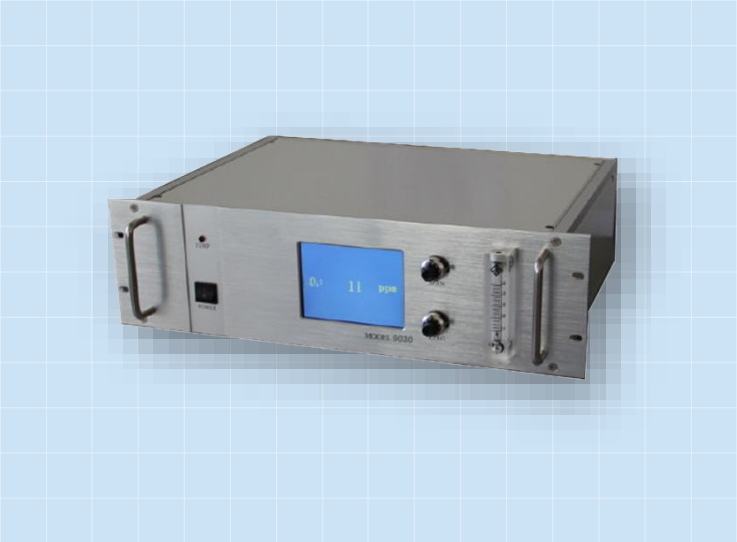
AIM SERIES ANALYZER

AIM9030 Universal Infrared Gas Analyzer

WITH COMPACT DESIGN FOR STABLE MEASUREMENT



BENEFITS & FEATURES

- Simultaneous measurement of up to 4 components including O_2 and 3 components selected from among CO_2, CO, CH_4, SO_2, and NO.
- A unique optics system minimizes drift particularly due to contamination of measurement cell, ensuring excellent long-term stability.
- The dual cell type of transmission detector minimizes interference from other gas components.
- Single beam system allows for simple measurement unit construction and requires no adjustment of optical balance, resulting in low maintenance.
- Large LCD provides easy interactive operation.
- Highly precise zero/span calibration is achieved by simply pressing keys. Automatic calibration is also available. Self-diagnostic function detects abnormality and displays an error massage.

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Delta Phase
WATER GAS MONITORING

AIM Series Analyzer

MEASURES: CO_2, CO, CH_4, SO_2, NO & O_2

The AIM9030 infrared gas analyzer is capable of measuring the concentrations of CO_2, CO, CH_4, SO_2, NO and O_2 components in sample gas. CO_2, CO, CH_4, SO_2 and NO are measured by the non-dispersive infrared method (NDIR), while O_2 is measured by the paramagnetic or zirconia method. A maximum of 4 components including O_2 (up to 3 components except for O_2 measurement) are simultaneously measurable.
A high-sensitivity mass flow sensor is adopted in the detection unit for the infrared method. Due to use of a single beam system for measurement, maintenance is easy and excellent stability is ensured for a long period of time. In addition, the AIM9030 has a large-size liquid crystal display, providing easy operation, high accuracy and multiple functions.
This analyzer is thus optimum for combustion control of various industrial furnaces, botanical study and global atmospheric research.

SPECIFICATIONS

Measurement principle:
CO_2, CO, CH_4: Non-dispersive infrared method
Single light source-single beam
O_2: Zirconia type or Paramagnetic type (external)

Measurable gas components and measuring ranges:

Component	Min. Range	Max. Range
CO_2	0 – 500 ppm	0 – 100 vol%
CO	0 – 200 ppm	0 – 100 vol%
CH_4	0 – 1000 ppm	0 – 100 vol%
O_2	0 – 5 vol%	0 – 25 vol%

Display:
LCD with backlight
Instantaneous value of each component

Analog output signal:
4 to 20 mA with max. load resistance 550 Ω, non-isolated, 8 points max.

Analog input signal:
4 to 20 mA for O_2, Temperature and so on.

Power supply:
Allowable range; 85 to 264 VAC; 50/60 Hz
Power consumption; 70 VA max. Inlet;
Conform to EN60320 Protection Class I

Operating conditions:
Ambient temperature; -5 to 45°C
Ambient humidity; 90%RH max., non-condensing

Storage conditions:
Ambient temperature; -20 to 60°C
Ambient humidity; 90%RH max., non-condensing

Enclosure:
Steel casing, for indoor use

Gas inlet/outlet:
1/4 NPT internal thread

Material of gas-contacting parts:
Gas inlet/outlet; SS304
Sample cell; SS304/neoprene rubber
Infrared-ray transmitting window; CaF2 Internal tubing; Toalon tube

Purge gas flow rate:
1 L/min (when required)

Performance

Repeatability:
±0.5% of full scale

Linearity:
±1% of full scale

Zero drift:
±2% of full scale/week, ±0.1% for O_2

Span drift:
±2% of full scale/week, ±0.1% for O_2

Response time (for 90%FS response):
1 or 2 component measurements; Within 15 seconds including replacement time of sample gas
More than 2 component measurements; Within 30 seconds including replacement time of sample gas

Requirements for Sample Gas

Flow rate: 1 ± 0.5 L/min
Temperature: 0 to 50°C
Pressure: 0 kPa or less (Gas outlet side should be open to the atmospheric air.)
Dust: 100 µg/Nm3 or less in particle size of 0.3 µm or less
Mist: Unallowable
Moisture: Below a level where saturation occurs at room temperature (condensation unallowable). Below the level where saturation occurs at 2°C for CO measurement in 0 to 200 ppm range, NO measurement, and SO_2 measurement.

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