



The Charme® charge aerosol measurement system developed by Palas® is a high-capacity Faraday cup aerosol electrometer that measures the electrical charges on aerosol particles.

For years, aerosol electrometers have been used in research applications to measure the mean charge of an aerosol. If the charge state of the particles for monodisperse aerosols is known, then these devices can quickly and easily determine the number concentration of particles with an approx. size ≥ 2 nm.

In the case of polydisperse aerosols, a charger or neutralizer is often used to generate a defined charge distribution. If a particle size is set using an upstream classifier (e.g., Palas® DEMC), then the number concentration of the particles can be determined indirectly based on a current measurement (load/time). An aerosol electrometer is often used to calibrate condensation particle counters ...

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BENEFITS

- Reliable current measurement (charge/time) for aerosols
- Quick measurement (10 Hz) of the particle concentration
- Intuitive operation using touch screen
- Graphical display of measured values for particle concentration and electrometer current
- Gravimetric filter that can be switched out for on-site correlation between the measured current and the mass concentration
- Integrated pump
- Integrated data logger
- Low maintenance
- Easy to operate
- Reduces your operating expenses

APPLICATIONS

- Aerosol research
- Environmental measurements (high concentrations)
- Workplace measurements
- Emission studies
- Process control
- Calibration of condensation particle counters (CPC)

DATASHEET

Measurement (number C_N)	range	1,000 – $1.6 \cdot 10^7$ Partikel/cm ³	Measurement (size)	range	> 2 nm
Volume flow		1 – 5 l/min (internal pump) 1 – 10 l/min (external pump)	Interfaces		USB, Ethernet (LAN), RS-232
Data logger storage		10 MB	Data acquisition		24 bit AD-converter
Measurement (current)	range	1 fA – 22,500 fA	Accuracy		0.1 fA (0.1 Hz), 1 fA (1 Hz)