

# Model 8800 PID Volatile Organic Vapor Analyzer

Baseline - MOCON, Inc.™

## ANALYZER

The Model 8800 PID is a 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.

With an incredible dynamic range from 10 ppb to 1%, the Model 8800 PID is designed to analyze hundreds of volatile organic compounds and various other gases. The analyzer has 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 a photoionization detector (PID) that delivers the sample gas to an ultraviolet light or lamp.

The energy emitted by the lamp ionizes the targeted gases in the sample to a point where they can be detected by the instrument and reported as a concentration.

Many chemicals can be detected by photoionization. Contact your sales representative for a complete listing.

The Model 8800 PID is relatively humidity insensitive and can be configured with internal components for a single or multipoint analysis of non-condensing gas samples. The automatic calibration feature enhances the long-term analytical stability of the instrument.

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



## Applications

The Model 8800 PID is designed to continuously monitor hundreds of volatile organic compounds and various other gases in a non-condensing sample stream.

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

- Industrial hygiene & safety monitoring
- Fugitive emissions
- Fenceline (perimeter) monitoring around industrial sites
- Carbon bed breakthrough detection
- Paint spray booth recirculated air
- Solvent vapor monitoring for cleaning and degreasing processes
- Low level VOC's in a process using inert gases

## Features

- VOC detection from sub-ppm to 10,000 ppm levels
- Automatic calibration at user-defined intervals
- Virtual analog ranges programmable from 1.0 ppm - 1% full scale
- Programmable relays for alarms, events and diagnostics
- Remote operation via RS-485, RS-232
- Back-pressure regulator with sample bypass system ensures fast response
- Internal multipoint sampling option
- Discrete, multilevel concentration & fault alarms
- Quick connect terminal block for electrical connections

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## INSTRUMENT CONSOLE

The Series 8800 front panel features a bright vacuum fluorescent display and keypad. Most operating parameters are set via the keypad.

The display identifies all sample locations and specifies the unit of concentration & reference equivalent.

Flashing alarm codes report the active alarm location, while flashing fault codes report lamp or temperature anomalies.

Represented by:

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## Specifications

SAMPLING	Internal, single or multipoint modules, with or without sample pump(s), for prefiltered ( $\leq 0.1$ microns), non-condensing samples
CALIBRATION	Programmable automatic, or manual (with internal selection valves)
DETECTOR	Photoionization detector (PID)
Lamp	Energies: 10.6 eV (life span > 6000 hrs), 11.7 eV (life span $\approx 140$ hrs).
MDQ	Minimum detectable quantity: < 0.1 ppm (as isobutylene), < 0.1 ppm (as benzene).
QUENCHING	Signal quenching due to moisture: < 30% at 95% R.H. and 23° Celsius.
RANGE	
Analog	Virtual range with software selectable endpoints provides full-scale ranges from 1.0 ppm – 1% (as isobutylene)
Digital	Display auto-ranges from 1.0 ppm to 1% (as isobutylene)
LINEARITY	Linear range: 0 – 10,000 ppm (isobutylene). Accurate to $\pm 1$ ppm or $\pm 15\%$ of reading, whichever is greater.
DRIFT	Sample dependent. Zero: < 0.1 ppm (as isobutylene) over 24 hours. Span: 100 ppm isobutylene, < 3 % over 24 hours.
RESPONSE TIME	Isobutylene: < 6 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: 30 lb (13.64 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	
Span	Isobutylene, or as required by application
Connections	1/4" O.D. Tube fitting connectors (1/8", 4 mm, and other options)

## Options & Accessories

SAMPLERS	Internal multipoint modules, available in 4-point or 8-point configurations, with or without internal sample pump(s)
ENCLOSURES	General purpose, 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
CALIBRATION GAS	Zero and span gases for a variety of applications

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