

Electro-mechanical Voltage Regulator, Indoor

Servo Motor type, SPS Series, 1KVA~300KVA



Application

- CNC Machines, SMT
- Laser Cutting Machine
- Process Control System
- Military Research & Defense Weapons
- Auto-testing Equipment.
- Medical Monitoring System
- Precise Measuring & Testing Equipment
- Generator
- Communication Receiver
- Medical Equipment
- TV & Radio Broadcasting Stations



CNC Machine



Power Industries



Production Line



Laser Cutting Machine



Medical System



GSM Base Station



Transportation System



Generator

SATECH POWER

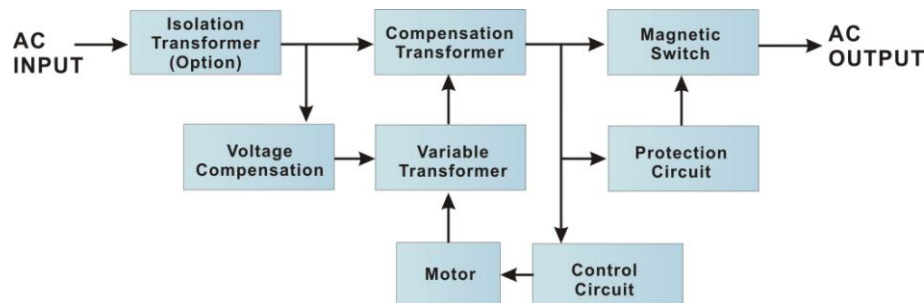
Industrial Grade Power System

SPS Series Electro-mechanical Voltage Regulator, Servo Motor

The SPS series Electro-mechanical Voltage Regulator is available from 1 to 300 KVA as standard, in single or three-phase output configurations and may be customized to reach up to 500KVA.

Introduction

The SPS series AVR's are designed to maintain the mains voltage constant all the time. Their electromechanical design will electronically correct the mains voltage constant should the mains voltage goes high or low. They are characterized by the high efficiency and are completely unaffected by power factor, load and frequency variations. They can withstand high instantaneous overload and does not create any magnetic interference. Compact in size, quiet in operation, these voltage stabilizers are very suitable for indoor use and can be located near to equipment without causing any magnetic disturbances to the equipment.



Features

- **±15% Input Voltage Range.** Option: ±20%, ±25%. +25%/-30%, ±40% or on request
- **±1% ~ ±2% Precise Voltage Regulation Rate**
- **≥98% VA Efficiency, from 0 to 100% load**
- **Independent Phase Control:** Every phase remains ±2% precise output voltage when AC power encounters 30% phase unbalanced, non-linear load or heavy load
- **Soft Start Load Protection:** Ensure the output voltage startup from the lowest voltage when it starts for full stabilization
- **Auto Restore while AC Recovery (Option)**
- Easy-to-Read LED Display Real State to AVR
- **Full Protection:** Under / Over voltage, Open Phase, Phase Reverse, Overload, Short Circuit protection
- **Manual Maintenance Bypass Switch:** For routine maintenance and service. Not affect machinery running in any ways
- **H-Grade Isolation Transformer (Option):** Used to protect against electric shock, to suppress electrical noise in sensitive devices.
- **Compliance with International Standards:**
 - BS EN50081-1;2 / IEC 61000-4-3;4
 - BS EN5490 / IEC 60529
- **CE Conformity:** EN55022, EN50082-2, ENV50140-1

Technical Specification (1-Phase Input / 1-Phase Output)

Revolutionary Design



- Shielded Cover VARIAC
- Molded VARIAC W/ Even Surface
- Japan-made Refine Carbon Brush

Specifications (1-Phase)

Model	SPS 1102	SPS 1103	SPS 1105	SPS 1107	SPS 1110	SPS 1115	SPS 1120	SPS 1125	SPS 1130
Capacity (KVA)	2	3	5	7.5	10	15	20	25	30
INPUT									
Phase & Wire	1Phase 2Wire+G or 1Phase 3Wire+G								
Input Voltage	A: 110V System: 1Phase 2Wire+G, 100/110/115/120V; B: 220V System: 1Phase 2Wire+G, 200/220/230/240V; C: c/w Isolation Transformer or 1Phase 3Wire+G or other specific voltage (as client demand)								
Input Voltage Range	±15% (option: ±20%, ±25%, ±30% or others)								
Frequency	50Hz/60Hz ±5%								
Power Factor	0.95~1								
OUTPUT									
Output Voltage	A: 110V System: 1Phase 2Wire+G, 100/110/115/120V; B: 220V System: 1Phase 2Wire+G, 200/220/230/240V; C: c/w Isolation Transformer or 1Phase 3Wire+G or other specific voltage (as client demand)								
Voltage Regulation Rate	±1%~±2%								
Output Voltage Adjustable	±1%~±5%								
Frequency	50Hz/60Hz ±5%								
Efficiency	≥ 98% (AC to AC)								
Distortion	Less than 1% adds								
Response Time	0.1 seconds when input voltage starts voltage regulation								
Overload Capacity	150% for 10 seconds; 200% for 2 seconds								
Auto Restart	Auto Restart while AC is recovery								
PROTECTION									
Over Voltage	Option								
Under Voltage	Option								
Manual Bypass	Switch to Mains Supply for Service / Maintenance								
Over Load	Auto Cut off when overload								
Lightning	Standard Feature								
INDICATORS									
Output Voltmeter	Analog Voltmeter or Digital Display								
Power On/Off	Standard Feature								
Working Environment	0℃~45℃ / 0%~95% (non-condensing)								
A & B Type (W*D*H / cm)	20*36*20		26.6*44*21.5		30*51*48			30*51*48	
C Type (W*H*D / cm)	30*51*48				47*50*87			55*55*98	
Weight- A & B (Kgs)	17	18	27	34	48	55	68	76	83
Weight- C (Kgs)	52	59	75	120	143	155	173	216	260

- All specifications are subject to change without prior notice.

Technical Specification (3-Phase Input / 3-Phase Output)

Outlooks (1-Phase & 3-Phase)



Specifications (3-Phase)

Model	SPS 3310	SPS 3315	SPS 3320	SPS 3330	SPS 3345	SPS 3360	SPS 3380	SPS 33100	SPS 33120	SPS 33150	SPS 33200	SPS 33300	
Capacity (KVA)	10	15	20	30	45	60	80	100	120	150	200	300	
INPUT													
Phase & Wire	3Phase 3Wire+G (Delta Connection) or 3Phase+3Wire+N+G (Star / Y Connection)												
Voltage	200/220/230/240/254/380/400/415/440/460/480V or other specific voltage (as client demand)												
Voltage Range	±15% (option: ±20%, ±25%, +25%/-30%, ±30%, ±40% or on request)												
Frequency	50Hz/60Hz ±5%												
Power Factor	0.95~1												
OUTPUT													
Voltage Accuracy	±1%~±5% adjustable												
Frequency	50Hz/60Hz ±5%												
Efficiency	≥98% (AC to AC)												
Distortion	Less than 1% adds												
Response Time	Input voltage starting alteration within 0.1 seconds start adjusting												
Overload Capacity	150% for 10 seconds; 200% for 2 seconds												
Phase Unbalance	Phase unbalanced to 30% may amend balance within 2%												
PROTECTION													
Over Voltage	Auto cut off when over range, auto restore when return to normal												
Under Voltage	Auto cut off when over range, auto restore when return to normal												
Phase Failure	Auto cut off + LED Indicator + Buzzer												
Manual Bypass	Switch to Mains Power Supply for Service / Maintenance												
Soft Start	Circuit Control, always starts from the low voltage												
Over Load	Magnetic Contactor Cutoff Automatically												
Lightning	Standard Feature												
INDICATOR													
Output Voltmeter	Analog Voltmeter or Digital Display												
Power On/Off	LED Indicator is lit												
O/P Voltage Status	LED Indicator is lit												
Working Environment	0℃~45℃; 0%~95% (non-condensing)												
Size (W*H*D/ cm)	220V System	36*54*57				41*79*71			52*102*82		60*115*120		120*80*155
	380V System	36*54*57				41*79*71			52*102*82		60*120*117		120*80*80
	c/w ISO-Tx	36*54*97				52*97*110			60*115*132		75*120*132		105*95*90
Weight (Kgs)	220V System	75	85	90	100	140	180	200	225	305	550	650	1100
	380V System	66	79	86	96	126	205	215	235	286	500	600	1000
	c/w ISO-Tx	103	150	210	293	445	570	600	720	850	1000	1150	1200

● All specifications are subject to change without prior notice.