

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Fire Detector**

with type designation(s)
MD601Ex, MD611Ex, and MDU601Ex- Conventional Heat Detector
MUBEx/5BEx - Universal Mounting Base

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	A
Humidity	B
Vibration	A
EMC	A
Enclosure	Required protection according to the Rules to be provided upon installation on board.

Issued at **Høvik** on **2018-08-30**This Certificate is valid until **2022-06-30**.for **DNV GL**DNV GL local station: **Southampton**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.



Job Id: **262.1-006667-23**
Certificate No: **TAA00001YU**

Product description

Intrinsically safe heat detectors and mounting bases including mounting kits 4B-DHM/DHM69.

Place of manufacture

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

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

Approved for use in conjunction with type approved fire alarm central units manufactured by THORN SECURITY LTD.

Intrinsically safe application of MD601Ex, MD611Ex, and MDU601Ex to be approved in each case. System application and location of detectors to be in accordance with relevant parts of the Rules.

Type Approval documentation

Tests carried out

Standard for Certification No. 2.4, April 2001
Applicable tests according to EN 54-5 (2000/2001)

Marking of product

The products are labelled as follows:

- MD601Ex – 516.052.051
- MD611Ex – 516.052.041
- MDU601Ex – 516.061.001

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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