

Megger.

VLF Sine Wave 45 kV + Tan Delta
Medium voltage cable testing

VLF Sine Wave 45 kV + Tan Delta Medium voltage cable testing



- **Test capacity of up to 10 μ F – that's up to 40 km or 25.8 miles of cable at reduced frequency and voltage**
- **Internal tan δ option with automatic results interpretation**
- **One minute burn after fault detection**
- **Automatic frequency adjustment based on cable length**
- **Adjustable DC pulse rates of 1:3 and 1:4**
- **IEEE compliant withstand testing for new installations up to 25 kV**
- **IEEE 400.2 compliant maintenance testing up to 35 kV**
- **IEC 60229 compliant sheath testing up to 20 kV DC**

DESCRIPTION

The VLF Sine Wave 45, with optional integrated tan δ , is a compact system for commissioning, testing and condition analysis of medium-voltage cables. This unit performs very low frequency (VLF), DC, and sheath integrity testing as well as sheath fault pinpointing when combined with the optional ESG NT step voltage probe. Ideal for both routine testing and complicated diagnostics, the VLF45 has a multi-purpose design with a continuous duty cycle.

For 0.1 Hz sine wave, rectangular or DC voltage tests, the VLF45 provides enhanced voltage quality and stability. In the event of excessive charge current integrated breakdown detection shuts down the test, ensuring limited damage to the cable. Up to 1000 measurements can be stored in the internal memory and results can be viewed on the unit or downloaded via the USB port to the included Easyprot software for reporting.

An optional internal tan δ is available that automatically evaluates results for PE, XLPE and PILC type cables based on insulation and selected compliance standard. Combined with the optional ESG NT step voltage probe, the VLF45 can pinpoint sheath faults.

FEATURES AND BENEFITS

- High test capacity up to 10 μ F
- Testing without operational interruptions
- AC testing in compliance with DIN VDE, EN, IEEE
- Intuitive user software with large internal memory
- Leakage current measurement in DC & VLF rectangular mode
- Optional internal tan δ with automatic evaluation per IEEE standards
- Maximum user safety through automatic discharge of the test object & earth loop ground monitoring
- Breakdown detection & load recognition (R, C)
- Quick, easy logging & updates via USB port
- Sheath testing & sheath fault pinpointing per IEC 60229

SPECIFICATIONS

Output voltage

VLF sine wave	0 ... 32 kV _{RMS} / 0 ... 45 kV _{peak}
DC voltage	± 0 ... 45 kV
VLF Rectangular voltage	0 ... 45 kV
Precision	± 1%
Resolution	0.1 kV

Output current

Measuring range	0 ... 20 mA
Precision	± 2%
Resolution	10 µA
Frequency range	0.01 Hz ... 0.1 Hz automatic frequency adjustment

Output Load

0.6 µF @ 0.1 Hz at 32 kV _{RMS}
10 µF maximum test capacity

Internal Tan Delta

Measuring range	0 ⁻³ ... 10 ⁰
Accuracy	10 ⁻³
Resolution	10 ⁻⁴
Sheath testing	0 ... 5 kV, 0 ... 10 kV, 0 ... 20 kV DC
Sheath fault pinpointing	0 ... 5 kV, 0 ... 10 kV, 0 ... 20 kV DC Pulse rate 1:3 und 1:4
Safety	Earth loop ground monitoring, automatic discharging of the test object
Input voltage	100V ... 264 V, 50/60 Hz, 600 VA
Duty cycle	continuous
Internal memory	For at least 1000 measurements
Dimensions	544H x 520W x 416D mm
Weight	50 kg
Protection class	IP 21
Operating temperature	-20° C ... +55° C
Storage temperature	-20° C ... +70° C

ORDERING INFORMATION	
Item (Qty)	Cat. No.
VLF sine wave 45 test system consisting of: 0.1 Hz test system, automated frequency adjustment, breakdown recognition, reporting (Easyprot) 1 GB internal memory, set of cables, carrying bag. Maximum cable capacitance 0.6 µF @ 0.1 Hz / 32 kVrms. Maximum cable capacitance 10 µF.	128300045
Internal tanDelta (with purchase of VLF SIN-45)	138316309
Upgrade internal tanDelta (retroactive)	138316310
HV connection cable VLF Sinus 45 10m	2004420
HV connection cable VLF Sinus 45 15m	2004421