

NLII-CO2-R-5-A | Room sensor CO₂ with sound alarm

Room sensor NLII-CO₂ is used to continuously monitor air quality inside buildings and then control ventilation (HVAC) systems according to current levels of internal air quality. The sensor measures concentration of carbon dioxide (CO₂) in air. It is suitable for schools, offices, classrooms, shopping centers, homes, restaurants, fitness centers, commercial buildings, etc.

- > measures CO₂
- > analog voltage/current output
- > 2x output relay – 2x NO/C
- > sound signalization – alarm
- > two modes of relay switching
- > maintenance during operation not required
- > long life and stability



Type of sensor / Order code	CO ₂ output	Relay
NLII-CO2-R-5-A	0-10 V/0-20 mA/4-20 mA ¹⁾	1x NO/C
NLII-CO2-2R-5-A	0-10 V/0-20 mA/4-20 mA ¹⁾	2x NO/C

¹⁾ It is possible to select the desired type of analog output by a jumper on the electronics board. Minimum achievable output value corresponds to minimum value of the measuring range.

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 built-in one analog output for the actual concentration of CO₂. Relay trigger level can be set by SET POINT rotary switch.

Relay switching is indicated simultaneously with a short (1,5s) audible signal and yellow LED light.

The way of relay switching can be set by a jumper – 5s pulses when the CO₂ concentration exceeds and falls below the set CO₂ level for e.g. opening and closing a skylight, or standard switching, where relays are closed until the measured CO₂ concentration drops under the set CO₂ level.

So the sensor efficiently manages ventilation and heat recovery units, based on current room air quality.

The current air quality can easily be determined by looking at the three LED indicators. The *eco* level means good indoor air quality necessary to achieve a sense of well-being and at the same time optimal energy costs for heating, ventilation or air conditioning.

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

Parameter	Value	Unit
Supply voltage range	12 – 35	V DC
	12 – 24	V AC
Average consumption	0,5	W
CO ₂ measuring range	400 – 5000	ppm
CO ₂ accuracy	± 35 ppm ±5 % of reading	
CO ₂ relay - hysteresis	100	ppm
CO ₂ rate rise	max 1	min
CO ₂ step response	(90 %) 80	s
Max. switching voltage	250/30	V AC / V DC
Max. switching current	5/5	A AC / A DC
Working humidity no condensing	5 – 95	RH
Working temperature	0 to +50	°C
Storage temperature	-20 to +60	°C
Expected lifetime	min. 10	years
Ingress protection	IP20	
Dimensions	90x80x31	mm

