

VLF Sinus 45 kV

Test and diagnostic system for commissioning testing and condition analysis of medium-voltage cables



- **Performs cable withstand testing, cable diagnosis and sheath fault pinpointing**
- **Automatically adjusts the test frequency to the cable length**
- **Eliminates hazards to the user and prevents extensive damage to the cable**
- **Easy field operation with no need for external computer**

DESCRIPTION

The VLF sine wave 45 kV with integrated tanDelta is a compact, robust, and portable high-performance test and diagnostic system for medium voltage cables.

The 45 kV tester is a multifunctional tool: apart from VLF and DC testing, it also performs sheath testing and sheath fault pinpointing (in combination with the step voltage probe ESG NT). Moreover, the optional internal tanDelta expands the system to assess both cable integrity and condition.

The smart VLF system automatically adjusts the test frequency to the cable length, making even tests on 25 kV rated cables (up to 25 km) easy and reliable.

Earth loop monitoring and automatic discharge eliminate hazards to the user. The automatic discharge functionality makes the use of an external safety stick no longer necessary.

In the event of excessive charge current, the integrated breakdown detector shuts down the test voltage, preventing extensive damage to the cable.

Field operations require no external computer. Equipped with intuitive operating software and a large internal memory, the VLF 45 kV evaluates and stores all data automatically. Via the USB port, datasets can be easily exported and processed for report generation via the PC software Easyprot (incl. in delivery). The user can review all performed measurements either immediately or at a later point in time (internally).

The well thought-out operating principle combined with simple visual commands guide the user through the entire measurement process, keeping training time to a minimum even for advanced cable diagnosis.

The system can also be used as a voltage source for the optional PD attachment and can be easily expanded to a universal testing and diagnostic system.

TECHNICAL DATA*

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	± 1 %
Resolution	10 µA

Frequency range	0.01 Hz ... 0.1 Hz autom. frequency adjustment
-----------------	---

Output load	0.6 µF @ 0,1 Hz at 32 kV _{RMS} 10 µF maximum test capacity
-------------	--

Internal tanDelta

Measuring range	10 ⁻³ ...10 ⁰
Precision	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 and 1:4

Safety	Earth loop ground monitoring, autom. discharging of the test object
--------	---

Input voltage	100 V ... 264 V, 50/60 Hz, 600 VA
Duty cycle	continuous

Internal memory	For at least 1000 measurements
-----------------	--------------------------------

Dimensions (W x H x D)	544 x 520 x 416 mm
------------------------	--------------------

Weight	50 kg
--------	-------

Protection class	IP 21
------------------	-------

Operating temperature	-20 °C ... +55 °C
-----------------------	-------------------

Storage temperature	-20 °C ... +70 °C
---------------------	-------------------

FEATURES

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

SCOPE OF DELIVERY

- VLF Sinus 45 kV
- HV connection cable 5 m
- Mains cable/grounding cable 3 m
- Accessory bag
- USB stick for logging
- Easyprot reporting software

ORDERING INFORMATION

Product	Order no.
VLF Sinus 45 kV	128300045-S
Options:	
Internal tanDelta	138316309
Upgrade internal tanDelta (retroactive)	138316310
PD attachment	1007582
HV connection cable 10 m	2004420
HV connection cable 15 m	2004421
Increase of testable capacity to 40 kV _{RMS} , 5 µF, 0.1 Hz	128311042
ESG NT	1004629-S

* We reserve the right to make technical changes.

GERMANY

Megger GmbH
Obere Zeil 2
D-61440 Oberursel
T +49 6171 92987 0
F +49 6171 92987 19
info@megger.de

Seba Dynatronic
Mess- und Ortungstechnik GmbH
Dr.-Herbert-lann-Str. 6
96148 Baunach
T +49 (0) 9544 680
F +49 (0) 9544 2273
team.dach@megger.de

Hagenuk KMT
Kabelmesstechnik GmbH
Röderaue 41
01471 Radeburg
T +49 (0) 35208 840
F +49 (0) 35208 84249
team.dach@megger.de

CERTIFICATION ISO

Registered to ISO 9001 Cert. no. 000677 QM08

VLFSINUS45KV_DS_EN_V01

www.megger.de

Megger is a registered trademark