

## T-206

### TRANSFORMER DIELECTRIC LOSS TAN DELTA TESTER

T-206 Transformer dielectric loss tan delta tester can effectively find the overall damp, deterioration and partly defects of electrical equipment insulation, which are widely used in electrical manufacturing, electrical equipment installation, handover and preventive testing.

The anti-interference precision dielectric loss tan delta tester is used for on-site anti-interference, dielectric loss measurement or laboratory dielectric loss measurement. The Transformer tan delta tester is an integrated structure with built-in dielectric loss bridge, variable variable frequency power supply, test transformer and standard capacitor, etc.. The instrument adopts frequency conversion anti-interference and Fourier transform digital filtering technology, fully automatic and intelligent measurement, and the measurement data is very stable under strong interference. The result of measurement is displayed by large screen display, and the instrument comes with micro printer to print and print test results.

## Application

1. Universities
2. Power plant;
3. Research institutes;
4. Electrical testing center;
5. Transformer manufacturers;
6. Voltage transformer factory;
7. Railway electrical department;
8. ISO17025 Electrical laboratory;
9. Electricity power bureau & power company;
10. Power engineering commissioning company;
11. Electrical Department of industrial and mining enterprises;



## Function & Features

1. With positive / reverse wiring, internal / external standard capacitor, internal / external high voltage, reverse connection, low voltage shielding, CVT and variable ratio, and other modes of operation. Automatically distinguish capacitance, inductance, resistance type test sample. Integrated structure, fully automatic, intelligent measurement, easy to use and carry.

2. With ordinary measurement and accurate measurement mode. Testing speed under accurate measurement mode is slower than the ordinary measurement mode, and is suitable for big interference in scene occasions. For common scene occasions, ordinary measurement mode can be used..
  3. The frequency conversion anti-interference can be measured accurately under 200% interference, and the test data is stable. It is suitable to do the anti-interference dielectric loss test on the spot.
  4. By using digital waveform analysis and Bridge self calibration technology, the accuracy and stability of the positive / reverse connection are consistent. With high-precision three terminal standard capacitor, high precision dielectric loss measurement is realized.
  5. Built in series and parallel dielectric loss measurement model, and can simulate voltage capacitor bridge and current comparator for convenient instrument verification.
  6. During CVT self excitation magnetic measurement, the measuring line can be connected with the floor, C1/C2 can be measured at the same time to automatically compensate the voltage sharing effect of ground busbar and standard capacitor, without changing line and external parts.
  7. The utility model has the function of reverse connection and low voltage shielding. Under the condition of 220kV CVT ground busbar, the C11 can be carried out the measuring of the dielectric loss of the lower shield without disconnecting the 10kV , and simultaneously measuring the capacitance and the dielectric loss of the lower shielding part.
  8. With CVT ratio measurement function, it can measure the CVT ratio, polarity and phase error.
  9. Safety measures
- High voltage protection:** Under condition of short circuit, breakdown or high voltage current fluctuation, it can cut off output at a high speed by short circuit mode.
- Power supply protection:** incorrect connection of 380V, power supply fluctuation or sudden power failure, it will start protection and avoid to cause over-voltage.
- Ground protection:** it has the function of ground wiring detection and can not step up when it is not grounded. If the instrument is not grounded properly, the ground protection is started.
- CVT protection:** four protection limits of voltage and current in high voltage, voltage and voltage and current in low voltage side to protect the equipment; the wrong menu will not output the exciting voltage. In CVT measurement without 10kV high voltage output.
- Anti misoperation:** two level power switch; real-time monitoring of voltage and current; repeated key confirmation; distinctive terminal of high / low voltage; slow step-up; quick decompression; sound and light alarm.
- Anti - "Capacitance rise":** when measuring large capacitance sample, the "rise" effect of voltage can occur. The instrument can automatically track the output voltage and keep the test voltage constant.
- High voltage cable:** high voltage insulated wire can be used even connecting the floor.
- Anti-seismic performance:** the instrument adopts unique anti-seismic design, and can withstand strong long-distance transportation, vibration and jolt without damage.

10. Print storage: instrument with a micro printer, and you can print and output the measurement results. The measurement results will be stored into the device (which can store 100 sets of measurements) or U disk for checking in the future..

11. Real time clock: instrument with real-time clock, real-time display, and can record the date and time of measurement.

## Parameters

Electrical parameters	
Power supply	Single phase AC 220V±10% or 110V±10%, 50/60HzAC
Accuracy	Cx: + (reading * 1%+1pF)TG Delta: + (reading * 1%+0.00040)
Anti-interference index	frequency conversion anti-interference, can achieve the accuracy under 200% interference
Capacitance range	Internal applied high voltage: 3pF ~ 60000pF/10kV 60pF to 1 mu F/0.5kV External applied high voltage: 3pF to 1.5 F/10kV 60pF to 30 mu F/0.5kV
Resolution	maximum 0.001pF, 4 bit significant digits
TG delta range	no limit, resolution 0.001%, capacitance, inductance, resistance, three kinds of test products, automatic identification.
Test current range	10 A to 5A
Internal Applied high voltage	set voltage range: 0-12kV
Maximum output current	200mA
Lifting mode	continuous smooth adjustment
Voltage accuracy	+ (1%× readings +10V)
Voltage resolution	0.1V
Test frequency	45, 50, 55, 60, 65Hz single frequency 45/55Hz, 55/65Hz, 47.5/52.5Hz automatic dual frequency conversion
Frequency accuracy	0.01Hz
External applied high voltage	positive and reverse wiring, the maximum test current 5A
CVT self excitation measurement	output voltage 3 ~ 50V, output current 3 ~ 30A C1/C2 simultaneous measurements, high-voltage wiring can be mopping
CVT ratio measurement	change ratio measurement accuracy: + reading×1% ratio, measuring range: 10~99999 Phase measurement accuracy: + 0.02° phase measurement range: 0~ 359.99 °
High voltage dielectric loss	support frequency conversion and vibration supply, high voltage dielectric loss
Real time clock	time and date display in real time
Internal storage	100 sets of measurement data can be stored inside the instrument
U disk	supports U disk storage

**Electrical parameters**

LCD	5.7"black and white LCD display
Cable length	High voltage cable 12m, signal cable 10m, CVT cable 8m;
Communication port	RS232, USB
Degree of protection	IP42
Printer	built-in 58mm thermal printer
Standard	IEC61010-1, IEC61326-1

**Mechanical parameters**

Dimension (L×W×H) (mm)	368x288x280
Weight (kg)	22

**Environmental conditions**

Operating temperature	-10°C to 50°C
Storage temperature	-20°C to 70°C
Relative humidity	≤85%RH