

VLF Hipot

HIPOT TEST SYSTEM



- » AC VLF Hipot Test
- » DC Hipot Test
- » TD HV Dissipation Test
- » Cx Capacitance Test
- » Rx insulation Resistance Test
- » PD Partial Discharge Test

KiloVolt VLF Hipot Test System adopts 7-inch touch screen, the latest ARM7 single-chip computer, high-speed AD acquisition circuit, and rich over-voltage and over-current protection measures. It overcomes many shortcomings of similar domestic products and has a much higher cost performance than similar imported products. The system can perform ultra-low frequency AC insulation test, DC insulation test, high voltage dielectric loss test, capacitance test, insulation resistance test, PD partial discharge test and other functions. It is particularly suitable for withstand voltage test of electrical equipment with large insulation equivalent capacitance (for example: power cables, power capacitors, large and medium-sized generators and motors, etc.).

FUNCTIONS

- » It adopts advanced digital frequency conversion technology, microcomputer control, and fully automated test processes such as boost, buck, measurement, and protection.
- » The control part and the high-voltage part adopt an integrated structural design, removing the intermediate connection line and only needing a high-voltage line and a ground line to connect to the test product.
- » The control part and the boost part adopt an integrated design, which is convenient for storage and transportation in various working environments, and is small in size and light in weight, which is very conducive to outdoor operations.

- » Comprehensive protection Multiple protection (over-voltage protection, high and low voltage side over-current protection), fast action (action time $\leq 10\text{ms}$), the instrument is safe and reliable, and can effectively protect the safety of operators.
- » The controller and the high-voltage generator are connected at low voltage, and the photoelectric isolation control is safe and reliable.
- » Closed-loop negative feedback circuit is adopted. No capacity rising during outputting.
- » I Capacitive touch screen, LCD graphic English character display, automatic storage, automatic printing configuration is complete.
- » 0.1Hz, 0.05Hz, 0.02Hz, 0.01Hz multi-frequency automatic selection, large test range.

MODELS

Test type / Model	VLF-xxAD	VLF-xxTD	VLF-xxTPD
VLF AC	•	•	•
DC	•	•	•
TD		•	•
C (Capacitance)		•	•
R (Insulation resistance)		•	•
PD (Partial discharge)			•

"xx" indicates voltage level

TECHNICAL SPECIFICATIONS

Parameter / Model	VLF-34 AD VLF-34 TD VLF-34 TPD	VLF-45 AD VLF-45 TD VLF-45 TPD	VLF-68 AD VLF-68 TD VLF-68 TPD	VLF-84 AD VLF-84 TD VLF-84 TPD	VLF-93 AD VLF-93 TD VLF-93 TPD
Input power	220V $\pm$ 5%, 50/60Hz				
Output voltage frequency	0.1Hz-0.01 Hz automatic frequency conversion				
Output load capacity	$\leq 10\mu\text{F}$	$\leq 10\mu\text{F}$	$\leq 6\mu\text{F}(1\sim 50\text{kV})$, $\leq 5\mu\text{F}(> 50\text{kV})$	$\leq 6\mu\text{F}(1\sim 50\text{kV})$, $\leq 5\mu\text{F}(> 50\text{kV})$	$\leq 6\mu\text{F}(1\sim 50\text{kV})$, $\leq 5\mu\text{F}(> 50\text{kV})$
Variable frequency generator	Power >3.5 kW	Power >3.5 kW	Power >5kW	Power >10 kW	Power >10 kW
Inner maximum protection voltage	Max. 34 kV _{peak}	Max. 45 kV _{peak}	Max. 68 kV _{peak}	Max. 84 kV _{peak}	Max. 93 kV _{peak}

Output voltage (AC)	Max. 30 kV _{peak} , 21 kV _{rms}	Max. 40 kV _{peak} , 28 kV _{rms}	Max. 60 kV _{peak} , 42 kV _{rms}	Max. 80 kV _{peak} , 56 kV _{rms}	Max. 90 kV _{peak} , 64 kV _{rms}
Output voltage (DC)	0-30 kV	0-40 kV	0-60 kV	0-80 kV	0-90 kV
AC current range	0-20 mA				
DC current range	0-2000 μF				
TD Test					
TD measurement range	0.01x10 ⁻³ ~ 655.35x10 ⁻³				
TD test voltage range	1 kV ~ rated value				
TD accuracy	1%				
TD resolution	1x10 ⁻⁵				
Capacitance test range	0.001 μF – 10 μF				
Capacitance resolution	0.001 μF				
Capacitance accuracy	≤±3%				
Insulation resistance measurement range	1 MΩ - 65535 MΩ				
Insulation resistance resolution	1 MΩ				
Insulation resistance accuracy	±10%				
PD Test					
Partial measurement range	0-5000 pc				
PD resolution	1 pc				
Sampling rate	200 MHz				
Discharge pulse frequency	1 kHz – 2000 kHz				
Others					
Type	Fully automatic step-up and step-down / manual fine-tuning				
Voltage resolution	0.1 kV				
Current resolution	AC: 0.1 mA, DC: 1 mA				
Voltage accuracy	±0.1 kV _{rms} ±1.5% of reading				
Voltage positive and negative peak error	≤±3%				
Waveform distortion	≤3%				
Operation mode	Touch screen control				
Structural mode	Integrated	Integrated	Integrated	Split	

Dimension (mm)	400x300x500	400x300x500	400x300x500	Control unit: 400x300x500 Booster: 350*x250x450
Weight	34 kg	36 kg	43.5 kg	Control unit: 34 kg, Booster: 42 kg
Usage conditions	indoor and outdoor; Temperature: -10°C ~ +40°C; Humidity ≤85%RH			

Note:

- If powered by a micro generator, a variable frequency generator should be used instead of an ordinary generator, because the speed of an ordinary generator is unstable, which will cause abnormal voltage boost and damage the instrument.