SERVOPRO

FID

Product overview

Safe area

Gas	Measures	Application
Total hydrocarbons (THC)	Trace ppm	Safety Quality

SENSING TECHNOLOGY

Flame Ionization Detector

Trace hydrocarbon analyzer ideal for air separation units (ASU) safety and quality control applications

Unrivalled performance

- Uses patented, low-noise, high accuracy FID sensing for reliable trace THC measurements
- Manufactured by Servomex - over 70 years' experience pioneering gas analysis and thousands of units used in the field every year

Flexible

- Three measurement ranges in low and high setting modes, with automatic range change and over range functions
- Remote interaction capabilities via RS232 ASCII

Easy to use

- Engineer-friendly, intuitive use and installation
- Enhanced safety through "flame out" fuel feed shut-off valve

Low cost of ownership

- Uses high accuracy, gas-selective FID for maximized device uptime
- Cost-effective and simplified ongoing maintenance
- Unique flow control function reduces operational costs

Benchmark compliance

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

Key applications

- Cryogenic air separation
- Process control
- Food gas manufacture
- Product validation

For more information visit **servomex.com/contact**

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The definitive THC measurement analyzer

When you work in applications like air separation, product validation or process control, you require an analytical solution that delivers highly reliable, accurate and low-noise measurements of Total Hydrocarbons (THC). Safe, non-explosive conditions must be maintained, so a proven trace measurement sensing technology is a must. The ability to perform quality THC control checks in pure O_2, N_2, Ar, He, air or CO_2 is also important, so a single, adaptable on-site solution is preferred. No matter your application needs, you'll also want an analyzer that can reduce ongoing costs and deliver remote interaction through diverse communications platforms. We don't believe you should have to compromise.

A no compromise solution

The FID fully addresses trace accuracy and stability through the use of its industry-leading patented FID sensing technology, delivering a highly reliable, low-noise answer to THC monitoring. This device delivers peace of mind through an integrated automatic fuel shut-off valve function that ensures if the flame is extinguished, fuel feed lines are automatically closed. The FID also adapts to meet the needs of quality control checks, allowing you to integrate a single solution for diverse site needs. In addition to high-performance functionality, the FID's user-friendly, low-maintenance operation makes it a no compromise analyzer you can depend on.

Flexible use to meet exact needs

FID's are able to adapt to meet and adapt to changing measurement needs, through a choice of three measurement range options. In addition to its gas measurement capabilities, the FID can also deliver measurements for other background gases or multiple background gas applications (upon request), delivering even greater adaptability to suit site needs. Finally, operational flexibility is maximized through a range of remote communication options including RS232 ASCII and 4-20mA outputs.

Useful links:

SERVOMEX SERVICE NETWORK

servomex.com/**service**

SERVOMEX SYSTEMS

servomex.com/**systems**

SERVOMEX EXPERT

servomex.com/**expert-guidance**

PBTDSFID Rev. 2 Date: 10/24

Technical data sheet

SERVOPRO FID

Specifications

Gas measured	**Total Hydrocarbons (THC)‡**	
Technology	Flame ionization detector (FID)	
Performance		
In gas stream*	Synthetic air, N_2, O_2, He, CO_2, Ar	
Fuel gas	H_2	Nitrifuel / Helifuel†
Range	0-10, 0-100, 0-1,000ppm / 0-100, 0-1,000, 0-10,000ppm	
Min. recommended range	0-10ppm / 0-100ppm	
Accuracy (intrinsic error)	<1% of FS	
Repeatability	<0.5% FS	
Lower detection limit (LDL)	0.1ppm (on 0-10ppm range)	
Zero drift (24 hours)	1% range	2% range
Signal outputs/inputs		
Analog output	Isolated 4-20mA, auto-ranging	
Analog output range	0-10ppm, 0-100ppm, 0-1,000ppm / 0-100ppm, 0-1,000ppm, 0-10,000ppm	
General fault alarm	Volt free single pole relay (24Vdc at 1A)	
Range change	Volt free single pole relay (24Vdc at 1A)	
Concentration alarms	2 x volt free single pole relays (24Vdc at 1A) for high alarm, high-high alarm	
Options		
Serial output	Continuous ASCII on RS232	
Physical		
Size	540mm (21.2”) Wide x 132mm (5.1”) High x 460mm (18.1”) Deep	
Weight	12kg (26lbs)	
Gas connection	1/8" compression fitting	
Sample conditions		
Temperature	+5°C to +40°C (+41°F to +104°F)	
Dewpoint	5°C (9°F) below minimum ambient	
Condition	Sample must be oil free, non-corrosive, non-condensing and non-flammable	
Particulates	Filtered to 10µm	
Vent	Vent to pressure	
Sample pressure	27 to 83kPag (5 to 15psig)	

‡ Calibrated relative to CH_4
* H_2 on special request
† 60% N_2 / 40% H_2 or 60% He / 40% H_2

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

Operating environment	
Ambient temperature range	+5°C to +40°C (+41°F to +104°F)
Relative humidity	0 to 95% RH non-condensing
Altitude	2,000m above sea level

Utilities						
Background	Air	N_2	O_2	Ar	He	CO_2
H_2 fuel	•	•	-	•	•	•
Nitrifuel	•	•	•	•	-	-
Helifuel	-	-	•	-	-	-
Air flow & pressure	300-500ml/min & 15-30psig					
Fuel flow & pressure	O_2 background only 100ml/min & 15-30psig, other backgrounds 65ml/min & 15-30psig					
Power	100 to 120Vac or 220 to 240Vac 50 / 60Hz 150VA					
Zero gas	5N Grade gas					
Span gas	80% FSD CH_4 in sample background gas					

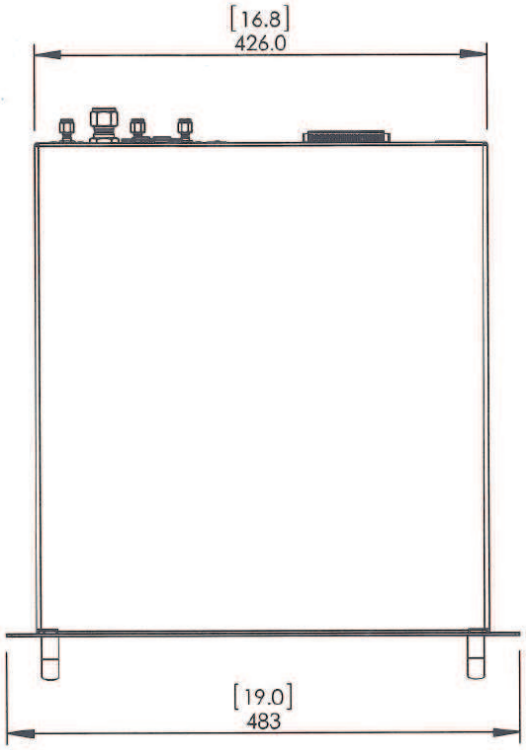
Options

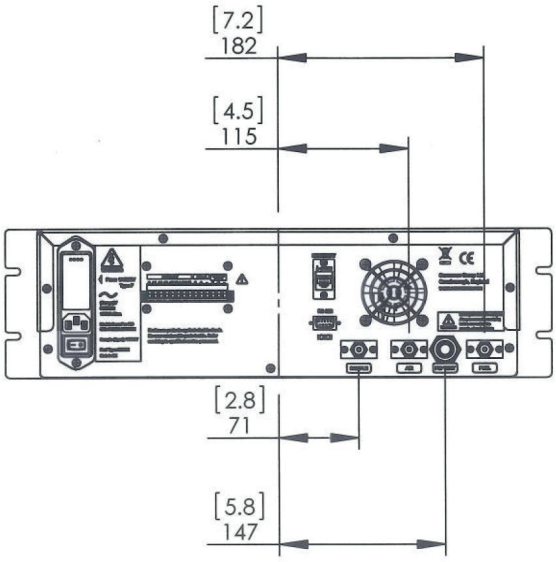
Description		
Power	There are 3 options for the power lead:	American (100-120Vac) ☐ European (220-240Vac) ☐ UK (220-240Vac) ☐
Digital outputs	Optional RS232 (continuous ASCII)	RS 232 ☐
Range	There are 2 range options: Low 0-10ppm, 0-100ppm, 0-1,000ppm High 0-100ppm, 0-1,000ppm, 0-10,000ppm	Low range ☐ High range ☐
Background gas		O_2 ☐ Ar ☐ Air ☐ He ☐ N_2 ☐ CO_2 ☐
Fuel	H_2 fuel for N_2, Ar, He, Air or CO_2 background Nitrifuel fuel for N_2, Ar, He, O_2 or Air background Helifuel for O_2 background gas only	Hydrogen ☐ Nitrifuel ☐ Helifuel ☐

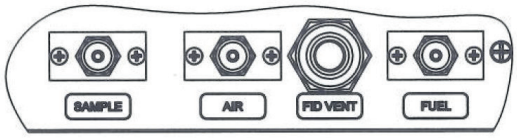
Compliance

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"

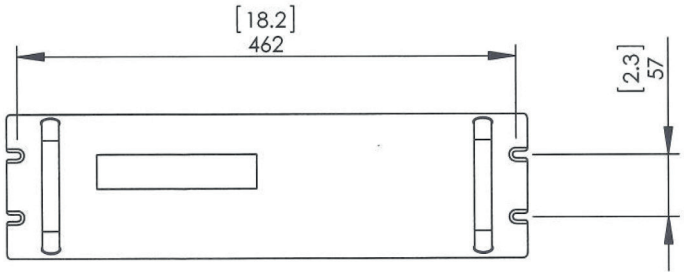
Dimensional drawings

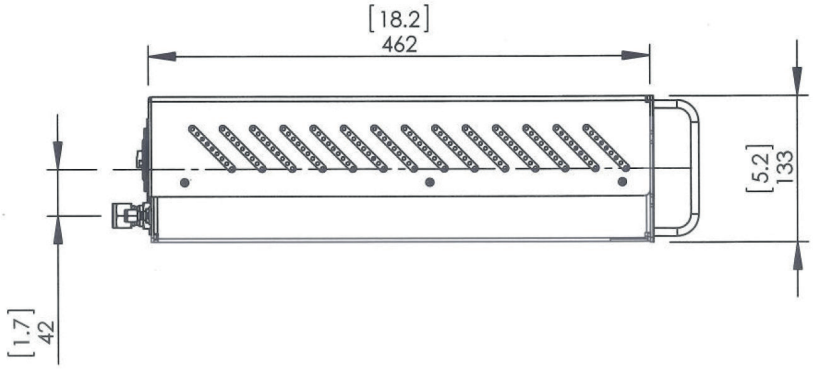






DETAIL OF REAR CONNECTION MARKINGS





Dimensions shown in millimetres
(dimensions in square brackets are in 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 legislation or regulation.

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.

Servomex has a policy of constant product improvement and reserves the right to change specifications without notice.

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Analysis that **empowers**

SERVOMEX
a **spectris** company