

ENVI-CPC 100



The ENVI-CPC 100 is a butanol-based particle counter with high efficiency for monitoring ultrafine particle (UFP) concentrations in the ambient air. The Model 100 is designed for typical concentrations of up to 10^5 particles/cm³. It is part of our modular nanoparticle measurement system. It can be combined with different systems for measuring the size distribution and concentration of UFP. The patented evaporator and condensation module is maintenance-free. This allows continuous operating times of up to one year without maintenance and cleaning.

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
- 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

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

特点

- 可扩展至U-SMPS 扫描电迁移率粒径谱仪
- 自动测量数据存储
- 用于质量控制的凝结粒子粒径分布测量
- 集成泵
- 配备7英寸触摸屏的集成计算机

技术数据

测量原理	Condensation of ultrafine particles with optical measurement of concentrations
测量范围(数量浓度)	10^5 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)
软件	PDAnalyze
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	90 – 264 V, 50/60 Hz
Power consumption	Average power consumption: 40 W
Installation conditions	+10 – +30 °C (others on request)
Accuracy	5% (single count mode), 10% (nephelometric mode)
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"); Internet access and separate registration required. The MyAtmosphere terms of use apply.

标准和证书

EN 16976:2024-09, ISO 27891:2015