



GD6100B Transformer Oil Tan Delta Tester



General Information

GD6100B Automatic Precision Oil Dielectric Loss Tester, is used for measuring dielectric dissipation factor and DC resistivity of insulating oil and other insulating liquids. The instrument intergrates with test oil cell, temperature controller, temperature sensor, dielectric loss test bridge, AC test power, standard capacitor, high resistance meter, DC high voltage source and other major components.

Features

- The test cell adopts the three-electrode structure according to national standard GB/T5654-2007, with electrode spacing 2mm, which can eliminate the effects of the stray capacitance and leakage on dielectric loss test results.
- The instrument adopts the medium frequency induction heating, PID temperature control algorithm. This heating method has the advantages of non-contact between the test cell and the heating body, uniform heating, fast speed, convenient control, and strictly control of the temperature within error range of the preset temperature.
- Internal standard capacitor is SF6 gas-filled three-electrode capacitance, and its capacitor dielectric loss and electrical capacity are not affected by ambient temperature, humidity etc, so that the instrument accuracy can be ensured even after prolonged use.
- AC test power supply uses AC-DC-AC conversion, which effectively prevents the fluctuations in mains voltage and frequency from affecting the dielectric loss measurement accuracy. Even use a generator, the instrument can work properly.
- Perfect protection function. When there is over voltage, over current or high-voltage short circuit, instruments can quickly cut off high voltage, and issues a warning message. When the temperature of the sensor failure or not connected, the instrument will also issue a warning message.
- There is a temperature limiting relay in the medium frequency induction heating furnace. When temperature above 120 degrees, the instrument frees the relay and stops heating.
- Convenient test parameter setting. Temperature setting range 0~120°C, AC voltage setting range 200~2200V, DC voltage setting range 0~500V.

- Using of large TFT touch screen, with backlight and clear display. With simply set up , the instrument can be automatically tested. And automatically store and print test results .
- Built-in real-time clock, the test date and time can be saved, displayed and printed with the test results.
- Calibration functions of cleaned dry cell. The measurement of dry cell's capacitance and dielectric loss factor can determine its cleaning and assembly conditions. The calibration data is automatically saved and so that it facilitates the calculation of relative permittivity and DC resistivity.
- The instrument takes the RAM9 platform as the core, the test accuracy is high and the speed is fast. The whole device is controlled by high-speed single-chip microcomputer, with high automation and easy operation.

Specification

Voltage supply	AC 220V±10%
Power frequency	50Hz/60Hz ±1%
Measuring range	
Capacitance	5pF~200pF
Relative Permittivity	1.000~30.000
Dielectric loss factor	0.00001~100
DC Resistivity	2.5MΩm~20TΩm
Measuring accuracy	

Capacitance	$\pm (1\% \text{ of reading} + 0.5\text{pF})$
Relative Permittivity	$\pm(1\sim 10)\%$ of reading
Dielectric dissipation factor	$\pm (5\% \text{ of reading} + 0.0002)$
DC Resistivity	$\pm 10\%$ of reading
Resolution	
Capacitance	0.01pF
Relative capacitivity	0.001
Dielectric dissipation factor	0.00001
Measured temperature range	0~120°C
Temperature measurement error	$\pm 0.5^\circ\text{C}$
AC Test Voltage	200~2200V Continuously adjustable, frequency 50Hz
DC Test Voltage	0~500V Continuously adjustable
Power consumption	100W
Ambient temperature	0°C~40°C
Relative humidity	<75%RH

Dimensions	450*410*320mm
Total weight	25kg