

TYPE APPROVAL CERTIFICATE

DNV·GL

This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the DNV GL Type Approval System.

Certificate No. **96 742 - 95 HH**

Company **electrotherm
Gesellschaft für Sensorik und thermische Meßtechnik mbH
Gewerbepark 6
98716 Geraberg, GERMANY**

Product Description **Thermocouple temperature sensors series 2xx-GL
Resistance temperature sensor, series 3xx-GL**

Type **220-GL, 221-GL, 230-GL, 240-GL, 254-GL, 257-GL, 258-GL, 259-GL, 272-GL
325-GL, 340-GL, 351-GL, 354-GL, 357-GL, 358-GL, 359-GL, 372-GL, 380-GL**

Environmental Category **D, EMC1**

Technical Data /
Range of Application **Single/double thermocouple sensor (2xx-GL) with protective tube:
Sensing element:
• J (Fe-CuNi), measuring range up to 700 °C
• K (NiCr-Ni), measuring range up to 800 °C**

**Single/double resistance temperature sensor (3xx-GL) with protective tube
Sensing element:
• 1 or 2 x Pt100, 2-, 3- or 4-wire
• 1 or 2 x Pt1000, 2-wire
Measuring range: up to 400°C (model 351: up to 120 °C)**

**Protective tube material: Stainless Steel (1.4571)
Degree of protection:
• IP54
• IP68, models 258-GL, 325-GL, 358-GL**

**Vibration test according to curve 3 (10g, 40 - 2000 Hz , at 600°C)
• Models: 220-GL, 258-GL, 358-GL**

Test Standard **GL Guidelines for the Performance of Type Approvals, Chapter 2 – Test
Requirements for Electrical / Electronic Equipment and Systems (VI-7-2),
Edition 2012**

Documents **Test report: TZO no. 024/95, dated 10.04.1995
Test report: electrotherm no. 37/05, dated 05.08.2005
Test report: paconsult no. 15-6893, dated 29.01.2016
Drawings: 02 100 736 a, 02 100 737 a, 02 100 697 a, 02 100 698 a
Drawings: 02 100 700 a, 257 00001, 02 100 701 a, 02 100 123 a, 272 0001
Drawings: 04 100 515 a, 04 100 702 a, 04 100 166 a, 04 100 703 b
Drawings: 04 101 342 b, 04 100 116 a, 04 100 122 a, 04 100 120 a
Drawing: 04 100 704 a**

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

Valid until **2021-02-21**

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File No. **I.D.02**

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Type Approval Symbol



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