

Airborne Particle Counter ZR-1640



100L/min

Introduction

ZR-1640 Airborne Particle Counter is a portable 6 channel particle counter that uses the principle of light scattering to test the number of airborne particles with sizes of **0.3, 0.5, 1.0, 3.0, 5.0, and 10.0µm**. The flow is stable at **100L/min** by a built-in power source. The instrument is suitable for cleanliness testing of clean rooms, and performance testing of air filter and filter material in clean workshops, biological laboratories, pharmaceutical factories, inspection and testing institutions, bio-safety cabinet manufacturers, etc.

Application



Features

- Support 6-channel simultaneous measurement and record.
- High precision sensor, minimum channel size is 0.3µm as a 100L/min particle counter.
- Optional concentration or number mode with cumulative and/or differential counting.
- Built-in clean room standards (GMP, ISO and so on), automated test reporting.
- Support auto-print and manual print, optional print/export content.
- Support presetting room, recipe and automatically set parameters according to selected class.
- Three-level user management and audit trail to ensure data integrity.
- Built-in HEPA filter for the exhaust.
- Support export data via USB flash disk and printing by an embedded printer.
- Built-in temperature, humidity, atmospheric pressure sensor.
- A replaceable lithium battery for 4 hours continuous sampling after fully charged.
- 7-inch touch color screen, friendly human-computer interaction.
- Abundant optional accessories for compressed gas testing, HEPA filter scanning, recovery test.

Reference standards

- ISO 14644
- ISO 21501-4:2018
- GMP
- GB/T 16292-2010
- JIS B 9921:2010
- GB/T 6167-2007
- JJF 1190-2008

Packing list



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Specifications

Parameters	Range
Flow rate	100.0 L/min, maximum permissible error $\pm 2\%$
Channel sizes	0.3, 0.5, 1.0, 3.0, 5.0, and 10.0 μm
Counting efficiency	0.3 μm : $50\% \pm 20\%$; >0.5 μm : $100\% \pm 10\%$
Error of particle size distribution	0.5 μm and 5 μm channels: $\leq \pm 30\%$
Repeatability	$\leq 10\%$ FS
Concentration indication error	0.5 μm channel: $\leq \pm 30\%$ FS
Light source	Laser diode
Concentration limit	17,000,000/m ³ , 10% coincidence loss
Zero count	<1 count /5 min
Sampling mode	Manual, automatic; cumulative and/or differential counting; Concentration mode, number mode; UCL calculation
Alarm	Audible and visual alarm when exceeding threshold or low battery
Sampling delay	0-1000 min
Sampling time	1 s-1000 min
Sampling volume	1.67 L-100000 L
Sampling cycle	1-1000 times
Sampling interval	1s-1000 min
Preset room/location/recipe	80 rooms and each one maximum of 1000 locations, and 54 recipes
Exhaust filtration	Built-in HEPA filter (>99.97% @0.3 μm)
Communication	USB, WIFI, Bluetooth, RS485, BNC female
Environmental sensor	Temperature, humidity, atmospheric pressure
Screen	7-inch touch color screen
Power supply	AC (100-240) V, 50/60 Hz
Battery	Removable lithium battery, continuous sampling $\geq 4\text{h}$ @25 °C, 101.325 kPa
Sampling data	Exported to USB drive or printed by built-in thermal printer
Data storage capability	8GB, >100,000 groups
Noise	≤ 60 dB (A)
Language	English, Chinese
Working condition	(10-40)°C, (20-85) % RH, no condensation
Storage condition	(-20-50)°C, $\leq 95\%$ RH
Dimension	(L265 × W240 × H 265) mm
Weight	About 8.2 kg
Power consumption	≤ 180 W

Particle Counter Series

