NL-ECO-IVOC | Room sensor VOC

Room sensor NL-ECO-IVOC is used to monitor indoor air quality and effectively control ventilation (HVAC) systems according to current air quality. The sensor measures the concentration of gaseous organic substances (VOC - Volatile Organic Compounds) in air. It can be effectively used in restaurants, kitchens, fitness centres, toilets, changing rooms, gyms, offices, commercial buildings, schools, households etc.

- measures VOC
- three-step LED indication with automatic turn off when ambient light is low (at night)
- analogue voltage output 0-10V
- eCO_2 output compatible with CO_2 standard
- alternatively choose one of 3 TVOC output measurement ranges
- output relay NO/C
- maintenance or calibration not required during operation
- long life and stability

Built-in advanced VOC sensor is sensitive to volatile organic compounds typically contained in the stuffy air - gaseous metabolic products of human bodies and other gaseous pollutants such as formaldehyde, cooking vapours, fumes from paints, varnishes, adhesives, detergents, etc. that CO_2 sensor does not detect. NL-ECO-IVOC sensor detects gaseous pollutant substances in the air that are the main reason for ventilation. The sensor approximates to human perception of air quality.
Sensor use special algorithm to estimate a CO_2 concentration based on the assumption that the TVOC (Total Volatile Organic Compounds) produced by humans is proportional to their exhaled CO_2. So the analogue voltage output of the sensor is adjusted as equivalent to a standard CO_2 sensor in range of 400–2000 ppm of estimated CO_2, so called eCO_2.
Instead of the eCO_2 output, you can choose one of three TVOC output ranges.
The trigger level of VOC concentration output relay can be set by a rotary element.
Ventilation and heat recovery units can be directly controlled based on the output signal of sensor in very efficient way.
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 12 – 24	V DC V AC
Consumption	max 1,5	W
Measuring range eCO_2 [1) 2)]	400 – 2000	ppm
Measuring range TVOC [2)]	0 - 1 / 0 - 5 / 0 - 10	mg/m^3
Relay - hysteresis	5% from range (100ppm)	
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	10 – 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)] Calculated estimated CO_2 concentration (estimated CO_2 – eCO_2).
[2)] Output type and range can be set with according jumpers.
[3)] Minimum achievable output value corresponds to minimum value of the measuring range.