

# EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:  
**MEDB00004SX**  
Revision No:  
**1**

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

## This is to certify:

**That the Portable Oxygen analysis and gas detection equipment**

with type designation(s)  
**Portable gas analyser RX-8500 & RX-8700**

Issued to  
**RIKEN KEIKI Co., Ltd.**  
**Itabashi-ku, Tokyo, Japan**

is found to comply with the requirements in the following Regulations/Standards:  
Regulation **(EU) 2020/1170,**  
**item No. MED/3.30. SOLAS 74, Regulation II-2/4, VI/3, XI-1/7, FSS Code 15 and**  
**MSC.1/Circ.1477, IMO MSC.1/Circ.1581.**

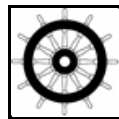
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2025-01-28.**

Issued at **Hamburg** on **2020-11-11**

DNV GL local station:  
**Yokohama**

Approval Engineer:  
**Didier Girardin**



Notified Body  
No.: **0098**

for **DNV GL SE**

**Gerhard Aulbert**  
**Head of Notified Body**

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU. This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled. Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Job Id: **344.1-008792-3**  
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## Product description

Portable Multi-Gas Monitor RX-8500/RX-8700 is a gas monitors designed to provide continuous exposure monitoring of combustible gas, Oxygen, toxic gas such as cabaon monoxide carbon Dioxide and hydrogen sulfied in hazardous environments.The gas sampling is suctioned by build-in micro pump. Battery LI-ion battery BUL-8000 for power supply.

<b>[RX-8500]</b>	<b>(CH4)</b>	<b>(O2)</b>	<b>(CO2)</b>	<b>(CO)</b>
Measuring principle	Non-dispersive infrared type	Galvanic cell type	Non-dispersive infrared type	Electrochemical type
Measuring range <Service range>	0 - 100.0% LEL/ 5 - 100.0 vol%	0 - 25.0 vol% <25.1 - 40.0 vol%>	0 - 20.0 vol%	0 - 1000 ppm
Minimum resolution	0.5% LEL (0 - 100.0% LEL) 0.5 vol% (5.0 - 100.0 vol%)	0.1vol%	0.01 vol% (0 - 2.00 vol%) 0.05 vol% (2.00 - 5.00 vol%) 0.1 vol% (5.00 - 20.0 vol%)	1ppm
<b>[RX-8700]</b>	<b>(HC)</b>	<b>(O2)</b>	<b>(H2S)</b>	
Measuring principle	Non-dispersive infrared type	Galvanic cell type	Electrochemical type	
Measuring range <Service range>	0 - 100.0% LEL/ 2 - 100.0 vol%	0 - 25.0 vol% <25.1 - 40.0 vol%>	Low concentration 0 - 30.0 ppm <30.5 - 100.0 ppm>	High concentration 0 - 1000 ppm
Minimum resolution	0.5% LEL (0 - 100.0% LEL) 0.5 vol% (5.0 - 100.0 vol%)	0.1vol%	0.5ppm	1ppm

<b>[RX-8500]/ [RX-8700]</b>	
Suction flow rate	0.75 L/min or more (Open flow rate)
Power supply	Dedicated lithium ion battery unit [BUL-8000]
Dimensions	Approx. 154 (W) x 81 (H) x 163 (D) mm
Weight	About 1.2 kg (with BUL-8000)
Operating Temp.	-20 - +50°C (at a constant condition)
Ingress proof rating	IP65/ IP67

## Place of manufacture

RIKEN KEIKI Co., Ltd.  
 2-3.Minamisakae-cho, Kasukabe  
 SAITAMA, JAPAN 344-0057

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### Application/Limitation

- Thermal shock test and Oil resistance test in accordance with IEC 60945 : 2002 (Ed.4) additionally carried out (see report No. 19/073E dated 2019.05.28).
- The equipment is compliant with following DNVGL location Class and application:
  - EMC-A : All locations except bridge and open deck (IEC 60092-504 (2016) table 1 item 15-20)
  - Enclosure B: (IP65/IP67) (Location according ref. IEC 60529:2001)
  - VIB-A : General applications (ref. IEC 60092-504 (2016) table 1 item 10)
  - TEMP-C : Location (-25°C to +45°C) (ref. IEC 60092-504 (2016) table 1 item 6-7),
  - Compliant with IACS UR E10 Rev, 07
- Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/Special Condition for Safe Use listed in valid Excertificate issued by a notified/recognized Certification Body.  
 The following paragraph provided for information only, is based on information received from the manufacturer, but not verified by DNV GL.

Information on Ex-Certification received from manufacturer – Not verified by DNV GL		
Equipment	Certified	Certificate No.
<b>[RX-8500]</b> <b>[RX-8700]</b>	⊕ II 1 G Ex ia IIC T4 Ga, -20°C ≤ Ta ≤ +50°C	Presafe 15 ATEX 6173X Issue 1

- Each Equipment delivery to be provided with installation and user manual.

### Type Examination documentation

Hidden

Presafe 15 ATEX 6173X Issue 1 issued by DNV GL Presafe AS. Issuing date 2020.08.26

Report	Issuing date	Drawings
No.19-275	2019.10.04	E3-6991-4894-10-01K
No.19-276	2019.10.04	E3-6991-5405-00-01K
No. 382-150009-2	2015.05.22	E3-6991-5406-70-01K
No. 400-180164-1	2019.06.19	E3-6991-4867-60-01K
No. 400-180165-1	2019.06.24	E3-6991-5364-30-01K
No.41501319P	2019.12.06	E3-6991-5400-30-01K
No 320-16158 T / 16159T	2016.08.30	E3-6991-5469-30-01K
No. 18-195 (J) & (E) /301186	2018.08.24	M2-4777-05-01K
No. 19/079E	2019.07.11	M2-4777-06-01K
No. 19/076E	2019.07.11	M3-4775-92-01K
No. 190204-2-4	2019.03.27	M3-4777-05-03K
No. 190204-2-5	2019.03.27	M3-4777-06-01K
Operating Manual (PT0E-1361)		

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### **Tests carried out**

IEC 60945:2002 incl. IEC 60945 Corr. 1: 2008,  
IEC 60092-504:2016,  
IEC 60533:2015,

Category 2: (explosive gas atmospheres):

- EN 50104:2010,
- EN 60079-29-1:2016,
- EN IEC 60079-0:2018,
- EN 60079-11:2012

### **Marking of product**

For identification to this type examination certificate the products shall be marked with:

- Manufacturer's name or trade mark
- Type designation
- Mark of Conformity (see front page)

END OF CERTIFICATE