

# KPM's Tan Delta Test Set (KPM-TD12)



## Applications:

**KPM's Tan Delta Test Set (KPM-TD12)** Automatic 12KV Capacitance & Dissipation Factor Test Set is used to measure the dissipation factor (PF) of insulating materials in heavy interference sites such as power plants or power substations. It can also be used in laboratory for high accuracy capacitance and dissipation measurement.

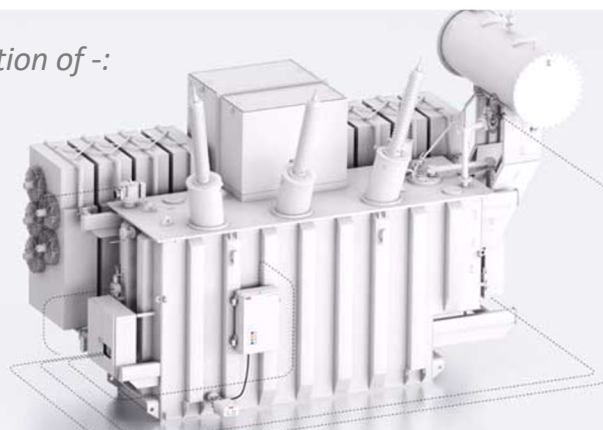
The test set is all in one unit which includes precision digital bridge, power unit, internal reference capacitor (CN), booster transformer and other electronic circuits. When started, it runs automatically and display the results on LCD. Micro printer can be used to print the results automatically.

The typical application of **Tan Delta Test Set (KPM-TD12)** is as follow:

- ❖ **KPM's Tan Delta Test Set (KPM-TD12)** Automatic 12KV Capacitance & Dissipation Factor Test Set is used to measure dissipation factor (PF) in heavy interference site such as power plants or power substations. It can also be used in laboratory for high accuracy test.
- ❖ The set is whole in one designed: including precision digital bridge, power unit, reference capacitor (CN), step-up transformer and other electronic circuits.
- ❖ It is also using frequency shift technology, FFT (Fast Fourier Transform algorithm) and digital filtering.
- ❖ Measure capacitance & dissipation factor for power transformer
- ❖ Measure capacitance & dissipation factor for high voltage motors
- ❖ Measure capacitance & dissipation factor for current transformer and voltage transformer
- ❖ Measure capacitance & dissipation factor for high voltage circuit breakers
- ❖ Measure capacitance & dissipation factor for insulation bushes

*KPM-TD12 is a combination of -:*

- Simplicity
- Accuracy
- Ruggedness
- Noise Rejection
- Portability



**Accurate Insulation diagnostics with world class *safety interlock protection***



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## Technical Specifications:

Accuracy	PF : Error < 0.5 % of reading + 0.02 % Cap: Error < 0.2 % of reading
Interference Ratio	Interference current is no more than 2 times of the test current
Capacitance Range	Internal HV 3pF~60000pF / 10kV , 60pF~1uF/0.5kV External HV 3pF~0.3uF/10kV Resolution 0.0001pF, 4 digital
PF Range	No limit, Resolution 0.001%, C/L/R specimen test
Operator Safety	2 Nos Safety Interlock Protections for 2 No Operators .
Input current range	10μA~1A
Internal HV	0.5~12kV / 200mA (max)
HV Adjust	Rise or fall smoothly
HV Accuracy	± ( reading×1%+10V ) Resolving 1V
Frequency select	50Hz single point, locked 45Hz/55Hz double point, locked
Test Time	40S typical
Power Supply	180V~270V 50Hz/60Hz auto
Operating Temperature	0°C~60°C
Storage Temperature	-20°C~60°C
Humidity	<90%

## Test Connections

**UST:** Un-grounded sample test. This mode is applied to measure the dielectric dissipation factor of un-grounded specimen. The test result of UST mode is more accurate compared to GST mode because the ground condition has no effect in the test result.

**GST:** Grounded sample test. This mode is applied to measure the dielectric dissipation factor of grounded specimen.

**CVT:** Capacitive Voltage Transformer test. CVT is applied in capacitive voltage transformer dissipation factor measurement only.

**HV:** High voltage

**MV:** Medium high voltage

**LV:** Low voltage

**PF:** Dielectric dissipation factor

**GSTG:** Grounded sample test with guarded connection. This mode is applied to split the capacitors with grounded specimen



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## Test Connections Diagram

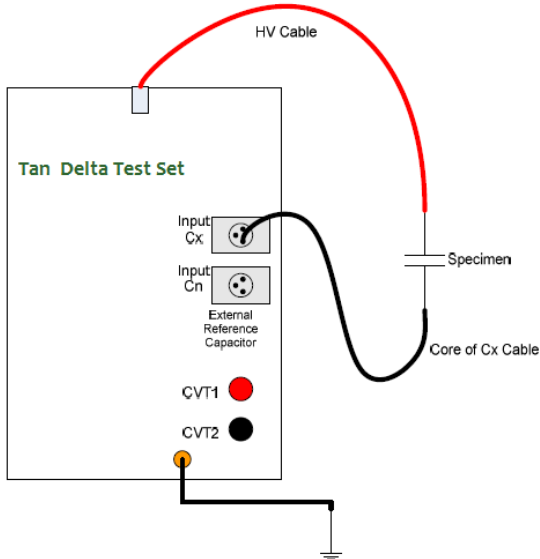


Figure 1

Test connection for UST with internal reference capacitor and internal HV power

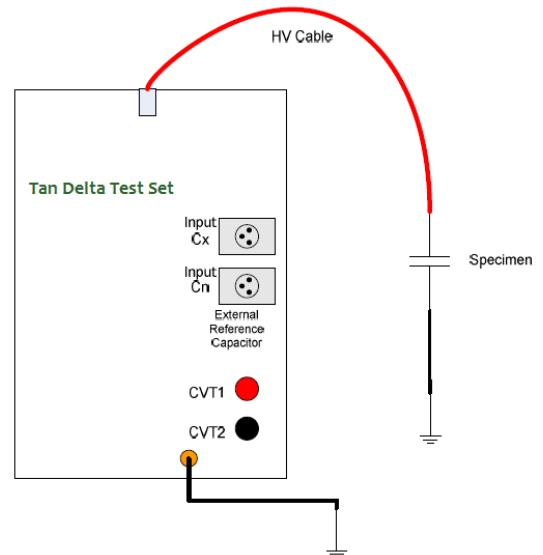


Figure 2

Test connection for GST with internal reference capacitor and internal HV power

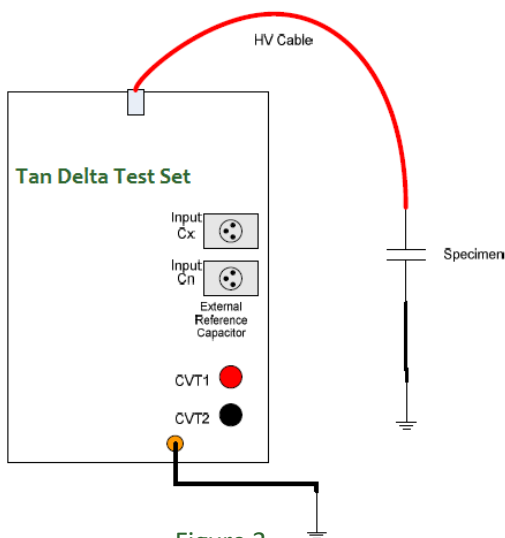
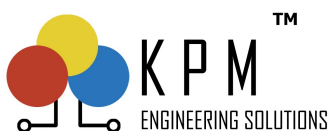


Figure 3

Test connection for UST with external reference capacitor and internal HV power

## Package List

- ❖ Test Set
- ❖ Printer paper
- ❖ HV Test cable
- ❖ Power cable
- ❖ LV test cable
- ❖ User manual
- ❖ Ground Cable



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