HPGP-101-C

High Pressure Gas Probe with PDS-E

High-technology manufacturing processes often require high-purity gases. The High Pressure Gas Probe system, HPGP-101-C, provides reliable in-line contamination monitoring for process gases at line pressure.

The HPGP is compatible with most non-toxic gases and can be used in many reactive gas monitoring applications.

The PDS-E (Particle Data System - Ethernet) instrument collects and reports data captured by the HPGP-101-C probe.

BENEFITS

Reduced Costs

- Speed qualification of process gas distribution systems
- Detect particles in gases before they impact yield
- Compatible with oxygen, hydrogen, and most non-toxic gases

Improved Process Control

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

Reliable

- Passive cavity design requires infrequent maintenance
- Inert gas purge ensures safety
- Leakage of sample gas to vessel discontinues power to electronics

FEATURES

- 0.1 µm sensitivity at 0.1 SCFM
- 8 particle channels
- Line pressures from 40 to 150 psig
- Passive laser cavity
- Parallel processing array detector system
- Safety containment vessel
- Oxygen and hydrogen compatibility

APPLICATIONS

- Qualification of gas distribution systems
- Process gas monitoring
- Reactive gas monitoring

PARTICLE MEASURING SYSTEMS®

HPGP-101-C

High Pressure Gas Probe with PDS-E

specifications

HPGP-101-C	
Size channels	8 channels with thresholds at: 0.1, 0.2, 0.3, 0.5, 1.0, 2.0, 3.0, 5.0 µm
Flow rate	0.1 SCFM (2.8 LPM)
Sample volume	0.1 SCFM (2.8 LPM)
Counting efficiency*	> 50% at 0.14 µm
Zero count level	< 2/ft^3 or < 0.2/min
Maximum concentration**	3,000/ft^3
Optical design	Passive cavity with parallel processing array detector
Optical system	Wide angle 90° scattering collecting optics with greater than 2π steradians solid angle
Laser type	HeNe
Data system	PDS-E
Calibration	Calibration materials used are traceable to the US National Institute of Standards and Technology (NIST).
Power	100, 115, 220 – 230, or 230 – 240 V, 50 – 60 Hz, 0.5 A
Environment	Temperature: 32 – 113 °F (0 – 45 °C). Humidity: non-condensing. Maximum altitude: 9,842 ft (3,000 m).
Dimensions (l, w, h)	26 x 8 x 9 in (66 x 20 x 23 cm)
Weight	45 lb (20.4 kg)
PDS-E	
Number of sensors	1
Sampling interval	1 second to 8:00:00 (hh:mm:ss)
Data management and analysis	Facility Net software
Computer interface	RS-232, bi-directional; Ethernet (via PMS protocol, Modbus, or OPC)
Power	100 – 240 VAC, 50 – 60 Hz, 0.63 A
Environment	Temperature: 32 – 113 °F (0 – 45 °C). Humidity: noncondensing. Maximum altitude: 9,842 ft (3,000 m).
Dimensions (l, w, h)	7 x 8.5 x 12.5 in (18 x 22 x 32 cm)
Weight	11.5 lb (5.2 kg)

*Allow ± 5% for variations in sample flow.
** Greater than 90% accuracy (less than 10% coincidence loss) at maximum recommendation ambient concentration.
Patents apply: United States – 4,798,465, 4,893,928, and 4,594,715.
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.

PARTICLE MEASURING SYSTEMS
www.pmeasuring.com
info@pmeasuring.com

Particle Measuring Systems Headquarters
5475 Airport Blvd., Boulder, CO 80301, USA
Tel: +1 303 443-7100 +1 800 238-1801
FAX: +1 303 449-6870
Instrument Service & Support: +1 800-557-6363
Customer Response Center: +1 877-475-3317

PMS EMEA
Tel: +44 1684 581 000
Email: PMSEMEA@pmeasuring.com

Particle Measuring Systems France
Tel: +33 160 10 32 96
Email: PMSFrance@pmeasuring.com

Particle Measuring Systems Germany
Tel: +49 2222 9299 522
Email: PMSGermany@pmeasuring.com

Particle Measuring Systems Italia
Tel: +39 06 9053 0130
Email: PMSSRL@pmeasuring.com

Particle Measuring Systems Nordic
Tel: +45 707 028 55
Email: PMSNordic@pmeasuring.com

Particle Measuring Systems China
Tel: +86 21 6113 3600
Email: pmschina@pmeasuring.com

Particle Measuring Systems Japan
Tel: +81 3 5298 8175
Email: PMSJapan@pmeasuring.com

Particle Measuring Systems Singapore
Tel: +65 6496 0330
Email: PMSSingapore@pmeasuring.com

AUTHORIZED REPRESENTATIVE

Particle Measuring Systems Brazil
Tel: +55 11 5188 8166
Email: PMSBrazil@pmeasuring.com

Particle Measuring Systems Mexico
Tel: +52 55 2271 5106
Email: PMSMexico@pmeasuring.com

Particle Measuring Systems Puerto Rico
Tel: +1 787 718 9096
Email: PMSPuertoRico@pmeasuring.com

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