DNV·GL

Certificate No:
TAA0000103

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Fire Detector

with type designation(s)
850H, 851PH, 850PC

Issued to
Tyco Fire & Security GmbH
Schaffhausen, Switzerland

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	**IP20 with base 4B&4B-C** **Class B/IP55 with base 4B-DHM**

This Certificate is valid until **2021-12-31**.

Issued at **Høvik** on **2017-01-17**
DNV GL local station: **London** for **DNV GL**

Approval Engineer: **Nils Jarem**

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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Job Id:
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Product description

Heat Detector 850H :
Most often used in areas where high levels of dust are present or where the environment precludes use of smoke detectors.
Operating temperature from -25 °C to +70 °C. Short-term to +90 °C

Photo Heat + CO Detector 850PC:
Used in more benign environment where any potential fire will be slow burning.
Operating temperature from -25 °C to +70 °C

Photo Heat Detector 850PH :
The combined optical and heat multi-sensor detector with the ability to detect a wide range of fires from flaming to smouldering types. Operating temperature from -25 °C to +70 °C

Detector bases 4B and 4B-C: universal mounting bases

Detector base 4B-DHM: deck head mounting base provides an IP55 seal between the mount and the detector base for superior marine environmental protection.

Place of manufacture

Tyco Fire & Security Czech Republic s.r.o.
Ulice Osvobozeni 363, Ráječko
Czech Republic

Application/Limitation

System application and location of detectors is to be in accordance with relevant parts of the DNV GL Rules.

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.

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.

Type Approval documentation

Tests carried out

Environmental tests according to DNV Standard for Certification No. 2.4 (Edition 2006).
Relevant tests of application functions in accordance with EN54-5/7 (issue 2000).

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