

MACURCO GAS DETECTORS

GD-1S

INSTALLATION & OPERATING INSTRUCTIONS

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GENERAL INFORMATION

The GD-1S is a surface mount gas detector intended for use with 12Vdc control panels or 12Vdc vehicles. The GD-1S is cost effective, compact, easy to install and uses an explosion proof design (ignition protected). The unit has a normally open relay output.

LOCATION

The unit on average can cover approximately 900 sq. ft. The coverage depends on air movement in the room or facility. The unit can also be mounted in enclosed compartments where hazardous gases could be present. Locate it high if the gas of concern is lighter than air, such as natural gas or hydrogen. If the gas of concern is heavier than air; such as butane, propane, ethanol; methanol or gasoline; mount the detector relatively low. Extra detectors may be needed near any areas where people work or the air is stagnant.

INSTALLATION

The unit has four wires. Connect 12Vdc to the RED (+) and BLACK (-) wires (note polarity). The two BLUE wires are for the dry contact, normally open (N.O.) ALARM/TROUBLE relay output. The relay has a maximum rating of 0.5 amp, 200v. There is no polarity on the relay. The GD-1S mounts to a flat surface, or on a single gang electric box with two #6 screws. See the GD-1S data sheet for more technical information on wiring and specifications.

OPERATION

When power is first applied to the detector, it will go through a warm-up period of about one-minute. The unit has an internal delay that prevents alarms during the warm-up period. The green light will blink during the one-minute warm-up period, and will be on solid after the delay. This green light is part of a supervisory circuit that monitors all critical functions of the detector. If the gas-sensing element ever fails it will result in the green light turning off and the relay closing. When the unit detects gas the light will turn to orange, the alarm relay will actuate, and any devices connected to the alarm relay should actuate. The unit will automatically reset once the air is clear.

TESTING

Once the unit is fully operational (the green light on solid) test the unit by directing gas from an *unlit* butane cigarette lighter into the detector near the light. The light will turn to orange, the alarm relay will actuate, and any devices connected to the alarm relay should actuate. The unit will switch the orange light back to green and shut off the relay automatically once the air clears. The detector should be tested regularly, about every 6 months, by using gas from an *unlit* cigarette lighter, as detailed above.

ALARMS DUE TO NORMAL ACTIVITIES

Various common household products, such as cleaning agents and aerosol spray cans, which are regularly used in homes or businesses, contain fumes or vapors that, can cause the GD-1S to alarm. When an alarm occurs during the day, treat the alarm only as a warning of a possible problem and attempt to determine the cause and fix it. **HOWEVER, DURING THE NIGHT WHEN THERE IS NOT NORMAL ACTIVITY TO PRODUCE FUMES, ALL ALARMS MUST BE TREATED AS POTENTIAL EMERGENCIES.**

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 GD-1S 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 GD-1S gas detectors are warranted to be free from defective material and workmanship for a period of one (1) 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

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