



CO2RM and CO2RMPP CO₂ Sensor Installation Guide

CE The EMC Directive
2004/108/EC
The Low Voltage
directive
2006/95/EC

1.0 Introduction

These are surface mounted room carbon dioxide (CO₂) sensors which also incorporate a temperature sensor.

They are designed to sense the room conditions for residential or commercial office buildings. There are separate O-IOV output signals for CO₂ and temperature readings and are suitable as input signals for fans and controls with the facility to accept a O-IOV signal.

CO2RM – CO₂ & temperature sensor requires SELV power supply by others.

CO2RMPP - CO₂ & temperature sensor supplied with SELV ac power supply.

If the application requires direct compatibility with Nuair Ecosmart control system then the control ES-CO2RM and ES-CO2RMPP may be more appropriate. Please refer to separate literatures for details.

2.0 Ratings

Sensing ranges: 0-2000ppm CO₂ and 0-50°C.

Output: 0-IOV dc proportional output, maximum load 1mA.

Current consumption: typically 10mA plus pulses of 0.3A for 0.3s (every 15s).

Warm up time: <5 minutes.

CO2RMPP – the mains supply to power pack must be 230V 1~ 50Hz.

CO2RM – the SELV power supply (by others) must have output of 24V ac (+/-20%) or 15-35V dc.

Please note that a proprietary 24V ac transformer would only produce 24V at maximum load. Due to the low current absorbed by the sensor; these would be running at very high output voltage (typically >30V ac) and are therefore not suitable.

If in doubt – use the CO2RMPP to ensure compatibility.

3.0 Installation

Installed environment: 0-50°C and up to 90% RH non-condensing.

The installation must be carried out by competent personnel in accordance with all local and national statutory regulation; i.e. IEE, COHSE, HVCA etc.

The unit must be installed indoors, away from direct source of heat (e.g. radiator, direct sunlight), any water spray or steam generating source.

The mounting surface must be free from vibrations.

Do not install the sensor in environment containing high level of contaminants; e.g. dust; corrosive gases; commercial kitchens.

Install the sensor at approximately head height or slightly higher for best response rate.

Use a small screwdriver to push in the clip at the bottom of casing to open the front cover. Remove the top half and store it in a safe place.

Use screened cable to connect the O-IOV output signals from the sensor to fan or other recipient of these signals and ensure the screening is grounded at one end only (normally the fan end).

Use the base of unit as a template to mark the fixing positions. Drill and insert appropriate fasteners (e.g. Rawplug) into the holes.

Feed the cable from the SELV side of power pack through the large hole of the base together with the output cable from the sensor.

Wire the cables into the terminal block as per wiring diagram on the reverse side of this document.

Figure 1. Use a small screwdriver to push in the clip at the bottom of casing to open the front cover.

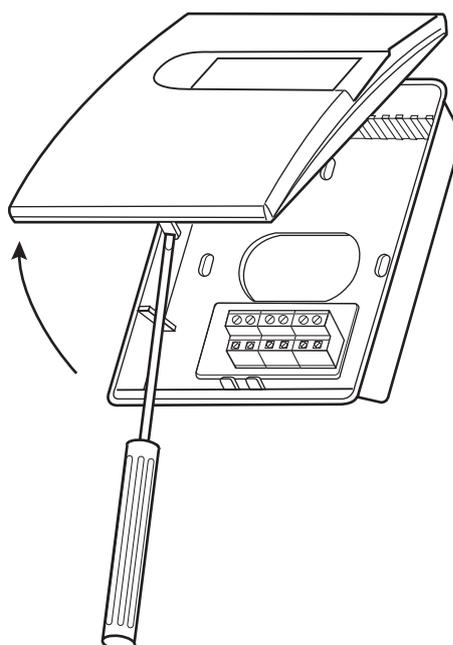
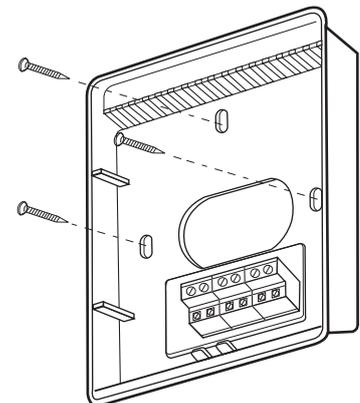


Figure 2. Use the base of unit as a template to mark the fixing positions.



Unit Dimensions (mm)
Width 85, Height 100, Depth 26

4.0 Wiring

Important

Use screened cable to connect the O-IOV output signals from the sensor to fan or other recipient of these signals and ensure the screening is grounded at one end only (normally the fan end).

Figure 3. CO2RM - wiring to ac power supply.

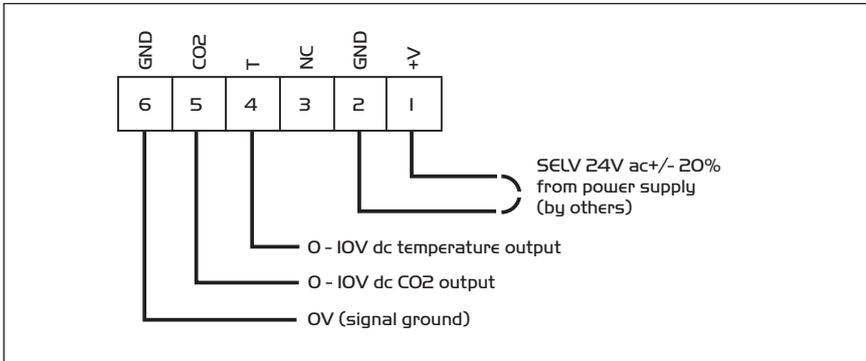


Figure 4. CO2RM – wiring to a SELV dc power supply.

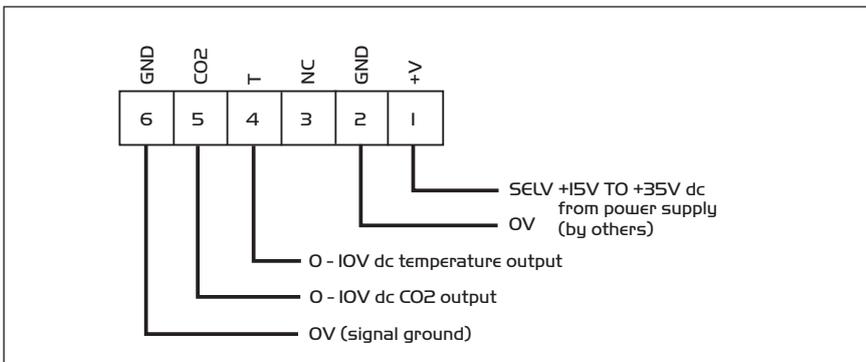
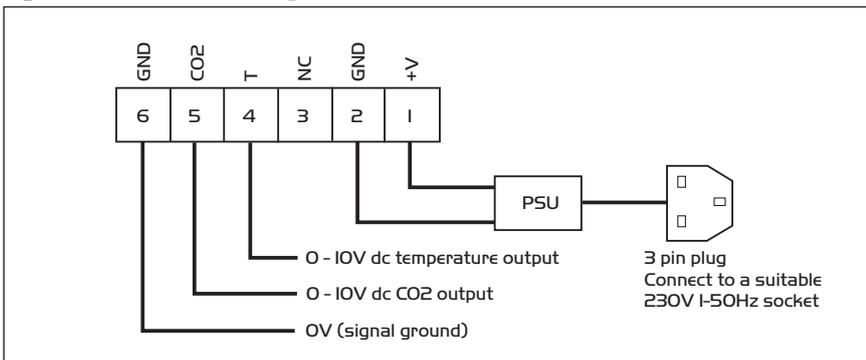


Figure 5. CO2RMPP – wiring to mains.



Note: do not connect any other devices to the power supply.

5.0 Maintenance

This unit do not require any routine maintenance. However, it is advisable to check the condition of the circuit board and wiring to ensure it has not been damaged by the installed conditions; e.g. unforeseen condensation etc. Remove any accumulated dust with a soft brush.

6.0 Warranty

The 3 year warranty starts from the date of delivery and includes parts and labour for the first year. The labour element is subject to full, free and safe access to the equipment as recommended by the CDM regulations. The remaining 2 years covers replacement parts only.

This warranty is conditional on adequate maintenance being undertaken.

7.0 Service Enquiries

Nuaire can assist you in all aspects of service. Our Technical Support department will be happy to provide any assistance.

Telephone 029 2085 8400
Fax 029 2085 8444

Technical or commercial considerations may, from time to time, make it necessary to alter the design, performance and dimensions of equipment and the right is reserved to make such changes without prior notice.