

TYPE APPROVAL CERTIFICATE**This is to certify:****That the Gas Detector**

with type designation(s)

Searchpoint: Optima Plus with optional Hart, Optima X, Optima Z

Issued to

**Honeywell Analytics Ltd.
Poole, United Kingdom**

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Location classes:**

Temperature	D
Humidity	B
Vibration	A
EMC	B
Enclosure	C / IP66 and IP67

Issued at **Høvik** on **2020-11-18**for **DNV GL**This Certificate is valid until **2021-12-31**.DNV GL local station: **Southampton**Approval Engineer: **Nils Jarem**

Marta Alonso Pontes
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Job Id: **262.1-014465-6**
Certificate No: **TAA000011W**
Revision No: **1**

Product description

Searchpoint Optima Plus with optional HART®:

designed for use in potentially hazardous areas where it provides hydrocarbon gas and vapor detection. Searchpoint Optima Plus with optional HART® uses the dual wavelength infrared absorption principle to detect hydrocarbon gases and vapours in various concentration ranges. Searchpoint Optima Plus with optional HART® is supplied calibrated and linearized for a specific target gas. A wide selection of gases is available in 0-100% LEL range, as well as some ppm range options.

All versions can be supplied with HART® over 4-20 mA communications. HART (Highway Addressable Remote Transducer) is a widely used digital communications protocol, which allows users to access live data, status indications and diagnostic information from intelligent field devices. It works by superimposing a digital signal on the existing analogue signal.

Software Version: 7v1

Searchpoint Optima X:

is a variant of Searchpoint Optima Plus with optional HART® exclusively for use in sampling systems. A fast speed of response is made possible by minimizing the volume of the sample cell.

Software Version: 7V1

Searchpoint Optima Z:

is a variant of Searchpoint Optima Plus with optional HART® optimized for the detection of the solvents ethanol, ethyl acetate, propane and ethylene, 2-propanol, 2-butanone, 1-butanol, toluene, acetone, n-hexane, mineral spirit 60/95, o-xylene, 1-butyl acetate, cyclohexane mixed with air in the measuring range 0-100% LEL. It is exclusively for use in sampling systems.

Software Version: 7V1

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems

Application/Limitation

Ex installations to be approved in each case according to DNV GL Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Ex-certification is not covered by this certificate and the following paragraph, which is 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 marking	Certificate No.
Ex II 2GD Ex db op is IIC 86°C/96°C Gb Ex tb IIIC T86°C/T96°C Db (Ta -40°C to +55°C/65°C)	Baseefa13ATEX0296X/1/2/3/4

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Type Approval documentation

Searchpoint Optima Plus with optional HART® output Operating Instructions 2108M0550 No. MAN905 Issue 6_05/15

Searchpoint Optima Plus with optional HART, data Sheet Ref. H

Searchpoint Optima Plus _DS0276_V10 EMEAI dated 12/14

Drawings No. 2108E0036 Iss.8, 2108E0037 Iss.4, 2108E0038 Iss.2, 2108E0039 Iss.8, 2108E0042 Iss.1

Searchpoint Optima Plus Manual Addendum for Optima X, No. MAN0914_Issue 5_01/13 Searchpoint

Optima Z data sheet Ref.: H_Optima Z_DS01063_V5_EMEAI, 2108M0511_Issue 3_A03812 07/12

Test reports:

IECEX Test Report GB BAS.ExTR13.0148.00 dated 14.05.2014

DEKRA / EXAM GmbH Test Report for Searchpoint Optima X No. PFG-no.41300406P NIII, dated 2011-09-12

DEKRA / EXAM GmbH Test Report for Searchpoint Optima Z No. PFG-no.41300406P NIV, dated 2011-03-24

DEKRA/EXAM Test Report Searchpoint Optima Plus with optional HART® Interface, Searchpoint Optima Z with optional HART® Interface, Searchpoint Optima X with optional HART® Interface PFG-no.41300406P NVII dated 2013-01-24

DEKRA/EXAM Test Report Searchpoint Optima Plus with optional HART® Interface, Searchpoint Optima Z with optional HART® Interface, Searchpoint Optima X with optional HART® Interface PFG-no.41300406P NVIII dated 2013-10-28

DEKRA/EXAM Test Report Searchpoint Optima Plus with optional HART® Interface, Searchpoint Optima Z with optional HART® Interface, Searchpoint Optima X with optional HART® Interface PFG-no.41300406P NIX dated 2014-07-09

DEKRA/EXAM Test Report Searchpoint Optima Plus with optional HART® Interface, Searchpoint Optima Z with optional HART® Interface, Searchpoint Optima X with optional HART® Interface PFG-no.41300406P NX dated 2014-11-19

DEKRA/EXAM Test Report Searchpoint Optima Plus with optional HART® Interface PFG-no.41300406P NXI dated 2015-03-05

DEKRA/EXAM Test Report Searchpoint Optima Plus with optional HART® Interface, Searchpoint Optima Z with optional HART® Interface, Searchpoint Optima X with optional HART® Interface PFG-no.41300406P NXII dated 2015-11-10

DEKRA/EXAM Test Report Searchpoint Optima Plus with optional HART® Interface, Searchpoint Optima Z with optional HART® Interface, Searchpoint Optima X with optional HART® Interface PFG-no.41300406P NXIII dated 2016-07-29

DEKRA/EXAM Test Report Searchpoint Optima Plus with optional HART® Interface PFG-no.41300406P NXIV dated 2016-12-01

DEKRA/EXAM Test Report Searchpoint Optima Plus with optional HART® Interface PFG-no.41300406P NXV dated 2017-01-17

DEKRA Test Report Searchpoint Optima Plus, Z and X with optional HART® Interface PFG-no.41300406P NXVII dated 2020-04-14

Optima Plus - EMC & Environmental Test Report - TL18134 dated 2019-02-05 - MS Testing

Optima Plus - Salt Mist Report - TL18134 dated 2019-02-05 - MS Testing

Certificate:

SGS Baseefa:

EC-Type Examination Certificate No. Baseefa13ATEX0296X/1/2/3/4 dated 2020-05-11.

Type approval renewal assessment report for A-14148, Dorset 2017-02-07.

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Tests carried out

Applicable tests according to:

- Class guideline DNVGL-CG-0339, December 2019.
- EN 60079-29-1: 2008-07 - Explosive atmospheres. Gas detectors. Performance requirements of detectors for flammable gases

Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE