



# SERVOTOUGH SpectraScan TUNABLE FILTER I.R. ANALYSER

## FEATURES

- Real-time operation down to sub-second update rates
- C1 – C5 hydrocarbon separation and total gas analysis (alkanes, alkenes and alkynes possible)
- Continuous flow-through analysis
- Remote, unattended continuous operation
- Eliminates carrier gases and other consumables
- Permanent span calibration for industrial deployment
- Virtually zero cross-sensitivity and high sensitivity

## APPLICATIONS

- Alternative to Gas Chromatography
- Natural gas quality and composition
- BTU/Wobbe content measurement
- Fuel blending and control
- Gas turbine, engines, fuel cells
- Alternative (biogas, syngas) fuels
- LNG production and custody transfer
- Hydrocarbon speciation applications



# THE SERVOTOUGH SpectraScan TUNABLE FILTER I.R. ANALYSER

The SERVOTOUGH SpectraScan Tunable Filter I.R. Analyser is an infrared absorption based on-line monitoring system, configured for measurement of light hydrocarbons (alkanes, alkenes and alkynes). The tunable filter allows spectral scanning which enables interference compensation.

A real-time optical analyser capable of accurately separating the hydrocarbon components; which previously could only be performed by gas chromatograph (GC) analysers.

Using a unique wavelength-sweeping tunable filter spectrometer, fast update rates down to sub-second intervals are performed for the full C1 through C5 analysis. Sampling is a flow-through type, suitable for a continuous, on-line, unattended operation. The analyser does not require carrier gas, fuel gases, or on-site calibration gases.

The SERVOTOUGH SpectraScan utilises a Precise OXS-3100 optical bench which is used extensively in the field, and is available as a stand-alone analyser in two hardware configurations. Standard data interface includes a MODBUS TCP/IP. An ATEX, CSA hazardous rated instrument is available.

## 2400 SERIES SERVOTOUGH SPECTRASCAN SPECIFICATION

### Measurement

Measurement range:	Typically - Methane: 0-100%, Ethane: 0-25%, Propane: 0-25%, n-Butane: 0-10%, iso-Butane: 0-10%, Ethylene: 0-20%, Acetylene: 0-30%, Propylene: 0-20%, Butenes: 0-10%, iso-Pentane: 0-5%, neo-Pentane: 0-5% Many other ranges available
Accuracy:	Typically $\pm 1\%$ of range. For some applications, depending on the relative concentrations of some higher hydrocarbons, $\pm 3\%$ of range
Zero drift:	Less than $\pm 0.2\%$ (absolute) per week (zero on air or N <sub>2</sub> )
Span calibration:	Factory calibrated (permanent calibration)
Update rate:	1 second - 5 minutes, software configurable (longer averaging improves precision)
Additional channel(s):	Contact Servomex for additional target gases and ranges

### Sampling

Technique:	Flow through
Flow rate:	0.1 - 10 LPM
Pressure:	0-30 psig
Gas cell volume:	100mL
Sample connections:	¼" Swagelok™

### Installation

Mechanical dimensions:	General Purpose:	19" rack-mountable enclosure, 3U, 133mm (5.25") high, 380mm (5") deep
	Wall Mount:	North American Div. 2 ATEX Cat 3, Zone 2 430mm (17"), 254mm (10"), 150mm (6")
Weight:	14kg/ 30lbs	
Power requirements:	110VAC 60Hz 2.0 amp max - 240V $\pm$ and 24V also available	
Operating temperature:	0-50°C (32-122°F)	
Output interface:	MODBUS over TCP/IP with Ethernet port (preferred for multiple component measurement). Local display and 4-20mA outputs are optional	