Model 8800 H
Heated Total Hydrocarbon Analyzer

Baseline - MOCON, Inc.™

ANALYZER

The Model 8800 H is the high-temperature member of the extraordinary Series 8800 family of gas analyzers. The Series 8800 is the candidate of choice whenever accurate, reliable hydrocarbon and VOC analysis is required. Series 8800 analyzers provide nearly limitless flexibility and offer continuous, fully automated gas analysis over a broad range of concentrations.

The Model 8800 H has an incredible dynamic range from less than 0.1 ppm to 50%. The analyzer is equipped with a generous complement of analog, digital, and logic output capabilities with room to expand. These features place the instrument well ahead of the competition in performance, automation, and configurability.

The analyzer is based on an electronically flow controlled flame ionization detector (FID) that delivers a small portion of the sample gas to the detector flame. During the combustion process, organic or hydrocarbon-based gases in the sample are ionized to a point where they can be detected by the instrument and reported as a concentration.

The Model 8800 H is configured for a single point analysis of samples heated up to 200 °C, and supports external valves for automatic calibration or an internal automatic calibration valve option.

Applications

The Model 8800 H is designed to continuously monitor the total hydrocarbon content of gases and maintain the temperature of heated samples above their dew point.

This extremely versatile instrument can be configured to support a variety of applications, such as:

- Compliance monitoring for EPA Methods 25A & 503
- Continuous Emission Monitoring (CEM) of source hydrocarbons
- Scrubber & oxidizer efficiency
- Carbon bed breakthrough detection
- LEL monitoring
- Vehicle emissions
- Chemical process blending

Features

- Hydrocarbon detection from sub-ppm to 50% levels
- Automatic calibration control at user-defined intervals
- Electronic flow control of fuel, air & sample, provides precise flow regulation for flame optimization with minimal O_2 synergism
- Sample pump starts automatically after warm-up
- Virtual analog ranges programmable from 1.0 ppm - 100% full scale
- Programmable relays for alarms, events and diagnostics
- Automatic FID ignition, with automatic shut-off of fuel and combustion air
- Heated sample train with internal, easy-access sample filter
- Remote operation via RS-485, RS-232
- Multi-point option with discrete, multilevel concentration & fault alarms

Baseline, the reference point from which all things are measured.

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Instrument Console

The Series 8800 front panel features a bright vacuum fluorescent display and keypad. All operating parameters are set via the keypad, eliminating the need for additional meters during setup or maintenance procedures.

The display specifies the unit of concentration & reference equivalent. Flashing alarm codes report the active alarm location, while flashing fault codes report flame, flow or temperature anomalies.

Represented by:

Specifications

Sampling	Heated, single point sample train, for prefiltered (≤ 0.1 microns) samples
Calibration	Programmable automatic, or manual with optional internal selection valves
Detector	Flame ionization detector (FID)
MDQ	Minimum detectable quantity: 0.1 ppm (100 ppb) as propane
Range	
Analog	Virtual range with software selectable endpoints provides full-scale ranges. Low range unit with –50 V collector, provides 0.1 ppm - 10% (as propane). High range unit with –300V collector, provides 1 ppm –50% (as methane).
Digital	Display auto-ranges from 0.1 ppm to over 50%
Repeatability	± 1% Full-scale response
Drift	± 1% Over 24 hours
Response Time	< 5 Seconds to 90% of final reading
Alarms	Multilevel concentration, average concentration, and fault
Audible	Horn: Sounducer, generating 85 dB @10 cm. Selectively en-/disabled for keypad input, fault, and alarms.
Output	
Analog	1 (standard) to 15 analog 0-20 mA or 4-20 mA loop power supplied, isolated outputs or optional 0-1V, 0-5V or 0-10V isolated outputs. Selectable for concentration, temperature or flow (fuel, air or sample).
Digital	Standard: RS-485 output (RS-232 option)
Relays	5 (standard) to 15 programmable (Latched/Not, NO/NC) contact closures (1A@30V max). Selectable for: alarm thresholds or events (calibration, fault, or sample location).
Physical	Dimensions: 19.00" W x 8.75" H x 16.00" D (48.26 cm W x 22.23 cm H x 40.64 D). Nominal weight: 45 lb (20.5 kg).
Configuration	Bench-top or rack-mount (19" panel)
Display	Digital vacuum fluorescent, 20 characters x 2 lines
Power	90-120 VAC or optional 210-230 VAC, 50/60Hz
Operating Conditions	
	Temperature: 32-104 °F (0-40 °C). Humidity: 0-95%, non-condensing.
Gas Specifications	
Support	Hydrocarbon content: <1 ppm required. Air ≈ 200 cc/min, hydrogen ≈ 40 cc/min. (Options: H_2/N_2 or H_2/He @ 100 cc/min.)
Connections	1/4" O.D. Tube fitting connectors (1/8", 4 mm, and other options)

Options & Accessories

Samplers	Internal multipoint modules, with or without sample pump(s) available in 4-point or 8-point configurations
Enclosures	General purpose, wallmount, X-purged or Z-purged
Expansion Boards	
Analog	Provides 4 or 10 additional programmable 4 - 20 mA outputs, with sample read & hold
Relay	Provides up to 10 additional programmable relays
Gas Generators	Zero air or hydrogen
Calibration Gas	Zero and span gases for a variety of applications

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