

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Temperature Sensor**

with type designation(s)  
**Screw-in Resistance Thermometer, type dGLx.xx.xx**

Issued to

**Dittmer Temperaturfühler GmbH & Co. KG**  
**Kamp-Lintfort, Nordrhein-Westfalen, Germany**

is found to comply with  
**DNV GL rules for classification – Ships**

**Application :**

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

**Location class:**

<b>Temperature</b>	<b>B</b>
<b>Humidity</b>	<b>B</b>
<b>Vibration</b>	<b>B</b>
<b>EMC</b>	<b>-</b>
<b>Enclosure</b>	<b>B (IP54) Required protection according to DNVGL Rules shall be provided upon installation on board</b>

This Certificate is valid until **2021-02-20**.

Issued at **Hamburg** on **2018-10-23**

for **DNV GL**

DNV GL local station: **Essen**

Approval Engineer: **Didier Girardin**

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**Joannis Papanuskas**  
**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: **262.1-021357-3**  
Certificate No: **TAA00000E6**  
Revision No: **1**

## Product description

Measuring range : -40 to +250 °C  
Measuring element: 1 x Pt100 or 2 x Pt100 (EN 60751 B or A or 1/3 B)  
Wiring: 2 or 3 or 4 wire-connection  
1 or 2 TC`s (IEC 584)  
Insert length : max. 800 mm  
Screw-in thread : G 1/2, material TECAPEEK natur or PTFE  
Thermo well material: 1.4541  
Connection head : type MA (J) or BA (B), material GD-ALSi9Cu3

## Application/Limitation

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

Hidden

Test report LGA no. 471 1187 (11.05.2001),  
Test report LGA no. 21 254 JP1 (29.03.2001);  
Drawing no. dGLx.xx.xx (Rev. 2, 2011-02);  
Type Approval Assessment Report (25.02.2016)

## Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, November 2015.

## Place of manufacture

Dittmer Temperaturfühler GmbH & Co. KG  
Carl-Zeiss-Straße 19  
47475 Kamp-Lintfort, GERMANY

## 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 renewal and at least once in the period of the validity of this certificate.

END OF CERTIFICATE