



**JKang**

环境解决方案专家

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**PEGASOR  
PARTICLE  
SENSOR**

**M**

**pegasor**

# THE OPTIMAL TOOL FOR INDUSTRIAL MONITORING OF ULTRAFINE PARTICLES

THE PEGASOR PARTICLE SENSOR M, OR PPS-M, IS A POWERFUL TOOL FOR MONITORING ULTRAFINE PARTICLES IN A WIDE RANGE OF INDUSTRIAL APPLICATIONS.



IT IS ESPECIALLY DESIGNED FOR MONITORING VEHICLE EMISSIONS, SUCH AS:

- continuous engine test bench and vehicle monitoring
- on-board vehicle monitoring (diesel, gasoline, CNG and GDI engines)
- vehicle inspection and in-use testing
- diesel particle filter (DPF) efficiency
- gasoline direct injection (GDI) emissions
- GDI and GPF regeneration strategies

The PPS-M is equally suited for a wide range of industrial applications, ranging from stack emission monitoring to ambient air quality monitoring.

## WHAT MAKES THE PPS-M UNIQUE

### 1 IT HELPS YOU COMPLY WITH EMISSION REGULATIONS

The PPS-M measures both particle number and mass concentration. Both are critical components of emission regulations as well as particulate health effects.

### 2 IT ALLOWS YOU TO PINPOINT THE CAUSE OF EMISSIONS

Thanks to its 0.2 second response time, the PPS-M can indicate the actual moment when particle concentrations change, allowing you to deeply understand what causes the emissions.

### 3 IT PERFORMS IN ALL KINDS OF ENVIRONMENTS

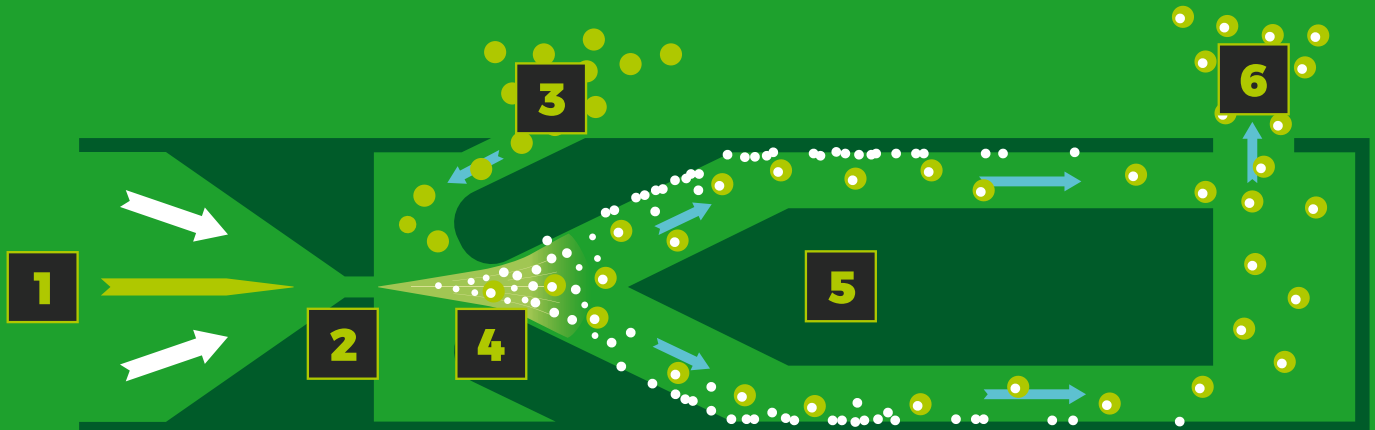
The wide dynamic range and high sensitivity of the PPS-M ensure you will be able to make reliable measurements no matter how high – or low – the particle concentration levels are in any given environment.

### 4 IT WILL GIVE YOU MORE RESULTS WITH LESS DOWNTIME

The smart flow-through design and sophisticated self-diagnostics guarantee you reliable long-term operation with very low maintenance and no need of frequent calibration.

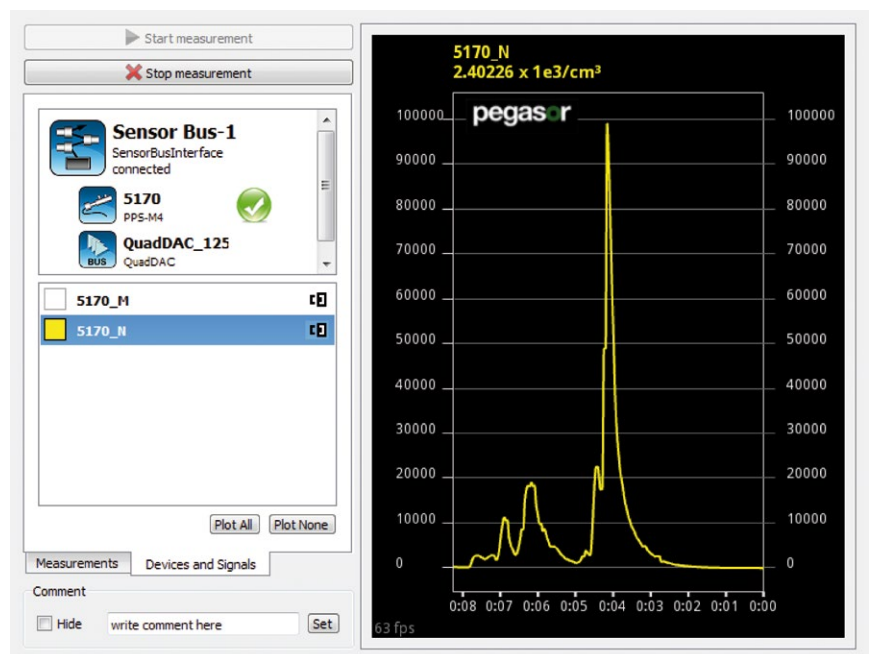
# HOW DOES IT WORK?

Unlike conventional measurement methods based on collecting particles, the PPS-M measures the **electrical charge** carried by particles. This allows highly accurate real-time monitoring with low maintenance.



- 1** A motive fluid (typically pure air) is fed into the sensor at high pressure
- 2** A corona discharge ionizes the air inflow
- 3** Due to underpressure, particle-containing gas flows through the sample inlet into the sensor.
- 4** The ionized air electrically charges particles at the ejector throat
- 5** An adjustable ion trap removes from the gas flow any ions not attached to particles
- 6** As the charged particles escape from the sensor, their electrical current is measured. This gives a direct, fast, real-time measurement of particle concentration, expressed as mass, number, or both.

# OPERATE YOUR SENSOR WITH EASY-TO-USE SOFTWARE



The **Pegasor Plotter** is a PC software tool where you can define your preferred settings, monitor and store your measurement data.

# TECHNICAL SPECIFICATIONS

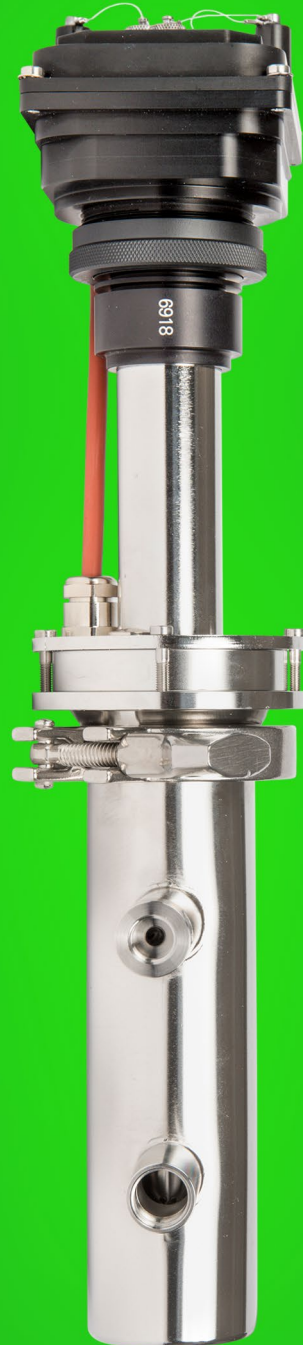
Minimum detectable particle size  
Software adjustable  
down to 10 nm

Particle concentration range  
**PARTICLE NUMBER:**  
300 1/cm<sup>3</sup> up to 1.3 \* 10<sup>9</sup> 1/cm<sup>3</sup>  
**PARTICLE MASS:**  
1 µg/m<sup>3</sup> – 290 mg/m<sup>3</sup>

Ambient temperature  
-20°C – +50°C

Sample temperature  
Direct raw exhaust  
sampling with heated line

System output  
USB  
Optional: Analog voltage,  
AK Protocol, CAN bus



Software and data collection  
Pegasor GUI for data analysis  
Mass & number concentration  
calculated

Data acquisition  
100 Hz sample rate,  
SNR 100 dB

Length  
40 cm

Weight (without accessories)  
3.3 kg

Sample inlet  
G1/4"

Sample out  
G3/8"

Clean air/nitrogen supply  
10 lpm @ 0.15 MPa

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