

RLC-METER MNS 1100



The meter is intended for automatic measurement of the impedance parameters (capacity C , inductance L , active resistance R , mutual inductance M , loss tangent $\text{tg}\delta$, phase tangent $\text{tg}\varphi$, and the quality factors Q_C and Q_L) by any of the two element equivalent circuit and also the percent deviations with representation of results in digital view.

The meter can be used in metrological works, in checking of electrical and radio equipment, in scientific researches, in measurement of non-electric values with usage of any kinds measurement sensors.

The meter can provide:

- The automatic choice of the reactance character of the measurement object by the criteria "prevailing parameter";
- Registration of the primary parameters;
- Averaging of the measurement parameters; the removal of the net interference (on the separate stipulated frequencies);
- Measurement with regulation of the value of the alternating current voltage, applied to the object of measurement;
- Two measurements modes: single - for measurement of unknown sizes; following - for continues measurement of changing in time values;
- A four terminal connection of the measurement objects.

Main Technical Characteristics:

Measurement value	The range of measurement values	Discreteness of the digital countdown (on lower range)
R , Ohm	from $1 \cdot 10^{-5}$ to $1 \cdot 10^{11}$	$1 \cdot 10^{-5}$
C , F	from $1 \cdot 10^{-17}$ to 10	$1 \cdot 10^{-18}$
L , H	from $1 \cdot 10^{-10}$ to $1 \cdot 10^8$	$1 \cdot 10^{-11}$
M , H	from $1 \cdot 10^{-6}$ to 1	$1 \cdot 10^{-8}$
$\text{tg}\delta$	from $1 \cdot 10^{-5}$ to $1 \cdot 10^5$	
U_{dc} , V	from $1 \cdot 10^{-8}$ to 1,25	
R_{dc} , Ohm	from $1 \cdot 10^{-5}$ to $1 \cdot 10^{11}$	
$\text{tg}\varphi$	from $\pm 1 \cdot 10^{-5}$ to $\pm 1 \cdot 10^5$	

Working frequencies: direct current, alternating current, Hz	from 0,5 to $1 \cdot 10^5$
Accuracy class (on the main frequency 1 kHz) at calibration on an external reference standard	0,01/0,001 0,01/0,003
The measuring accuracy of the constant voltage	Less than $3 \cdot 10^{-5}$
The measuring accuracy of the resistance to direct current	Less than $2 \cdot 10^{-5}$
The range of values of alternating current on the object of measurement),V	from 0,01 to 4
The measurement time on frequency 1 kHz, sec	Not more than 3
The sizes of the device, mm	300x290x120
The weight of the device, (without accumulator)	Not more than 5
Operating conditions of application:	
Air temperature, °C	from 10 to 35
Relative air humidity, %	80
Supply net voltage, V	220 ± 22
Supply net frequency, Hz	50 ± 1
Consumption power, W	Not more than 10