



## REMOTE 3104, 5104

### AIRBORNE PARTICLE COUNTERS

Incorporating the latest in laser optical particle counting technology, Lighthouse designed the **REMOTE 3104** and **5104** for continuous trouble-free operation.

With a sensitivity of 0.3 and 0.5 micron, respectively, at a flow rate of 1.0 CFM (28.3 LPM), the **REMOTE 3104** and **5104** provide real-time continuous data collection at a cost-effective price per point.

Using an external vacuum source, the compact **REMOTE 3104** and **5104** provide versatile mounting options and can be installed where space is at a premium. The optional T/RH Probe can be mounted up to eight feet from the instrument by using an optional extension cable.

The **REMOTE 3104** and **5104** integrate seamlessly into large facility monitoring and management systems and transfer up to 4 channels of simultaneous particle count and environmental data using RS-485 Modbus.

With the optional Network or Wireless Adapter, the **REMOTE 3104** or **5104** can be connected to TCP/IP LANs.

**Designed and built by  
Lighthouse - a name you can trust.**

Lighthouse is an ISO 9001:2008 Registered company.

**[www.golighthouse.com](http://www.golighthouse.com)**

### Features:

- ★ REMOTE 3104: 0.3 -25  $\mu$ m
- ★ REMOTE 5104: 0.5 -25  $\mu$ m
- ★ 1.0 CFM (28.3 LPM) Flow Rate
- ★ Up to 4 Channels of Simultaneous Data
- ★ All Models Meet ISO 21501-4 Standards
- ★ Compact Size
- ★ Stainless Steel Enclosure
- ★ Status Indicators
- ★ External Alarm Connector
- ★ Optional Temperature/Relative Humidity Probe
- ★ RS-485 Modbus Output
- ★ Facility Monitoring Systems Interface
- ★ Versatile Mounting Options
- ★ External Vacuum Source
- ★ Designed for Reliability

### Benefits:

- ★ 2 Year Warranty
- ★ Installs in Limited Space
- ★ Cost Effective Price per Point
- ★ Proven Data Integrity
- ★ Proven Reliability
- ★ Continuous Real-Time Data
- ★ Easy System Integration
- ★ International Support
- ★ Low Cost of Ownership



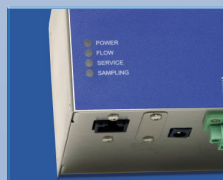
Optional T/RH  
Probe



Direct Mount  
Isokinetic  
Probe



RJ45  
Connector



Status LEDs



Alarm Relay



Flow Status  
Monitoring



## Specifications:

	3104	5104
<b>Size Range:</b>	0.3 - 25.0µm	0.5 - 25.0µm
<b>Channel Sizes:</b>	Standard: 0.3, 0.5µm Optional: 0.3, 0.5, 0.7, 1.0µm; 0.3, 0.5, 1.0, 5.0µm; Optional: 0.3, 0.5, 5.0, 10.0µm	Standard: 0.5, 5.0µm; 0.5, 10.0µm Optional: 0.5, 1.0, 5.0, 10.0µm; 0.5, 5.0, 10.0, 25.0µm
<b>Counting Efficiency:</b>	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)

**Additional channel sizes are available - please contact your Sales Engineer for information regarding these options.**

<b>Flow Rate:</b>	1.0 CFM (28.3 LPM)
<b>Laser Source:</b>	Laser Diode
<b>Zero Count Level:</b>	<1 count / 5 minutes (per ISO 21501-4)
<b>Concentration Limits:</b>	500,000 Particles / ft <sup>3</sup> @ 5% Coincidence Loss
<b>Calibration:</b>	NIST Traceable
<b>Data Storage:</b>	Rotating Buffer, 2000 Records
<b>Vacuum Requirements:</b>	External Vacuum >18" (45.72) of Hg
<b>Air Flow:</b>	Internally Monitored
<b>Communication Modes:</b>	RS-485 MODBUS
<b>LED Indicators:</b>	Power, Flow, Service, Sampling
<b>Connector:</b>	RJ45
<b>Supporting Software:</b>	LMS XChange, Lighthouse Monitoring System, LMS Express, LMS Express RT, LMS Net
<b>Environmental Sensors:</b>	(Optional) Temperature/Relative Humidity Probe 32 - 122F (0-50C)+/-1F (0.5C), 0 - 100% RH +/-2%
<b>External Alarm Output:</b>	Normally Open Dry Contact Rated 0-60 V AC/DC 1 Amp
<b>Enclosure:</b>	Stainless Steel
<b>Power:</b>	24 VDC
<b>Dimensions:</b>	REMOTE 3104: 3.5"(l) x 4.2"(w) x 3.3"(h) [8.89 x 10.66 x 8.38 cm] REMOTE 5104: 1.7"(l) x 4.2"(w) x 3"(h) [4.3 x 10.7 x 7.6 cm]
<b>Weight:</b>	REMOTE 3104: 2 lb (0.90 kg); REMOTE 5104: 0.97 lb (0.44 kg)

## Environmental Conditions:

**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

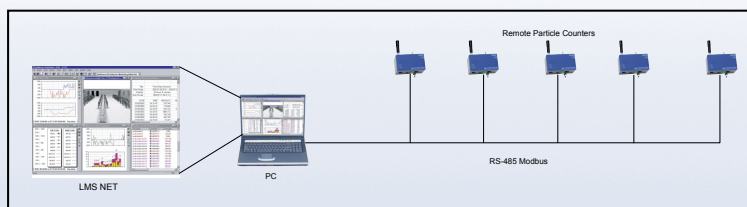
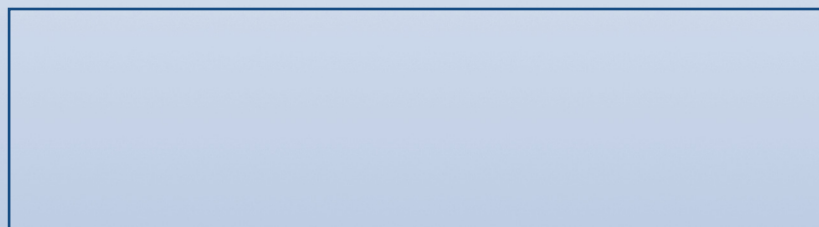
## Accessories:

**Included:**  
 Operating Manual on CD

**Optional:**  
 Printed Operating Manual; RS-485 Hub with Power Supply; RS-232 Communication Cable and Adapter; USB to Serial Port Converter; *Network Adapter; Wireless Network Adapter*; Isokinetic Sampling Probes; Vacuum Tubing; Sample Tubing; Data Cable; Purge Filter; Power Supply; Temperature/ Relative Humidity Probe; 8' T/RH Probe Extension Cable; REMOTE Mounting Kit; *LMS XChange, LMS Express; Express RT, LMSNet* software; RS-485 Communication Kit; High-Pressure Diffuser.

**Manufactured by:**

**Distributed by:**



**SAMPLE SYSTEM INTEGRATION**