# **PROMO®** 3000







The  $Promo^{\$}$  3000 is a light-scattering aerosol spectrometer system with two sensors for particle size analysis and concentration determination that can be equipped with all welas $^{\$}$  sensors. On  $Promo^{\$}$  3000, the welas $^{\$}$  sensors equipped with different measurement volumes, as required, can be easily connected via fiber optic cables and interchanged as needed. These sensors allow reliable measurement in the concentration range from < 1 particle/cm $^{3}$  up to  $10^{6}$  particles/cm $^{3}$  and are available for measurement in gases and liquids.

 $Promo^{\$}$  3000 is famous for up to 128 size channels per measuring range and a concentration range from < 1 particle/cm<sup>3</sup> to  $10^6$  particles/cm<sup>3</sup>.

## **BENEFITS**

- Very high size resolution
- Concentration range from < 1 particle/cm<sup>3</sup> to 10<sup>6</sup> particles/cm<sup>3</sup>
- Calibration curves for different refractive indices
- Very high and reproducible counting efficiency starting at 0.2  $\mu m$
- Optical fiber technology
- Easy operation thanks to large touch display
- Calibration, cleaning, and lamp replacement can be performed independently by the customer
- External control via RS 232 or Ethernet
- · Low maintenance

#### **FEATURES**

- Two sensors can be connected for raw and clean gas measurement
- Up to four measuring ranges: 0.2  $\mu$ m 10  $\mu$ m | 0.3  $\mu$ m 17  $\mu$ m | 0.6  $\mu$ m 40  $\mu$ m | 2  $\mu$ m 100  $\mu$ m
- Up to 128 size channels per measuring range
- Clear calibration curve thanks to white light source with 90° scattered light detection
- Patented T-aperture: No edge zone error, coincidence detection and correction on the individual signal
- Selectable sensors for optimized measurement with regard to concentration
- On-site calibration and adjustment (particle size and volume flow)

#### **APPLICATIONS**

- Emission monitoring of installations
- Control of grinding and classification processes
- Monitoring of production processes in the food, pharmaceuticals and chemicals industries
- Testing of complete filters, inertial and wet separators or electrostatic precipitators

## **MODEL VARIATIONS**



Promo® 3000 H

With heating control up to 250 °C for welas® aerosol sensors

https://www.palas.de/en/product/promo3000h



Promo® 3000 HP

Version with automatic regulation of sampling volume flow by the aerosol sensors welas  $^{\circledR}$  under overpressure up to 10 bar or in temperatures to 120  $^{\degree}$ C

https://www.palas.de/en/product/promo3000hp

https://www.palas.de/en/product/promo3000



# **DATASHEET**

Measuring principle	Optical light-scattering	$\begin{array}{ll} \text{Measurement} & \text{range} \\ \text{(number } C_N) \end{array}$	< 1 • 10 <sup>6</sup> particles/cm <sup>3</sup>
Measurement range (size)	0.2 – 10 μm, 0.3 – 17 μm, 0.6 – 40 μm, 2 – 100 μm	Volume flow	5 l/min
Size channels	Max. 128 (64/decade)	Time resolution	1 s
Interfaces	USB, Ethernet (LAN), Wi-Fi, RS- 232/485	User interface	Touchscreen, 800 • 480 pixel, 7" (17.78 cm)
Data logger storage	4 GB Compact Flash	Software	PDControl, FTControl, PDAnalyze
Thermodynamic conditions	+10 - +40 °C, -100 - 50 mbar	Data acquisition	Digital, 20 MHz processor, 256 raw data channels
Light source	Xenon arc lamp 35 W	Gehäuse	Table housing, optional: with mounting brackets for rack-mounting
Support options	Direct remote access, Palas webserver service	Operating system	Windows embedded
Power supply	115 – 230 V, 50/60 Hz	Power consumption	100 W
Installation conditions	+5 – +40 °C (control unit)	Dimensions	185 • 450 • 315 mm (H • W • D) (19")

additional parameter on our website  $\dots$