MICROPROCESSOR BASED
INFRARED GAS ANALYZER

Model ZRH

SINGLE OR DUAL COMPONENT

FEATURES

- Microprocessor controlled
- Single source, single beam optics
- Direct readout in engineering units
- Linear output
- Low sensitivity to vibration
- 1 or 2 components, multiple ranges
- Self diagnosis function
- No optical alignment required
- RS-232C interface
- Easy maintenance
- 19″ rack mountable

OPTIONS

- AUTO calibration
- Remote range change and range identification output
- Barometric pressure compensation

APPLICATIONS

- Combustion efficiency:
  Boilers, incinerators & furnaces (CO, CO_2, SO_2)
  Commercial ovens (CO, CO_2)
- Controlled atmospheres:
  Heat treating (CO, CO_2, CH_4)
  Greenhouses (CO_2)
  Fermentation (CO_2)
  Air liquification (CO_2)
- Landfill emissions (CO_2, CH_4)
- Process chemical gas analysis
- Respiration studies:
  Single breath lung diffusion (CO)
- Stack gases: CEM (CO, CO_2, SO_2)
- Vehicle emissions

California Analytical Instruments, Inc.

Model ZRH
INFRARED GAS ANALYZER

DESCRIPTION

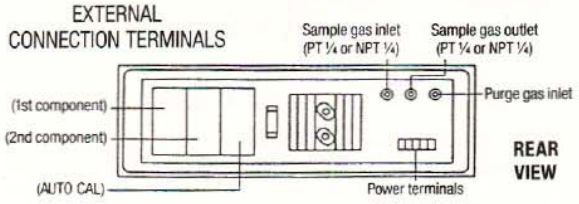
The Model ZRH is a single or dual component non-dispersive infrared (NDIR) gas analyzer used for measuring CO, CO_2, CH_4 and SO_2 achieves high accuracy and provides multiple function and ease of operation through the use of a microprocessor. It is available in 19-inch rack, panel or tabletop mountings.

Zero and span calibrations are easily accomplished by pressing the appropriate key on the front panel.

The ZRH has an improved single beam optical system which provides superior performance to conventional double beam analyzers. It is easy to maintain and offers excellent long term stability. The ZRH is ideal for continuous measurement in the combustion control of burners, incinerators and furnaces as well as CEM-stack systems.

The dual cell type of transmission detector minimizes interferences from other gas components.

The ZRH optical design and modular construction assures long term reliability.



OPTIONS SPECIFICATIONS

REMOTE RANGE CHANGE: Range is changeable via external signal of 5V DC

RANGE IDENTIFICATION SIGNAL OUTPUT:
Contact Type: Form 1A
Contact Rating: 250 VAC, 2A (resistive load)

AUTOMATIC CALIBRATION: Zero and span can be automatically calibrated at a preset cycle.

SPECIFICATIONS

MEASURABLE GAS COMPONENTS: Single-component, multiple range analyzer: CO_2, CO, CH_4 and SO_2
Two-component multiple range analyzer: Any two
Ranges: Up to 3 ranges (optional)
200 ppm to 100%
Range ratio–maximum 5 to 1

MEASURING SYSTEM: Nondispersive infrared absorption (NDIR) method, single light source–single beam

OUTPUTS: Analog 4 to 20mA DC, and simultaneous 0 to 1 mV or 0 to 1V or 0 to 5V or 0 to 10VDC selectable
RS-232C

REPEATABILITY:
1st range (low range): Within ±0.5% of full scale
2nd range (high range): Within ±1% of full scale

ZERO DRIFT: Within ±1% of full scale/24 hours

SPAN DRIFT: Within ±1% of full scale/24 hours

RESPONSE TIME: Within 3 seconds, depending on cell length and flow rate

LINEARITY: ±1% of full scale

NOISE: ±0.5% of full scale

POWER SUPPLY: 100, 115, 200 (±10%) VAC, 50/60 Hz

POWER CONSUMPTION: 37VA max.

AMBIENT TEMPERATURE: 23-113°F (–5 to +45°C)

AMBIENT HUMIDITY: Less than 90% RH non-condensing

ENCLOSURE: Steel casing, for indoor use

DISPLAY: 4 digit LED for concentration display
4 digit LED for sub-display

OUTPUT HOLD: Output value can be held during manual or automatic calibration function

MEASURED GAS TEMPERATURE: 32-122°F (0 to 50°C)
20-50°C for water vapor applications

WARM-UP TIME: Approximately 1 hour

GAS INLET/OUTLET, PURGE GAS INLET SIZE:
NPT ¼" internal thread

MEASURED GAS FLOW RATE: 0.5 to 2 liters/min.

PURGE GAS FLOW RATE: 1 liter/min.

DIMENSIONS: Rack Mount 5¼"H x 19"W x 17½"D
(133mm x 483mm x 448mm)
Panel Mount 5¼"H x 17½"W x 17½"D
(133mm x 443mm x 448mm)
Table Top 5¾"H x 17½"W x 17½"D
(145mm x 443mm x 448mm)

WEIGHT: Approximately 27 lbs. (12 kg)

Specifications subject to change without notice

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