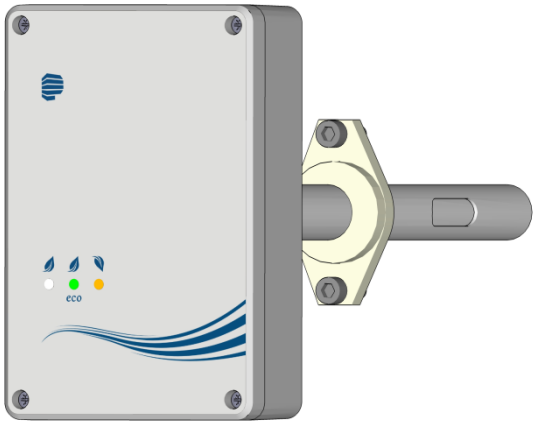
NL-ECO-TVOC-D | Duct mounted VOC sensor

Duct sensor NL-ECO-TVOC-D is used to continuously monitor indoor air quality and then 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
- choose one of 3 TVOC output measurement ranges
- eCO_2 output compatible with CO_2 standard
- output relay NO/C
- easy air duct mounting
- 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-TVOC-D sensor detects gaseous pollutant substances in the air that are the main reason for ventilation. You can choose one of three TVOC (Total Volatile Organic Compounds) output ranges or the eCO_2 output. In case of eCO_2 output, 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 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.
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.

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 TVOC [2]	0 – 1000 0 – 5000 0 – 10000	µg/m^3
Measuring range eCO_2 [1] [2]	400 – 2000	ppm
Relay - hysteresis	5% from range (100ppm)	
Voltage output [2]	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] Output type and range can be set with according jumpers. Factory setting is TVOC 0 - 5000 µg/m^3.
[2] Calculated estimated CO_2 concentration (estimated CO_2 – eCO_2).
[3] Minimum achievable output value corresponds to minimum value of the measuring range.