

Handheld Laser Particle Counters

Three or Five-channel Particle Concentration Measurement

- **Particle size channels monitored simultaneously**
 - Flexible 5-channel model (3886): 0.3, 0.5, 1.0, 3.0, and 5.0 μm
 - Economical 3-channel model (3887): 0.3, 0.5, and 5.0 μm
- **Simultaneous, flexible monitoring of particle concentration**
 - Add optional probes to 5-channel 3886 for relative humidity/temperature and air velocity to meet your applications
- **Built-in flow sensor for highly accurate particle concentration measurements**
 - 0.1 cfm (2.83 L/min) flow rate \pm 10%
- **User-selectable sampling time and frequency**
- **Alkaline battery, rechargeable NiMH AA batteries, or AC operation**
 - Operate with alkaline batteries for fast emergency response
- **Efficient internal data storage and logging**
 - 500 data points* - Model 3886
 - 8000 data points* - Model 3887
- **Compact and lightweight**
 - 5-channel model: 2.2 lbs (1 kg); 8 x 5 x 3 in (20 x 13 x 8 cm)
 - 3-channel model: 1.5 lbs (.68 kg); 8 x 4 x 3 in (20 x 11 x 8 cm)
- **Model 3886 can be used as a multi-point monitor with cascade connection**
- **Remote control with PC, cable, and software**
 - Cable and software included with economical 3-channel model
 - Optional accessories available for 5-channel model



3887 Handheld Laser Particle Counter



3886 Particle Counter shown with optional RH/temperature and air velocity probes

Description

The 3886 and 3887 Handheld Laser Particle Counters simultaneously monitor multiple particle size channels to provide concentration measurement ranging from 0.3 to 5.0-micron particles. Optional probes for relative humidity/temperature and air velocity may be added to the 3886 5-channel model for simultaneous monitoring of these important indoor air parameters. The large four-line LCD allows easy monitoring of parameters. A built-in flow sensor enables highly accurate measurement of particle concentration for particles such as clothing and carpet fibers, mold spores, dust mites, asbestos fibers, skin cells, and other particles in the size measuring range. Compact and lightweight, these particle counters are easy to hold and the integral keypad simple to use. Battery operation allows monitoring in remote locations. Data can be downloaded to a PC with ease.

* Does not include address code function



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Applications for Particle Counters

Particle Counter use has expanded from the semiconductor industry to monitoring critical environments in the pharmaceutical, food processing, and electronics industries. Following are general applications for particle counters.



- Cleanroom monitoring (FS 209E and ISO 14644)
- Indoor air quality investigations
- Checking HEPA filter system efficiency
- Containment verification during remediation projects
- Particle contamination source tracking
- Medical industry
- Aerospace
- Paint spray booths

Particle Counters in IAQ Investigations

Particle Counters have come to play an important role in Indoor Air Quality (IAQ) investigations by helping to locate sources of particle contamination and by indicating areas where further sampling should be performed.

About Laser Particle Counters

- The instrument reads in particles/ft³ or particles/m³ of air.
- The particle counter can be used like a Geiger counter to guide the user closer to the source of particulate contamination.
- If the particle count is high in the 2 to 10 micron range, mold contamination is often present.
- These particle counts are used in a manner similar to spore counts using spore traps.
- Particle counts are taken inside, outside, and in various zones and compared.

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Performance Profile

Particle sizes measured:	3886: 0.3, 0.5, 1.0, 3.0, and 5.0 μm 3887: 0.3, 0.5, and 5.0 μm
Coincidence loss:	< 5% at 2,000,000 particles/cfm
Flow rate:	0.1 cfm (2.83 L/min)
Sampling time:	1 sec-99 min 59 sec (adj. in sec)
Sampling frequency:	1-99 times or continuous
Count alarm:	1-70,000,000 counts
Measurement modes:	Singe/repeat/continuous/calculation/remote
Interface:	RS-232C or RS-485 (for cascade connection) and RJ-11 connector
Power:	4 AA NiMH batteries (1.2 V), AC adapter (input: 100-240 V), or AA alkaline disposable batteries
Operating time:	Approx. 3 hrs on batteries, indefinitely on AC
Dimensions:	3886: 8 x 5 x 3 in (20 x 13 x 8 cm) 3887: 8 x 4 x 3 in (20 x 11 x 8 cm)
Weight (without batteries):	3886: 2.2 lbs (1 kg) 3887: 1.5 lbs (0.68 kg)

Accessory Probe Specifications

Temperature/Humidity Probe Model 0842

Temperature range:	0-50 C (32-122 F)
Accuracy:	± 0.5 C (> 0.2 m/s air velocity)
Humidity range:	3-98% RH
Accuracy:	$\pm 3\%$ RH ($\pm 5\%$ at the outside of 30-85% RH range)

Air Velocity Probe Model 0843

Air velocity range:	0-1 m/s (0-197 fpm)
Accuracy:	± 0.05 m/s (10 fpm)

Ordering Information

Description	Cat. No.
3886 Laser Particle Counter includes AC adapter (100-240 V), zero filter, tube, handle, 4 AA NiMH batteries, battery charger, calibration certificate, and operating manual	745-3886
3887 Laser Particle Counter includes AC adapter (100-240 V), zero filter, datalogging software, communication cable for PC, 4 AA size NiMH batteries, battery charger, calibration certificate, and operating manual	745-3887

Accessories

Description	Cat. No.
Temperature/RH Probe	745-0842
Air Velocity Probe	745-0843
Extension Rod	745-084301
Particle Counter Software	745-388600
RS-232 Cable	745-388608
Carry Case for Model 3886	745-388602
Carry Case for Model 3887	745-388702