



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

## Description

Depending on the composition of the aerosol to be measured, i.e. the carrier gas component and the particle material, pressure and temperature changes in the carrier gas can significantly influence the particle size distribution, e.g. due to condensation or evaporation.

this reason, the welas<sup>®</sup> aerosol sensors welas<sup>®</sup> 2070 H, HP, 2100 H, HP, 2200 H, HP, 2300 H, HP and welas<sup>®</sup> 2500 H, HP are equipped with a heatable and, as required, pressure-tight cuvette to ensure isobaric and isothermal sampling into the sensor's measurement volume.

Promo<sup>®</sup> 2000 H model variant also offers heating regulation for temperatures up to 250 °C for the aerosol sensors with heatable cuvette.

Promo<sup>®</sup> is usually calibrated for the operating volume flow. In the Promo<sup>®</sup> 2000 H version, regulation of the sampling volume flow is performed independently by the customer taking the temperature and pressure into consideration.

## Benefits

- Measuring range of 0.2 to 100 µm (4 measuring ranges selectable in one device)
- Up to four measuring ranges in only one device:
  - 0,2 µm – 10 µm
  - 0,3 µm – 17 µm
  - 0,6 µm – 40 µm
  - 2 µm – 100 µm (additionally for sensors 2300 and 2500)
- Up to 128 size channels per measuring range
- Concentration range of 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 rate starting at 0.2 µm
- **Pressure-resistant up to 10 bar (optional)**
- **Heatable to 250 °C (optional)**
- Optical fibre technology
- Simple operation with a large touch display
- Calibration, cleaning and lamp replacement can all be performed independently by the customer
- External control by RS 232 or Ethernet
- With analysis software PDAnalyze
- Optional: Software PDControl for operation as welas<sup>®</sup> digital available
  
- Low maintenance
- Reliable function
- Reduces your operating expenses

## Datasheet

<i>Parameter</i>	<i>Description</i>
<b>Interfaces</b>	USB, Ethernet, RS232/485, Wi-Fi
<b>Measurement range (size)</b>	0,2 µm – 10 µm, 0,3 µm – 17 µm, 0,6 µm – 40 µm, 2 µm – 100 µm
<b>Size channels</b>	up to 128 (64/decade)
<b>Measuring principle</b>	Optical light-scattering
<b>Measurement range (number C<sub>N</sub>)</b>	< 1 • 10 <sup>6</sup> particles/cm <sup>3</sup>
<b>Volume flow</b>	5 l/min
<b>Data acquisition</b>	20 MHz processor, 256 raw data channels, digital
<b>Light source</b>	Xenon arc lamp 35 W
<b>Power consumption</b>	100 W
<b>User interface</b>	Touch screen, 800 • 480 pixel, 7"
<b>Housing</b>	Table housing, optionally with mounting brackets for rack-mounting
<b>Dimensions</b>	185 • 450 • 315 mm (H • W • D) (19")
<b>Support options</b>	Direct remote access, Palas <sup>®</sup> webserver service
<b>Weight</b>	approx. 8 kg (control unit), approx. 2.8 kg (sensor)
<b>Operating system</b>	Windows embedded
<b>Data logger storage</b>	4 GB Compact Flash
<b>Software</b>	PDControl, FTControl, PDAnalyze
<b>Installation conditions</b>	+5 – +40 °C (control unit)

## 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

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