

## GD250W4NB

### CO GAS DETECTOR

#### PRODUCT SPECIFICATION SHEET

#### FEATURES

- High sensitivity and selectivity to carbon monoxide
- Low sensitivity to alcohol vapor
- Solid state sensor
- Linear 2 to 10 Vdc or 4 to 20mA output
- Compact size (70mm × 122mm × 32mm)



#### APPLICATION

GD250W4NB is IAQ(Indoor Air Quality) sensor, which is designed to detect carbon monoxide gas in the air. This model has high accuracy at low concentration, so it is optimum for parking lot, tunnel and under ground places. Also, the advantage of this model is compact size and easy installation.

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#### SPECIFICATIONS

Table 1. Model selection guide

Model	Gas Detected	Sensing Range	Wiring
GD250W4NB	Carbon monoxide	0 ~ 250 ppm	3/4 wire

Gas detected	: Carbon monoxide (CO)	Coverage area	: 465 m <sup>2</sup> (recommended)
Sensor type	: Semiconductor	Response time	: Within 5 minutes.
Detect range	: 0~250ppm	Warm-up time	: Minimum 2 hours
Accuracy	: 1) +/-5% FS for 0~100ppm : 2) +/- 10% FS for 100~250ppm	Protection class	: IP30
Output signal	: 2~10Vdc (default) or 4~20mA (selectable by jumper)	Wiring	: 3 or 4 wire compatible
Power supply	: 24Vac 50/60Hz, 24Vdc, +/- 20%	Operating temperature	: 0 ~ 50 °C.
Sensor life expectancy	: 3years	Operating Humidity	: 10 ~ 95%RH (no condensing)
		Storage temperature	: -20 ~ 60 C.
		Storage Humidity	: 10 ~ 95%RH (no condensing)

## DIMENSIONS

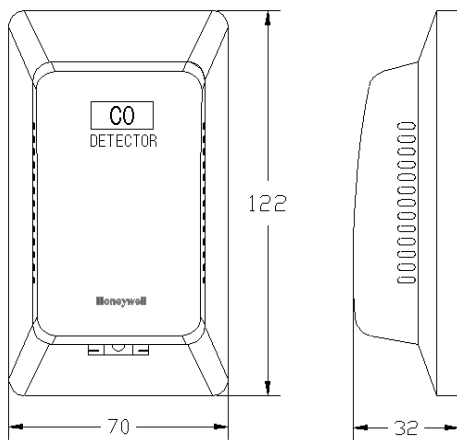


Fig. 1. dimensions (in mm)

## ASSEMBLY

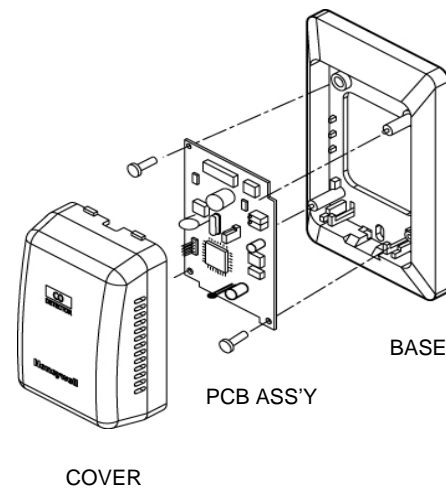


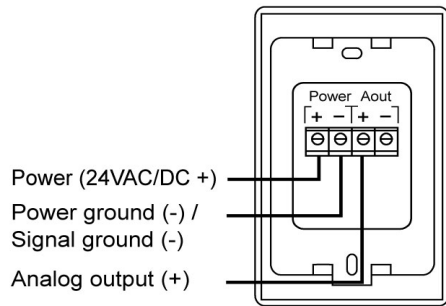
Fig. 2. assembly structure

## INSTALLATION

1. Determine the output signal type.
  - For DC voltage output(2~10VDC), connect Jumper to 'V-out' which is located in center of the PCB.
  - For current output(4~20mA), connect Jumper to 'I-out' which is located in center of the PCB.
  - ※ Default is DC voltage output(2~10VDC).
2. Installation procedure
  - ① Push the bottom of the cover to separate from the base.
  - ② Connect the input and output lines to the terminal block. Then, verify the lines correctly fixed to the terminal.
  - ③ Fix the base by using the screw nails. Do not fix the base upside down. (Be cautious PCB assembly not to be damaged.)
  - ④ Reassemble the cover.
3. Mount approximately 150cm(5 feet) above floor.
4. Do not use as a life safety device.
5. When the product has wet by dew, use the product after completely dry up.
6. Install the input and output lines far away form other system-input lines.
7. Do not use this product for portable.

## WIRING

### 3-line wiring



### 4-line wiring

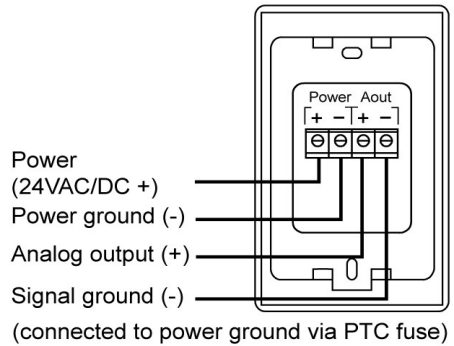


Fig. 3. wiring diagram

### Jumper setting method to determine the output signal type

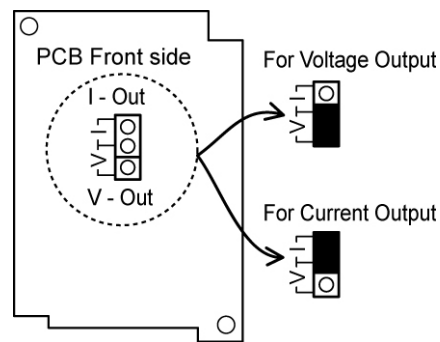
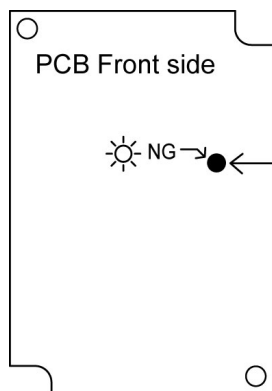


Fig. 4. jumper setting

### Caution on wiring



#### AC24V wiring polarity error notice lamp

When power on, if this lamp lights, please change the AC24V power line polarity reversely.  
(The V/mA signal output is not electrically separated from AC 24V power line.)

## CAUTION

- The standard test condition is 25°C, 50%RH. Sensitivity will be decreased when the sensor is located in extreme dry condition or places.
- Avoid exposure where silicone adhesives, hair grooming materials or silicone rubber/putty may be present.
- Avoid exposure to alkaline metals, especially salt-water spray.
- Avoid exposure to highly corrosive materials such as H<sub>2</sub>S, SO<sub>x</sub>, Cl<sub>2</sub>, HCl, etc.
- Sensor drift may occur due to soaking or splashing the sensor with water.
- If water freezes on the sensing surface, the sensing material would crack, altering characteristics.
- If water condenses on the sensor's surface and remains for an extended period, sensor characteristics may drift.
- Sensor performance may be affected if exposed to high density of gas for a long period of time, regardless of the powering condition.
- When stored without powering for a long period, the sensor should be stored in a sealed bag containing clean air, do not use silica gel.
- Regardless of powering condition, if the sensor is exposed in extreme conditions such as very high humidity, extreme temperatures, or high contamination levels for a long period of time, sensor performance will be adversely affected.
- Avoid excessive vibration or strong shock that may cause the sensor or lead wires to break.

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