

Safety information

The GX-6000 can measure up to six gases with six sensors.

Standard unit measures four gases with four sensors for general combustible gases (LEL), Oxygen (O₂), Hydrogen Sulfide (H₂S) and Carbon Monoxide (CO).

Other remaining two slots are for Smart Sensors which consist of sensor part and circuit board and are connected with apparatus through digital signal output to various sensors. Four different types of detection principle are applied for Smart Sensors and up to two sensors can be mounted into the GX-6000.

Just like GX-6000, GX-6100 can measure up to six gases with six sensors.

The combustible gas sensor (LEL) for GX-6100 satisfies the requirement. Moreover, Hotwire Semiconductor Sensor can be installed, making it possible to measure a range of combustible gas ppm. And with a Thermal Conductivity Sensor, %VOL of combustible gases can be measured. GX-6100 can measure a range of ppm, LEL, and %VOL of combustible gases with a use of these three sensors.

Gas is sampled by a built-in micro pump.

Either alkaline battery unit "BUD-6000/BUD-6100" or lithium-ion battery unit "BUL-6000/BUL-6100" can be installed into GX-6000 and GX-6100.







Structure of battery unit allows end users to replace it by themselves.

It is supposed to replace the battery unit, alkaline battery, and charge the rechargeable battery at non-hazardous area. Also, Charging BUL-6000/BUL-6100 should be done with a specific model, BC-6000 or SDM-6000.







BC-6000 is a battery charger for both GX-6000 and GX-6100.

SDM-6000 is a docking station for charging and calibration for both GX-6000 and GX-6100.

Specification for safety

GX-6000 Ex code T class	Ambient temperature range for use	Combustible gas sensor	Battery
Ex ia IIB T4 Ga  II1G Ex ia IIB T4 Ga	-20°C to +50°C	Mounted	BUL-6000 / BUL-6100
Ex ia IIC T4 Ga  II1G Ex ia IIC T4 Ga	-20°C to +50°C	Not Mounted	BUL-6000 / BUL-6100
Ex ia IIB T4 Ga  II1G Ex ia IIB T4 Ga	-20°C to +50°C	Mounted	BUD-6000 / BUD-6100 LR6 (TOSHIBA)
Ex ia IIC T4 Ga  II1G Ex ia IIC T4 Ga	-20°C to +50°C	Not Mounted	BUD-6000 / BUD-6100 LR6 (TOSHIBA)
Ex ia IIB T3 Ga  II1G Ex ia IIB T3 Ga	-20°C to +50°C	Mounted	BUD-6000 / BUD-6100 MN1500 (DURACELL)
Ex ia IIC T3 Ga  II1G Ex ia IIC T3 Ga	-20°C to +50°C	Not Mounted	BUD-6000 / BUD-6100 MN1500 (DURACELL)

• Ambient temperature range during battery charging : 0°C to +40°C

GX-6100 Ex code T class	Ambient temperature range for use	Combustible gas sensor	Battery
Ex da ia IIC T4 Ga  II1G Ex da ia IIC T4 Ga	-20°C to +50°C	Mounted	BUL-6100 / BUL-6000
Ex ia IIC T4 Ga  II1G Ex ia IIC T4 Ga	-20°C to +50°C	Not Mounted	BUL-6100 / BUL-6000
Ex da ia IIC T4 Ga  II1G Ex da ia IIC T4 Ga	-20°C to +50°C	Mounted	BUD-6100 / BUD-6000 LR6 (TOSHIBA)
Ex ia IIC T4 Ga  II1G Ex ia IIC T4 Ga	-20°C to +50°C	Not Mounted	BUD-6100 / BUD-6000 LR6 (TOSHIBA)
Ex da ia IIC T3 Ga  II1G Ex da ia IIC T3 Ga	-20°C to +50°C	Mounted	BUD-6100 / BUD-6000 MN1500 (DURACELL)
Ex ia IIC T3 Ga  II1G Ex ia IIC T3 Ga	-20°C to +50°C	Not Mounted	BUD-6100 / BUD-6000 MN1500 (DURACELL)

- Ambient temperature range during battery charging : 0°C to +40°C

Electrical data

- Power supply of Li-ion battery unit : BUL-6000
Two parallel connected Li-ion cells used in battery pack BUL-6000 are from type Maxell INR18650PB1 or SDI INR18650-15M or SONY US18650VT3.
- Power supply of Li-ion battery unit : BUL-6100
Two parallel connected Li-ion cells used in battery pack BUL-6100 are from type PANASONIC NCR18650GA.
- Um=250V.
- Power supply of alkaline battery unit : BUD-6000 and BUD-6100
Powered by three series AA size alkaline batteries, model LR6 by TOSHIBA or model MN1500 by DURACELL

Certificate numbers

- IECEx Certificate number : IECEx PRE 15.0011
- ATEX Certificate number : Presafe 15 ATEX6171X
- UK Type Examination Certificate : DNV 22 UKEX 25912X

List of standards

- | | | |
|-----------------------|-------------------------|---------------------------|
| • IEC 60079-0 : 2017 | • EN IEC 60079-0 : 2018 | • BS EN IEC60079-0 : 2018 |
| • IEC 60079-1 : 2014 | • EN 60079-1 : 2014 | • BS EN 60079-1 : 2014 |
| • IEC 60079-11 : 2011 | • EN 60079-11 : 2012 | • BS EN 60079-11 : 2012 |

Specific conditions of “X”-mark:

Regarding ATEX specification, the measuring function according to Annex II paragraph 1.5.5 of the Directive is not covered by this EU-type examination. It shall comply with the requirements from the relevant European harmonized standards which provide guidance on the performance of gas detection equipment and safety devices.

The measuring function according to schedule 1, paragraph 24 of the Regulation is not covered in this UK-type examination. It shall comply with the requirements from the relevant UK Designated Standards which provide guidance on the performance of gas detection equipment.

WARNING

- Do not charge in hazardous location.
- Do not charge it except by genuine charger.
- Do not replace battery unit in hazardous location.
- Do not replace dry batteries in hazardous location.
- Do not attempt to disassemble or alter the instrument.
- Use only with connected alkaline aa battery, type LR6 manufactured by TOSHIBA, or type MN1500 manufactured by DURACELL
- The combustible gas sensor NCR-6309, to measure LEL, is the only part of this Gas Monitor system with flame - proof construction.
- This product is an explosion-proof product and is not to be disassembled or modified with the exception of specified parts.
- NCR-6309 must not be exposed to ultraviolet light.
- This product integrates a sensor having flameproof construction.
- If assembly is not performed as specified, explosion protection performance will be compromised. When replacing the sensor and filter, properly install genuine parts and torque to specification.
- The re-adjustment and parts replacement etc including the gas calibration shall be contacted to our nearest agent or RIKEN KEIKI Co., Ltd.

INST. No. 0 0 0 0 0 0 0 0 0 0

A B C D E

A: Manufacturing year (0-9)

B: Manufacturing month (1-9, XYZ for Oct. - Dec.)

C: Manufacturing lot

D: Serial number

E: Code of factory

**RIKEN KEIKI Co.,Ltd.**

2-7-6, Azusawa, Itabashi-ku, Tokyo, 174-8744, Japan

Phone : +81-3-3966-1113

Fax : +81-3-3558-9110 GIII

E-mail : intdept@rikenkeiki.co.jp

Web site : <http://www.rikenkeiki.co.jp>