

# PROMO<sup>®</sup> 3000



The Promo<sup>®</sup> 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<sup>®</sup> sensors. On Promo<sup>®</sup> 3000, the welas<sup>®</sup> 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<sup>3</sup> up to 10<sup>6</sup> particles/cm<sup>3</sup> and are available for measurement in gases and liquids.

Promo<sup>®</sup> 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<sup>6</sup> 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 μm
- 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 μm - 10 μm | 0.3 μm - 17 μm | 0.6 μm - 40 μm | 2 μm - 100 μm
- 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<sup>®</sup> 3000 H

With heating control up to 250 °C for welas<sup>®</sup> aerosol sensors

<https://www.palasz.de/en/product/promo3000h>



### Promo<sup>®</sup> 3000 HP

Version with automatic regulation of sampling volume flow by the aerosol sensors welas<sup>®</sup> under overpressure up to 10 bar or in temperatures to 120 °C

<https://www.palasz.de/en/product/promo3000hp>

## DATASHEET

Measuring principle	Optical light-scattering
Measurement range (number $C_N$ )	$< 1 \cdot 10^6$ particles/cm <sup>3</sup>
Measurement range (size)	0.2 – 10 $\mu\text{m}$ , 0.3 – 17 $\mu\text{m}$ , 0.6 – 40 $\mu\text{m}$ , 2 – 100 $\mu\text{m}$
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
Housing	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")
Weight	Control unit: approx. 8 kg, sensor: approx. 2.8 kg