



Portable Gas Analyzer
Model:pGas4820 (LNIR)

Portable Industry Gas Analyzer

Ref: pGas4820_IntE

Date: 2004-04-19

Information: http://www.big-dipper.com.cn/Products/Gas/Portable/pGas4820_IntE.pdf

- *Intelligent Analysis Based on Powerful CPU*
- *Rapid Test in Seconds*
- *Sub-ppm or ppm detection of over 120 gases*
- *100 frame Data log*
- *LCD 8x20 Display, Backlight Available*
- *RS232/485 Communication*
- *Full Function Keypad Operation*
- *Memo Driven Software, Easy to use; easy to train new operators*
- *Lightweight and easily portable*
- *Long life sensor designed*
- *Free of maintenance*
- *None of interferences of water vapor at most case*
- *High selective is expected*
- *Dissolved gas detect is supported*
- *Versatile and up-gradable to suit your needs(Spectral Scanning upgrade permits collection of spectral fingerprint of unknowns, for further in-depth analysis and identification)*

p-Gas4820 Industry Gas Analyzer

p-Gas4820 was special designed for industry general gas analysis. It was based on high resolution TDLAs NIR spectroscopy technology.

Applications:

- Industry gas analysis.
- Leak Detection for process maintenance
Using a leak detection probe, you can set up the pGas4820-L23-OPL10-PSED to check for leaks around many types of process equipment.
- Groundwater and soil contamination assessment
- Tanker loading emissions monitoring
- Occupational hygiene analysis
- Detection of leaks from storage facilities
- Vehicle emissions
- Stack Emissions Monitoring
- Atmosphere Analysis. pGas4820-L23-OPL10k-ASM-HAP is for trace pollutants analysis.
- Environ monitoring, and urban air pollution surveys. pGas4820-L22-OPL36-ASM-EAP is the design for popular environ hazardous gases analysis.
- Odor investigations and Effluviium Detect
- Assessment and quantification of indoor air quality
- Indoor Air Quality Studies
The pGas4820-L22-OPL36-ASM-EAP makes precise spot measurements for compounds such as CO₂, CO, formaldehyde, or organic vapors.
- Occupational Air Quality
- Acid gases and odorous species SO₂, NO₂, H₂S and NO
- Light hydrocarbons and combustion products
- Industrial Hygiene
Real-time detection of vapors in job environments promotes safe work habits. pGas4820-L23-OPL10k-ASM-HAP



- analyzers monitor at typical government-regulated levels.
- Waste Anesthetic Gases
Service technicians can identify leaks on anesthetic delivery systems by using the pGas4820-L22-OPL36-ASM-EAP Ambient Air Analyzer as a part of Preventative Maintenance (PM) work.
- Emergency Response Analysis
The pGas4820-L22-OPL36-PSED assists emergency response personnel in qualifying hazardous spills and emissions.
- Fume Hood/Tracer Gas Analysis
When the handling of toxic substances is performed in fume hoods, worker safety can be jeopardized. The pGas4820-L23-OPL10-PSED serves as an effective monitor for evaluating fume containment of laboratory hoods.

Instrumental Functions

- LCD 320×240 Graphic LCD Display, with backlight
- RS232/RS485 serial port. Supporting STIMcom / Modbus communication, and printer; USB support in new version
- Non-volatile memory supported data store and read out, or output to computer
- Built-in Sampling pump included, and suitable sample pre-process assembly
- Built-in alarm include LED flash, LCD indication, and Beep; Alarm limit setup supported, default to TWIN standard
- Sampling gun with filter/trap for dusts and condensed water drain.
- System diagnostic
 - Protection against accidental turn-off
 - Over-range protection for all installed sensors
 - Storage protection for sensors
- Flexible tubing for re-configuration
- User complete calibration, zero-adjust and essential data setup support
- Interfering gas compensation select
- Basal humidity and temperature detected for compensation and controlled for normal test. Over limit alarm support
- Rechargeable batteries to provide 100 hours of continuous operation
- 15-24 V DC powered. Local AD to DC adapter supported
- Basal intrinsically safe system, except parts of pump and heater. Special order for class 1 div. 1, groups a, b, c and d and class 2 div. 1, groups e, f and g for use in hazardous areas recommended.

Specifications

Electronic unit: BD6, ADC resolution: 0.0015%FS
 Protection against electromagnetic and radio frequencies interference
 Maintenance interval: Recommended every 3 months (no consumables needed)
 Calibration: In situ with flow through cell, or in separate calibration device,
 Identification set by high pure gas only.
 Storage or standby would not decay the system. Long life supported.

Detector Type	Single beam near infrared spectrophotometer
Optics	Bandwidth: 0.1 to 0.001nm; Refer to Laser list
Dynamic range:	General 1000 to 100000 :1
Pump Flow Rate	1-15 liters/ minute
Analysis Time	1-20s;
Alarms	User Definable
Readout	8 line x 40 character LCD
Start up:	3mins
Response Time	T90:1-10 seconds to 90% of final reading
Optical Path length (OPL)	OPL1: 0.5m to 1.00m OPL30: 30m OPL36k:36km OPL could be expanded to kilometers by Perrot Cell for trace gas analysis.

Sample Cell Volume	2.0 liters
Instrument span drift:	< 4% of measuring range between maintenance intervals
Instrument zero drift:	Negligible (<2% of measuring range between maintenance intervals)
Sampling pressure:	Atmosphere \pm 20% (Standard sampling condition)
Sampling temperature:	-10 °C to 50 °C(Standard sampling condition)
Battery	Internal, rechargeable NiCd. 12V nominal; 2 Ah Capacity. Recharge time 4 to 8 hours Continuous running time: >24Hr/ each charge; Standby time: 7 days
Output	0-2.5Vdc, Serial RS232 or RS485
Dimensions	553mm (W) x 365mm (H) x 193mm (D) Mass 15 kg
Intrinsic Safety	User specified models are certified for CENELEC, Groups IIC, Zone 1 and 2
Certifications	ETL (Class I, Div 1, Groups B, C, & D, Temperature Class T4; ETL-C (Class I, Div. 1, Groups, B, C, & D, Temperature Class T4); CENELEC (EEx ib d IIB + H2 T4)

Environment Requirements:

Environmental Humidity:	Operating:0 to 100% RH, non-condensing Storage:0 to 90% RH, non-condensing
Environmental Temperature Range:	N:Operating -10 °C to 50 °C N:Storage -40 °C to 70 °C

Series Products

Model	Professional	Specifications	Application
OPL1-MP1-IndGas	General industry analyzer	gasDefined by industry 10ppm-100% Vol; LDL<10ppm for mostt gases 1 specified gases calibration in plant;	Industry Gas Analysis
OPL1-MP2-L22L23	Organic Analyzer	Vapor0-100% Vol LDL<10ppm for mostt gases; 2 specified gases calibration in plant;	Chemical process; Gas leakage detector; Environ monitoring
OPL1-MP2-IndGas	General industry analyzer	gasDefined by industry 10ppm-100% Vol; LDL<10ppm for mostt gases 2 specified gases calibration in plant;	Industry Gas Analysis
OPL1-MP2-Flue	Flue gas analyzer	Defined by industry 10ppm-100% Vol; LDL<10ppm for mostt gases 2 specified gases calibration in plant;	Industry Gas Analysis
H-OPL1-MP2-IndGas	General industry analyzer	gasDefined by industry 10ppm-100% Vol; LDL<10ppm for mostt gases 2 specified gases calibration in plant;	Industry Gas Analysis
OPL1-MP4-IndGas	General industry analyzer	gasDefined by industry 10ppm-100% Vol; LDL<10ppm for mostt gases 4 specified gases calibration in plant;	Flue Gas Analysis
OPL05-MP4-VAMCs	Waste Gases and Analyzer	Anesthetic10ppm-1% Vol; 4 specified gases calibration in plant; Nitrous Oxide, Enflurance, Halothane, Methoxyflurane, Fluoroxene	Hospital Environ; Anesthetic Agent Detection; Engineering Servic; industrial hygiene monitoring; Surgical, Nursing, Dental, and Research Services;
OPL30-MP4-Flue	General industry analyzer	gasDefined by industry 10ppm-100% Vol; LDL<10ppm for mostt gases 8 specified gases calibration in plant;	Flue Gas Analysis

OPL30-MP4- EAP	Ambient Air Analyzer	Quality36 more environ air pollution gas detect supported, Most gas LDL::0.1ppm; 7 specified gases calibration in plant;	Environ monitoring, and urban air pollution surveys; ISO 14000 / ISO 14001 Monitor
OPL30-MP4-EFF	Malodorous Compounds Analyzer	36 more gas detect supported, Most gas LDL::0.1ppm 7 specified gases calibration in plant;	Environ monitoring, and urban air pollution surveys; ISO 14000 / ISO 14001 Monitor
OPL30-MP8-PSED	Emergency Response Gas Analyzer	50s gas detect possible; 10 specified gases calibration in plant; Most gas LDL::0.1ppm	Public safety department; General toxic gases; Chemical weapon agents included;
OPL30-MP8-IAP	Indoor Air Analyzer	36 more gas detect supported, Most gas LDL::0.1ppm 12 specified gases calibration in plant;	Environ monitoring, and urban air pollution surveys; ISO 14000 / ISO 14001 Monitor
OPL100-MP8-HAP	Atmosphere Analyzer	188 more gas detect supported, Most gas LDL::10ppb; 16 specified gases calibration in plant;	Atmosphere Analysis; ENVIRONMENTAL MANAGEMENT Evaluation Analysis

*The range data is with 1 m optical path cell, unless other where specified with OL.

*analyzer for unlisted gases might be designed by requirements. Such as Acetylene (C2H2), Allene (CH2CCH2), Ammonia (NH3), Butadiyne (C4H2), Butene (CH2CHCH2CH3), Carbon dioxide (CO2), Carbon disulfide (CS2), Carbon monoxide (CO), Carbon tetrachloride (CCl4), Carbonyl fluoride (COF2), Carbonyl sulfide (COS), Chlorine nitrate (ClONO2), Chlorine oxide (ClO), Chlorosulfonyl isocyanate (CSI) (ClSO2NCO), Cyanogen (C2N2), Cyclopropane (C3H6), Dimethyl sulfide (DMS) (H3CSCH3), Dimethyl sulfoxide (DMSO) (H3CSOCH3), Ethane (CH3CH3), Ethylene (C2H4), Formaldehyde (H2CO), Formic acid (HCO2H), Hydrazine (N2H4), Hydrogen (H2), Hydrogen bromide (HBr), Hydrogen chloride (HCl), Hydrogen cyanide (HCN), Hydrogen fluoride (HF), Hydrogen iodide (HI), Hydrogen peroxide (H2O2), Hydrogen sulfide (H2S), Hydroperoxy radical (HO2), Hypobromous acid (HOBr), Hypochlorous acid (HOCl), Isobutene ((CH3)2CCH2), Methane (CH4), Methanesulfonyl chloride (CH3SO2Cl), Methanol (CH3OH), Methylamine (CH3NH2), Methyl chloride (CH3Cl), Methyl fluoride (CH3F), Methyl mercaptan (CH3SH), Nitric acid (HNO3), Nitric oxide (NO), Nitrogen (N2), Nitrogen dioxide (NO2), Nitrogen oxide cation (NO+), Nitrous oxide (N2O), Oxygen (O), Oxygen (O2), Ozone (O3), Phosphine (PH3), Propane (C3H8), Propylene (C3H6), Propyne (CH3C2H), Sulfur dioxide (SO2), Sulfur hexafluoride (SF6), Sulfuryl chloride (SO2Cl2), Sulfuryl fluoride (SO2F2), Thiophosphoryl chloride (SPCl3), Water (H2O)..

Assembly Units:.....

Sampling Accessories

Items			Introduction
Sampler Gun	AGS	1	For normal air
Sampler	SGS	1	For user defined
Pump	6V	1	For atmosphere sampling
Pump	9V	1	For smoke sampling
Toxic gas Trap			Collect of toxic gas before exhaust
Chemical Filter			Collect interfering gas that influence accuracy of sensors selected. Plant recommended
Heater		1	For outdoor air application in north area, or cold gas process
Filter		1	To filtrate industrial level dust
Gas dilutor	DM2.0L-Auto	1	To expand the test range based on the basic sensors. It was supported to operate manually or automatically; The manual mode can expand range to hundreds times. The auto mode only allow 10-20 times.
Pipe fitter			For easy connect to pipe line
Pressure Conditioner			To reduce and regulate sample pressure to fit testing requirements
Extended Wiring and piping			Attached to sample gun

Calibration Accessories

		Introduction	
Standard gas	0	4L bottle, 9.5MPa	
Cal tool kit	1	regulator	
Cal tool kit	1	Switch	
Cal tool kit	1	connector	

Consumables

Paper For printer

Other Accessories

		Introduction	
pAirWin V1.0		PC window 2000 application, STIM data acquisition	
pAirWin Pro V1.0		PC window 2000 application	
RS485 Kit		Append RS485 port, and Connector to RS232 port of PC	
?		User defined, need consultation	

Instrument Guaranteed: 1 years.

Ordering Information

- Specify the low and high limit of important gases in your applications if possible.
- Plant calibration available by order.
- Although this system is self compensated and long term stable, It was still recommended to order several standard gas for general correction and even to calibration. Wherever your order it, better choose close supplier for convenient transportation.
- Instrument Normal Size: 560x350x250 mm; 750x350x250 mm(for OPL1);
- Transfer package size: approximately: 66x45x40 cm;850x450x350 mm;

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