



3-Channel Portable Laser Particle Counter



HAL-PPC300

Features

- **Simultaneously measure 3-channel particle distributions**
- **Automatic sampling and excess-count-limit warning**
- **USB/RS232 interface for data downloading and upgrading**
- **Built-in printer**
- **Built-in zero-counter filter**
- **Built-in flowmeter**
- **AC and DC dual power use**

HAL-PPC300 portable laser particle counter can be used in measuring particles suspending in the air and their distributions in clean environment applications such as microelectronics, fine mechanic, optics, and pharmaceutical, medical device, food processing and aerospace. The basic principle of the CW-PPC300 portable laser particle counters is that the laser scattering pulse signal of an aerosol particle output from an optical sensor is processed and counted based on digital signal processing. The setting of measurement parameters, result display, and data storage are all controlled or realized by an internal microprocessor (MCU). It can simultaneously measure three channels that are arbitrarily configured or set by the users. The data are recorded in the embedded flash memory and can be downloaded with supplied software through either USB or RS232 interface. The user can also upgrade the firmware through USB or RS232 interface.

The HAL-PPC300 is in compliance with the international standard (ISO14644-1) and CE certification. All of its key components are made from USA, Germany and Japan. The instrument is unique in many aspects comparing to the similar products in the market. A built-in printer allows for on-site data print out. In addition, both a built-in flowmeter and zero-counter filter ensure the quality of measurement with capabilities of onsite flow and zero-count calibration.



Applications

- Clean environment monitoring
- Indoor Air Quality
- Test/Check Filter seal and efficiency
- Trace contamination source
- Analysis of Particle size distribution

Specifications

Light Source	Laser diode (>100,000 hours)
Sensitivity	0.3 μ m
Channels	0.3 ~25 μ m (three default channels: 0.3, 0.5, 5.0 μ m, user configurable)
Counting Efficiency	50 \pm 20% @0.3 μ m 100 \pm 10% (0.5 μ m)
Coincidence Loss	<5% @70,000 particles/liter or <5% @2,000,000 particles/ft ³
Flow Rate	2.83 L /min (0.1cfm)
Sampling Time	User defined: (up to 59m59s) and auto repeat (up to 99 times)
Count Limit Warning	FED209E and ISO14644-1 standards
Sampling Mode	Cumulative, differential, concentration (counts/liter)
Error Indications	Excess count limit, optics contamination, loss of laser power, insufficient battery power
Interface	USB, RS232
Data Transfer Rate	12M bps
Internal Memory	3000 measurement data (1000 sets)
Power	Ni-MH Rechargeable battery (6V/2500mAh) or 12VDC AC Adapter (100~240V input)
Max. Operating time	Continuous operation > 5 hours with Ni-MH battery
Dimension	180 (W) \times 212 (D) \times 123 (H) mm
Weight	< 3500 grams (including battery)
Environmental Condition	Operating: 5 ~ 45 $^{\circ}$ C, < 90%RH Storage: -20 ~ 65 $^{\circ}$ C, < 90%RH
Standard Accessories	AC adaptor, iso-kinetic probe, USB data cable, data download software (CD)
Optional	External temperature and humidity sensor, zero-count filter,