Automotive Engineering 2. Measurement Systems



AVL M.O.V.E

Mobile Exhaust Measurement Systems

- GAS PEMS iS: The AVL GAS PEMS iS is a compact, portable exhaust-gas analyzer developed for the determination of NO / NO2, CO / CO2 and O2 concentrations in the exhaust gas of diesel and gasoline engines
- PN PEMS IS: The PN PEMS iS has been developed for continuous measurement of particulate matter emissions [# / cm³] of solids particles under real driving conditions (RDE)



Source: AVI

Specifications:

- · Sensor principle: Advanced Diffusion Charger
- · Sample preparation: Catalytic Stripper
- Max. Sampling rate: 10Hz
- Dilution rate 10: 1



CAMBUSTION DMS500

Differential mobility analyser (DMA)

Function:

- Particles are charged by an unipolar corona charger with relation to the particle surface
- In a classifying unit the electrically charged particles are exposed to a static electric field, witch leads to deflection in direction of 22 ring electrodes
- The trajectory (impact location on a ring electrode) depends on the electrical mobility of the particles, based of witch the aerodynamic diameter is estimated

Specifications:

• Range: 5 – 1.000nm (optional: 5 – 2.500nm)

• Max. sampling rate: 10Hz

· 38 size fractions



Source: CAMBUSTION



