



PORTABLE TOXIC GAS MONITOR

WITH DIGITAL READOUT AND AUDIBLE ALARM

MODEL SC-90



FEATURES

- Microprocessor control
- LCD digital readout
- Diagnostic function
- Sample-drawing system
- Lightweight hands free monitoring
- Peak hold and averaged readout
- Audible/visual alarms
- Fully portable
- Touch panel controls
- Easy to use



RIKEN KEIKI INSTRUMENTS, INC.

COMPONENT DESIGNATION



The model SC-90 is designed to measure one of several toxic gases in the PPM (parts per million) range. This monitor is useful as a personal safety monitor for detecting dangerous levels of toxic gas in semiconductor manufacturing and other industries.

When gas concentration exceeds the preset alarm level, audible and visual alarms are activated. Display functions are controlled by micro-processor technology and operational functions can be performed without tools simply by pressing the control panel.

The gas concentration reading is continuously up-dated. The Averaged Reading function displays the average gas concentration during the monitoring period and the Peak Reading displays the highest gas concentration during the monitoring period. This model is powered by user replaceable standard Alkaline batteries (Nickel Cadmium batteries with external charger or continuous operation from the AC power line are available as options.)

The dot-matrix display and cautional information make operation easily understood without special training. An electrochemical sensor delivers quick, accurate and repeatable readouts.



Top view



Right side view

SPECIFICATIONS

Detection principle	Electrochemical sensor
Detectable gas and range	See the table on following page.
Concentration readout	Continuous measurement, Averaged readout and Peak Hold readout
Functional control	Microprocessor
Display	Dot-matrix self-illuminated LCD
Control functions	Power switch, Voltage check, Peak hold switch, Averaged readout switch
Accuracy	Better than $\pm 10\%$ of full scale
Response time	Within 30 seconds (when exposed to gas at 3 times the alarm preset concentration)
Alarms	<ul style="list-style-type: none"> a) Intermittent audible tone and flashing red LED lamp activates when gas level exceeds alarm preset point b) Continuous audible tone and display of "REPLACE BATTERY" for low battery condition. c) Continuous audible and visual alarm and display of "OVER PPM" for over scale.
Sampling system	Sample-drawing by internal diaphragm pump
Ambient temperature and humidity	$-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$ (14 to 104°F), Below 90%RH
Continuous operating hours (with no alarms or lights)	Alkaline batteries (standard) Approx. 20 hours Ni-Cd batteries (Optional) Approx. 10 hours AC Power Adaptor (Optional) Continuous
Dimensions & weight	7.87" wide \times 3.2" high \times 5.6" deep, 4 lbs 3 ounces

Specifications subject to change without notice.

DETECTABLE GAS AND MEASURING RANGE FOR MODEL SC-90

Detectable gas	Chemical formula	Measuring range	Alarm preset point
Phosphine	PH ₃	0–1.00ppm (0.05ppm/digit)	0.3ppm
Arsine	AsH ₃	0–1.00ppm (0.05ppm/digit)	0.3ppm
Silane	SiH ₄	0–15.0ppm (0.5ppm/digit)	5ppm
Diborane	B ₂ H ₆	0–30.0ppm (0.5ppm/digit)	10ppm
Hydrogen chloride	HCl	0–5.00ppm (0.05ppm/digit)	2ppm
Sulfur dioxide	SO ₂	0–15.0ppm (0.5ppm/digit)	2ppm
Nitric oxide	NO	0– 100ppm (1ppm/digit)	25ppm
Nitrogen dioxide	NO ₂	0–15.0ppm (0.5ppm/digit)	3ppm
Hydrogen fluoride	HF	0– 9.0ppm (0.5ppm/digit)	3ppm
Hydrogen sulfide	H ₂ S	0–30.0ppm (0.5ppm/digit)	10 ppm
Ozone	O ₃	0–5.00ppm (0.05ppm/digit)	2ppm
Fluorine	F ₂	0–3.00ppm (0.05ppm/digit)	1ppm
Bromine	Br ₂	0–1.00ppm (0.05ppm/digit)	0.3ppm
Carbon monoxide	CO	0– 300ppm (5ppm/digit)	50ppm
Ammonia	NH ₃	0– 75ppm (1ppm/digit)	25ppm
Hydrogen sulfide	H ₂ S	0–1.00ppm (0.05ppm/digit)	0.3ppm
Chlorine	Cl ₂	0–3.00ppm (0.05ppm/digit)	1ppm

Note: Specify one of the above detectable gases and ranges when ordering. The model SC-90 measures one type of gas, as ordered.

ACCESSORIES

Standard accessories

- ① Shoulder strap 1 pc
- ② Sampling probe 1 pc
- ③ Sampling hose (1m) 1 pc
- ④ Alkaline battery 4 pcs
- ⑤ Instruction manual 1 copy

Optional accessories

- ① Ni-Cd battery
- ② Charger for Ni-Cd battery
(Specify AC voltage)
- ③ AC adaptor



A9812



ISO 9001:2000

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