

Description

The purpose of the meter and its field of use is the execution of electromagnetic tests of transformers of all circuits and connection groups.

List of basic functions during single-phase and three-phase excitation of the tested transformer:

- current and idling loss measurement at low voltage;
- short-circuit resistance measurement;
- transformation ratio measurement;
- determination of connection groups of three-phase transformer windings and terminal polarity of single-phase transformers;
- measurement of DC copper resistance.



During the measurement, the asymmetry, the unsmoothness and the excitation voltage frequency are controlled. The function of the meter is maintenance, repair, setting-up, and testing of power transformers, both in laboratory and field conditions by the services of ORGRES.

Technical specification

Measured AC range (three channels)¹, A, – 0.01-5.

Measured AC voltage range (two three-channel meters)², A, – 5-400.

Measured active power range (three channels)^{1,2}, W, – 1-2000.

Measured DC copper resistance range, Ohm, – 0.00005-1999.

Measured frequency range, Hz, – 45-55.

Current measurement limits, A, – 15.

Voltage measurement limits, V, – 100-400.

Resistance measurement limits, Ohm, – 0.00002-1999.

Basic reduced voltage measurement error at each of limits, max., % – 0.2.

Basic reduced power measurement error, max., % – 0.5.

Basic reduced current measurement error, max., % – 0.5.

Absolute frequency measurement error, max., Hz – 0.25.

Basic reduced DC copper resistance measurement error, % – 0.5.

Input resistance of voltage measurement channels, min., kOhm – 400.

Load voltage drop of current strength measurement channels, max., mV – 75.

Average service lifetime of the device, min., years – 8.

Mean time to failure, min., h – 10000.

The permissible auxiliary measurement error caused by the ambient air temperature change relative from normal to limiting values in the operating temperature range does not exceed the limit of permissible basic error.

Notes:

¹ – without using an external current measuring transformer;

² – without using an external voltage measuring transformer.