

## Warning!

Please read the user manual included in this work as it contains important information related with safety of installation and use of the device.

Only persons who read the user manual may use the device.

The user manual must be kept because it may be required in the future. The device is to be used exclusively for purposes specified in this user manual.

The device must be unpacked prior to starting-up. After removing the packaging make sure the device is in working order.

If the product has defects, it should not be used until it is repaired.

The product is intended for use at home and commercial use and may not be used for other than intended use.

The manufacturer is not liable for damages resulting from not adhering to the rules contained in the user manual, therefore, we recommend to follow the aforementioned safety rules for operation and maintenance of the device. In this way you will ensure yourself safety and avoid causing damage to the device.

The manufacturer and the supplier are not liable for losses or damages arising out of the product, including financial or intangible losses, loss of profits, income, data, pleasure from use of the product or other products related with it - indirect, incidental or consequential loss or damage. The above provisions apply whether the loss or damage concerns:

1. Deterioration of quality or the lack of operation of the products or products related with it due to damage as well as the lack of access to the product when it is undergoing repair, which results in stoppage the loss of user's time or a break in business activity;
2. Improper results of operation of the product or products related with it;
3. It applies to losses and damages according to any legal category, including negligence and other losses, termination of a contract, expressed or implied guarantee and strict liability (even if the manufacturer or the supplier was notified about the possibility of occurrence of such damages).

### Safety measures:

Particular attention at designing was directed to quality standards of the device where ensuring safety of operation is the most important factor.

The device must be secured against contact with caustic, staining and viscous fluids.

The device was designed in such a way that it restarts operation when power supply is restored after a break.

Turn off the device before transporting it.

Prior to connecting the device to a power source check whether the supplied voltage is consistent with rated voltage specified in the user manual.

**Attention! We recommend using protections to further protect the device from possible overvoltages in installations.**

**Surge protectors are effective protection against accidental pass to the device voltages higher than the rated. Damages caused by pass the voltages higher than specified in manual, are not under warranty.**

### Proper product disposal:

A marking of a crossed out waste bin indicates that the product may not be disposed together with other household waste in the entire EU. To avoid possible damage to the natural environment of health due to uncontrolled waste disposal, therefore, it should be handed over for recycling, propagating in this way sustainable use of natural resources.

To return a worn-out product, use a collection and disposal system of this type of equipment or contact a seller from whom it was purchased. He will then be recycled in an environmentally-friendly way.

It is forbidden to use the device in case its power cord or plug is damaged, the device works incorrectly, was damaged or dropped. A damaged power cord or plug must be replaced with new ones by the manufacturer, personnel of service centre or a person with relevant qualifications in order to avoid the risk of electric shock. We do not recommend repairing the device on one's own for safety reasons.

The device is not intended for operation by persons (including children) with limited physical, sensory or mental capabilities as well as persons inexperienced in operation or not competent to operate of such device, unless the operation is supervised by a person responsible for their safety or in line with instructions for use provided by such person.

It is forbidden to touch the plug with wet hands! Pull the plug, never the cable, to pull out the plug from a socket.

The device is to be used exclusively according to its use described in this manual. Use of accessories not recommended by the manufacturer of the device may cause fire, electric shock or injuries.

Marking of a lightning inside a equilateral triangle signifies presence of dangerous voltage, contained under the cover of the device. It may be dangerous for user's life and health.

The UT-195DS is a universal digital meter used to measure: voltage, current, resistance, capacitance, frequency, and checking the correctness of diodes operation. The meter has the function of automatic change of measuring ranges, as well as the relative measurement mode.

The device meets the IP65 tightness class.



|                         |   |
|-------------------------|---|
| DC voltage measurement: | $600 \text{ mV} \pm (0.7\% + 3) @ 0.1 \text{ mV}$ ,<br>$6 \text{ V} \pm (0.5\% + 3) @ 0.001 \text{ V}$ ,<br>$60 \text{ V} \pm (0.7\% + 3) @ 0.01 \text{ V}$ ,<br>$600 \text{ V} \pm (0.7\% + 3) @ 0.1 \text{ V}$ ,<br>$1000 \text{ V} \pm (0.7\% + 3) @ 1 \text{ V}$ ,<br>$6 \dots 60 \text{ V} \pm (1.5\% + 4) \text{ AC + DC}$  |
| AC voltage measurement: | $600 \text{ mV} \pm (1\% + 4) @ 0.1 \text{ mV}$ ,<br>$6 \text{ V} \pm (0.7\% + 3) @ 0.001 \text{ V}$ ,<br>$60 \text{ V} \pm (1\% + 3) @ 0.01 \text{ V}$ ,<br>$600 \text{ V} \pm (1\% + 3) @ 0.1 \text{ V}$ ,<br>$750 \text{ V} \pm (1\% + 3) @ 1 \text{ V}$<br><br><ul style="list-style-type: none"> <li>• LPF mode :<br/> <math>6 \dots 750 \text{ V} \pm (2\% + 3) @ 0.1 \text{ V}</math></li> <li>• LoZ mode :<br/> <math>600 \text{ V} \pm (2\% + 3) @ 0.1 \text{ V}</math></li> </ul> |
| DC current measurement: | $600 \mu\text{A} \pm (0.8\% + 3) @ 0.1 \mu\text{A}$ ,<br>$6000 \mu\text{A} \pm (0.8\% + 3) @ 1 \mu\text{A}$ ,<br>$60 \text{ mA} \pm (0.8\% + 3) @ 0.01 \text{ mA}$ ,<br>$600 \text{ mA} \pm (0.8\% + 3) @ 0.1 \text{ mA}$ ,<br>$6 \text{ A} \pm (1\% + 3) @ 0.001 \text{ A}$ ,<br>$20 \text{ A} \pm (1.2\% + 5) @ 0.01 \text{ A}$   |



# User Manual

Code: UT-195DS  
UNIVERSAL METER **UT-195DS** UNI-T

|  |   |
|--|---|
| AC current measurement:                    | 600 $\mu$ A $\pm$ (1% + 3) @ 0.1 $\mu$ A ,<br>6000 $\mu$ A $\pm$ (1% + 3) @ 1 $\mu$ A ,<br>60 mA $\pm$ (1% + 3) @ 0.01 mA ,<br>600 mA $\pm$ (1% + 3) @ 0.1 mA ,<br>6 A $\pm$ (1.2% + 3) @ 0.001 A ,<br>20 A $\pm$ (1.5% + 5) @ 0.01 A   |
| Resistance measurement:                    | 600 $\Omega$ $\pm$ (1% + 2) @ 0.1 $\Omega$ ,<br>6 k $\Omega$ $\pm$ (0.8% + 2) @ 0.001 k $\Omega$ ,<br>60 k $\Omega$ $\pm$ (0.8% + 2) @ 0.01 k $\Omega$ ,<br>600 k $\Omega$ $\pm$ (0.8% + 2) @ 0.1 k $\Omega$ ,<br>6 M $\Omega$ $\pm$ (1.2% + 3) @ 0.001 M $\Omega$ ,<br>60 M $\Omega$ $\pm$ (2.5% + 5) @ 0.01 M $\Omega$  |
| Capacitance measurement:                   | 6 nF $\pm$ (3% + 10) @ 1 pF ,<br>60 nF ... 600 $\mu$ F $\pm$ (3% + 5) @ 10 pF ... 100 nF ,<br>6 mF ... 60 mF $\pm$ 10% @ 1 $\mu$ F ... 10 $\mu$ F   |
| Inductance measurement:                    | —   |
| Frequency measurement:                     | 100 Hz ... 40 MHz $\pm$ (0.1% + 4) @ 0.01 Hz ... 0.01 MHz   |
| Square-wave signal duty ratio measurement: | 0.1 % ... 99.9 % $\pm$ (2% + 5) @ 0.1 %   |
| Temperature measurement:                   | —   |
| Automatic change of measuring ranges:      | ✓   |
| hFE:                                       | —   |
| Diode test:                                | ✓   |
| Sound signal of the continuity test:       | ✓   |
| Checking TTL logic states:                 | —   |
| RS-232:                                    | —   |
| USB:                                       | —   |
| Main features:                             | <ul style="list-style-type: none"><li>• True RMS - accurate measurement of the RMS current and voltage for any waveform,</li><li>• Possibility to measure AC voltage using low measuring impedance (LoZ mode),</li><li>• LPF function - allows to measure the AC voltage values using low-pass filter with a frequency limit of 200 Hz,</li><li>• Robust housing that meets the requirements of the IP65 "Index of Protection" class,</li><li>• Freezing the last reading,</li><li>• Test and identification of phase sequence for a three-phase motor: 600 V,</li><li>• Writing the value MAX / MIN,</li><li>• REL - relative measurement mode,</li><li>• Writing the value peak,</li><li>• Analog bargraph,</li><li>• Large, double LCD display with backlight,</li><li>• Low battery level alarm,</li><li>• Flashlight built-in,</li><li>• Aesthetic and solid construction,</li><li>• The set includes a practical case</li></ul> |
| Power supply:                              | 9V, type 6LR61 battery (included)   |
| Weight:                                    | 0.47 kg   |
| Dimensions:                                | 195 x 95 x 61 mm  |
| Manufacturer / Brand:                      | UNI-T   |
| Guarantee:                                 | 2 years   |

Front panel:



Rear view:



Place for 9V battery:



In the kit:



Device is secured by handy case:



## PACKAGE

|                                  |                    |
|----------------------------------|--------------------|
| Dimensions (L x W x H): 0x0x0 mm | Gross Weight: 0 kg |
|----------------------------------|--------------------|