Verax™ CTX™ Analyzer

Natural Gas Custody Transfer

Multi-Stream Measurement of BTU, Hydrocarbon Composition (C1-C6+), Relative Density, and CO2 in Natural Gas

JP3 Verax CTX Analyzer: Capable of measuring natural gas up to 1650 BTU/SCF without sample conditioning

The JP3 Verax CTX for Natural Gas has been certified to exceed the repeatability and reproducibility criteria of common standards referenced for custody transfer (GPA2261-13 and API 14.1)

One Device Measures Composition and Physical Properties of up to four Natural Gas Streams

For the first time, natural gas can be easily analyzed to obtain Hydrocarbon composition, BTU, Relative Density, CO2, and other properties without the cost and headaches of traditional analyzers. Verax CTX delivers custody transfer information for up to four fluid streams in real time without sampling.

Measure in the Pipeline at Operating Pressure and Temperature

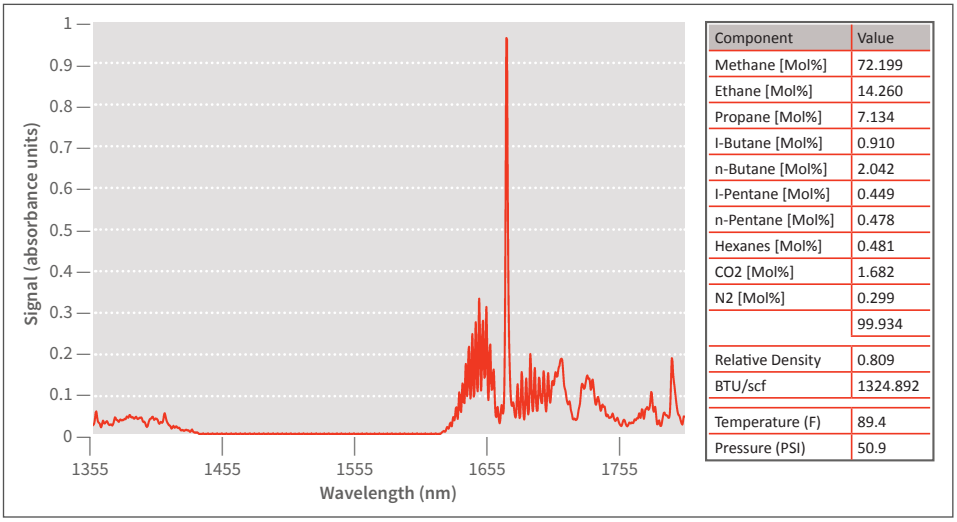
The Verax flow cell is installed directly in the process at operating pressure and temperature requiring no sampling or conditioning systems. The flow cell is connected to the analyzer by a single pair of fiber optic cables allowing the analyzer to be located as close to or far from the process as desired. Our advanced technology means the Verax analyzer produces no emissions and requires no carrier gases or calibration gases.

Solid State Spectroscopy for Rapid Response Time

Using patented Near-Infrared (NIR) optical spectroscopy and advanced chemometric techniques, Verax CTX provides readings in a matter of seconds, directly in both liquid and gas streams. No moving parts, no consumables, and no sample conditioning systems means longer life and reduced maintenance costs. Our patented laser source utilizes constant amplitude correction and wavelength calibration to deliver a source performance that is unmatched in the industry.

Internet Ready for Remote Monitoring

Verax's advanced electronics and communication capabilities allow easy integration into your plant networks and systems. Verax also supports 24 x 365 monitoring making even the most remote unmanned applications possible and economical.



Component	Value
Methane [Mol%]	72.199
Ethane [Mol%]	14.260
Propane [Mol%]	7.134
I-Butane [Mol%]	0.910
n-Butane [Mol%]	2.042
I-Pentane [Mol%]	0.449
n-Pentane [Mol%]	0.478
Hexanes [Mol%]	0.481
CO2 [Mol%]	1.682
N2 [Mol%]	0.299
	99.934
Relative Density	0.809
BTU/scf	1324.892
Temperature (F)	89.4
Pressure (PSI)	50.9

Real Time Output from Verax CTX

Data shown for representative 1300 BTU natural gas stream.

Live time stamp, line temperature and pressure readings are all shown along with the composition, BTU, relative density, and CO2 information of the stream.

Specifications

Applications	**Fluid Streams**	Type: Natural Gas Phase: gas Upstream, Midstream, Downstream Applications
	Property Analysis	C1-C6+, BTU, Relative Density/Specific Gravity, CO2 Natural Gas Custody Transfer
	Sample System	None Required
	Calibration Gas	None Required
	Line Pressure	0-1500 psig
	Line Temperature	-10° to 225°F (Higher ranges available)
	Line Flow Rate	Sufficient pressure drop to induce flow
	Response Time	~ 10 seconds per analysis point
	Detection Method	NIR spectroscopy with inline optical probes

Electrical	**Input Power**	24V DC standard; 100-240 VAC optional Max Power Consumption: 100V @ 1.4A; 240V @ 0.65A; 24V @ 6A
	Communications	MODBUS RTU over Serial or TCP (others available upon request)
	Outputs	8 solid state relays for process control Analog 4-20 mA /0-10 VDC outputs available configurable alarms/controls

Physical	**Enclosure**	NEMA 4X IP 66 powder coated aluminum
	Dimensions	Control Panel: 24"W x 36"H x 10"D
	Weight	Control Panel: 60 lbs. Flowcell Assembly: 12 lbs.
	Ambient	-4°F to 122°F. No environmental control required; sunshade recommended if >90°F
	Classification	Enclosure: Class I / Division 2 A,B,C,D, T4 Class 1 / Zone 2 IIC Certified to UL 61010-1 Certified to CAN/CSA Std C22.2 No. 61010-1 Conforms to ISA 12.12.01 Conforms to CSA/CSA C22.2 No 213 Flow Cell: Intrinsically Safe / Class 1 Div 1

Typical Installations at Customer Sites:
Verax CTX control panels, and optical probes

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Critical Data. Real Time.