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SERVOPRO
Chroma

ULTRA-ACCURATE, HIGHLY VERSATILE TRACE GAS ANALYZER CONFIGURABLE TO A WIDE RANGE OF APPLICATIONS

SERVOPRO Chroma

The Chroma trace analyzer is one of the most versatile gas monitoring solutions on the market. Utilizing a unique, non-depleting plasma emission detector, the Chroma is a mainframe customized to your application.

Offering multi-component trace measurement at ppb, ppm or % level, the Chroma can monitor H_2, O_2, N_2, Ar, CH_4, CO, CO_2 and NMHC impurities in H_2, O_2, N_2, Ar and He. Optimized via a sophisticated and flexible operational software that offers access to all device functions via a PC, the Chroma is configurable for a wide range of complex applications including medical gas purity, air separation, argon recovery, hydrogen purification and semiconductor wafer manufacture.

With a range of sophisticated sensor options supported by PlasmaHC and ArgonSep technology for the measurement of THC/methane and separation of argon respectively, many applications will be satisfied by a single 4U rack analyzer configuration: all helping to make the SERVOPRO Chroma one of the most compact and powerful trace analyzers available.

FLEXIBLE

- Comprehensive solution for ultra-trace H_2, O_2, N_2, Ar, CH_4, CO, CO_2 and NMHC in a number of background gases; H_2, O_2, N_2, Ar and He
- Compact design that fits into a single 4U rack
- Flexible communication options including Ethernet and 4-20 mA output

EASY TO USE

- Comprehensive device interaction and monitoring via intelligent software.
- Full remote configuration via Ethernet/Internet
- Electronic carrier and sample flow PID control system
- Remote range I.D. contact per impurity

LOW COST OF OWNERSHIP

- Simplified reporting functions facilitated by the software
- PED sensing technology does not require a separate methanizer

UNRIVALLED PERFORMANCE

- Uses ultra-sensitive and highly selective patented PED sensing technology, delivering the highest reliability and performance currently available
- PlasmaHC measures methane and THC without the use of a FID, eliminating the need for maintenance and fuel. ArgonSep separates Ar from O_2 without the need for scrubbers, providing a sensitive, maintenance-free measurement.

BENCHMARK COMPLIANCE

- Class B digital apparatus requirements of ICES-003 of Canada through the application of EN 61000-6-3:2007
- Part 15 of the US FCC rules for Class B equipment.
- IEC 61010-1 for electrical safety
- EC "Low Voltage Directive" by application of EN 61010-1 and rated for Over Voltage Category II, Pollution Degree 2

Learn more about the SERVOPRO Chroma
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ANALYZERS
HIGH-PERFORMANCE GAS ANALYSIS

HIGH VERSATILITY FOR DIVERSE APPLICATION NEEDS

Applications that depend on the very highest levels of product purity depend on trace analysis of exceptional sensitivity and performance. Impurities requiring measurement are both diverse in nature and found in a number of background gas streams, so high flexibility is also a must. Measurements need to be reliable, so a technology that can provide stability is essential. No matter what your application monitoring requirements, you'll also want a solution that is easy to use and has a low lifetime cost-of-ownership. We don't believe you should have to compromise.

A NO COMPROMISE SOLUTION

The Chroma's flexible ultra-trace analysis is delivered through a smart combination of cutting-edge sensing technology and intelligent control software. Benefiting from the fast, accurate, sensitive and selective response of Servomex's non-depleting Plasma Emission Detector (PED) cell, Flame Ionization Detector (FID) and Thermal Conductivity (TCD) technologies, the Chroma offers sophisticated configuration and performance options which are far ahead of the competition.

EASY AND INTUITIVE TO USE

Added to the Chroma's measurement performance is its ability to provide an easy-to-use solution with added flexibility. Feature-rich software permits full device interaction remotely via Ethernet/Internet, while a full range of reporting options provide simplified statistical data analysis. The Chroma also features a user-friendly high resolution TFT color LCD for easy local configuration and interaction.

COMPLEMENTARY PRODUCTS

The SERVOPRO Chroma is augmented by complementary products to improve and extend measurement performance.

SERVOPRO PureGas

SERVOPRO PureGas purifies gases onsite, minimizing gas contamination risk so the Chroma can perform reliably with high levels of sensitivity. Available for Ar and He matrices, the PureGas delivers outlet impurity levels for O_2, H_2O, CO, CO_2, H_2, CH_4 and N_2.

DF-300

The DF-300 series microprocessor-based analyzer uses Servomex's unique, non-depleting Coulometric E-sensor technology for O_2 measurements at percent, trace and ultra-trace levels.

KEY APPLICATIONS

- Medical Gas Production
- Medical Gas Verification
- Air separation plants
- Argon purification plants
- Cryogenic truck loading station
- Hydrogen purification plants
- Specialty gas laboratories
- Semiconductor plants
- Helium liquification plants

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TECHNOLOGIES

ZIRCONIA   GAS FILTER CORRELATION   CALORIMETRY   THERMAL CONDUCTIVITY   PARAMAGNETIC   INFRARED

OPTIONS	DESCRIPTION	SPECIFICATION
Analog inputs	None	N/A
Analog outputs	1 x 4-20 mA output 1 x Isolated mA chromatogram output 1 x Remote range identification output, 2 x Alarm dry contact outputs / user pre-settable limited	Used as process value Transmission up to 8 outputs High resolution output One per peak, up to 8
Digital Input	1 x digital isolated inputs	System status dry contact output
Inputs	Digital	Facilitates remote device start-up
Solenoid valve	Simple sample and span switching	Dual inlet fitted with a solenoid valve
Alarms	3 x volt free single pole relays	Alarms for: dry contacts, system status and 2 additional alarms
Sample flow	Simplified sampling	Electronic carrier and sample flow PID control system
PC software	Adds additional dimensions of interaction, reporting and analysis	Facilitates full device interaction including chromatograms and process results obtained via Ethernet or Internet. Can also be used to generate statistics and historical values

ACCESSORIES	ACCESSORIES AVAILABLE FOR SPECIFIC APPLICATIONS – CONTACT YOUR LOCAL SERVOMEX BUSINESS CENTER

MONITORING PERFORMANCE

Background Gas	H_2	O_2	N_2	A_r	He
Technology	Plasma Emission Detector (PED)	Plasma Emission Detector (PED)	Plasma Emission Detector (PED)	Plasma Emission Detector (PED)	Plasma Emission Detector (PED)
Range	0ppb – 200ppm (application specific)	0ppb – 200ppm (application specific)	0ppb – 200ppm (application specific)	0ppb – 200ppm (application specific)	0ppb – 200ppm (application specific)
Repeatability FS	±1% to 5%	±1% to 5%	±1% to 5%	±1% to 5%	±1% to 5%

BACKGROUND GAS

Impurities	H_2	O_2	N_2	A_r	He
H_2	x	•	•	•	•
O_2	x	x	•	•	•
N_2	•	•	x	•	•
A_r	•	•	•	x	•
CH_4	•	•	•	•	•
CO	•	•	•	•	•
CO_2	•	•	•	•	•
NMHC	•	•	•	•	•

• Available x Not Applicable

TUNABLE DIODE LASER   FLAME IONISATION DETECTOR   GAS CHROMATOGRAPHY   PLASMA   LASER MOISTURE   COULOMETRIC   SPECTROSCOPIC

SAMPLE FOR MEASUREMENTS

Sample for measurement	Sample must be oil free, non-corrosive, non-condensing and non-flammable
Sample pressure	10-20psig (application dependent)
Flow rate	30-60sccm (full range 10-175 sccm)

DEVICE SPECIFICATION

Size:

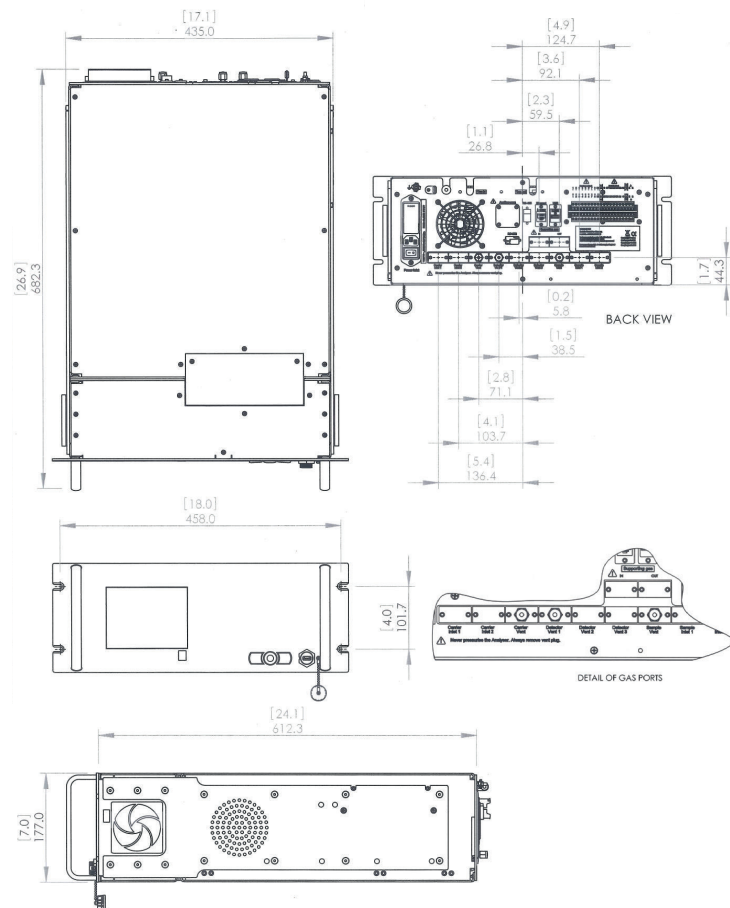- 482mm (18.9") Wide x 117mm (4.6") High x 600mm (23.6") Deep

Weight:

- 11-27kg (25-60lb) applications dependent

Certifications:

- In compliance with EMC Directives, rated for Overvoltage Category II and Pollution Degree 2

DEVICE SCHEMATIC

Notes: *1. Dimensions in square brackets are in inches*

BACK VIEW

DETAIL OF GAS PORTS

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: *This document was updated in August 2014. While every effort has been made to ensure accuracy, no responsibility can be accepted for errors or 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.*

PBChroma Rev:0 Date: 08/14

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