

# Handheld Optical Particle Counters

3 or 5 Channel Models Available

- **Particle size channels monitored simultaneously**
  - Flexible 5-channel model (3886): 0.3, 0.5, 1.0, 3.0, and 5.0  $\mu\text{m}$
  - Economical 3-channel model (3887): 0.3, 0.5, and 5.0  $\mu\text{m}$
- **Simultaneous measurement of other parameters**
  - Add optional probes to 5-channel 3886 for relative humidity/temperature and air velocity
- **Built-in flow sensor for highly accurate particle concentration measurements**
  - 2.83 L/min (0.1 cfm) flow rate  $\pm 10\%$
- **User-selectable sampling time and frequency**
- **Alkaline battery, rechargeable NiMH AA batteries, or AC operation**
- **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 (980 gm); 8.3 x 4.5 x 2.8 inches (21.1 x 11.4 x 7.1 cm)
  - **3-channel model:** 1.5 lbs (680 gm); 7.8 x 4.4 x 2.8 inches (19.2 x 11.2 x 7.1 cm)
- **5-channel model (3886) can be used as a multi-point monitor with cascade connection**
- **Remote control and real-time monitoring with PC, cable, and software**
  - Cable and software included with economical 3-channel model (3887)
  - Optional accessories for 5-channel model (3886)



3887 Handheld Optical Particle Counter



Versatile 5-channel 3886 OPC shown with optional RH/temperature and air velocity probes

## Description

The 3886 and 3887 Handheld Optical Particle Counters (OPCs) 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 verification/monitoring
- IAQ investigations
- Clean bench verification
- Food process investigations
- Hospital surgical room monitoring
- Filter testing
- Nanoparticle exposure evaluation

## 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 Optical Particle Counters

- The instrument reads in particles/ft<sup>3</sup> or particles/m<sup>3</sup> 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.

## SKC Limited Warranty and Return Policy

SKC products are subject to the SKC Limited Warranty and Return Policy, which provides SKC's sole liability and the buyer's exclusive remedy. To view the complete SKC Limited Warranty and Return Policy, go to <http://www.skcin.com/warranty.asp>.



## Performance Profile

<b>Size of Particles Measured (Channels):</b>	<b>3886:</b> 0.3, 0.5, 1.0, 3.0, and 5.0 $\mu\text{m}$ <b>3887:</b> 0.3, 0.5, and 5.0 $\mu\text{m}$
<b>Coincidental Loss:</b>	< 5% at 2,000,000 particles/cf
<b>Flow Rate:</b>	2.83 L/min (0.1 cfm) $\pm$ 10%
<b>Sampling Time:</b>	1 sec-99 min 59 sec (adj. in sec)
<b>Sampling Frequency:</b>	1-99 times or continuous
<b>Count Alarm:</b>	1-70,000,000 counts
<b>Measurement Modes:</b>	Singe/repeat/continuous/calculation/remote
<b>Interface:</b>	RS232C or RS485
<b>Power:</b>	4 AA-size rechargeable NiMH batteries (included) or AC adapter (100-240 V, included)
<b>Operating Time:</b>	<b>3886:</b> 3.5 hrs with NiMH batteries (1600 mAh) <b>3887:</b> 3 hrs with NiMH batteries (1600 mAh)
<b>Dimensions:</b>	<b>3886:</b> 8.3 x 4.5 x 2.8 in (21.1 x 11.4 x 7.1 cm) <b>3887:</b> 7.8 x 4.4 x 2.8 in (19.2 x 11.2 x 7.1 cm)
<b>Weight (without batteries):</b>	<b>3886:</b> 2.2 lbs (980 gm) <b>3887:</b> 1.5 lbs (680 gm)

## Accessory Probe Specifications

<b>Temperature/Humidity Probe Model 0842</b>	
<b>Temperature Range:</b>	32-122 F (0-50 C)
<b>Accuracy:</b>	$\pm$ 0.5 C (> 0.2 m/s air velocity)
<b>Humidity Range:</b>	3-98% RH
<b>Accuracy:</b>	$\pm$ 3% RH ( $\pm$ 5% at the outside of 30-85% RH range)

## Air Velocity Probe Model 0843

<b>Air Velocity Range:</b>	0-197 fpm (0-1 m/s)
<b>Accuracy:</b>	10 fpm ( $\pm$ 0.05 m/s)

## Ordering Information

Description	Cat. No.
<b>3886 Optical Particle Counter</b> includes AC adapter (100-240 V), zero filter with connecting tube, handle, 4 AA-size NiMH batteries, battery charger, calibration certificate, software, USB cable, shoulder strap, and operating manual	<b>745-3886</b>
<b>3887 Optical Particle Counter</b> includes AC adapter (100-240 V), zero filter, datalogging software, communication cable for PC, 4 AA-size NiMH batteries, battery charger, calibration certificate, isokenetic probe, meter stand, USB cable, carry case, and operating manual	<b>745-3887</b>

## Accessories

Description	Cat. No.
<b>Temperature/RH Probe</b> , for Model 3886	<b>745-0842</b>
<b>Air Velocity Probe</b> , for Model 3886	<b>745-0843</b>
<b>Extension Rod</b> , for Model 3886	<b>745-084301</b>
<b>RS-232 Cable</b> , for Model 3886	<b>745-388608</b>
<b>Carry Case</b> , for Model 3886	<b>745-388602</b>