



H.V. TEST

Specialists in High Voltage
Testing & Diagnostics

HVTTD12B

12kV Capacitance and dissipation factor & CVT Ratio, Polarity, Phase Error

The HVTTD12B Transformer Dielectric Loss Tangent Delta Tester is an instrument specially designed for testing the capacity of standard distribution power transformers under lower voltage and lower currents.

Dielectric loss or dissipation factor measurement is a good method as part of the insulation test, which can effectively find the overall moisture deterioration and deterioration of electrical equipment insulation, as well as local defects. It is widely used in electrical engineering, electrical equipment installation, handover and preventive testing. The measurement of dielectric loss of transformers, transformers, reactors, capacitors, bushings, arresters, etc. is the most basic method to measure the insulation performance.

Projects

Repairs

Services

Training

Products



Features:

- The instrument uses Fourier transform digital filtering technology to measure capacitance, dielectric loss and other parameters. The precision of the test results is ideal for automatic measurements.
- frequency conversion technology eliminates 50Hz power frequency interference in the field, and even in an environment of strong electromagnetic interference.
- Use full-touch super large LCD, easy to operate.
- Data storage: save the test results and results can be displayed and printed at any time.
- Data can be exported to Flash.
- Data can be viewed and managed by PC software
- Equipped with thermal printer for printing and output and USB port for a Flash disk
- Easy to operate. When a selected measurement method is selected, the data measurement can be completed automatically.
- Integrated model, with standard capacitor and high-voltage power supply, facilitates field testing and reduces field wiring.
- Due to the high measurement accuracy of the instrument, the requirements of oil dielectric loss measurement. can also be performed by equipping the standard oil cup
- It has a reverse wiring low-voltage shielding function. When the 220kV CVT bus is grounded, 12kV reverse wiring dielectric loss measurement can be performed on the C11 without removing the wires.
- Able to do an AC withstand test. It is useful for PT, CT secondary side ac withstand voltage, 400V low-voltage system to do the withstand voltage test.
- With CVT test function, CVT self-excitation test can be performed and 4 protection limits of high voltage/current and low voltage/current can be set to ensure the safety of person and equipment.

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Additional Features:

- When testing CVT, not only the capacitance and dielectric loss values of C1 and C2 can automatically be tested, but also the total capacitance and dielectric loss values of CVT equipment
- With CVT ratio measurement function, it can also measure CVT ratio, polarity and phase error.
- With a computer interface. A computer can control 32 instruments, which can be integrated into the comprehensive high-voltage test vehicle to achieve multiple measurements
- Grounding protection function, when the instrument is not grounded or the grounding is bad, the instrument does not enter the normal test program and does not output high voltage.
- Over-current protection, the instrument will not be damaged in short circuit or breakdown.
- Electrocution protection function: when the operator of the instrument accidentally comes in contact with the output, the instrument will immediately cut off the high voltage to ensure the safety of the test personnel.

TECHNICAL SPECIFICATIONS

- Accuracy Cx: $\pm (\text{readings} \times 1\% + 1\text{pF})$
Tg δ $\pm (\text{readings} \times 1\% + 0.00040)$
- Anti-interference index Frequency conversion anti-interference, can still achieve the above accuracy under the interference of 200%.
- Capacitance range Internal high voltage : 3pF $\sim$ 60000pF/12kV 60pF $\sim$ 1.5 μ F/0.5kV
External high voltage : 3pF $\sim$ 1.5 μ F/12kV 60pF $\sim$ 30 μ F/0.5kV
Resolution: up to 0.001 pF, 4-bit significant digits
- Tg δ range No limit, The resolution is 0.001%. The capacitance, inductance and resistance can be identified automatically.
- Test current range 10 μ A $\sim$ 5A
- Internal high voltage Setting Voltage Range : 0.5 $\sim$ 12kV
Resolution: 1V Accuracy: $\pm(1.5\% \times \text{reading} + 10\text{V})$
Maximum output current : 200mA
Boost and drop voltage mode: the voltage is set at will. Such as 5123 v.
- Test frequency 40-70Hz single frequency can be set at will. For example, 48.7 Hz.
50 $\pm$ 0.1Hz to 50 $\pm$ 10Hz auto dual frequency conversion optional
60 $\pm$ 0.1Hz to 60 $\pm$ 10Hz auto dual frequency conversion optional
Frequency accuracy: $\pm 0.01\text{Hz}$
- External high voltage Maximum test current 5A, power frequency or frequency conversion of 40-70Hz during positive connection
- Maximum test current 12kV/5A, power frequency or frequency conversion 40-70Hz
- CVT self-excitation method LV Output voltage 3 $\sim$ 50V, output current 3 $\sim$ 30A
- CVT ratio measurement Ratio accuracy: $\pm \text{reading} \times 1\%$
Ratio measurement range: 10 $\sim$ 99999
Phase accuracy: $\pm 0.1^\circ$
Phase measurement range: 0 $\sim$ 359.9 $^\circ$
- Measurement time About 40s, related to measurement method
- Input power 180V $\sim$ 270VAC, 50Hz $\pm$ 1%, municipal or generator power supply
- Computer interface Standard RS232 interface, USB Flash disk
- Printer Thermal printer
- Environment temperature -10 $^\circ\text{C}$ $\sim$ 50 $^\circ\text{C}$
- relative humidity <90%
- Overall dimension 430 x 330 x 350mm
- Weight 28kg

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