

# MANUAL FOR USE OF TEMPERATURE PROBES WITH „K“ (NiCr-Ni) THERMOCOUPLE, TYPES CP500, CZ900, CZ550, GT1150, GD260, GD700, GD1250

Probes are design for temperature measurement in usual chemically non-aggressive environment. The output signal is the thermoelectric voltage of thermocouple type K, which depends on the measured temperature. The probes don't require operation and maintenance.

## Technical parameters

### • common parameters

It is necessary to ensure in operation, plastic parts of probes (handles) not to be exposed to temperature higher than 80 °C (probe GT1150 up to 220 °C).

Warning: probes are not design for measurement of objects under electric voltage!

*Type of sensor: thermocouple type „K“ (NiCr-Ni) according to EN 60584-1*

*Accuracy: class 1 in accordance with IEC 584-2, ie.*

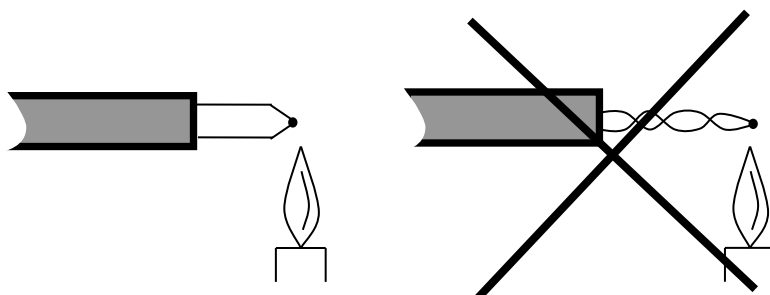
*$\pm 1,5^{\circ}\text{C}$  at the temperature range  $-40$  to  $+375^{\circ}\text{C}$*

*$\pm 0,004 \times |t|$  outside this range*

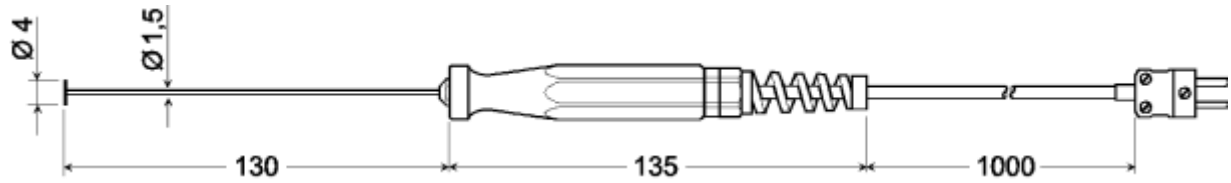
*Termination of the cable: miniature connector for thermocouples (NST1200)*

## Cable location and treatment

The cables have to be placed as far as possible from potential interference sources. The cables should not be led in parallel along power cabling. Safety distance is up to 0,5m, otherwise undesirable induction of interference signals can appear. When you need an extension cable it is necessary to use compensating lead wires of the same composition as the material has its own thermocouple. The wires of the probe can be connected only at the measurement temperature point.



- **probe CP500** – surface probe



The temperature probes are intended to measure the contact temperature of solid substances having a plane and smooth surface. The contact pad is electrically connected to the thermocouple.

*Operating temperature range: -65 to +500 °C – only end of the steam!*

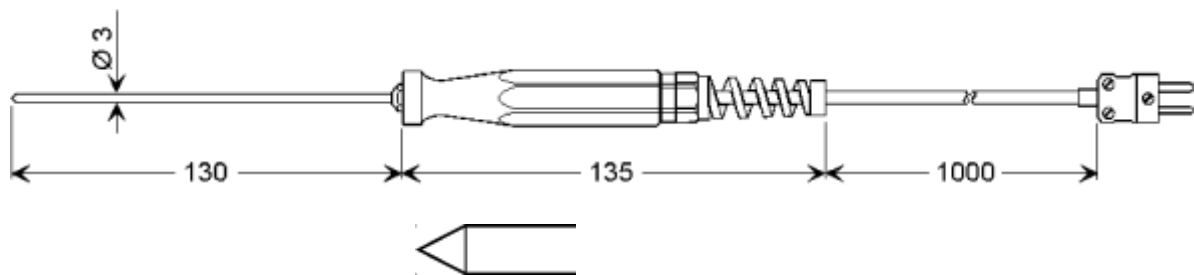
*Plastic handle operating temperature range: -20 to +80 °C*

*Response time:  $t_{90}$  = approx. 5 s*

*Material of the contact pad: copper*

*Lead – in cable: silicone insulation*

- **probe CZ900** – insertion probe for soft materials



*Operating temperature range: -65 to +1000 °C – only end of the steam!*

*Plastic handle operating temperature range: -20 to +80 °C*

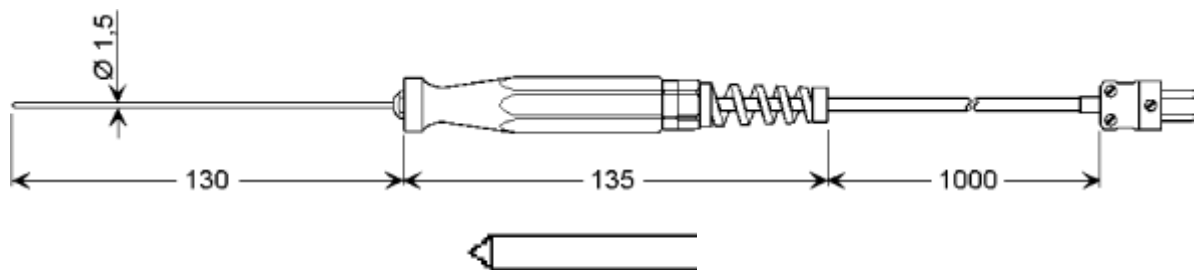
*Response time:  $t_{90}$  = approx. 5 s*

*Material of the needle: stainless steel V4A*

*Lead – in cable: silicone insulation*

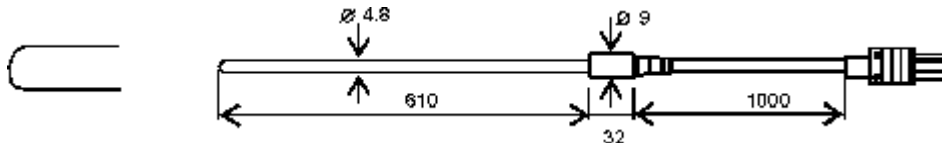
*The needle of the probe is electrically connected to the thermocouple.*

- **probe CZ550** – fast insertion probe for soft plastic materials



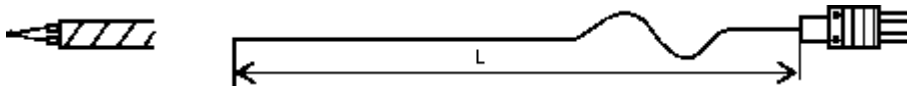
Operating temperature range: -65 to +550 °C – only end of the steam!  
 Plastic handle operating temperature range: -20 to +80 °C  
 Response time:  $t_{90}$  = approx. 3 s  
 Material of the needle: stainless steel V4A  
 Lead – in cable: silicone insulation  
 The needle of the probe is electrically connected to the thermocouple.

• probe GT1150 – thermocouple probe with handle



Operating temperature range: -65 to +1150 °C – only end of the steam!  
 Handle operating temperature range: +220 °C max.  
 Material of the metal case: Inconel

• probes GD260, GD700 a GD1250 – fast response wire probes



Lengths of 1m, 2m, 3m, 4m.

Type **GD260**:

Operating temperature range: -65 to +260 °C  
 Full diameter: approx. 0.8 mm  
 Insulation: neoflon

Type **GD700**:

Operating temperature range: -65 to +700 °C  
 Full diameter: approx. 2 mm  
 Insulation: duplex, high temperature glass

Type **GD1250**:

Operating temperature range: -65 to +980 °C  
 Full diameter: approx. 4 mm  
 Insulation: duplex, Silica (silicon based)

**WARNING:**

High temperature glass (insulation of the probe GD700) and ceramic based on silicon (insulation of the probe GD1250) are materials with high temperature resistance. Their resilience against abrasion and mechanical stress is however small. When handling with probes pay increased attention to this fact.

## WARRANTY CERTIFICATE

This product has two years warranty since the date of sale to the end user. Defects due defective materials, defective manufacturing or design will be repaired free of charge by the manufacturer. The location of repair is at manufacturer's. No warranty is given to products operated in conditions not matching the conditions specified by the manufacturer in instruction manual. Also no warranty is given to products which were modified by the user, products with broken seal, products which were connected to power or input signals not matching the technical specification (Instruction manual). No warranty is given to consumables and eventual changes of parameters created by wear (influence of aggressive environment etc.).

**Typ of the probe:**

**Date of sale:**

<i>DISTRIBUTOR</i>