Remote Storage Safety 3
Alarm Installation Guide

Model: RAD-0102-6

Product Description

Thank you for selecting the RAD-0102-6 Remote Storage Safety 3 Alarm.



This monitor is designed to protect customers and workers, anywhere bulk carbon dioxide is used or stored.

Today, CO2 alarms are required in many local state jurisdictions to meet fire codes. The RAD-0102-6 is designed specifically to meet all code requirements for CO2 storage safety. The Remote Storage Safety 3 Alarm constantly measures and monitors enclosed areas for higher than normal levels of carbon dioxide gas.

If a CO2 leak occurs, visible and audible alarms will sound on the sensor unit and on the remote display – to warn you and your employees.

The RAD-0102-6 Remote Storage Safety 3 Alarm is cost-effective and has many features:

- Separate SEU (Main Sensor Unit) and RDU (Remote Display Unit) allow you to see warning before entering an enclosed area. Up to 3 RDUs can be used.
- Large digital LCD display clearly indicates the ambient CO2 concentration.
- Relay outputs to control ventilation devices.
- Audible and Visual Alarm Indications at three separate alarm levels.
- Ability to add strobes or strobe towers for additional indication.

NOTE: All the necessary mounting hardware (screws, mounting brackets, power supply strip) are included.

All you will need is standard screwdriver, for basic installation.

***There are 3 additional universal power plugs included, so as the system can be installed *worldwide*.**

Installation Steps

1. Choose a suitable location near a wall outlet to install the SEU.
2. To install the SEU (Sensor Unit) start by making a mark about 12 inches off the floor. *(CO2 is heavier than air and will settle at the floor, first.)*
3. Screw the mounting bracket into the wall where you placed your mark. If you are using the wall adapter, mount the sensor unit close to a wall outlet. *(Make sure it is mounted an area that it will not accidently get hit by boxes or heavy machinery).*
4. Attach one end of the ethernet cable to the SEU (Sensor Unit), then slide the Sensor Unit onto the mounted bracket on the wall.
5. Plug in the wall adapter – the SEU (Sensor Unit) should automatically turn on and perform a self-check.
6. Securely attach the safety strap over the power supply, to ensure it does not become accidently unplugged.
7. The Green light should appear and show that the SEU (Sensor Unit) has power.
8. Over the next few minutes, all lights will flash, and resort back to green. This means the CO2 level is matching the ambient CO2 level in the room and provide you with a precise, accurate ppm (parts per million) reading.

Next, the Small Remote Display Install

1. Make a mark for the RDU (Remote Display Unit) outside the room where the SEU is and CO2 is stored. Screw the mounting bracket where the mark is. (Should be mounted at eye level.)

   a. Plug in the other end of the ethernet cable into the back of the RDU (Remote Display Unit)

   b. Mount the RDU onto the bracket on the wall, the input on the Remote Display Unit should be connected to the output on the SEU (Sensor Unit).

   c. Place the warning signs that came with the device, on the wall directly next to the RDU. (**The signs should be visible**).

Perform a Test

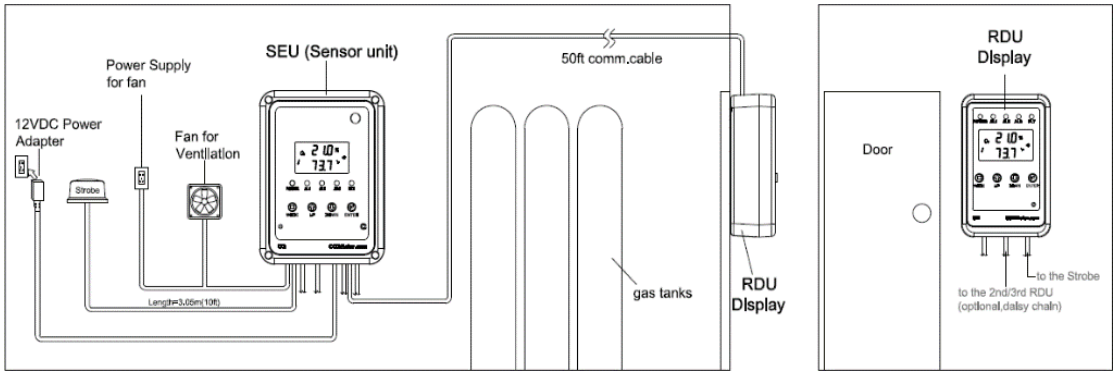
1. To test if the monitor is operating correctly, you can do a simple test. Normal Indoor Air Quality Levels are between 400-1200ppm.

2. To test the device, simply blow (huff) on the hole located on the left top corner of the SEU. Your exhaled breath is about 3%CO2 which is more than enough to set off the alarm.

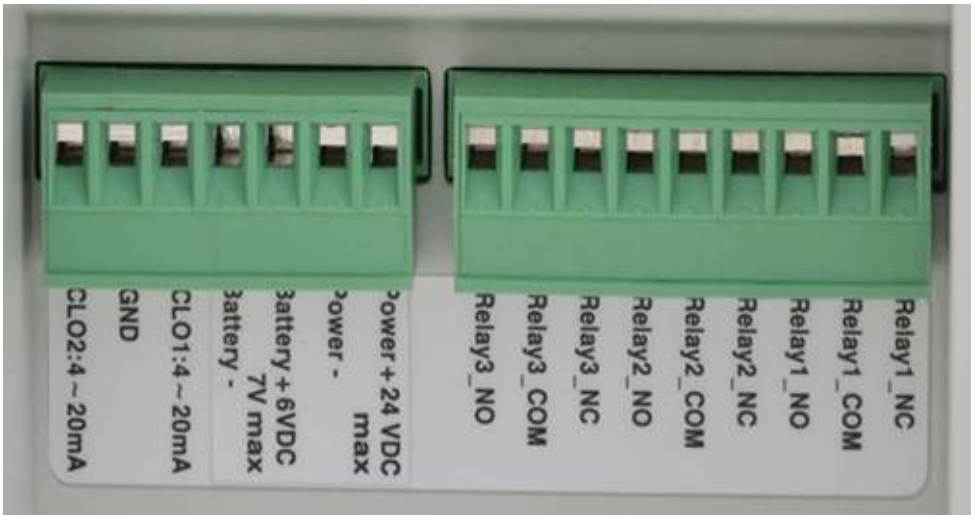
3. *Verify that the alarms are sounding, and the lights are flashing, on both the SEU and RDU.

4. Now you know the monitor is working, the alarm will stop once the CO2 returns to a normal level.
   (You can also press the reset alarm button on the SEU to silence the alarm.)

Installation Example:



Installation Connector Options



1. For new build installations, the sensor unit can be powered by **Power+24VDC**

2. **4~20mA** outputs are included for offsite CO2 monitoring

3. In the case of a power outage, the **6VDC Battery Backup** can be installed to retain the alarm settings.

4. If you have more than one door, in the CO2 Storage Area – you can also purchase additional display units (up to three RDU's can be displayed to a main SEU unit - up to a maximum of 300 ft.

- **Power + 24 VDC MAX–** The RAD-0102-6 is powered from 12 to 24 Volts DC. You may use the supplied 12 Volt DC Power Adapter or other 12 to 24 Volt DC Power Source.
- **Power -** Ground
- **Battery +** Back-up battery
- **Battery -** Back-up battery Ground
- **CL01:4-20mA** 4-20 mA for CO2: 0 to 50,000ppm
- **GND** 4-20mA GND
- **CL02:4-20mA** 4-20 mA for Temp: 32 to 122° F (0-50°C)

- **Alarm 1** – is fixed. It cannot be configured. It is set to activate if the average CO2 Concentration is above 0.5% (5000 ppm) for 8 hours.

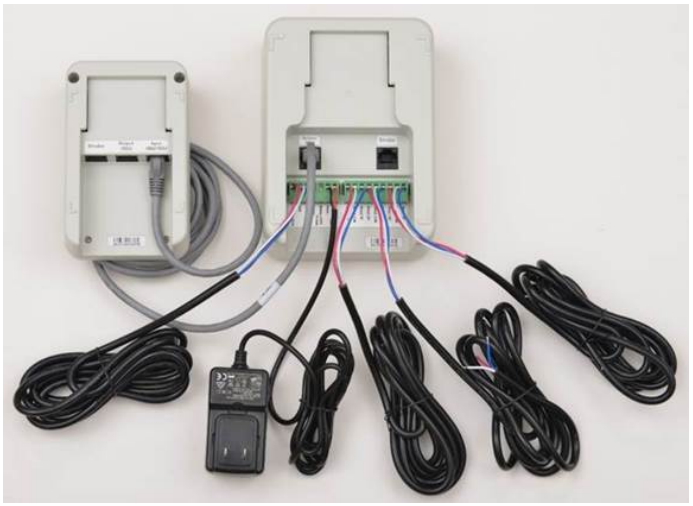
- **Relay 2** – is activated by **Alarm 2**.
- **Alarm 2** can be configured to alarm when CO2 Concentration reaches **Alarm 2 Set Point**.
- **Alarm 2 Set Point** can be configured for **0.5% (5000 ppm) 1.0%,1.5%,2.0%,2.5%,3.0%.**

- **Relay 3** – is activated by **Alarm 3**.
- **Alarm 3** can be configured to alarm when CO2 Concentration reaches **Alarm 3 Set Point**.
- **Alarm 3 Set Point** can be configured for 2.0%,2.5%,3.0%,3.5%,4.0%.

- The Peak current for all relays is **2A@30 VDC or 250 VAC**.
- All relays are Single Pole Double Throw with a Common (**COM**), Normally Open (**NO**) and Normally Closed (**NC**) contacts.

- All relays are Single Pole Double Throw.
- Relays are rated, **2A @ 30 VDC or 250 VAC**.





RAD-0102-6 Connectors Continued

Alarm 1 controls Relay1. It has a fixed setting (5000 ppm/Time Weighted) and cannot be re-configured.

Use Alarm 2/Relay2 to activate instant alarms and set custom alarm configurations.

- **Relay1_NC** Relay 1 Normally Closed Contact (Output)
- **Relay1_COM** Relay 1 Common (Input)
- **Relay1_NO** Relay 1 Normally Open Contact (Output)

Alarm 2 controls Relay2.

- **Relay2_NC** Relay 2 Normally Closed Contact (Output)
- **Relay2_COM** Relay 2 Common (Input)
- **Relay2_NO** Relay 2 Normally Open Contact (Output)

Alarm 3 controls Relay3.

- **Relay3_NC** Relay 3 Normally Closed Contact (Output)
- **Relay3_COM** Relay 3 Common (Input)
- **Relay3_NO** Relay 3 Normally Open Contact (Output)

Product Care

To insure you receive the maximum benefit from using this product, observe these guidelines:

- **Repair** - Do not attempt to repair the product or modify the circuitry by yourself. Please contact CO2Meter directly if the product needs servicing, including the replacement or calibration of the sensor. Contact Support@CO2Meter.com for further information.
- **Cleaning** - Disconnect the power before cleaning. Use a damp cloth. Do not use liquid cleaning agents such as benzene, thinner or aerosols, as these will damage the device.
- **Maintenance** – We recommend testing the communication between the SEU and RDU under 'DIAG" function. If these five LEDs blink and the buzzer of SEU and RDU sound simultaneously, it indicates that SEU and RDU work normally.

Safety Notes

Warning: Your safety is very important to us. To ensure to use the product correctly and safety, please read these warnings and the entire User Manual before using the product. Otherwise, the protection provided by the equipment may be impaired. These warnings provide important safety information and should always be observed.

1. Please handle the device carefully; do not subject the product to impact or shock. Otherwise, this may cause the accuracy drift.
2. Do not place the unit near a heat source. Heat can cause distortion of the unit, which may result in an explosion or fire.
3. Do not touch the exposed electronic circuitry of the device under any circumstances, as there is the dangerous of electric shocks.
4. Please take care of cable connection between SEU and RDU. Make sure the cable from SEU is connected into the INPUT port of RDU.
5. Please ensure the external power supply is normally supplied to ventilation fan while the relay is working. If there has no normally power supply to the fan, the relay will not work, which may result in potential danger with lower O2 concentration in confined space

Support & Warranty

Contact us: We're here to help!

The monitor comes with a one (1) year warranty starting from the date the monitor was shipped to the buyer.

For more information visit our website:
www.co2meter.com/pages/terms-conditions

Support@CO2Meter.com
(386) 256-4910 or (386) 256-4910 (Technical Support)
www.CO2Meter.com

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