CERTIFICATE

(1) EU-Type Examination

(2) **Equipment or protective systems intended for use in potentially explosive atmospheres - Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number: **DEKRA 21ATEX0089X** Issue Number: **1**

(4) Product: **Portable Gas Detector 9000 series**

(5) Manufacturer: **RIKEN KEIKI Co., Ltd.**

(6) Address: **2-7-6, Azusawa, Itabashi-ku, Tokyo, 174-8744, Japan**

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) DEKRA Certification B.V., Notified Body number 0344 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential test report number NL/DEK/ExTR21.0064/01.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0 : 2018 **EN 60079-11 : 2012** **EN 60079-1 : 2014**

except in respect of those requirements listed at item 18 of the Schedule.

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

II 1 G Ex da ia IIC T4…T3 Ga
or
II 1 G Ex ia IIC T4…T3 Ga

Date of certification: 26 April 2024

DEKRA Certification B.V.

L.G. van Schie
Certification Manager

Throughout this document, a point is used as the decimal separator.

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(13) # SCHEDULE

(14) **to EU-Type Examination Certificate DEKRA 21ATEX0089X** Issue No. **1**

(15) **Description**

The Portable Gas Detector 9000 series is designed to provide continuous exposure monitoring of up to 6 mixture toxic gases and/or oxygen by suction type method.

It contains up to 3 R-sensors for the measurement of oxygen (O_2), hydrogen sulphide (H_2S) and carbon monoxide (CO) as well as maximum of 3 F-sensors out of 5 sensors for measuring of combustible gases, toxic gases, CO_2 and VOC.

F-sensor will internally process concertation calculation and transmit digital data from gas concentration to the main CPU.

Gas sampling is done by the internal pump. Up to two pumps can be installed, sampling of two systems is possible.

The measurement results are displayed on the LCD while gas alarms can be issued via LED and buzzer.

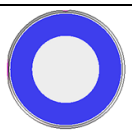
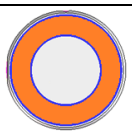
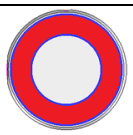
The examination of the Portable Gas Detector does not include a judgment of the functional performance of the apparatus.

Type designation

The type GX-9000 contains all sensor combinations.
The type GX-9000H is limited to combinations of
R-sensors for detection of O_2 and low concentration of H_2S,
F-sensors ESF for detection of high concentration of H_2S and
F-sensors IRF.
The type SC-9000 is limited to multiple of ESF sensors.

Following sensor options are availible:

R-sensors

Name	ESR (3EC)	ESR (3EC)	ESR (3EC) or ESR (4EC)
Target Gas	O_2	H_2S	CO
Appearance			
Detection Principle	Electro Chemical	Electro Chemical	Electro Chemical

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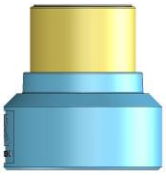
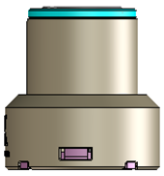
F-sensors

Name	NCF	TEF	ESF	IRF	PIF
Target Gas	Combustible	Combustible	Toxic	CO_2 / CH_4 / HC	VOC
Range	%LEL	VOL%	ppm	ppm / vol%	ppb / ppm
Appearance					
Detection principle	Catalytic	Thermal Conductivity	Electro Chemical	NDIR	PID

Marking variations and thermal data

The relation between type of battery used, combustible gas thermo-catalytic sensor model NC-6322, ambient temperature range and marking symbols is given below:

Marking code	**Ambient temperature**	**Combustible gas thermo-catalytic sensor NC-6322**	**Battery unit**	**Cell type**
II 1 G Ex da ia IIC T4 Ga	-40 °C to +60 °C	Yes	BUL-9000	NCR18650GA (Panasonic)
II 1 G Ex ia IIC T4 Ga		No		
II 1 G Ex da ia IIC T4 Ga	-40 °C to +60 °C	Yes	BUD-9000	LR6 (Toshiba)
II 1 G Ex ia IIC T4 Ga		No		
II 1 G Ex da ia IIC T4 Ga	-40 °C to +40 °C	Yes	BUD-9000	MN1500 (Duracell)
II 1 G Ex ia IIC T4 Ga		No		
II 1 G Ex da ia IIC T3 Ga	-40 °C to +60 °C	Yes		
II 1 G Ex ia IIC T3 Ga		No		

(13) # SCHEDULE

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Electrical data

Supply:
Battery unit type BUD-9000 with 6 Alkaline Manganese AA batteries (2 parallel lines of 3 in series connected batteries), type LR6 manufactured by Toshiba or type MN1500 manufactured by Duracell
or
battery unit type BUL-9000 with 3 lithium-ion rechargeable batteries (parallelly connected), type NCR18650GA manufactured by Panasonic.

Main unit backup battery type CR1220 manufactured by Maxell.
ESF sensor backup battery type CR1632 manufactured by MuRata.

Installation instructions

The instructions provided with the product shall be followed in detail to assure safe operation.

(16) **Report Number**

NL/DEK/ExTR21.0064/01.

(17) **Specific conditions of use**

For ambient temperature range see (15).

Equipment must be prevented from impact to the buzzer opening at the enclosure.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at item (9).

(19) **Test documentation**

As listed in Report No. NL/DEK/ExTR21.0064/01.