



TYPE APPROVAL CERTIFICATE

Certificate No:
TAA00000E6
Revision No:
4

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:

Temperature	B
Humidity	B
Vibration	B
EMC	--
Enclosure	B (IP54) Required protection according to DNV Rules shall be provided upon installation on board

Issued at **Hamburg** on **2023-08-08**

for **DNV**

This Certificate is valid until **2026-02-20**.

DNV local unit: **Essen**

Approval Engineer: **Holger Jansen**

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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.

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 300,000 USD.



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 (12.03.2021)

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.

END OF CERTIFICATE