

# TYPE APPROVAL CERTIFICATE

Certificate no.:  
**TAA00000E6**  
Revision No:  
**5**

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

with type designation(s)  
**Resistance Thermometer, type dGLx.xx.xx; GL-4,68; GL-4,69; GL-Exia**

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

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

## Application:

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

## Location classes:

<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 DNV Rules shall be provided upon installation on board</b>

Issued at **Hamburg** on **2026-02-12**

This Certificate is valid until **2031-02-20**.

DNV local unit: **Essen**

Approval Engineer: **Holger Jansen**



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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to USD 300 000.

## Product description

### Type dGLx.xx.xx

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-AISI9Cu3

### Type GL-4,68

Measuring range: -40 to +200 °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  
Transition Sleeve: ø4-8 mm / 40-60 mm /Possible with or without transition sleeve  
Tube length: ø3-8 mm / max. 800 mm  
Thermo well material: 1.4541/1.4571  
Cable length: max. 6000 mm

### Type GL-4,69

Measuring range: -40 to +200 °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  
Transition Sleeve: ø4-8 mm / 40-60 mm  
Flex cable length: max. 6000 mm  
Sensor tip: ø3-6 mm  
Thermo well material: 1.4541/1.4571  
Cable length: max. 6000 mm

### Type GL-Exia

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: optional with Thread to your specification  
Thermo well material: 1.4541  
Connection head: type MA (J), B or BUZH =ALU or V=Stainless steel

## 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 classification of ships Pt.4 Ch.9 Control and monitoring systems.

## Type Approval documentation

Test report LGA no. 471 1187 (11.05.2001),  
Test report LGA no. 21 254 JP1 (29.03.2001);  
Test report Intertek no. 2249905KAU001 (2023-07-05)  
Drawing no. dGLx.xx.xx (Rev. 2, 2011-02);  
Drawing no. z-GL-4,68 (2023-08)  
Drawing no. z-GL-4,69 (2023-02)  
Drawing no. z-GL-Exia (2023-02)  
Type Approval Assessment Report issued at Essen on 2025-09-11

## Tests carried out

Applicable tests according to Class Guideline DNV-CG-0339, August 2021.

## 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 after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

## Manufactured by:

Dittmer Temperaturfühler GmbH & Co.KG  
Carl-Zeiss-Str. 19  
47475 Kamp-Lintfort/Germany

END OF CERTIFICATE