



CERTIFICATE NUMBER	22-2208520-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: 61-1003RK-CH4, 61-1003RK-HC, 61-1004RK-02,-03,-05 & -10, 61-1007RK-02,-03,-05 & -10
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

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Email: orders@rkiinstruments.com

Web: rkiinstruments.com

Tier: 3 - Type Approved, unit certification not required

Product: Gas Detector

Model: 61-1003RK-CH4, 61-1003RK-HC, 61-1004RK-02,-03,-05 & -10, 61-1007RK-02,-03,-05 & -10

Endorsements:

Intended Service:

Marine & Offshore Application

Description:

LEL Infrared Sensor - Direct Connect Sensor w/ Junction Box: 61-1003RK-CH4, 61-1003RK-HC.

CO2 Infrared Sensor - Direct Connect Sensor w/ Junction Box: 61-1004RK-02, -03, -05 & -10. Hazardous Areas-Explosion proof for Class I, Division 1, Groups B, C & D atmospheres.

CO2 Infrared Sensor - Direct Connect Sensor w/ Junction Box: 61-1007RK-02, -03, -05 & -10. Non Explosion Proof.

Rating:

Measuring Range:

0 to 100% LEL(61-1003RK-CH4, 61-1003RK-HC) - LEL Sensor;

0-5000 ppm (61-1004RK-02) - CO2 Sensor

0-5.0% Vol (61-1004RK-03) - CO2 Sensor

0-50.0% Vol (61-1004RK-05) - CO2 Sensor

0-100.0% Vol (61-1004RK-10) - CO2 Sensor

Temperature: -20 °C to 50 °C

See attached ".pdf" for additional details.

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:

UL Report No E253828 Issued 29 Oct 2005;

Brochure FO20-2012/1000 - Direct Connect Sensors;

Terms of Validity:

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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:

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

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

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA