AIR QUALITY PARTICLE COUNTING

PCE-CPC 100



- **Real-time measurement from 0.3 µm ... 10 µm**
- **Output in particles/28.3L or particles/m³**
- **Visual and audible alarm when threshold value is exceeded**
- **Modbus RTU and MQTT via RS485**
- **Real-time display of cleanroom class ISO 14644-1**
- **Robust housing for wall mounting**

The state-of-the-art air quality particle counting enables precise real-time measurement in the range from 0, 3 µm to 10 µm to provide a comprehensive picture of air quality. The results are presented in two units, either number per 28.3 litres or number per cubic metre. Air sampling is performed by an internal pump. When the particles pass the light source (laser), light scattering occurs; the scattered light is converted into an electrical signal (pulse) by a photoelectric transducer, and the larger the particles, the larger the pulse signal.

The air quality particle counting offers not only a visual but also an audible alarm function. Threshold values can be set for each channel; as soon as the predefined threshold values are exceeded, the cleanroom particle counter issues a warning. The integration of Modbus and MQTT ensures seamless integration into existing networks and enables efficient data communication. The sampling time can be set from 1 to 10 min and the pause time from 1 to 1000 min.

With our real-time display of the cleanroom class according to ISO 14644-1, the air quality particle counting always provides control over the cleanliness of the environment. This function makes it possible to continuously monitor the cleanliness level and ensure that the premises meet the required standards.

Specification

Particle	
Measuring channel sizes	0.3, 0.5, 1.0, 5.0, 10
Measuring range	0 ... 1000000 Particles/28.3 l
Counting efficiency	50 % @0.3 µm 100 % @≥0.5 µm (at 25±2 °C, 50±10 % RH)
Flow volume	28,3 l/min
Relative humidity	
Measuring range	0 ... 100 %
Resolution	0,1 %
Accuracy	±2 % of Rd
Temperature	
Measuring range	-40 ... +125 °C
Resolution	0,1 °C
Accuracy	±0.2 °C (within 5 ... 60 °C)

General technical data	
Display type	Touch screen
Display size	3,5 Inch
Display refresh rate	1 x per second
Interface	RS485, Ethernet
Sensor	Laser scattered light
Response time	8 s
Menu language	English, Chinese
Protection class (device)	IP30
Power supply	24 VDC, 5 A
Connector type	Schuko plug
Operating conditions	0 ... 45 °C , 0 ... 95 % RH
Storage conditions	-20 ... 60 °C , 0 ... 95 % RH
Dimensions (L x W x H x D)	218 x 235 x 272 x 87 mm
Other dimensions	Hose: inner diameter: 10 mm / length: approx. 3 m
Weight	1495 g