

HVA28 & HVA28TD VLF high voltage test set

Datasheet

The HVA28 and HVA28TD are truly compact and portable VLF test sets that determine the condition of medium voltage cables. The HVA28TD includes integrated Tan Delta diagnostics capabilities, in comparison to the HVA28 device, which can be upgraded with a TD diagnostics unit. Both test sets perform VLF and DC testing, as well as sheath testing with sheath fault location.

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

Duty cycle: Operating time is not thermally limited; the test sets may be operated 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 or Bluetooth for further investigation and easy reporting via the b2 ControlCenter.

MWT: In addition, HVA28TD 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. 29 kV _{peak} , 21 kV _{rms} |
| Output load | 0.5 μF @ 0.1 Hz @ 20 kV _{rms} |
| Weight | 14 kg / 31 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 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.



IP67

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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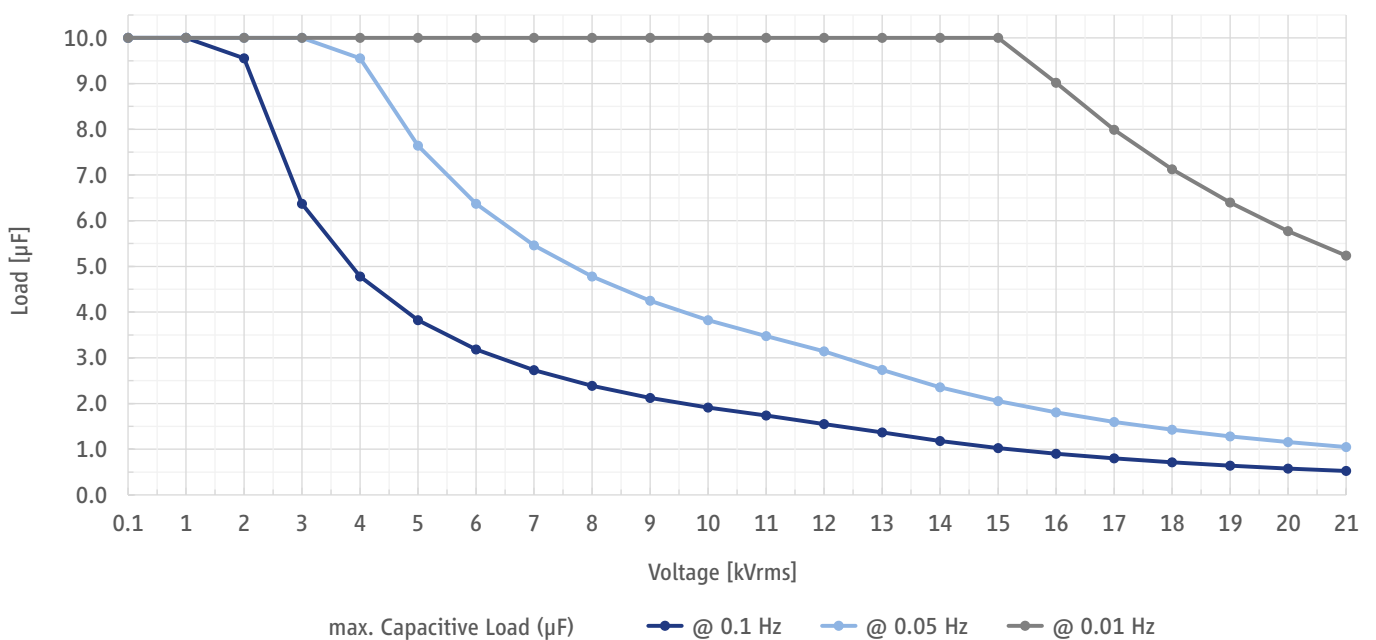
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TECHNICAL DATA

| Output characteristics | |
|------------------------------|--|
| VLF sine wave | 0 ... 21 kV _{rms} / 0 ... 29 kV _{peak} |
| DC | -28 kV ... 28 kV |
| VLF square wave | 0 ... 28 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 | 12 mA _{rms} max. |
| DC | 17 mA max. |
| Sheath test trip current | 0.1 ... 10 mA |
| Sheath fault location | 17 mA |
| Duty cycle | Continuous, no thermal limitation of operating time |

Load diagram for Sinewave



| High voltage tests | |
|--------------------|---|
| Test types | VLF withstand test |
| | VLF Tan Delta test – (for HVA28TD only) |
| | Monitored Withstand Test – (for HVA28TD 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 0276-620 (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 | 29 kV _{rms} |
| | Resolution | 0.1 kV _{rms} |
| | Accuracy | ± 0.1 kV _{rms} ± 1% of reading |
| | DC | |
| | Maximum display value | 40 kV |
| | Resolution | 0.1 kV |
| | Accuracy | ± 0.1 kV ± 1% of reading |
| Output current measurement range | AC TrueRMS | |
| | Maximum display value | 39 mA _{rms} |
| | Resolution | 0.1 / 1 / 10 / 100 μA _{rms} |
| | Accuracy | ± 1μA _{rms} ± 1% of reading |
| | DC | |
| | Max./min. display values | ± 55 mA |
| | Resolution | 0.1 / 1 / 10 / 100 μA |
| | Accuracy | ± 1μA ± 1% of reading |
| Tan Delta HVA28TD 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 | 0.1 nF ... 10 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 ... 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 | -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: unlimited | |
| PC software | b2 ControlCenter (included) | |
| Dimensions L x W x H | 417 mm x 221 mm x 334 mm 16.40 in x 8.71 in x 13.15 in | |
| Weight | 14 kg / 31 lbs | |

SCOPE OF SUPPLY

| | Art. No. |
|-----------------------------------|----------|
| HVA28 VLF High Voltage Test Set | SH5001 |
| HVA28TD VLF High Voltage Test Set | SH5002 |



| Included accessories | HVA28 | HVA28TD | Art. No. |
|---|-------|---------|----------|
| HVA34 HV test lead 65 kV 4 m 80 A with clamp | 1 | – | GH0570 |
| 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 |
| Bluetooth USB Adapter 100 m | 1 | 1 | KDG0013 |
| HVA data storage device with PC software | 1 | 1 | GZD5028 |
| Extra Power-on key | 1 | 1 | KEC0007 |
| HVA28 accessory bag | 1 | 1 | VKR0027 |
| Carrying strap for HVA28 peli case | 1 | 1 | VS0002 |
| HVA28 HV test lead 65kV TD 4 m 80 A with clamp | – | 1 | GH0584 |
| HVA test lead external guard 4 mm - snap | – | 2 | KEK0126 |
| Test lead 4mm 1,5 m black MFK15-1-150 | – | 1 | KEK0127 |
| Dolphin clip 32 A 4 mm Jack black | – | 2 | KE50021 |
| HVA Guard connection DUT | – | 2 | KMS00064 |
| Corona shield, min. clearance distance = 10 mm | – | 2 | KMD0081 |