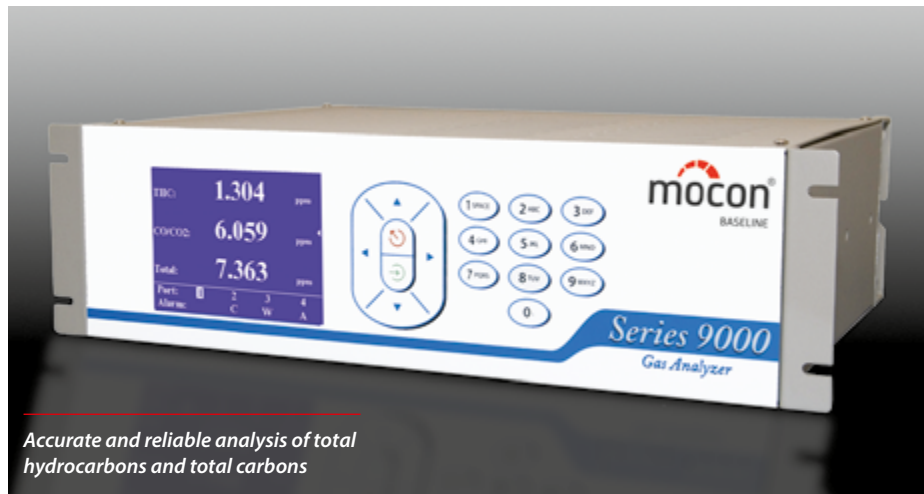


SERIES 9000 TCA

TOTAL CARBON ANALYZER



Accurate and reliable analysis of total hydrocarbons and total carbons

Fully automated analysis over a broad range of concentrations

The Series 9000 TCA Total Carbon Analyzer is a microprocessor-based instrument designed to measure total hydrocarbon content as well as provide a combined carbon monoxide (CO) and carbon dioxide (CO₂) reading. The analyzer is configured for single or multi-point sampling (with or without a sample pump) for pre-filtered (< 0.1 microns) non-condensing samples.

Detection limits down to < 0.1 ppm. User-programmable ranges from 1 ppm to 100 ppm are factory-configured per the customer's application to facilitate installation and setup.

The Total Carbon Analyzer utilizes a flame ionization detector (FID) in conjunction with a catalytic methanizer. The system uses a two-step method to determine the total hydrocarbon (THC) content and, separately, the total carbon content of the sample. Total hydrocarbons are first measured and the catalyst converts the CO and CO₂ to methane (CH₄) and leaves the hydrocarbons unchanged for a total carbon measurement. The total hydrocarbon value is then automatically subtracted from the total carbon concentration to determine the combined CO/CO₂ reading.

All instrument parameters are reported clearly and continually refreshed on a large, graphical LCD display. Using analog, digital, and logic output communication capabilities, analytical information from the analyzer can be acquired using an external PC and a simple communications program such as Windows® HyperTerminal or the analyzer can output binary or ASCII formats directly to a data acquisition system or PLC. Every Series 9000 analyzer includes AMETEK MOCON - Baseline's free PC utility *9000 Keeper* used for storing and uploading multiple methods, as well as sending configuration settings, directly to the analyzer.



Applications

- Hydrocarbon and CO/CO₂ impurities in ultra pure inert gases with no oxygen content
 - Argon, Ar
 - Helium, He
 - Hydrogen, H₂
 - Nitrogen, N₂

Features & Benefits

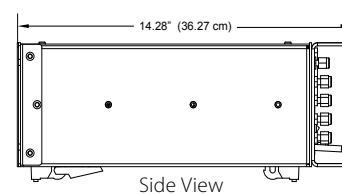
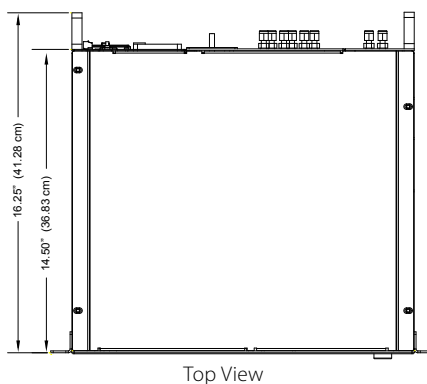
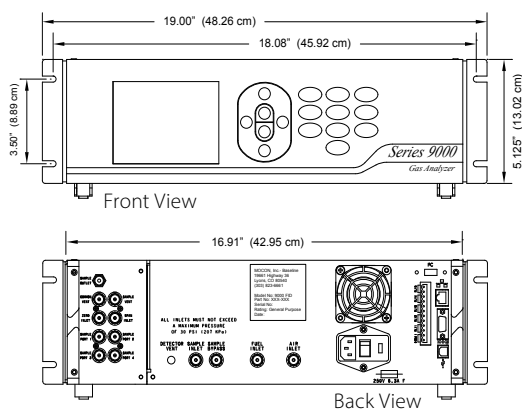
- Flame Ionization Detector (FID)
- Automatic FID ignition
- Graphical LCD display with easy to use menu system
- Sleek rack mountable profile
- Automatic calibration at user-defined intervals
- Internal multi-point sampling option
- FlowGuard electronic control of fuel, air and sample
- Electronic back-pressure regulator with sample bypass system
- Discrete, multilevel concentration & fault alarms
- Programmable analog output ranges
- Programmable relays for diagnostics, concentration, alarms, and events
- Automatic shut-off of sample, fuel and combustion air
- Remote operation via RS-232 and Ethernet

These features place the instrument well ahead of the competition in performance, automation and configurability.

SERIES 9000 TCA TOTAL CARBON ANALYZER

Specifications

Detector	Flame Ionization (FID)		
Methanizer	Converts low levels of carbon monoxide (CO) and carbon dioxide (CO ₂) to methane (CH ₄)		
Ranges	User definable based upon calibration within: <ul style="list-style-type: none"> • 0.1 ppm to 100 ppm (methane, CH₄) Accuracy ± 1%, full-scale Analyzer range is configured at the factory.		
Repeatability	± 1% full-scale response		
Drift, Zero	± 0.01% of full-scale over 24 hours		
Drift, Span	± 1% of full-scale over 24 hours		
Response Time	T90 < 30 seconds		
Sampling	Internal single or multipoint modules, with or without sample pump, for pre-filtered (1 micron) non-condensing samples		
Alarms	Multilevel concentration and fault alarms that result in an audible and visually displayed alarm. Alarms may also be mapped to relays to control external equipment		
Calibration	Programmable automatic or manual calibration		
Support Gases	Hydrogen (H ₂) — 35 cc/min. Hydrocarbon content must be < 1 ppm. Air — 175 cc/min (typical) Fuel blend options available, consult MOCON - Baseline.		
Display	Graphical LCD display, 3.4" x 4.5" (8.64 x 11.43 cm)		
Outputs	Digital RS-232 LAN	Analog Standard: 1 programmable 0–20 mA or 4–20 mA isolated output Optional: 3 programmable analog outputs	Relay Standard: 5 programmable Form A relays rated to 3 A @ 230 V AC Optional: 9 programmable relays
Operating Temperature	32 to 104 °F (0 to 40 °C)		Connections
Operating Humidity	0 to 95% (non-condensing)		Power
Configuration	Bench-top or 19" (48.3 cm) rack-mount, 3U		Weight
			1/4" (6.35 mm) tube fitting connectors
			100–240 V AC, 50/60 Hz, 2 A
			< 20 lb (9.07 kg)



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