

FI-21

Optical Gas Indicator



The Riken Gas Indicator Model FI-21 is a precision gas analyser which is adapted to measure the % volume concentration of any of the commonly used gas in a mixture of air or oxygen for solvents, fumigation, gas purity and anaesthetic gas.

The standard instrument is calibrated for eight (8) selectable gas readings on the direct digital display.

The FI-21 operating principle utilises the highly accurate measurement with CCD and Fourier analysis technology and electronic circuitry to provide direct digital readout.

The FI-21 is equipped with a built-in sample draw pump for ease of use.

APPLICATIONS

- Measurement of gas concentrations for solvent gases, fumigation gases, etc.
- Measurement of gas purity
- Measurement of fuel calories
- Measurement of anaesthetic gases

Detection principle	Optical Interferometric method
Display	Digital display (Measuring gas, base gas, gas concentration, time, etc)
Structure	Non-explosion proof
Measuring method	Batch measurement
Gas sampling method	Suction by internal pump (Pump stops operation while reading)
Indication accuracy	Within + 3% of the indication value + 1 digit
Outputs	Data logger, 0-1VDC
Data logging function	Day, time (24 hours) and measurement results, maximum recording : 100 data points
Operating temp & humidity	5-35°C, below 80% R.H.
Operating pressure	Atmospheric pressure
Power source	C size alkaline batteries (4pcs) or AC adaptor (optional)
Battery life	Approx. 20 hours (without sampling)
Dimensions & weight	Approx. 20cm x 14.5cm x 8cm (L x W x H) Weight approx 2 kg.
Standard Accessories	Carrying case, absorption tube, sampling hose, C size alkaline batteries (4pcs), sampling "T" piece (for anaesthetic application only)
Optional Accessories	AC adapter, data logger software, cable for data logger

KEY FEATURES

- Capable of measuring up to 8 kinds of gases
- Gas can be selected with key operation
- Direct digital readout
- Built-in sampling pump
- High accurate measurement with CCD and Fourier analysis technology
- Data logging stores up to 100 readings
- Few consumable parts saving on maintenance cost

FI-21 MODEL

SPECIFICATIONS Specifications subject to change without notice

Type No.	Application	Name of Gas	Measuring gas	Range
TYPE -01	Vol% solvent gases applications	Toluene in air	C ₇ H ₈ in air	0 – 2%vol
		Methyl ethyl ketone in air	MEK in air	0 – 5%vol
		Ethyl acetate in air	EtAc in air	0 – 5%vol
		Xylene in air	C ₈ H ₁₀ in air	0 – 1%vol
		Isopropyl alcohol in air	IPA in air	0 – 2%vol
		Methyl isobutyl ketone in air Methanol in air	MIBK in air CH ₃ OH in air	0 – 1%vol 0 – 1%vol
TYPE -02	%LEL solvent gas applications	Toluene in air	C ₇ H ₈ in air	0 – 100% LEL
		Methyl ethyl ketone in air	MEK in air	0 – 100% LEL
		Ethyl acetate in air	EtAc in air	0 – 100% LEL
		Xylene in air	C ₈ H ₁₀ in air	0 – 100% LEL
		Isopropyl alcohol in air	IPA in air	0 – 100% LEL
		Methyl isobutyl ketone in air Methanol in air	MIBK in air CH ₃ OH in air	0 – 100% LEL 0 – 100% LEL
TYPE -03	Fumigation gas applications	Methyl bromide in air	CH ₃ Br in air	0 – 200 mg/l
		Phosphine in air	PH ₃ in air	0 – 50 mg/l
		Methyl iodide in air	CH ₃ I in air	0 – 200 mg/l
		Methyl bromide in air	CH ₃ Br in air	0 – 5% vol
		Propylene oxide in air	PO in air	0 – 10% vol
		Oxygen in N ₂	O ₂ in N ₂	0 – 100% vol
		Sulfuryl Fluoride in air	SO ₂ F ₂ in air	0 – 200 mg/l
TYPE -04	Gas purity applications	Helium in air	He in air	0 – 100% vol
		Neon in air	Ne in air	0 – 100% vol
		Hydrogen in air	H ₂ in air	0 – 100% vol
		Methane in air	CH ₄ in air	0 – 100% vol
		Carbon dioxide in air	CO ₂ in air	0 – 100% vol
		Ammonia in air	NH ₃ in air	0 – 100% vol
		Hydrogen in N ₂	H ₂ in N ₂	0 – 100% vol
		Hydrogen in CO ₂	H ₂ in CO ₂	0 – 100% vol
TYPE -05	Anaesthetic applications	Halothane in O ₂	Halothane in O ₂	0 – 6% vol
		Isoflurane in O ₂	Isoflurane in O ₂	0 – 8% vol
		Sevoflurane in O ₂	Sevoflurane in O ₂	0 – 10% vol
		Desflurane in O ₂	Desflurane in O ₂	0 – 20% vol
		Halothane in air	Halothane in air	0 – 6% vol
		Isoflurane in air	Isoflurane in air	0 – 8% vol
		Sevoflurane in air	Sevoflurane in air	0 – 10% vol
		Desflurane in air	Desflurane in air	0 – 20% vol



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