

## VLF SINE 37 kV

### Test and diagnostics system for medium voltage cables



- **Cable withstand testing, cable diagnostics, sheath testing and fault pinpointing in one device**
- **Smallest, lightest and most powerful unit in its class**
- **Unmatched user-experience thanks to large colour-touch display and advanced user interface**
- **Precise automatic result interpretation as per latest IEEE 400.2 standard**

#### DESCRIPTION

The VLF Sine 37 kV with integrated tan delta is a compact, robust, and portable high-performance test and diagnostic system for medium voltage cables. With a testable capacity of  $1.6 \mu\text{F} @ 26 \text{ kV}_{\text{RMS}}$ , it is the most powerful yet portable unit in its class, making reliable testing and diagnostics of cables longer than 5 km effortless.

This 37 kV tester is a true multifunctional tool. In addition to VLF and DC testing, it performs sheath testing and sheath fault pinpointing (in combination with the ESG NT2 step voltage probe). The optional internal tan delta further enhances the system, enabling both cable integrity and condition assessment. Its smart VLF system automatically adjusts the test frequency based on cable length, ensuring reliable tests even on 15 kV-rated cables up to 25 km.

The unit comes with plugable HV test leads in 5, 10, or 15 m length, offering maximum flexibility to the end user. Field operations are seamless, requiring no external computer. With intuitive operating software and a large internal memory, the VLF Sine 37 kV automatically evaluates and stores all test data. Data can be exported easily via USB or, with an upcoming feature, via wireless connection to a mobile device. Users can review measurements directly on the unit, either immediately or during future diagnostics – e.g., comparing tests conducted a year apart.

The user-friendly, touch-enabled interface redefines ease of operation, minimizing training time even for advanced diagnostic methods. This ensures maximum productivity and efficiency for all users.

The system can also serve as a voltage source for the optional PD attachment (PDS 62-SIN). As the lightest PD coupler on the market, the PDS 62-SIN features globally recognized software for advanced yet user-friendly partial discharge (PD) diagnostics. Paired with the PDS 62-SIN, the VLF Sine 37 kV transforms into a universal testing and diagnostic system capable of withstand testing, tan delta diagnosis, and partial discharge diagnosis.

Optional transport cases for both the VLF Sine 37 kV and the PDS 62-SIN provide safe storage and transport. Additional accessories, such as leakage current correction and multiple test adapters, further expand the system's capabilities, making it a comprehensive solution for medium voltage cable testing and diagnostics.

# VLF SINE 37 kV

## Test and diagnostics system for medium voltage cables

### FEATURES

- High test capacity of up to  $1.6 \mu\text{F}$  @  $26 \text{ kV}_{\text{RMS}}$  and  $0.1 \text{ Hz}$
- Maximum test capacity of  $10 \mu\text{F}$
- Continuous duty cycle
- Large 7" colour-touchscreen
- Intuitive user software with large internal memory
- Optional internal tan delta with automatic evaluation acc. to IEEE 400.2 or user-defined trending limits
- Insulation resistance measurement up to  $5 \text{ GOhm}$
- Via optional PDS 62-SIN PD coupler expandable to a full test and diagnostic test set
- Maximum user safety through breakdown detection, automatic discharge of the test object
- Sheath testing and sheath fault pinpointing acc. to IEC 60229
- Monitored withstand testing in TD and PD mode
- Prepared for wireless data-transfer

### SCOPE OF DELIVERY

- VLF SINE 37 kV
- HV connection cable 5, 10 or 15 m
- Clamp set (EU or US)
- Mains cable
- Grounding cable 5, 10 or 15 m
- Accessory bag
- Operating manual

### TECHNICAL DATA

Output voltage	
VLF sine wave	$0 \dots 26 \text{ kV}_{\text{RMS}} / 0 \dots 37 \text{ kV}_{\text{peak}}$
DC voltage	$\pm 0 \dots 37 \text{ kV}$
VLF rectangular voltage	$0 \dots 37 \text{ kV}$
Accuracy	$\pm 1 \%$
Resolution	$0.1 \text{ kV}$
Output current	
Source output current	$37 \text{ mA} @ 37 \text{ kV}_{\text{peak}}$
Accuracy	$\pm 1 \%$
Resolution	$1 \mu\text{A}$
Frequency range	$0.01 \dots 0.1 \text{ Hz}$
Output load	autom. frequency adjustment $1.6 \mu\text{F} @ 0.1 \text{ Hz}$ at $26 \text{ kV}_{\text{RMS}}$ $2.3 \mu\text{F} @ 0.1 \text{ Hz}$ at $18 \text{ kV}_{\text{RMS}}$ $10 \mu\text{F}$ maximum test capacity $0.1 \text{ MOhm} \dots 5 \text{ GOhm}$
Resistance range	
Internal tan delta	
Measuring frequency	$0.01 \dots 0.1 \text{ Hz}$
Measuring range	$10^{-4} \dots 100$
Accuracy	$10^{-4}$
Resolution	$10^{-5}$ or $10^{-6}$
Sheath testing	$0 \dots -20 \text{ kV DC}$
Sheath fault pinpointing	$0 \dots -20 \text{ kV DC}$ Pulse rate 0.5:1, 1:2, 1:3, 1:4 and 1.5:0.5
Safety	autom. discharging of the test object
Input voltage	$100 \text{ V} \dots 264 \text{ V}, 50/60 \text{ Hz}, 1500 \text{ VA}$
Duty cycle	continuous
Display	7" colour-touchscreen
Interfaces	USB, LAN, wireless (coming soon)
Internal memory	For at least 1000 measurements
Dimensions (W x H x D)	$529 \times 478 \times 380 \text{ mm}$ $20.8 \times 18.8 \times 15.0 \text{ in.}$
Weight	29 kg / 64 lbs.
Protection class	IP21
Operating temperature	$-20^\circ\text{C} \dots +55^\circ\text{C} / -4^\circ\text{F} \dots 131^\circ\text{F}$
Storage temperature	$-20^\circ\text{C} \dots +70^\circ\text{C} / -4^\circ\text{F} \dots 158^\circ\text{F}$



SF6 test adapter for angle plug



PD coupler  
PDS 62-SIN



External safety equipment without  
and with operating function



Leakage current  
correction HVCC



Transport case  
VLF SINE 37 kV

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**Test and diagnostics system for medium voltage cables**

<b>ORDERING INFORMATION</b>	
<b>Product</b>	<b>Order no.</b>
VLF SINE 37 main device (Mandatory transport packaging (PN: 90046904) will be added to order)	1016791
<b>Mandatory selection accessories (1x)</b>	
Accessories VLF SINE 37-5M	2017926
Consisting of: 5m HV and earth lead and accessory bag	
Accessories VLF SINE 37-10M	2017927
Consisting of: 10m HV and earth lead and accessory bag	
Accessories VLF SINE 37-15M	2017928
Consisting of: 15m HV and earth lead and accessory bag	
<b>Mandatory selection mains cable (1x)</b>	
Mains cable EU	810000024
Mains cable UK	118307335
Mains cable US	502025220
Mains cable AUS	90020435
<b>Mandatory selection clamp set (1x)</b>	
Clamp set EU VLF	2017791
Clamp set US VLF	2017792
<b>Options</b>	
Internal tan delta	2018376
HV connection cable VLF SIN-37, length 5 m	2016305
HV connection cable VLF SIN-37, length 10 m	2016740
HV connection cable VLF SIN-37, length 15 m	2016741
HVCC, leakage current correction	1013605
External safety unit without / with controls	2010001 / 2006112
Test adapter VLF CS-SF6-UNI-L set (long 460 mm)	1013586
Test adapter VLF CS-SF6-UNI-K set (short 310 mm)	1013587
PDS 62-SIN PD coupler	further information on PDS 62-SIN datasheet
Transport case with wheels VLF SIN-37	90045098
Transport case with wheels IP67 VLF SIN-37	90045757
Transport case PDS 62-SIN	90023948
ESG NT2 (50 Hz voltage gradient method)	1014430
Test/calibration certificate VLF SINE 37 kV	90046210/2017823
Software MeggerBook 3 for Windows - full license	2015875

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