OpreX™ Analyzers

IR800G/IR810G

Infrared Gas Analyzer

YOKOGAWA

Co-innovating tomorrow™

Designed for ease of maintenance and reliability.

IR810G

- **Active Zero-drift Compensation**

  Measuring cell contamination causing zero-drift is automatically corrected through alternative sampling of sample and reference gases.

  Reduces overall maintenance expense.

- **Intuitive HMI**

  Full-color HMI allows for intuitive operation.

  Single touch calibration capabilities.

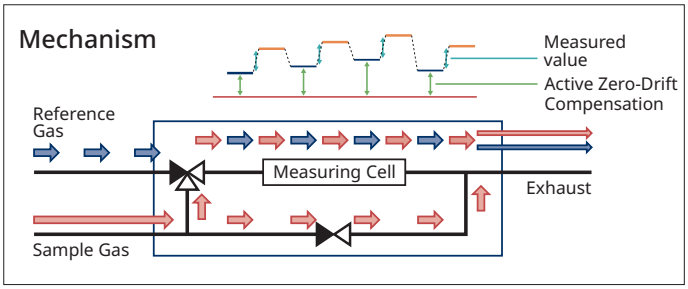
- **Ability to measure up to 5 gas components**

  O_2 (built-in or 4-20mA) and up to 4 other components can be measured from NO, SO_2, CO, CO_2, and CH_4.

IR800G

Bulletin 11G06A00-02EN

Active zero-drift cancellation mechanism



IR gas analyzers are susceptible to zero-drift due to various factors such as built up sample dirt or debris requiring increased cleaning and calibration. With Yokogawa's IR800G/810G analyzer a built-in active-drift mechanism corrects for this drift through alternative sampling of sample and reference gases.

Specification

Rack Type Infrared Gas Analyzer IR800G / Wall and Panel Mount Type Infrared Gas Analyzer IR810G

Measurement principle	$NO/SO_2/CO/CO_2/CH_4$	Non-dispersive infrared method (Single light source-single beam)
	O_2	Built-in paramagnetic type or external analyzer (4-20 mA)
Measurement range	NO	0-50 ppm to 0-5000 ppm (Optional range: 0-50 to 0-199 ppm)
	SO_2	0-50 ppm to 0-5000 ppm, 0-2 vol% to 0-10 vol% (Optional range: 0-50 to 0-199 ppm)
	CO	0-50 ppm to 0-5000 ppm, 0-2 vol% to 0-100 vol% (Optional range: 0-50 to 0-199 ppm, 0-51 vol% to 0-100 vol%)
	CO_2	0-1000 ppm to 100 vol% (Optional range: 0-1000 to 0-4999 ppm, 0-26 to 0-100 vol%)
	CH_4	0-2 to 0-100 vol% (Optional range: 0-51 to 0-100 vol%)
	O_2	0-5 to 0-100 vol% *0-25 to 0-100 vol% for hydrogen background
Sample gas / Reference gas conditions		Flow rate: 0.5 to 1.0 L/min Temperature: 0 to 50°C Pressure: 4.9 to 9.8 kPa Moisture: Below a level where saturation occurs at 5°C (No condensation) *Sample gas: No other corrosive gas *Reference gas: Atmosphere, Instrument air or N_2 Impurities other than CO_2 should be 0.1% of minimum measurement range or less When the measurement range of CO_2 is 5vol% or less, N_2 must be used as the reference gas.
Analog output signal		Number of outputs: 4 Isolated output: 4-20 mA DC (Max load capacity 550 Ω) Output range: any range in selected specification
Analog input signal		Number of input points: 1 point for connection to external oxygen analyzer Input signal: 4-20 mA DC
Contact output		Output points: 11 points (1a), 6 points (1c) Function: Instrument error, Calibration error, Automatic calibration in progress, Solenoid valve drive CH1 to CH5 for automatic calibration, Range identification CH1 to CH5, Blowback, alarms 1 to 6, Peak alarm output, Maintenance in progress, Power status
Contact input		Input points: 8 points (No-voltage or Voltage contact input) Functions: Remote hold, average value reset, automatic calibration start, simple zero calibration start, automatic validation start, remote range changeover, blowback, contact for ZR802G, calibration error for ZR802G
Digital communications		RS-485 (Modbus RTU)
Functions		Output signal hold, Range changeover, Range identification signal, Blowback, Auto calibration, Auto zero calibration, Auto validation, Contact output during auto-calibration/validation, High/low limit alarm, Instrument error contact output, Calibration error contact output
Enclosure		Steel casing, for indoor use
Ambient temperature		IR800G: 0 to 40°C IR810G: 0 to 45°C
Dimensions (W x D x H)		IR800G: 483 x 492 x 177 mm IR810G: 412 x 240 x 615 mm
Weight		IR800G: Approx. 16 kg IR810G: Approx. 17 kg
Supply voltage		100 to 240V AC 50/60 Hz

Characteristics

IR800G / IR810G

Repeatability	$NO/SO_2/CO/CO_2/CH_4$	±0.5% F.S. (±1% F.S. when the optional range is included)
	O_2	±0.5% F.S.
Linearity		±1.0% F.S.
Zero drift	$NO/SO_2/CO/CO_2/CH_4$	±1.0% F.S./week (±2% F.S. when the optional range is included)
	O_2	±2.0% F.S./week
Span drift		±2.0% F.S./week
Response time (90% F.S. response)		30 sec. or less

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