

Milliohmmeter MIKO-7 with basic software

Production of the device is discontinued.

A new version is available now - MIKO-7M. Orders are accepted. Comparison of the first version of the device and its modification is at site www.skbpribor.com

Certificates:

Safety Test Certificate IEC 61010-1:2001 on the MIKO-7
EMC Compatibility 61326-1:2005 on the MIKO-7

MIKO-7 is included in Russian Register of Innovative Products under #240, valid until 12.10.2018

MIKO-7 is included in Russian State Register under #55004-13, valid until 30.09.2018

Warranty: 13 months
Service life: 10 years



DC current resistance measurement in inductive and noninductive circuits in the range from 10 μOhm \div 1 kOhm for the currents of up to 10A:

- Windings of power transformers, instrument current transformers, electromagnets and electric motors;
- Compensatory, current-limiting and other resistors of high-voltage circuit breakers;
- Contacts and contact connections of power and signal circuits;
- Cables.

Description:

- The instrument ensures the overall automation of resistance measurement process thus simplifying the process of configuring and provides for the knowledge of actual value of resistance of the item subject to diagnostics. Measuring current in the equipment of other manufacturers changes discretely – by huge steps, for instance, of 10A, 1A, 0,1A, while the travel of milliohmmeter MIKO-7 is as smooth as possible;
- Output signal power control (0.3; 1; 5; 20; 62) for the avoidance of excessive resistance of low-power windings of electric motors, electromagnets, etc.;
- Exceptional measuring current stability;
- High level of protection and safety conformance in regard to exceeding of measuring current;
 - exceeding of measuring current;
 - polarity reversal of cable ends in accumulator storage battery;
 - electromotive force (emf) of self-induction;
 - a set of required protective means against superheat of the measuring unit;
 - protection grounding contact in the mains plug and safety earthing terminal on the case of the measuring unit.
- Power from the mains and external accumulator storage battery;
- Cables of different length and the grip of alligator type clamps allowing performance of ground measurement as well as the measurement from the cover of transformers of all voltage types;

- The instrument is easy and convenient to use and has an intuitive interface that has been repeatedly noted by the users.

The instrument can be supplied with two software versions. Advanced software is more sophisticated and mostly functional.

Obtaining **MIKO-7 with standard software** you can activate the advanced version for the evaluation period and get access to new functions. In order to activate this version press “CANCEL” button and input the code “0000000000”. After activation the user receives a number of advantages including:

- automatic stop of measuring process – the user does not have to select the time of measuring process completion by itself;
- performance measurement (fault-free/faulty) of transformer – automatic calculation of relative deviation of winding resistance against each other;
- accurate identification of transformer problem area – recalculation of resistance of moving windings with delta or star connection to the phase winding resistance;
- defining of compliance of transformer showings with the certified values – recalculation of resistance at current temperature to the resistance at the certified temperature;
- transformer winding temperature calculation;
- history of measurements stored in the instrument and on computer – connection to the computer through USB cable, copying of measurement results on computer;

Specific transition from standard to advanced software can be performed at any time convenient for the user by entering the unique code.

Specifications

| Specifications | Value |
|---|--------------------------------|
| Resistance range | 10 μ Ohm ÷ 1 kOhm |
| Maximum permissible intrinsic error of resistance measurement | $\pm (0.1\%+0.5\mu\text{Ohm})$ |
| Best resolution | 0.1 μ Ohm |
| Measuring current intensity, A | 0,015 ÷ 10 |
| Relative drift of measuring current intensity, %/s | ± 0.002 |
| Maximum output voltage, V | 22 |
| Set output power limits, W | 0.3; 1; 5; 20; 62 |
| Power supply: | |
| network voltage, V | 100÷242 |
| power voltage from the battery, V | 100÷300 |
| Power supply voltage from the external accumulator storage battery, V | 11 ÷ 14 |
| Maximum consumed power, W | 120 |
| Dimensions, mm | 270x250x130 |
| Operation temperature range, °C | -20 ÷ +50 |
| IP for transportation | IP64 |
| IP rating in operating state | IP20 |
| Maximum measuring unit weight, kg | 3.2 |
| Interface language | English |
| User manuals language | English |
| Calibration interval, year | 3 |

Area of the Instrument application

| Test methods | Recommended Instrument |
|--|--|
| Power cable lines | |
| Monitoring of cable lines | MIKO-7 , MIKO-7M MIKO-8M, MIKO-9, MIKO-2.3 |
| Current transformers | |
| Measuring of secondary resistance | MIKO-7 , MIKO-7M MIKO-8M, MIKO-9, MIKO-2.3 |
| Operates in the range of 10 m Ω ÷ 1 k Ω on the current of up to 10A, therefore, when measuring the resistance of the secondary current transformer windings the minimum output power shall be set as low as 0.3W, that will reduce the current amperage. | |
| Voltage transformers (electromagnetic and capacitive) | |
| Measuring of secondary resistance | MIKO-7 , MIKO-7M MIKO-8M, MIKO-9, MIKO-2.3 |
| Operates in the range of 10 m Ω ÷ 1 k Ω on the current of up to 10A, therefore, when measuring the resistance of the secondary current transformer windings the minimum output power shall be set as low as 0.3W, that will reduce the current amperage. | |
| Power transformers, autotransformers and oil-immersed reactors | |
| Measuring of transformer winding resistance | MIKO-7 , MIKO-7M MIKO-8M, MIKO-9, MIKO-2.3 |
| Synchronous generators, compensators and AC/DC motors | |
| Measuring of winding resistance of the facility | MIKO-7 , MIKO-7M MIKO-8M, MIKO-9, MIKO-2.3 |