

## **Superthin 3-Channel Handheld Particle Counter**



**HPC300**

### **Features**

- **Simultaneously measure 3 user configurable particle sizes**
- **Counting modes with cumulative/differential/concentration/continue / average/auto-repeat/timer**
- **Up to 1500-data (450 sets) internal memory**
- **Excess-count-limit warning**
- **USB/RS232 interface for data downloading and upgrading**
- **External digital temperature and humidity probe**

HAL-HPC300 Handheld Laser Particle Counters can be used in measuring particles suspending in the air in clean environment applications such as microelectronics, fine mechanic, optics, and pharmaceutical, medical device, food processing and aerospace as well indoor/outdoor air quality. The basic principle of the HAL-HPC300 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 channel sizes that are configurable 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 HAL-HPC300 was designed in USA and is in compliance with the international standards (JIS B 9925:1997 and ISO14644-1). 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. It features high sensitivity, multiple functional capabilities, slim and lightweight and user friendly.

## 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  |
| Sizes Range             | 0.3µm~10µm   |
| Channels                | All three channels are user configurable (size selections from 0.3µm, 0.5µm, 0.7µm, 1.0µm, 2.0µm, 2.5µm, 5.0µm and 10µm)   |
| Counting Efficiency     | 50±20% @0.3µm<br>100±10% (0.45µm)  |
| Coincidence Loss        | <5% @70,000 Particles/Liter or<br><5% @2,000,000 particles/ft <sup>3</sup>   |
| Zero Count              | <1 count per 5 minutes   |
| 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     | FED STD 209E (Class 1 ~ 100,000) or ISO 14644-1 (Class 2 ~ 9)  |
| Sampling Mode           | Cumulative, differential, concentration (counts/liter)   |
| Error Indications       | Excess count limit, optics contamination, loss of laser power, insufficient battery power  |
| Interface               | USB, RS232   |
| Internal Memory         | 1500 measurement data (450 sets)   |
| Power                   | Li-ion polymer rechargeable battery (7.4V/2800mAH) or 9VDC AC Adapter (100~240V input)   |
| Max. Operating time     | Continuous operation > 5 hours with Li-ion battery   |
| Dimension               | 180 (H) ×93 (W) × 46 (D) mm  |
| Weight                  | < 950 grams (including battery)  |
| Environmental Condition | Operating: 5 ~ 45°C, < 90%RH<br>Storage: -20 ~ 65°C, < 90%RH   |
| Accessories             | AC adaptor, iso-kinetic probe, USB data cable, data download software (CD), zero-count filter, digital temperature and humidity sensor probe, mini printer, printer cable, tripod, calibration certificate |