

# Micro LPC-101 HP

## Micro High Pressure Laser Particle Counter

The Particle Measuring Systems Micro LPC-101 HP samples inert pressurized gases at their line pressures. This system outputs data to an external printer or computer.



### BENEFITS

#### Reduced Costs

- Speed qualification of process gas distribution systems
- Detect particles in gases before they impact yield
- System incorporates two devices: a sampling sensor and a data system

#### Improved Process Control

- Verify specifications
- Detect process upsets
- Quantify impact of system changes
- Accurate particle sizing
- Facility Net data management system option for comprehensive data storage, management, reports, and alarms

#### Reliable

- Passive cavity design requires infrequent maintenance
- Unlike other systems, the Micro LPC-101 HP requires no fluids for monitoring
- Samples inert pressurized gases at their line pressure

### FEATURES

- 0.1 micron sensitivity at 0.1 SCFM
- Eight particle size thresholds
- Line pressures from 40 to 150 psig
- Passive cavity optical design
- Side-stream monitoring of process gases
- Computer interface
- Optional external printer

### APPLICATIONS

- Qualification of gas distribution systems
- Process gas monitoring

Without measurement, there is no control.

# Specifications

## Micro LPC-101 HP

<b>Size range:</b>	0.1 - 5.0 microns
<b>Flow rate:</b>	0.1 SCFM (2.8 LPM)
<b>Sample volume:</b>	0.1 SCFM (2.8 LPM)
<b>Counting efficiency*:</b>	>50% at 0.14 microns
<b>Zero count level:</b>	<2/ft <sup>3</sup> or <0.2/min
<b>Maximum concentration**:</b>	3,000/ft <sup>3</sup>
<b>Optical design:</b>	Passive cavity with parallel processing array detector
<b>Optical system:</b>	Wide angle 90° scattering collecting optics with greater than 2π steradians solid angle
<b>Laser type:</b>	HeNe
<b>Number of sensors:</b>	1
<b>Sizing thresholds:</b>	8 channels with thresholds at: 0.1, 0.2, 0.3, 0.5, 1.0, 2.0, 3.0, 5.0 microns
<b>Sampling interval:</b>	1 second to 99:59:59 (hh:mm:ss); programmable or manual
<b>Sampling mode:</b>	Single, continuous, or manual
<b>Delay time:</b>	5 seconds to 99:59:59 (hh:mm:ss); programmable
<b>Data reporting:</b>	Option of external printer or special version of Facility Net
<b>Data management and analysis:</b>	Facility Net option
<b>Computer interface:</b>	RS-232C, bi-directional
<b>Calibration:</b>	Calibration materials used are traceable to the USA National Institute for Standards and Technology (NIST)
<b>Power:</b>	100, 115, 220 or 240 V; 50 - 60 Hz, 4 amps maximum
<b>Dimensions (l, w, h):</b>	22 x 16 x 7 in. (56 x 41 x 18 cm)
<b>Weight:</b>	42 lb. (19 kg)
<b>Environment:</b>	Temperature: 0 - 40°C, Humidity: noncondensing, Altitude: 0 to 20,000 ft. (6,098 m)

\*Allow ±5% for variations in sample flow.

\*\* Greater than 90% accuracy (less than 10% coincidence loss) at maximum recommendation ambient concentration.

Patents apply: U. S. - 4,798,465, 4,893,928, and 4,594,715. Foreign patents: Japan- 2,786,187, and 2,554,614.

Germany- 3,712,665C2, 3,930,642, and 3,485,749.4. Canada- 1,228,148. UK- EP142815.

Particle Measuring Systems, Inc. reserves the right to change specifications without notice.

AUTHORIZED REPRESENTATIVE



Registration applies to the Boulder, Colorado facility



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