

Wuhan HTDP-H VLF Hipot Test Set



I. Introduction

It is designed and manufactured for electrical voltage 10kV, 35kV, 300MW thermal power machine, 10kV, 35kV power transformers and lines etc. all electrical main equipment withstand voltage test. Very low frequency withstand voltage test is essentially an alternative of power frequency withstand voltage test. We know that when do power frequency withstand voltage test of large generators, cables etc., because of their insulating layer with large capacity, need large-capacity test transformer or resonant transformer. These devices, not only bulky, high cost, and very inconvenient. To solve this problem, power sector uses the 0.1Hz ultra-low frequency HV generator test device, reduce the test frequency to reduce the capacity of the test power, thus greatly simplifying field testing difficulty. From home and abroad for many years theories and practices have proved that with 0.1Hz ultra-low frequency withstand voltage test replace power frequency withstand voltage test, not only have the same equivalence, and the volume of the device is greatly reduced, greatly reduced weight, theoretical capacity is about one five-hundredth of power frequency.

II. Features

1. Data of current, voltage, wave form can be directly sampled at high voltage side, so the data is real and accurate.
2. Overvoltage protection: If the output exceeds the set limit of voltage, the instrument will shut-down to protect itself; the actuation time is less than 15ms.
3. Overcorrect protection: it is high-low voltage dual protection in the design, the accurate shut-down protection can be made according to the set value at high voltage side; If the current on low voltage side exceeds the rated current, the instrument will take shut-down protection, the actuation time are both less than 15ms.
4. A high voltage output protective resistor is provided in the voltage boost body in the design and this eliminates the need of additional protective resistor connected outside.
5. As a result of high and low voltage closed-loop negative feedback control circuit, the output without capacitive rise effect.
6. High-voltage control part adopts innovative light control HV switching unit, control is accurate, safe

and reliable;

7. With color man-machine interface touch control plus controls modular software operating system, precise and intuitive

8. Multi-purpose, can simultaneously measure tested objects capacitance, insulation resistance, leakage current, and AC withstand voltage test

III. Parameters

Table 1:

Model	Rated Voltage	Load Capacity	Fuse	Reference Weight
VLF-30 (30KV)	30kV/20mA (Peak)	0.1Hz, ≤1.1μF	5A	Controller: 4kg Booster : 25kg
		0.05Hz, ≤2.2μF		
		0.02Hz, ≤5.5μF		
VLF-50 (50KV)	50kV/30mA (Peak)	0.1Hz, ≤1.1μF	15A	Controller : 4kg Booster : 50kg
		0.05Hz, ≤2.2μF		
		0.02Hz, ≤5.5μF		
VLF-80 (80KV)	80kV/30mA (Peak)	0.1Hz, ≤0.5μF	20A	Controller : 4kg Booster 1 (30kV) : 25kg Booster 2 (50kV) : 50kg
		0.05Hz, ≤1μF		
		0.02Hz, ≤2.5μF		

Table 2:

Output rated voltage	See table 1	
Output frequency	0.1Hz、0.05Hz、0.02Hz	
Load capacity	See table 1	0.1Hz max 1.1 μf
		0.05 Hz max 2.2 μf
		0.02 Hz max 5.5 μf
Measurement accuracy	2.5 %	
Positive and negative voltage peak errors	≤2.5%	
Voltage wave form distortion	≤3%	
Insulation resistance measurement error	≤2.5%	
Leakage current measurement error	≤2.5%	
Power	AC 50 Hz, 220V ±5%	
Power Fuse	See table 1	

IV. Accessories



Control Cabinet



Voltage Booster



Parallel capacitance



Discharge Rod



Dedicated Control Cable



HV Output Line



Parallel Capacitance HV Cable



Fuse



Manual, Report, Certificate