

NL-ECO-CO2-BA | Room sensor CO₂ with BOOST regime and alarm

Room sensor NL-ECO-CO2-BA serves for continuous air quality monitoring inside buildings and for effective ventilation (HVAC) systems control according to actual level of air pollution. Sensor continuously monitors carbon dioxide (CO₂) concentration in the air. It can be effectively used in offices, schools, classrooms, shopping centers, homes, restaurants, fitness centers, commercial buildings, etc.

- › measures CO₂, optical principle NDIR
- › LED indication with automatic turn off according to ambient light (at night)
- › sound signalization – alarm
- › BOOST regime
- › analog voltage output 0-10V
- › output relay NO/C
- › maintenance or calibration not required during operation
- › long-term stability
- › expected lifetime >10 years

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.

CO₂ concentration has very good telling ability about actual indoor air quality, therefore the sensor serves to effectively control ventilation and heat recovery units. The trigger level of CO₂ concentration output relay can be set by a rotary element in the entire measuring range. Relay switching can be indicated by a short (1,5s) sound signal 1x per minute, if the function is allowed.

BOOST regime allows you to manually set the ventilation to maximum power. Detailed description of functions can be found further in this manual. 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.

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
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.

