



## Portable Multi Toxic Gas Detector

**MODEL: SC-9000**

# 3-in-1

Allows up to 3 different toxic gas sensors to be installed in a single unit (3-in-1).

**Innovative gas detector**

- Simultaneous detection of up to 3 different toxic gases:  $\text{NH}_3$ ,  $\text{HF}$ ,  $\text{Cl}_2$ ,  $\text{HCl}$ ,  $\text{O}_3$ ,  $\text{SiH}_4$ ,  $\text{PH}_3$ , etc.
- Up to 3-year gas sensor warranty: Features next-generation high-performance gas sensors.
- Outstanding durability: Passes 1.5 m drop testing, equivalent to IP66/68 protection rating
- Bluetooth® equipped! Easy data management via smartphone (optional)
- Inherently safe explosion-proof construction allows use in explosion-proof areas.
- Continuous operating time: Approx. 60 hours (about twice the time of the previous gas detector)





# Portable Multi Toxic Gas Detector

## MODEL: SC-9000

Simultaneous Toxic Gas Detection

Up to **3** gases

Features 3 different toxic gas sensors to provide the performance of 3 conventional gas detectors in a single unit. Sensor combinations can be selected from gases including  $\text{NH}_3$ ,  $\text{HF}$ ,  $\text{Cl}_2$ ,  $\text{HCl}$ ,  $\text{O}_3$ ,  $\text{SiH}_4$ , and  $\text{PH}_3$ . Dramatically improves work efficiency while reducing purchase and maintenance costs.

\* For details of detection target gas combinations, please contact RIKEN KEIKI.

Previously...  
Each toxic gas type  
required a separate gas detector



**SC-9000**  
covers all with a  
**single unit**



Simply install the required gas sensors  
in 3 gas sensor slots!



More compact than previous gas detector



## Next-generation high-performance **F sensors** installed

What are F sensors?

Next-generation high-performance gas sensors that are more compact than previous gas sensors while offering greatly improved performance and durability.

Compared to previous  
gas sensors, the size  
(volume) has been  
reduced to less than  
1/3.



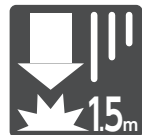
Gas sensor  
warranty

Up to **3** years

Features next-generation high-performance F sensors offering outstanding performance and allowing long-term use with peace of mind.

\* Refer to "Gas Sensor Specifications" for details of the specific warranty periods.

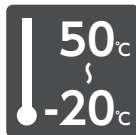
## Outstanding durability



**1.5 m**  
drop testing  
passed



Equivalent to  
**IP66/68**  
protecting rating

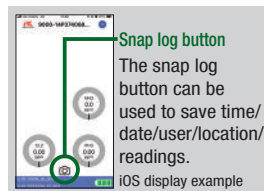


Operating temperature range  
**-20 °C to +50 °C**  
(Varies depending on gas  
sensors installed.)

## Bluetooth® equipped! \* Easy data management via smartphone

Can communicate with smart-  
phones and tablets via  
Bluetooth®. Easy data man-  
agement using the ded-  
icated RK Link app to record and  
email measurement results.

\* Please specify when ordering if you require Bluetooth® functionality.



The RK Link app can be down-  
loaded free of charge from Google  
Play or Apple Store.



Bluetooth® and the Bluetooth® logo are  
registered trademarks of Bluetooth SIG,  
Inc. and are used by RIKEN KEIKI under  
license.

## Intrinsically safe explosion-proof construction

Meets Japanese and international explosion-proof standards,  
allowing use even in explosion-proof areas.

\* Japan Ex, ATEX, IECEx

## Continuous operating time: Approx. 60 hours\*

Twice the time of the previous gas detector to allow use for a week without  
recharging, even when used 8 hours a day

\* For lithium ion battery model. Approx. 30 hours for dry cell battery model

## Usable in a wide range of fields

With a broad range of toxic gas sensors, the SC-9000 offers outstanding durability and  
inherently safe explosion-proof construction. You can select target gases depending  
on the purpose in various fields such as semiconductor plants, petrochemical plants,  
shipping, automotive plants, or fumigation.



Semiconductor plant



Petrochemical plant



Shipping



Automotive plant

## [ Accessories ]

### Tube/strap

#### Sampling probe

Approx. 94 cm tube with gas sampling rod  
(Interior coating: ETFE)  
Allows suction even with strongly  
adsorptive toxic gases.  
Part No.: 4733 9406 00



#### Shoulder strap

Attaches to the main unit for easy carrying over your  
shoulder.  
Part No.: 4777 4592 10



Appearance with accessories attached

### Batteries and power related

#### AC adapter

Part No.: 2594 1342 30  
\* Included with rechargeable  
battery model



#### Adapter plug (Type C)

Part No.: 2594 1435 00  
\* Included with ATEX/IECEx  
rechargeable battery model



#### AA alkaline batteries ×6

Part No. (single battery): 2753 3007 80  
\* Included with dry cell  
battery model



## [ Optional Accessories ]

### Batteries

#### Dry battery unit and AA alkaline batteries

Inserting batteries allows instant use in  
emergencies.

##### Dry battery unit

Part No.: (Japan Ex) 4777 9603 60  
(ATEX/IECEx) 4777 9605 10

##### AA alkaline battery

Part No.: 2753 3007 80



#### Lithium ion battery unit and AC adapter

The battery unit allows repeated use by recharging.  
The AC adapter features a USB Type-C connector.

##### Lithium ion battery unit

Part No.: (Japan Ex) 4777 9602 90  
(ATEX/IECEx) 4777 9604 30

##### AC adapter

Part No.: 2594 1342 30



### Case/holder

#### Waist belt and waist belt attachment

Allow the gas detector to be worn close to the body.

\* We recommend using in conjunction  
with the shoulder strap to prevent  
the gas detector dropping.

##### Waist belt

Part No.: 4775 5653 40

##### Waist belt attachment

Part No.: 4775 9853 10



#### Sampling rod holder

Attaches to the shoulder strap;  
allows the gas sampling rod  
tip to be stowed.

Part No.: 4775 5651 00



#### Aluminum storage case

Houses the gas detector, accessories,  
and optional accessories.

Dimensions:  
Approx. 365 mm (W) × 236 mm (H) × 226 mm (D)\*

Part No.: 4777 9579 00

\* excluding projections



### Management software/cable

#### USB cable (1 m)

Connects the gas detector to a PC.  
Used when using the software

Part No.: 2440 2728 90



Simply install the  
software on a PC.

#### Data logger management program

Software used to view and manage  
measurement results and logs of events such  
as alarms and calibrations

Part No.: (Japan Ex) 9811 0980 90  
(ATEX/IECEx) 9811 0990 80



Example: Measurement  
results (table)

Example: Measurement  
results (graph)

#### Configuration Program

A configuration program to edit SC-9000  
settings can be downloaded free of  
charge from the RIKEN KEIKI website.

### Miscellaneous

#### Adapter plugs

The Type A AC adapter can be  
converted to Type C, O, or BF.

Part No.: (EU/Type C) 2594 1435 00  
(AU/Type O) 2594 1434 20  
(UK/Type BF) 2594 1436 70



#### Protective film

To protect the LCD  
(set of 5)

Part No.: 4777 9025 70



## [ Product Specifications ]

Item	Specifications
Concentration display	LCD digital (full dot)
Detection target gases <sup>*1</sup>	Up to 3 different gas sensors can be installed. (NH <sub>3</sub> , HF, Cl <sub>2</sub> , HCl, O <sub>3</sub> , SiH <sub>4</sub> , PH <sub>3</sub> , NO, NO <sub>2</sub> )
Detection method	Pump suction type
Suction flow rate	Minimum 0.75 L/min (open flow rate)
Display items	Clock, battery level, operation status
Display languages	English, Cantonese (Traditional Chinese), Czech, French, German, Italian, Japanese, Korean, Mandarin (Simplified Chinese), Polish, Portuguese, Russian, Slovak, Spanish, Turkish, Vietnamese
Buzzer volume	Approx. 95 dB (mean value at 30 cm from source)
Gas alarm indication	Lamp flashing, continuous modulating buzzer sounding, gas concentration reading blinking
Gas alarm pattern	Self-latching, auto-reset
Fault alarm/self-diagnosis	Flow rate abnormality, system abnormality, sensor abnormality, low battery voltage, calibration failure, clock abnormality
Fault alarm indication	Lamp flashing, intermittent buzzer sounding, detail display
Fault alarm pattern	Self-latching
Communication specifications	USB 2.0 Type-C (for data logger/setting), Bluetooth 4.2 (Bluetooth Low Energy)
Power source <sup>*2</sup>	Dedicated lithium ion battery unit (BUL-9000) or dedicated dry battery unit (AA alkaline batteries ×6) (BUD-9000)
Continuous operating time	Lithium ion battery unit: Approx. 60 hours (at 25 °C, no alarm, no lighting) Dry battery unit: Approx. 30 hours (at 25 °C, no alarm, no lighting)
Operating temperature range <sup>*3</sup>	-20 °C to +50 °C (no sudden fluctuations)
Operating humidity range <sup>*3</sup>	20 to 90 %RH (no condensation)
Operating pressure range	80 kPa to 120 kPa (80 kPa to 110 kPa for explosion-proof range)
Construction <sup>*4</sup>	Dustproof and waterproof construction equivalent to IP66/68, drop resistant to 1.5 m
Explosion-proof construction	Intrinsically safe explosion-proof construction
Explosion-proof class <sup>*5</sup>	Japan Ex: Ex ia IIC T4 Ga ATEX: II 1 G Ex ia IIC T4 Ga IECEX: Ex ia IIC T4 Ga
Certification	CE marking
External dimensions	Approx. 158 mm (W) × 85 mm (H) × 132 mm (D) (excluding projections)
Weight <sup>*6</sup>	Approx. 1.1 kg

\*1: For details of detection target gas combinations, please contact RIKEN KEIKI.

\*2: To ensure explosion-proof performance, use only the batteries indicated on the explosion-proof certificate.

\*3: May vary depending on the gas sensors installed.

\*4: IPx8: No water penetration when submerged at depth of 2 m for 1 hour.

\*5: For dry cell battery model, the explosion-proof class may differ in some cases when using battery power.

\*6: Including batteries and battery unit.

## [ Gas Sensor Specifications ]

Detection target gas	Detection range	Resolution	Alarm setpoints (1st/2nd)	Warranty period
NH <sub>3</sub>	0 – 75.0 ppm	0.5 ppm	25.0/50.0 ppm	2 years
F <sub>2</sub>	0 – 3.00 ppm	0.02 ppm	1.00/2.00 ppm	1 year
HF	0 – 1.50 ppm	0.01 ppm	0.50/1.00 ppm	1 year
Cl <sub>2</sub>	0 – 1.50 ppm	0.01 ppm	0.50/1.00 ppm	3 years
HCl	0 – 6.00 ppm	0.05 ppm	2.00/4.00 ppm	3 years
HBr	0 – 6.00 ppm	0.05 ppm	2.00/4.00 ppm	3 years
ClF <sub>3</sub>	0 – 0.300 ppm	0.002 ppm	0.100/0.200 ppm	3 years
O <sub>3</sub>	0 – 0.600 ppm	0.005 ppm	0.100/0.200 ppm	1 year

Detection target gas	Detection range	Resolution	Alarm setpoints (1st/2nd)	Warranty period
SiH <sub>4</sub>	0 – 15.0 ppm	0.1 ppm	5.0/10.0 ppm	3 years
Si <sub>2</sub> H <sub>4</sub>	0 – 15.0 ppm	0.1 ppm	5.0/10.0 ppm	3 years
PH <sub>3</sub>	0 – 1.00 ppm	0.01 ppm	0.30/0.60 ppm	3 years
HCN*	0 – 15.0 ppm	0.1 ppm	5.0/10.0 ppm	3 years
NO	0 – 100 ppm	1 ppm	25/50 ppm	3 years
NO <sub>2</sub>	0 – 15.0 ppm	0.1 ppm	5.0/10.0 ppm	3 years
SO <sub>2</sub>	0 – 6 ppm	0.05 ppm	2.00/4.00 ppm	3 years

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