



Datenblatt: CO2 Messgerät mit wireless EnOcean CO₂-W 100

Beschreibung

This sensor gives information concerning carbon dioxide (CO₂) concentration levels, essential element in air quality monitoring and control in occupied buildings. Changes in concentration of this gas are difficult for humans to recognize. The gas is safe in low concentrations (typically <1000ppm), however prolonged exposure at moderate levels can lead to a range of health related problems such as sick building syndrome causing fatigue like symptoms, effects are most notable in children –kindergartens, schools- due to their higher metabolic activity.



Current and incoming legislation requires CO₂ gas monitoring within building environments for optimal control of air quality. Moreover, such CO₂ gas monitoring is employed within demand control ventilation systems used for building heating ventilation and air condition-

Technical Specifications

CO₂ specification

Type of Measurement	NDIR -non dispersive infrared technology-
Sensor Type	dual wavelength
Measurement Range	400 – 2,550 ppm CO ₂ by volume
Resolution	< 20 ppm CO ₂
Accuracy	± 5% of reading
Pressure Dependence	0.13 % of reading per mm Hg
Response Time	< 3 minutes for a 90% step change
Warm up Time	< 30 seconds operational < 15 minutes full accuracy

Outputs

wireless version	EnOcean EEP profile A5-09-04 Concentration increment (linear): 10 ppm Databyte 2 (scale 0...255) 0 bit - 0 ppm 255 bit- 2550 ppm
Radio Regulations	R&TTE EN 300 220 (TCM 310)

Thresholds:

PPM1	Level1: green x < 500 ppm
PPM2	Level 2: green flashing when 500 ≤ ppm < 700 ppm
PPM3	Level 3: yellow when 700 ≤ ppm < 1200 ppm
PPM4	Level 4: yellow flashing when 1200 ≤ ppm < 1800
PPM5	Level 5: red when 1800 ≤ ppm < 2500
PPM6	Level 6: red flashing when ppm ≥ 2500 ppm

Hysteresis for the threshold/level values:

Levels 1,2,3:	± 30 ppm
Levels 4,5,6:	± 80 ppm

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Electrical Specifications		General Specifications	
Power supply SELV	24Vdc (7-28Vdc)	Regulatory Compliance	CE Mark: EMC 2004/108/EC, LVD 2006/95/EC, RoHS 2011/65/EU, WEEE 2012/19/EU CFR47, Part15 Class A
Power consumption	14-45 mA	Product safety	2001/95/EC
Operating Temperature	0 ~ +40° C	Material of housing	ABS
Storage Temperature	-20 ~ + 50 °C	Protection Class	IP20
Operating Humidity	0 ~ 95% non-condensing	Color housing	White - RAL 910
Electrical connection	screw terminals max. 1.5 mm ²	Dimensions	71x71x23.5 mm 2.79x2.79x0.93 "
EMC	EN 61000-6-3, EN 60730-1:2002	Weight	0.076 kg

Learning process:



S3-LRN button

When the sensor is connected to the power, the 3 LED lights of the device are flashing . After a few seconds 5-10 sec. when all LEDs are lit, the sensor starts the measurements and just 1 LED is going ON according with the status of the Air Quality (see *Thresholds values*)

Housing Dimensions (mm)

