PROTRONIX
SENSE & EASY

Datasheet

NLII-CO2 | Combined sensor CO_2/RH

Combined sensor NLII-CO2/RH is used to monitor air quality inside buildings and power control ventilation (HVAC) systems according to current levels of air internal air quality. The sensor measures concentration of carbon dioxide (CO_2) and relative humidity (RH) in air. It can be effectively used in offices, classrooms, shopping centers, homes, restaurants, fitness centers, commercial buildings, etc.

- measures CO_2 and RH
- 2x analog voltage/current output
- 2x output relay – 2x NO/C
- cascade switching
- not required maintenance during operation
- long life and stability

Type of sensor	CO_2 output	RH output	Relay
NLII-CO2	0-10 V/0-20 mA/4-20 mA[1)]	-	-
NLII- CO2 -R	0-10 V/0-20 mA/4-20 mA[1)]	-	1x switching contact
NLII- CO2 +RH	0-10 V/0-20 mA/4-20 mA[1)]	0-10 V/0-20 mA/4-20 mA[1)]	-
NLII- CO2 +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.

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 very good long term stability.
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 CO_2 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	
CO_2 measuring range	0 – 2000	ppm
CO_2 accuracy	± 35 ppm + ±5 % of reading	
CO_2 relay - hysteresis	100	ppm
CO_2 rate rise	max 1	min
CO_2 step response	(90 %) 80	s
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 non condensing	0 – 95 %	RH
Working temperature	0 to +50	°C
Storage temperature	-20 to +60	°C
Expected lifetime	min. 10	years
Dimensions	90x80x31	mm

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