ENVI-CPC 200

The ENVI-CPC 200 is currently the only butanol-based particle counter with high efficiency, which can directly determine the highest concentrations of 2 • 10^6particles in single counting mode in high resolution without dilution. It is part of our modular nanoparticle measurement system. It can be combined arbitrarily with different systems to measure ultrafine particles. Likewise, it is particularly suitable for long-term measurement of combustion or other aerosols with high concentrations of nanoscaled particles. The patented evaporator and condensation module is maintenance-free.

The system meets the requirements of the current standard EN 16976:2024 (Harmonized measurement of number concentrations using CPC) in all areas. It can be operated directly with a NAFION® based sampling system if desired. The pumps required for this are already integrated.

优势

- The unique, patented way of providing the working fluid for unattended operation for months
- Ambient air monitoring without a dilution system
- Intuitive user interface with sophisticated software for data evaluation
- Limitless, integrated network connectivity that supports remote operation and data storage on the internet
- Powerful software package
- Low maintenance

特点

- Automatic measurement data storage
- Measurement of the particle size distribution of condensed particles for quality assurance
- Integrated pump
- Integrated computer with 7″ touchscreen

应用领域

- 气溶胶研究
- 环境测量
- 环境监测网络
- 工作场所安全与职业暴露研究
- 交通排放监测
- 健康研究
- 移动气溶胶研究

https://www.palas.de/zh/product/envicpc200

技术数据

测量原理	Condensation of ultrafine particles, optical sensor for determining the number concentration and size distribution of the condensed particles
测量范围(数量浓度)	$2 \cdot 10^6$ particles/cm^3 (single count mode)
测量范围(粒径)	Approx. 5μm
体积流量	0.9 l/min +/- 2% (optional 0.5 l/min additional) (pressure loss isotherme capillary)
Time resolution	1s - 60s
接口	USB, Ethernet (LAN), weather station/butanol level sensor, RS-232, T/rH sensor
User interface	Touchscreen, 800 • 480 pixel, 7″ (17.78 cm)
Protocols	UDP, UIDEP, B/H, MODBUS TCP/RTU, ASCII TCP/Seriell
Data logger storage	Approx. 6 GB data storage (2 years)
Detection efficiency (at low particle size)	D50 = 10 ± 1 nm (others on request); D90 < 20 nm, D95 @ 40 nm ± 10 nm, D90 @ 1000 nm ± 100 nm
Data acquisition	Digital, 20 MHz processor, 256 raw data channels
Light source	Long term stable LED
外壳	Tabletop device
电源	115 – 230 V, 50/60 Hz
Power consumption	Average power consumption: 40 W
Installation conditions	Operating temperature: +10 – +30 °C, operating humidity: < 95% (non-condensing)
Accuracy	+/- 2% (according to calibration certificate)
Response time	t_{90} < 3 s
Working fluid	n-Butanol (>99.5%)
Dimensions	330 • 380 • 240 mm (H • W • D)
重量	Approx. 10 kg
Resolution	Min. 1s
Data Management	Prepared for connection to the Palas Cloud MyAtmosphere (“MyAtmosphere-ready”)

标准和证书

EN 16976:2024-09, ISO 27891:2015