

# CO2RT-R

## CO<sub>2</sub> Sensor

Product #: 99315



CO2RT-R is a room sensor for measuring carbon dioxide levels in air. They have a built-in relay with switching output.

Fantech's CO2RT-R is a patented auto calibration process sets new standards in CO<sub>2</sub> measuring for HVAC applications. In the same casing, the CO2RT-R combines measuring of CO<sub>2</sub>-level, temperature and optional relative humidity.

The sensor is mounted in the cover-part of the casing. The cover is easy to detach from the back by means of snap-in grips and detachable terminals. This makes mounting easier. Furthermore, no cables have to be disconnected, which simplifies service and replacement.

When the CO<sub>2</sub> level goes above the set point the unit will go into high speed.

### Features

- Built-in relay
- CO<sub>2</sub>-level 0...2000 ppm
- Excellent long term stability
- Snap-in cover

### Measuring principle

The CO<sub>2</sub>-concentration is measured by means of infrared light, a technique that measures the absorption in gases. It has a reference measuring system that compensates values in relation to changes in light intensity.

The method gives several advantages:

- Very high accuracy
- Exact identification of the detected gas
- Low risk for contamination
- Short response time
- High long term stability

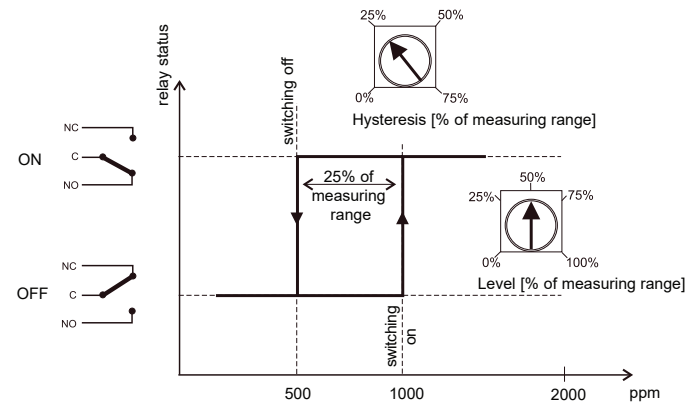
### Automatic calibration

CO2RT-R is calibrated automatically, which means that manual recalibration is not required during the lifetime of the sensor.

### Applications

The CO<sub>2</sub>-level gives a direct indication of the indoor air quality. With this basic information, the ventilation can be controlled with high precision and the air quality improved. At the same time, the supply air will only be increased when necessary and the energy costs will thereby be reduced.

### Hysteresis and level



### Technical data

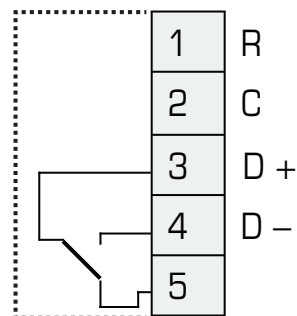
Supply Voltage	24 V AC +/- 15%, 50...60 Hz or 15...35 V DC
Power Consumption	3 W
Ambient Temperature	23...+131°F (-5...+55°C)
Ambient Humidity	0...90% RH, non-condensating
Temperature Dependence	typ. 2 ppm CO <sub>2</sub> /°C
Storage Temperature	-40...158°F (-40...70°C)
Long Term Stability	typ. 20 ppm / year
Response Time	< 90 s
Warm-up Time	< 5 s
Protection Class	IP30
Measuring Principle	NDIR (Non-Dispersive Infrared Technology)
Working Range CO <sub>2</sub>	0...2000 ppm
Accuracy CO <sub>2</sub> at 38°F (20°C)	< ± (50 ppm +2% of measuring value)

### Switching output

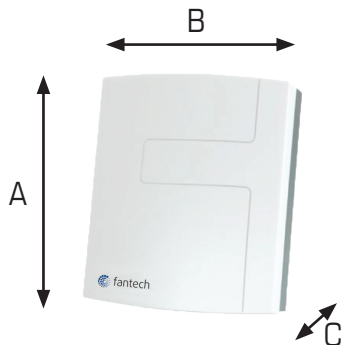
Max. switching voltage	50 V AC / 60 V DC
Max. switching load	1 A at 50 V AC, 1 A at 30 V DC
Min. switching load	1 mA at 5 V DC
Contact material	Ag+Au clad

### Wiring

Supply voltage 24 V AC ±15%, 50...60 Hz or 15...35 V DC.  
Consumption 3 W



### Dimensions



A	B	C
100	85	30

Dimensions are in mm.

### Contacts

Submitted by: _____	Date: _____
Quantity: _____	Model: _____
Project #: _____	Comments: _____
Location: _____	Architect: _____
Engineer: _____	Contractor: _____

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