

# GREYSTONE

ACCURACY BY DESIGN



## **GAS DETECTORS 2-WIRE TRANSMITTERS**



## **INSTALLATION AND OPERATING INSTRUCTIONS**

### **PRODUCTS**

**CMD Series – CO Detectors**  
**AGD Series – Toxic Gas Detectors**  
**CGD Series – Combustible Gas Detectors**

(All transmitters are factory set and calibrated)

#### **NOTE:**

This document provides the necessary information for the use and operation of Greystone gas detectors. Greystone Energy Systems Inc. reserves the right to make design modifications without prior notice.

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## INTRODUCTION

The Greystone 2-wire gas detector provides a 4-20ma signal over a selected gas concentration range.

**WARRANTY:** Greystone Energy Systems Inc. will repair, or replace, any product it deems a manufacturers' defect for a period of one year beyond invoice date, at no charge to the customer (calibration excluded). If a failed product is requested in advance of evaluation, and/or repair, the customer will be invoiced for a new product and the repaired product will be returned to that customer.

**NOTE:** Always confirm, prior to installation of the device (s), that the applications and configurations are as they were intended and suitable for.

## SENSOR TECHNOLOGIES AND RANGES

| DETECTOR SERIES   | SENSOR TYPE          | GAS DETECTED   | DETECTION RANGE          |
|-------------------|----------------------|--|--------------------------|
| <b>CMD Series</b> | Electrochemical      | Carbon Monoxide (CO)   | 0-500 ppm                |
| <b>AGD Series</b> | Electrochemical      | Ammonia (NH <sub>3</sub> )<br>Nitrogen Dioxide                         | 0-100 ppm<br>0-10 ppm    |
| <b>CGD Series</b> | Catalytic Combustion | Propane (C <sub>3</sub> H <sub>8</sub> )<br>Methane (CH <sub>4</sub> ) | 0-100% LEL<br>0-100% LEL |
|                   |                      | Hydrogen (H <sub>2</sub> )   | 0-2%                     |

### DETECTOR MOUNTING HEIGHTS AND LOCATION

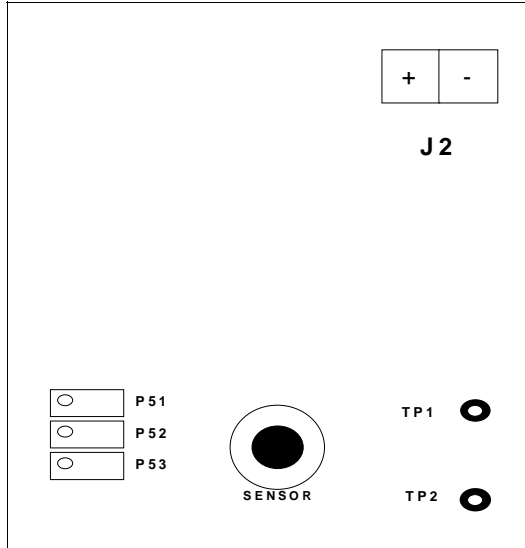
Please ensure that all sensors are installed 15 meters (50 feet) from a wall and must be kept away from fans, doors, air intakes, outlets, and etc.

**NOTE:** Standard enclosure (ABS Nema 1) mounts directly to 2" x 4" utility box.

| GAS DETECTED     | AREA COVERED                  | MOUNTING HEIGHT                 | MOUNTING LOCATION             |
|------------------|-------------------------------|---------------------------------|-------------------------------|
| Carbon Monoxide  | 700 sq. meters (7500 sq. ft.) | 1.0 to 1.5 meters (3 to 5 feet) | Above floor (duct optional)   |
| Ammonia          | 160 sq. meters (1500 sq. ft.) | 30 centimeters (1 foot)         | Below ceiling (duct optional) |
| Nitrogen Dioxide | 700 sq. meters (7500 sq. ft.) | 30 cm to 1 meter (1-3 feet)     | Below ceiling (duct optional) |
| Methane          | 160 sq. meters (1500 sq. ft.) | 30 centimeters (1 foot)         | Below ceiling (duct optional) |
| Hydrogen         | 160 sq. meters (1500 sq. ft.) | 30 centimeters (1 foot)         | Below ceiling (duct optional) |
| Propane          | 160 sq. meters (1500 sq. ft.) | 30 centimeters (1 foot)         | Above floor (duct optional)   |

# TWO WIRE ANALOG SERIES

## PCB LAYOUT

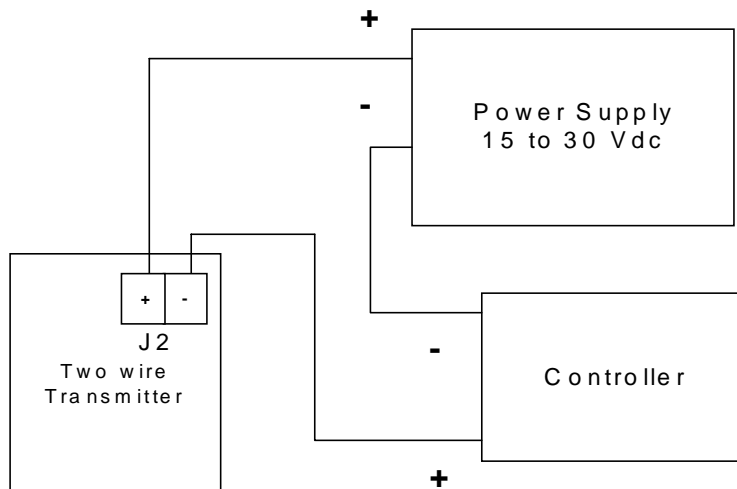


## INSTALLATION & OPERATION

To mount the unit, first remove the cover casing by removing the screws. Next, mount the bottom casing, housing the PCB to the wall or junction box using the holes provided (height and location as per page 3)

After initial start-up, the green LED will be energized indicating the operation of the unit.

## TERMINAL CONNECTIONS



**Note:** Use twisted pair wire to reduce noise interference.

The maximum allowable loop resistance is found by the formula:

$$R_{max} = (\text{power supply voltage} - 14 \text{ volts}) / .02$$

Example: when using A 24 VDC power supply  $R_{max} = (24-14) / .02 = 500 \text{ ohms}$

**Input Voltage Range: 15 to 30 VDC**