

CL-CO2 | CO₂ sensor with 0-10V output and RS485 communication

Room sensor CL-CO2 is used to monitor the air quality inside buildings and effectively control ventilation (HVAC) systems according to current levels of air pollution. The sensor measures concentration of carbon dioxide (CO₂). It can be effectively used in offices, classrooms, shopping centers, homes, restaurants, fitness centers, commercial buildings, etc.

- › measures carbon dioxide concentration
- › selectable output - analog voltage 0 - 10V or RS485 communication with Modbus RTU protocol
- › simple selection of measuring range 400 – 2000 ppm or 400 – 5000 ppm
- › suitable for mounting inside an electrical installation box
- › maintenance during operation is not required
- › long life and stability

Description:

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.

It is possible to select 0 - 10V analog voltage output or the RS485 data output by jumper setting on the electronics board.

Measuring range can be chosen by jumper setting either 400 - 2000 ppm or 400 - 5000 ppm CO₂.

Sensor can efficiently manage ventilation and heat recovery units, based on current air quality.

The current air quality can easily be determined by looking at the RGB LED indicator.

For information on the communication protocol, use the document [CL-Modbus-Communication](#).

Explanation of abbreviations and technical terms can be found on our website in the [Glossary](#) section.



Technical data

Parameter	Value	Unit
Supply voltage range	12 – 40	V DC
	15 – 30	V AC
Average consumption	0,2	W
CO ₂ measuring range ¹⁾	400 – 2000 / 400 – 5000	ppm
CO ₂ accuracy ²⁾		
for range 400 - 2000 ppm	± 40 ppm + ±4 % of reading	
for range 400 - 5000 ppm	± 60 ppm + ±4 % of reading	
CO ₂ startup ³⁾	max 1	min
CO ₂ step response ³⁾	(90 %) 80	s
Working temperature	0 to +50	°C
Working humidity non condensing	0 – 90 %	RH
Storage temperature	-20 to +60	°C
Expected lifetime	min. 10	years
Ingress protection	IP20	
Dimensions	57,2x44,4x25	mm
RS485 bus ⁴⁾		
A-B voltage difference	max 5	V
A-B common input voltage	-7 to 12	V
A-B common output voltage	max 3	V
¹⁾	Measuring range can be chosen by jumper setting.	
²⁾	At 15-30°C, 15-80%RH, 1013Pa.	
³⁾	Depends on the actual placement and degree of covering the sensor.	
⁴⁾	Not galvanic isolated.	

