



NOVOTEST

Ultrasonic Thickness Gauge NOVOTEST UT-1M-IP

Available with
Bluetooth



Datasheet

2022

1. Introduction

Ultrasonic Thickness Gauge NOVOTEST UT-1M-IP is a special version of ultrasonic thickness gauge, it is designed to measure the thickness of various materials and products for one-way access in difficult climatic conditions – in dusty rooms, in high humidity, in the rain – when the use of a conventional ultrasonic thickness gauge is impossible.

It is used to control the thickness of materials such as glass, metals and alloys, polymers, plastic and many others. Objects can be pipes, rolled products, structures, products and parts for various purposes and shapes.

NOVOTEST Lab is your real laboratory in your pocket!

The results of measurement, adjustment and calibration of the ultrasonic thickness gauge in smartphone – the innovative NOVOTEST application for smartphones based on Android.

The functions of devices have no been so wide before! With the Bluetooth connection, your smartphone is able to control all the functionality of the NOVOTEST ultrasonic thickness gauge without wires. The intuitive interface of the application itself, access to the Internet, mail and instant messengers, touch screen, camera, microphone and GPS receiver of the mobile device make the use of NOVOTEST devices much more convenient and versatile.

The main advantages of the Ultrasonic Thickness Gauge NOVOTEST UT-1M-IP:

- INCREASED DUST AND MOISTURE RESISTANCE

Unique protection against dust and moisture – by default, the device is delivered with a degree of dust and moisture protection IP65 according to DIN 40050. When ordering, versions of a thickness gauge with moisture protection up to IP67 are available (immersion in water is allowed).



- UNPRECEDENTED AUTONOMY OF THE DEVICE

Due to the features of circuitry and operating modes – the continuous operation time of the device in practice reaches 200 hours. What makes the device ideal for field conditions in the absence of power supply.

- **WIDE RANGE OF MEASURING**

Ultrasonic Thickness Gauge NOVOTEST UT-1M-IP can be equipped with various types of transducers, however, the device has the ability to advanced settings of transducers (gain, path, V-correction, etc.), which allows the user to get the maximum operation range with one transducer, in practice, the operating range of the 5 MHz probe reaches from 0.5 to 500 mm.



- **LIBRARY OF MATERIALS AND PROBES**

The device has a library of velocities of basic materials, as well as an archive of transducers, which allows the operator to take measurements at various objects without additional reference information and complicated setup. Also, the user can independently replenish the settings archive.

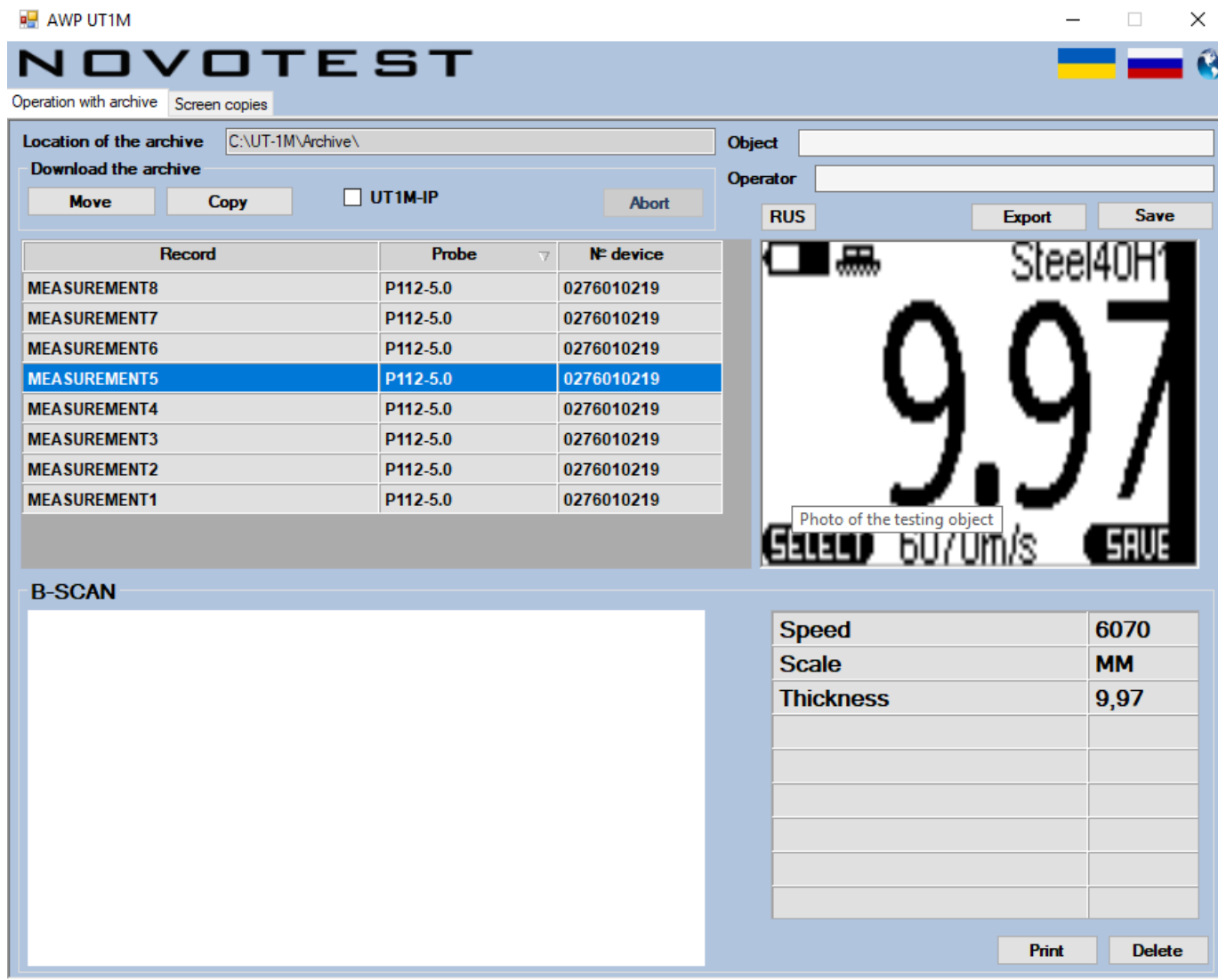


- **TRANSFERRING DATA TO PC**

Device has special water-dustproof connector and special cable in set.



Using a special software for PC, it is possible to transfer the saved measurement results to PC for further processing.



2. Specifications

2.1 Advantages

- Unique protection from dust and moisture, previously not available in the market of ultrasonic thickness gauges of general purpose. By default the device comes with a degree of dust-moisture protection IP65. This protection degree can be increased up to IP67 (submerged in water) at order;
- Unprecedented autonomy of the device – increased up to 200 hours continuous operation time of the thickness gauge;
- Special rubber lining on the side surfaces of the casing facilitates the convenient retention of the thickness gauge in the user's hand;
- Device has light weight and dimensions, in comparison with similar protected thickness gauges;
- Saved data can be transmit to PC;

- Material selection and automatic setting of ultrasound velocity;
- Large graphic display of high contrast and backlight;
- Display of measured thickness in mm and inches;
- Convenient menu in the device;
- Wide choice of UT probes with preset settings in the device;
- Modes of statistical processing of measurements;
- Ability to restore factory calibrations;
- Ability to adjust all parameters of the acoustic path;
- Ability of further adjusting the user gain directly from the measurement mode;
- Wide range of testing;
- Mode of audible and visual alarm when leaving the established ranges.

2.2 Specifications

Measuring thicknesses range , mm:	0.45 ... 1000 or more
•Probe 10MHz – P112-10-6 / 2	•range 0.45-300 mm
•Probe 5MHz – P112-5-10 / 2	•range 0.8-500 mm
•Probe 2,5MHz – P112-2,5-12 / 2	•range 2.5-1000 mm
Probe dimensions, mm:	
•Probe 10MHz – P112-10-6 / 2	•D12×15 mm
•Probe 5MHz – P112-5-10 / 2	•D17×20 mm
•Probe 2,5MHz – P112-2,5-12 / 2	•D20×21 mm
Diameter of probe contact area, mm:	
•Probe 10MHz – P112-10-6 / 2	•9 mm
•Probe 5MHz – P112-5-10 / 2	•14 mm
•Probe 2,5MHz – P112-2,5-12 / 2	•16 mm
Size of plate:	
•Probe 10MHz – P112-10-6 / 2	•6 mm
•Probe 5MHz – P112-5-10 / 2	•10 mm
•Probe 2,5MHz – P112-2,5-12 / 2	•12 mm
Optional probes	•Echo-Echo 5MHz probes for through-coating testing •High temperature 5MHz probes, up to 250 C
Setting range of the ultrasonic velocity, m / s	1000-17000
Discrete readings on the digital indicator, mm	0.1
Response time, with no more than	1
Basic measurement accuracy, mm	$\pm (0,01 T + 0.05)$
Echo-Echo mode (through coating measuring), max thickness of coating, mm	1 (with optional Echo-Echo probes only)
Standards	•ASTM E797 •EN 14127 •EN15317

Storage of measurement results	256
Menu languages	English, Spanish, Russian
Overall dimensions, mm	120x60x25
Operating temperature range, ° C	-5 to +40
Power supply	3 AA batteries
Time of continuous work hours, not less, h	up to 200
Weight of electronic unit with battery, no more, kg	0.2

2.3 Available options

- Couplant
- UT-probes
- Calibration blocks

2.4 Standard package

- Electronic unit Ultrasonic Thickness Gauge
- Transducer (probe) – 1 pc
- AA batteries – 3 pcs
- Charger
- Cable for PC
- Operating manual
- Case

