PROTRONIX
SENSE & EASY

Datasheet

NL-ECO-CO2 | Room sensor CO_2

Room sensor NL-ECO-CO2 is used to monitor air quality inside buildings and fir effective control of ventilation (HVAC) systems according to actual indoor air quality. The sensor monitors concentration of carbon dioxide (CO_2) in air. It can be effectively used in offices, classrooms, shopping centers, homes, restaurants, fitness centers, commercial buildings, etc.

- measures CO_2
- precise optical principle NDIR
- LED indication with automatic turn off at night
- analog voltage output 0-10V
- output relay NO/C
- maintenance or calibration free during whole lifetime
- long-term stability
- verified lifetime >10 years

Description:

The measuring of CO_2 is based on the principle of infrared radiation attenuation dependence on the CO_2 concentration in the air (NDIR).
Built-in auto-calibration function ensures excellent long term stability.
The sensor has one analog output for the actual concentration of CO_2.
Ventilation and heat recovery units can be effectively controlled based on the output signal of the sensor in very efficient way.
The trigger level of CO_2 concentration output relay can be set by a rotary element.
Current air quality can be easily checked by three LED indicators with built-in automatic shut-off at night.

Technical data:

Parameter	Value	Unit
Supply voltage range	12 – 35 12 – 24	V DC V AC
Consumption	max 1	W
CO_2 measuring range [1]	400 - 1000 400 – 2000 400 – 5000	ppm
CO_2 accuracy [2] - for ranges 400 – 1000 and 400 - 2000 ppm - for range 400 - 5000 ppm	 ± 40 ppm + ±4 % of reading ± 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. Default range 400-2000 ppm.
[2] At 15 – 35 °C, 0-80% RH.
[3] Minimum achievable output value corresponds to minimum value of the measuring range.

Explanation of abbreviations and technical terms can be found on our website in the Glossary section.