

Process Aerosol Monitor Series PAM 510

Principle

Light extinction by particles of a highly concentrated aerosol streaming through a measuring cell where a light beam is crossed.

By measuring the average transmission and its fluctuation, the particle number concentration can be calculated independently of the refractive index of the aerosol material to be analysed.

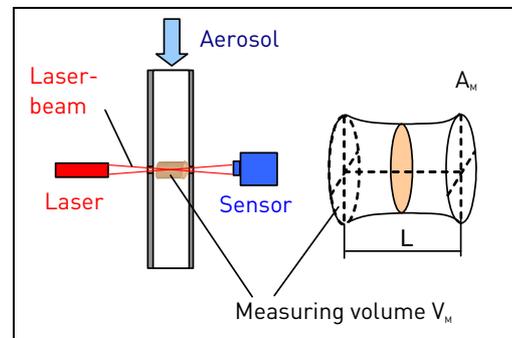
With the known refractive index the calculation of an average particle size can be performed simultaneously.

Special Advantages

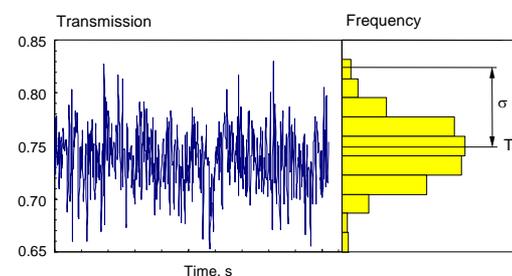
- Highly innovative instrument for online measurements of aerosols
- Simultaneous determination of particle size as well as particle number concentration
- No calibration at known refractive index
- Concentration measurement is independent of the extinction coefficient
- Integrated RS232 interface for further processing of the measured data with the Software PAMWin

Applications

- Continuous monitoring of aerosols Series SLG
- Monitoring of aerosol generators



Optical Arrangement of the PAM 510



Output Caused by Single Particles
(σ : Standard Deviation, T: Mean)

Specifications

Example of Application

The Topas Condensation Aerosol Generator series SLG produces monodisperse aerosols. Both particle size and particle concentration to be generated can be quickly adjusted.

The Process Aerosol Monitor series PAM was developed for online monitoring of the generated aerosol. The instrument can directly be connected to the outlet in front of the aerosol generator series SLG (see figure below).

This equipment enables an excellent control of the particle size and particle concentration. The system is well suitable for instrument calibration and aerosol research.

The measured data are transmitted via the integrated RS232 interface to a computer, recorded with the software PAMWin and evaluated.



Monitoring of monodisperse aerosols produced by the Condensation Aerosol Generator SLG 270

Technical Data

Principle	Light extinction measuring setup with transmission and fluctuation analysis
Operating mode	Online measurement
Particle size range	0.5...10 µm
Particle concentration range	10 ⁴ ...10 ⁷ Particles/cm ³
Light source	3 mW, λ=780 nm laser diode
Microprocessor	TMPZ84C015 (Toshiba)
Sample flowrate	10 l/h...500 l/h
Sheath air flowrate	12 l/h
Counter pressure	max. 3 kPa (30 mbar)
Computer Interface	RS232
Power adapter	12 V DC, 300 mA
Power supply	12 V DC, 200 mA (via AC adapter)
Dimension (H x L x W)	200 x 235 x 60 mm
Weight	2.4 kg

QMS certified to
DIN EN ISO 9001.



12 100 11908 TMS

For more information please
visit our website at
www.topas-gmbh.de

Specifications are subject to
change without notice.

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