

SBW

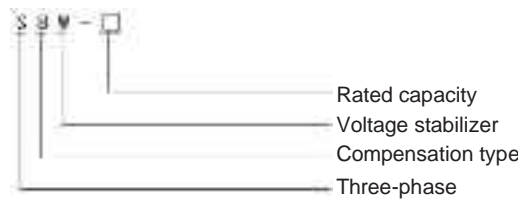
Series Three-phase Compensation AC Power Voltage Stabilizer



I. Scope of Application

The SBW Series Three-phase Compensation AC Power Voltage Stabilizer is designed and developed by our company on the basis of introducing and absorbing international advanced compensation technology, combined with the national conditions of China's power system, which can automatically keep the output voltage stable when the voltage fluctuation is caused by grid voltage fluctuation or load change. The product is characterized by large capacity, high efficiency, no waveform abnormality, stable voltage regulation, wide applicable load, as well as the ability to withstand instantaneous overload, long-term continuous work, and optional switching of manual control and automatic control. It is equipped with the automatic protection device for the overvoltage, short circuit and fault, and has advantages of small size, light weight, convenient use and installation, low noise and reliable operation. The product can be widely used in large electromechanical equipment, metal processing equipment, production lines, construction engineering equipment, and light textile equipment in the fields of industry, agriculture, transportation, post and telecommunications, military, railway, scientific research and culture, and all applications in need of stable voltage, such as air conditioning, radios and televisions, hotels, and household appliance lighting. The product complies with JB/T7620.

II. Model Description



III. Normal Operating Conditions

1. Ambient temperature: -5°C—+40°C
2. Altitude: Not higher than 1,000 meters.
3. Relative humidity: 15%—90% (at 20°C)
4. The installation site shall be free of gas, steam, chemical deposits, dust, dirt or other explosive and corrosive media that seriously affect the insulation of the voltage stabilizer.
5. The installation site shall be free from severe vibration or turbulence.

IV. Structural Features

The voltage stabilizer consists of the compensation transformer, voltage regulator, transmission mechanism, brush contact system, box and control system. The cylindrical winding surface of the variable transformer is polished and processed to remove insulation, and thus presents a smooth conductor surface, which is convenient for the good contact of electric brushes. The transmission mechanism consists of the servo motor, sprocket and chain.

Product features:

1. When the input power supply is out of phase, the voltage stabilizer can automatically detect and cut off the output.
2. Adopting the "mains direct connection" reduces the number and capacity of AC contactors, and improves the reliability of voltage stabilizer operation.
3. It has the functions of voltage output, overvoltage and undervoltage protections as well as alarm: In the steady state, when the input voltage exceeds the upper input limit of the stabilizer (456 V) and reaches a certain value or the output voltage of the stabilizer is higher than (426 ± 8 V) due to other reasons, the output is cut off and an alarm is given. When the output voltage drops, it will automatically return to normal.
4. It has the function of automatic self-resetting after power-on: When the power supply is restored after power failure, the voltage stabilizer has two optional functions: automatic power restoration and manual start.
5. It has the boot delay function: In the steady state, turn on the start button, and the voltage stabilizer adjusts itself to a stable value (for a few seconds) before KM3 is pulled in for voltage output.

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V. Main Technical Parameters

Model	Rated capacity (kVA)	Output current (A)	Input voltage (V)	Output voltage (V)	Electric strength	Insulation resistance (MΩ)	Efficiency	Waveform distortion	Working frequency (Hz)	Voltage regulation accuracy	Loudness time (s)
SBW-30	30	46	304-456	380±(1-5)% Adjustable	No flicker breakdown in 1 minute at 50 Hz and 2,000 V sinusoidal AC power	≥3	≥98%	≤0.1%	50	±(1-5)% Adjustable	≤0.5
SBW-50	50	76									
SBW-80	80	122									
SBW-100	100	152									
SBW-150	150	228									
SBW-180	180	273									
SBW-225	225	342									
SBW-320	320	486									
SBW-400	400	608									
SBW-500	500	760									
SBW-600	600	912									
SBW-800	800	1,216									
SBW-1000	1,000	1,520									
SBW-1200	1,200	1,823									
SBW-1400	1,400	2,127									
SBW-1600	1,600	2,431									

- Note:
- Under normal circumstances, the load power factor COSΦ of AC voltage stabilizer is 0.8.
 - The actual external output power is 80% of the rated capacity.
 - In the case of inductive load, the impact on the voltage stabilizer when the starting current of the load is large shall also be considered during the type selection.
 - Special specifications and requirements can be customized by contacting our company.

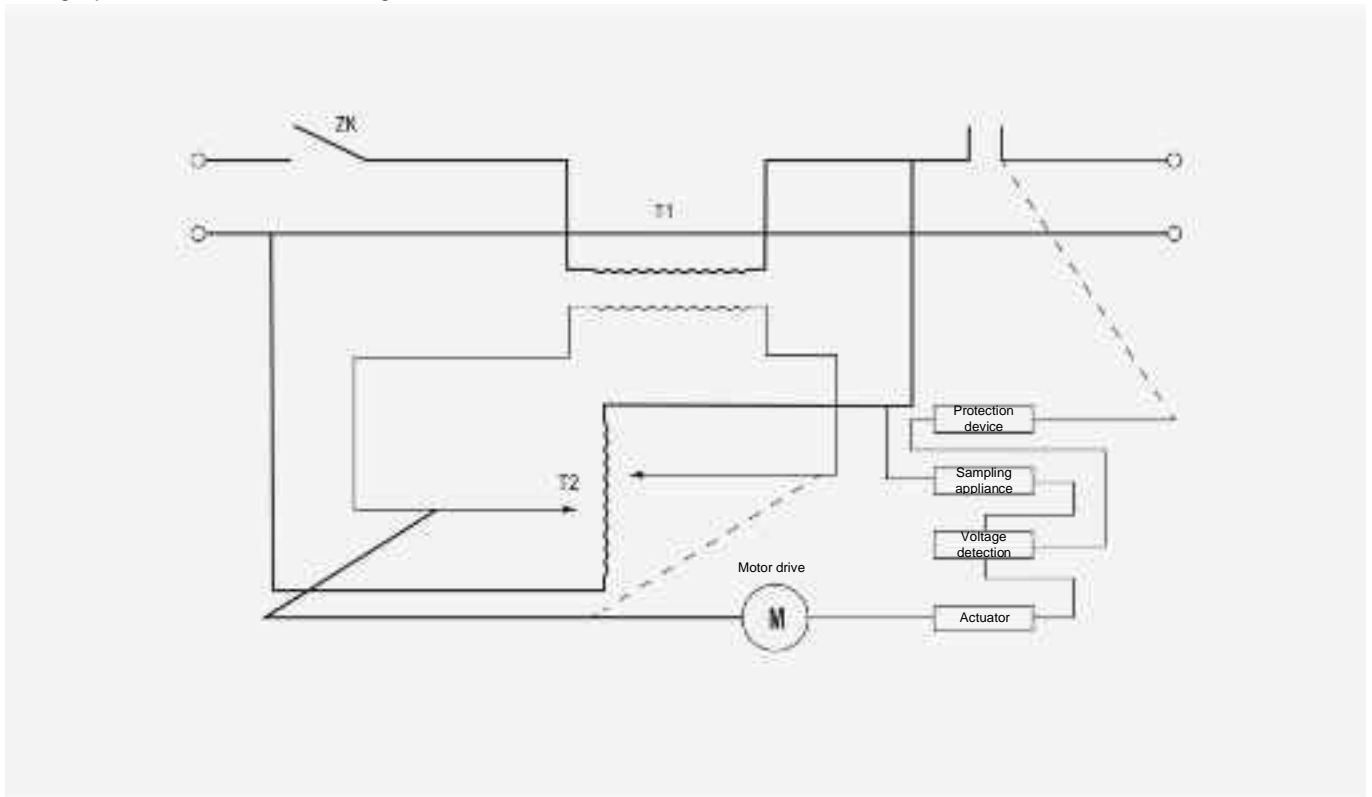
VI. Outline and Installation Dimensions and Schematic Diagrams

Model	W x D x H (mm)	Number of cabinets	Model	W x D x H (mm)	Number of cabinets
SBW-30	800 x 540 x 1,230	Single cabinet	SBW-320	1,100 x 800 x 1,900	Single cabinet
SBW-50			SBW-400	1,000 x 800 x 2,000	Double cabinets
SBW-80			SBW-500		
SBW-100	SBW-600				
SBW-150	1,000 x 700 x 1,600		SBW-800	1,200 x 950 x 2,000	Three cabinets
SBW-180			SBW-1000		
SBW-200			SBW-1200		
SBW-225	1,100 x 800 x 1,900		SBW-1400	1,100 x 1,100 x 2,000	Four cabinets
SBW-250			SBW-1600		

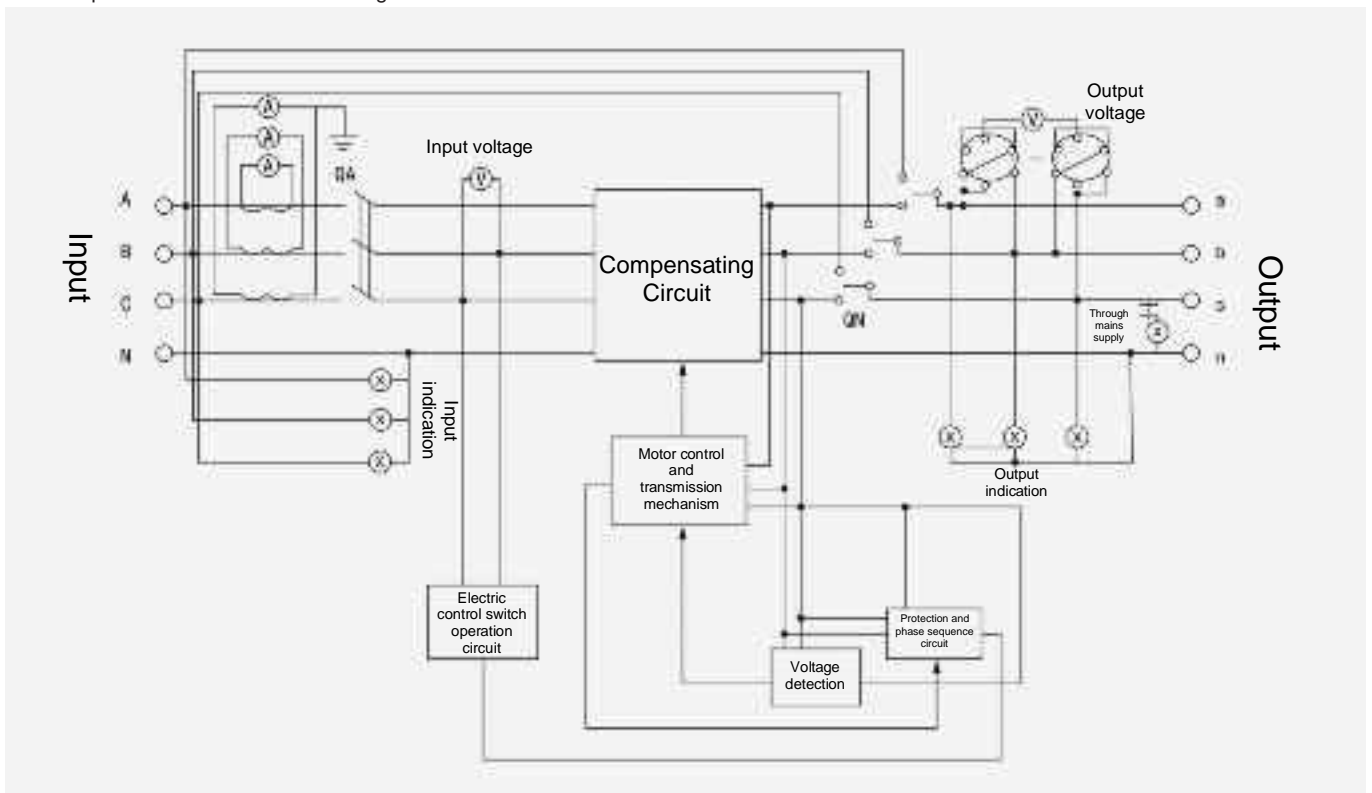
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1. Single-phase electrical schematic diagram

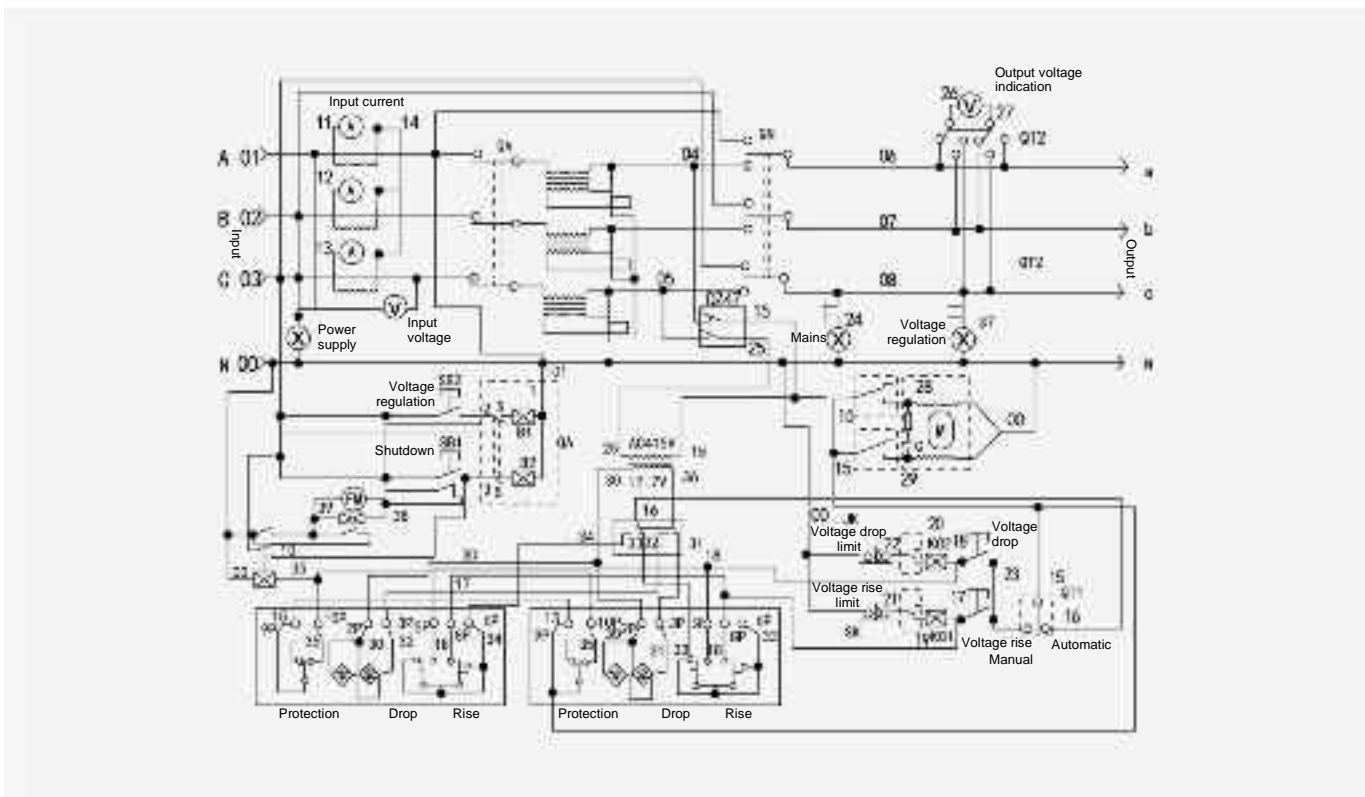
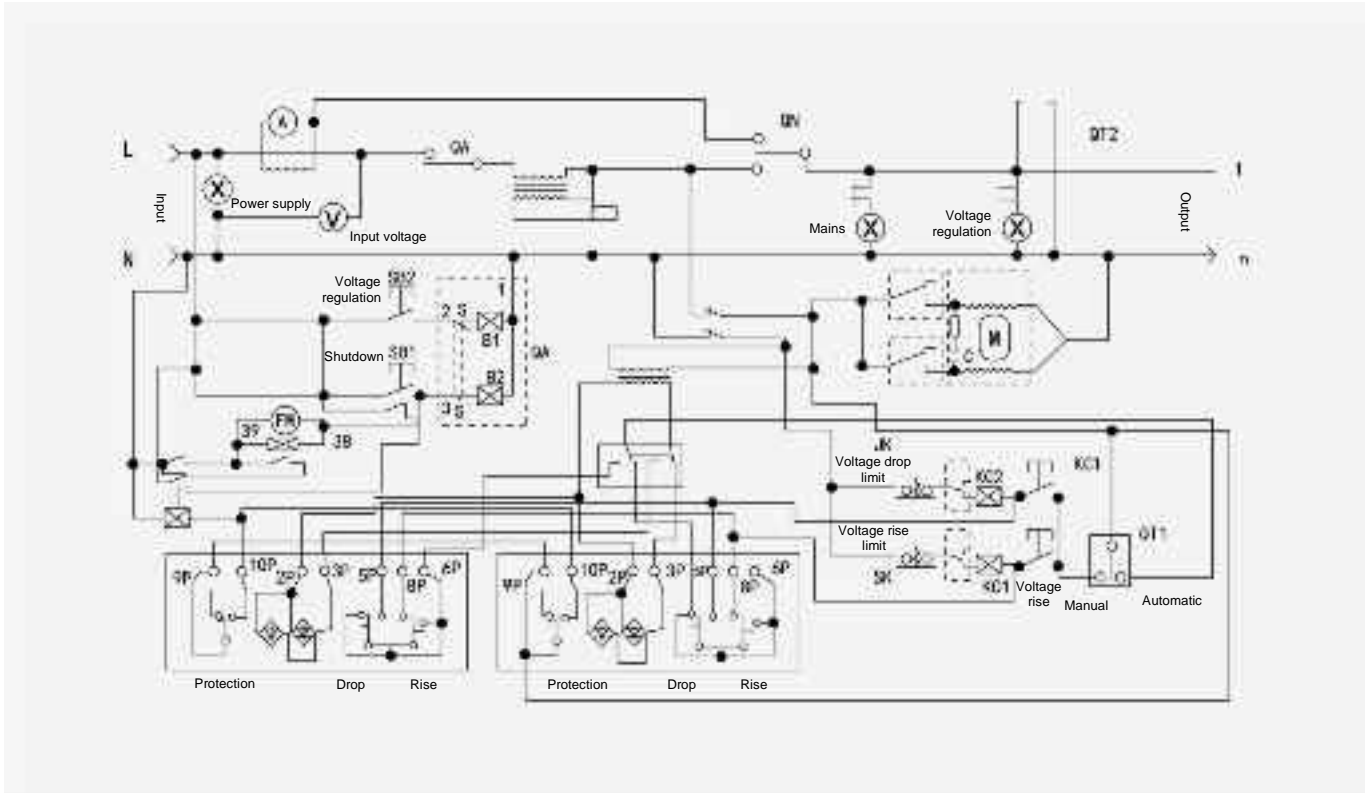


2. Three-phase electrical schematic diagram



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3. Electrical schematic diagram of DBW



A Primary power distribution
B Secondary distribution
C Terminal power distribution
D Industrial control and protection
E power device
F Power management
G High voltage components