

VLF Tan Delta (δ) Cable Testing

Model TD-65E | 65 kVac peak @ 0.1 Hz

The latest in TD & VLF technology: only from HVI

HVI - The World's Source for VLF Technology **Made in the USA!**

How good is my cable? Like new, slightly, moderately, or highly degraded?

Tangent Delta, or Dissipation Factor, or Loss Angle testing is a method of determining the degree of deterioration within a cables insulation. Is it perfect, like a pure capacitor, or is it degraded, containing many resistive defects: now an RC circuit - not only C?

Tan Delta testing to learn the condition of your cables insulation helps one make a comparative analysis of many cables to prioritize replacement, insulation injection, or to determine what additional tests may be useful, possibly a **VLF Withstand** or **VLF Partial Discharge** test.

Tan Delta cable testing is a well proven, common method of evaluating the dielectric integrity of insulation. It is similar to 50/60 Hz. Power Factor testing only it **uses an off-line 0.1 Hz VLF AC voltage source**. It is a **non-destructive qualitative** test long established and defined by the IEEE and other standards. It is easily performed, economical, and it provides useful results the operator can interpret and act on.

Why Choose the TD-65E?

Using the TD-65E with the HVI VLF-65E permits the user to **perform all TD tests possible and wirelessly communicate** the results to the **VLF memory** itself for display and data collection, to the VLF's **USB drive**, or to a **laptop with HVI custom application software** written solely for the TD-65E. **There is no better alternative.** **Another reason:** HVI has supplied the world with VLF and Tan Delta since 1998, with more models, greater voltage range, higher power capability, and the **HVI sales and service care and support that is well known and unmatched.**

Tests for MV Cable & Rotating Machinery

VLF Withstand VLF Tan Delta
VLF Withstand Test with monitored TD
VLF Partial Discharge testing, with add'l access.

World Standards Met

IEEE 400, IEEE 400.2, IEEE 433, DIN VDE 0276, CENELEC HD620 S1, NEETRAC CDFI, & others



TD-65E Tan Delta Transducer

Features & Operations

Voltage Measurement Range
Accuracy & Resolution

Current Measurement Load Range
Accuracy & Resolution

TD Measurements Load Range
Accuracy & Resolution

Communications Type
Range: Indoor/Outdoor

Power Input - Battery Type
Life

Dimensions TD Transducer w/Tripod
TD Carrying Case

Weight TD Transducer + Tripod
TD w/ Case

Input Cable Connection - HV

Output Connection - High Voltage

Ground Connection

Environmental Operating Temperature
Storage Temperature
Humidity

Rugged Carry Case Standard

Pelican type carrying case contains the TD-65E and all its accessories. Handle and wheel design provides easy transport.



VLF-65E & TD-65E

Specifications

1 - 65 kV peak / 1 - 46 kV rms
1% & 0.1 kV peak

150 mA peak / 106 mA rms
1% & 1 μ A rms

Freq: 0.1 Hz - 0.01 Hz, 5 nF - 10 μ F
1.0 x 10⁻⁴ & 1 x 10⁻⁵

XBee 802.15.4 (2.4 GHz)
100' (30m) / 1000' (300m)

2 "D" cells (Alkaline or NiMH)
>16 hours

6" x 8" x 18" (152 x 203 x 457 mm)
25" x 20" x 14" (629 x 497 x 353 mm)

10 lbs. / 4.5 kg
40 lbs. / 18.1 kg

MC Connector (\varnothing 14mm socket)

1/4 - 20 male thread w/accessories

1/4 - 20 stud w/wingnut

- 10°C to + 50°C (14° to 122°F)
- 25°C to + 65°C (-13° to 149°F)
80% up to 31°C (88°F)

Accessories Included

- Operators manual
- 4 D size alkaline batteries (2 needed)
- Xstick USB to XBee Network adapter
- 4 GB USB flash drive w/PC App Software
- Shielded HV cable w/MC connector, 20'/6m
- 18 AWG unshielded cable w/banana jack & battery clamp, connects TD to load, 10'/3m
- Ground cable 10 AWG w/battery clamp, 10'/3m
- Corona suppression spinning: 2" x 5" aluminum
- Tripod stand contains HV Divider, fixed height

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High Voltage, Inc. designs and manufactures high voltage test equipment for utility and industrial applications.
Products include VLF AC hipots, fault locators/thumpers, AC and DC hipots, aerial lift testers, HV dividers, oil dielectric testers, and more.