

NLII-iVOC+RH+T-RS485 | Combined VOC/RH/T sensor with RS485

Combined sensor NLII-iVOC is used to continuously monitor air quality inside buildings and then control ventilation (HVAC) systems according to current levels of air internal air quality. The sensor measures concentration of gaseous organic substances in the air (VOC), relative humidity (RH) and temperature (T). It can be effectively used in offices, classrooms, restaurants, kitchens, fitness centres, commercial facilities etc.



- › measures VOC, RH and temperature
- › compatibility with CO₂ standard
- › RS485 bus communication with Modbus RTU protocol
- › maintenance during operation is not required

Built-in advanced iVOC sensor is sensitive to volatile organic substances typically contained in stuffy air - gaseous products of human metabolism and other gaseous pollutants such as formaldehyde, cooking vapors, fumes from paints, varnishes, adhesives, detergents, etc. that CO₂ sensor does not detect. NL-iVOC sensor detects those gaseous pollutant substances that are the main reason for ventilation. Sensor NL-iVOC approximates to human perception of air quality. The output of the sensor is calibrated as equivalent to a standard CO₂ sensor with range 450 – 2000ppm. Measurement of the relative humidity is based on the principle of capacitive polymer sensor. 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. All outputs of measurement are available through RS485 bus.

For information on the communication protocol, use the document [NLII-Modbus-Communication](#). 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
iVOC measuring range ¹⁾	450 – 2000	ppm
RH measuring range	0 – 100 %	RH
RH accuracy 20 – 80 %	± 3 %	RH
RH accuracy 0 – 100 %	± 6 %	RH
T measuring range	0 – 50	°C
T accuracy	± 0,4	°C
Working humidity non condensing	0 – 95 %	RH
Working temperature	0 to +50	°C
Storage temperature	-20 to +50	°C
Expected lifetime	min. 10	years
Ingress protection	IP20	
Dimensions	90x80x31	mm
RS485 bus		
A-B voltage difference	max 5	V
A-B common input voltage	-7 to 12	V
A-B common output voltage	max 3	V
¹⁾ iVOC ppm equivalent to CO ₂ ppm		

