High-flow, 6-Channel Portable Laser Particle Counter

HAL-PPC600

Features

- **Large sampling flow at 1 CFM or 28.3 Liter per minute**
- **Simultaneously measure 6-channel particle distributions**
- **Automatic sampling and excess-count-limit warning**
- **RS232 interface for real time data monitoring**
- **Built-in printer**
- **AC and DC dual power use**

To respond requirement of ever-growing regulation demanding, Hal Technology introduced HAL-PPC600 six-channel, high-flow, portable laser particle counter. It 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 HAL-PPC600 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 six channels that are arbitrarily configured or set by the users. The data are recorded in the embedded flash memory and can be downloaded later with supplied software through RS232 interface.

The HAL-PPC600 is in compliance with the international standard (ISO14644-1). All of its key components are made from USA, Germany and Japan. The instrument is simple to operate comparing to the similar products in the market. A built-in printer allows for on-site data print out. In addition, a zero-counter filter could ensure the quality of measurement with capabilities of onsite zero-count verification.

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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	0.3µm
Channels	0.3, 0.5, 0.7, 1.0, 2.0 and 5.0µm (six channels)
Counting Efficiency	50±20% @0.3µm 100±10% (0.5µm)
Coincidence Loss	<5% @35,000 particles/liter
Flow Rate	28.3 L /min (1cfm)
Sampling Time	User defined: 1 sec to 999 seconds and auto repeat (up to 99 times)
Count Limit Warning	ISO14644-1 standards
Sampling Mode	Concentration (counts/m^3 and counts/$foot^3$)
Error Indications	NA
Interface	RS232
Data Transfer Rate	9600 bps
Internal Memory	256 measurement data sets
Power	AC/DC dual use < 90W PPC600-110 for 100-120V input PPC600-220 for 220-240V input
Max. Operating time	Continuous operation > 4 hours with Lithium rechargeable battery
Dimension	230 (W)× 360 (D) × 170 (H) mm
Weight	< 9000 grams (including battery)
Environmental Condition	Operating: 0 ~ 40°C, < 90%RH Storage: -20 ~ 60°C, < 90%RH
Standard Accessories	Iso-kenetic probe, sampling tubing, spare fuse tripod, data download software (CD), portable carry case
Optional	Zero-count filter

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