

# Automatic Capacitance and Tan Delta Tester, Model: CTD-12 (12kV)

## Quality / Accuracy / Reliability

This Capacitance and Tan Delta Tester adopts variable frequency power technology, single chip and modernized electrical technology to carry out automatic frequency shift, analog-to-digital conversion and data computing. It features strong anti-interference capacity, high test speed, high precision, automatic digitization and easy operation. It adopts high-power switching power supply, which outputs 45Hz and 55Hz pure sine wave and automatically increase the voltage to a maximum value 12KV. it can test 3 DUTs at one time

The tester is applicable to the site test of substation and other places with large electromagnetic interference. This method is extensively applied in dielectric loss measurement of transformer, mutual inductor, reactor, bushing, capacitor, arrester and others equipments in power industry.



### Functions and Features:

- The instrument adopts complex number current method to measure capacitance, tan delta and other parameters. The measured result is highly accurate and it is easy to realize automatic measurement.
- The instrument adopts variable frequency technology to eliminate 50Hz/60Hz power frequency interference. So a reliable data will be reachable even under the strong electromagnetic interference.
- Digital backlit LCD display
- The instrument is easy to operate and the measuring process is controlled by microprocessor.
- The instrument is designed to be an integrated model with reference capacitor and HV power supply in it.
- Internal memory/ printer, USB interface, PC software.
- External oil cell to test tan delta of insulating oil (optional)
- .Multi test mode :UST/GST/CVT/GSTg/CVT ratio/4-channel
- Internal automatic memory/printer/USB port/RS232 port
- The instrument is equipped with CVT testing function, which can achieve CVT self-exciting testing without external accessories and measure the capacitance and dielectric loss of C1 and C2 by at a time.
- GST measurement adopts ivddv technology to ensure the stability of test data in GST measurement.
- The instrument provides low voltage shell function of GST. When the bus of 220kV CVT is grounded, dielectric loss measurement can be conducted for C11 without removing 10 kV GST.
- The instrument has a function of measuring high-voltage dielectric loss. It can carry out dielectric loss test with over 10kV with the help of voltage transformer or series resonance.
- It can test 3 objects at the same time, such as testing 3 bushings at one time.
- Multi protection functions
- PC software can automatically generate test report in Excel format.

### Specifications:

Condition of Use	-10℃~ 50℃		RH<90%
Power Source	180V~270VAC, 50Hz/60Hz±1%, mains or generator		
Internal HV	HV range:	0.5KV ~ 12KV	
	Maximum output current:	300mA	
	Rise/drop voltage	Continuous smooth adjustment	
	Test frequency:	45, 50, 55 single frequency, 45/55Hz,49/61HZ... automatic dual variable frequency, Frequency accuracy: ±0.01Hz	
External HV	In case of UST	maximum test current is 5A, and power frequency or variable frequency is 40-70Hz	
	In case of GST	maximum test current is 10kV/5A, and power frequency or variable frequency is 40-70Hz	
CVT self-exciting low voltage output	Output voltage 3~50V, output current 3~30A		
Resolution	tgδ: 0.001%, Cx: 0.001pF		
Precision	△tgδ: ± (1% rdg+0.04%)		
	△C x : ± (1%rdg +1PF)		
Measuring Range	tgδ	unlimited, 0.01% <tgδ <100%	
	Internal under high voltage	12 KV	3PF ≤Cx ≤80000PF
		0.5 KV	60PF ≤Cx ≤ 1.2μF
	External under high voltage	12 KV	3PF ≤Cx ≤ 1.5μF
		0.5 KV	60PF ≤Cx ≤ 30μF
Test current range	10μA ~ 1A		
Anti-interference:	Variable frequency anti-interference		
Measuring duration	About 40s, depending on measuring method		
Printer	Thermal printer		
Dimension/Net weight	470 (L) *370 (W) *320 (H) mm /26.5KG		

Product Specifications are subject to change without notice

Marketed By:

Manufactured By:

**Neutronics Manufacturing Private Limited**

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