



CERTIFICATE NUMBER	22-2208522-PDA
EFFECTIVE DATE	03-Feb-2022
EXPIRY DATE	02-Feb-2027
ABS TECHNICAL OFFICE	Houston ESD - Piping

## CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

**RKI INSTRUMENTS, INC.**

located at

**33248 CENTRAL AVE., UNION CITY, CA, United States, 94587**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

**Product:** Gas Detector  
**Model:** S2 Series Transmitters  
**Endorsements:**  
**Tier:** 3 - Type Approved, unit certification not required

This Product Design Assessment (PDA) Certificate remains valid until 02/Feb/2027 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

*Yongjin Lee*

Yongjin Lee, Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

**RKI INSTRUMENTS**

33248 CENTRAL AVE.

UNION CITY CA

United States 94587

Telephone: 800-754-5165

Fax: 510-441-5650

Email: orders@rkiinstruments.com

Web: rkiinstruments.com

**Tier: 3 - Type Approved, unit certification not required**

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**Product:** Gas Detector

**Model:** S2 Series Transmitters

**Endorsements:**

**Intended Service:**

Marine & Offshore Application - for Fixed Monitoring of Gases in Hazardous or Non-Hazardous Locations.

**Description:**

S2 Series Fixed Systems Gas Monitoring Heads consist of 65 Series Sensors & Junction Boxes for detection of LEL, H2 PPM, Oxygen, H2S, CO, CO2, CH4 & Hydrocarbon gases in Hazardous Areas. Refer to attachment for details.

**Rating:**

See attached "pdf" for Specification (Sensors, Measuring Ranges, Operating Temperatures, Housing, etc)

Location: Indoor & Outdoor Explosion Proof for Class I, Division 1, Groups B, C & D ;

**Service Restriction:**

Unit Certification is not required for this product.

If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

**Comments:**

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Combustible gas detectors are not tested to performance requirement in accordance with recognized standards by independent third party laboratory.

**Notes/Drawing/Documentation:**

Drawing No. 65-2331RK, S2 Detector/Amp/J-Box, CSA XP H2S, 0-100 ppm, Revision: A, Pages: 1

Drawing No. 65-2336RK, S2 Detector/Amp/J-Box, CSA XP CO, 0-300 ppm, Revision: A, Pages: 1

Drawing No. 65-2428, Sensor Assembly, H2S, with Preamp, CT7, CSA classified, RF Resistant, Revision: A, Pages: 1

Drawing No. 65-2438, Sensor Assembly, CO, with Preamp, CT7, Revision: A, Pages: 1

CSA Report 70056548, Descriptive Report and Test Results, Revision: -, Pages: 27

UL Report E180083, Issued Date: 29 Sep 1997, Revised Dated: 27 January 2022, Pages: 5

UL Report E253828, Issued Date: 9 December 2005, Pages: 16

FO26-2012/1000, S2 Sensor/Transmitter, Revision: -, Pages: 1

**Terms of Validity:**

This Product Design Assessment (PDA) Certificate remains valid until 02/Feb/2027 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

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**STANDARDS**

**ABS Rules:**

The Rules for Conditions of Classification, 2022 Marine Vessels 1-1-4/7.7, 1-1-A3,1-1-A4, which covers the following:

2022 Rules for Building and Classing Marine Vessel Rules: 4-8-3/1.11.1, 4-8-3/Table 2, 4-8-4/27

The Rules for Conditions of Classification, Offshore Units and Structures, 2022 Mobile Offshore Units 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

2022 Rules for Building and Classing Mobile Offshore Units: 4-3-3/3.1.1(a), 4-3-3/9.1.1

**National:**

CSA C22.2 No. 0-10 (2015) General Requirements - Canadian Electrical Code, Part II.

C22.2 No. 30-M1986 (2016), Explosion-Proof Enclosures for Use in Class I Hazardous Locations

UL Standard 1203 (Edition 5), Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for use in Hazardous (Classified) Locations

UL Standard 61010-1 (Edition 3), Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements

**International:**

NA

**Government:**

NA

**EUMED:**

NA

**OTHERS:**

NA