RIKEN KEIKI

Equipped with Long-term Stability Optical Interferometric Sensor Ideal for Controlling Gas Concentrations in Manufacturing Processes

New

Optical Interferometric Gas Analyzer

Model FI-900

ATEX (Equipment for explosive atmospheres) explosion-proof certified product

IECEx (IEC System for Certification to Standards Relating to Equipment for Use in Explosive Atmospheres) certified product

TIIS (Technology Institution of Industrial Safety) explosion-proof certified product

CE Marking conforming product

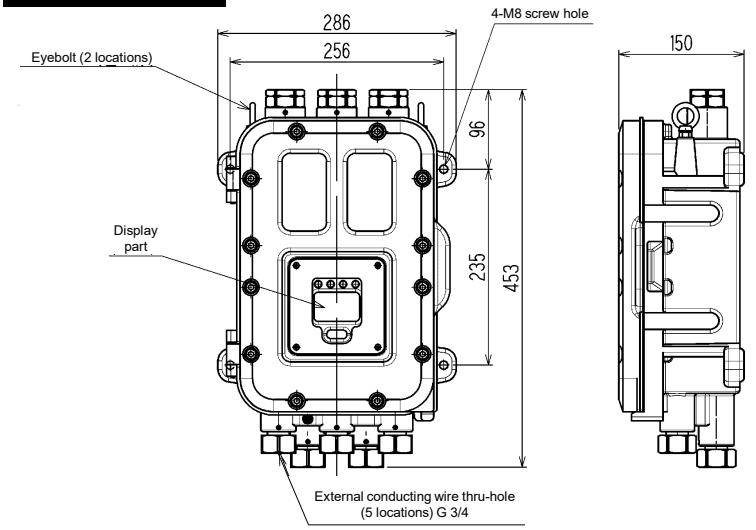
Features

- Uses an optical interferometric sensor with high reliability and backed with an 80-year track record
  - Gas analyzer with refinements made to the optical interferometric sensor developed when our company was founded
  - Sensor with no degradation in sensitivity and excellent long-term stability means replacement is not required for 10 years
  - Takes measurements using gas-specific refractive indices, making it capable of measuring a wide range of gases
- Capable of handling corrosive gases like methylene chloride, NH_3 and VCM gases
- Pressure-resistant explosion-proof structure (ATEX/IECEx/Japan Ex) that can even be used in H_2 environment
- Comprehensive self-diagnostic function, and checks of gas concentrations as well as status using MODBUS communications
- Ideal for preventing explosions and managing concentrations of VOCs, and managing concentrations of hydrogen gas

Specifications

Model	FI-900
Measuring principle	Optical interferometric method
Measuring gas	Combustible gases, solvent vapors, inert gases
Measuring range	Depending on gas specifications
Alarm setpoint	Depending on gas specifications
Measurement accuracy	F.S. within ±3% (under same conditions)
Response time	T90: within 30 seconds
Measurement method	Specified flow gas feed from external sampling unit
Display	Full-dot LCD (with backlight)
External output	4-20 mA DC (insulated, current throw type), permitted resistive load 300 Ω or less Minimum resolution 0.01 mA or less
Communications output	RS-485 (MODBUS) communication function
Alarm relay contact 1	Non-voltage contact, contact capacity 1 A 30 V DC (resistive load)
Alarm relay contact 2	Non-voltage contact, contact capacity 1 A 30 V DC (resistive load)
Malfunction contact	Non-voltage contact, contact capacity 1 A 30 V DC (resistive load)
Power supply	24V DC±10% / 100 - 240V AC±10% 50/60Hz *The ATEX/IECEx specifications apply to DC power source only
Power consumption	Max. 6 W (24 V DC±10%) / Max. 20 VA (100 - 240 V AC ±10% 50/60 Hz) *The ATEX/IECEx specifications apply to DC power source only
Protection class	Equivalent to IP66/67
Operating temperature range	-20 to +60℃ (ATEX/IECEx specifications) / -20 to +57°C (Japan Ex specifications) (no sudden changes)
Operating humidity range	0 to 95% RH (no condensation/use of condensible gases within unit) (no condensation)
Operating pressure range	Atmospheric pressure or equivalent (no pulses)
Outer dimensions	Approx. 286 (W) x 453 (H) x 150 (D) mm (projection portions excluded)
Weight	Approx. 23 kg
Explosion-proof structure	Flame-proof enclosures
Explosion-proof class	Ⅱ2G Ex db ⅡB+H2 T4 Gb (ATEX) / Ex db ⅡB+H2 T4 Gb (IECEx) / Ex dⅡB+H2 T4 (Japan Ex)
Self-diagnostic function	Status monitoring in 4 separate categories ・FAILURE ・FUNCTION CHECK ・MAINTENANCE REQUIRED ・OUT OF SPECIFICATION
Accessories	Control key, Allen key (2 types), cable ground, plug

Outline drawings



Gas specifications

Measuring gas	Measuring range	Measurement accuracy
Toluene in air	0－100%LEL	±3%LEL
Acetone in air	0－100%LEL	±3%LEL
Ethyl acetate in air	0－100%LEL	±3%LEL
Methylene chloride in air	0－100%LEL	±3%LEL
Methylene chloride in air	0－20vol%	±0.6vol%
Hydrogen in nitrogen	0－100%LEL	±3%LEL
Hydrogen in nitrogen	0－100vol%	±0.6vol%

*1 Gas specifications are planned to be added to the lineup, however if you need the product to measuring gases, base gases, or measurement ranges not included in this list, please inquire with our Sales Department.

*2 In order for the device to be able to detect gases, a separate sampling unit is required for drawing in the measuring gas and reference gas.

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