

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Gas Detector

with type designation(s)
Searchline Excel infrared open path gas detector

Issued to

Honeywell Analytics
Poole, Dorset, 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/C (Tested to 100 Hz)
EMC B
Enclosure C

Issued at **Høvik** on **2017-05-12**

This Certificate is valid until **2022-05-11**.

DNV GL local station: **Southampton**

for **DNV GL**

Approval Engineer: **Nils Jarem**

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Odd Magne Nesvåg
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.



Product description

Searchline Excel infrared open path gas detector

Searchline Excel Open-Path Gas Detector (OPGD) consists of a Transmitter unit that sends an infrared beam to a Receiver unit up to 40 metres away, and can be located where a flammable hydrocarbon gas cloud is likely to occur.

Receiver

The detector operates on the principle of infrared (IR) absorption. Gases absorb light at specific wavelengths depending on their molecular composition. Hydrocarbon gases absorb in the infrared region of the spectrum. If a cloud of hydrocarbon gas is present, part of the infrared light is absorbed by the gas, causing a reduction in the signal received that is proportional to the amount of gas in the beam.

Transmitter

The Searchline Excel Transmitter unit produces the infrared light, and the Receiver unit features optical detectors and signal processing electronics. Each unit is housed in a robust stainless steel housing. The Receiver produces a 4 - 20mA analogue output equivalent to 0 - 5 LEL.m (Lower Explosive Limit metres) of gas.

Nominal voltage: 24V DC.

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-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Type Approval documentation

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.

Applicable tests for open path gas detectors according to EN 60079-29-4: 2010 and corrigendum 1.

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