

Stabilizer Three Phase



Three Phase Servo Voltage Stabilizer

1. Working principle of voltage stabilizer

The three-phase servo controlled voltage stabilizer is a device used to stabilize the three-phase power supply voltage.

The three-phase servo controlled voltage stabilizer mainly consists of the following parts: autotransformer, servo motor, control circuit, compensation transformer, and detection circuit.

- **Voltage detection and comparison:**

The detection circuit (voltage sensor) of the voltage stabilizer monitors the three-phase input voltage in real time.

If the voltage is detected to deviate from the set value (such as 380V), the control circuit will calculate the amplitude that needs to be adjusted.

- **Servo motor drive adjustment:**

The control circuit drives the servo motor to rotate according to the voltage deviation.

The servo motor drives the carbon brush on the transformer to slide along the winding, changing the tap position of the transformer, thereby adjusting the output voltage.

- **Compensation and output stabilization:**

The adjusted voltage is further optimized by the compensation transformer to make the output voltage more stable.

Finally, the voltage provided to the load is adjusted to the set value (such as three-phase $380V \pm 1\%$).

Model		SJW3-10KVA	SJW3-20KVA	SJW3-15KVA	SJW3-30KVA	SJW3-40KVA
Phase		Three phase				
Input voltage		AC 260-450V, 304-456V or customized				
Output voltage		AC 380V or customized				
Frequency		50Hz/60Hz				
Precision		±3%				
Efficiency		>95%				
Control type		Servo motor				
Digital display		Show input and output voltage, Load Ratio and Fault Indicator				
Protection		Overvoltage, Overload, Short circuit, Over temperature				
Ambient temperature		-10°C~+ 40°C				
Relative Humidity		<95%				
Waveform Distortion		No additional wave form distortion				
Insulating Resistance		Normally more than 2MΩ				
Insulating Class		Class B				
Protection	Overvoltage	Output Voltage ≥ 425V ± 4V				
	Low voltage	Output Voltage ≤ 310V ± 4V				
	Over temperature	95°C±10°C				
	Delay protection	Customizable				
	Undervoltage	Disabled by default, customizable if needed				
Power	10KVA	15KVA	20KVA	30KVA	40KVA	
Size(mm) L*W*H	490*320*520	490*320*520	490*320*520	410*460*880	410*460*880	
N.W(kg)	35.5	41	46.5	85.5	95.5	