

# enviDUST

## PARTICULATE MATTER MONITOR IN AMBIENT AIR



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*Do you want to know the air quality for the citizens of your city or town?*

The enviDUST sensor unit is a device used for online monitoring of air quality in a specified location. For this purpose, it uses different types of sensors according to the customer's requirements for the monitored variables.

Dust sensor - monitoring the size and quantity of particles of  $PM_1$ ,  $PM_{2.5}$ ,  $PM_{10}$  fractions in  $\mu g/m^3$  working on optical principle in the effective range of  $0-500 \mu g/m^3$  (for  $PM_{10}$  and  $PM_{2.5}$ ).



$PM_{10}$



$PM_{2.5}$



$PM_1$

Measuring the mass concentration and number concentration of aerosol particles in real-time and simultaneously.

**An optical method based on the light scattering principle.**

## Key benefits and features



Modular unit.



Possibility to create local measurement networks.



Low acquisition costs compared to professional analyzers. No consumables required for operation - low operating costs.



Compact unit with variable installation options.



Online transmission of measured data using GSM + GPS technology.



Power supply - internal switching power supply with maximum output 25W input 230V/0,11A, output 5V/5A.



Operating temperatures: minimum ambient temperature  $-15^{\circ}C$ , maximum ambient temperature  $+40^{\circ}C$ .



Box (151x125x90 mm), polycarbonate, non-flammable, self-extinguishing, IP44 - mounting on wall, vertical or horizontal structure (railing, public lighting).

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### TECHNICAL PARAMETERS

Measuring principle:	Optical light scattering
Measured variables:	PM <sub>1</sub> , PM <sub>2,5</sub> and PM <sub>10</sub> , particle number concentration (also by individual size channels)
Dust sensor manufacturer:	Plantower, life span 18 - 24 months
Mass concentration:	0 – 500 µg/m <sup>3</sup>
Data averaging:	standard 10/60 min diameters
Average consumption:	3 Wh
Installation conditions:	-15 až +40°C
Power supply:	230V; 50/60Hz; alternative 5V (+/-0.1V), battery or solar panel power supply possible – requirement to be addressed by individual offer
Dimensions:	151x125x90 mm (H x W x D)
Casing:	IP44, aluminium bracket for mounting the station on the wall, vertical or horizontal construction (railings, public lighting)
Control unit:	BeagleBone Microcomputer



*The system can be connected to an electric power supply (solar panel option) and has a built-in LTE + SIM modem.*

### APPLICATIONS

- Dust aerosol measurement networks in urban environments
- Monitoring of dusty industrial plants
- Cleanroom monitoring
- Dust measurement in the working environment
- SMART CITY concepts
- Educational projects (both for schools and the professional public)
- Research projects
- Indicative dust measurement