

Type Approval Certificate



This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the 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, series 2xx
Resistance temperature sensor, series 3xx and 403**

Type **220, 221, 230, 231, 253, 254, 258, 259, 262, 290
325, 340, 351, 353, 354, 357, 358, 359, 372, 380, 403**

Environmental Category **D, H, EMC1**

Technical Data /
Range of Application **Single/double thermocouple (2xx) and jacket thermocouple (290)
L (Fe-CuNi), measuring range up to 700 °C
J (Fe-CuNi), measuring range up to 700 °C
K (NiCr-Ni), measuring range up to 800 °C
with protective tube.
Single/double resistance temperature sensor Pt 100 (class A and class B) with
protective tube (3xx) for measuring range up to 380 °C (351: 120 °C;
358: 550 °C; 380: 300 °C) and single cable resistance temperature sensor with
protective sleeve (403) for measuring range up to 180 °C.
Protective tube material: steel no. 1.4541 (others by order)
Degree of protection: IP54, IP68 (258,290, 325, 358), IP55 (351)
Insert length: max. 400 mm (standard types or by order)
Fitting length: max. 250 mm**

**Vibration test (220, 221, 230, 231, 258, 259, 290, 358, 359): 25 - 200 Hz, 5 g
Vibration test (for insert length up to 250 mm): 200 - 2000 Hz, 15 g**

Test Standard **Guidelines for the Performance of Type Approvals, Chapter 2, Edition 2003**

Documents **Test reports: TZO no. 024/95 dated 10.04.95, electrotherm no. 37/05 dated 05.08.05
Data sheets and dimensional drawings.**

Remarks **None**

Valid until **2015-02-16**

Page 1 of 1

File No. I.D.02

Hamburg, 2010-07-26

Type Approval Symbol



Germanischer Lloyd

W. Voß
Wolfgang Voß

K.-P. Schröder
Klaus-Peter Schröder