



Marine & Offshore

Certificate number: 38435/C0 MED

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This certificate is not valid when presented without the full attached schedule
composed of 7 sections
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Notified Body 2690 - MARINE EQUIPMENT DIRECTIVE 2014/90/EU

EC TYPE EXAMINATION CERTIFICATE

as per Module B of Directive 2014/90/EU of the European Parliament and of the Council of 23 July 2014 as transposed in the French Regulations and Commission Implementing Regulation (EU) 2021/1158 of 22 June 2021

This certificate is issued to:

RIKEN KEIKI CO., LTD.

Tokyo - JAPAN

for the type of product

FIXED OXYGEN ANALYSIS AND GAS DETECTION EQUIPMENT - CATEGORY 3 (EXPLOSIVE GAS ATMOSPHERES)

Smart transmitter / gas detector, model SD-1 (type GP) and SD-1D

Requirements:

SOLAS 74 convention as amended, Regulations II-2/4, VI/3.

IMO Res. MSC.98(73) -(FSS Code)- as amended by MSC.206(81), MSC.217(82), MSC.292(87), MSC.311(88), MSC.327(90), MSC.339(91) and MSC.457(101), 15

IMO MSC.1/Circ.1370

IEC 60092-504:2016

IEC 60533:2015

EN 50104:2010 and EN 60079-29-1:2016

EN IEC 60079-0:2018

This certificate is issued on behalf of the French Maritime Authorities to attest that Bureau Veritas Marine & Offshore did undertake the relevant type-examination procedures for the product identified above which was found to comply with the relevant requirements of the Directive 2014/90/EU of the European Parliament and of the Council of 23 July 2014 as transposed in the French Regulations.

This certificate will expire on: 06 Jun 2024

For Bureau Veritas Marine & Offshore Notified Body 2690,

At BV KOBE, on 13 Dec 2021,

Shinichi Takemoto



This certificate does not allow to issue the Declaration of Conformity and to affix the mark of conformity (wheelmark) to the products corresponding to this type. To this end, the production-control phase module (D, E or F) of Annex II of the Directive is to be complied with and controlled by a written inspection agreement with a notified body.

This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. Bureau Veritas Marine & Offshore is designated by the French Maritime Authority as a "notified body" under the terms of the French Regulations Division 140 Chapter 140-2. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

Product model or type description:

- **Model: SD-1(TypeGP) and SD-1D**

Product description:

- **SMART TRANSMITTER/GAS DETECTOR**

Detection Gas	
Detection principle	Catalytic combustion method
Measuring Range	0-100% LEL
Measuring Gas	Combustible gases
Explosion/Temperature Group	II 2G Ex db IIC T5 Gb
Power Source	DC24V(DC17 # 26.4V)
Response Time	Within 30 sec.
Output signal	4-20 mA (Gas concentration)

2. DOCUMENTS AND DRAWINGS :

Riken Keiki:

- Catalogue Smart Transmitter/Gas Detection, Ref. C2E-0450
- Specification SD1(TypeGP), Ref. RSE-0379-0
- Manufacture's statement Ref.: EGU-5580, dated Feb 18, 2015
- SD-1 Operating Manual No. PT2E-160, SD-1D Operating Manual No. PT2E-161.

Drawings Contents	No.	Rev.	Date
Gas Detector SD-1	M3-4287-35-07K	6	2016-12-27
Gas Detector SD-1D	M3-4287-36-10K	4	2016-12-27
Details of Internal Part SD-1	M3-4287-35-08K	8	2016-03-24
Details of Internal Part SD-1D	M3-4287-36-11K	3	2016-03-24
X detail	M3-4287-35-14K	0	2010-10-15
Cable entry	M3-4287-35-03K	5	2017-04-21
Socket	M3-4287-35-12K	3	2012-3-26
Name plate SD-1	M3-4287-35-05K	3	2016-12-26
Name plate SD-1D	M3-4287-35-05K	1	2016-12-26
Sensor A(sus)	M3-4287-35-17K	1	2010-11-10
Sensor B(sus)	M3-4062-00-18K	1	2010-11-10
SD-1 Internal wiring	E4-6991-4886-70-01E	1	2009-12-15
Electrical diagrams SD-1	E4-6991-4925-90-01E	2	2015-04-15
Electrical diagrams Hart	E4-6991-5116-50-01E	0	2012-05-10
Final version of diagram	E4-6991-5115-80-04E	0	2012-05-07

3. TEST REPORTS :

- EMC Test Report No. TR-14001, witnessed by a Society's Surveyor.
- Environmental Test Report No. 570H 14001, witnessed by a Society's Surveyor.
- TypeTest Report No. 570H 14002, as per 60079-29-1, witnessed by a Society's Surveyor.

JQA:

- Test Report for SD-1GP, No. 400-180140, dated 13-05-2019.

DEKRA:

- Test report PFG-no. 41500119P, dated 07-05-2019.

For Modification B2 version:

Dekra:

- Ex Certificate No. KEMA 10ATEX0083X Issue 7, dated 07-07-2020.

4. APPLICATION / LIMITATION :

- 4.1 - The Manufacturer's instruction manual should be kept on board.
- 4.2 - As per Requirements of Regulations stated on the front page of this certificate.
- 4.3 - EN 50104 : 2010 are not applicable to the above products.
- 4.4 - Ex certification is not covered by this certificate, Applications in hazardous areas are to be approved in each case according to the Rules and Conditions for Safe Use specified in a valid Ex-Certificate issued by a Notified or Recognised Certification Body.
- 4.5 - The following component(s) shall comply with the requirements of MED2014/90/EU, as amended, and be wheelmarked:
 - SD-1(TypeGP) and SD-1D.

5. PRODUCTION SURVEY REQUIREMENTS :

- 5.1 - This certificate alone does not allow the applicant to issue the Declaration of Conformity and to affix the mark of conformity (wheelmark) to the products corresponding to this type. To this end, the production-control phase module D Production Quality Assurance or module E Product Quality Assurance or module F Product Verification of Annex II of the Directive is to be complied with and controlled by a written inspection agreement with a Notified Body.
- 5.2 - For information concerning the production phase modules, **RIKEN KEIKI CO., LTD.** has declared the following manufacturing site(s):

RIKEN KEIKI CO., LTD. Development Center
2-3 Minamisakae-cho
344-0057 Kasukabe
JAPAN

6. MARKING OF PRODUCT :

- According to EN 60079-29-1
- Reference is made to MED 2014/90/EU chapter 2.
- In particular Article 10.3 specifies that the wheelmark shall be followed by the identification number of the Notified Body involved in the production control phase (module D, E or F) and by the year in which the mark is affixed (4 digits or last 2 digits).

7. OTHERS :

- 7.1 - It is **RIKEN KEIKI CO., LTD.**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.
- 7.2 - This certificate supersedes the EC Type Examination Certificate No. 38435/B2 MED issued on 09 Jul 2021 by the Society.

*** END OF CERTIFICATE ***