PARTICLE COUNTER

PCE-PCO 1



- **Measures 6 sizes of particles: 0.3 µm, 0.5 µm, 1.0 µm, 2.5 µm, 5.0 µm, 10 µm**
- **Offers a robust 80 MB internal memory and microSD card slot**
- **Features a large, full-color LCD display with backlight**
- **Includes a built-in camera for image and video recording**
- **Contains sensors for measuring air temperature, dew point and relative**
- **humidity**

This is a laser particle counter, or dust measuring device, for measuring the concentration of particles in the air. The dust measuring device is ideal for monitoring clean rooms, indoor air quality, exposure to exhaust, tobacco or cigarette smoke and other harmful air pollutants, and levels of airborne dust. Cigarette smoke particles mainly are distributed in the size range from 0.1 to 1.0 micron.

A variety of materials are explosible in dust form. Some examples include: food (e.g., candy, sugar, spice, starch, flour and feed), grain, tobacco, plastics, wood, paper, pulp, rubber, pesticides, pharmaceuticals, dyes, coal and metals (e.g., aluminum, chromium, iron, magnesium and zinc). These materials are used in agriculture, chemical manufacturing, pharmaceutical production, furniture, textiles, fossil fuel power generation, recycling operations, metal working and processing (including additive manufacturing and 3D printing) and many other industries and processes.

In addition to being a combustion hazard, certain kinds of dust can be a health hazard. Exposure (such as skin contact, eye contact and inhalation) can be linked to sneezing, a stuffy or runny nose, itchy or red eyes, headaches, fatigue, fever, cough, shortness of breath, dermatitis, asthma, bronchitis, pneumonia (e.g., Legionnaires' disease and hypersensitivity pneumonitis) and cancer.

Specification

Particle	
Measuring channel sizes	0.3, 0.5, 1.0, 2.5, 5.0, 10
Measuring range	0,3 ... 10 µm
Counting efficiency	50 % at 0.3 µm; 100 % at particle size > 0.45 µm
Flow volume	2,83 l/min
Coincidence error	<5% at 2,000,000 particles per ft³
Dew point	
Measuring range	0 ... 10 °C
Resolution	0,1 °C
Accuracy	±1°C
Dew point	
Measuring range	10 ... 40 °C
Resolution	0,1 °C
Accuracy	±0.5°C
Dew point	
Measuring range	40 ... 50 °C
Resolution	0,1 °C
Accuracy	±1°C
Relative humidity	
Measuring range	0 ... 20 % RH
Resolution	0,1 % RH
Accuracy	±5 % RH
Relative humidity	
Measuring range	20 ... 40 % RH
Resolution	0,1 % RH
Accuracy	±3.5 % RH
Relative humidity	
Measuring range	40 ... 60 % RH
Resolution	0,1 % RH
Accuracy	±3 % RH
Relative humidity	
Measuring range	60 ... 80 % RH
Resolution	0,1 % RH
Accuracy	3.5 % RH
Relative humidity	
Measuring range	80 ... 100 % RH
Resolution	0,1 % RH
Accuracy	±5 % RH

General technical data	
Display type	LCD with backlight
Display size	2,8 Inch
Display resolution	320 x 240 pixels
Storage medium	Internal memory
Storage capacity	80 MB
Memory capacity (additional information)	Micro SD card 5000 data records
Interface	Mini-USB
Sensor	Laser scattered light
Operating time	4 h
Automatic power-off from...to	3 ... 60 min.
Menu language	English, French, German, Spanish
Protection class (device)	IP20
Connector type	Device-europlug
(Rechargeable) battery	1 x 7,4 V internal , Lithium polymer battery
Capacity	1200 mAh
Operating conditions	0 ... 50 °C , 10 ... 90 % RH
Storage conditions	0 ... 50 °C , 10 ... 90 % RH
Dimensions (L x W x H)	240 x 75 x 55 mm
Weight	420 g

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Temperature	
Measuring range	0 ... 10 °C
Resolution	0,1 °C
Accuracy	±1 °C
Temperature	
Measuring range	10 ... 40 °C
Resolution	0,1 °C
Accuracy	±0.5 °C
Temperature	
Measuring range	40 ... 50 °C
Resolution	0,1 °C
Accuracy	±1 °C