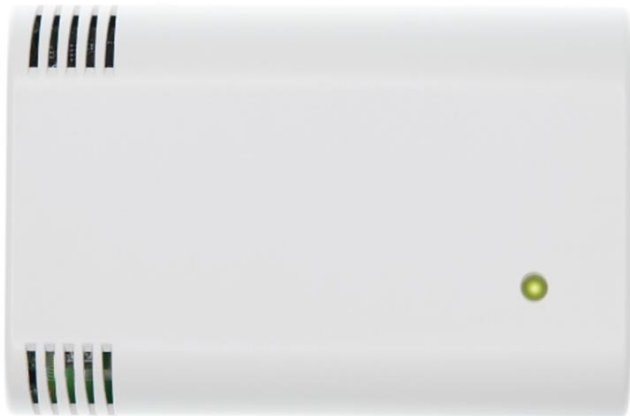


# Indoor Air Quality sensor

## PRODUCT DESCRIPTION

Unipi indoor air quality sensors are designed for measuring indoor air quality in office buildings, schools, factory halls, and other similar objects. Sensors can be used to measure temperature, relative air humidity, barometric pressure, volatile organic compound (VOC) concentration, and ambient light intensity. Selected variants are also equipped with a carbon dioxide (CO<sub>2</sub>) concentration sensor. Due to the RS485 and WiFi interfaces, wide connectivity is ensured. In addition, selected variants also have an interface for LoRaWAN wireless technology.



## POWER SUPPLY

The sensor can be powered in two ways:

1. **24 V–/0,1 A power supply**, connected to the terminal block
2. **5 V–/0,5 A** via **USB power cable with a special (long tip) microUSB connector**

## USAGE

Monitoring of air quality in building interiors, in measurement and control projects (i.e. HVAC) - in them the obtained data can be used for control and regulation of ventilation, heating, air conditioning or recuperation units.

## FEATURES

	RW-TH	RLW-TH	RW-THC	RLW-THC
<b>Communication interface</b>				
Wi-Fi AP	⊕	⊕	⊕	⊕
Wi-Fi client	⊕	⊕	⊕	⊕
Modbus TCP + MQTT + HTTP/REST	⊕	⊕	⊕	⊕
Modbus RTU via RS485	⊕	⊕	⊕	⊕
LoRaWAN 868 MHz	⊗	⊕	⊗	⊕
Digital output	⊕	⊕	⊕	⊕
<b>Measured quantities</b>				
Temperature + humidity	⊕	⊕	⊕	⊕
Ambient light intensity	⊕	⊕	⊕	⊕
VOC	⊕	⊕	⊕	⊕
CO <sub>2</sub>	⊗	⊗	⊕	⊕

# IAQ RxW-TH

## Communication

WiFi	802.11 b/g/n 2.4 GHz
LoRaWAN	Class A, 14 dBm SF 7-12, 868 MHz Support ABP and OTAA activation
RS485 transmission speed	1200 baud ... 115200 baud
RS485 terminating resistor	Builtin attachable, 120 $\Omega$
Supported communication protocols	MQTT, http/REST, Modbus TCP, Modbus RTU

## Digital output

Galv. isolated open collector	max. 20 mA/24 V
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## Indication and visualization

Indication of indoor air quality and device status	RGB LED
Unified web interface	Yes (dashboard)

## Measurement accuracy

Air temperature	$\pm 0,5$ °C
Relative air humidity	$\pm 2$ % (in rage of 20-80 %)
CO <sub>2</sub> concentration	$\pm 30$ ppm and $\pm 3$ % from the value
VOC concentration	Indicative value
Barometric pressure	$\pm 5$ hPa
Ambient light intensity	Indicative value

## Installation and operating conditions

Air temperatue	-40 °C až +85 °C
Relative humidity	0-90 % non-condensing
CO <sub>2</sub> concentration	300-5000 ppm
VOC concentration	AQ index 0-500
Barometric pressure	300-1100 hPa
Ambient light intensity	0-7500 lx

## Dimensions and weight

Dimensions	120 × 80 × 25 mm
Weight	120 g (RW-TH)
	124 g (RW-THC)
	124 g (RLW-TH)
	127 g (RLW-THC)

## Power supply

Power supply, connected to the terminal block	24 V $\approx$ /0.1 A
Power cable with a special (long tip) microUSB connector	24 V $\approx$ /0.1 A 5 V $\approx$ /0.5 A
Power consumption	Typ. 0.6 W Max. 2.4 W

## Directive compliance

EN 300 328
EN 300 220
EN 301 489
EN 60730
EN 60950
EN 62311
EN 62479
RoHS
WEEE
EMC
RED

