RIKEN

PORTABLE TOXIC GAS MONITOR
WITH DIGITAL READOUT AND AUDIBLE∕VISUAL ALARMS

MODEL SC-90

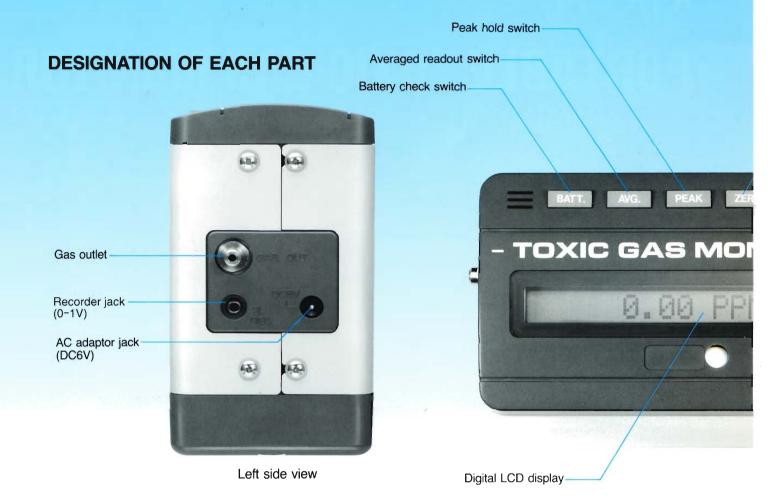

FEATURES
- **Microprocessor control**
- **LCD digital readout**
- **Diagnosis function**
- **Sample-drawing system**
- **Lightweight hands free monitoring**
- **Peak hold and averaged readout**
- **Audible/visual alarms**
- **Fully portable**
- **Easy to use**

ISO 9001
KHK
ISO 9000
95QR·007

ISO 14001
KHK
ISO 14000
97ER·005

RIKEN KEIKI

DESIGNATION OF EACH PART

Peak hold switch

Averaged readout switch

Battery check switch

BATT.   AVG.   PEAK   ZER

– TOXIC GAS MO

0.00 PPI

Gas outlet

Recorder jack
(0-1V)

AC adaptor jack
(DC6V)

Left side view

Digital LCD display

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 microprocessor technology and operational functions can be performed without tools simply by pressing the switch.

The gas concentration reading is continuously up-dated. The Averaged Reading function displays the averaged 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 ±10% of full scale
Response time	Within 30 seconds (when exposed to gas at 3 times the alarm preset concentration)
Alarms	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°C ~ +40°C, Below 90%RH
Continuous operating hours (under no alarm and lighting)	Alkaline batteries (standard) .... Approx. 20 hours Ni-Cd batteries (Optional) .... Approx. 10 hours AC Power Adaptor (Optional) .... Continuous
Dimensions & weight	200(W) × 80(H) × 142(D) mm Approx. 1.9 kg

Specifications subject to change without notice.

DETECTABLE GAS AND MEASURING RANGE FOR MODEL SC-90

Detectable gas	Chemical formula	Measuring range	Alarm preset point
*Ammonia	NH_3	0—75.0ppm (0.5ppm/digit)	25ppm
Arsine	AsH_3	0—200ppb (5ppb/digit)	50ppb
*Boron trichloride	BCl_3	HCl 0—15.0ppm (0.5ppm/digit)	5ppm
*Bromine	Br_2	0—1.00ppm (0.02ppm/digit)	0.3ppm
Carbon monoxide	CO	0—75.0ppm (0.5ppm/digit)	25ppm
		0—150ppm (5ppm/digit)	25ppm
*Chlorine	Cl_2	0—3.00ppm (0.05ppm/digit)	1ppm
		0—1.50ppm (0.02ppm/digit)	0.5ppm
*Chlorine Trifluoride	ClF_3	0—1.00ppm (0.02ppm/digit)	0.3ppm
Diborane	B_2H_6	0—300ppb (5ppb/digit)	100ppb
*Fluorine	F_2	0—3.00ppm (0.05ppm/digit)	1ppm
*Hydrogen chloride	HCl	0—15.0ppm (0.5ppm/digit)	5ppm
*Hydrogen fluoride	HF	0—9.0ppm (0.5ppm/digit)	3ppm
*Hydrogen bromide	HBr	0—9.0ppm (0.5ppm/digit)	3ppm
Hydrogen sulfide	H_2S	0—1.00ppm (0.05ppm/digit)	0.3ppm
		0—30.0ppm (0.5ppm/digit)	10ppm
Nitrogen monoxide	NO	0—100ppm (1ppm/digit)	25ppm
Nitrogen dioxide	NO_2	0—15.0ppm (0.5ppm/digit)	3ppm
*Ozone	O_3	0—5.00ppm (0.05ppm/digit)	2ppm
		0—1.00ppm (0.02ppm/digit)	0.3ppm
Phosphine	PH_3	0—1.00ppm (0.05ppm/digit)	0.3ppm
Silane	SiH_4	0—15.0ppm (0.5ppm/digit)	5ppm
Sulfur dioxide	SO_2	0—30.0ppm (0.5ppm/digit)	3ppm

Remarks: 1) Specify one of above detectable gases and measuring ranges when ordering. Because model SC-90 can measure one kind of gas by one set only but not cover all gases.
2) Sampling probe is not supplied for gases marked by (*).

ACCESSORIES

Standard accessories
❶ Shoulder strap·······················1 pce
❷ Sampling probe *······················1 pce
❸ Sampling hose (1m)··················1 pce
❹ Alkaline battery ······················4 pces
❺ Test certificate·······················1 sheet
❻ Instruction manual····················1 copy

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