

TD30 Tan delta test system



Features

- Lightweight portable unit
- Solid state air insulated design
- Suitable for use with the HVA30 VLF test systems
- Test result storage to notebook or PDA via Bluetooth ® connection
- Supplied complete with analysis software
- Real-time display of actual output waveform

Applications

The TD30 provides the testing and commissioning engineer with a versatile high voltage tan delta measuring system suitable for testing electrical plant including cables: XLPE, PE, EPR, PILC etc, capacitors, switchgear, transformers, rotating machines, insulators and bushings.

Description

Tan Delta testing enables the cable test engineer to detect insulation defects before the cable fails in service. The **TD30** is a versatile tan delta measuring system that is directly connected the HVA series of VLF test systems. The tan delta of the test object can now be quickly measured and the results stored thus providing a “signature” of the device being tested. This enables the cable engineer to now make tan delta routine test.

Product design

The **TD30** is a battery powered system that is directly connected to the HVA30 series of VLF test systems. The standard “C” size alkaline battery cells last for some 10hours thus providing the capacity for many tests. The **TD30** is supplied with 10 metres of output cable which is already terminated to suit the HVA30 test system. The **TD30** is supplied complete with operating software which gives a complete picture of the tan delta measurement together with a real time display of the output voltage and current. The data transmission to the note book pc or PDA is via **Bluetooth** thus eliminating a direct connection between the TD30 and the data collection device.



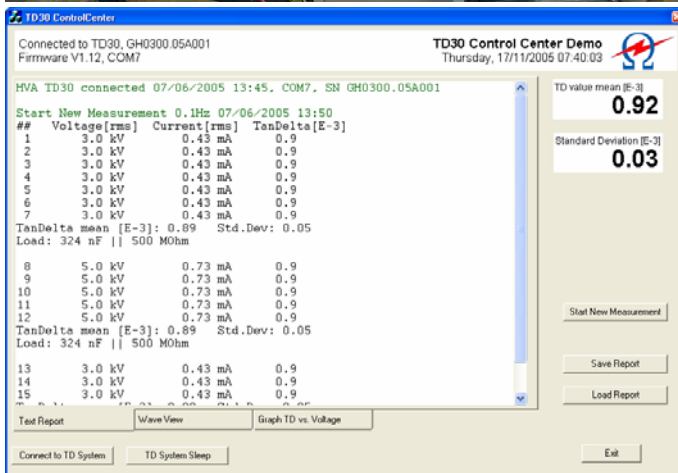
HV Diagnostics International



TD30 test setup

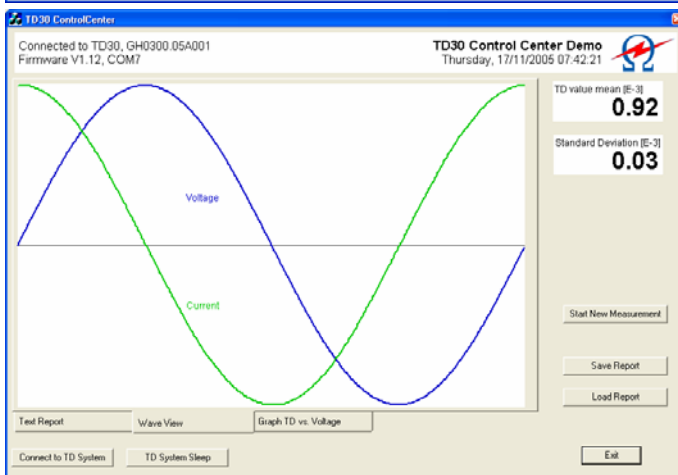
The TD30 test setup is very simple since it is already designed to operate with the HVA30 series of test systems.

In addition since the data transfer is via Bluetooth there are no physical connections to the note book PC or PDA



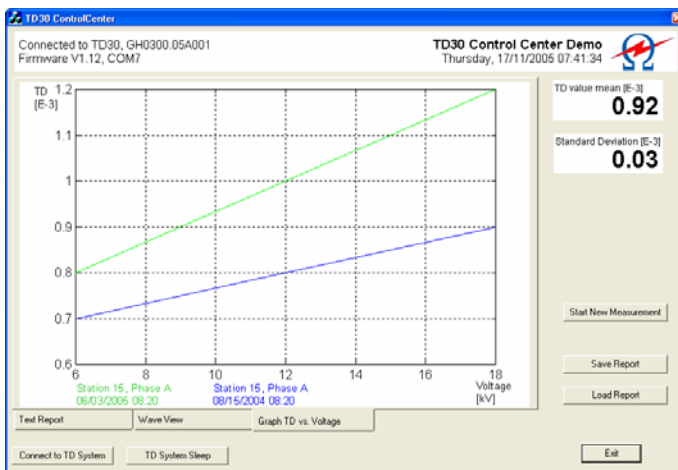
TD 30 Analysis software

There 3 main screens associated with the TD30 software. The test report screen gives all the details of the measurements taken during a test sequence. The results are based on individual measurements per cycle of voltage and current. From these the results the Tan delta is calculated and displayed



Output waveform screen

In the Wave view screen both the output voltage and output current are displayed simultaneously in real time. In addition the status of the voltage and current waveforms the Tan delta value is also displayed



Tan Delta curve screen

The tan delta curve screen plots the measured Tan delta with respect to the test voltage. On a good test sample the curve should remain almost horizontal. However, on a faulty sample a Tan Delta "tip up" will occur alerting the test engineer to possible faulty sample. All 3 phases can be compared on the same diagram.



Technical Data

Input voltage 2 type "C" alkaline cells

Operating voltage Sinusoidal: 1 — 23kV rms
Frequency: 0.1 Hz

Voltage measurement Resolution 0.1kV rms
Accuracy 0.5% of reading

Current measurement Resolution 1 μ A rms
Accuracy 0.5% of reading

Frequency measurement Resolution 0.01Hz

Tan delta measurement Resolution 0.1E-4
Accuracy \pm 0.5E-4

Weight 3kgs (6.6lbs) not including batteries

Dimensions 240mm long x 80mm in diameter (9.5" Long x 3.2" in diameter)

Computer interface Bluetooth. Results download software is included

Accessories supplied HV output cable, transit case
earth cable, operating software
Operating manual

Standards Shock : IEC68-2-27 (15g/11ms half sinus)
Vibration: IEC68-2-6 (10.....150Hz : 2g
EMC: IEC6100-4-2, IEC6100-4-4, EN55011
Safety: EN60950, EN50191,EN61010-1

Temperature Storage: -25° C to +70°C
Operating: -5°C to +45°C



Part Number	Description
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700 123	Tri-pod stand
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700 124	Adaptor kit
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700 125	Large transit case
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NOTE: Due to Company's continuous development program the information detailed in this document may change without previous notification.

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