RIKEN KEIKI

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: NH_3, HF, Cl_2, HCl, O_3, SiH_4, 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)

CE marking compliant C€

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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 NH_3, HF, Cl_2, HCl, O_3, SiH_4, and PH_3. Dramatically improves work efficiency while reducing purchase and maintenance costs.

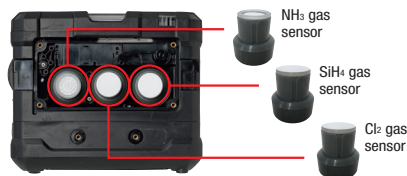* For details of detection target gas combinations, please contact RIKEN KEIKI.

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

Example

NH_3 gas detector

Cl_2 gas detector

SiH_4 gas detector

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

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

NH_3 gas sensor

SiH_4 gas sensor

Cl_2 gas sensor

More compact than previous gas detector

-22 mm

Previous gas detector — Approx. 154 mm

SC-9000 — Approx. **132** mm

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.

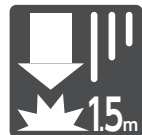Compared to previous gas sensors, the size (volume) has been reduced to less than 1/3.

Previous gas sensor

F sensor

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

IP66/68 相当
2m 1h
Equivalent to **IP66/68** protecting rating
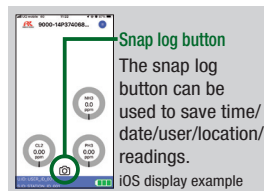
50℃ ~ -20℃
Operating temperature range **-20 °C to +50 °C** (Varies depending on gas sensors installed.)

Bluetooth® equipped!* Easy data management via smartphone

Can communicate with smartphones and tablets via Bluetooth®. Easy data management using the dedicated RK Link app to record and email measurement results.

Snap log button
The snap log button can be used to save time/date/user/location/readings.

iOS display example

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

GET IT ON Google Play

Download on the App Store

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

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

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

Waist belt
attachment

Waist belt

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.
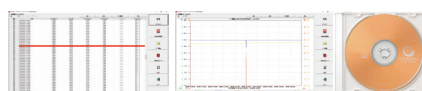Used when using the software

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[*1]	Up to 3 different gas sensors can be installed. (NH_3, F_2, HF, Cl_2, HCl, HBr, ClF_3, O_3, SiH_4, Si_2H_6, PH_3, HCN, NO, NO_2, SO_2)
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[*2]	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[*3]	-20 °C to +50 °C (no sudden fluctuations)
Operating humidity range[*3]	20 to 90 %RH (no condensation)
Operating pressure range	80 kPa to 120 kPa (80 kPa to 110 kPa for explosion-proof range)
Construction[*4]	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[*5]	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[*6]	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_3	0 – 75.0 ppm	0.5 ppm	25.0/50.0 ppm	2 years
F_2	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_2	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_3	0 – 0.300 ppm	0.002 ppm	0.100/0.200 ppm	3 years
O_3	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_4	0 – 15.0 ppm	0.1 ppm	5.0/10.0 ppm	3 years
Si_2H_6	0 – 15.0 ppm	0.1 ppm	5.0/10.0 ppm	3 years
PH_3	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_2	0 – 15.0 ppm	0.1 ppm	5.0/10.0 ppm	3 years
SO_2	0 – 6.00 ppm	0.05 ppm	2.00/4.00 ppm	3 years

* ATEX/IECEx models are not available. Cannot be installed for export outside Japan due to export restrictions.

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