SERVOPRO Plasma

GAS	MEASURES	APPLICATION
NITROGEN	TRACE PPM	QUALITY

☑ SENSING TECHNOLOGY

PLASMA ⚡

KEY APPLICATIONS

- Argon production
- Helium production
- Truck loading
- Pure gas bottling
- Specialty gas laboratories

RELIABLE MONITORING OF N_2 IN Ar AND He, OPTIMIZED FOR AIR SEPARATION UNIT (ASU) PLANT OPERATIONS

UNRIVALLED PERFORMANCE

- PED sensor technology uses an intelligent micro-processor for unrivalled reliability/gas-specific selectivity
- Manufactured by Servomex - over 60 years' experience pioneering gas analysis and thousands of units used in the field every year

FLEXIBLE

- Optimized for cryogenic air separation, gas bottling applications or specialty gas laboratories requiring the continuous measurement of N_2 in Ar and/or He
- Control of External Valve Box (via RS232)
- Three measurement ranges with automatic range change function for optimal output resolution

EASY TO USE

- Engineer-friendly, intuitive operation with easy installation
- Simplified configuration through factory set range options

LOW COST OF OWNERSHIP

- High accuracy PED sensing offers industry-leading reliability, maximizing device uptime and process efficiency
- Maintenance-free solution providing considerable ongoing cost reductions

BENCHMARK COMPLIANCE

- Electrical safety to IEC 61010-1
- In compliance with Low Voltage, EMC and applicable Directives

For more information please contact us
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SAFE AREA

PERFORMANCE AND ACCURACY YOU CAN RELY ON

When you work in cryogenic air separation or gas bottling plants, producing Ar or performing He liquefaction, you need an analyzer that offers the most reliable and accurate continuous monitoring of N_2 or trace impurities. The freedom to configure a suitable device easily and select one that meets your specific needs is also essential; including the flexibility to detect either Ar or He or both gas streams simultaneously. No matter your application needs, you'll also want a device that reduces ongoing costs and deliver comprehensive remote interaction through a choice of communications platforms. And we don't believe you should have to compromise.

A NO COMPROMISE SOLUTION

The Plasma is the most stable continuous N_2 in Ar and/or He and trace N_2 impurity measurement analyzer available. With easy set-up that includes configuration of three range options, this analyzer adapts to your specific application needs. The Plasma also enhances safety and reduces downtime potential through its fault alarm and contact alarm features.

MAINTENANCE-FREE AFFORDABILITY

The Plasma provides impressive affordability to match its accuracy and measurement stability, with no ongoing maintenance requirements. The ability to remotely interact with this analyzer using a network connection delivers additional value by allowing offsite troubleshooting and parameter checking. This dramatically reduces lifetime cost-of-ownership, so you can leverage considerable savings over comparable devices.

USEFUL LINKS

SERVOMEX SERVICE NETWORK
servomex.com/service

SERVOMEX SYSTEMS INTEGRATED SOLUTIONS
servomex.com/systems

SERVOMEX EXPERT UNRIVALLED KNOWLEDGE AND VISION
servomex.com/expert-guidance

▶ Watch our videos

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PBTDSPlasma Rev. 2 Date: 04/22

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TECHNICAL DATA SHEET

SERVOPRO Plasma

SPECIFICATIONS

GAS MEASURED	Nitrogen in pure Ar and/or pure He	
TECHNOLOGY	Plasma emission detector (PED)	

PERFORMANCE		
In gas stream	Ar or He	Ar
Range	0-1, 0-10, 0-100ppm 0-10, 0-50, 0-100ppm	0-10, 0-50, 0-250ppm 0-10, 0-100, 0-500ppm
Accuracy (intrinsic error) [1]	≤ ±1% of range [2]	≤ ±5% of range [2]
Linearity	≤ ±1% of range [3]	≤ ±5% of range [3]
Noise [1]	≤ ±1% of range [2]	≤ ±5% of range [2]
Drift (24hours)	≤ ±1% of range [2]	≤ ±5% of range [2]

SIGNAL OUTPUTS/INPUTS	
Analog output	Isolated 4-20mA autoranging
General Fault Alarm	Volt free single pole relay (24VDC at 1A)
Range Change	Volt free single pole relay (24VDC at 1A)
Concentration alarms	2 volt-free single pole relays (24VDC at 1A) for high alarm, high-high alarm

PHYSICAL	
Size	461mm (18.1") Wide x 133mm (5.2") High x 483mm (19") Deep
Weight	15kg (33lbs)

SAMPLE GAS	
Condition	Oil free, non-corrosive, non-condensing, non-flammable
Particulates	Filtered to 2µm (internal filter provided)
Vent	Vent to atmosphere
Sample flow	25 to 150ml/min
Sample pressure	5 to 10psig
Connection	1/8" compression fitting

OPERATING ENVIRONMENT	
Operating temperature	+5°C to +40°C (+41°F to +104°F)
Storage temperature	-20°C to +60°C (-4°F to +140°F)
Relative humidity	0 to 95% RH non-condensing
Altitude	2,000m above sea level

[1] The accuracy may be decreased by an additional 6% maximum range at some frequencies under the influence of radiated RF fields specified for industrial environments

[2] Calibrated range

[3] N_2 in Helium linearity spec is <±5% range

The performance specification has been written and verified in accordance with the international standard IEC 61207-1:1994 "Expression of performance of gas analyzers"

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UTILITIES	
Background gas	Ar or He
Power	100 to 120Vac or 220 to 240Vac 50/60Hz, 45 Watt maximum consumption
Zero gas	6N Grade Ar or He (depending on sample background gas)
Span gas	At least 80% FSD N_2 in Ar, or He (depending on sample background gas)

SAMPLE WETTED MATERIALS

ANALYZER FITTED WITH	
	Stainless steel Nylon Aluminium Brass Viton Quartz PTFE

OPTIONS

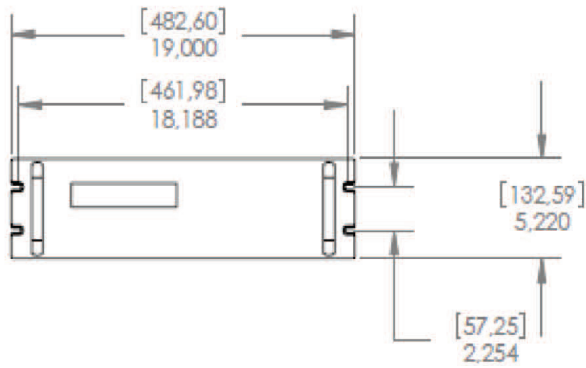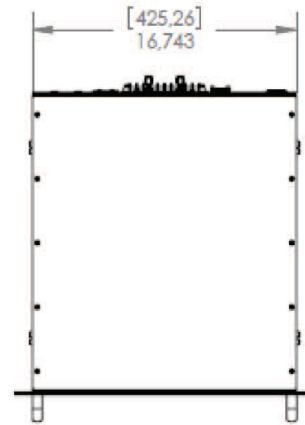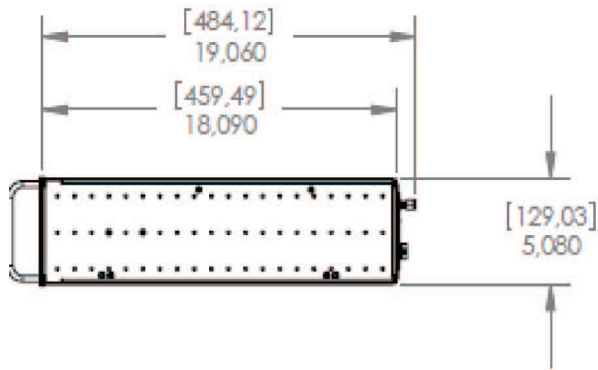| DESCRIPTION			
Power	There are 3 options for the power lead:	American (110V) European (220V) UK (240V)	☐ ☐ ☐
Background gas		Ar He Both	☐ ☐ ☐
Autocalibration	Option for autocalibration, fitted with internal valves for zero and span*	Autocal	☐
Digital output	Optional RS232 (continuous ASCII)	RS 232	☐
External valve box	Controls external valve box via RS232 (only available if autocalibration not selected)	Ext valve box	☐
Range options	There are 4 range options: 0-1, 0-10, 0-100 ppm * 0-10, 0-50, 0-100 ppm 0-10, 0-50, 0-250 ppm (Ar only) 0-10, 0-100, 0-1,000 ppm (Ar only)		☐ ☐ ☐ ☐

* Autocalibration only available on 0-1, 0-10, 0-100 ppm option

COMPLIANCE

EC DIRECTIVES	This product complies with the EMC Directive, the Low Voltage Directive, and all other applicable directives.
ELECTRICAL SAFETY	Electrical safety to IEC 61010-1 Rated for "Overvoltage Category II" and "Pollution Degree 2"

SERVOMEX
ANALYZERS
HIGH-PERFORMANCE GAS ANALYSIS

DIMENSIONAL DRAWINGS

[484,12]
19,060

[459,49]
18,090

[129,03]
5,080

[425,26]
16,743

[482,60]
19,000

[461,98]
18,188

[132,59]
5,220

[57,25]
2,254

All dimensions shown in
(millimetres) inches

> # WE'RE READY TO HELP
WHATEVER YOUR GAS ANALYSIS REQUIREMENTS, WHEREVER YOU ARE

These analyzers are not intended for any form of use on humans and are not medical devices as described in the Medical Devices Directive 93/42EEC.

Please note: *Whilst every effort has been made to ensure accuracy, no responsibility can be accepted for errors and omissions.*
Data may change, as well as legislation, and you are strongly advised to obtain copies of the most recently issued regulations, standards and guidelines.
This document is not intended to form the basis of a contract.

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