Three-phase Voltage Dip Simulation Generator

VDS-11XXB Series【Introduction】

VDS-11XXB Three-phase AC Voltage Dip and Variation Simulator is a highly reliable and high-precision testing device specifically designed for the characteristics and requirements of voltage transient and short-duration interruption immunity tests for three-phase electrical equipment. The performance of this device meets the standards of IEC 61000-4-11, 34 and GB/ T 17626.11, 34.

The VDS-11XXB series of products satisfies the requirements for phase angle variation stipulated in the standards, and boasts a compact size and light weight. It can achieve a maximum voltage of 690V and a maximum current of 200A. If needed, customized testing specifications of 400A and 1140V are available.

Compliance Standards

IEC 61000-4-11、IEC 61000-4-34、EN 61000-4-11、 EN 61000-4-34、GB/T 17626.11、GB/T 17626.34

Application Fields

Industrial equipment, electrical meters, medical devices, lighting appliances, communication transmission equipment, audio-visual equipment, low-voltage electrical appliances, electronic components, electric tools, information technology equipment, instrumentation.

Technical Features

- Meets the testing requirements of IEC 61000-4-11/-34 and GB/T 17626.11/.34；
- Features a full-color touchscreen for interface programming control, IEC level setting, and real-time display of test waveforms, voltage, and current parameters；
- Designed with an expandable modular structure, allowing not only standalone operation of the main unit but also expansion for universal power grid simulation；
- Fully compatible with both 50 Hz and 60 Hz, with automatic frequency and voltage detection, calculation, and adjustment；
- Comes standard with an RS485 control interface for upper computer control；
- Excellent voltage switching characteristics (switching time less than 5 μs) to meet standard requirements.

Parameter List

Specification	VDS-1132B	1110B	1120B
Interference Type	Three-phase, AC 380 V/32 A (or 690 V/32 A)	Three-phase, AC 380 V /100 A (or 690 V/100 A)	Three-phase, AC 380 V /200 A (or 690 V/200 A)
Power Grid Frequency	50 Hz/60 Hz		
Voltage for Dip Test	Single-phase: Arbitrarily set from 0-220 V (with 2.5% steps) Three-phase: Arbitrarily set from 0-380 V (with 2.5% steps)		
The overshoot variation of the voltage at the output terminals of the generator under rated load conditions	≤ 5%UT		
Phase relationship between voltage dips and interruptions and power supply frequency	< ±10°		
Voltage Interruption Mode	Voltage interruption can be selectively applied to one, two, or all three phases, or simultaneously to all phases		
Voltage Dip Mode	Voltage Dip on Phase-to-Neutral Line Voltage Dip on Phase-to-Phase Line		
Inrush Current	≥ 500 A	≥ 1000 A	≥ 1000 A
Initial Phase of Dip (or Rise)	0 to 359° (with 1° steps)		
Final Phase of Dip (or Rise)	0 to 359° (with 1° steps)		
IEC Standard Test Voltage	0%, 40%, 70%, 80%, 120% EUT		
Number of Cycles Sustained During Dip (or Rise)	0.1 to 9999 cycles (for both 50 Hz and 60 Hz)		
Number of Cycles Between Dips (or Rises)	5 to 9999 cycles (for both 50 Hz and 60 Hz)		
Number of Experiments	1 ~ 60000 times		
General Parameters			

Operating Power Supply	AC 220 V/16 A		
Display Interface	Touchscreen Display		
Host Computer Interface	RS485/RJ45		
Size	6 U	22 U	22 U
Weight	75 kg		
Temperature	15℃~ 35℃ (Operating Conditions)		
Humidity	30% ~ 60%(Operating Conditions)		
Atmospheric Pressure	86 kPa ~ 106 kPa		
Standard Configuration	Main unit, test cables, power cord, fuse, test report, and instruction manual		