

Room sensor | CO₂

Controls, Switches and Sensors

For use with Titon HRV Q Plus Range

The Room Sensor CO₂ is used to monitor air quality inside a dwelling and effectively control ventilation system according to current levels of internal air quality.

The sensor measures concentration of carbon dioxide (CO₂) in air. The measuring of CO₂ is based on the principle of infrared radiation attenuation dependence on the CO₂ concentration in the air (NDIR).

Built-in auto-calibration function ensures very good long term stability. The sensor has one analog output for the actual concentration of CO₂.

Heat recovery units can be directly controlled based on the output signal of the sensor in very efficient way.

The trigger level of CO₂ concentration output relay can be set by a rotary element. Current air quality can be easily checked by three LED indicators. When ambient light is dimmed, the indicators turn off automatically to not disturb you when falling asleep.

Features & Benefits

- Measures CO₂, optical principle NDIR
- LED indication with automatic turn off according to ambient light (at night)
- Analog voltage output 0-10V
- Output relay NO/C
- Maintenance or calibration not required during operation
- Long-term stability
- Expected lifetime >10 years
- Colour: Front – White, Base – Grey

Specification

Parameter	Value	Unit
Supply voltage range	12 – 35	V DC
	12 – 24	V AC
Consumption	max 1.5	W
CO ₂ measuring range ¹⁾	400 – 1000	ppm
	400 – 2000	
	400 – 5000	
CO ₂ accuracy ²⁾	- for ranges 400 – 1000 and 400 - 2000 ppm	± 40 ppm + ±4 % of reading
	- for range 400 - 5000 ppm	± 60 ppm + ±4 % of reading
	CO ₂ relay - hysteresis	5 % from range (100ppm/250ppm)
CO ₂ rate rise	max 1	min
CO ₂ step response	(90 %) 80	s
Voltage output ³⁾	0 – 10	V DC
Max. switching voltage	250/30	V AC / V DC
Max. switching current	5/5	A AC / A DC
Working humidity non condensing	0 – 95 %	RH
Working temperature	0 to +50	°C
Storage temperature	-20 to +60	°C
Expected lifetime	10 years	
Ingress protection	IP20	
Dimensions	90x80x31	mm

¹⁾ Measuring range can be chosen by jumper setting.

²⁾ At 15 – 35 °C, 0-80% RH.

³⁾ Minimum achievable output value corresponds to minimum value of the measuring range.

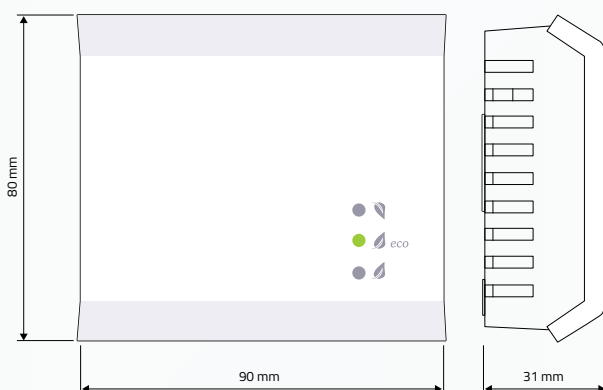
Sensor



Product Number

Room CO₂ Sensor - **TP541**

Drawing and Dimensions



Dimensions in mm