HVA34
VLF high voltage test set

Datasheet

The HVA34 is a perfectly suitable test set to determine the condition of medium voltage cables with a voltage rating up to 25 kV (acc. to IEEE 400.2-2013). Its compact design and unmatchable high voltage output power to weight ratio is second to none on the market and makes it an excellent option for cable testing up to 24 kV_{rms} and 34 kV_{peak} (sine wave operation). Beside the VLF and DC testing, the HVA34 performs also sheath testing with sheath fault location mode (here, however, additional fault probe is needed).

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 transient protection system (at 50/60 Hz).

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

Solid HV connectors: Robust HV connectors allow the use of various HV test lead lengths, quick exchange of a replacement cable, or a simpler upgrade path for connection of diagnostics systems.

Output voltage	max. 34 kV_{peak}, 24 kV_{rms}
Output load	0.4 µF @ 0.1 Hz @ 24 kV_{rms}
Weight	19.5 kg / 43 lbs

YOUR BENEFITS

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

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

COMPACT AND PORTABLE
Our HVA series have been designed for maximum portability and on-site use. It makes them widely applicable for in-field use.

TD AND PD DAGNOSTICS
HVA34 can be extended to a complete cable diagnostic system at any time.

- Pure sinusoidal output voltage (load-independent)
- Sheath fault pinpointing in combination with sheath fault locator (not included)
- Easily exchangeable HV test lead
- Breakdown voltage and load detection
- Real time oscilloscope of the output voltage on the HVA display
- Programmable test sequences with a tailor-made software tool
- Report downloads from the device via USB flash drive

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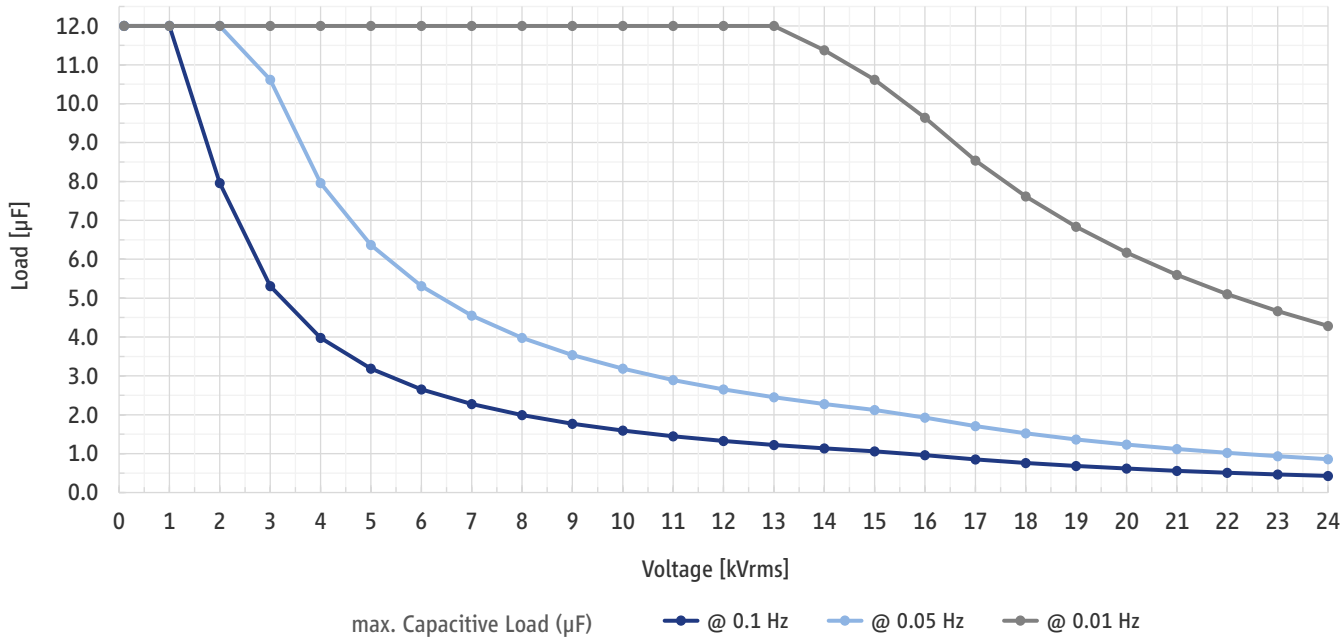
TECHNICAL DATA

Output characteristics		
Output voltage	VLF sine wave	0 ... 24 kV_{rms} / 0 ... 34 kV_{peak}
	DC	-34 kV ... 34 kV
	VLF square wave	0 ... 34 kV
	Sheath test	0 ... 10 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	10 mA_{rms} max.
	DC	14 mA max.
	Sheath test trip current	0.1 ... 5 mA
	Sheath fault location	17 mA max.
Duty cycle		Continuous, no thermal limitation of operating time

Load diagram for sine wave



High voltage tests		
Test types	VLF 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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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	35 kV_{rms}
	Resolution	0.1 kV_{rms}
	Accuracy	± 0.1 kV_{rms} ± 1% of reading
	DC	
	Maximum display value	50 kV
	Resolution	0.1 kV
	Accuracy	± 0.1 kV ± 1% of reading
Output current measurement range	AC TrueRMS	
	Maximum display value	17 mA_{rms}
	Resolution	0.1 / 1 / 10 / 100 μA_{rms}
	Accuracy	± 1μA_{rms} ± 1% of reading
	DC	
	Max./min. display values	± 25 mA
	Resolution	0.1 / 1 / 10 / 100 µA
	Accuracy	± 1µA ± 1% of reading
Resistance	Range	0.1 MΩ ... 5 GΩ
	Resolution	0.1 / 1 / 10 / 100 MΩ
	Accuracy	typ. 10%
Capacitance	Range	0 ... 20 µF
	Resolution	0.01 / 0.1 / 1 nF and 0.01 / 0.1 µF
	Accuracy	typ. 20%
Flashover voltage		Full output voltage range

Further characteristics		
AC supply		110 ... 240 V, 50/60 Hz, 400 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	-10 ... +50 °C
	Storage temperature range	-25 ... +70 °C
	Humidity	5 ... 85%, non condensing

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Further characteristics	
Data transfer	USB type A
	RS232
Report management	Built-in memory: up to 50 reports, 40 test sequences
	USB flash drive: dependent on storage capacity
PC software	b2 ControlCenter (included)
	HVA ControlCenter (included)
Dimensions L x W x H	430 x 250 x 360 mm 17 x 9.8 x 14.17 in
Weight	19.5 kg / 43 lbs

SCOPE OF SUPPLY

	Art. No.
HVA34 VLF High Voltage Test Set	SH5006

Included accessories	Pcs.	Art. No.
HVA34 HV test lead 65 kV 4 m with 80 A clamp	1	GH0570
Earth lead 4 m 6 mm² transparent M6/clamp	1	GH0522
Earth lead 4 m 6 mm² yellow/green M6/M6	1	KEK0076
Power chord country specific - Unit side C13	1	XKEK0001
HVA language specific manual	1	XDHV0005
HVA safety manual multi language	1	DHV1440
HVA 1st generation data storage device with PC software	1	GZD5026
Extra Power-on key	1	KEC0007
Cable serial DB9 f/f Link 3 m	1	KEK0017
UC232R-10 “ChiPi” USB-RS232 Adapter	1	KEK0049

OPTIONALLY AVAILABLE

Additional Accessories	Art. No.	Diagnostics Options	Art. No.
Discharge Stick 30 kV 6000 R 4 kJ 750 mm	GH0628	TD30 Tan Delta diagnostics system	SH5021
Transport case	VKR0002	PD30-E Partial Discharge diagnostics system	SH5027

GH0628

VKR0002

TD30

PD30-E