HVA120 - 7 in 1 Universal High Voltage Test System

It is well known that DC testing of aged extruded cable such as XLPE and EPR is potentially damaging to the cable insulation, causing premature failure of the cable under service conditions.

In addition, DC “proof” or hipot testing has been found to be ineffective in detecting serious defects in cables. Since this is the main objective of any hipot test, and due to the negative side effects of DC, VLF AC waveform testing is now recommended by almost all cable testing standards. Acceptance or maintenance hipot/proof testing using VLF high voltage sinusoidal AC allows the operator to efficiently detect serious cable insulation defects, before they result in an in-service failure, without affecting those healthy sections of the cable that still have remaining service life.

• VLF • DC • Jacket/Sheath • Fault Conditioning

SAFETY FEATURES

• Short circuit protected output
• 12 kV feedback protection
• Signal lamps for active / inactive high voltage
• Status display of safety functions
• Integrated discharge circuit for device under test
• Main switch with key-lock
• Emergency-off button on front panel

The following features make the high voltage HVA120 cable tester the most outstanding cable test system of its class:

- Predefined standard-compliant cable test sequences
- Symmetrical sine wave high voltage
- RMS measurement of output voltage and current
- Measurement of capacitive and resistive load
- Automatic and load dependent frequency selection (0.01 Hz – 0.1 Hz)
- Display of current test time
- Integrated real-time scope function
- Self-explanatory, multilingual software
- Large output load capability (up to 5 μF)
- Automatic measurement reporting
- Report storage via RS232 (USB optional)
- PC software (HVA Control Center) for data analysis and storage
- Flashover detection and ultra fast switch off
- Flashover voltage measurement
- Time optimized burning mode
- No regular maintenance required

APPLICATIONS

- Cables: XLPE, PE, EPR, PILC etc.
- Capacitors
- Switchgear
- Transformers
- Rotating Machines (IEEE 433)
- Insulators
- Bushings
The HVA120 cable tester is a portable 0.1 Hz VLF cable test system for the testing of medium and high voltage cables. With its weight of 181 kg the hipot tester provides an excellent power-to-weight-ratio. The powerful output is capable of driving capacitive loads of up to 5 μF. At maximum output voltage cables with a length of up to 33km can be tested.

**TECHNICAL DATA**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input Voltage</strong></td>
<td>210 – 240 V 50/60 Hz (3.0 kVA)</td>
</tr>
</tbody>
</table>
| **Output Voltage**         | Sinusoidal: 0 – 120 kV peak, 85 kV rms  
DC: 0 – 120 kV  
Squarewave: 120 kV  
Accuracy ± 1%  
Resolution 0.1kV |
| **Output Current**         | 0 – 90 mA (Resolution 1 μA)  
Accuracy ± 1% |
| **Resistance Range**       | 0.1 MΩ....5 GΩ |
| **Output Frequency**       | 0.01 ... 0.1 Hz in steps of 0.01 Hz (default 0.1 Hz) – auto frequency selection |
| **Output Load**            | 0.5 μF @ 0.1 Hz @ 85 kV rms  
5 μF @ 0.01 Hz @ 85 kV rms  
5 μF maximum Capacitance |
| **Output Modes**           | AC (VLF) Symmetrical and load independent across full range,  
DC (plus or negative polarity), Burn-/ Fault Condition or  
Fault Trip Mode, Jacket / Sheath Testing |
| **Protection**             | 50 Hz 12 kV Feedback Protection / Discharge unit |
| **Memory**                 | Minimum 50 Test Records Stored in non-volatile built in memory |
| **Metering**               | Voltage an Current (True rms and / or peak),  
Capacitance, Resistance, Time, Flashover Voltage |
| **Duty**                   | Continuous. No thermal limitation for operating time |
| **HV Cable**               | 10m with clamps on end (other options available on request) |
| **Computer Interface**     | RS232 connection, USB - optional |
| **Temperature**            | Storage: -25°C to + 70°C. Operating: -5°C to + 45°C |
| **Dimensions (LXHXW)**     | 790 x 445 x 740 mm (Excl. Carry Handle), also as 19” version available |
| **Weight**                 | 181 kg |

**ORDER CODES**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>PART NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard HVA 120</td>
<td>SH 0215</td>
</tr>
<tr>
<td><strong>OPTIONAL ADD-ONS</strong></td>
<td></td>
</tr>
<tr>
<td>TD60 Tan Delta Accessory (option)</td>
<td>SH 0206</td>
</tr>
<tr>
<td>PD90 Partial Discharge Accessory (option)</td>
<td>SH 0222</td>
</tr>
<tr>
<td>Transport Case with 4 wheels (option)</td>
<td>VKR 0012</td>
</tr>
</tbody>
</table>

*STANDARD DELIVERY INCLUDES:

- HVA120 Test System  
- 10m HV cable  
- Earth cable  
- HVA Control Centre Software  
- Operating manual

GLOBAL THINKING, LOCAL ACTION

www.hvdsa.com