

Technical Data:

Power supply:	4 x 1.5 V minion or rechargeable cells or external 6 V power supply (see accessories)
Display:	LED, 3½ decimal places, 26 mm high
Accuracy:	Comparison soldered joint measurement: typically $\pm 0.6^\circ$ (max $\pm 1.5^\circ$) Final value: max $\pm 2^\circ$ Linearity incl. sensor: $+2 / -1 \%$ (0..1100 °C) $+0 / -7 \%$ (0...-40 °C) $-6 / -11 \%$ (-40..-80 °C)
Toggle switch:	ON/OFF
Sensor receptacle:	For connecting Ni/CrNi thermal sensors, type K
2.5 mm DC receptacle:	For external power supply
Case:	Plastic, ABS
Dimensions:	approx. 160 x 120 x 45 mm
Masse:	ca. 400 g

Recommended Accessory:

P3120-6N 6 V Transformer for powering the box-thermometer from 230 V~/50 - 60 Hz mains

Do not drop the instrument. Should this occur, have the instrument checked and, if necessary, repaired by authorized service personnel.

In the event that unexpected problems arise during installation or use, turn the instrument off and contact an authorized dealer.

Do not expose the instrument to water drops or spray.

This instrument contains no parts that need to be serviced by the user (except for changing batteries).

This device is only to be operated by qualified persons and by others duly instructed by such persons.

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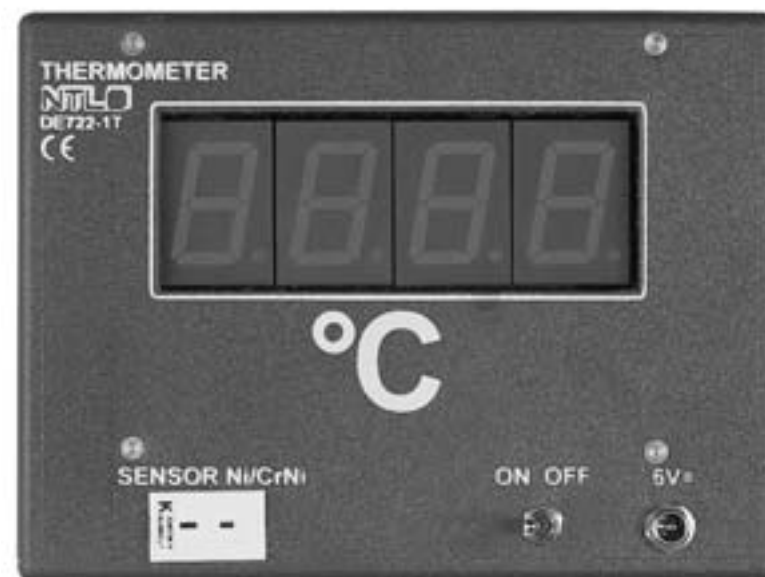
Box-thermometer, magnetic DE722-1T

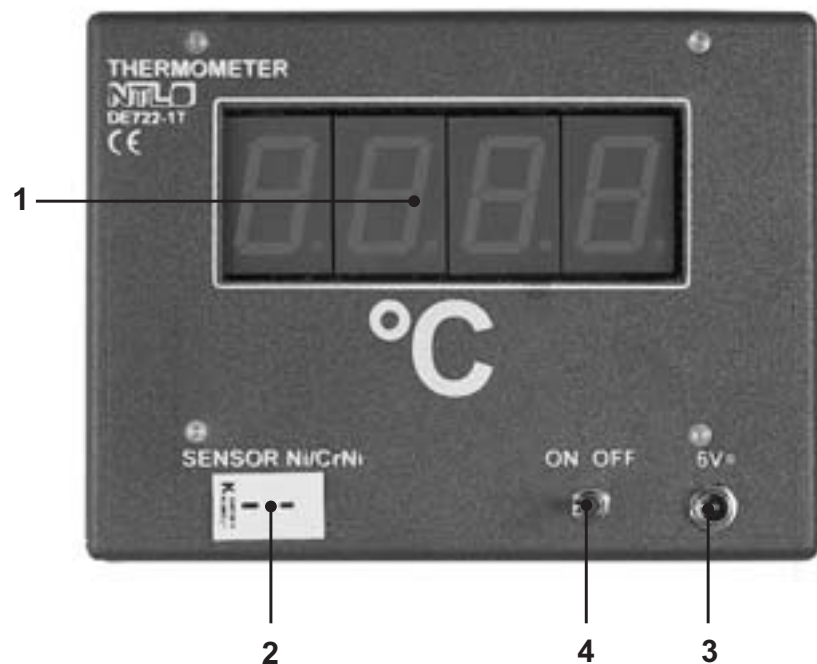
This device serves to measure temperature with the aid of a Ni/CrNi thermal sensor, type K.

Depending on the construction type, the temperature range for which Ni/CrNi thermal sensors may be used is between 400°C or 1350 °C and -80 °C.

Required Accessory:

DT202-2T Thermal sensor Ni/CrNi -50 to +100 °C
Sensor length: 300 mm





- 1 LED display, 3½ decimal places, 26 mm high
- 2 Receptacle for connecting Ni/CrNi thermal sensor, type K
- 3 2,5 mm input receptacle for external 6 V power supply
- 4 ON/OFF switch
- 4 magnets on the reverse side

Operation:

The box-thermometer is easy and safe to use and is designed exclusively for operation with Ni/CrNi thermal sensors of type K. Connecting other sensors leads to misleading results.

The Ni/CrNi thermal sensor is connected to the receptacle (2). Turn the ON/OFF switch (4) to the ON position. The value measured is shown on the LED-Display (1).

The device is equipped with a comparison soldered joint compensatory mechanism, ensuring that room temperature is taken into account during measurement.

The box-thermometer is powered by four built-in minion cells. If the most modern batteries with a capacity of about 3 Ah are used, the batteries should suffice for about 7 hours of operation. Should the device not be used for several months at a time, the batteries should be removed so that no damage occurs to the device in the case of seepage.

The box-thermometer can also be powered by a transformer, for example the 6v mains transformer P3120-6N.

Note: transformers providing no more than a maximum of 300 mA can lead to problems!

The power supply is connected to the input receptacle (3) using a DC wire with 2.5 mm DC plugs. The outer contact is the negative terminal and the inner tube is the positive one. Reversing the poles or applying too much voltage do not harm the device up to ±25 V. When the DC plug is connected mechanically, the battery is disconnected. Faulty batteries or an inappropriate transformer result in the display appearing faint or showing the wrong value.

As long as the display glows it shows the correct value. This is the reason the device has no "LowBatt" display. When using the device in complex circuits where it can also be supplied with power from the circuit, it is important to make sure that the GND plug is connected to the negative terminal of the power supply.

Notes on measuring temperature:

A good thermal contact between the sample and the sensor element is of utmost importance for measuring temperature exactly. Particularly in the case of surface sensors this can be difficult! Air spaces posing problems can be bridged using a suitable silicon paste ("heat-conducting paste").

Similar problems may occur when testing boiling fluids or fluids containing large amounts of dissolved substances. In such cases several degrees difference between different points in the fluid are not unusual. A magnetic stirrer can prove helpful here. Measuring the temperature of gases usually only makes sense within moving media due to the high degree of thermal inertia on the part of the sensor. Naked sensors, without a case, can be used by way of an alternative. These are, however, very sensitive and are easily damaged if not handled very carefully.