PROMO® 3000 HP

Depending on the aerosol composition 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. For this reason, the welas® aerosol sensors welas® 2070 HP, 2100 HP, 2200 HP, 2300 HP, and welas® 2500 HP are equipped with a cuvette heatable up to 120 °C and pressure-tight up to 10 barg to ensure isobaric and isothermal sampling into the sensor's measurement volume.

The Promo® system is usually calibrated for the operating volume flow. As the operating volume flow changes with pressure and temperature, it is advantageous for the user if automatic volume flow regulation for the sampling volume flow is provided for in the device.

In the Promo® 3000 HP, the pressure and temperature of the carrier gas are measured, and the required operating volume flow is automatically set to 5 l/min.

OPERATION PRINCIPLE

Includes:

- Mass flow controller for volume flow regulation
- Heating regulator up to 120 °C
- Temperature sensor
- Absolute pressure capsule
- Filter unit to protect the flow rate control

Benefits

- Up to 128 size channels per measuring range
- Concentration range of 1 particle/cm^3 to 10^6 particles/cm^3
- 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
- Low maintenance, reduces your operating expenses

DATASHEET

Measuring principle	Optical light-scattering
Measurement range (number C_N)	$< 1 \cdot 10^6$ particles/cm^3
Measurement range (size)	0.2 – 10 μm, 0.3 – 17 μm, 0.6 – 40 μm, 2 – 100 μm
Volume flow	5 l/min regulated by mass flow
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 – +120 °C, 2 – 10 bar_g
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″)
Weight	Control unit: approx. 8 kg, sensor: approx. 2.8 kg

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

Mehr Informationen:
https://www.palas.de/product/promo3000hp