uRADMonitor MODEL A3

Integrated environmental monitoring station: air quality and noise

Automated fixed station measuring 11 parameters: PM1, PM2.5, PM10, CO2, ozone, formaldehyde, volatile organic compounds, noise level, temperature, humidity and pressure. Hardware version 112 with duty-cycled low-power operation. Data is sent automatically over GSM and published in real time on the school dashboard and through an API.

Role in the school network: Indoor: aluminium case, one station in each monitored occupied room. Outdoor: Stevenson shield, one station per building in the schoolyard.

> Basis: Directive (EU) 2024/1275, Art. 13, indoor air quality monitoring devices in non-residential buildings; national green school schemes such as Romania's OME 4147/2022, art. 27(b): a sensor network in all occupied rooms and at building level.

Sensor specifications

Sensor	Parameter	Range	Resolution	Accuracy	Expected life
MEMS	Temperature	-40…+85 °C	0.5 °C	±1 °C	5 years
MEMS	Relative humidity	0…100 % RH	1 % RH	±2 %	5 years
MEMS	Barometric pressure	950…1050 hPa	1 Pa	0.12 hPa	5 years
Optical, laser	PM1 · PM2.5 · PM10	0…1000 µg/m³	1 µg/m³	±5 %	5 years
NDIR	Carbon dioxide CO2	400…5000 ppm	1 ppm	±5 %	5 years
Electrochemical	Ozone O3	0…10 ppm	10 ppb	±5 %	2 years
Electrochemical	Formaldehyde HCHO	0…5 ppm	10 ppb	±5 %	2 years
MOX	Volatile organic compounds	10…1000 ppm	–	±15 %	2 years
Analogue microphone	Noise level	30…130 dB	1 dB	±10 %	2 years

General characteristics

Housing	Indoor: aluminium, 110 × 65 × 25 mm, 175 g. Outdoor: UV-resistant ASA Stevenson shield, IP65
Airflow	Built-in fan, active flow through the measuring chamber
Connectivity	GSM/GPRS (SIMCom SIM800L, 850/900/1800/1900 MHz), prepaid 10-year data SIM included, international roaming. On request: WiFi, Ethernet, LoRaWAN
Power	6–24 V DC (100–240 V AC adapter included) or 5 V micro-USB; compatible with 12 V solar (uRADMonitor SolarBattery)
Operating conditions	–20…+65 °C, 0–100 % RH
Data	Public school dashboard, cloud API and local access; alerts on configurable thresholds
Maintenance	PM, O3 and HCHO sensors on connectors, user-replaceable without soldering; maintenance kit about every 2 years
Evaluations and certifications	CE-RED; INCD ECOIND (2017); AQ-SPEC South Coast AQMD, USA (2018); AIRPARIF AIRLAB, France (2021, 2023, 2025)
Warranty	12 months; maintenance contract on request

Compliance table for the tender specification

Requirement in the specification	Technical offer: uRADMonitor MODEL A3	Complies
Sensor network: noise level (dBA)	Analogue microphone, 30–130 dB	**YES**
Particulate matter PM1, PM2.5, PM10	Optical laser sensor, 0–1000 µg/m³	**YES**
Carbon dioxide CO2	NDIR, 400–5000 ppm, 1 ppm resolution	**YES**
Ozone O3	Electrochemical, 0–10 ppm	**YES**
Volatile organic compounds	MOX, 10–1000 ppm	**YES**
Temperature, humidity	MEMS, −40…+85 °C, 0–100 % RH	**YES**
Metal housing	Aluminium (indoor); IP65 Stevenson shield (outdoor)	**YES**
Operating temperature −20…+65 °C	−20…+65 °C	**YES**
Mains powered	100–240 V AC adapter, device 6–24 V DC	**YES**
Cellular or WiFi connectivity	GSM with 10-year data included (WiFi on request)	**YES**
CE marking	EU declaration of conformity CE-RED	**YES**
Warranty at least 12 months	12 months	**YES**
Carbon monoxide CO, NO, NO2, SO2	Not measured by A3; add MODEL CITY to the network	**NO**
Project-specific requirements (to be completed by the bidder):		

Documents supplied

- EU declaration of conformity (CE)
- Quality and warranty certificate with each station's serial number
- Installation and user instructions
- Commissioning record with every station live on the dashboard
- The evaluation reports listed, on request

Manufacturer: Magnasci SRL, Dumbrăvița 307160, Timiș, Romania · +40 770 420 664 · www.uradmonitor.com
Configurations and quotes: greenschools.uradmonitor.com

Informative document. Technical data may be updated; confirm the hardware version when bidding. uRADMonitor® is an EUIPO registered trademark of Magnasci SRL.