

# Model Portable gas monitor

# GX-3R



## Small & Light

The newly developed dual-sensor configuration reduces size by approximately 30% compared to previous models.

Light weight (about 100g) means it won't interfere with your work.

## 5-year warranty

The instrument and sensors have 5-year warranty\*.

\*Option.

**Weights  
just  
100g!**

**Intrinsically safe explosion-proof construction and flame - proof enclosures**

**Water and dust resistant IP66/68**

**Robust design (Withstands 7m drop)**



Play the Promotional video from here.

Now on the website!

**RIKEN KEIKI Co.,Ltd.**

# Active in various fields!



**Construction sites**



**Gas plants**



**Shipyards**



**Steel plants**

Compact lightweight design won't impede work in confined spaces.

Tough design to withstand 7m drop, that you can use even when working at heights.

Use the suction unit to confirm safety before entering pits.

The newly developed CO sensor reduces effects of hydrogen interference.

## You can understand at a glance! GX-3R

Model	GX-3R
Detection gas	1 to 4 types
Battery	Rechargeable battery
Detection method	Diffusion type *Pump unit available as option (see next page)
Alarm setpoint	Settings can be changed.
Combustible gas conversion function	26 types
Data logger function	Records up to 3,600 data.
Confirmation beep function	Can be changed (see section below for details).
Lunch break function	Can be changed (see section below for details).
Protective cover	Provided as standard
Heat-resistant case, leather case	Optional accessories
Five-component detection	⇒ We recommend the GX-3R Pro model.
Dry battery power	⇒ We recommend the GX-3R Pro model.
Bluetooth	⇒ We recommend the GX-3R Pro model.

## Combustible conversion gas list





Conversion gas	Gas name displayed	Calibration gas conversion		Conversion gas	Gas name displayed	Calibration gas conversion	
		CH <sub>4</sub>	i-C <sub>4</sub> H <sub>10</sub>			CH <sub>4</sub>	i-C <sub>4</sub> H <sub>10</sub>
Methane	CH <sub>4</sub>	—	×	Benzene	C <sub>6</sub> H <sub>6</sub>	○	○
Isobutane	i-C <sub>4</sub> H <sub>10</sub>	○	—	N-hexane	n-C <sub>6</sub> H <sub>14</sub>	○	○
Hydrogen	H <sub>2</sub>	○	○	Toluene	C <sub>7</sub> H <sub>8</sub>	○	○
Methanol	CH <sub>3</sub> OH	○	○	N-heptane	n-C <sub>7</sub> H <sub>16</sub>	○	○
Acetylene	C <sub>2</sub> H <sub>2</sub>	○	○	Xylene	C <sub>8</sub> H <sub>10</sub>	○	○
Ethylene	C <sub>2</sub> H <sub>4</sub>	○	○	N-nonane	n-C <sub>9</sub> H <sub>20</sub>	○	○
Ethane	C <sub>2</sub> H <sub>6</sub>	○	×	Ethyl acetate	EtAc	○	○
Ethanol	C <sub>2</sub> H <sub>5</sub> OH	○	○	Isopropyl alcohol	IPA	○	○
Propylene	C <sub>3</sub> H <sub>6</sub>	○	○	Methyl ethyl ketone	MEK	○	○
Acetone	C <sub>3</sub> H <sub>6</sub> O	○	○	Methyl methacrylate	MMA	○	○
Propane	C <sub>3</sub> H <sub>8</sub>	○	×	Dimethyl ether	DME	○	○
Butadiene	C <sub>4</sub> H <sub>6</sub>	○	○	Methyl isobutyl ketone	MIBK	○	○
Cyclopentane	C <sub>5</sub> H <sub>10</sub>	○	○	Tetrahydrofuran	THF	○	○

## Mounted with the new R sensors, which are long-term consistence sensors

GX-3R mounted with the new R sensor series, which have dramatically improved the performance from the previous sensors.

The sensors have 5-year warranty\*.

\*Option.

HC or CH <sub>4</sub>	O <sub>2</sub>	CO&H <sub>2</sub> S	CO
Tough construction against poisoning- and impact-resistant!	New electrochemical oxygen sensor, which improved the basic characteristics.	2-in-1 configuration enabled smaller detector!	Significantly reduce H <sub>2</sub> interference with a two-sensor structure!
			

## Wide range of safety functions

### Combustible gas conversion function

Eliminates the need for complex calculations. Allows direct readout of 26 different combustible gas types.

### Lunch break

Enabling this function retains the TWA and peak values and allows integrating measurement whether power is on or off.

### Alarm setpoints can be freely adjusted

You can now adjust alarm setpoints on the main unit. Allows monitoring based on the customer's own standards.

### Cal. Limit

Indicates the number of days until recommended regular maintenance when the power is turned on. Reminds the user to perform maintenance on the product to ensure safe use.

### Confirmation beep

This function provides audible notification that the device is functioning correctly. Buzzer sounds at preset intervals while measurement is underway.

## Optional accessories



## Model GX-3R



1 Heat-resistant case	Case for protection from heat resource. Uses a safety pin.	Part No. 4777 4259 40
2 Leather case	Case for protection against dirt. Uses the clip on the unit.	Part No. 4777 4257 00
3 Belt clip	Allows the product to be attached to a belt or pocket.	Part No. 4777 9202 40
4 Arm/Ankle belt	Belt for securing the unit to your arm or ankle.	Part No. 4777 9293 30
5 Protective film	Protects the display. (set of 5)	Part No. 4777 9296 50
6 Manual suction unit	External manual pump. Draws in at greater flow rates than electric pump.	(with sampling probe) Part No. 4777 9302 80 (with 8m float-type tube) Part No. 4777 9304 20 (with 30m weighted tube) Part No. 4777 9305 00
7 Charging cradle	Cradle for recharging the unit. Cradles can be interconnected.	Part No. BC-3R 00
8 Five-unit AC adaptor	One AC adaptor recharges up to five units. *Recharging times remain unchanged.	(with 22.5cm cable) Part No. 4777 9329 70 (with 60cm cable) Part No. 4777 9319 80 (with 120cm cable) Part No. 4777 9333 20
9 Calibration adaptor	Adaptor for applying gas to GX-3R during bump test and calibration. (with outlet nipple and rubber seal)	Part No. 4777 9311 00
10 Data management program	Software for viewing and managing measurement data.	Part No. 9811 0870 60

## 11 Pump unit RP-3R

An external electric pump.  
Allows use for suction sampling.



### Specifications

Model	RP-3R
Suction flow rate	High mode: 0.4 L/min or more Low mode: 0.25 L/min or more
Battery	AA alkaline battery × 1
Continuous operating time	High mode: Approx. 10 hours Low mode: Approx. 16 hours
Temperature range	-20°C~+50°C (at a constant condition)
Humidity range	0~95%RH (non-condensing)
Explosion-proof class	Inherently safe explosion-proof construction ATEX II1G Ex ia IIC T4 Ga IECEX Ex ia IIC T4 Ga Japan Ex Ex ia IIC T4 Ga
Structure	Drip-proof and dust-proof performances compliant to IP67 level
Dimensions / Weight	Approx. 82mm (W) × 96mm (H) × 29mm (D) / Approx. 120g
Optional accessories	8m float-type gas sampling tube Filters (set of 10) Meshes (set of 10)

\* Cannot be connected to other models GX-2009, GX-3R Pro and others.

## 12 Docking station SDM-3R

Allows the user to perform a simplified pre-work check (bump test) and gas calibration automatically.



### Specifications

Model	SDM-3R
Power supply	100 to 240 V AC ±10%, 50/60 Hz
Suction flow rate	Approx. 0.25 L/min
Temperature range	0~40°C (at a constant condition)
Humidity range	0~95%RH (non-condensing)
Dimensions / Weight	Approx. 130mm (W) × 110mm (H) × 250mm (D) / Approx. 800g
Optional accessories	Connecting fixture, wall-mounting fixture, exhaust tube

## Also consider the high-spec [GX-3R Pro] model!

- Up to 5 gases can be detected**  
Detects carbon dioxide and sulfur dioxide in addition to combustible gases, O<sub>2</sub>, H<sub>2</sub>S, and CO.
- Connects with Bluetooth**  
Allows connection to a smartphone.  
Use the dedicated app iOS, Android to send alarm notifications by email.
- Runs on either dry cell or rechargeable batteries**  
Unit system for easy replacement.
- Easy-to-read full-dot display**  
Supports a total of 11 different languages.

## Model GX-3R Pro



\* For details, see the GX-3R Pro catalog.



## Specifications

Model	GX-3R		
Detection method	Diffusion type (Changeable to sampling type by attaching RP-3R)		
Gas alarm indication	Lamp flashing, continuous modulating buzzer sounding, gas concentration display blinking, vibration Reset operation: Self-latching		
Fault alarm	System abnormality, sensor abnormality, battery voltage drop, calibration failure		
Fault alarm indication	Lamp flashing, intermittent buzzer sounding, detail display Reset operation: Self-latching		
Displays	LCD digital, backlight, operation status, clock, battery level, temperature, peak reading, calibration notification		
Buzzer volume	Approx. 95dB (30cm)		
Data logger function	Maximum number of items: 3,600 Interval: 5 minutes (adjustable) Communication system: IrDA		
Explosion-proof class	ATEX	II1G Ex da ia IIC T4 Ga / IM1 Ex da ia I Ma (With combustible gas sensor) II1G Ex ia IIC T4 Ga / IM1 Ex ia I Ma (No combustible gas sensor)	
	IECEX	Ex da ia IIC T4 Ga / Ex da ia I Ma (With combustible gas sensor) Ex ia IIC T4 Ga / Ex ia I Ma (No combustible gas sensor)	
	Japan Ex	Ex ia IIC T4 Ga	
Protection level	Equivalent to IP66/68 (2 m, 1 h)		
Power source	Lithium ion rechargeable battery unit Charging time: Approx. 3 hours		
Continuous operating time*1	Long-life battery mode on: Approx. 40 hours (25°C, fully charged, no alarm, no lighting)		
	Long-life battery mode off: Approx. 25 hours (25°C, fully charged, no alarm, no lighting)		
Temperature range/ humidity range*2	-40°C~+60°C(no sudden changes), 0~95%RH (non-condensation)		
External dimensions/weight	Approx. 58mm (W) × 65mm (H) × 26mm (D) (excluding protrusions) / Approx.100g		
Warranty	3 years (optional 2 years extension available)		

\*1 Varies depending on sensor type installed. Please contact Riken Keiki for more information.

\*2 In temporary ambient conditions for approximately 15 minutes. The operating temperature and humidity ranges for continuous ambient conditions are as follows: Temperature: -20 °C to +50 °C (no sudden changes) / Humidity: 10 to 90 %RH (no condensation)

## Detection gas

Detection target gas	Combustible gas (HC or CH <sub>4</sub> )	Oxygen(O <sub>2</sub> )	Carbon monoxide(CO)	Hydrogen sulfide(H <sub>2</sub> S)
Detection principle	New ceramic type	Electrochemical type		
Detection range (service range)	0~100%LEL	0~25.0 vol% (~40.0 vol%)	0~500ppm (~2000ppm)	0~100.0ppm (~200.0ppm)
1 digit	1%LEL	0.1vol%	1ppm	0.1ppm
Gas alarm setpoint (can be set by user)	1st alarm : 10%LEL 2nd alarm : 25%LEL 3rd alarm : 50%LEL OVER alarm: 100%LEL	L alarm : 19.5vol% LL alarm : 18.0vol% H alarm : 23.5vol% OVER alarm: 40.0vol%	1st alarm : 25ppm 2nd alarm : 50ppm 3rd alarm : 1200ppm TWA alarm : 25ppm STEL alarm : 200ppm OVER alarm: 2000ppm	1st alarm : 5.0ppm 2nd alarm : 30.0ppm 3rd alarm : 100.0ppm TWA alarm : 1.0ppm STEL alarm : 5.0ppm OVER alarm: 200.0ppm

## Standard accessories

Protective cover



Appearance when attached



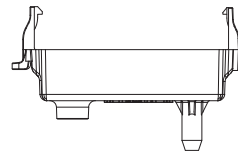
Protective cover (Part No. 4777 4161 10)



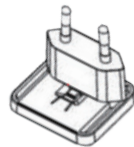
AC adapter (Part No. 2594 0898 30)

Alligator clip (Part No. 4777 9203 10)

Hand strap (Part No. 0888 0605 90)



Calibration adapter (simple type) (Part No. 4777 9307 40)



EU plug (Part No. 2594 0933 60)

## Type list

TYPE	Detection gas
TYPE A	LEL, O <sub>2</sub> , H <sub>2</sub> S, CO
TYPE B	LEL, O <sub>2</sub> , H <sub>2</sub> S
TYPE C	LEL, O <sub>2</sub> , CO
TYPE CH	LEL, O <sub>2</sub> , CO*
TYPE D	LEL, O <sub>2</sub>
TYPE E	O <sub>2</sub> , H <sub>2</sub> S
TYPE F	O <sub>2</sub> , CO
TYPE FH	O <sub>2</sub> , CO*
TYPE I	LEL, CO
TYPE IH	LEL, CO*
TYPE K	H <sub>2</sub> S

\* CO sensor with reduced H<sub>2</sub> interference

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