



## TEMPERATURE SENSOR NT-PT100

## OPERATING MANUAL

*Quality control system on the development and production complies with requirements  
ISO 9001:2015*

### **Dear customer,**

Company NOVATEK-ELECTRO LTD thanks you for purchasing our devices.  
You will be able to use properly the device after carefully studying the Operating Manual.  
Keep the Operating Manual throughout the service life of the device.

## 1 BASIC DETAILS ON THE DEVICE AND TECHNICAL SPECIFICATIONS

### 1.1 Designation

The temperature sensor NT-PT100 (hereinafter the device, NT-PT100) is designed to measure temperature of liquid, gaseous and granular media.

### 1.2 Basic technical specifications

Table 1 shows the main technical specifications.

**Table 1** - Basic technical specifications

| Description   | Values              |
|---|---------------------|
| Operating range of temperatures to measure                            | from -60 to +150° C |
| Nominal static characteristic at 0 °C                                 | 100 Ω               |
| Class of tolerance  | 0.5 %               |
| Length of the cable   | 3000 mm             |
| Length of the installation section                                    | 30 mm               |
| Thermal inertia index   | 15...16 s           |
| Max. power dissipation  | ≤ 0.5 mW            |
| Insulation resistance at (25 ± 10) °C and relative humidity up to 80% | ≥ 100 MΩ            |
| Material of protective fittings                                       | Plastic             |
| Degree of protection of the installation section                      | IP 68               |
| Degree of protection of the outer part                                | IP 68               |

## 2 WARRANTY OF THE MANUFACTURER (SUPPLIER)

**2.1** The lifetime of the device is 10 years.

**2.2** Shelf life is 3 years.

**2.3** Warranty period of the device operation is 1 year from the date of sale.

During the warranty period of operation (in the case of failure of the NT-PT100) the manufacturer is responsible for free repair of the device.

**ATTENTION! IF THE NT-PT100 HAS BEEN OPERATED IN VIOLATION OF THE REQUIREMENTS OF THIS MANUAL, THE USER WILL LOSE THE RIGHT TO WARRANTY MAINTENANCE.**

**2.4** Warranty service is performed at the place of purchase or by the manufacturer of the device.

**2.5** Post-warranty service of the device is performed by the manufacturer at current rates.

**2.6** Before sending for repair, the device should be packed in the original or other packing excluding mechanical damage.

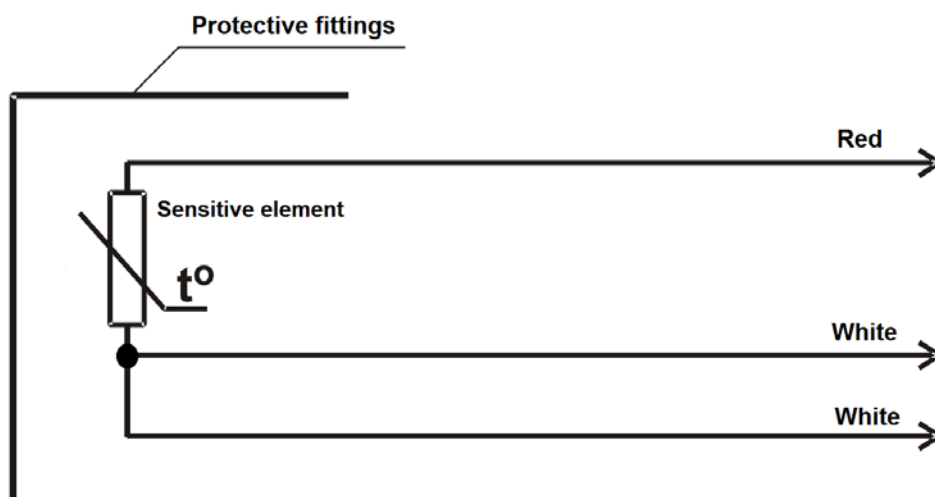
*You are kindly requested, in case of return of the device and transfer it to the warranty (post-warranty) service, in the field of the claims data, list the detailed reason for return.*

## 3 CONSTRUCTION AND OPERATION

**3.1** The operating principle of the NT-PT100 is based on the property of a semiconductor of the sensing element to change electrical resistance depending on temperature. The change in resistance is recorded by a secondary device, in the measuring circuit of which the NT-PT100 is connected.

**3.2** The sensing element is a thermistor placed in protective fittings. The terminals of the sensor are lead through a cable for connection to the measuring circuit of the secondary device.

The connection diagram is shown in Figure 1.



**Fig. 1** – Connection diagram



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### 8 ACCEPTANCE CERTIFICATE

The temperature sensor NT-PT100 has been manufactured and accepted according to the requirements of effective technical documentation and is approved to be ready for operation.

Chief of quality department

Date of issue

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STAMP

*The Company is grateful to you for the information about the quality of the device and suggestions for its operation.*



For all questions, please contact the manufacturer:

**NOVATEK-ELECTRO Ltd,**  
**59, Admiral Lazarev Str.**  
**Odesa, 65007, Ukraine.**  
**Tel.: +38 (048)738-00-28,**  
**Tel./fax: +38 (0482) 34-36-73.**  
**www.novatek-electro.com**

Date of sale \_\_\_\_\_

**VN250303**