

Code: UT-593

## MULTIFUNCTION METER FOR ELECTRICAL INSTALLATIONS **UT-593** UNI-T

The UT-593 is a multifunction meter for measurements in electrical installations, dedicated to electricians. The device is also a comprehensive tester for the safety of electrical installations. The UT-593 allows you to measure insulation resistance, short circuit loop impedance with/without RCD tripping, line impedance, continuity of protective and equalizing conductors, test of trip current and RCD tripping time, AC voltage value, and the phase sequence display.

**Attention!** High voltage is required to correctly measure the insulation resistance value. During the measurement one should be particularly careful and strictly follow the recommendations included in the device manual.



|                                   |   |
|-----------------------------------|---|
| Resistance measurement:           | <ul style="list-style-type: none"> <li>• Test voltage 250 V : 0.05 MΩ ... 250 MΩ</li> <li>• Test voltage 500 V : 0.05 MΩ ... 500 MΩ</li> <li>• Test voltage 1000 V : 0.05 MΩ ... 1000 MΩ</li> </ul> |
| Measuring accuracy:               | 0.05 MΩ ... 1000 MΩ ± (5% + 5)  |
| Open circuit voltage:             | Test voltage ± 10 %   |
| Test current:                     | 0.9 mA ... 1.1 mA   |
| Short-circuit current:            | < 1.8 mA  |
| AC voltage measurement:           | 0 V ... 440 V ± (2% + 3) @ 1 V  |
| DC voltage measurement:           | 0 V ... ± 440 V ± (2% + 3) @ 1 V  |
| Measurement of small resistances: | 0.01 Ω ... 200 Ω ± (2% + 5)   |
| Frequency measurement:            | 20 Hz ... 100 Hz - for reference only   |

|   |   |
|---|---|
| Test of RCDs:   | <ul style="list-style-type: none"> <li>Working voltage: 220V <math>\pm</math> 10 %</li> <li>Test current: 10mA / 30mA / 100mA / 300mA / 500mA</li> <li>Switch-off time ranges : <ul style="list-style-type: none"> <li>- 0 ... 2000 ms <math>\pm</math> (5% + 5) @ 1/2 x nominal value of the residual current</li> <li>- 0 ... 500 ms <math>\pm</math> (5% + 5) @ 1 x nominal value of the residual current, Selective RCD</li> <li>- 0 ... 300 ms <math>\pm</math> (5% + 5) @ 1 x nominal value of the residual current</li> <li>- 0 ... 40 ms <math>\pm</math> (5% + 5) @ 5 x nominal value of the residual current</li> </ul> </li> </ul> |
| RCD tripping current measurement:                               | Increasing current test: 10 mA / 30 mA / 100 mA / 300 mA / 500 mA $\pm$ 10 %  |
| RCD automatic test:   | ✓   |
| Phase sequence test:  | 100 V ... 440 V / 45 Hz ... 65 Hz   |
| Continuity measurement of protective and equalizing conductors: | 0 $\Omega$ ... 199 $\Omega$ $\pm$ (2% + 5)<br>Measuring current > 20 mA @ 0 ... 2 $\Omega$  |
| Line impedance measurement (L-N):                               | <ul style="list-style-type: none"> <li>0.05 <math>\Omega</math> ... 1.99 <math>\Omega</math> <math>\pm</math> (5% + 5)</li> <li>2 <math>\Omega</math> ... 19.99 <math>\Omega</math> <math>\pm</math> (5% + 5)</li> <li>20 <math>\Omega</math> ... 2000 <math>\Omega</math> <math>\pm</math> (5% + 5)</li> </ul> Measuring current : 20 A / 20 ms<br>Measuring range of prospective short-circuit current : 0 ... 26 kA  |
| Short circuit loop impedance measurement (L-PE):                | <ul style="list-style-type: none"> <li>0.05 <math>\Omega</math> ... 1.99 <math>\Omega</math> <math>\pm</math> (5% + 5)</li> <li>2 <math>\Omega</math> ... 19.99 <math>\Omega</math> <math>\pm</math> (5% + 5)</li> <li>20 <math>\Omega</math> ... 2000 <math>\Omega</math> <math>\pm</math> (5% + 5)</li> </ul> Measuring current : 20 A / 20 ms<br>Measuring range of prospective short-circuit current : 0 ... 26 kA  |
| Automatic change of measuring ranges:                           | ✓   |
| RS-232:   | —   |
| USB:  | —   |
| Main features:  | <ul style="list-style-type: none"> <li>Warning of using high voltage during the measurement,</li> <li>Phase switch 0° / 180° during RCD test,</li> <li>Automatic identification of AC/DC voltage,</li> <li>Reset function for measuring low resistances,</li> <li>Large, readable LCD display with backlight,</li> <li>Buzzer,</li> <li>Automatic power-off,</li> <li>Low battery indicator,</li> <li>Aesthetic and solid construction</li> </ul>   |
| Operation temp:   | 0 °C ... 40 °C  |
| Permissible relative humidity:                                  | $\leq$ 85 % (non-condensing)  |
| Power supply:   | 8 x 1.5V, type AA/LR6/FR6 battery - included  |
| Weight:   | 1.1 kg  |
| Dimensions:   | 210 x 175 x 90 mm   |
| Manufacturer / Brand:   | UNI-T   |
| Guarantee:  | 2 years   |