



CERTIFICATE NUMBER
18-HS1734023-PDA

DATE
11 May 2018

ABS TECHNICAL OFFICE
Houston ESD - Piping

CERTIFICATE OF Design Assessment

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

GENERAL MONITORS

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: **Gas Detector S5000, S5000 Junction Box, Digital Sensor, IR400, Passive Sintered Sensor and Passive Screen Sensor**

This Product Design Assessment (PDA) Certificate 18-HS1734023-PDA, dated 11/May/2018 remains valid until 10/May/2023 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING

Dustin De Los Santos

Dustin De Los Santos
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 the terms and conditions as contained in ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

GENERAL MONITORS

26776 SIMPATICA CIRCLE

LAKE FOREST CA

United States 92630

Telephone:

Fax:

Email:

Web:

Tier: 2 - PDA Issued

Product: Gas Detector

Model: Gas Detector S5000, S5000 Junction Box, Digital Sensor, IR400, Passive Sintered Sensor and Passive Screen Sensor

Intended Service:
Marine & Offshore Application

Description:

The S5000 Gas Monitor is a fixed gas detection system for combustible, toxic or oxygen gases. The System comprises an S5000 transmitter base unit or an optional S5000 Junction Box fitted with an arrangement of up to a pair of two factory-configured combustible, toxic or oxygen gas sensors.

Rating:

Measuring Range:

Input: 24 VDC nominal, 12 to 30 VDC;

Output Relay Contacts: 220 Vac, 30 Vdc, 5.0 A; Signal Outputs: Dual 4-20 mA;

Operating Ambient Temperature: -55° C to +75° C;

Enclosure Rating: NEMA Type 4X, IP66 (Configuration Utilizing Digital Sensors are restricted to an enclosure rating of Type 3X, IP 65);

Hazardous Area Classification:

S5000 Transmitters (as per IECEx SIR 17.0016X)

Cemented Joint version:

Ex db IIC T5 Gb

Ex tb IIIC T85° C Db*

Ex nA nC IIC T4 Gc

-55° C Ta +75° C

Flanged Joint Version (as per IECEx SIR 17.0016X)

Ex db IIB+H2 T5 Gb

Ex tb IIIC T85° C Db*

Ex nA nC IIC T4 Gc

-55° C Ta +75° C

* Note Combustible gas detection performance compliance to IEC 60079-29-1 does not cover environments with dust and fibers in suspension in air.

S5000 Junction Box (as per IECEx SIR 17.0016X)

Cemented Joint versions:

Ex db IIC T6 Gb

Ex tb IIIC T85° C Db

Ex nA IIC T6 Gc

-55° C Ta +75° C

Flanged Joint Versions (as per IECEx SIR 17.0016X)

Ex db IIB+H2 T6 Gb

Ex tb IIIC T85° C Db*

Ex nA IIC T6 Gc

-55° C Ta +75° C

Digital Sensor (as per IECEx SIR 17.0016X)

Ex db IIC T5 Gb

Ex tb IIIC T85° C Db

-55° C Ta +60° C

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LAKE FOREST CA

United States 92630

Telephone:

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IR400 (as per IECEx SIR 07.0080)

Ex db IIB+H2 T5 Gb

Ex tb IIIC T100° C Db

(Ta -60° C to +75° C)

Passive Sintered Sensor (as per IECEx SIR 07.0007U)

HC & H2S Sensor Heads, Model No. 11159 (HC) and 51457 (H2S)

Ex db IIC Gb

Passive Screen Sensors:

CSA approved Models: 10001-1 and 10058-1, 50445-1, 50445-5, 50445-9 and 50448-1, 50448-5, 50448-9;

Also see the attached CSA Certificate of Compliance 70116279 (LR 025993_0_000) covering hazardous area classification for various gas monitor configurations.

Also see attached SIRA Certifications Sira 17ATEX4052X and Sira 17ATEX1048X and product data sheet for further 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.

Notes/Drawing/Documentation:

CofC 70116279 (LR 025993_0_000), Certificate of Compliance, Dated: 04-27-2017, Revision: -, Pages: 11;

General Monitors S5000 gas detector data sheet-EN, Date: April 2017, Pages: 2;

IECEX SIR 17.0016X Issue 0, date of issue: 01/08/2018, Pages: 11;

Sira 17ATEX1048X Issue: 0, Pages:10;

Sira 17ATEX4052X Issue: 0, Pages: 4;

FM Approval Certificate FM17US0037, date of issue: 02/19/2017, Pages:3;

IECEX SIR 07.0080 Iss 7, date of issue: 07/03/2007, Pages: 4;

SIR 07ATEX1253 Issue: 7, Pages: 4;

IECEX SIR 07.0007U Issue: 4, date of issue: 06/22/2017, Pages: 4;

Sira 00ATEX1039U Issue: 7, Pages: 4;

Sensor Datasheet, Pages: 4;

Terms of Validity:

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STANDARDS

ABS Rules:

Rules for Conditions of Classification, Part 1- 2018 Steel Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

2018 Steel Vessels Rules: 4-8-3/1.11.1, 4-8-3/1.17.1, 4-8-3/Table 2, 4-8-3/13;

Rules for Conditions of Classification, Part 1- 2018 Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3 which covers the following:

2018 Mobile Offshore Drilling Units Rules: 4-3-1/15, 4-3-1/17.1, 4-3-3/Table 1, 4-3-3/9.1;

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA