

Pegasor Particle Sensor

For the most demanding emission monitoring applications

The Pegasor Particle Sensor (PPS) will monitor fine particles for extended periods without costly user maintenance or expensive consumables. Pegasor's unique sensor technology measures fine and ultrafine particles in a variety of often harsh environments and in a way that finally permits long term monitoring of these ubiquitous pollutants.

The simplicity and robustness of the PPS has been specifically developed to provide environmentalists, hygienists, local, national and continental government authorities to develop realistic management strategies.

For the industrial customers PPS offers superior time resolution and sensitivity compared to any other existing instrument. To take full advantage of these features, measurements can be done directly from raw exhaust. Along with the user friendliness, PPS is the most powerful tool e.g. for automotive emission monitoring and stack emission monitoring in real world conditions.

VEHICLE EMISSIONS

Engine test bench routine monitoring
On Board vehicle monitoring
Vehicle Inspection
On Board Diagnostics
Downstream Diesel Particle Filter
Upstream Diesel Particle Filter

AIR QUALITY

Urban air quality sensor networks
Indoor air quality sensors
Air conditioning systems
Occupational hygiene monitoring

STACK EMISSIONS

In situ stack emission monitoring

PPS is the world's first Particulate Matter monitor that meets the developing requirements for ultra-fine particle monitoring:

Real time and continuous operation

High sensitivity to fine and ultrafine particles

Measurements are unaffected by of flow rate, pressure and temperature changes in the sample

No dilution needed

Highly flexible "plug and play" system

Robust stainless steel construction for maintenance free operation



DATA HANDLING AND SENSOR OPERATION

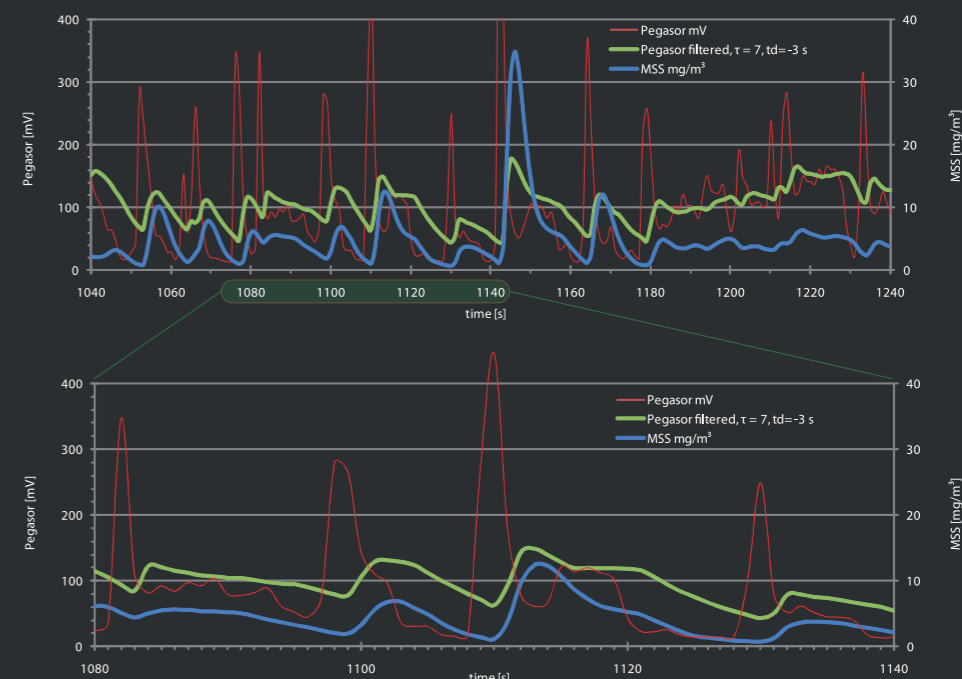
This unique development from Pegasor enables the sensor to report reliable data on both particle mass and particle number concentrations in real time. Highly integrated data logging software produces ASCII format files for real time, and post processing.

The Pegasor particle sensor operates by electrostatic charging particles passing through the sensor and then measuring the current caused by the charged particles leaving the sensor. The flow-through design keeps the sensor clean for extended operation and low maintenance.

CALIBRATION

Easy user calibration and validation is possible for accurate application specific use and sensor operation verification. For vehicle emission monitoring, the sensor is factory calibrated for typical engine particle emission size distribution.

Resolution delivered by design - the PPS delivers plug flow without turbulence to produce the highest resolution. Results from parallel engine emission measurements with PPS and Micro Soot Sensor (graphs).

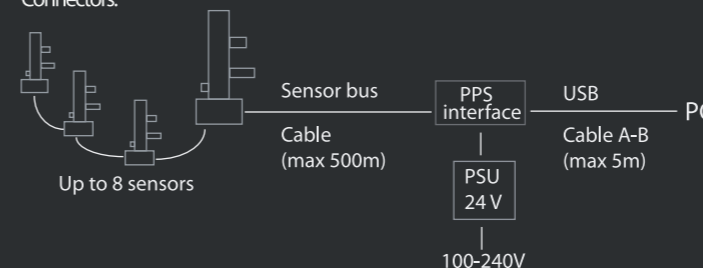


Technical Specifications: **

Particle size range:	A few nm up to 2.5 μm ***
Response frequency:	Up to 100 Hz
Concentration range:	High concentration 10 $\mu\text{g}/\text{m}^3$ up to 250 mg/m^3 *** High sensitivity 1 $\mu\text{g}/\text{m}^3$ up to 25 mg/m^3 ***
Service interval:	Up to 1 year, application dependant
Sample temperature:	Standard sensor up to 200 °C High temperature sensor up to 850 °C
Sample pressure:	Dependant on pump overpressure (critical flow), typical 1-10 bar abs.
Environmental conditions:	Temperature max. 50 °C
Computer requirements:	XP/Vista

* depending on sensor type.
** specifications subject to change without notice.
*** depending on application.

Connectors:



Sensor dimensions:

