

TECHNICAL SPECIFICATION

Air Quality Sensor

Vatonnati A1



Features

- PM1, PM2.5, PM4, PM10
- Temperature, humidity, air pressure
- Internal data logger
- GSM connectivity
- Real time data
- JSON and MQTT data format
- LAN with PoE
- Setting by internal website
- Compact size
- Wide power supply 10-32V
- Easy installation

Vatonnati A1 is simple Air Quality Display with measurement of critical for health particles measurement, temperature, humidity and air pressure. This model make possible to know 4 particles parameters PM1, PM2.5, PM4, PM10. Vatonnati A1 can be used in indoor application and semi outdoor. This

sensor is connected direct do the server and is sending air measurement data to the cloud. From the cloud air quality parameters are available in dashboard.

Description	Parameter
Dust Measurement	
Mass concentration accuracy	0 to 100 µg/m ³ ±10 µg/m ³ 100 to 1000 µg/m ³ ±10 µg/m ³
Mass concentration range	0 to 1'000 µg/m ³
Mass concentration resolution	1 µg/m ³
Mass concentration size range	PM1.0 0.3 to 1.0 µm PM2.5 0.3 to 2.5 µm PM5.0 0.3 to 4.0 µm PM10 0.3 to 10.0 µm
Sampling interval	1s
Lifetime of sensor	more than 8 years
Acoustic emission level of sensor fan	0.2m 0.25 dB(A)

Description	Parameter
Temperature	
Operating range	Operational -40 to +85°C Full accuracy 0 to +65°C
Absolute accuracy temperature	A _{T,25} 25 °C ±0.5°C A _{T,full} 0...65 °C ±1.0°C
Humidity	
Operating range	0-100 RH
Absolute accuracy tolerance	20...80 %RH, 25 °C, including hysteresis ±3 %RH
Hysteresis	10→90→10 %RH, 25 °C ±1 %RH
Nonlinearity	10→90 %RH, 25 °C 1 %RH
Long term stability	▲H _{stab} 10...90 %RH, 25 °C 0.5 RH/year
Air Pressure	
Operating	Operational -40°C to +85°C

Description	Parameter
temperature range	Full accuracy 0°C to +65°C
Operating pressure range	Full accuracy 300 – 1100 hPa
Absolute accuracy pressure	300... 1100 hPa 0... +65 °C ±1.0 hPa
Relative accuracy pressure	700... 900hPa 25... +40 °C ±0.12hPa
Long term stability	▲Pstab ±1.0 hPa per year
Interfaces	
Ethernet	100 Base-T Ethernet
USB	1x USB 2.0 for getting log (optional)
Software support for Logger Software	
OS	Any modern browser

Description	Parameter
	Android, IOS
Power supply	
Supply Voltage	10-32V DC
Supply power	5W maximum
Physical Characteristics	
Enclosure material	Metal aluminium body
Protection grade	IP54
Environmental Specification	
Operating temp.	-20 ~ 70°C (-4 ~ 158°F)
Storage temp.	-40 ~ 85°C (-40 ~ 176°F)
Ambient RH	5% to 95% (non-condensing)

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