NOVOTEST

Dew Point Meter
NOVOTEST KTR-1

OPERATING MANUAL

2015

CONTENTS

1. Introduction

This manual is designed to introducing with the instrument, principle of action and operation rules of Dew Point Meter NOVOTEST KTR-1, hereinafter the Device.

2. Appointment

2.1. Dew Point Meter NOVOTEST KTR-1 is designed for rapid non-destructive measurement the temperature, humidity, dew point calculation and measurement the surface temperature by contact method.

2.2. Dew Point Meter NOVOTEST KTR-1 allows user to measure:

– air temperature (-20 to + 125 ° C)
– surface temperature (-20 to + 125 ° C)
– relative humidity

and calculates:

– dew point temperature
– difference between dew point and surface temperature

2.3. The Device can be used in workshop, laboratory, “field conditions”, at high-altitude objects and in other environments according to the rules of safety at ambient temperatures from -10 ° C to + 40 ° C and relative humidity up to 100%.

3. Technical characteristics

3.1. The technical characteristics of Device are shown in the Table 1.

Table 1

The main specifications of the Device

Measurement range	
• air temperature, C	-20 ... +125
• surface temperature	-20 ... +125
• humidity	0-100%
Measurement accuracy	
• air temperature	±1°C
• surface temperature	±1°C
Calculated values	
• dew point temperature	-15 ... +40
• difference between dew point and surface temperature	Depends on measurements
Dimensions, mm	96*47*24
Operating temperature range, ° C	-10 … + 40
Power supply	Internal battery
Battery life, h, no less	10
Net weight, kg, no more	0,2

4. Completeness

4.1. Device – 1 unit.
4.2. Charger – 1 pc.
4.2. Operating manual – 1 pc.

5. Labeling, packaging

5.1. On the body of device is applied the symbol with the trademark of the manufacturer and serial number.

5.2. The Device placed in the package (case) for storage and transportation.

6. Safety precautions and maintenance

6.1. The humidity sensor is very sensitive and should not be subjected to the touch.

Do not expose NOVOTEST KTP-1 long heavy loads and extreme temperatures. Overheating can damage the screen, plastic housing and internal parts.

Dust and prolonged high humidity can damage the unit, causing malfunction. The device is not water resistant and can not be immersed in liquid.

Plastic surfaces may be cleaned only with isopropyl alcohol (ethanol) and dried with a soft cloth. Other solvents may cause damage to the plastic housing.

6.2. Maintenance of device made by the manufacturer in case of trouble.

7. Design

7.1. Keyboard

Keyboard of NOVOTEST KTP-1 is shown below:

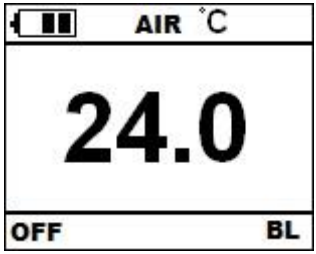
 - Press and hold leads to on / off the device.

 - Control of button illumination. Long pressing leads to overturning on 180 degrees the information at the display.

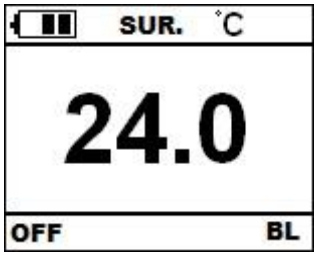
 - On / off of displaying of all measured parameters.

 - Selecting the measurement mode.

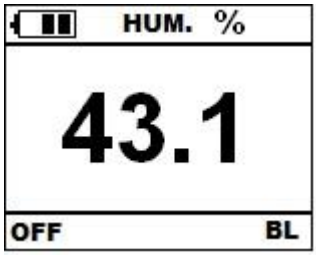
7.2. Indication and Modes



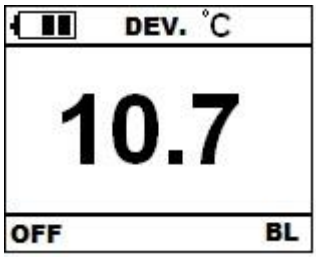
Air temperature measurement mode



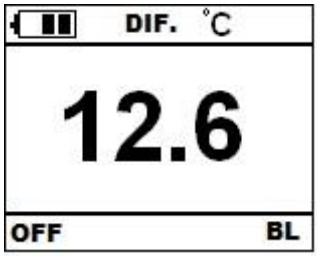
Surface temperature measurement mode



Relative humidity measurement mode



Dew point temperature displaying mode



Displaying mode of difference between surface temperature and temperature at a point

7.3. The battery status
3 segments indicate battery status. The larger number of displayed segments, the more energy remains in the battery. When low energy level, the battery symbol starts to blink, and the battery should be charged. Connector for charging is located in the upper end of the unit.

8. Operating

The device measures the three different values: air temperature, surface temperature and relative humidity. From these values shall be calculated dew point temperature and ΔT.

8.1. Relative humidity
For the accurate measurement of relative humidity is necessary to ensure unimpeded air flow through the grooves of the sensor.

8.2. Surface temperature
The sensor for measuring the surface temperature has a metal tip. Metal tip is placed against the surface, preferably at an angle of 90 °, and fixed in this position until the stabilization of the measured values. During measuring user needn't press on the Device with a great force.

8.3. Air temperature
The sensor measures the temperature of the air directly in their environment, and so it is important to keep items which could affect on the temperature of the air, for example, the fingers away from this sensor.

8.4. Dew point temperature
Dew point temperature is calculated parameter which is obtained from the values of air temperature and relative humidity.

Surfaces with surface temperature near or below the dew point temperature will be covered by condensate.

8.5. ΔT
ΔT - is the difference between the surface temperature of tested objects and the dew point temperature.

8.6. The warning signal
Devices makes sound alarm when ΔT (difference between surface temperature and dew point) decreases more than 3 ° C. In such climatic conditions there is a risk of poor-quality painting, due to the formation of condensation on the surface. A warning signal sounds only in the mode of displaying difference between the surface temperature and the temperature at point.

9. Storage and transportation

9.1. The Device must be stored at ambient temperature from -10 to +35 ° C and relative humidity up to 80% at 25 ° C.

9.2. The storage should be free of dust, fumes, acids, alkalis and corrosive gases.

9.3. Transporting device in a package can be made by any mode of transport in accordance to the requirements and rules of transportation, operating on the data types of transport.

9.4. During transportation, handling and storage of stock unit should be kept from blows, shocks and moisture.

10. Warranty

10.1. The manufacturer guarantees compliance device to the technical requirements for observance of consumer terms of transportation, storage and operating.

10.2. Warranty period - 12 months from date of shipment to the consumer.

Manufacture date

_____ **Signature**

Sale date

_____ **Signature**