

# CLOUD DROPLET ANALYZER



The Cloud Droplet Analyzer is an optical aerosol spectrometer for high-resolution measurement of the size distribution and number concentration of cloud aerosols.

## BENEFITS

- Continuous and simultaneous measurement of particle number concentration and particle size distribution
- Intuitive and simple operation
- Remote monitoring, operation and maintenance easily possible
- No radioactive material
- No consumables
- Low energy consumption
- Low maintenance
- On-site calibration possible

## APPLICATIONS

- Cloud research
- Ice nucleation events
- Environmental research

## FEATURES

- Determination of the MVD (Mean Volume Diameter), ED (Equivalent Diameter) and LWC (Liquid Water Content) parameters
- Designed for 24/7 operation
- Heated sampling head
- Weather sensor
- Use under difficult climatic conditions

## DATASHEET

<b>Measuring principle</b>	Optical light scattering at single particles	<b>Reported data</b>	Particle size distribution, particle number concentration, mean volume diameter, equivalent diameter, water content
<b>Measurement (number <math>C_N</math>)</b>	<b>range</b> 0 – 200 particles/cm <sup>3</sup>	<b>Measurement (size)</b>	<b>range</b> 0.6–40 $\mu\text{m}$ , 0.8–100 $\mu\text{m}$
<b>Volume flow</b>	5 l/min	<b>Size channels</b>	64 (32/decade)
<b>Time resolution</b>	1 s–24 h	<b>Interfaces</b>	USB, Ethernet (LAN), RS-232/485
<b>User interface</b>	Touchscreen, 800 • 480 pixel, 7" (17.78 cm)	<b>Protocols</b>	UIDEP, UDP, ASCII, MODBUS
<b>Software</b>	PDAalyze	<b>Data acquisition</b>	Digital, 20 MHz processor, 256 raw data channels
<b>Light source</b>	Long term stable LED	<b>Housing</b>	Weatherproof housing IP55
<b>Operating system</b>	Windows 10 IoT Enterprise	<b>Power supply</b>	115–230 V, 50/60 Hz
<b>Installation conditions</b>	-30–+40 °C, <95% rH, non-condensing, max. 4.000 m (above sea level)	<b>Sampling head</b>	Sigma-2 passive collector, heatable with automated control
<b>Dimensions</b>	Ca. 1,150 • 742 • 404 mm (H x W x D)	<b>Weight</b>	Approx. 40 kg

additional parameter on our website ...