

# HVA68TD

## VLF high voltage test set

### Datasheet



The HVA68TD is a truly compact and portable VLF test set that determines the condition of medium voltage cables with a voltage rating up to 46 kV (acc. to IEEE 400.2-2013). It performs VLF and DC testing, as well as sheath testing with sheath fault location mode (additional fault probe needed). The high output power of the HVA expands greatly the load possibilities. It allows testing longer cables or several phases in parallel. The integrated Tan Delta diagnostics unit enables a straightforward condition assessment of the cable system.

**Performance:** Best in class output power combined with outstanding TD diagnostics features.

**Safety first:** Two independent discharge devices (electronic & mechanical) plus an integrated 12 kV backfeed protection system (at 50/60 Hz).

**MWT:** The HVA68TD offers Monitored Withstand Testing, a combination of withstand testing & Tan Delta diagnostics in compliance with the guide IEEE 400.2.

**Connectivity:** On-site, no external PC is needed. All results can be downloaded later via USB or Bluetooth for further investigation and easy reporting with the b2 ControlCenter.

**Flexible high voltage connection options:** Our HV test leads enable a simple and safe connection between HVA & test object. They are available in different lengths and are quickly exchangeable.



Output voltage	max. 68 kVpeak, 48 kVrms
Output load	2 $\mu$ F @ 0.1 Hz @ 44 kVrms
Dimensions L x W x H	488 x 340 x 513 mm   19.2 x 13.4 x 20.2 in
Weight	63 kg / 139 lbs
Order number	SH5250

## YOUR BENEFITS



### TRUE MODULARITY

HVA68TD can be easily extended to a complete cable diagnostics system by adding products from our PD or PDTD series at any time.



### ARC PRE-LOCATION

The integrated APL function pre-locates arcs while testing. This adds additional value to traditional VLF testing, which saves time and cost in subsequent cable fault location processes.



### UNLIMITED OPERATING TIME

HVA test sets are designed for continuous operation within the specifications.



### COMPACT AND PORTABLE

Our HVA series has been designed for maximum portability, resulting in widely applicable devices for any type of on-site use.

- Distance to the arc measurement feature
- Pure sinusoidal output voltage (load-independent)
- Sheath fault pinpointing (additional fault probe needed)
- Non-arcing contacts eliminate routine servicing and make the HVA almost maintenance-free

- Easily exchangeable HV test lead
- Breakdown voltage and load detection
- Real time oscilloscope of the output voltage on the HVA display
- Download reports from device via USB flash drive or Bluetooth
- Programmable test sequences with a tailor-made software tool

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High voltage tests (continued)	
Test modes	Manual mode
	Automatic test sequences (user definable)
Arc management modes	Burn on arc
	Trip out on arc
Compliance	VLF withstand testing according to IEEE 400.2 and the test standards DIN VDE 0276-620 (CENELEC HD 620 S2), DIN VDE 0276-621 (CENELEC HD 621 S1)
	AC and sheath testing according to IEC 60502-2 / IEC 60229

Metering		
Tan Delta	Load 10 nF ... 10 $\mu$ F	
	TD range	0.1 ... 999 E-3
	Resolution	single: 0.1 E-3   mean: 0.01 E-3
	Accuracy	$\pm$ 0.1 E-3
	Load 1 nF ... 10 nF	
	TD range	0.1 ... 999 E-3
Arc Pre-Location	Resolution	single: 0.1 E-3   mean: 0.01 E-3
	Accuracy	$\pm$ 0.3 E-3
	Measuring range	80.0 m ... 10.0 km
	Velocity range (v)	100.0 ... 300.0 m/ $\mu$ s
	Resolution	0.1 m

Further characteristics	
AC supply	190 ... 240 V, 50/60 Hz, 3.000 VA 120 V operation: 1.500 VA
Product safety	Backfeed protection: 12 kV at 50/60 Hz DDD Dual Discharge Device (integrated electronic and mechanical discharge device)
Data transfer	USB type A Bluetooth
Report management	Built-in memory: up to 50 reports, 50 test sequences USB flash drive: dependent on storage capacity
PC software	b2 ControlCenter (included)
Dimensions L x W x H	488 x 340 x 513 mm 19.2 x 13.4 x 20.2 in
Weight	63 kg / 139 lbs

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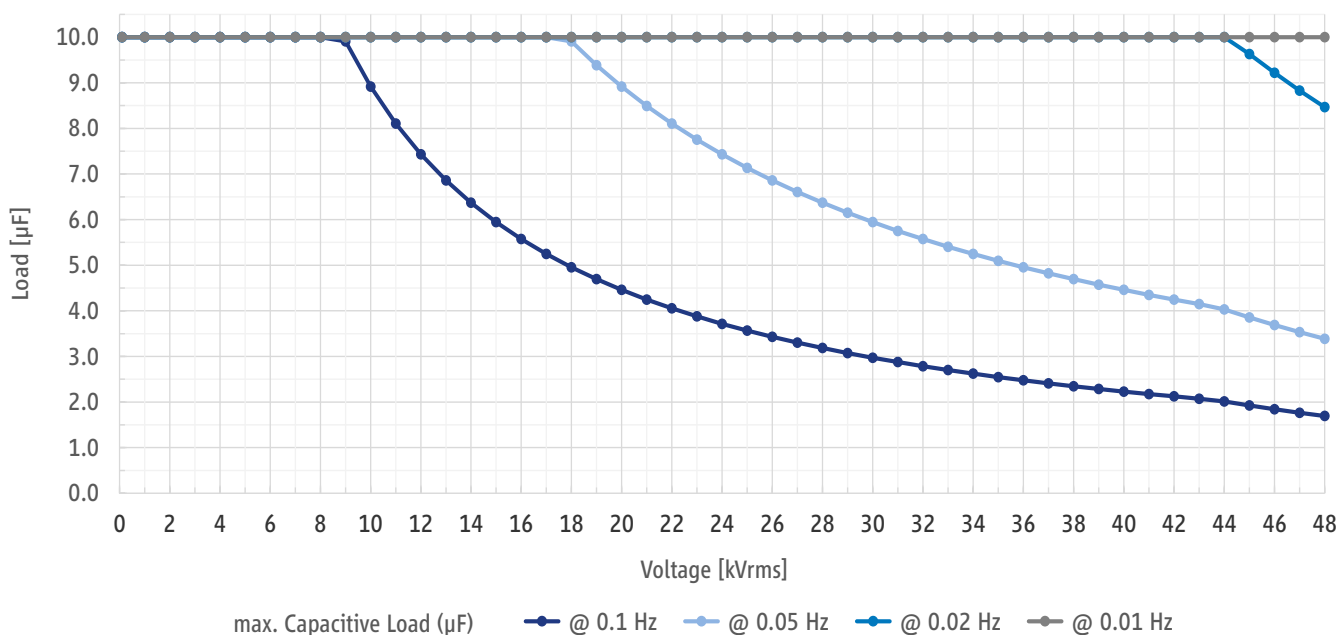
Datasheet



### TECHNICAL DATA

Output characteristics	
Output voltage	VLF sine wave 0 ... 48 kV <sub>rms</sub> / 0 ... 68 kV <sub>peak</sub>
	DC -68 kV ... 68 kV
	VLF square wave 0 ... 68 kV
	Sheath test 0 ... 15 kV (negative polarity)
	Voltage setting resolution 0.1 kV
	AC frequency range 0.01 Hz ... 0.1 Hz
	Frequency setting resolution 0.01 Hz
Output current	AC 70 mA <sub>rms</sub> max.
	DC 100 mA max.
	Sheath test trip current 0.1 ... 10 mA
	Sheath fault location 25 mA max.
Duty cycle	
Continuous, no thermal limitation of operating time	

### Load diagram for sine wave



High voltage tests	
Test types	VLF withstand test
	VLF Tan Delta test
	Monitored withstand test
	DC test
	Sheath test
	Sheath fault location pulse / period: 1:3 / 4s, 1:5 / 4s, 1:5 / 6s, 1:9 / 6s (sheath fault locator not in scope of supply)
	Vacuum bottle test

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## SCOPE OF SUPPLY

Art. No.		
HVA68TD VLF High Voltage Test Set		SH5250
Included accessories	Pcs.	Art. No.
HVA68TD HV test lead PDTD 7 m	1	GH0938
Earth lead 4 m 6 mm <sup>2</sup> transparent M6/clamp	1	GH0522
Power cord country specific - Unit side C19	1	XKEK0002
Corona sphere 2-part distance 10 mm	2	KMD0081
HVA Guard connection cable	2	KEK0126
Test lead with 4 mm plugs 1.5 m	1	KEK0127
Dolphin clip 32 A 4 mm Jack black	2	KES0021
G-Clamp with M8 wing screw	1	KES0274
MC socket S14AR-N with thread shortened	1	KES0282
Straight ring terminal with M14x10 mm	1	KES0384
45° ring terminal with M14x10 mm	1	KES0385
M14 to M10 thread adapting spacer 35 mm	1	KES0386
M10 spacer 35 mm	1	KES0387
HVA Guard connection DUT	2	KMSO0064
Extra Power-on key	1	KEC0007
HVA v2 data storage device with PC software	1	GZD5028
Bluetooth USB Adapter	1	KDG0013
HVA safety instructions multi language	1	DHV1440
HVA language specific manual (firmware v2)	1	XDHV0004

## OPTIONALLY AVAILABLE

Additional Accessories	Art. No.	Diagnostics Options	Art. No.
Discharge stick 60 kV 12 kΩ 8 kJ 1100 mm	GH0629	PDTD60-2 PD & TD diagnostics system	SH5031
 <p>GH0629</p>		 <p>PDTD60-2</p>	