

# HVA34-1 & HVA34TD-1 VLF high voltage test set

## Datasheet

The HVA34-1 and HVA34TD-1 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 HVA34TD-1 combines the small and lightweight VLF test set with an integrated Tan Delta diagnostics unit.

**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, HVA34TD-1 offers a Monitored Withstand Test, a combination of withstand testing and Tan Delta diagnostics in compliance with the guide IEEE 400.2-2013.



Output voltage	max. 34 kV <sub>peak</sub> , 24 kV <sub>rms</sub>
Output load	1.5 μF @ 0.1 Hz @ 24 kV <sub>rms</sub>
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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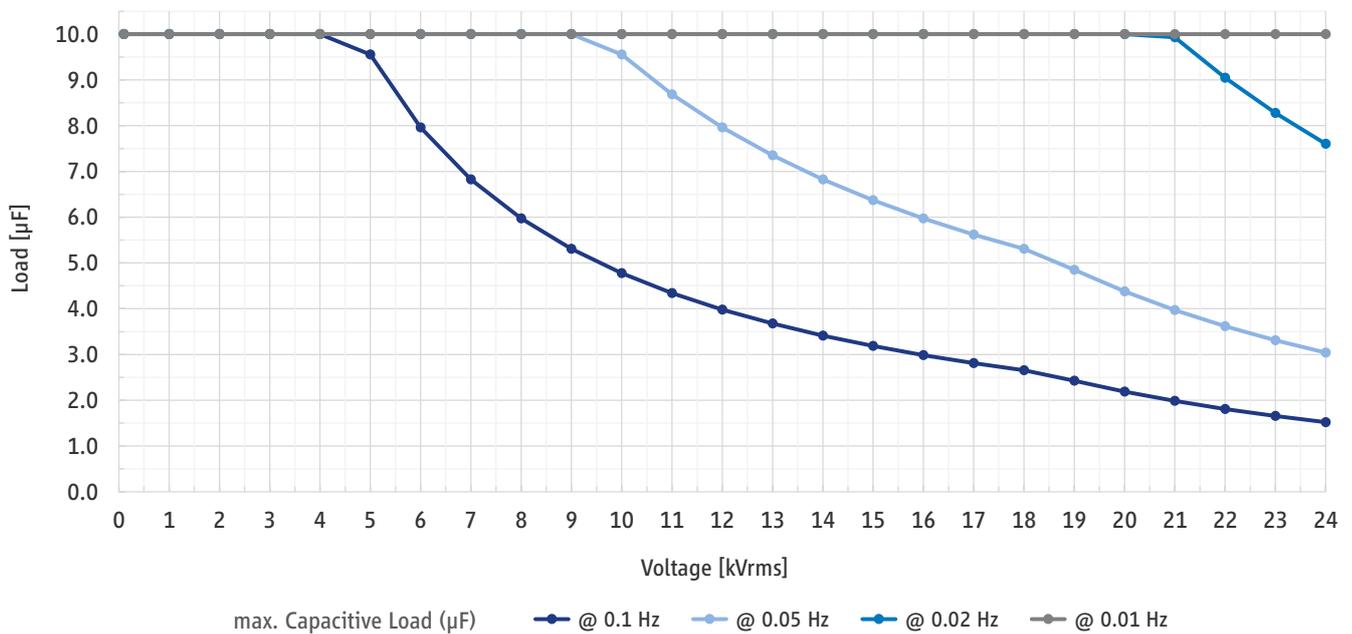
Datasheet



## TECHNICAL DATA

Output characteristics	
VLF sine wave	0 ... 24 kV <sub>rms</sub> / 0 ... 34 kV <sub>peak</sub>
DC	-34 kV ... 34 kV
VLF square wave	0 ... 34 kV
<b>Output voltage</b>	
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
<b>Output current</b>	
AC	30 mA <sub>rms</sub> max.
DC	45 mA max.
Sheath test trip current	0.1 ... 10 mA
Sheath fault location	25 mA max.
<b>Duty cycle</b>	Continuous, no thermal limitation of operating time

## Load diagram for sine wave



High voltage tests	
<b>Test types</b>	VLF withstand test
	VLF Tan Delta test – (for HVA34TD-1 only)
	Monitored Withstand Test – (for HVA34TD-1 only)
	DC test
	Sheath test
	Sheath fault location
	Vacuum bottle test

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High voltage tests (continued)	
<b>Test modes</b>	Manual mode Automatic test sequences (user definable)
<b>Arc management modes</b>	Burn on arc Trip out on arc
<b>Compliance</b>	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		
<b>Output voltage measurement range</b>	AC TrueRMS	
	Maximum display value	38 kV <sub>rms</sub>
	Resolution	0.1 kV <sub>rms</sub>
	Accuracy	± 0.1 kV <sub>rms</sub> ± 1% of reading
	DC	
	Maximum display value	55 kV
	Resolution	0.1 kV
	Accuracy	± 0.1 kV ± 1% of reading
<b>Output current measurement range</b>	AC TrueRMS	
	Maximum display value	69 mA <sub>rms</sub>
	Resolution	0.1 / 1 / 10 / 100 μA <sub>rms</sub>
	Accuracy	± 1 μA <sub>rms</sub> ± 1% of reading
	DC	
	Max./min. display values	± 98 mA
	Resolution	0.1 / 1 / 10 / 100 μA
	Accuracy	± 1 μA ± 1% of reading
<b>Tan Delta</b> HVA34TD-1 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
<b>Resistance</b>	Range	0.1 MΩ ... 5 GΩ
	Resolution	0.1 / 1 / 10 / 100 MΩ
	Accuracy	typ. 10%
<b>Capacitance</b>	Range	0 ... 30 μF
	Resolution	0.01 / 0.1 / 1 nF and 0.01 / 0.1 μF
	Accuracy	typ. 20%
<b>Flashover voltage</b>	Full output voltage range	

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Further characteristics		
<b>AC supply</b>	100 ... 240V, 50/60 Hz, 1.200 VA	
<b>Product safety</b>	Backfeed protection: 12 kV at 50/60 Hz	
	DDD Dual Discharge Device (integrated electronic and mechanical discharge device)	
<b>Environmental conditions</b>	Operating temperature range	-20 ... +55 °C
	Storage temperature range	-25 ... +70 °C
	Humidity	5 ... 85%, non condensing
<b>Data transfer</b>	USB type A	
	Bluetooth	
<b>Report management</b>	Built-in memory: up to 50 reports, 50 test sequences	
	USB flash drive: dependent on storage capacity	
<b>PC software</b>	b2 ControlCenter (included)	
<b>Dimensions L x W x H</b>	500 x 305 x 457 mm 19.68 x 12.0 x 18.0 in	
<b>Weight</b>	39 kg / 86 lbs	

## SCOPE OF SUPPLY

	Art. No.
HVA34-1 VLF High Voltage Test Set	SH5007
HVA34TD-1 VLF High Voltage Test Set	SH5008
	
Included accessories	HVA34-1    HVA34TD-1    Art. No.
HVA45 HV test lead 100 kV TD 5 m MC14	1            1            GH0661
Earth lead 4 m 6 mm <sup>2</sup> 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            KMS0064
Corona shield, min. clearance distance = 10 mm	–            2            KMD0081
MC14 Socket Connection for Corona Shield	–            1            KES0209