

# HVA40-5

## VLF high voltage test set

### Datasheet

The HVA40-5 is a truly compact and portable VLF test set which determines the condition of medium voltage cables. It performs VLF and DC testing, as well as sheath testing with sheath fault location mode (additional fault probe needed). It is also an HVA series member with a very high output current, up to 120 mA, extending greatly the load possibilities and testable length of a cable.

**Performance:** Outstanding features considering size and weight vs. output load.  $4.6 \mu\text{F} @ 0.1 \text{ Hz} @ 29 \text{ kV}_{\text{rms}}$  in comparison to  $1.1 \mu\text{F} @ 0.1 \text{ Hz} @ 29 \text{ kV}_{\text{rms}}$  (HVA45)

**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. $45 \text{ kV}_{\text{peak}}$ , $32 \text{ kV}_{\text{rms}}$
Output load	$3.8 \mu\text{F} @ 0.1 \text{ Hz} @ 32 \text{ kV}_{\text{rms}}$
Weight	57 kg / 125.6 lbs

## YOUR BENEFITS



**TD AND PD DIAGNOSTICS**  
HVA40-5 can be extended to a complete cable diagnostic system at any time.



**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.



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



**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.

- 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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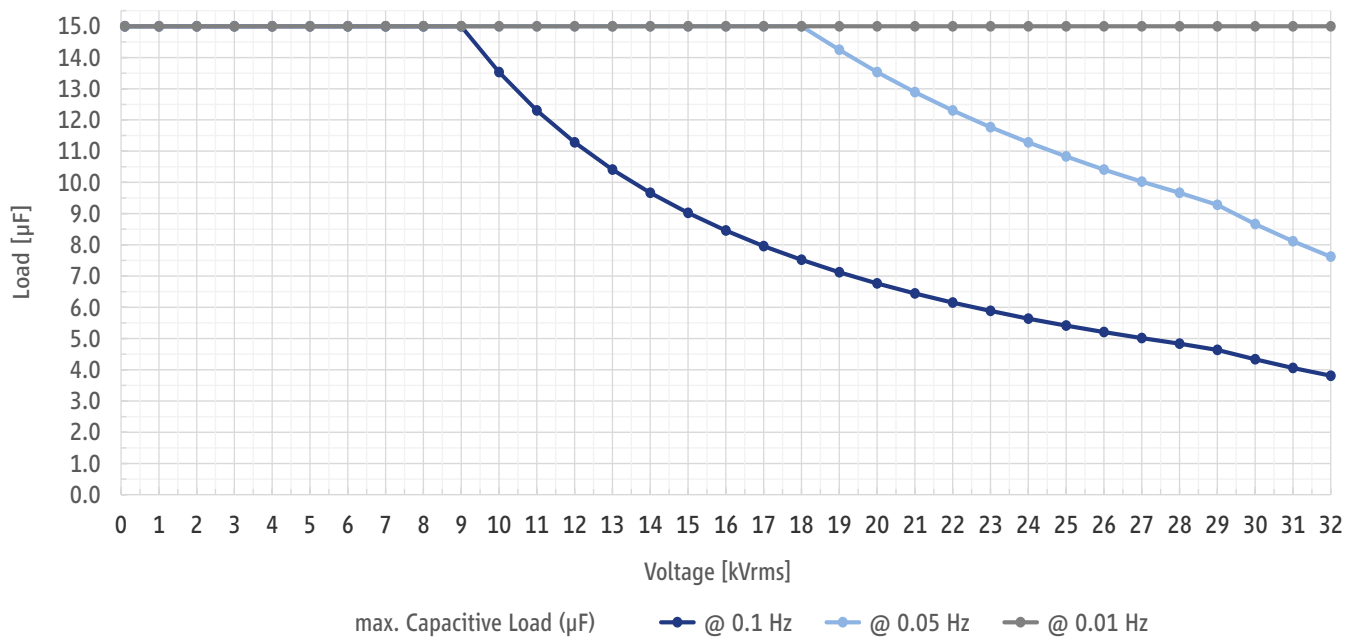
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### TECHNICAL DATA

Output characteristics	
VLF sine wave	0 ... 32 kV <sub>rms</sub> / 0 ... 45 kV <sub>peak</sub>
DC	-45 kV ... 45 kV
VLF square wave	0 ... 45 kV
<b>Output voltage</b>	
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
<b>Output current</b>	
AC	85 mA <sub>rms</sub> max.
DC	120 mA max.
Sheath test trip current	0.1 ... 5 mA
Sheath fault location	35 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	
	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)	
<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	53 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	75 kV
	Resolution	0.1 kV
	Accuracy	± 0.1 kV ± 1% of reading
<b>Output current measurement range</b>	AC TrueRMS	
	Maximum display value	106 mA <sub>rms</sub>
	Resolution	0.1 / 1 / 10 / 100 μA <sub>rms</sub>
	Accuracy	± 1μA <sub>rms</sub> ± 1% of reading
	DC	
	Max./min. display values	± 150 mA
	Resolution	0.1 / 1 / 10 / 100 μA
	Accuracy	± 1μA ± 1% of reading
<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	

Further characteristics		
<b>AC supply</b>	190 ... 240 V, 50/60 Hz, 3.000 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	-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	450 x 340 x 520 mm 17.7 x 13.4 x 20.47 in
Weight	57 kg / 125.6 lbs

## SCOPE OF SUPPLY


	Art. No.
HVA40-5 VLF High Voltage Test Set	SH5009
Included accessories	Pcs. Art. No.
HVA54-3 HV test lead 100 kV 5 m 150 mA MC14	1 GH0655
Earth lead 4 m 6 mm <sup>2</sup> transparent M6/clamp	1 GH0522
Power chord country specific - Unit side C19	1 XKEK0002
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 60 kV 12 kR 8 kJ 1100 mm	GH0629	TD60-MC Tan Delta diagnostics system	SH5023
Transport case with wheels	VKR0009	PD60-2 Partial Discharge diagnostics system	SH5030
		PDTD60-2 PD & TD diagnostics system	SH5031




VKR0009



GH0629



TD60-MC



PDTD60-2