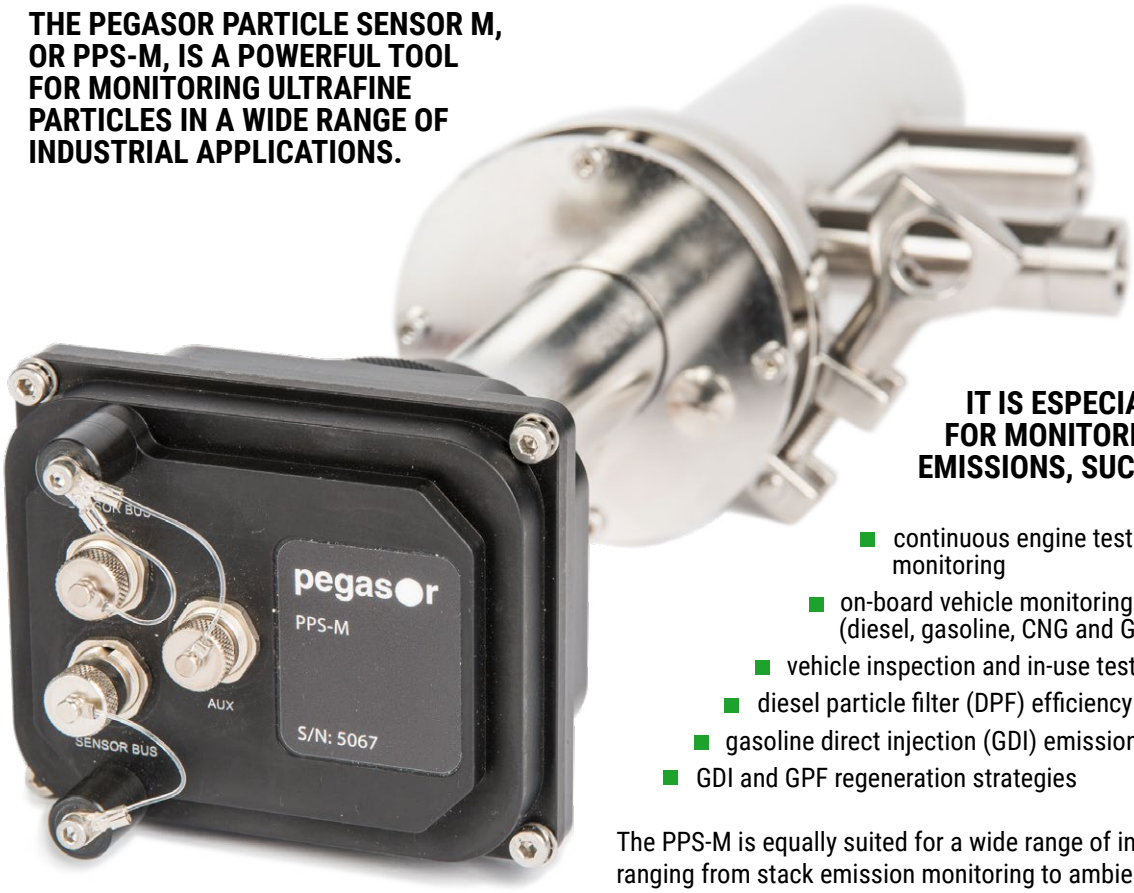


PEGASOR PARTICLE SENSOR M

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

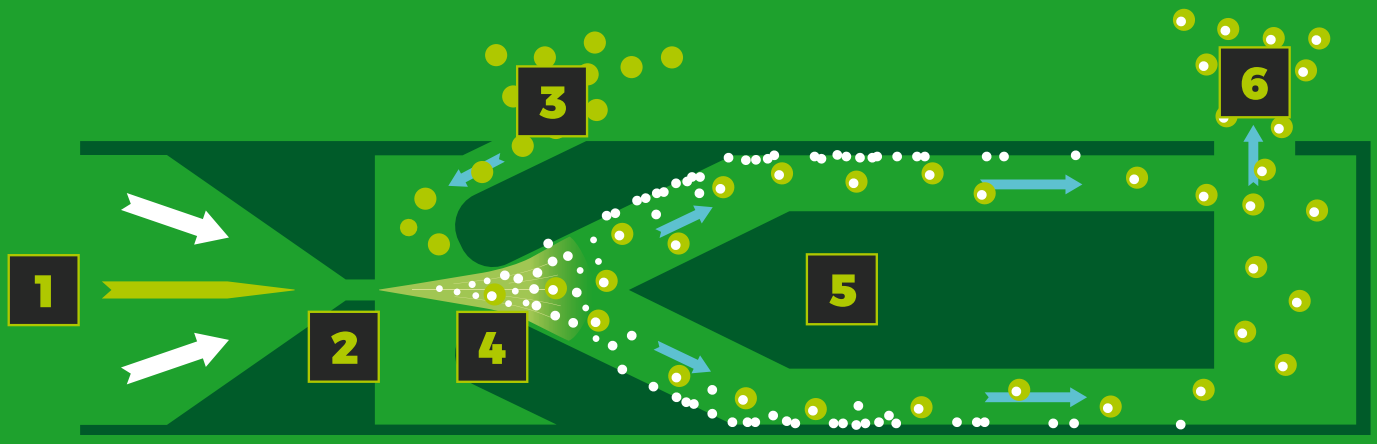
The wide dynamic range and high sensitivity of the PPS-M ensure you will be able to make reliable measurements no matter how high – or low – the particle concentration levels are in any given environment.

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.

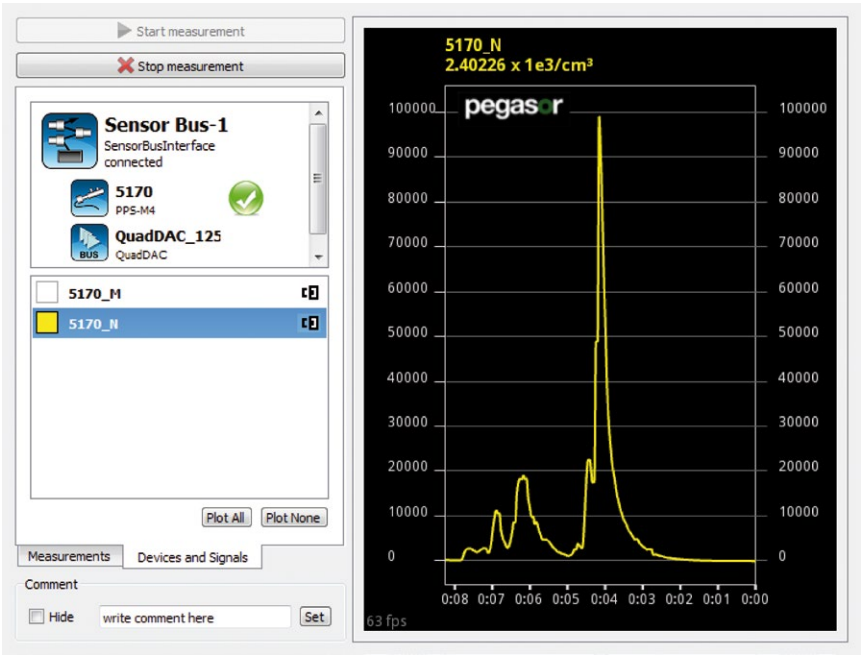
HOW DOES IT WORK?

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 SOFT-WARE



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

TECHNICAL SPECIFICATIONS

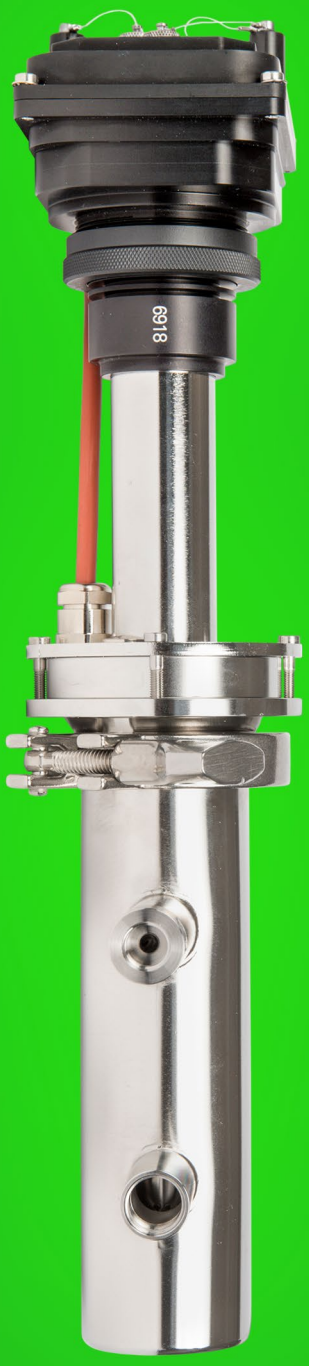
Minimum detectable particle size
Software adjustable down to 10 nm

Particle concentration range
PARTICLE NUMBER:
300 1/cm³ up to 1.3 * 10⁹ 1/cm³
PARTICLE MASS:
1 µg/m³ – 290 mg/m³

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

Alpha Scientific

Scientific & Environmental Monitoring Technologies



ECAAS ISO 9001 CERTIFIED

JAS-ANZ

Australia Wide
Phone: 1300 025 780

Contact Details
Phone: + 61 3 9124 9886
Email: sales@alphascientific.com.au
Website: www.alphascientific.com.au