

SERVOPRO FID

HIGH PERFORMANCE FID MEASUREMENTS OF TOTAL HYDROCARBONS (THC) AND QUALITY CONTROL IN PURE OXYGEN, NITROGEN, ARGON, HELIUM, AIR AND CARBON DIOXIDE



SERVOPRO FID

The FID is a high specification Flame Ionization Detector (FID) based analyzer that provides a robust and high accuracy solution to trace Total Hydrocarbon (THC) measurements, ensuring gas stream inflammability levels are closely monitored. In addition, the FID is optimized for quality control in pure O₂, N₂, H₂, Ar, He, air or CO₂. The result is an adaptable solution designed to meet the needs of diverse applications, from cryogenic air separation plants to dry ice manufacturers. The use of highly stable low-noise FID sensing ensures this device delivers an accuracy unsurpassed by many contemporary solutions.

Designed to provide the flexibility demanded by a wide array of applications, the FID offers three measurement ranges in low or high setting modes, with automatic range change and over range functions. The FID's ability to enhance safety is delivered through innovative features like its "flame out" integrated fuel alarm shut-off valve, while the FID's unique flow control feature reduced ongoing operational costs.

FLEXIBLE

- Comprehensive solution for diverse applications requiring the measurement of THC and quality control in pure O₂, N₂, H₂, Ar, He, Air or CO₂
- Three measurement ranges in low and high setting modes, with automatic range change and over range functions
- Comprehensive remote interaction capabilities: Ethernet/Internet and 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
- Unique flow control function reduces operational costs
- Cost-effective and simplified ongoing maintenance

UNRIVALLED PERFORMANCE

- Uses patented, low-noise, high accuracy FID sensing for reliable trace THC measurements
- Manufactured by Servomex - over 60 years' experience innovating and pioneering gas analysis and thousands of units used in the field every year

BENCHMARK COMPLIANCE

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

Learn more about the SERVOPRO FID
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SERVOMEX
ANALYZERS
HIGH-PERFORMANCE GAS ANALYSIS

PRODUCT OVERVIEW: FID

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-flammable conditions must be maintained, so a proven trace measurement sensing technology is a must. The ability to perform quality THC control checks in pure O₂, N₂, Ar, He, air or CO₂ 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 is 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 Internet/Ethernet, RS232 ASCII and 4-20MA input/outputs.

KEY APPLICATIONS

- Cryogenic air separation
- Air separation
- Process control
- Food gas manufacture
- Dry ice manufacturing
- Product validation

COMPLEMENTARY PRODUCTS

A range of SERVOPRO and DF analyzers augment the capabilities of the SERVOPRO FID in a wide range of applications.

SERVOPRO Plasma



Designed for the continuous monitoring of nitrogen in argon, helium or both, the Plasma provides a stable, reliable measurement ideal for ASU plant operators.

MultiExact 5400



Combining industry-leading performance and a range of new and enhanced functions as standard, the MultiExact offers air separation plants a multi-gas analyzer specifically optimized to industry requirements – with measurements now augmented by Servomex's revolutionary TCD measurement sensing technology.

DF-300 Series



The DF-300 series microprocessor-based analyzer uses Servomex's unique, non-depleting coulometric E-sensor technology for O₂ measurements at percent, trace and ultra-trace levels.



Zirconia



Gas Filter Correlation



Calorimetry



Thermal Conductivity



Paramagnetic



Infra-Red



Tunable Diode Laser Spectroscopy



Flame Ionisation Detector

PRODUCT DATA: FID

OPTIONS	DESCRIPTION	SPECIFICATION
Analog inputs	2 x 4-20mA measurements	Isolated 4-20mA supplied as standard
Analog outputs	Isolated 4-20mA	Isolated 4-20mA supplied as standard
Analog output range	Analog output parameters	0-10ppm, 0-100ppm, 0-1,00ppm / 0-100ppm, 0-1,000ppm, 0-10,000ppm (1%)
Range change	Volt free single pole relay	24Vdc at 1A
Gas connection	Compression fitting	1/8" connection
Concentration alarms	2 x volt free single pole relays	24Vdc at 1A for high alarm, high-high alarm
Serial outputs and communications	Comprehensive range of options	Remote interaction via RS232 ASCII Modbus protocol and Internet/Ethernet
Additional measurement capabilities	Background gases or multiple background gas application options	Available on request, please contact your local Servomex business center

ACCESSORIES

**ACCESSORIES AVAILABLE FOR SPECIFIC APPLICATIONS
- CONTACT YOUR LOCAL SERVOMEX BUSINESS CENTER**

MONITORING PERFORMANCE

Trace measurement of	THC	THC	THC	THC	THC	THC
In gas stream	Synthetic air	Synthetic air	O ₂	O ₂	He	CO ₂
Fuel gas	H ₂	NitriFuel (60% N ₂ / 40% H ₂)	NitriFuel (60% N ₂ / 40% H ₂)	NitriFuel (60% N ₂ / 40% H ₂)	H ₂	H ₂
Technology	Flame Ionization Detection (FID)	Flame Ionization Detection (FID)	Flame Ionization Detection (FID)	Flame Ionization Detection (FID)	Flame Ionization Detection (FID)	Flame Ionization Detection (FID)
Range	0-10ppm, 0-100ppm, 0-1,000ppm / 0-100ppm, 0-1,000ppm, 0-10,000ppm (1%)	0-10ppm, 0-100ppm, 0-1,000ppm / 0-100ppm, 0-1,000ppm, 0-10,000ppm (1%)	0-10ppm, 0-100ppm, 0-1,000ppm / 0-100ppm, 0-1,000ppm, 0-10,000ppm (1%)	0-10ppm, 0-100ppm, 0-1,000ppm / 0-100ppm, 0-1,000ppm, 0-10,000ppm (1%)	0-10ppm, 0-100ppm, 0-1,000ppm / 0-100ppm, 0-1,000ppm, 0-10,000ppm (1%)	0-10ppm, 0-100ppm, 0-1,000ppm / 0-100ppm, 0-1,000ppm, 0-10,000ppm (1%)
Accuracy (intrinsic error) FS	<1% of FS	<2% of FS	<2% of FS	<2% of FS	<1% of FS	<1% of FS
Repeatability	<0.5% FS	<0.5% FS	<0.5% FS	<0.5% FS	<0.5% FS	<0.5% FS
Lower Detection Limit (LDL)	0.1ppm (on 0-10ppm range)	0.1ppm (on 0-10ppm range)	0.1ppm (on 0-10ppm range)	0.1ppm (on 0-10ppm range)	0.1ppm (on 0-10ppm range)	0.1ppm (on 0-10ppm range)
Smallest recommended output range	0-10ppm / 0-100ppm	0-10ppm / 0-100ppm	0-10ppm / 0-100ppm	0-10ppm / 0-100ppm	0-10ppm / 0-100ppm	0-10ppm / 0-100ppm
T90	<15	<25	<25	<25	<15	<15

PRODUCT DATA: FID

SAMPLE FOR MEASUREMENTS

Sample condition	Sample must be oil free, non-corrosive, non-condensing and non-flammable
Particulates	Filtered to 10µm
Sample pressure	27-83kPag (5-15psig)

DEVICE SPECIFICATION

Size:

- 540mm (21.2") Wide x 132mm (5.1") High x 460mm (18.1") Deep

Weight:

- 12kg (26lbs)

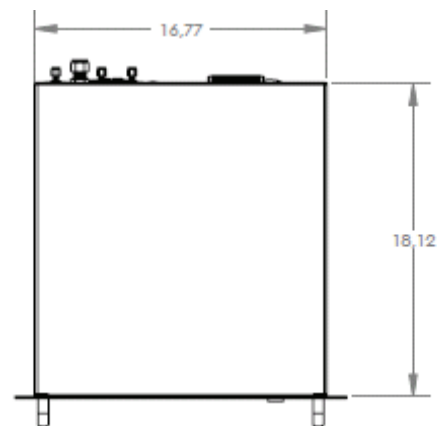
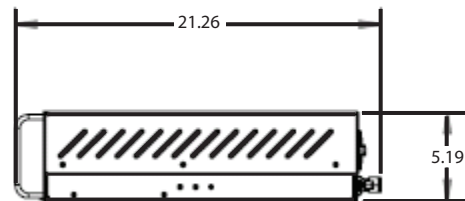
Operating temperature:

- 5°C - 40°C/41°F - 104°F

Certifications:

- Electrical safety to IEC 61010-1
- In compliance with EMC Directives, rated for Overvoltage Category II and Pollution Degree 2

DEVICE SCHEMATIC



PBFID Rev.0 Date: 08/14

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.

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