

## Standard accessories

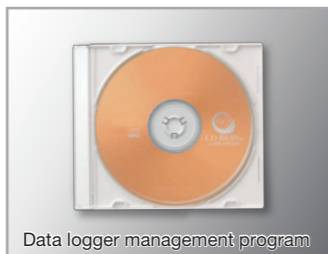
- ① Lithium ion rechargeable battery unit and AC adapter for charging
- ② Dry battery unit and AA alkaline batteries (× 3)
- ③ Gas sampling rod and gas sampling tube
- ④ Filter cylinder and connecting tube
- ⑤ Filter cylinder retaining belts
- ⑥ Shoulder strap
- ⑦ CO<sub>2</sub> removal filter and retaining belt\*<sup>2</sup>

\*1: The dry battery unit is selectable as standard only with the RX-8000.

\*2: Provided only with the RX-8500



## Optional accessories (sold separately)



- Lithium ion rechargeable battery unit
- AC adapter for charging
- Dry battery unit
- AA alkaline batteries (× 3)
- Sampling rod holder
- Absorbent cotton
- Demand flow valve
- Calibration gas cans
- Gas sampling bag set
- H<sub>2</sub>S calibration gas set (CK-82) \*RX-8000 only



# Portable Gas Detectors

Model RX-8000/RX-8500/RX-8700

ATEX  
IECEX  
TIIS (Japan Ex)  
CE marking  
MED \*RX-8000 only  
ABS Type Approval \*RX-8500/RX8700 only  
JG (Japan Government Type Approval)  
NK (Class NK Type Approval) \*RX-8500/RX8700 only



### [Target gases]

◆RX-8000  
HC or CH<sub>4</sub>: 0 - 100.0 %LEL/Up to 100.0 vol%  
O<sub>2</sub>: 0 - 25.0 vol% (Service range 25.1 - 40.0 vol%)

◆RX-8500  
CH<sub>4</sub>: 0 - 100.0 %LEL/5 - 100.0 vol%  
O<sub>2</sub>: 0 - 25.0 vol% (Service range 25.1 - 40.0 vol%)  
CO: 0 - 1,000 ppm  
CO<sub>2</sub>: 0 - 20.0 vol%

◆RX-8700  
HC: 0 - 100.0 %LEL/2 - 100.0 vol%  
O<sub>2</sub>: 0 - 25.0 vol% (Service range 25.1 - 40.0 vol%)  
H<sub>2</sub>S: Low concentration measurement mode: 0 - 30.0 ppm  
(Service range 30.5 - 100.0 ppm)  
High concentration measurement mode: 0 - 1,000 ppm

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※The contents described in this catalog are subject to change without notice according to the performance improvement.

### ★ Distributed by:



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## Features

- **Capable of measuring combustible gas (HC or CH<sub>4</sub>) from low to high concentrations**  
The easy-to-use auto range switching feature automatically switches to the vol% range if the combustible gas concentration measured exceeds 100 %LEL.
- **Infrared sensor maintains high accuracy even in inert gas or N<sub>2</sub> atmospheres**  
Features infrared type combustible gas sensor unaffected by oxygen concentrations during measurement. Its high selectivity also means it's virtually unaffected by interference from other coexisting gases or water vapor.
- **Intrinsically safe explosion-proof construction**  
The Ex ia IIC T4 X explosion-proof rating allows use even in Zone 0 hazardous areas. Protection rating equivalent to IP67.
- **Complies with SOLAS convention amendments**  
Meets the requirements of amended SOLAS convention for portable gas detectors carried by vessels.
  - ① Capable of measuring combustible gas (HC or CH<sub>4</sub>) and oxygen (O<sub>2</sub>) simultaneously
  - ② Intrinsically safe explosion-proof construction
  - ③ Continuous operation for at least 10 hours

## Applications

● **Concentration monitoring during gas purging work on gas facilities**

● **Ensuring safety before gas elimination and tank cleaning work**

On land

● **Measuring various gas concentrations inside cargo tanks**

● **Measuring various gas concentrations inside ballast tanks**

On ships

- Monitoring performance of inert gas emitting equipment [HC, CH<sub>4</sub>, O<sub>2</sub>]
- Measuring residual gas concentrations inside tanks during repair work [CO<sub>2</sub>, CO]
- Checking safety before entering enclosed spaces [H<sub>2</sub>S, O<sub>2</sub>]

## Specifications

### ○ RX-8000



**Able to measure HC/CH<sub>4</sub> with high accuracy even in inert gas or N<sub>2</sub> atmospheres**

|                                      |   |  |
|--------------------------------------|---|--|
| Target gases                         | Combustible gas (HC* <sup>1</sup> or CH <sub>4</sub> )  | Oxygen (O <sub>2</sub> )   |
| Measuring principles                 | Non-dispersive infrared type  | Galvanic cell type   |
| Measurement range (Service range)    | 0 - 100.0 %LEL/Up to 100.0 vol%* <sup>2</sup>   | 0 - 25.0 vol% (25.1 - 40.0 vol%)   |
| 1 digit                              | 0.5 %LEL (0 - 100.0 %LEL)/0.5 vol% (Up to 100.0 vol%)   | 0.1 vol%   |
| Measuring method                     | Pump suction type (Minimum suction flow rate: 0.75 L/min)   |  |
| Display                              | LCD digital (7-segment + sign + bar meter)  |  |
| Fault alarms                         | System abnormality, sensor abnormality, low battery voltage, calibration failure, low flow rate, clock abnormality                    |  |
| Fault alarm indications              | Lamp flashing, intermittent buzzer sounding, detail display   |  |
| Power source* <sup>3</sup>           | Lithium ion battery unit or dry battery unit (AA alkaline batteries × 3)  |  |
| Continuous operating time            | Lithium ion battery unit: Approx. 15 hours (with full charge, at 25 °C, no alarm, no lighting)  | Dry battery unit: Approx. 10 hours (with new batteries, at 25 °C, no alarm, no lighting) |
| Operating temperature/humidity range | -20 °C - +50 °C (no sudden changes), up to 95 %RH (no condensation)   |  |
| External dimensions                  | Approx. 154 mm (W) × 81 mm (H) × 127 mm (D) (excluding projections)   |  |
| Weight                               | Approx. 1.1 kg (with lithium ion battery unit), approx. 1.0 kg (with dry battery unit)  |  |
| Protection level                     | IP67 equivalent   |  |
| Explosion-proof                      | Intrinsically safe explosion-proof construction (Ex ia IIC T4 X)  |  |
| Certifications                       | TIS explosion-proof certified, ATEX explosion-proof certified, IECEx certified, CE marking compliant, MED compliant, JG type approved |  |
| Functions* <sup>4</sup>              | LCD backlight, data logger, peak display, log data display, pump shutdown   |  |

### ○ RX-8500



**A single unit supports all operations within LNG vessels**

|                                      |  |   |                      |  |
|--------------------------------------|--|---|----------------------|--|
| Target gases                         | Combustible gas (CH <sub>4</sub> )   | Oxygen (O <sub>2</sub> )  | Carbon monoxide (CO) | Carbon dioxide (CO <sub>2</sub> )  |
| Measuring principles                 | Non-dispersive infrared type   | Galvanic cell type  | Electrochemical type | Non-dispersive infrared type   |
| Measurement range (Service range)    | 0 - 100.0 %LEL/<br>5 - 100.0 vol%* <sup>2</sup>  | 0 - 25.0 vol%<br>(25.1 - 40.0 vol%)   | 0 - 1,000 ppm        | 0 - 20.0 vol%  |
| 1 digit                              | 0.5 %LEL (0 - 100.0 %LEL)<br>0.5 vol% (5.0 - 100.0 vol%)   | 0.1 vol%  | 1 ppm                | 0.01 vol% (0 - 2.00 vol%)<br>0.05 vol% (2.00 - 5.00 vol%)<br>0.1 vol% (5.00 - 20.0 vol%) |
| Measuring method                     | Pump suction type (Minimum suction flow rate: 0.75 L/min)  |   |                      |  |
| Display                              | LCD digital (7-segment + sign + bar meter)   |   |                      |  |
| Fault alarms                         | System abnormality, sensor abnormality, low battery voltage, calibration failure, low flow rate, clock abnormality   |   |                      |  |
| Fault alarm indications              | Lamp flashing, intermittent buzzer sounding, detail display  |   |                      |  |
| Power source* <sup>3</sup>           | Lithium ion battery unit or dry battery unit (AA alkaline batteries × 3) (option)  |   |                      |  |
| Continuous operating time            | Lithium ion battery unit: Approx. 15 hours (with full charge, at 25 °C, no alarm, no lighting)   | Dry battery unit: Approx. 8 hours (with new batteries, at 25 °C, no alarm, no lighting) |                      |  |
| Operating temperature/humidity range | -20 °C - +50 °C (no sudden changes), up to 95 %RH (no condensation)  |   |                      |  |
| External dimensions                  | Approx. 154 mm (W) × 81 mm (H) × 163 mm (D) (excluding projections)  |   |                      |  |
| Weight                               | Approx. 1.2 kg (with lithium ion battery unit), approx. 1.1 kg (with dry battery unit)   |   |                      |  |
| Protection level                     | IP67 equivalent  |   |                      |  |
| Explosion-proof                      | Intrinsically safe explosion-proof construction (Ex ia IIC T4 X)   |   |                      |  |
| Certifications                       | TIS explosion-proof certified, ATEX explosion-proof certified, IECEx certified, CE marking compliant, JG type approved, NK type approved, ABS type approved, MED (pending) |   |                      |  |
| Functions* <sup>4</sup>              | LCD backlight, data logger, peak display, log data display, pump shutdown  |   |                      |  |

### ○ RX-8700



**Capable of high-concentration H<sub>2</sub>S measurement (Measurement mode switching with one push of a button)**

|                                      |  |   |  |                                      |
|--------------------------------------|--|---|--|--------------------------------------|
| Target gases                         | Combustible gas (HC)* <sup>1</sup>   | Oxygen (O <sub>2</sub> )  | Hydrogen sulfide (H <sub>2</sub> S)                      |                                      |
| Measuring principles                 | Non-dispersive infrared type   | Galvanic cell type  | Electrochemical type                                     |                                      |
| Measurement range (Service range)    | 0 - 100.0 %LEL/<br>2 - 100.0 vol%* <sup>2</sup>  | 0 to 25.0 vol%<br>(25.1 - 40.0 vol%)  | Low concentration:<br>0 - 30.0 ppm<br>(30.5 - 100.0 ppm) | High concentration:<br>0 - 1,000 ppm |
| 1 digit                              | 0.5 %LEL (0 - 100.0 %LEL)<br>0.5 vol% (5.0 - 100.0 vol%)   | 0.1 vol%  | 0.5 ppm  | 1 ppm                                |
| Measuring method                     | Pump suction type (Minimum suction flow rate: 0.75 L/min)  |   |  |                                      |
| Display                              | LCD digital (7-segment + sign + bar meter)   |   |  |                                      |
| Fault alarms                         | System abnormality, sensor abnormality, low battery voltage, calibration failure, low flow rate, clock abnormality   |   |  |                                      |
| Fault alarm indications              | Lamp flashing, intermittent buzzer sounding, detail display  |   |  |                                      |
| Power source* <sup>3</sup>           | Lithium ion battery unit or dry battery unit (AA alkaline batteries × 3) (option)  |   |  |                                      |
| Continuous operating time            | Lithium ion battery unit: Approx. 15 hours (with full charge, at 25 °C, no alarm, no lighting)   | Dry battery unit: Approx. 8 hours (with new batteries, at 25 °C, no alarm, no lighting) |  |                                      |
| Operating temperature/humidity range | -20 °C - +50 °C (no sudden changes), up to 95 %RH (no condensation)  |   |  |                                      |
| External dimensions                  | Approx. 154 mm (W) × 81 mm (H) × 163 mm (D) (excluding projections)  |   |  |                                      |
| Weight                               | Approx. 1.3 kg (with lithium ion battery unit), approx. 1.2 kg (with dry battery unit)   |   |  |                                      |
| Protection level                     | IP67 equivalent  |   |  |                                      |
| Explosion-proof                      | Intrinsically safe explosion-proof construction (Ex ia IIC T4 X)   |   |  |                                      |
| Certifications                       | TIS explosion-proof certified, ATEX explosion-proof certified, IECEx certified, CE marking compliant, JG type approved, NK type approved, ABS type approved, MED (pending) |   |  |                                      |
| Functions* <sup>4</sup>              | LCD backlight, data logger, peak display, log data display, pump shutdown  |   |  |                                      |

\*1: HC calibration gas is isobutane. Contact Riken Keiki if you intend to measure a gas other than the calibration gas. \*2: This product automatically switches measurement ranges. The product will automatically switch to the vol% range if the combustible gas concentration measured exceeds 100 %LEL. \*3: The RX-8500 and RX-8700 standard versions use the lithium ion battery unit. The dry battery version is optional. For the dry battery version, use dry batteries specified in the certificate of conformity for electrical equipment used in potentially explosive atmospheres to meet explosion-proof performance requirements. \*4: Contact Riken Keiki if you require the optional gas alarm function.