

HVA120

VLF high voltage test set

Datasheet



The HVA120 is a compact and portable VLF test set designed for assessing the condition of medium-voltage cables up to 69 kV (in accordance with IEEE 400.2). Its robust design and excellent power-to-weight ratio make it a reliable choice for routine cable testing in the field. In addition to VLF testing (sine and square wave) and DC testing, the HVA120 also supports sheath testing and sheath fault location*.

Performance: Outstanding features considering size and weight vs. output load. Devices under test up to 2 km in length** can be tested at 85 kV_{rms} with 0.1 Hz

Connectivity: On site, no laptop is required. All results can be later down-loaded via USB for further analysis and easy reporting using the b2 ControlCenter.

Safety first: Two simultaneous ways of discharging (electronic and mechanical) plus integrated 12 kV backfeed protection (at 50/60 Hz) ensure maximum operator safety.

Flexible connection options: Robust HV connectors allow use of various HV test lead lengths, quick replacement, and easy upgrades for diagnostic system integration..



Output voltage	max. 120 kV _{peak} , 85 kV _{rms}
Output load	0.5 µF @ 0.1 Hz @ 85 kV _{rms}
Weight	198 kg 436.5 lbs

YOUR BENEFITS



UNLIMITED OPERATING TIME

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



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.



COMPACT AND PORTABLE

Our HVA test sets are designed for maximum portability, resulting in widely applicable devices for any type of on-site use.



TRUE MODULARITY

All our HVA test sets can be easily extended to a complete diagnostics system by adding our PD, TD or PDTD series products at a later point of time. This keeps the initial investment low.

- Pure sinusoidal output voltage (load-independent) over the entire power range
- 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

*additional sheath fault locator needed
**at 250 pF/m cable capacitance and 0.5 µF load

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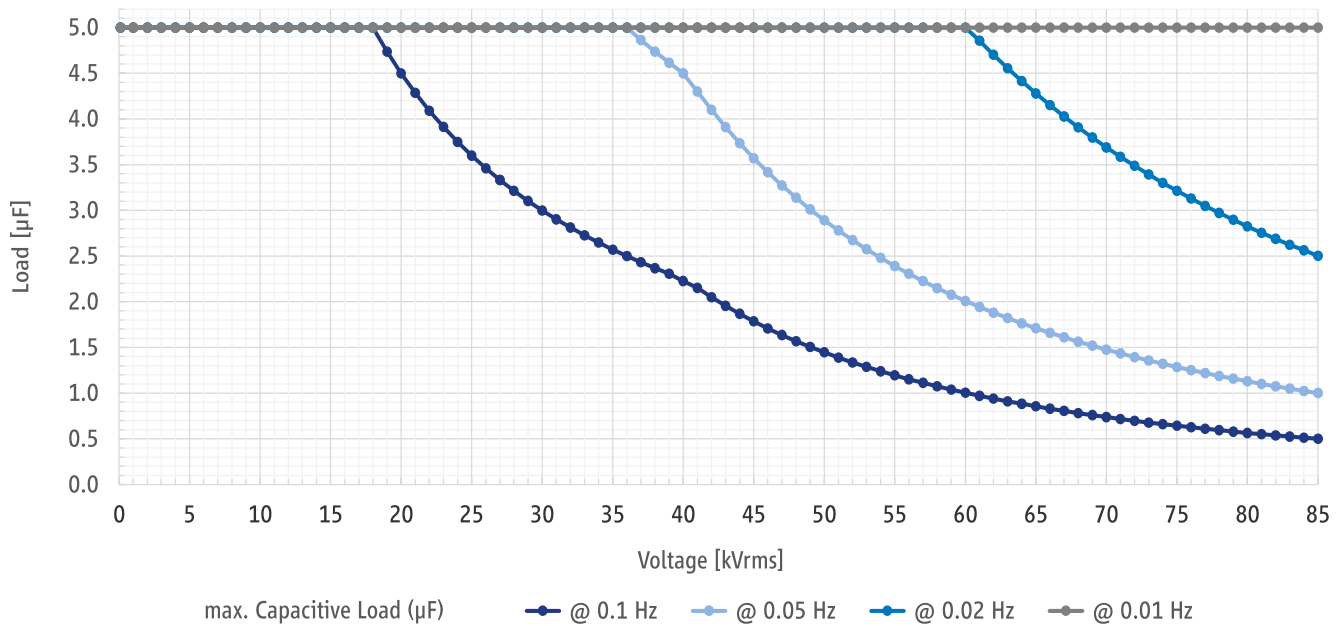
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TECHNICAL DATA

Output characteristics	
Output voltage	VLF sine wave 0 ... 120 kV _{peak} 0 ... 85 kV _{rms}
	DC -100 kV ... 100 kV
	VLF square wave 0 ... 100 kV
	Sheath test 0 ... 10 kV (negative polarity)
	Voltage setting resolution 0.1 kV
	AC frequency range 0.01 Hz ... 0.1 Hz
Output current	Frequency setting resolution 0.01 Hz
	AC 56 mA _{rms} max.
	DC 80 mA max.
	Sheath test trip current 0.1 ... 5 mA
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 (additional sheath fault locator needed)
	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	100 kV _{rms}
	Resolution	0.1 kV _{rms}
	Accuracy	± 0.1 kV _{rms} ± 1% of reading
	DC	
	Maximum display value	140 kV
	Resolution	0.1 kV
	Accuracy	± 0.1 kV ± 1% of reading
Output current measurement range	AC TrueRMS	
	Maximum display value	70 mA _{rms}
	Resolution	0.1 / 1 / 10 / 100 μA _{rms}
	Accuracy	± 1 μA _{rms} ± 1% of reading
	DC	
	Max./min. display values	± 100 mA
	Resolution	0.1 / 1 / 10 / 100 μA
	Accuracy	± 1 μA ± 1% of reading
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	

Further characteristics		
AC supply		210 ... 240 V, 50/60 Hz, 3.000 VA
Product safety	Backfeed protection: 12 kV at 50/60 Hz	
	DDD Dual Discharge Device (integrated electronic and mechanical discharging)	
	Connector for external interlock	
	Key switch (protection against unauthorized use)	
Environmental conditions	Operating temp. range	-5 ... +45 °C 23 ... 113 °F
	Storage temp. range	-25 ... +70 °C -13 ... 158 °F
	Humidity	5 ... 85%, non condensing

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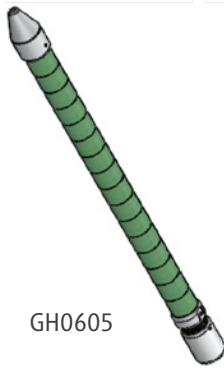


Further characteristics	
Data transfer	USB type A
	RS232
Report management	Built-in memory: up to 50 reports, 40 test sequences
	USB drive: dependent on storage capacity
PC software	b2 ControlCenter (included)
	HVA ControlCenter (included)
Dimensions L x W x H	790 mm x 445 mm x 740 mm 31.1 in x 17.51 in x 29.1 in
Weight	198 kg 436.5 lbs

SCOPE OF SUPPLY

	Art. No.	
HVA120 VLF high voltage test set	SH5019	
Included accessories	Pcs.	Art. No.
HVA120 HV test lead 10 m MC14	1	GH0635
Grounding cable 16 mm ² 5 m flat M6/clamp transparent	1	GH1009
Spare key for key-lock switch Rafix 16	1	KEC0007
Cable serial DB9 f/f 3 m	1	KEK0017
USB to RS232 cable UC232R-10 FTDI Chip	1	KEK0049
Power cord country-specific with C19 connector	1	XKEK0002
PC software & corresponding HVA documentation on a USB drive	1	GZD5026
b2 Safety instructions for HVA series multi language	1	DHV1440

OPTIONALLY AVAILABLE

Additional accessories	Art. No.	Suggested diagnostics options	Art. No.
Discharge stick 120 kV 18 kΩ 36 kJ 1.800 mm	GH0605	TD120-MC Tan Delta diagnostics system	SH5026
Transport case with wheels	VKR0038	PDTD120-2 PD & TD diagnostics system	SH5034
  VKR0038 GH0605		  TD120-MC PDTD120-2	