

HVA45 & HVA45TD VLF high voltage test set

Datasheet



The HVA45 and HVA45TD are truly compact and portable VLF test sets that determine the condition of medium voltage cables. Both test sets perform VLF and DC testing, as well as sheath testing with sheath fault location possibilities. In order to meet international test guides (e.g. IEEE 400.2-2013) the HVA45TD combines the small and lightweight VLF test set with an integrated Tan Delta diagnostics unit. **With the available +4 kV option you can extend the possible output voltage of this test set even further.**

Performance: Outstanding features considering size and weight vs. output load.

Duty cycle: No thermal limitation! You can use the test set continuously.

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

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

MWT: In addition, HVA45TD offers a Monitored Withstand Test, a combination of withstand testing and Tan Delta diagnostics in compliance with the guide IEEE 400.2-2013.



		with +4 kV option
Output voltage	max. 45 kV _{peak} , 32.3 kV _{rms}	max. 49 kV _{peak} , 34.6 kV _{rms}
Output load	0.9 μF @ 0.1 Hz @ 32 kV _{rms}	0.8 μF @ 0.1 Hz @ 34 kV _{rms}
Weight	39 kg / 86 lbs	

YOUR BENEFITS



SMALL AND LIGHTWEIGHT

The HVA series offers the smallest and lightest VLF hipot test sets available. This makes them widely applicable for in-field use.



DRY SYSTEM

HVA test sets are constructed with non-arcing contacts and no need to change oil. This eliminates routine servicing and makes the test sets almost maintenance-free.



UNLIMITED OPERATING TIME

HVA generators are designed for continuous operation without any thermal limitations.



IP67 (with a closed lid)

A watertight and very rugged case with a protection class of IP67 makes additional transport boxes obsolete.

- Pure sinusoidal output voltage (load-independent)
- Sheath fault pinpointing in combination with sheath fault locator (not included)
- Easily exchangeable HV test lead

- Safe communication over Bluetooth
- Large color display (4.3")
- Programmable test sequences with a tailor-made software tool
- Download reports from the device via USB flash drive

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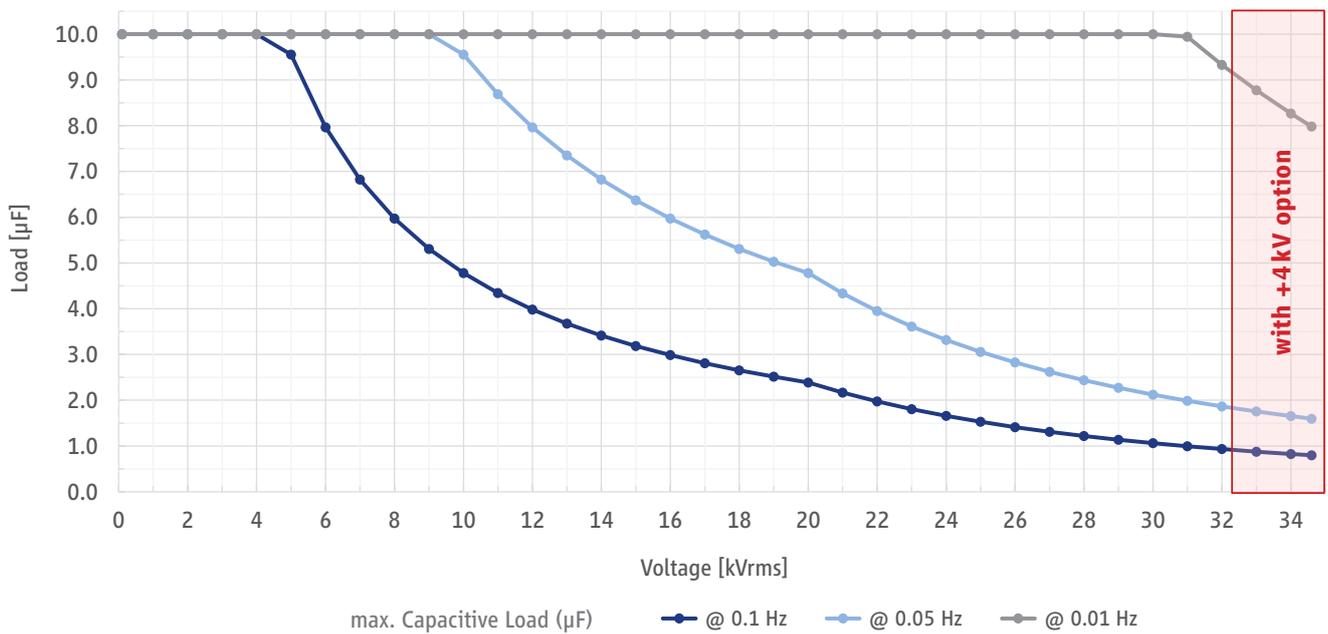
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TECHNICAL DATA

Output characteristics		with +4 kV option
VLF sine wave	0 ... 32.3 kV _{rms} / 0 ... 45 kV _{peak}	0 ... 34.6 kV _{rms} / 0 ... 49 kV _{peak}
DC	-45 kV ... 45 kV	
VLF square wave	0 ... 45 kV	
Output voltage	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	30 mA _{rms} max.
	DC	45 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 – (for HVA45TD only)
	Monitored Withstand Test – (for HVA45TD only)
	DC test
	Sheath test
	Sheath fault location
	Vacuum bottle test

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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		
Output voltage measurement range	AC TrueRMS	
	Maximum display value	38 kV _{rms}
	Resolution	0.1 kV _{rms}
	Accuracy	± 0.1 kV _{rms} ± 1% of reading
	DC	
	Maximum display value	55 kV
	Resolution	0.1 kV
	Accuracy	± 0.1 kV ± 1% of reading
Output current measurement range	AC TrueRMS	
	Maximum display value	69 mA _{rms}
	Resolution	0.1 / 1 / 10 / 100 μA _{rms}
	Accuracy	± 1 μA _{rms} ± 1% of reading
	DC	
	Max./min. display values	± 98 mA
	Resolution	0.1 / 1 / 10 / 100 μA
	Accuracy	± 1 μA ± 1% of reading
Tan Delta HVA45TD only	Load 10 nF ... 10 μF	
	TD range	0.1 ... 999 E-3
	Resolution	single: 0.1 E-3 / mean: 0.01 E-3
	Accuracy	± 0.1 E-3
	Load 1 nF ... 10 nF	
	TD range	0.1 ... 999 E-3
	Resolution	single: 0.1 E-3 / mean: 0.01 E-3
	Accuracy	± 0.3 E-3
Resistance	Range	0.1 MΩ ... 5 GΩ
	Resolution	0.1 / 1 / 10 / 100 MΩ
	Accuracy	typ. 10%
Capacitance	Range	0 ... 30 μF
	Resolution	0.01 / 0.1 / 1 nF and 0.01 / 0.1 μF
	Accuracy	typ. 20%
Flashover voltage	Full output voltage range	

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Further characteristics	
AC supply	100 ... 240V, 50/60 Hz, 1.200 VA
Product safety	Backfeed protection: 12 kV at 50/60 Hz
	DDD Dual Discharge Device (integrated electronic and mechanical discharge device)
Environmental conditions	Operating temperature range -20 ... +55 °C
	Storage temperature range -25 ... +70 °C
	Humidity 5 ... 85%, non condensing
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	500 x 305 x 457 mm 19.68 x 12.0 x 18.0 in
Weight	39 kg / 86 lbs

SCOPE OF SUPPLY

	Art. No.		
HVA45 VLF High Voltage Test Set	SH5010		
HVA45TD VLF High Voltage Test Set	SH5011		
HVA45 Option 45kV+4kV VLF High Voltage Test Set	GH5845		
			
Included accessories	HVA45	HVA45TD	Art. No.
HVA45 HV test lead 100 kV TD 5 m MC14	1	1	GH0661
Earth lead 4 m 6 mm ² transparent M6/Clamp	1	1	GH0522
Power chord country specific - Unit side C13	1	1	XKEK0001
HVA language specific manual	1	1	XDHV0004
HVA safety instructions multi language	1	1	DHV1440
Bluetooth USB Adapter 100 m	1	1	KDG0013
HVA 2nd generation data storage device with PC software	1	1	GZD5028
Extra Power-on key	1	1	KEC0007
HVA45 accessory bag	1	1	VKR0045
HVA test lead external guard 4 mm - snap	–	2	KEK0126
Test lead 4 mm 1.5 m black MFK15-1-150	–	1	KEK0127
Dolphin clip 32A 4 mm Jack black	–	2	KES0021
HVA Guard connection DUT	–	2	KMSO0064
Corona shield, min. clearance distance = 10 mm	–	2	KMD0081
MC14 Socket Connection for Corona Shield	–	1	KES0209