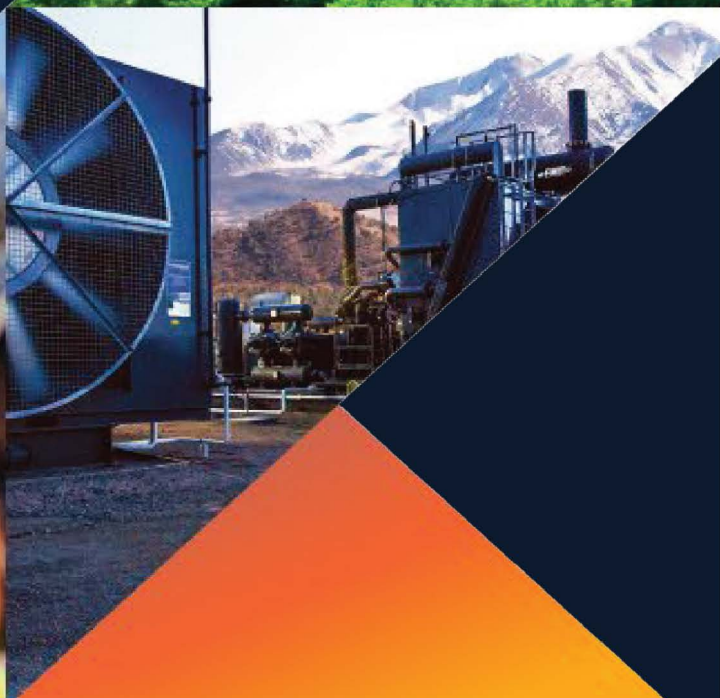




FAU-TDL

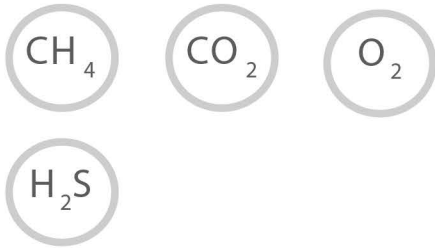
FIELD ANALYTICAL UNIT
TUNEABLE DIODE LASER



+1(909) 906-1001
sales@ecotecco.com



The FAU-TDL uses Tunable Diode Laser Technology to enable accurate and reliable measurements with no drift overtime or cross-gas sensitivity. The optical system uses a laser to produce a specific wavelength of light tuned to an absorption line, the known light frequency of the target gas. This technique produces an analyzer with a fast response speed, where the laser light stimulates vibrations and rotation in the molecule, resulting in energy absorption and enabling the sensing of gas.



- Custom gas readings
- Continuous readings with rapid response
- Up to 4 gas analysis
- Multiple communication options
- Annual factory calibration not required

Applications

Renewable Natural Gas

Anaerobic Digestion Projects

Green House Reporting

Gas Flaring

Carbon Credit Projects

Coal Mine Methane

Key Benefits

Suitable Solutions

Ecotec's fixed position analyzer is manufactured and supported in the US with customizable details to suit your projects

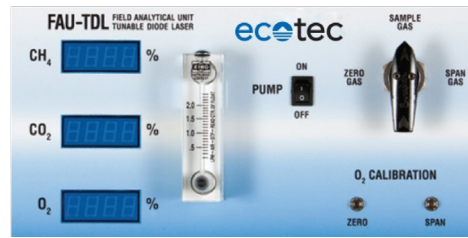
Real-Time Data

FAU-TDL captures real time data and is enabled to send immediate results to the scada system

Cost-Effective

Laser technology does not require field calibration which reduces cost of ownership and labor

FAU-TDL | Technical specification



MEASUREMENTS

SENSOR	TYPE	RANGE	RESPONSE TIME (T90)	ACCURACY
CH ₄	Laser	0-100%	≤30s	+/-0.5%
CO ₂	Laser	0-100%	≤30s	+/-0.5%
O ₂	Laser	0-25%	≤30s	+/-0.05%

SENSOR	TYPE	LIFETIME	RANGE	RESOLUTION	RESPONSE TIME (T90)	ACCURACY
O ₂	Electrochemical	Appox. 24 months.	0-25%	0.1%	≤30s	+/-1%

GAS CONDITIONING

Particle removal	Particles >20 microns
Liquid removal	Can sample on wet or dry basis, gas must be non-condensing

POWER SUPPLY

Power	90-240VAC 50-60Hz 1.4A
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ENVIRONMENTAL CONDITIONS

Operating temperature	-4°F - 158°F (-20°C - +70°C) with cold weather package
Relative humidity	0-95% non-condensing

PHYSICAL

NEMA 4x enclosure	36" x 24" x 9" / 915mm x 610mm x 288mm
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PUMP

Flow rate	200-2,000 ml/min
Vacuum / pressure	-120" W.C max / +4 PSI max

OPTIONAL ACCESSORIES

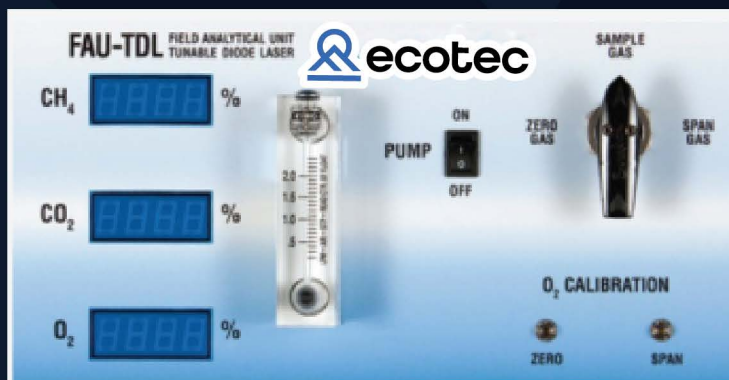
Temperature probe	+/-1°C of reading -22°F to 266°F (-30°C to +130°C)
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FAU-TDL Specific Features

- CH₄, CO₂ and O₂ continuous readings by Tunable Diode Laser Technology
- Choose a single gas analyzer or up to four gases
- Options of O₂, and H₂S by electrochemical cell
- Optional temperature probe
- Options of gas conditioning internal or external to enclosure
- Choice of Analog Or Digital Outputs
- Minimal user interaction

No Cross-Gas Effects

The Methane, Carbon Dioxide and Oxygen channels utilize TDL (tunable diode laser) that are tuned specifically to the absorption frequency of their respective molecules. For example, Ecotec's TDL analyzer does not have cross-gas effects from other hydrocarbons on the methane channel (e.g., ethane, propane, butane, etc.) with similar absorption frequencies and typically cause cross-gas effects with NDIR analyzers, which can artificially inflate methane readings.



Learn more about Ecotec's design, development and manufacturing of cutting-edge gas detectors and software by visiting our website

 **ecotec** ecotecco.com

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