

Micromilliohmmeter IKS-1A

Compact micromilliohmmeter IKS-1A is designed for rapid measurement of electric resistance to direct current, mostly of contact resistance of bolted and welded connections, sockets. The device allows measuring electric resistance of low-inductive and inductive circuits of machines and instruments in the range from $1\ \mu\Omega$ to $200\ \Omega$.

The device can also be used for controlling the resistance of metallic bonding to evaluate reliability of the contact between different elements, forming electrical ground.

In devices produced since 2019, it is available the mode "AUTO Contact" which allows to start the continuous measurement process (when both hands are occupied by measuring probes).

The device is available in two modifications: «Basic» and «Energetic» (see the Completeness tab).

In the kit «Energetic» the device with extended functionality («AUTO IND» mode) allows to measure the resistance of transformer windings with power up to 1000 kVA in electrical grids of 0.4-10 kV. In addition, the device in this kit is supplied with testing wires, 3 m long with "alligator" type clips with the grip width of up to 40 mm.



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Wide range of applications:

- Measurement of bolted, welded, contact resistances;
- Control of the resistance of metallic bonding;
- Diagnostics of the windings of hybrid motor generators;
- Control of electric resistance of wheel pairs;
- In the kit «Energetic» the device allows measuring winding resistance of transformers with the power of up to 1000 kVA in the electrical grids of 0.4-10 kV.

Distinctive features



High accuracy of measurements in the whole range



Built-in battery allows to do hundreds of measurements without recharging



Connection with a PC via USB-interface for charging the battery, setting up the device and conducting measurements



Little weight 0,25 kg
and dimensions 140x100x35 mm

Specifications

Resistance range

$1\ \mu\Omega \dots 200\ \Omega$

Permissible basic relative error of measurement does not exceed:

- for subrange of up to $10\ \text{m}\Omega$: $\pm(0.1+0.02(10/R-1))\%$, where R is a measured value of resistance, $\text{m}\Omega$

- for other subranges: $\pm 0.1\%$

Measuring current intensity

$10\ \text{mA} \dots 1.2\ \text{A}$

Uptime, not more than

2 sec

Measurement time, not more than	3 sec
Dimensions of the device	140x100x35 mm
Weight without testing wires, not more than	0.25 kg
Ambient temperature, operational	from -20 to +55°C
Resolution display, pixels	128x64
Device power supply	autonomous
Battery charge	from 220 V, 50 Hz or from a PC by USB
One battery charge is enough to hold at least	160 measurements
"Long measurement" mode for inductive circuits and circuit breakers with integral current transformers. Measurements time in this mode is 10...20 seconds	
The "AUTO Contact" mode for starting the continuous measurement process (when both hands are occupied by measuring probes)	
The "AUTO IND" mode for measuring the resistance of transformer windings with power up to 1000 kVA *	

*Only for the Micromilliohmmeter IKS-1A in the "Energetik" kit

Completeness:

«Basic» kit:

1. Measuring device	1 psc.
2. Testing wires, 1,5 m long with "alligator" type clips with the grip width of 25 mm	2 psc.
3. USB cable for connecting to power supply unit or PC	1 psc.
4. Power supply unit with USB	1 psc.
5. Operational manual and passport	1 psc.
6. Carry case for the device and accessories	1 psc.

«Energetic» kit:

1. Measuring device with extended functionality	1 psc.
2. Testing wires, 3 m long with "alligator" type clips with the grip width of up to 40 mm	2 psc.
3. USB cable for connecting to power supply unit or PC	1 psc.
4. Power supply unit with USB	1 psc.
5. Operational manual and passport	1 psc.
6. Carry case for the device and accessories	1 psc.

Additional accessories:

1. Testing wires, 3 m long with separated current "alligator" clamps and potential test probes	1 kit.
2. Testing wires, 1,5 m long with two-pin plug-in test probes	1 kit.
3. Testing wires, 3 m long with "alligator" type clips with the grip width of up to 40 mm	1 kit.
4. Testing wires, 3 m long with spring-loaded probe	1 kit.
5. Testing wires, 1,5 m long with "alligator" type clips with the grip width of 25 mm	1 kit.



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