



NetPID indoor – EDIAQI Project

Data Sheet (version of 03/2024)

This document is intended for EDIAQI Project Partners

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Highly sensitive remote indoor air quality monitoring unit



NetPID EDIAQI indoor is a compact remote and continuous IAQ monitoring unit suitable for complex monitoring networks in confined environments. In the EDIAQI project, it will be realised with a novel configuration of sensors as shown below. List of devices and configurations is reported in *Annex A*.

Image for illustrative purposes

MONITORING UNIT

The control unit is made of inert polymeric material. The response and sensitivity of the sensors placed inside it has been further optimised by means of a fluidic system designed to expose some sensors to a forced, conveyed air circulation.

Features*

Material	Inert
Dimension (H x L x P)	130 mm x 150 mm x 150 mm
Weight	500 grams
Power supply	Da 5 a 24 V ; 15 W
Data storage	Years. TBD
Communication	Wi-Fi

* Design of instrument may be subject to change.

SENSORS

Detection of Volatile Organic Compounds

The high performance of the sensor is due to a patented technology (called 'fence electrode') capable of suppressing the non-specific contribution of humidity by compensating the measurements to make them more accurate.

Features	VOC AROMATICS	TVOCS
Accuracy	5 ppb	0.5 ppb
Range	0 – 100 ppm	0 – 3 ppm
T90 (S)	< 8	< 12
Sensitivity	>15 mV/ppm	> 600 mV/ppm
Power consumption	100 mW	100 mW
Lamp characteristics	10.0 eV 10,000 Hours	10.6 eV 10,000 Hours

Detection of Particulate Matter (PM2.5 e PM10)

Fine dust detector based on the laser scattering measurement principle.

Features	Conditions	Value	Measuring unit
Measurement range	-	0 - 1'000	$\mu\text{g}/\text{m}^3$
Dimensional interval	PM1.0	0.3 - 1.0	μm
	PM2.5	0.3 - 2.5	μm
	PM4	0.3 - 4.0	μm
	PM10	0.3 - 10.0	μm
Accuracy in the detection of PM1 and PM2.5	0 100 $\mu\text{g}/\text{m}^3$	± 10	$\mu\text{g}/\text{m}^3$
	100 to 1000 $\mu\text{g}/\text{m}^3$	± 10	% m.v.
Accuracy in the detection of PM4 and PM10	0 to 100 $\mu\text{g}/\text{m}^3$	± 25	$\mu\text{g}/\text{m}^3$
	100 to 1000 $\mu\text{g}/\text{m}^3$	± 25	% m.v.

Detection of Carbon Dioxide (CO2), Temperature and Relative humidity

Integrated sensor for detecting temperature, moisture and carbon dioxide (CO2) with NDIR technology, which allows the detection of the absolute concentration of CO2. The sensor guarantees exceptional stability by compensating for long-term drift by means of the dual channel principle (compliant with technical std. ISO 16000-26).

Features	CO2
Accuracy	± 30 ppm
Range	400 – 10.000 ppm
T90 (S)	20
Stability with respect to temperature	2.5 ppm / °C

Detection of Nitrogen Dioxide, Ozone and Carbon Monoxide

Features	NO2	O3	CO
Accuracy	5 ppb	5 ppb	20 ppb
Range	0-20 ppm	0-20 ppm	0-15 ppm
T90 (S)	< 80	<80	< 30
Sensitivity	320 to 500 nA/ppm	-200 to -650 nA/ppm a 1 ppm	220 to 410 nA/ppm in 2ppm
Operating T°	-30 – 40 °C	-30 – 40 °C	-30 – 50 °C

DATA STORAGE AND COMMUNICATION

NetPID indoor acquires and stores each sensor's data. It can work in two modes: *stand-alone* and *online*.

Stand-alone mode: is the operating mode when an internet connection is not available. The system can be accessed via the exposed access point and via the network interface if it is connected via a LAN or Wi-Fi.

Online mode: is the operating mode if there is an internet connection. All the features of the stand-alone mode are included. In addition, the System synchronizes and updates the data in real time with an online platform my.odorsens.cloud for viewing and downloading the collected data.

Through the online platform it will be also possible to set threshold values (so-called 'Trigger') for each sensor and activate e-mail notifications.

Following the login to the platform, it will be therefore possible to:

- ✓ view data in real-time.
- ✓ analyze time series of all parameters
- ✓ access the configuration and management section
- ✓ download the displayed data

The online platform will be accessible from PC, Tablet and Smartphone.



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APPENDIX A

Serial Number	T°, HR, Pressure	PM [2.5, 10]	CO2	CO	NO2	O3	TVOCs	Aromatics
LS0323020119	X	X	X	X	X	X	X	X
LS0623020122	X	X	X	X	X	X	X	
LS0623020123	X	X	X	X	X	X	X	
LS0623020124	X	X	X	X	X	X	X	
LS0623020125	X	X	X	X	X	X	X	
LS0623020126	X	X	X	X	X	X	X	
LS0623020127	X	X	X	X	X	X	X	
LS0623020128	X	X	X	X	X	X	X	
LS0623020129	X	X	X	X	X	X	X	
LS0623020130	X	X	X	X	X	X	X	
LS0623020131	X	X	X	X	X	X	X	
LS0623020132	X	X	X	X	X	X	X	
LS0623020133	X	X	X	X	X	X	X	
LS0623020134	X	X	X	X	X	X	X	
LS0623020135	X	X	X	X	X	X	X	

LS0623020136	X	X	X	X	X	X	X	
LS0623020137	X	X	X	X	X	X	X	
LS0623020138	X	X	X	X	X	X	X	
LS0623020139	X	X	X	X	X	X	X	
LS0623020140	X	X	X	X	X	X	X	
LS0623020141	X	X	X	X	X	X	X	
LS0623020142	X	X	X	X	X	X	X	
LS0623020143	X	X	X	X	X	X	X	
LS0623020144	X	X	X	X	X	X	X	
LS0623020145	X	X	X	X	X	X	X	
LS0623020146	X	X	X	X	X	X	X	
LS0623020147	X	X	X	X	X	X	X	
LS0623020148	X	X	X	X	X	X	X	
LS0623020149	X	X	X	X	X	X	X	
LS0623020150	X	X	X	X	X	X	X	X
LS0623020151	X	X	X	X	X	X	X	
LS0623020152	X	X	X	X	X	X	X	
LS0623020153	X	X	X	X	X	X	X	
LS0623020154	X	X	X	X	X	X	X	

LS0623020155	X	X	X	X	X	X	X	
LS0623020156	X	X	X	X	X	X	X	
LS0623020157	X	X	X	X	X	X	X	
LS0623020158	X	X	X	X	X	X	X	
LS0623020159	X	X	X	X	X	X	X	
LS0623020160	X	X	X	X	X	X	X	
LS0623020161	X	X	X	X	X	X	X	
LS0623020162	X	X	X	X	X	X	X	
LS0623020163	X	X	X	X	X	X	X	X
LS0623020164	X	X	X	X	X	X	X	X
LS0623020165	X	X	X	X	X	X	X	X
LS0623020166	X	X	X	X	X	X	X	X
LS0623020167	X	X	X	X	X	X	X	
LS0623020168	X	X	X	X	X	X	X	
LS0623020169	X	X	X	X	X	X	X	
LS0623020170	X	X	X	X	X	X	X	X
LS0623020171	X	X	X	X	X	X	X	X