NLII-iVOC | Combined sensor VOC/RH

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

- measures VOC and RH
- close to the human perception of odors
- compatibility with CO_2 standard
- 2x analog voltage/current output
- 2x output relay – 2x NO/C
- cascade switching

Type of sensor	iVOC output	RH output	Relay
NLII-iVOC	0-10 V/0-20 mA/4-20 mA[1)]	-	-
NLII-iVOC -R	0-10 V/0-20 mA/4-20 mA[1)]	-	1x switching contact
NLII-iVOC +RH	0-10 V/0-20 mA/4-20 mA[1)]	0-10 V/0-20 mA/4-20 mA[1)]	-
NLII-iVOC +RH-R	0-10 V/0-20 mA/4-20 mA[1)]	0-10 V/0-20 mA/4-20 mA[1)]	2x NO/C

[1)] It is possible to select by jumper desired type of analog output.

Built-in advanced iVOC sensor is sensitive to volatile organic substances typically contained in the stuffy air - gaseous metabolic products of human bodies and other gaseous pollutants such as formaldehyde, cooking vapors, fumes from paints, varnishes, adhesives, detergents, etc. that CO_2 sensor does not detect. NL-iVOC sensor detects gaseous pollutant substances in the air 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 CO_2 sensor. Measurement of the relative humidity is based on the principle of capacitive polymer sensor. The sensor has built-in two separate analog outputs - one for the actual concentration of VOC and the other for the current relative humidity. If the sensor contains 2 relays can be set two switching modes: standard (always one relay switched according to one quantity), a cascade mode (according to a selected quantity switch two relays with different levels of switching). Cascade switching, for example, can be used to switch power air conditioning units. The two rotary switches can be independently set the level at which the corresponding relay switches. Sensor can efficiently manage ventilation and heat recovery units, based on current air quality. By three LED indicators can be easily checked the current air quality. Preferred eco level means good indoor air quality needed to achieve a sense of well-being and at the same time can reduce energy costs for heating or air conditioning.

Based on these measurements can be directly controlled ventilation, air conditioning and heat recovery units in an efficient manner.

Parameter	Value	
Supply voltage range	14 V – 40 V DC or 18 V – 30 V AC	
Average consumption	0,5	W
Ingress protection	IP20	
iVOC* measuring range	450 – 2000	ppm
iVOC* relay - hysteresis	100	ppm
RH measuring range	0 – 100 %	RH
RH accuracy 20 – 80 %	± 3 %	RH
RH accuracy 0 – 100 %	± 6 %	RH
RH switching hysteresis	5 %	RH
Max. switching voltage	250/30	V AC / V DC
Max. switching current	5/5	A AC /A DC
Working humidity no condensing	5 – 95 %	RH
Working temperature	0 to +50	°C
Storage temperature	-20 to +50	°C
Expected lifetime	min. 10	years
Dimensions	90x80x31	mm

* iVOC ppm equivalent to CO_2 ppm