accidental or otherwise. The above warranty is in lieu of all other express warranties, obligations or liabilities. **THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE ARE LIMITED TO A PERIOD OF ONE (1) YEAR FROM THE PURCHASE DATE.** Macurco shall not be liable for any incidental or consequential damages for breach of this or any other warranty express or implied arising out of or related to the use of said gas detector. Manufacturer or its agents liability shall be limited to replacement or repair as set forth above. Buyer's sole and exclusive remedies are return of the goods and repayment of the price, or repair and replacement of non-conforming goods or parts. (The Uniform Commercial Code applicable in the State of Colorado shall govern.)

RETURN INSTRUCTIONS

Call (303) 781-4062 for a Return Authorization number. Then carefully pack the gas detector with a written description of the nature of the return. Send the unit to the following address:

Macurco Inc.
3946 South Mariposa Street
Englewood, Colorado 80110
WWW.MACURCO.COM

REV. 7/99