



# SERVO MOTOR VOLTAGE STABILIZER BK-TND SERIES 3KVA-60KVA

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## BK-TND Series Single Phase Voltage Stabilizer

### Product Overview

The BK-TND series single-phase servo voltage stabilizer integrates a high-speed servo motor, intelligent control circuitry, and a low-loss auto-voltage regulator into a compact package.

Designed specifically for complex and changing power grid environments, it provides stable and reliable power for a wide range of electrical equipment.

It is widely used in locations requiring extremely high voltage stability, such as computer rooms, medical equipment rooms, laboratories, and high-end office areas, making it an ideal choice for ensuring the normal operation of precision instruments and sensitive equipment.

### Applications

- **Precision Light Manufacturing**  
Single-phase CNC machines, laser engravers, 3-D printers, micro-assembly lines and handheld welders— $\pm 3\%$  regulation keeps every cut, layer and bead within spec.
- **Medical & Lab Front-Ends**  
Dental/ophthalmic treatment chairs, portable CT/DR imagers, high-precision analyzers and biological-sample cold-chain monitors—shield delicate sensors and reagents from grid transients.
- **Commercial & Public Facilities**  
Bank branches, retail stores, smart-building lighting, hospital outpatient clinics, metro-station weak-current rooms and elevator control panels—ultra-compact, wall-mountable and whisper-quiet, with field-replaceable carbon brushes for zero-downtime maintenance.





## Technical Advantages

### ■ Precision Mechanical Adjustment

A servo motor drives a carbon brush mechanism for voltage regulation. The mechanical transmission ensures linear output voltage adjustment, with a voltage regulation accuracy of up to  $\pm 3\%$ .

### ■ Instantaneous Response to Fluctuations

Equipped with a highly sensitive voltage sampling and servo drive system, the servo motor quickly drives the carbon brushes to adjust the position of the autovoltage regulator when the input voltage fluctuates.

### ■ Strong Load Adaptability

The design offers strong power handling capabilities and stable operation under various load types, including resistive, inductive, and capacitive loads.

### ■ Proven and Reliable Structure

Core components, including the servo motor, autovoltage regulator, and transmission mechanism, utilize proven and reliable technologies. The simple mechanical structure is easy to maintain and has a low failure rate.

## Product Features

### ■ Precise Voltage Regulation

Utilizing advanced servo motor drive technology combined with sophisticated automatic control circuitry, it rapidly responds to grid voltage fluctuations.

### ■ Wide Input Voltage Range

An extremely wide input voltage range, covering 150V to 250V, adapts to voltage fluctuations in different regions and grid conditions.

### ■ Efficient and Fast Response

Voltage regulation is extremely fast. Even with a 10% input voltage change, the adjustment time is  $\leq 1\text{S}$ , enabling instant voltage adjustments.





# PRODUCT CATALOG

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**Voltage Stabilizer**  
**Transformer**

**VFD Inverter**  
**Soft Starter**  
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