PCOE-1161

RIKEN KEIKI

6-Component Gas Detector with PID Sensors

for enhanced safety

Portable 6-Component Gas Detector

MODEL: GX-6100

Features PID sensors to enable VOC detection.

State-of-the-art 6-component gas detector for use across a wide range of conditions

- Simultaneous detection of up to 6 gases: HC/CH_4, O_2, CO, H_2S, VOC, CO_2, NH_3, etc.
- Bluetooth® equipped!
  Easy data management via smartphone (option)
- High-performance gas sensors with up to 3-year warranty
- Runs for approximately 28 hours with a single charge
  (approximately twice as long as previous models)
- Detects combustible gases from ppm to vol% with a single unit

CE marking CE

RIKEN KEIKI Co., Ltd.

Portable 6-Component Gas Detector

MODEL: GX-6100

Easy to carry

Handy size

The handy 6-component GX-6100 detector combines both portability and functionality. Includes a panic alarm and man down alarm, in addition to gas alarms, to ensure worker safety.

With PID sensors*

For rapid response even for low-concentration gases

PID sensors can be installed to detect VOCs and a wide range of other gases at low concentrations down to the ppb range. Incorporates a gas list of approximately 680 different types, allowing gas concentrations to be read off directly.

* PID: Acronym for photoionization detector

For chemical substance

Risk assessment*

The Industrial Safety and Health Act mandates risk assessments* when handling chemical substances, regardless of work site dimensions. The GX-6100 (with PID sensors) enables measurement of approximately 200 different chemical substances covered by the risk assessment regulations. It provides direct concentration readings using a single unit.

* Examining the hazards and harmful effects of handling chemical substances and considering measures to prevent workplace accidents

Max. **6** types
Simultaneous detection gases

Greater number of gases with a single unit

Allows simultaneous detection of multiple gases using a single unit instead of requiring multiple gas detectors and detector tubes.

O_2 H_2S CO Combustible gas (%LEL or vol%) + VOC NH_3 SO_2 HCN Cl_2 PH_3 NO_2 CO_2 Combustible gas (ppm)

In addition to **4** main gas types

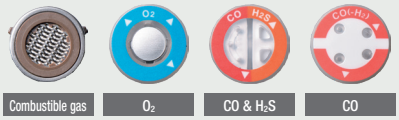
Ability to **detect** up to **2** gas types **simultaneously**

Features newly added **ppm range** and **vol% range** sensors for combustible gases.

R Sensor
Next-generation high-performance sensors

Compatible with "R Sensor"

Next-generation high-performance sensors offer greatly improved performance and durability.



Combustible gas	O_2	CO & H_2S	CO
Tough construction with excellent toxicity and impact resistance	Electrochemical type with greatly improved basic characteristics	2-in-1 dual construction	Two-sensor configuration minimizes H_2 interference

Max. **3** years
Sensor warranty

Longer warranty for peace of mind

Utilizes R Sensor for outstanding long-term stability. Up to three-year sensor warranty*. Allows use with peace of mind.

* R Sensor series only. Warranty for other sensors is one year.

Rapid information sharing in emergencies

Panic alarm function

An alarm activated manually when a worker senses a hazard or emergency situation.
It can be used to prompt rapid assistance and response from others in the vicinity.

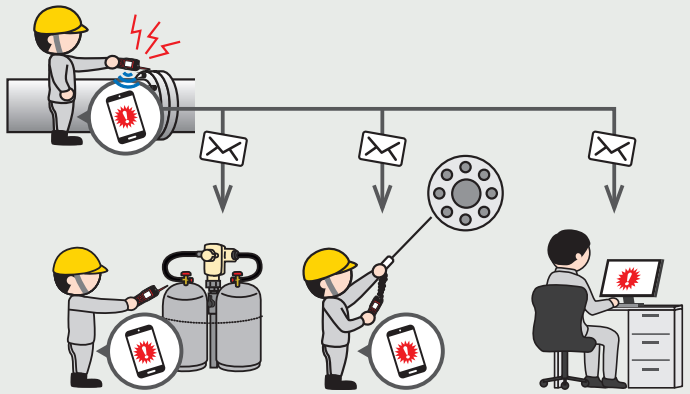
Man down alarm function

An alarm triggered automatically when a worker remains motionless for a certain period of time.
The alarm rapidly alerts those in the vicinity to a worker's abnormal condition and enables rapid response.

Bluetooth® equipped* Allowing on-site information to be shared remotely (Models for EU, US, Canada, and Japan only)

Bluetooth® can be used for communication with smartphones. Allows alarms to be issued to remote locations in real time to notify emergency situations using the dedicated RK Link app. The RK Link app can be downloaded free of charge from Google Play or Apple Store.

* Bluetooth® functionality is available only in countries and regions that comply with the Radio Law (EU, US, Canada, and Japan). Please specify when ordering if you require Bluetooth® functionality.



Linking with smartphones via Bluetooth®

Easy data management via smartphone

The snap logger function can be used to easily record measurements and save them to the app. Saved position data and gas concentrations can be sent automatically to preset email addresses.

Handy features for ease of use

Combustible gas conversion function

Models with new ceramic type combustible gas sensors installed can be used to directly read off up to 27 different combustible gas types.

* Provided no thermal conductivity sensor is installed.
* Conversion to methane, ethane, and propane is not possible with isobutane models.

Gas name	Display name
Methane	CH_4
Isobutane	i-C_4H_{10}
Hydrogen	H_2
Methanol	CH_3OH
Acetylene	C_2H_2
Ethylene	C_2H_4
Ethane	C_2H_6

Gas name	Display name
Ethanol	C_2H_5OH
Propylene	C_3H_6
Acetone	C_3H_6O
Propane	C_3H_8
Butadiene	C_4H_6
Cyclopentane	C_5H_{10}
Benzene	C_6H_6

Gas name	Display name
N-hexane	n-C_6H_{14}
Toluene	C_7H_8
Heptane	n-C_7H_{16}
Xylene	C_8H_{10}
N-nonane	n-C_9H_{20}
Ethyl acetate	EtAc
Isopropyl alcohol	IPA

Gas name	Display name
Methyl ethyl ketone	MEK
Methyl methacrylate	MMA
Dimethyl ether	DME
Methyl isobutyl ketone	MIBK
Tetrahydrofuran	THF
N-pentane	n-C_5H_{12}

Screen display inversion

The screen display flips 180° automatically to match the orientation of the unit. This prevents errors when reading off the display.

Alarm setpoint setting function

Use the setting program to change/edit settings. Supports management and operation in accordance with the customer's own criteria.

Confirmation beep function

Indicates that the gas detector is functioning normally. The buzzer sounds at preset intervals while measurement is underway.

Calibration notification function

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

Continuous operating time: Approx. 28 hours

Allows use for extended periods without worrying about battery depletion, providing reliable safety management support.

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

GET IT ON Google Play

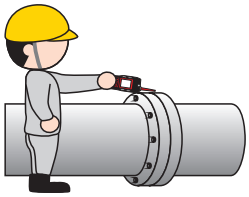
Download on the App Store

Accessories

Tapered nozzle
Part No.: 4777 4057 20

Protect cover
Part No.: 4777 4035 00

Belt clip
Part No.: 4777 9099 00



For measurements in specific locations within reach

Protective film
To protect the LCD
Part No.: 4777 4068 90

Hand strap
Part No.: 0888 0605 90

Charger/AC adapter
Part No.: BC-6000A (00)
*Included with rechargeable battery models (IECEx/ATEX models also include adapter plug [type C].)

AA alkaline batteries ×3
Part No. (single battery): 2753 3007 80
* Included with dry battery models

Fresh air adjustment filters
*Inclusion and type will differ depending on specificatons.

Optional accessories

Batteries

Dry battery unit (BUD-6100)/ AA alkaline batteries

Allows use even in emergencies simply by inserting dry cell batteries.

Dry battery unit (BUD-6100)
Part No.: 4777 39

AA alkaline battery
Part No. (single battery): 2753 3007 80

Lithium ion battery unit (BUL-6100)/ Charger/AC adapter

The battery unit can be recharged for repeated use.

Lithium ion battery unit (BUL-6100)
Part No.: 4777 38

Charger/AC adapter
Part No.: BC-6000A (00)

Gas sampling rod/tubes*

Gas sampling rod/Gas sampling tubes

Gas sampling rod
Part No.: 0904 0275 00

Gas sampling tubes

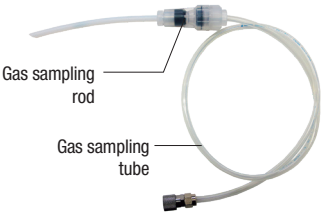
75 cm
Part No.: 0914 0135 30

5 m
Part No.: 0914 0136 10

10 m
Part No.: 0914 0137 80

20 m
Part No.: 0914 0138 50

30 m
Part No.: 0914 0139 20



Sampling tubes with float

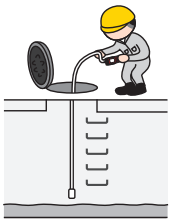
The waterproof filter inside the float separates water to allow gas detection. Ideal for locations where water is present at the detection point.

5 m
Part No.: 4777 9368 60

10 m
Part No.: 4777 9374 60

20 m
Part No.: 4777 9375 30

30 m
Part No.: 4777 9376 10



For measurements inside tanks

Two-stage gas sampling rod

Extends up to approximately 70 cm to enable measurements in hard-to-reach locations. (Retracted length: approx. 40 cm / Overall length: approx. 70 cm)
Part No.: 4383 0730 80

For measurements in elevated locations

* When PIS or ESS sensors are installed, the detection target gas may be absorbed, preventing accurate measurements.

Management software/cable

Infrared communication port (IR001)

For infrared communication between the gas detector and a PC. Used when using the software program

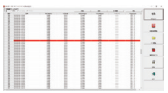
Part No.: 2594 1262 80

Simply install the software on a PC.

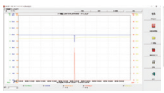
Data logger management program

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

Part No.: (IECEx/ATEX models) 9812 0060 70
(Japan Ex models) 9812 0050 80



Example: Measurement results (table)



Example: Measurement results (graph)

Setting program

Use the setting program for the GX-6100 to configure settings and edit a VOC sensor gas list of more than 600 different gas types. This can be downloaded free of charge from the RIKEN KEIKI website.

Easy management via PC

PID list

Maintenance parts and other items

Tube holder

For VOC sensors (10.0 eV). Used when using the prefilter tube

Part No.: 0904 0284 10

Prefilter tube

For VOC sensors (10.0 eV). Interference gas removal filter for selective detection of benzene

Pack of 10

Part No.: 1879 2231 10

Lamp cleaning kit

For VOC sensors. Used for cleaning when the sensor sensitivity is reduced due to internal fouling

Part No.: 9030 4017 20

Pellet removal tool

For VOC sensors. Used to remove internal components when cleaning inside the sensor

Part No.: 9030 4007 30

Adapter plugs

To convert the Type A plug of the AC adapter to Type C, Type O, and Type BF plugs

Type C
Part No.: 2585 0064 30

Type O
Part No.: 2585 0066 80

Type BF
Part No.: 2585 0065 10

Protective film

To protect the LCD (set of 5)

Part No.: 4777 9064 60

Filters (replacement)

Please contact RIKEN KEIKI for more information.

Using a **prefilter tube** allows **selective detection** of **benzene**!

VOC sensors (10.0 eV) with high selectivity can be used together with a proprietary prefilter tube that removes interfering substances such as toluene to enable selective detection of benzene at extremely low concentrations.

Efficient measurement method

Main substances that can be removed by the prefilter tube:
Toluene, xylene, ethyl benzene, acetone, hydrogen sulfide

STEP 1 **Normal mode**

Check for presence of VOCs including benzene without prefilter tube.

If reading exceeds control concentration

STEP 2 **Benzene select mode**

Attach the prefilter tube to selectively detect benzene by removing interference gases.

Benzene concentration can be checked using the prefilter tube, if needed, for improved work efficiency.

Tube holder

Safe, convenient tube cutter

The end of the tube can be cut as required. No separate cutter is required.

Insert prefilter tube here.

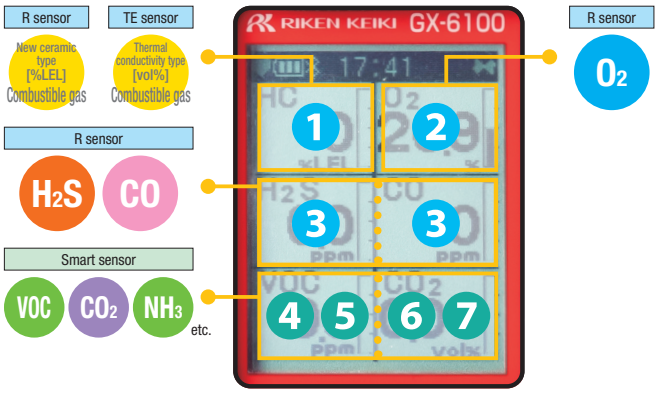
Designed to separate if subjected to any load. This minimizes the risk of damage to the gas detector if subjected to an impact, allowing use with peace of mind.

* A VOC sensor (10.0 eV) must be installed to use benzene select mode and the prefilter tube. For more information, refer to the 'Product code table' and 'Sensor specifications'.

Sensors

Sensor selection

Up to six different sensors can be installed.
Refer to the 'Product code table' below to select the desired sensors.



* When both combustible gas R sensor and TE sensor are installed, the reading for one of the sensors will be displayed, depending on the gas concentration and settings.

Combustible gas sensor selection

Four different types of combustible gas sensors in terms of detection principles can be installed.
Select the sensors to suit the intended purpose based on their specific detection ranges and features.

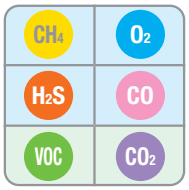
Detection principle	Hot-wire semiconductor type	New ceramic type	Thermal conductivity type	Non-dispersive infrared type
Detection range	ppm	%LEL	vol%	%LEL/vol%
Features	Capable of detecting low concentrations	Allows use of combustible gas conversion function	Capable of detecting high concentrations	Capable of detecting even in inert gas Can be used even where Si is present

Sensor selection examples

Example 1

$CH_4/O_2/H_2S/CO$ + VOC/CO_2 [ppm]] R sensor/TE sensor, Smart sensor

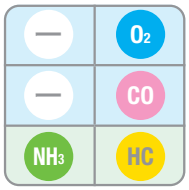
Combustible gas sensor:
New ceramic type [%LEL] + Thermal conductivity type [vol%]



Example 2

O_2/CO + HC/NH_3] R sensor, Smart sensor

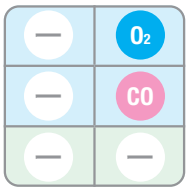
Combustible gas sensor:
Non-dispersive infrared type [%LEL/vol%]



Example 3

O_2/CO] R sensor

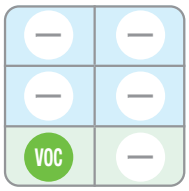
Combustible gas sensor: **N/A**



Example 4

VOC] Smart sensor

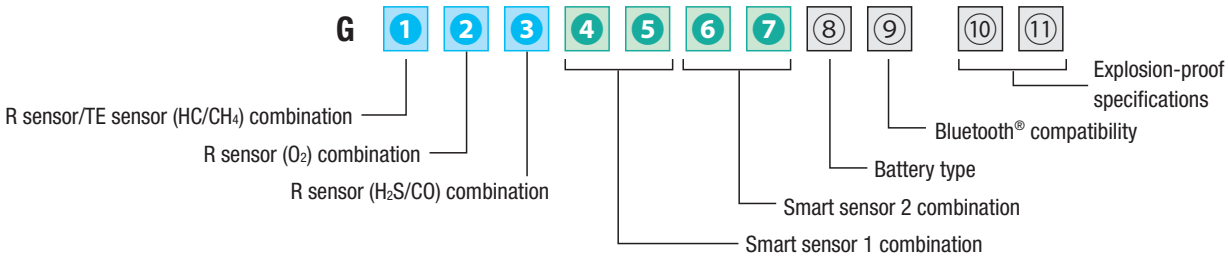
Combustible gas sensor: **N/A**



All of these are examples. Example 1 shows the full capacity of sensors installed. Fewer sensors can be installed. Different combinations of sensors can be installed. Refer to the 'Product code table' below to select sensors.

Product code table

Select a GX-6100 product based on the sensors needed, power supply type, Bluetooth® compatibility, and explosion-proof specifications.
Refer to the product table below to select the desired specifications.



①: R sensor/TE sensor (HC/CH_4) combination

Code	Sensor model (detection target gas) [units]
0	N/A
M	NCR-6309 (CH_4) [%LEL]
H	NCR-6309 (HC (i-C_4H_{10})) [%LEL]
D	NCR-6309 (CH_4) [%LEL] + TE-7561 (CH_4) [vol%]
V	TE-7561 (CH_4) [vol%]

②: R sensor (O_2) combination

Code	Sensor model (detection target gas)
0	N/A
1	ESR-X13P (O_2)

③: R sensor (H_2S/CO) combination

Code	Sensor model (detection target gas)
0	N/A
1	ESR-A1DP (H_2S/CO)
2	ESR-A13i (H_2S)
3	ESR-A1CP (CO) [Reduced H_2 interference]
4	ESR-A13P (CO)

④⑤ or ⑥⑦: Smart sensor combination

Code	Sensor model (detection target gas) [units]
00	N/A
P1	PIS-001A (VOC, 10.6 eV) [ppb]
P2	PIS-002A (VOC, 10.6 eV) [ppm]
P3	PIS-003 (VOC, 10.0 eV) [ppm]
E1	ESS-03DH (SO_2)
E2	ESS-03DH (NO_2)
E3	ESS-03DH (HCN)
E4	ESS-B332 (NH_3)
E5	ESS-B335 (Cl_2)*1
E6	ESS-03DH (PH_3)
D1	DES-3311-1 (CO_2) [vol%]
D2	DES-3311-2 (HC (i-C_4H_{10})) [%LEL/vol%]
D3	DES-3311-3 (CH_4) [%LEL/vol%]
D4	DES-3311-4 (CO_2) [ppm]
S1	SHS-8661 (CH_4) [ppm]*1 *2
S2	SHS-8661 (HC (i-C_4H_{10})) [ppm]*1 *2

*1 ③: H_2S cannot be selected for the R sensor combination.
*2 ①: Only M, H, or D can be selected.
④⑤ / ⑥⑦: S1 and S2 cannot be selected simultaneously.
⑥⑦: Only D1, D2, D3, or D4 can be selected for the smart sensor combination.

⑧: Battery type

Code	Specifications
L	Lithium ion battery unit BUL-6100
D	Dry battery unit BUD-6100

⑨: Bluetooth® compatibility

Code	Specifications
0	Bluetooth® not supported
1	Bluetooth® supported*3

*3: Selectable only when using in EU, US, Canada, or Japan that complies with the Radio Law

⑩⑪: Explosion-proof specifications

Code	Specifications
00	Japan Ex
50	IECEx/ATEX

Sensor specifications

● Combustible gas sensor 1

R sensor (new ceramic type)

Detection target gas		Methane (CH_4)		Isobutane (i-C_4H_{10})	
Sensor model		NCR-6309			
Explosion-proof specifications		IECEx/ATEX	Japan Ex	IECEx/ATEX	Japan Ex
Display range		0 – 100 %LEL		0 – 100 %LEL	
Detection range		0 – 100 %LEL		0 – 100 %LEL	
Resolution		1 %LEL		1 %LEL	
Alarm setpoints*1	First alarm	10 %LEL		10 %LEL	
	Second alarm	25 %LEL	50 %LEL	25 %LEL	50 %LEL
	Third alarm	50 %LEL		50 %LEL	
	TWA	–		–	
	STEL	–		–	
Operating temperature range*2		-20 to +50 °C		-20 to +50 °C	
Operating humidity range*3		10 to 90 %RH		10 to 90 %RH	

● Combustible gas sensor 1

TE sensor (thermal conductivity type)

Detection target gas		Methane (CH_4)
Sensor model		TE-7561
Explosion-proof specifications		IECEx/ATEX and Japan Ex
Display range		0 – 100 vol%
Detection range		0 – 100 vol%
Resolution		1 vol%
Alarm setpoints*1	First alarm	–
	Second alarm	–
	Third alarm	–
	TWA	–
	STEL	–
Operating temperature range*2		-20 to +50 °C
Operating humidity range*3		0 to 95 %RH

● Oxygen sensor 2

R sensor (electrochemical type)

Detection target gas		Oxygen (O_2)	
Sensor model		ESR-X13P	
Explosion-proof specifications		IECEx/ATEX	Japan Ex
Display range		0 – 40.0 vol%	
Detection range		0 – 25.0 vol%	
Resolution		0.1 vol%	
Alarm setpoints*1	First alarm	19.5 vol%	
	Second alarm	18.0 vol%	
	Third alarm	23.5 vol%	25.0 vol%
	TWA	–	
	STEL	–	
Operating temperature range*2		-20 to +50 °C	
Operating humidity range*3		10 to 90 %RH	

● Toxic gas sensor 3

R sensor (electrochemical type)

Detection target gas		Hydrogen sulfide (H_2S)		Carbon monoxide (CO)		Hydrogen sulfide (H_2S)		Carbon monoxide (CO)	
Sensor model		ESR-A1DP				ESR-A13i		ESR-A1CP/ESR-A13P	
Explosion-proof specifications		IECEx/ATEX	Japan Ex	IECEx/ATEX	Japan Ex	IECEx/ATEX	Japan Ex	IECEx/ATEX	Japan Ex
Display range		0 – 200.0 ppm		0 – 2000 ppm		0 – 200.0 ppm		0 – 2,000 ppm	
Detection range		0 – 100.0 ppm	0 – 30.0 ppm	0 – 500 ppm		0 – 100.0 ppm	0 – 30.0 ppm	0 – 500 ppm	
Resolution		0.1 ppm		1 ppm		0.1 ppm		1 ppm	
Alarm setpoints*1	First alarm	5.0 ppm	1.0 ppm	25 ppm		5.0 ppm	1.0 ppm	25 ppm	
	Second alarm	30.0 ppm	10.0 ppm	50 ppm		30.0 ppm	10.0 ppm	50 ppm	
	Third alarm	100.0 ppm	10.0 ppm	1,200 ppm	50 ppm	100.0 ppm	10.0 ppm	1,200 ppm	50 ppm
	TWA	1.0 ppm		25 ppm		1.0 ppm		25 ppm	
	STEL	5.0 ppm		200 ppm		5.0 ppm		200 ppm	
Operating temperature range*2		-20 to +50 °C		-20 to +50 °C		-20 to +50 °C		-20 to +50 °C	
Operating humidity range*3		10 to 90 %RH		10 to 90 %RH		10 to 90 %RH		10 to 90 %RH	

● VOC sensor 4 5/6 7 (P1 to P3)

Smart sensor (Photoionization detection type (PID))

Detection target gas		Volatile organic compounds (VOCs)		
Sensor model		PIS-001A	PIS-002A	PIS-003
Photoionization energy		10.6 eV	10.6 eV	10.0 eV
Explosion-proof specifications		IECEx/ATEX and Japan Ex		
Display range/ Detection range		0 – 40,000 ppb	0 – 4,000 ppm	VOC: 0 – 100.0 ppm Benzene: 0 – 50.0 ppm*4
Resolution		1 ppb (0 – 4,000 ppb) 10 ppb (4,000 – 40,000 ppb)	0.1 ppm (0 – 400.0 ppm) 1 ppm (400 – 4,000 ppm)	0.01 ppm (0 – 10.00 ppm) 0.1 ppm (10.0 – 100.0 ppm)
Alarm setpoints*1	First alarm	5,000 ppb	400.0 ppm	5.00 ppm
	Second alarm	10,000 ppb	1,000 ppm	10.0 ppm
	Third alarm	10,000 ppb	1,000 ppm	10.0 ppm
	TWA	OFF	OFF	OFF
	STEL	OFF	OFF	OFF
Operating temperature range*2		-20 to +50 °C	-20 to +50 °C	-20 to +50 °C
Operating humidity range*3		0 to 95 %RH	0 to 95 %RH	0 to 95 %RH

● Toxic gas sensor 4 5/6 7 (E1 to E6)

Smart sensor (electrochemical type)

Detection target gas		Sulfur dioxide (SO_2)	Nitrogen dioxide (NO_2)	Hydrogen cyanide (HCN)*5	Phosphine (PH_3)	Ammonia (NH_3)	Chlorine (Cl_2)
Sensor model		ESS-03DH	ESS-03DH	ESS-03DH	ESS-03DH	ESS-B332	ESS-B335
Explosion-proof specifications		IECEx/ATEX and Japan Ex					
Display range		0 – 99.90 ppm	0 – 20.00 ppm	0 – 15.0 ppm	0 – 20.00 ppm	0 – 400.0 ppm	0 – 10.00 ppm
Detection range		0 – 99.90 ppm	0 – 20.00 ppm	0 – 15.0 ppm	0 – 1.00 ppm	0 – 400.0 ppm	0 – 10.00 ppm
Resolution		0.05 ppm	0.05 ppm	0.1 ppm	0.01 ppm	0.5 ppm	0.05 ppm
Alarm setpoints*1	First alarm	2.00 ppm	3.00 ppm	5.0 ppm	0.30 ppm	25.0 ppm	0.50 ppm
	Second alarm	5.00 ppm	6.00 ppm	10.0 ppm	1.00 ppm	50.0 ppm	1.00 ppm
	Third alarm	5.00 ppm	6.00 ppm	10.0 ppm	1.00 ppm	50.0 ppm	1.00 ppm
	TWA	2.00 ppm	3.00 ppm	OFF	0.30 ppm	25.0 ppm	0.50 ppm
	STEL	5.00 ppm	OFF	4.7 ppm	1.00 ppm	35.0 ppm	1.00 ppm
Operating temperature range*2		-20 to +50 °C	-20 to +50 °C	-20 to +50 °C	-20 to +50 °C	-20 to +50 °C	-20 to +50 °C
Operating humidity range*3		10 to 90 %RH	10 to 90 %RH	10 to 90 %RH	10 to 90 %RH	20 to 90 %RH	20 to 90 %RH

● Carbon dioxide sensor 4 5/6 7 (D1, D4)

Smart sensor (non-dispersive infrared type (NDIR))

Detection target gas		Carbon dioxide (CO_2)	Carbon dioxide (CO_2)
Sensor model		DES-3311-4	DES-3311-1
Explosion-proof specifications		IECEx/ATEX and Japan Ex	
Display range		0 – 10,000 ppm	0 – 10.00 vol%
Detection range		0 – 10,000 ppm	0 – 5.00 vol%
Resolution		20 ppm	0.02 vol%
Alarm setpoints*1	First alarm	5,000 ppm	0.50 vol%
	Second alarm	OFF	3.00 vol%
	Third alarm	OFF	3.00 vol%
	TWA	5,000 ppm	0.50 vol%
	STEL	OFF	3.00 vol%
Operating temperature range*2		-20 to +50 °C	
Operating humidity range*3		0 to 95 %RH	

● Combustible gas sensor 4 5/6 7 (D2, D3)

Smart sensor (non-dispersive infrared type (NDIR))

Detection target gas		Methane (CH_4)	Isobutane (i-C_4H_{10})
Sensor model		DES-3311-3	DES-3311-2
Explosion-proof specifications		IECEx/ATEX and Japan Ex	
Display range		0 – 100 %LEL/ 100 %LEL – 100.5 vol%	0 – 100 %LEL/ 100 %LEL – 30.0 vol%
Detection range		0 – 100 %LEL/ 100 %LEL – 100.0 vol%	0 – 100 %LEL
Resolution		1 %LEL/0.5 vol%	
Alarm setpoints*1	First alarm	10 %LEL	
	Second alarm	50 %LEL	
	Third alarm	50 %LEL	
	TWA	–	
	STEL	–	
Operating temperature range*2		-20 to +50 °C	
Operating humidity range*3		0 to 95 %RH	

● Combustible gas sensor 4 5/6 7 (S1, S2)

Smart sensor (hot-wire semiconductor type)

Detection target gas		Methane (CH_4)	Isobutane (i-C_4H_{10})
Sensor model		SHS-8661	
Explosion-proof specifications		IECEx/ATEX and Japan Ex	
Display range		0 – 5,000 ppm	0 – 2,000 ppm
Detection range		0 – 2,000 ppm	0 – 500 ppm
Resolution		10 ppm	
Alarm setpoints*1	First alarm	–	
	Second alarm	–	
	Third alarm	–	
	TWA	–	
	STEL	–	
Operating tLemperature range*2		-20 to +50 °C	
Operating humidity range*3		20 to 95 %RH	

*1: The alarm setpoint values above are the default settings. Where the values are shown or are indicated as "OFF", settings can be changed by the user using the setting program. *2: With no sudden fluctuations
*3: With no condensation *4: The display range and detection range in benzene select mode for which benzene can be selectively measured using the prefilter tube (sold separately).
*5: Due to export restrictions, concentrations of 0.0 – 0.2 ppm with the HCN sensor are indicated as 0.0 ppm.

Product specifications

Model	GX-6100
Concentration display	LCD digital (full-dot display)
Detection method	Pump suction type
Suction flow rate	Minimum 0.45 L/min (with tube not fitted)
Display items	Clock, battery level, operation status
Display languages	Japanese, English, Korean, Chinese (simplified), Chinese (traditional), Vietnamese, Italian, Spanish, Slovak, Czech, German, Turkish, French, Portuguese, Polish, Russian
Buzzer sound pressure	Approx. 95 dB (mean value at 30 cm from source, with protect cover fitted)
Gas alarm indication	Lamp flashing, continuous modulating buzzer sounding, gas concentration readout blinking, vibration
Gas alarm pattern	Self-latching, auto-reset (Default setting: Self-latching)
Fault alarm/self-diagnosis	Flow rate abnormality, system abnormality, sensor abnormality, low battery voltage, adjustment failure, clock abnormality
Fault alarm indication	Lamp flashing, intermittent buzzer sounding, detail display
Fault alarm pattern	Self-latching
Panic/man down alarm indication*1	Prealarm: Lamp flashing, intermittent buzzer sounding (prealarm) Main alarm: Lamp flashing, continuous modulating buzzer sounding
Panic alarm pattern*1	Self-latching
Man down alarm pattern*1	Auto reset
Communication specifications	Bluetooth® (Bluetooth Low Energy)
Power source	Lithium ion battery unit (BUL-6100) or dry battery unit (BUD-6100) (AA alkaline batteries × 3)*2
Continuous operating time*3	Lithium ion battery unit: Approx. 28 hours Dry battery unit: Approx. 8 hours (at 25 °C, no alarm, no lighting)
Operating temperature range	-20 to +50 °C (no sudden fluctuations)
Operating humidity range*4	0 to 95 %RH (no condensation)
Operating pressure range	80 to 120 kPa (80 to 110 kPa for explosion-proof range)
Structure	Dustproof/waterproof construction equivalent to IP67 (excluding pipes)
Explosion-proof construction	Intrinsically safe explosion-proof construction, flame-proof enclosure
Explosion-proof class	IECEx*5 Ex da ia IIC T4 Ga (with new ceramic type sensor) Ex ia IIC T4 Ga (without new ceramic type sensor) ATEX*5 II 1 G Ex da ia IIC T4 Ga (with new ceramic type sensor) II 1 G Ex ia IIC T4 Ga (without new ceramic type sensor) Explosion-proof electrical equipment type certified (Japan Ex) Ex da ia IIC T4 Ga (with new ceramic type sensor) Ex ia IIC T4 Ga (without new ceramic type sensor)
Certifications	CE marking
External dimensions	Approx. 70 mm (W) × 201 mm (H) × 56 mm (D) (excluding projections)
Weight	Approx. 500 g (with BUL-6100), approx. 450 g (with BUD-6100)

*1: The panic alarm and man down alarm are disabled by default. The settings must be enabled in order to use these alarms.
*2: Japan Ex models can use three Toshiba LR6T (JE) batteries.
IECEx/ATEX models can use either three Toshiba LR6T (JE) or three Duracell MN1500 batteries.
*3: For six-component models detecting combustible gas (new ceramic type sensor), oxygen, hydrogen sulfide, carbon monoxide, VOC, and carbon dioxide. The continuous operating time varies depending on the sensor installed.
*4: Operating ambient humidity range: May vary depending on the sensors installed. For more information, refer to 'Sensor specifications' on P. 6.
*5: When using the BUL-6100 or BUD-6100 with Toshiba dry cell batteries. The temperature class is T3 when using the BUD-6100 with Duracell (MN1500) batteries.

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