

THREE PHASE STATIC ELECTRONIC AC VOLTAGE STABILISER

- 10kVA~3000kVA

Three Phase input/ Three Phase output

SINGLE PHASE STATIC ELECTRONIC AC VOLTAGE STABILISER

- 10kVA~100kVA

Single Phase input/ SinglePhase output

This series of industrial grade static electronic AC voltage stabilizers have single phase SWV-1P and three phase SWV-3P.

Compare with other forms voltage stabilizers, have large capacity, high efficiency, no waveform distortion, and fast response time , suitable for wide range loads, this series products is equipped with overvoltage, undervoltage, overcurrent and other protection functions, easy to install, and operation. The product adopts the latest DSP calculation and measurement chip control technology, fast AC sampling technology, effective value correction technology, current zero-crossing switching technology and fast compensation voltage stabilization technology. It combines intelligent instruments, fast voltage stabilization and fault diagnosis, make the product safe and efficient , precision.



The product is mainly composed of isolation transformer, SCR module, CPU control core and safe protection device, realizing full nocontact control.

Widely used in large electromechanical equipment, metal processing equipment, production lines, elevators, medical equipment, embroidery and textile equipment, air conditioners, radio and television, household appliances and building lighting in the fields of industry, transportation, post and telecommunications, national defense, railways, scientific research and other fields. and other electrical equipment that require stable voltage.

Comply with standard: YD/T 1270.

Input Voltage Range

Three Phase

304V-456V / 278V-433V

Single Phase

152V-228V / 166V-249V / 173V-263V

Additional Features

- Front Status Panel with Metering
- Input Circuit Breaker to protect against overload and short circuit
- **Voltage stabilization response:** voltage stabilization response time in 40 ms and not affect the load to high speed voltage changes.
- **High Accuracy:** SWV-3 series products output voltage accuracy can be set from $\pm 1\%$ to $\pm 5\%$, and the maximum voltage stabilization accuracy is $\pm 1\%$.
- **Communication interface:** RS-232 and RS-485 communication interfaces (optional)
- Over & Under Volts and Over Current Protection
- Anti interference, strong purification ability, safe and pure output power.
- Automatic Re-Start in the event of a Utility Mains Failure
- Virtually Maintenance Free



System Parameters

Response time	Power supply changes corrected in 0.1 seconds											
Efficiency	≥ 98%											
Cooling	Natural Ventilation [aided with fans]											
Operating Ambient Temperature	-10/+45°C											
Storage Temperature	-25/+60°C											
Max Relative Humidity (Non Condensing)	95%											
Admitted Overload	150% for up to 10 seconds		200% for up to 2 seconds									
Harmonic Distortion	None Introduced											
Colour	RAL 7032											
Max Ingress Protection Degree	IP54 / IP20											
Status & Alarm Indication (Front Panel)	Input Switch, InputBreaker, Output Breaker and Manual Bypass, Phase Failure Protection, Automatic Electronic Bypass, Class II Lightning Surge Arrestors, Temperature Controller, LCD Display Panel with RS/485 - Modbus Interface.											
Installation	Indoor or Outdoor - Hardwired Screw Terminals (bottom or side cable entry)											
Physical Size: (W x H x D)	792*383*838					860*522*1160						
Weight (KG)	130	150	170	190	210	250	280					
							320					

Operating Ambient Temperature	-10/+45°C									
Storage Temperature	-25/+60°C									
Max Relative Humidity (Non Condensing)	95%									
Admitted Overload	150% for up to 10 seconds				200% for up to 2 seconds					
Harmonic Distortion	None Introduced									
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Installation	Indoor or Outdoor - Hardwired Screw Terminals (bottom or side cable entry)									
Physical Size (W x H x D)	1200*800*1600			1300*800*1950			1550*1050*2000			
Weight (KG)	500	530	650	700	790	940	1800			
							1500*1000*2000*2			

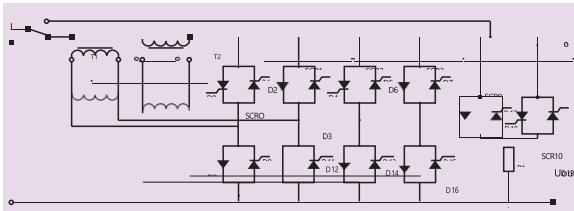
Front Status Panel



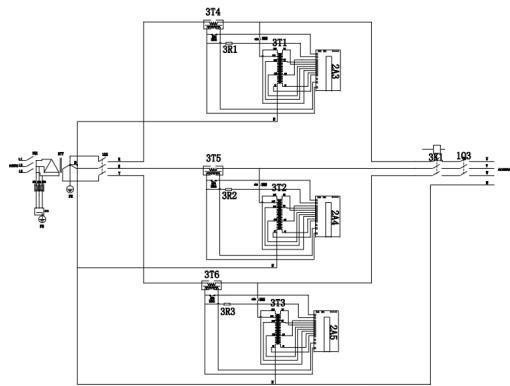
Input & Output Connection



Schematic Diagram



Note: This picture is single phase schematic block diagram.



Note: This picture is three phase schematic diagram

Technical Performance Comparison

Technical Indicators	SWV Industrial Grade Static Electronic AC Voltage Stabilizer	Compensated column type Current regulator (servo type)	Inductive voltage regulator
Work Principle	The microcomputer intelligent detection output command is used to control the rapid switching of the silicon controlled thyristor module (SCR), and the stability of the output voltage is maintained through the same frequency of the transformer, phase locking, and sine wave superposition compensation. Fast response, no carbon brushes, no contacts, no machinery, no sparks, three-phase adjustment.	Relying on the movement of the carbon brush frame on the voltage regulating transformer, the voltage of the secondary winding of the compensation transformer is changed to maintain the stability of the output voltage. There are carbon brushes, contacts, and mechanical transmission.	By changing the phase angle of the stator and rotor, the relative voltages of the input and output are changed.
Response time	Fast: The time to stabilize to the rated voltage value is ≤ 40 ms, which can suppress instantaneous input high and low surge voltages and effectively protect precision equipment in real time.	Slow (3~5)s: Motor adjustment (servo l)	Slow (3~5) s: It is a hysteresis voltage regulator, which cannot suppress the instantaneous input high and low surge voltage, and it is difficult to protect precision equipment.
Parameter set	on the display panel can set various parameters	No	No
Three phases no Balance	automatic balancing function.	No	No
Protect response time	20ms protection after abnormal situation occurs	≥ 10 s	No
Magnetic leakage interference	No	No	Yes (stator/rotor magnetic leakage)
Grid pollution	No	No	surge voltage feed back to the power grid, which increases by power.
Maintenance	Free	periodical	periodical

