OpreX™ Analyzers

IR800G/IR810G

Infrared Gas Analyzer

YOKOGAWA

Co-innovating tomorrow™

Improve OPEX by stability and usability

IR810G

■ Build-in Active zero-drift cancellation mechanism

Zero-drift caused by measuring cell contamination is corrected

Contribute to reduce OPEX* by stable measurement

*Operating Expense

■ Highly visible HMI

Full-color touch panel realizes easy operation

You can directory go to calibration menu by using one-touch calibration menu

■ Max 5 gas components measurement

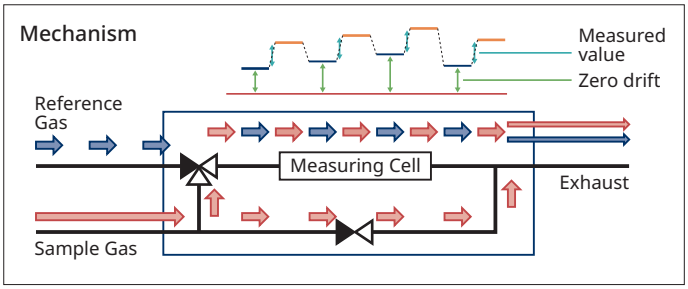
O_2 and 4 gas components from NO/SO_2/CO/CO_2/CH_4

Can connect a O_2 analyzer by using 4-20 mA analog input

IR800G

Bulletin 11G06A00-01EN

Active zero-drift cancellation mechanism



Gas analyzers have been suffered from zero point drift caused by factors such as the built up of dirt on the instrument and it required frequent cleaning and calibration. With IR800G/IR810G analyzers, an Active zero-drift cancellation mechanism is built in that is able to correct changes in the zero-point. This is accomplished by alternately measuring a sample gas and a reference gas. Thanks to this function, maintenance needs to be performed less frequently, thereby saving time and effort and reducing costs.

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	Build-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 the CO_2 meter is 5 vol% or less, be sure to use N_2 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

YOKOGAWA ELECTRIC CORPORATION **https://www.yokogawa.com/an/**
World Headquarters
9-32, Nakacho 2-chome, Musashino-shi, Tokyo 180-8750, JAPAN

YOKOGAWA CORPORATION OF AMERICA https://www.yokogawa.com/us/
YOKOGAWA EUROPE B.V. https://www.yokogawa.com/eu/
YOKOGAWA ENGINEERING ASIA PTE. LTD. https://www.yokogawa.com/sg/
YOKOGAWA CHINA CO., LTD. https://www.yokogawa.com/cn/
YOKOGAWA MIDDLE EAST & AFRICA B.S.C.(c) https://www.yokogawa.com/bh/

Represented by:

ANA-02E

Subject to change without notice. [Ed:01/b]
Printed in Japan, 305(KP)

YOKOGAWA Co-innovating tomorrow™