

A20-CEN CPC

The A20 is a reliable and robust device that can accurately and sensitively measure aerosol particles in various environments. It meets all the requirements specified by ACTRIS and CEN, ensuring full compliance. The A20-CEN is part of ACTRIS whitelist and has been extensively tested and proven valuable in atmospheric research over the years.

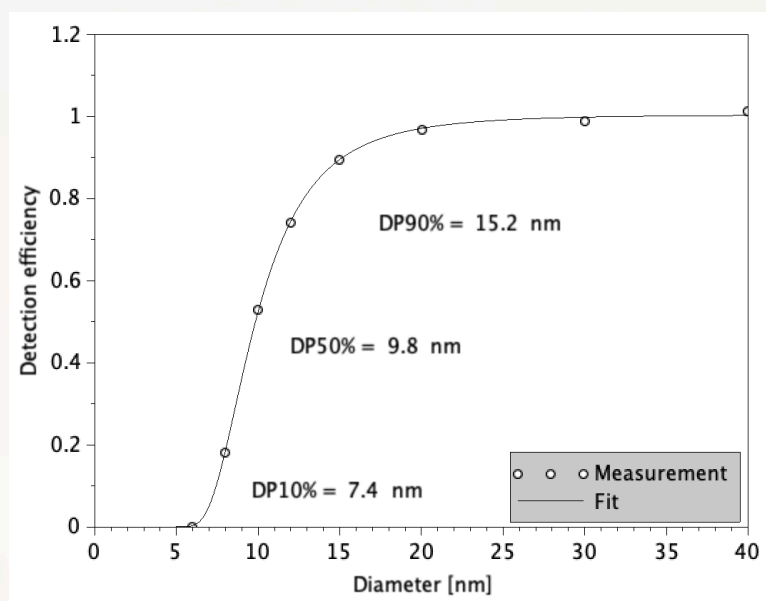


Compliance

✓ **ACTRIS / EN 16976:2024**

Individual counting

✓ **Calibration algorithms that offer complete transparency**



Benefits

- ✓ **Precise particle counting**
- ✓ **Extremely low noise**
- ✓ **Fully open algorithm**
- ✓ **Easy to use touchscreen**
- ✓ **Advanced signal diagnostics**
- ✓ **Compatible with Airmodus PSM**
- ✓ **New inlet BlockSafe system**

The A20-CEN has the capability to monitor the overall concentration of particles, or it can be integrated into measurement systems that assess the distribution of particle sizes, such as the MPSS. Airmodus also offers complete sampling inlet systems that consist of a cyclone, Nafion dryer, RHTP Module, and a vacuum pump package.

Additionally, the Airmodus MultiLogger software is included to simplify the logging process.

✓ A20-CEN CPC - Specifications

Particle size range	10 nm – 2.5 µm * (Dp50% at 10nm +/- 1 nm & D90% < 20 nm)	
Concentration range	0 – 100 000 #/cm ³ with single particle counting mode. **	
Aerosol inlet flow	Nominal flow 1.05 lpm +/- 5%	
Aerosol sample flow	Nominal flow 1.05 lpm (no dilution, full flow through the optics)	
Response time	t ⁹⁵ < 1.15 s	
False counts	<0.001 #/cm ³	
Working fluid	n-Butanol (>99,5%)	
Sample conditions	Pressure: 75 to 105 kPa, Dew Point: < 15°C***	
Environmental conditions	Temperature: 15°C to 35°C Pressure: 75 kPa to 105 kPa Relative Humidity: 0 % to 95 %	
Communication	Analog out: BNC connector, 0 - 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.	
Diagnostics	volumetric aerosol flow rate temperature at the saturator and condenser temperature of the optics liquid level	nozzle pressure critical orifice pressure laser current pulse quality
Fittings	External Vacuum: 1/4" stainless steel tube (built-in pump on request) Inlet: 1/4" stainless steel tube	
Software	Airmodus MultiLogger software for online data acquisition (for Microsoft Windows**** 10 or newer) Can be used with TSI 3082/3080 SMPS platforms and AIM software.	
External vacuum	100 - 400 mbar pressure at NTP (or <40% of inlet pressure) required	
Power requirements	Instrument uses an external power adaptor (provided with the instrument) Power adaptor input: 100 - 240 VAC 50/60 Hz, max. 160 W Steady state consumption: 100 W Power adaptor output: 12VDC 11.5 A	
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, of Silver particles. See calibration certificate.

**) This range represents the calibrated measurements. The CPC is capable of measuring higher concentrations, but the accuracy of those readings hasn't been verified using an individual calibration.

***) With high relative humidity, an aerosol drier should be used to prevent excess water condensation inside the instrument.

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