

For Environmental and Industrial Hygiene Monitoring

# PORTABLE ORGANIC VAPOR ANALYZER

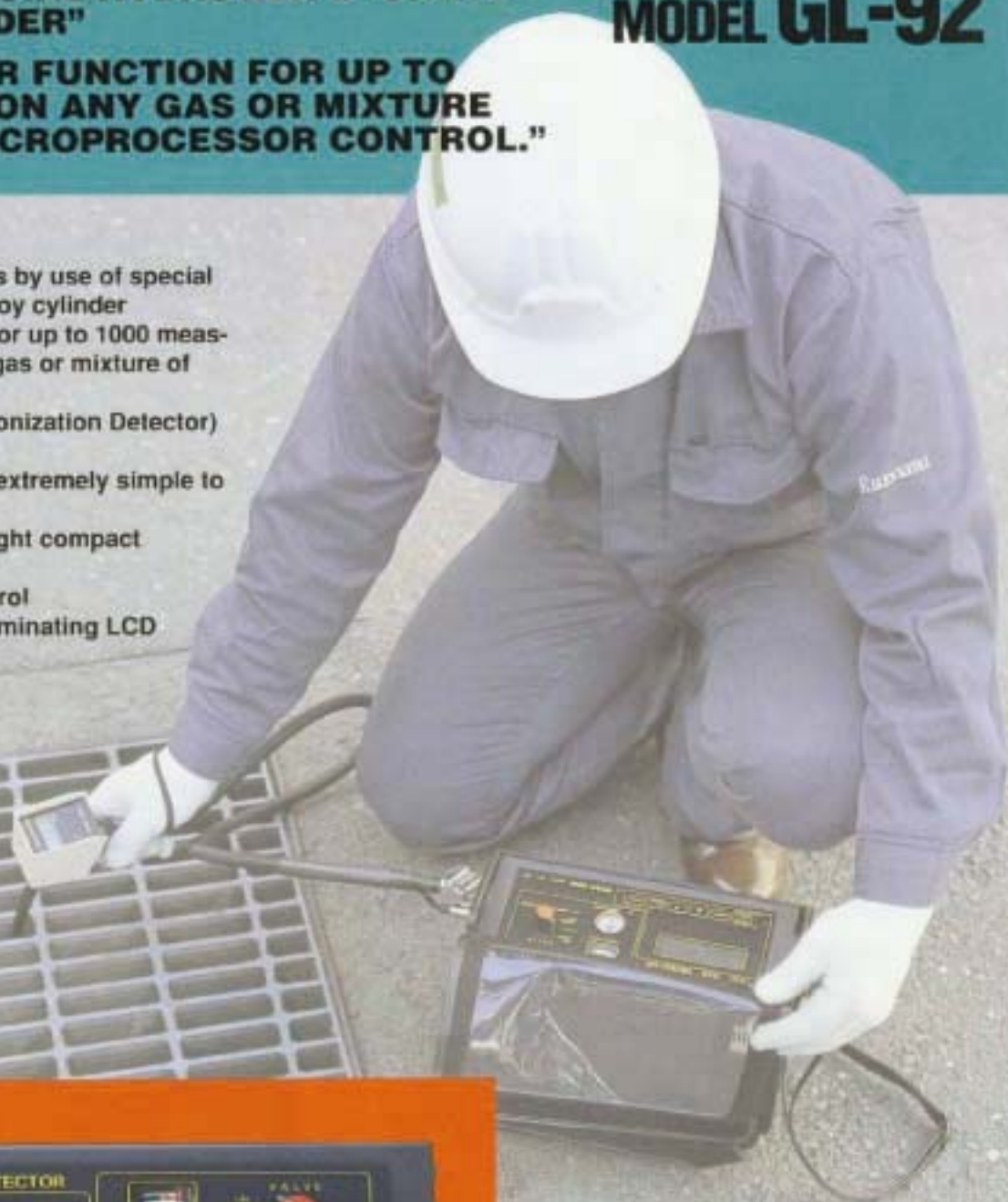
"APPLY A SPECIAL HYDROGEN STORAGE ALLOY CYLINDER"


## MODEL GL-92

"DATA LOGGER FUNCTION FOR UP TO 1000 POINTS ON ANY GAS OR MIXTURE OF GAS BY MICROPROCESSOR CONTROL."

### FEATURES

- Long operating hours by use of special hydrogen storage alloy cylinder
- Internal data logger for up to 1000 measuring points on any gas or mixture of gases
- Reliable FID (Flame Ionization Detector) principle
- Highly accurate and extremely simple to use
- Rugged and lightweight compact portability
- Microprocessor control
- Easy-to-read self-illuminating LCD display



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# HIGHLY SENSITIVE DETECTION METHOD (FID) FOR DETECTION OF LOW CONCENTRATION OF COMBUSTIBLE GASES/ORGANIC VAPORS IN THE ATMOSPHERE AND SOIL

## MAIN APPLICATIONS

### [Organic vapor]

- Fuel contamination of soil or ground water.
- Hazardous waste sites
- Soil/water remediation processes.
- Environmental surveys in organic chemical plants, Painting and printing plants, Solvent recovery plants, Semiconductor plants, Dry cleaning operations.

### [General combustible gases]

- Fugitive emission monitoring in refineries and petrochemical plants.
- Gas leak detection from underground and supply pipes.
- Gas leak detection from the bottom of storage tanks.
- Trace levels of petroleum fuels.
- Confined space entry into tanks and marine vessels.
- Sterilization processes in hospitals, pharmacies and medical plants.

Typical detection levels (Min. Alarm 10 ppm) Gas or Vapor	TWA level (ACGIH)
n-Hexane	50PPM
Butane	800PPM
Butadiene	10PPM
Benzene	10PPM
Toluene	100PPM
Isopropyl Alcohol	400PPM
Methyl Ethyl Ketone	200PPM
Trichloroethylene	50PPM
1,1,1. - Trichloroethane	200PPM
Tetrachloroethylene (Perchloroethylene)	50PPM



Leakage measurement from cylinder valve



Solvent measurement of drainage pit.

Model	GL-92 (General combustible gases/Organic vapor)			
Measurable gases	LCD display		LCD display	
	① Methane (CH <sub>4</sub> )	METH	⑤ Toluene (C <sub>7</sub> H <sub>8</sub> )	TOL
	② Propane (C <sub>3</sub> H <sub>8</sub> )	PROP	⑥ Isopropyl Alcohol (C <sub>3</sub> H <sub>8</sub> O)	IPA
	③ n-Hexane (n-C <sub>6</sub> H <sub>14</sub> )	NHEX	⑦ Methyl Ethyl Ketone (C <sub>4</sub> H <sub>8</sub> O)	MEK
	④ Isobutane (i-C <sub>4</sub> H <sub>10</sub> )	ISBUT	⑧ Ethylene Oxide (C <sub>2</sub> H <sub>4</sub> O)	EO
	⑤ Isobutylene (i-C <sub>4</sub> H <sub>8</sub> )	ISBTL	⑨ Trichloroethylene (C <sub>2</sub> HCl <sub>3</sub> )	TCE
	⑥ Butadiene (C <sub>4</sub> H <sub>6</sub> )	BUTDN	⑩ 1,1,1-Trichloroethane (CH <sub>3</sub> CCl <sub>3</sub> )	TCA
	⑦ Benzene (C <sub>6</sub> H <sub>6</sub> )	BNZNE	⑪ Tetrachloroethylene (C <sub>2</sub> Cl <sub>4</sub> )	PCE

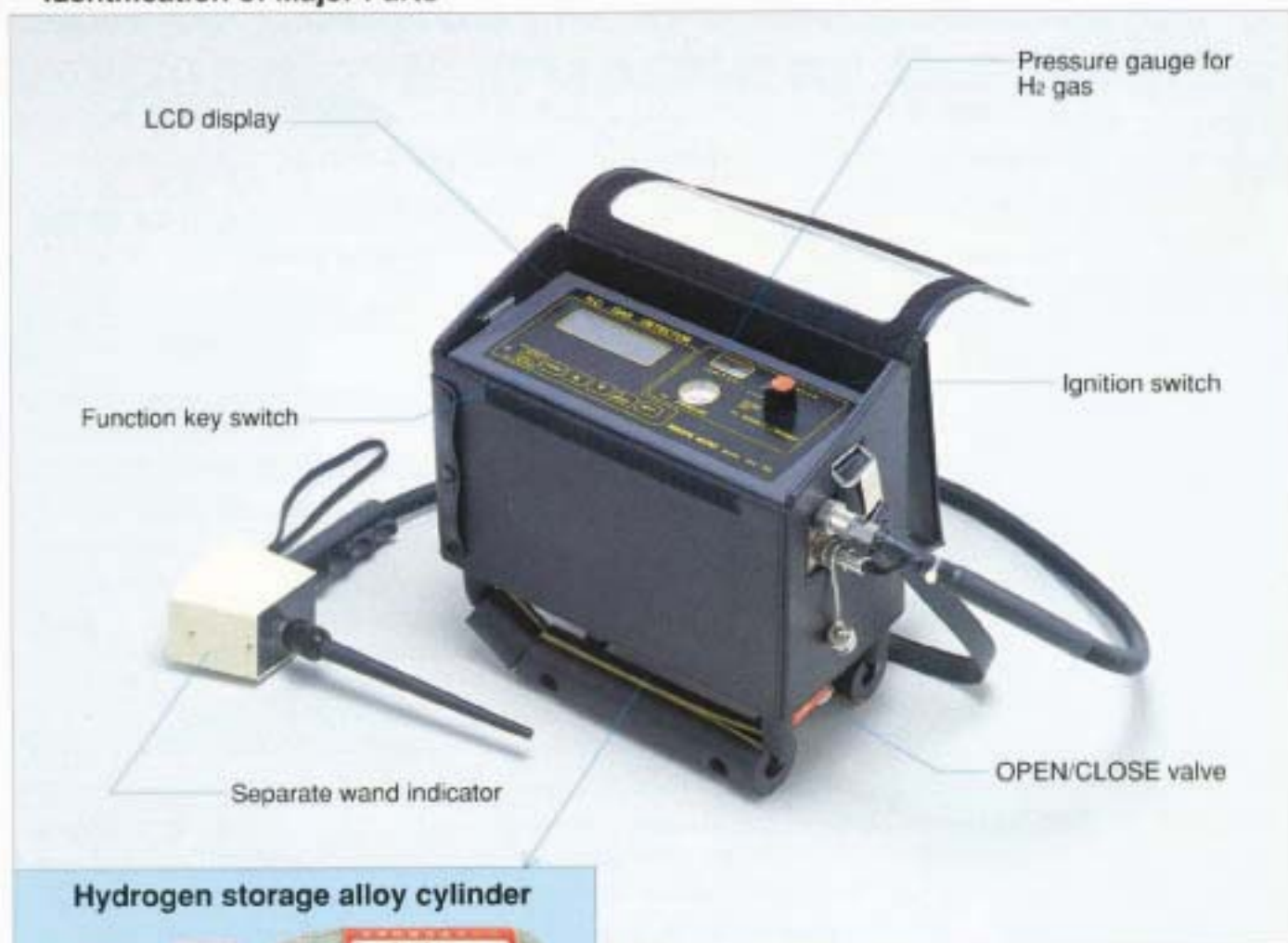
## Specifications

Detecting principle	Flame Ionization Detector (F.I.D)
Measurable gases	Please refer to above table
Measuring range	0-2000ppm (CAL. n-C <sub>6</sub> H <sub>14</sub> ) 0-2000ppm presented in 3 ranges <ul style="list-style-type: none"> <li>0-50ppm (1 PPM/digit)</li> <li>50-200ppm (5 PPM/digit)</li> <li>200-2000ppm (20 PPM/digit)</li> <li>*"OVER" indication beyond 2000PPM</li> </ul>
Display	Monitor: LCD (4 line, 20 characters) with illumination Separate wand indicator: LCD (1 line, 4 characters) with illumination
Operating temperature & humidity	-10°C to +40°C, Below 90%RH
Accuracy	±3ppm + 1 digit in range of 0-50ppm ±5% of indication value in range of 50-200ppm and 200-2000ppm
Response time	Within 10 seconds to 90% response
Alarm method	(1) Alarm for high gas: Intermittent audible tone at alarm setting concentration point (2) OVER range of gas: Continuous audible tone beyond 2000PPM concentration (3) Low battery: Warning: "B" flashing at 4.55V Alarm: Continuous audible tone at 4.5V (4) Flow fail: Continuous audible tone with flashing message on the display "FLOW FAIL" (5) Flame fail: Continuous audible tone with flashing message on the display "FLAME OUT" Note) (1)-(4)...Alarm reset switch only valid for audible tone.
Alarm preset point	(1) Any point from 10PPM to 1980PPM (standard 500PPM) (2) OFF position disables all audible alarms.
Sample flow rate	Approx. 0.5L/min.
External output	Data Logger Max. 1000 measuring points (RS-232C) on any gas or mixture of gases
Operating hours	Ⓐ Approx. 15 hours continuous with C size alkaline battery at 20°C (standard). Ⓑ Approx. 7 hours continuous with C size Ni-Cd battery at 20°C (optional).
Hydrogen storage alloy cylinder	Approx. 30 hours in continuous operation per full cylinder
Power supply	C size alkaline battery...4pcs. (standard), C size Ni-Cd battery...4pcs. (option). In case of Ni-Cd battery, charge by using the charger adapter.
Dimensions & weight	Monitor: Approx. 250(W) × 112(D) × 223(H)mm Approx. 5Kg Separate wand indicator: Approx. 50(W) × 72(D) × 70(H)mm Approx. 0.4Kg
Intrinsically safe design	Class I, Div 1, Group B, C & D
Other functions	(1) TAG point input by key switch (4) Temperature display (2) TAG input by bar code (5) Operating hour display (3) Data display (6) Battery voltage display

\* Specifications subject to change without notice

# Model GL-92

## Identification of Major Parts



### Hydrogen storage alloy cylinder




#### Standard accessories

- |                                     |          |                                   |        |
|-------------------------------------|----------|-----------------------------------|--------|
| (1) Carrying case .....             | 1 pce.   | (5) C size alkaline battery ..... | 4 pcs. |
| (2) Sampling probe .....            | 1 pce.   | (6) Carrying strap .....          | 1 pce. |
| (3) Packing .....                   | 3 pcs.   | (7) Instruction manual .....      | 1 copy |
| (4) Filter for sampling probe ..... | 2 sheets |                                   |        |

#### Optional accessories

- |  |                                       |
|--|---------------------------------------|
| (1) Barcode reader pen type BR-91B           | (3) Charger adapter for Ni-Cd battery |
| (2) Data-connector for CPU adapter type RC-1 | (4) Ni-Cd battery                     |

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