

# Handheld

PARTICLE COUNTERS



# Handheld 2016/3016/5016

## Particle Counters



**T**HE ergonomically designed and lightweight Lighthouse Handheld 2016, 3016 and 5016 particle counters feature 0.2, 0.3 and 0.5 $\mu$ m sensitivities and are the most advanced handheld particle counters on the market. Providing up to 6 particle size channels of simultaneous counting, Lighthouse Handheld Particle Counters can display cumulative and differential particle count data as well as Temperature/Relative Humidity data on the fast and easy to read color touch screen. Lighthouse Handheld Particle Counters can hold up to 3000 records of particle data and the configurable recipe database can store up to 50 recipes for sampling and reports. Removable batteries and an optional charger help to maximize the Handheld's uptime. Data is very easily downloaded using the Lighthouse Data Transfer Software. The Handheld can be used as a mobile particle monitor or become a part of a large facility monitoring and management system.



TFT Color  
Touchscreen Interface



Removable  
Rechargeable  
Li-Ion Battery



One-handed Operation  
with Start & Stop  
on Handle



Removable  
Temp / RH and  
Isokinetic Probes



Easily Download  
Data to PC

## Features

- Handheld 2016: 0.2 - 2  $\mu$ m
- Handheld 3016: 0.3 - 25  $\mu$ m
- Handheld 5016: 0.5 - 25  $\mu$ m
- 0.1 CFM (2.83 LPM) Flow Rate
- View 6 Particle Sizes Simultaneously
- Designed for ISO 21501-4 Compliance:
- Unit-to-Unit Accuracy and Repeatability
- Bright 3.5" (8.89 cm) Color Touch Screen Display
- Removable / Rechargeable Li-Ion Battery
- Large Memory for Storing Data (3,000 samples)
- Concentration Limit - 4,000,000/ft<sup>3</sup>
- Temperature/Relative Humidity Probe Included
- Test Wizard for Cleanroom Pass/Fail Reports:
- FS-209E, ISO-14644-1 or EU GMP Annex 1
- 50-record Configurable Recipe Database
- Easily Configurable Interface with Zoom Capability
- Open Architecture Connectivity with OPC Server

- Alphanumeric Location Labels
- Internal Audible Alarm
- Ergonomically Designed
- Lightweight

## Benefits

- 2 Year Warranty
- User Friendly Interface
- International Support
- Low Cost of Ownership

## Operating:

50°F to 104°F (10°C to 40°C) / 20% to 95% non-condensing

## Storage:

14°F to 122°F (-10°C to 50°C) / Up to 98% non-condensing

# Handheld 3016 IAQ

## Particle Counter



OUR ergonomically designed and lightweight Lighthouse Handheld 3016 IAQ is the newest, most advanced handheld particle counter on the market, featuring Mass Concentration Mode that approximates density in  $\mu\text{g}/\text{m}^3$ . Providing up to 6 particle size channels of simultaneous counting, Lighthouse Handheld Particle Counters can display cumulative and differential particle count data as well as Temperature/Relative Humidity data on the fast and easy to read color touch screen. Lighthouse Handheld 3016 IAQ can hold up to 3000 records of particle data and the configurable recipe database can store up to 50 recipes for sampling and reports. The Handheld 3016 IAQ monitors particulate levels accurately and reliably, even in "hard-to-reach" areas where two-handed operation is unsafe.



LOC: LOC001		2011/09/05	
RCP: RCP001		15:56:00	
$\mu$	$\Sigma$ $\text{m}^3$		
PM 0.3	0.05	0.05	0.05
PM 0.5	0.06	0.06	0.06
PM 1.0	0.09	0.09	0.09
PM 2.5	0.13	0.13	0.13
PM 5.0	0.16	0.16	0.16
PM 10.0	0.21	0.21	0.21
TPM:	0.30	0.30	0.30

### Features

- 0.3 - 10  $\mu\text{m}$  Size Range
- 0.1 CFM (2.83 LPM) Flow Rate
- View 6 Particle Sizes Simultaneously
- Approximate Mass Concentration in  $\mu\text{g} / \text{m}^3$
- 3.5" (8.89 cm) Color Touch Screen Interface
- Removable/Rechargeable Li-Ion Battery
- Large Memory for Storing Data (3,000 samples)
- Concentration Limit - 4,000,000/ $\text{ft}^3$
- Temperature/Relative Humidity Probe Included
- 200 User Defined Alphanumeric Location Labels
- Easily Configurable Interface with Zoom Capability
- On Screen Data Buffer Viewing
- Molded Handle Allows One-handed Sampling
- Internal Audible Alarm

Mass  
Concentration  
Screen

- Ergonomically Designed
- Lightweight
- Data Easily Downloaded to Computer
- 50-record Configurable Recipe Database

### Benefits

- 2 Year Warranty
- User Friendly Interface
- International Support
- Low Cost of Ownership

### Operating:

50°F to 104°F (10°C to 40°C) / 20% to 95% non-condensing

### Storage:

14°F to 122°F (-10°C to 50°C) / Up to 98% non-condensing

# Product Selection Guide

	2016	3016
Size Range	0.2 - 2.0 µm	0.3 - 25.0 µm Standard: 0.3, 0.5, 0.7, 1.0, 2.0, 5.0 µm
Channel Size	0.2, 0.3, 0.5, 0.7, 1.0, 2.0 µm	Standard: 0.3, 0.5, 1.0, 3.0, 5.0, 10.0 µm Standard: 0.3, 0.5, 0.7, 1.0, 2.5, 5.0 µm Standard: 0.3, 0.5, 1.0, 2.5, 5.0, 10.0 µm Optional: 0.5, 1.0, 3.0, 5.0, 10.0, 25.0 µm
Counting Efficiency	50% @ 0.2 µm; 100% for particles > 0.45 µm (per ISO 21501-4)	50% @ 0.3 µm; 100% for particles > 0.45 µm (per ISO 21501-4)

	3016IAQ	5016
Size Range	0.3 - 10.0 µm	0.5 - 25.0 µm
Channel Size	0.3, 0.5, 1.0, 2.5, 5.0, 10.0 µm	Standard: 0.5, 0.7, 1.0, 3.0, 5.0, 10.0 µm Optional: 0.5, 1.0, 3.0, 5.0, 10.0, 25.0 µm (specify 3 channels at time of order)
Counting Efficiency	50% @ 0.3 µm; 100% for particles > 0.45 µm (per ISO 21501-4)	50% @ 0.5 µm; 100% for particles > 0.75 µm (per ISO 21501-4)

## 2016 / 3016 / 3016IAQ / 5016

Flow Rate	0.1 CFM (2.83 LPM)	Sample Inlet	Isokinetic Sampling Probe
Laser Source	Extreme Life Laser Diode with > 20 years MTTF	Sample Output	Internally filtered to HEPA standards (>99.97% @ 0.3 µm)
Zero Count Level	< 1 count / 5 minutes (per ISO 21501-4)	Vacuum Source	Internal pump, automatic flow control
Concentration Limits	8,000,000 particles / ft <sup>3</sup> @ 10% coincidence loss	Enclosure	High impact injection molded plastic
Calibration	Meets ISO 21501-4 calibration using NIST traceable PSL spheres, DMA and condensation Particle Counter	Power	External power supply: 12VDC, 1.25A
Count Modes	Automatic, manual, beep, concentration, cumulative/differential	Battery	Li-Ion, removable & rechargeable
Data Storage	3,000 sample records, rotating buffer (includes particle and environmental data, location and time)	Dimensions	8.75" (L) x 5.0" (W) x 2.5" (H) (22.23 x 12.7 x 6.35 cm)
Communication Modes	RS-232 via RJ-45 to a PC or an optional printer	Weight	2.2 lb (1 kg)
Supporting Software	LMS Express, LMS Express RT, LMS Pharma, LMS Pro	Languages	English (U.S.), Deutsch, Espanol, Italiano, Français, Russian, Japanese, Korean and Chinese.
Environmental Sensors	Temperature/relative humidity probe: 0-150°F (-17.8 to 65.6°C) ±1.8°F @ 77°F, 0-100% ± 5% @ 33%		
Touch Screen Display	3.5" (8.89 cm), color TFT		
Reports	FS-209E, ISO-14644-1 (1999, 2015) & EU GMP		
Alarms	Internal, adjustable alarm buzzer. Alarms on counts. Low battery or sensor failure.		

<b>Corporate Headquarters</b> 47300 Kato Road Fremont, CA 94538 USA  Tel: +1 510 438 0500 Fax: +1 510 438 3840	<b>Manufacturing Operations</b> 1221 Disk Drive Medford, OR 97501 USA  Tel: +1 541 770 5905 Fax: +1 541 770 2033	<b>Benelux Operations</b> Van Heemstraweg 19-A 6657 KD Boven-Leeuwen The Netherlands  Tel: +31 487 560811 Fax: +31 487 560013	<b>EMEA Operations</b> Mimar Sinan Mh. Cavusbasi Cd. Ozge Sk. Zin D Business Center NO: 1/26 Cekmekoy/Istanbul Turkey  Tel: +90 216 640 0 597 Fax: +90 216 640 0 598
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**Thailand Operations**  
9/13 Moo 5, Phaholyothin Rd.  
T. Klongneung, A. Klongluang  
Pathumthani, 12120  
Thailand  
  
Tel: +662 902 2722-3  
Fax: +662 902 2724

**Malaysia Operations**  
No. 18-32-A1 & A2  
Gurney Tower, Persiaran Gurney  
Georgetown, 10250 Penang  
Malaysia  
  
Tel: +604 370 1229  
Fax: +604 370 1209



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