



### Application

A digital automatic dissipation factor measurement apparatus Tangens-3M is intended for taking measurements of the transformer oil dielectric dissipation factor according to IEC 60247 at 50 Hz frequency.



### Technical specifications

Parameter	Value
Dissipation factor (DF) measuring range	0.0001 – 1.0000 (0.01% – 100%)
DF measuring accuracy	± (0.03 DF + 0.00002)
Resolution	0.00001
Output AC voltage applied to testing cell terminals (RMS)	1940 V – 2060 V
Output AC voltage measuring accuracy	± 2.5 % of reading
Capacitance measuring range	5 pF – 30 pF
Testing temperature	90 °C
Temperature measuring accuracy	± 1 °C
Measuring time for "Program 1" (measuring at 70 °C and 90 °C)	35 minutes
Measuring time for "Program 2" (measuring at 70 °C, 80 °C and 90 °C on increasing temperature and measuring at 90 °C, 80 °C and 70 °C on decreasing temperature)	85 minutes
Power consumption, max	0.3 kVA
Supply voltage	220 V ± 15 V
Frequency	50 Hz ± 1 Hz
Net weight, max	5 kg
Gross weight (incl. package), max	10 kg
Dimensions	405x260x90 mm

### YAPI-3 test cell specifications

Terminals count	3
Volume	11 – 13 cm <sup>3</sup>
AC voltage corresponding to electric field strength of 1 MW/m	2 kV/RMS

YAPI-3

#### The system measures:

- dissipation factor tgδ;
- dielectric capacitance ε;
- capacitance C;
- voltage applied to a measurement cell;
- a transformer oil sample temperature.



## Diode rectifier VP-300

Diode rectifier VP-300 is designed for breaking-up a junction where cable's phase conductor is short-circuiting with the sheath with a current of up to 300 A.

The device is made in an aluminium case with a flap cover and carrying handles.



## Insulation testing unit AI-2500

An insulation testing unit AI-2500 with a maximum output voltage of 2500 V AC is intended for insulation testing under AC sine voltage which can be adjusted from 0 to 2500 V (50 Hz).

The device can be used in power and electrical engineering industries. Due to increased output current AI-2500 can be used for an AC voltage testing of the winding insulation of large electrical machines and electrical tools.

## Insulation testing unit AI-50



The purpose of the tester with the maximum operating voltage of 50 kV is testing the insulation of power cables and solid dielectrics with sinusoidal electric voltage up to 50 kV, frequency 50 Hz.

AI-50 can also be used as a high voltage installation for testing the insulation of various items (cables, insulators, etc.) with an AC voltage.

The tester consists of a control unit (CU) and a high voltage unit (HVU).