

## IR-8400D DIGITAL GAS ANALYZER

Reliable · Easy to Use · Accurate

### IR-8400D Features:

- High reliability
- Low maintenance
- Explosion-proof enclosure
- NEMA 7 certified
- LCD display non-contact operation
- Measures up to 5 gases simultaneously
- Automatic calibration (optional)
- Multiple sample stream monitoring (optional)



### RELIABLE AND RUGGED CONTINUOUS EMISSIONS MONITORING

The Infrared Industries IR-8400D is a Non-Dispersive Infrared (NDIR) gas analyzer, capable of simultaneously monitoring target gases in a sample stream for extended periods of time. The IR-8400D digital gas analyzer is designed specifically for the measurement of Hydrocarbons (HC), Carbon Dioxide (CO<sub>2</sub>), Carbon Monoxide (CO), and Oxygen (O<sub>2</sub>). The ranges for the IR-8400D are specified by end-user requirements.

Tailored for the petroleum industry, this instrument is designed specifically for enhanced oil recovery applications as well as for refineries and petroleum transfer stations. For example, it can be configured to monitor the level of CO<sub>2</sub> present in the separated gas from production wells using CO<sub>2</sub> injection for enhanced oil recovery. The IR-8400D is designed to continuously monitor total hydrocarbons expressed as CH<sub>4</sub>, C<sub>3</sub>H<sub>8</sub>, or C<sub>4</sub>H<sub>10</sub> in process gas streams or for ambient air.

The IR-8400D analyzer is temperature and pressure compensated to achieve excellent long-term stability and negates the need for frequent calibrations. Built to withstand hostile temperature and weather environments, these analyzers come standard with an LCD display, an RS232 output, an analog output, and an isolated linear 4-20 mA current output.

#### Electronics

The IR-8400D is made with state-of-the-art electronics, which are housed in an explosion-proof enclosure. The analyzer is ruggedly built to withstand a long life, insensitive to shock and vibration.

#### Material

Compatibility is assured by using stainless steel sample cells and sapphire windows and by selecting corrosion-resistant materials for seal and tubing components.

#### Temperature

Controlled long-term stability and accuracy are maximized and resistance to harsh environments is minimized with the use of temperature-stabilized optical bench and electronics. An enhanced temperature controller system allows the IR-8400D to accurately measure down to single parts per million (ppm) increments and stabilize temperatures within half a degree.

#### Automatic Calibration

An operator can select dates and times that the IR-8400D will automatically perform its own routine calibrations and update itself without any operator assistance.

#### Company Overview

Infrared Industries has been a leading developer and producer of state-of-the-art gas analyzers instrumentation since 1969.

#### CUSTOMIZED APPLICATIONS

Have a unique application that consists of a different range of gas not currently detected in the IR-8400D? Call us today and we can build a tailor-made gas analyzer that detects the gas of your choice.

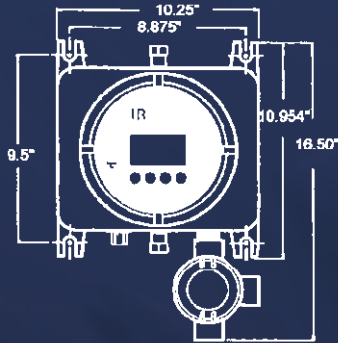
#### APPLICATIONS

- Continuous emissions monitoring
- Combustion monitoring for boilers and furnaces
- Monitoring atmospheres in heat treated and annealing furnaces and process stream control

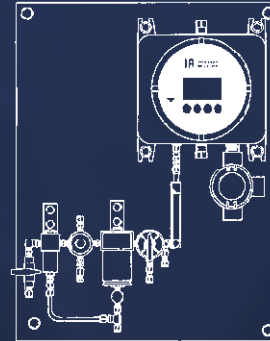
# IR-8400D

## DIGITAL GAS ANALYZER

### IR-8400D DIMENSIONS AND SIDE VIEW



### IR-8400D GAS ANALYZER WITH IR-1150 SAMPLING CONDITIONER SYSTEM



#### SPECIFICATIONS

**Performance measurement range:**  
0-100% as specified by customer

**Accuracy:**  
± 2% of reading or ± 5% Full scale

**Repeatability:**  
± 1% of reading or ± 5% Full scale

**Stability - 24-hour period:**  
± 0.5% Full scale zero drift (maximum)  
± 1% Full scale span drift (maximum)

**Stability - 90-day period:**  
± 1% Full scale zero drift (typical)  
± 2% Full scale span drift (typical)

**Output noise (RMS):**  
Less than 0.5% Full scale

**Response time:**  
Less than 10 seconds (electronic)

**Warm-up time:**  
Less than 1 hour

**Temperature range:**  
-22° to 122° F (-30° to 50° C)

#### GAS SAMPLE REQUIREMENTS

**Flow rate:**  
1 scfh (2 LPM) - recommended  
2 scfh (4 LPM) - maximum

**Moisture:**  
0 to 99% non-condensing

#### OUTPUT

**Analog:**  
0 to 100mV standard  
0 to 1V, 0 to 5V or 0 to 10VDC (optional)  
4 to 20mA (isolated)  
RS232 bi-directional digital communication

**Alarms:**  
Zero signal fault indication

#### GAS FLOW SYSTEMS

**Connections:**  
Sample inlet - 1/4" compression fitting  
Sample outlet - 3/8" or 1/4" compression fitting

**Materials:**  
316 SS, sapphire, Teflon, viton, polypropylene (typical)

#### STANDARD GASES

- O<sub>2</sub>
- HC
- CO
- O<sub>2</sub>
- NO<sub>x</sub>
- Butane
- Propane
- Methane

#### POWER

90-260 VAC maximum, 117 Vrms ± 10%, 50-60 Hz  
12, 24, or 36 volts DC (optional)

#### ENCLOSURE (W X L X D)

10.25" x 10.25" x 9" (26cm x 26cm x 22.86cm) enclosure with display window and attached 3.5" x 2.5" junction box; NEMA 7 (C, Grp D, E Div 1, 2)

#### WEIGHT

25 lbs. (11.35 kg)

#### WARRANTY

Infrared Industries warrants each gas analyzer it manufactures to be free of defects in material and workmanship for a period of one (1) year from the date of delivery. Abuse, misuse or unauthorized changes excluded. An extended warranty is optionally available.