

5431 Standard PMP Condensation Particle Counter

PRECISE AND COMPACT – FOR SOLID PARTICLE NUMBER (PN)

- n-Butanol based CPC
- Complies to the GPRE particle measurement program
- Integrated sample pump, no external vacuum required

FEATURES

- Precise nanoparticle counting
 - n-Butanol based CPC
 - D50 = 23.0 nm
 - Droplet size control
 - Continuous condensate drain with micro pump
 - Single count mode (up to 50 000 particles/cm³)
- Sample flow rate controlled by critical orifice
 - Integrated sample pump, no external vacuum required
- Saturator shutter
- Wide range power supply
 - 100 ... 240 VAC wide range power supply, 50 ... 60 Hz



BENEFITS

- Optimized for special applications
 - Measuring of solid particle number (PN)
 - Exhaust emission monitoring
 - Aerosol research
 - Testing of diesel particulate filter (DPF)
- Easy to use
 - Status control via LEDs
 - LCD display for real-time number concentration data
 - 5475 GRIMM nanoSoftware for Counters
- Cost saving
 - Low maintenance

Technical data

Detection principle	Condensation particle counter
Working fluid	n-butanol (n-butyl alcohol)
Output	Particle number concentration/cm ³
Particle concentration range	Single count mode: up to 50 000 particles/cm ³
Coincidence correction	< 10 % ... 23 000 particles/cm ³
Concentration linearity	R ² ≥ 0.98
Concentration accuracy	≥ 90 %
Response time t₁₀ ... t₉₀	< 2 s
Counting efficiency	at 23 nm 50 ± 12 % at 41 nm ≥ 90 %
False background counts	< 0.001 particles/cm ³
Readability	0.1 particles/cm ³
Sample flow rate	0.6 l/min (integrated sample pump), independent of altitude above sea level
Flow control	Critical orifice with stabilized temperature

Aerosol carrier gas	Air and inert gases
Interface	USB or RS-232
Data recording	Directly on PC with GRIMM nanoSoftware, optionally on USB flash drive
Analog input	Port for optional analog sensor e. g. T, RH; 3 x 0 ... 10 V
Power supply	100 ... 240 VAC, 50 ... 60 Hz, max. 10.4 A
Power input	40 W standard operation 30 W standby 80 W warm up
Dimensions (h x w x d)	• Housing: 23 x 26 x 24 cm (9 x 10.2 x 9.4 inch) • Fully assembled with n-butanol and condensate bottle: 35 x 26 x 29 cm (13.8 x 10.2 x 11.4 inch)
Weight	9.2 kg (20.3 lbs)
Operating conditions	+10 ... +40 °C (50 ... 104 °F), RH < 95 % non condensing, 500 ... 1 100 mbar
Transport and storage	0 ... +50 °C (32 ... 122 °F), RH < 95 %

Office Location

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