DNV·GL

Certificate No:
**TAA00000MY**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Fire Detector**

with type designation(s)
**601P-M, 601PH-M, 601H-R-M, 601H-F-M, 611H-F, 631H-F**

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:**

| Type | Temperature | Humidity | Vibration | EMC | Enclosure |
|---|---|---|---|---|---|
| **601P-M, 601PH-M** | **D** | **B** | **A** | **B** | **With Base 5B 5": Class A<br>With Base 5B 5" and DHM 69: Class B** |
| **601H-R-M, 601H-F-M** | **C** | **B** | **A** | **B** | |
| **611H-F, 631H-F** | **C** | **B** | **A** | **B** | **B** |

This Certificate is valid until **2021-06-30**.

Issued at **Høvik** on **2016-10-31**

for **DNV GL**

DNV GL local station: **Augsburg**

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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## Product description

| Type | Function |
|---|---|
| 601P-M | Conventional Optical Smoke Detector |
| 601PH-M | Conventional High Performance Smoke Detector |
| 601H-R-M | Conventional RoR and Fixed Temperature Heat Detector |
| 601H-F-M | Conventional Fixed Temperature Heat Detector |
| 611H-F | Conventional 60 degC Fixed Temperature Heat Detector |
| 631H-F | Conventional 90 degC Fixed Temperature Heat Detector |
| 5B 5” | Universal Mounting Base |
| 4B | Universal Mounting Base |
| 4B-DHM | Deck Head Mounting Base |
| DHM69 | Deckhead Mounting Kit |

## Application/Limitation

System Application and location to be in accordance with relevant parts of the Rules.

## 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.

## Type Approval documentation

## Tests carried out
Relevant tests according to EN 54-5/7 and DNV Standard for Certification No. 2.4.

## Marking of product
The products to be marked with:
- manufacturer name
- model name
- serial number

## 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 at least every second year and at renewal of this certificate.

END OF CERTIFICATE