

MACURCO GAS DETECTORS

GD-1D

OPERATING INSTRUCTIONS

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GENERAL INFORMATION

The GD-1D is a low voltage (12-24 VAC or VDC), dual level, dual relay output all electronic gas detector. The unit is designed to be connected to a control panel or energy management system but can be made to operate stand alone. The LOW relay is factory calibrated to 10% of the LEL (Lower Explosion Limit) of Natural (Methane) Gas. This will be close to the 10% LEL of propane, butane & LP gas. The HIGH relay is factory calibrated to 25% of LEL of Natural Gas. This will be close to 25% of LEL of propane, butane and LP gas. The unit is factory calibrated but special calibrations are available for the two levels. Call the factory at (303) 781-4062 for more information on calibrations.

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, alcohol's or gasoline; mount the detector relatively low. Extra detectors may be needed near any areas were people work or the air is stagnant.

INSTALLATION

The unit mounts in and becomes the cover of a 4x4 electrical box (supplied by installer). Connect power, 12-24 VAC or VDC no polarity, to the two **White** wires of the unit. The power draw of the unit is 1.5 watts. The two **Yellow** wires of the unit are connections for the LOW relay. The two **Red** wires are the connections for the HIGH relay. Both relays are normally open (N.O.), dry contact, reed type relays that are inherently explosion proof. The red and yellow wires have no polarity preference. The relays maximum ratings are 0.5 amp, 200v, 10VA.

OPERATION

When power is first applied, the GD-1D goes through a 2 minute warm-up cycle, during which the green light blinks on and off. No alarms are possible during this time period. At the end of the 2 minute delay, the green light turns on steady to indicate proper operation.

The Red light on the GD-1D serves a dual function, it blinks on and off to indicate the LOW relay closure, and it turns on continuously to indicate that both relays are closed. The relays automatically open once the gas level drops. The electronic sensor is supervised. Any failure will be indicated by both the red and green light flashing on and off, and a closure of the LOW relay. To test the unit use an *un-lighted* butane cigarette lighter and direct gas into the unit near the green light. The LOW relay will close first as shown by a flashing red light, followed by the HIGH relay closure and a steady red light. The unit will automatically restore once the gas clears. The detector should be tested about every 6 months, by using gas from an *un-lighted* cigarette lighter, as detailed above.

INTERFERENCE'S

Various common products, such as cleaning agents or solvents or aerosol spray cans, that are regularly used, contain fumes or vapors that can cause the GD-1D to alarm.

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-1D 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-1D 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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