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 (CO2), Carbon Monoxide (CO), and Oxygen (O2). 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 CO2 present in the separated gas from production wells using CO2 injection for enhanced oil recovery. The IR-8400D is designed to continuously monitor total hydrocarbons expressed as CH4, C3H8, or C4H10 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.

**Iron Industries 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**

**Electronics**
The IR-8400D is built 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 (optional)**
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

© 2012 Infrared Industries, Inc. All Rights Reserved. Contents and specifications are subject to change without prior notice.
SPECIFICATIONS

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

Accuracy:
<± 1% full scale or <± 2% of reading (single gas)

Repeatability:
<± 1% of full scale or ± 2% of reading

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)

Response time:
Less than 10 seconds (electronic)

Warm-up time:
Less than 1 hour

Temperature range:
-40° to 122° F (-40° to 50° C)

High Temperature Option Available:
-40° to 140° F (-40° to 60° C)

GAS SAMPLE REQUIREMENTS

Flow rate:
2 scfh (1 lpm) - minimum
4 scfh (2 lpm) - maximum

Moisture:
0 to 99% non-condensing

OUTPUT

Analog:
0 to 100mV standard
0 to 1V, 0 to 5V (optional)
4 to 20mA (isolated)

RS232 bi-directional digital communication

Alarms:
Optional

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

• Butane
• Propane
• Methane
• Carbon Dioxide

POWER

110 VAC, 50/60 Hz
or
220 VAC, 50/60 Hz

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.

© 2012 Infrared Industries, Inc. All rights reserved.
Infrared Industries reserves the right at any time and without notice to change specifications presented within this data sheet, and assume no responsibility for applications or use of devices herein described.