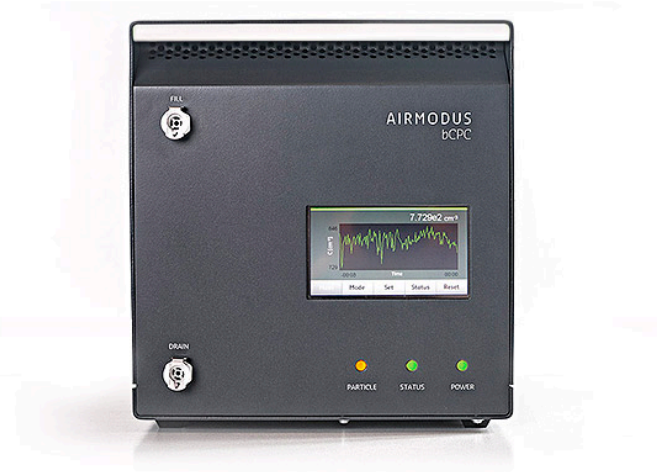
"It's the small things that count."

A23 bCPC

www.airmodus.com

Designed for vehicle emission measurements

Airmodus A23 Condensation Particle Counter is a user-friendly tool for all applications where counting aerosol particles larger than 23 nm is a necessity. The A23 CPC is compliant with the Particle Measurement Protocol (PMP) for EURO 5/6. It fulfills the requirements of UN/ECE R49 and UN/ECE R83.



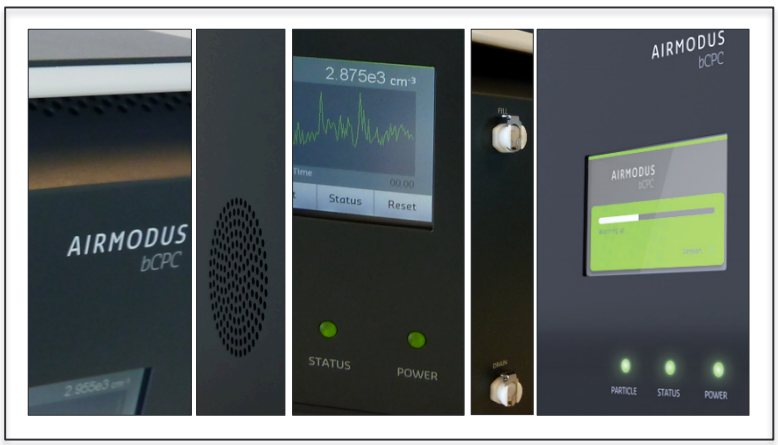
A versatile particle counter
The A23 can be used both as a stand-alone instrument for measuring the total particle number concentration, and as a counter in different kinds of aerosol measurement systems. It is **easy to use and handle**. All settings can be quickly adjusted from a handy touch screen, which also displays the current concentration reading and instrument diagnostics.

The A23 is also compatible with the Airmodus Particle Size Magnifier A10.

Benefits of the A23

- The saturator is made of robust and inert stainless steel in order to ensure stable operation
- Narrow pulse width for higher counting accuracy
- Easy to use touch screen
- Improved usability and design: all connections optimized for easy access

Regulation requirements	**A23**
$Dp_{50\%}$ (±12%) = 23 nm ± 1 nm	✓ 23 nm
$Dp_{>90\%}$ = 41 nm ± 1 nm	✓ very sharp cut-off curve
Linear concentration response between 0 - 10 000 #/cm3	✓ 0 - 30 000 #/cm3



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A23 bCPC Specifications

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Particle size range	23 nm – 2.5 µm Dp50% = 23 nm*
Concentration	0 – 100 000 #/cm^3 Up to 30 000 #/cm^3 in single particle counting mode with coincidence <10%; higher concentrations with Total Scattering Mode Correction
Aerosol sample flow	1.00 ± 0.06 lpm, controlled with a critical orifice
Response time	t_{90} < 3 s
False counts	<0.0001 #/cc
Working fluid	n-Butanol (>99.5%)
Sample conditions	Pressure: 75 to 105 kPa Relative humidity: 0 to 95% non-condensing (preferably<40%)**
Environmental conditions	Temperature: 15°C to 35°C Pressure: 75 to 105 kPa Relative humidity: 0 to 95% non-condensing
Communication	*Analog in:* BNC connector, 0 to 10 V (reading data of external sensor) *Analog out:* BNC connector, 0 to 10 V, user-selectable function output (linear concentration, also DMA voltage control) *Pulse out:* BNC connector *Serial:* RS-232 *Ethernet:* RJ45 *USB:* type B connector All communication based on ASCII character-encoding scheme.
Fittings	*External Vacuum:* 1/4 in. stainless steel tube *Inlet:* 1/4 in. stainless steel tube
Software	Airmodus A2X software for online data acquisition (for Microsoft Windows)
External vacuum requirement	100 - 400 mbar pressure at NTP (or <40% of inlet pressure)
Power requirements	100 - 240 VAC max. 320 W universal AC input/full range
Dimensions and weight	260x230x400 (height x width x depth in mm) 10.5 kg
Shipping conditions	Temperature: 0 - 40°C Relative humidity: <95% non condensing The instrument should be shipped in upright position and should be protected against tremor and blows.

*) Cut-off size in mobility equivalent diameter. See calibration certificate.
**) With high relative humidity, an aerosol drier should be used to prevent excess water condensation inside the instrument.

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