

# HSLIS M65 UL1604 Compatible Particle Counters

## Liquid Optical Particle Counters

HSLIS M65 UL1604 compatible particle counters allow continuous, real-time monitoring of fluid particle contamination levels in Class I, Div II environments. Reduce costs with particle counters that can be installed without modification into these critical monitoring areas. Sizing sensitivity of 0.065  $\mu\text{m}$ . Easily integrates into Facility Net software to provide an economical way to monitor multiple flow systems.



### BENEFITS

#### Cost Effective

- Packaged for easy installation into Class I, Div II environments
- Particle measurements for solvents, chemicals, and DI water
- Simplify data analysis by using the same sensor throughout all of your fabs
- Low initial capital investment because packaging has already been completed
- Sealed package protects sensor from accidental chemical spills

#### Use with Facility Net Software

- Ethernet or RS-485 communication protocols
- Data time plots for simplified data interpretation
- Alphanumeric paging and emailing functions to alert operators to out of tolerance conditions

### FEATURES

- 0.065  $\mu\text{m}$  sensitivity
- Ethernet or RS-485 communication
- 4-20 mA outputs with Ethernet system
- Sealed enclosure

### APPLICATIONS

- Qualify particle concentrations in flammable solvents
- Monitor chemical delivery systems
- In-line measurements in recirculating baths
- Quality assurance
- Continuous monitoring for process improvement

Without measurement, there is no control.

# Specifications

## HSLIS M65 UL1604

<b>Size range:</b>	0.06 - 0.2 $\mu\text{m}$
<b>Channels:</b>	4
<b>Channel sizes:</b>	0.065, 0.1, 0.15, 0.2 $\mu\text{m}$
<b>Optimum flow rate:</b>	100 $\pm$ 10% mL/min
<b>Sample volume:</b>	0.6 mL/min.
<b>Counting efficiency:</b>	100% of the sample volume (.117 $\mu\text{m}$ )
<b>Maximum concentration*:</b>	10,000 cts/mL
<b>Sample temperature:</b>	150°C
<b>Zero count level:</b>	$\leq$ 2000 cts/L
<b>Wetted surface materials:</b>	Teflon®, Kel-F®, Sapphire, and Chemraz® 570 O-Rings
<b>Dimensions (l, w, h):</b>	Fiberglass: 19 x 13 x 9 in. (48 x 33 x 23 cm)      Stainless Steel: 18 x 16 x 9 in. (46 x 41 x 23 cm)
<b>Weight:</b>	Fiberglass: 22 lb. (10 kg)      Stainless Steel: 31 lb. (14.1 kg)
<b>Power:</b>	90-264 VAC, 50-60 Hz, 1.0 amp maximum
<b>Calibration:</b>	Calibration materials used are traceable to the USA NIST
<b>Environment:</b>	Temperature: 10 - 35°C, Humidity: non-condensing
<b>Communications:</b>	Ethernet: includes five 4-20mA outputs, four particle channels, one instrument status. One RS-232 input for set up and diagnostics only. RS-485: optional serial communications protocol

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

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Chemraz® is a registered trademark of Greene Tweed and Co.

Teflon® is a registered trademark of DuPont.

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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