Certificate no.:
TAA00003M2

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Fire Detector

with type designation(s)
LICO HDL Marine Heat Detector Series

issued to
LICO Mechatronic Kft.
Érd, Pest, Hungary

is found to comply with
IMO International Code for Fire Safety Systems (FSS Code) Chapter 9
IEC 60092-504 Ed. 4.0 (2016-09) Electrical installations in ships – Part 504: Automation, control and instrumentation
DNV class programme DNV-CP-0203 – Type approval – Electronic and programmable equipment and systems

Application:

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Location class:

Temperature	**D**
Humidity	**B**
Vibration	**A**
EMC	**None**
Enclosure	**IP66**

Issued at **Hamburg** on **2025-06-12**

This Certificate is valid until **2030-06-11**.
DNV local unit: **Ostrava**

Approval Engineer: **Heinz Scheffler**

for **DNV**
Digitally signed by: Dariusz Lesniewski
Location: DNV SE, Germany

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

HDL - Heat **D**etector **L**ICO

The product designation of the device is made from combining the desired product characteristics in accordance with the following structure / nomenclature

Nomenclature

(e.g. HDL-3XL-MED - D - 2 - ST - 165 - B - S - 4 - E - 1 - S)
(Position 1 2 3 4 5 6 7 8 9 10 11)

Position	Characteristic	Characteristic value	Description
1	Box Type:	HDL-2-MED HDL-3-MED HDL-3XL-MED HDL-5-MED HDL-6-MED HDL-6XL-MED HDL-7-MED HDL-7XL-MED	75 mm (length) 80 mm (width) 57 mm (height) 75 mm (length) 80 mm (width) 57 mm (height) 125 mm (length) 80 mm (width) 57 mm 120 mm (length) 122 mm (width) 80 mm 120 mm (length) 120 mm (width) 116 mm 150 mm (length) 150 mm (width) 130 mm 152 mm (length) 102 mm (width) 90 mm 152 mm (length) 152 mm (width) 130 mm
2	Sensor Housing	S D	Single Threaded Double Threaded
3	Switch type	1 2	Normally Open Normally Close
4	Sensor material	BR ST	Brass Stainless steel
5	Nominal Temperature	60 71 88 99 107 135 165 187 232	60 °C / 140 °F (EN 54-5 class A1 static response) 71 °C / 160 °F (EN 54-5 class B static response) 88 °C / 190 °F (EN 54-5 class C static response) 99 °C / 210 °F (EN 54-5 class D static response) 107 °C / 225 °F (EN 54-5 class D static response) 135 °C / 275 °F (EN 54-5 class G static response) 165 °C / 325 °F (EN 54-5 tested static response) 187 °C/ 360 °F (EN 54-5 static response tested) 232 °C / 450 °F (EN 54-5 static response tested)
6	Sensor mounting	L B	Lid Box
7	Wiring block material:	S C	Standard Ceramic
8	Entries	1 2 3	One Entry Two entry Three entry
9	Type of Cable Gland	A B C D	M16 Thread M20 thread Cable Gland (M20 standard)" Cable Gland (1/2"" NPT standard)"
10	Seal Lid	1 2 3	HT Silicone (standard)" Neopren EPDM
11	Resistor	N E S B	None EOL Series Both

Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, 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 Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Before installation: The Operation, Installation & Safety Manual for ATEX & EN54-5 certified HDL heat detector units (02.2025, Document No. GDT02049) is to be observed.

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

Test Reports and Documents: TAA00003M2_Overview_Documents Rev.00

Tests carried out

Applicable tests according to:

- EN 54-5:2017 + A1:2018
- IEC 60092-504:2016
- DNV-CG-0339, August 2021

Marking of product

The products to be marked with:

- Model name
- Sensor Type
- Manufacturer name
- Serial number

Place of Manufacturer

LICO Mechatronic Kft.
Balatoni út 4.
Diósd, H-2049
Hungary

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