



CO2RT-R(-D)

CO₂-sensors with built-in relay

CO2RT-R and CO2RT-R-D are room sensors for measuring carbon dioxide levels in air. They have a built-in relay with switching output.

- Built-in relay
- CO₂-level 0...2000 ppm
- Excellent long term stability

Systemair's CO2RT series with patented auto calibration process sets new standards in CO₂ measuring for HVAC applications. In the same casing, the CO2RT series combines measuring of CO₂-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.

Measuring principle

The CO₂-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

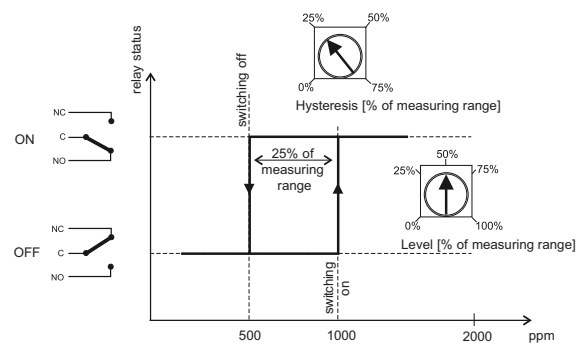
CO2RT-R(-D) is calibrated automatically, which means that manual recalibration is not required during the lifetime of the sensor.

- Snap-in cover
- Model with display (CO2RT-R-D)

Applications

The CO₂-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



Models

Model	Display
CO2RT-R	No
CO2RT-R-D	Yes

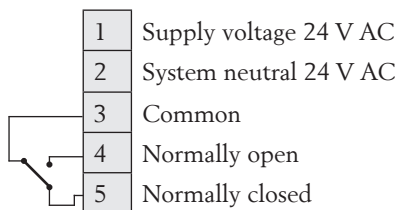
Technical data

Supply voltage	24 V AC +/- 15%, 50...60 Hz or 15...35 V DC
Power consumption	3 W
Ambient temperature	-5...+55°C
Ambient humidity	0..90% RH, non-condensating
Temperature dependence	typ. 2 ppm CO ₂ /°C
Storage temperature	-40...70°C
Long term stability	typ. 20 ppm / year
Response time	< 90 s
Warm-up time	< 5 min
Protection class	IP30
Measuring principle	NDIR (Non-Dispersive Infrared Technology)
Working range CO ₂	0...2000 ppm
Accuracy CO ₂ (at 20°C)	< ± (50 ppm +2% of measuring value)
CE	This product conforms with the requirements of European EMC standards CENELEC EN 61000-6-1 and EN 61000-6-3 and carries the CE mark.

Switching output

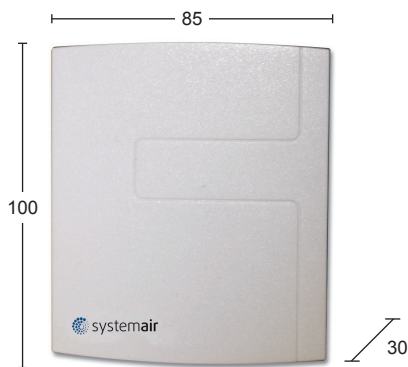
Max. switching voltage	50 V AC / 60 V DC
Max. switching load	1 A at 50 V AC, 1 A at 30 V DC
Min. switching load	1 mA at 5 V DC
Contact material	Ag+Au clad

Wiring



Screw terminal: Max. 1.5 mm²

Dimensions



mm