DNV·GL

Certificate No:
TAA00001NA

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Gas Detector

with type designation(s)
Spectrex SafEye Quasar 900 Open Path Gas Detector

Issued to
Rosemount Inc.
Chanhassen, MN, USA

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	**B**
EMC	**B**
Enclosure	**C / IP66,** **D / IP68 (2 m)**

Issued at **Høvik** on **2018-02-09**
This Certificate is valid until **2022-12-31**.
DNV GL local station: **New York**

Approval Engineer: **Nils Jarem**

for **DNV GL**

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.

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Product description

Spectrex SafEye Quasar 900 model uses wavelengths around 2.3 µm spectral band to measure air flammability potential between the source and detector. At this wavelength, all hydrocarbon materials have an absorption peak.
The Quasar 900 detects hydrocarbon gases including methane, ethylene, propane, ethane, butane etc.

The Quasar 900 includes 4 models with the same detector and different source. That gives the ability to get detection at distances of 7-200 m.

Model Number and Installation Distance

Model No.	Detector	Source	Min. Installation Distance	Max. Installation Distance
901	QR-X-11X	QT-X-11X	23 ft (7 m)	66 ft (20 m)
902	QR-X-11X	QT-X-21X	50 ft (15 m)	132 ft (40 m)
903	QR-X-11X	QT-X-31X	115 ft (35 m)	330 ft (100 m)
904	QR-X-11X	QT-X-41X	265 ft (80 m)	660 ft (200 m)

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:
- Standard for Certification No. 2.4 Edition April 2006.
- EN 50270: 2006
- IEC 60079-29-4: 2009 – Explosive atmospheres- Part 29-4: Gas detectors- Performance requirements of open path detectors for flammable gases. FM 6325: 2005.

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