

USER MANUAL

SERVOMOTOR VOLTAGE STABILIZERS



Single-phase servomotor type

**500, 1000, 2000,
3000, 5000, 8500, 11000
15000, 20000**



Three-phase servomotor type

9000, 15000, 20000

Developed in Russia
Made in China

We are grateful to you for choosing our equipment!
We hope that this equipment will seem worthy and useful to you!



This operating manual is a document that certifies the technical characteristics of the SUNTEK AC voltage stabilizer guaranteed by the manufacturer and allows you to familiarize yourself with the device, the operating rules and the principle of its operation.

1. APPOINTMENT

AC voltage stabilizer of electromechanical type with digital indication SUNTEK is designed to power devices and devices with single-phase and three-phase sinusoidal voltage, with filtering of mains interference and without introducing distortions into its shape.

2. SERVICE CONDITIONS

- environment is non-explosive, without the content of aggressive substances in the air (vapours of acids, alkalis and other liquids and gases) in concentrations that destroy insulation and metals, as well as conductive and abrasive dust;
- ambient temperature range from 0°C to +50°C
- relative air humidity not more than 80% at +25°C;
- degree of protection of a product - IP20 (leaky);
- indoors or under a canopy in the absence of shock, vibration, dirt.

2. TECHNICAL SPECIFICATIONS

The stabilizer provides:

- the main technical characteristics specified in tab. 12;
- indication of the main operating modes of the stabilizer, input and output voltage;
- automatic shutdown of loading at short circuit or long overload;
- continuous, round-the-clock work;
- effective smoothing of impulse noise in the network;
- "transit" mode ("bypass").

Table 1. Technical specifications Single-phase electromechanical type

Name of the parameter	Stabilizer model									
kVA	0,5	1	2	3	5	8,5	11	15	20	
	Parameter value									
Operating range of input voltage, V	120 - 285									
Frequency of the supply network, Hz	50/60									
The stabilization process	Permanent (continuous)									
Response rate to changes in input voltage, V/min	50									
Efficiency (at 100% load), not less than, %	97									
Load change limits, %	0 - 100									
Accuracy of output voltage stabilization (when the input voltage is changed within 152-255 V), %	not more than ± 3									
Upper cut-off voltage, V	242 \pm 5									
Housing material	Metal									
Stabilizer model, kVA	0,5	1	2	3	5	8,5	11	15	20	
Overall dimensions, (HxWxD), not more than, sm	27x16x12		27x16x12		37x26x17		44x29x17		44x41x85	
Net weight, not more than, kg	4 kg	5 kg	7 kg	12 kg	15 kg	24 kg	27 kg	54 kg	60 kg	

Table 2. Technical specifications Three-phase electromechanical type

Name of the parameter	Stabilizer model		
kVA	9	15	20
	Parameter value		
Linear input voltage, V	240-430		
Phase input voltage, V	140-260		
Frequency of the supply network, Hz	50/60		
The stabilization process	Permanent (continuous)		

Response rate to changes in input voltage, V/min	50		
Efficiency (at 100% load), not less than, %	98		
Load change limits, %	0 - 100		
Accuracy of output voltage stabilization, %	±3% on phase and ±4% on linear		
Housing material	Metal		
Stabilizer model, kVA	9	15	20
Overall dimensions, (HxWxD), not more than, sm	33x33x77	36x36x84	63x60x96
Net weight, not more than, kg	45 kg	58 kg	75 kg

2. COMPLETENESS

Voltage stabilizer 1 pcs.

Manual 1 pcs.

Package 1 pcs.

3. DEVICE AND OPERATING PRINCIPLE

The stabilizer is structurally made in a metal case of a universal (wall-floor) design and consists of the main parts:

- control schemes;
- display schemes;
- electric motor of brush drive of autotransformer
- is an additional autotransformer of the output noise suppression filter.

A 5-digit seven-segment indicator is located on the front wall of the stabilizer housing, showing the input / output voltage. For three-phase voltages, individual displays showing the current are used. A dot indication in the form of LEDs is also made, showing the situation with the voltage in the network. (Three types of indication)

Attention! It is necessary to ensure a reliable connection of the stabilizer to the ground loop through the grounding terminal of the connector for connection in stabilizers with a nominal value of SUNTEK EM- 3000, 5000, 8500, 11000 VA, 15000 VA and 20000VA and through the grounding contact of the mains plug in the nominal values of SUNTEK EM – 1000 and 2000 VA



4. INDICATION OF SECURITY MEASURES

Attention! In working condition, life-threatening voltage is supplied to the stabilizer from the mains. Installing, disassembling and repairing the stabilizer should be done only when the power is off.



5. FORBIDDEN

- Install the stabilizer in rooms with an explosive or chemically active environment that destroys insulation and metals;
- Connection and operation of an ungrounded stabilizer;

The stabilizer is grounded through the grounding contact of the power cord intended for connection to the network or a special contact on the terminal block (for models 3000 VA and above)



- Operation of the stabilizer in the presence of deformation of the body elements, which can lead to their contact with the current-carrying elements of the stabilizer;
- Close the ventilation openings of the stabilizer housing;
- Ingress of foreign objects and liquids into the ventilation openings of the stabilizer housing.

Attention! The total power of the load connected to the stabilizer must not exceed the specified power! Consult with experts when choosing a voltage stabilizer! It is important to correctly take into account the change in the power of the voltage stabilizer when the input voltage drops or rises!



6. INSTALLATION, CONNECTION AND OPERATION PROCEDURE

A) Preparing the stabilizer for work. First, choose a place to install the stabilizer, it must be dry, dust-free and well ventilated. The stabilizer itself must be carefully unpacked, familiarized with its external device according to this product passport. If the stabilizer was transported at sub-zero temperatures, it must be kept at room temperature for at least four hours before connection.

Models 1000-11000 VA have the option of both horizontal surface mounting and vertical mounting. That allows you to use it in the most favorable perspective for the buyer.

B) Connection. At the time of switching on, please note that the stabilizer is turned off - the automatic power switch is in the "Off" position and the stabilizer must be connected to a network with grounding.

Attention! After turning on the automatic power switch, the output voltage indication appears after an automatic delay of 3 seconds



The automatic delay function is necessary so that the stabilizer can diagnose the network and enter the operating mode.

Further, information about the output voltage appears on the display (in three-phase voltage stabilizers, there are three displays showing the load current). By pressing the "input / output" button, we can get information about what input voltage is at a given time.

The voltage stabilizer always turns on without load, as soon as it has entered the working state, you can gradually connect the load to it.

Bypass system allows you to connect the load directly from the network, bypassing the stabilizer without turning it off. (The switched on devices will be under the adjusted voltage!) This function is available only on models 3000-11000 VA.

At the moment of switching on, the tabs "network" and "bypass" must be lowered down. Next, lift up the "network" tab - the stabilizer works.

If you raise the "bypass" tab, it will not be fixed at the top, in order to enable the bypass, you must turn off the network!

7. MAINTENANCE

During the operation of the stabilizer, it is necessary to carry out:

- inspection of the stabilizer housing and the wires connected to it to detect their damage (1 time per month);
- removing dirt and dust from the surfaces of the stabilizer housing with a brush or a dry rag.

8. MALFUNCTIONS AND WAYS TO ELIMINATE THEM

Malfunction	Possible cause	Method of elimination
There is no output voltage and at the same time there is no indication on the stabilizer display	Overload, the automatic fuse went off	Press the automatic fuse button
	1.Switch malfunction 2.Power cord malfunction	
There is no output voltage and at the same time there is an indication on the stabilizer display	Other malfunctions	Repair at authorized service centers or at the manufacturer
There is an output voltage and there is no indication on the stabilizer display		
When the stabilizer is turned on, the introductory automatic turns off	1. Overloaded on the stabilizer, the load is greater than the nominal value of the machine 2. The nominal value of the introductory automaton is much less than the nominal value of the stabilizer automaton	Replace the introductory automatic with a more powerful one or purchase a stabilizer with a nominal value of less.

9. STORAGE AND TRANSPORTATION RULES

Transportation must be carried out in the packaging of the manufacturer by any type of closed-type transport.

Stabilizers are stored and transported in the position indicated on the package.

It is not allowed to subject stabilizers to shock loads during loading and unloading operations.

The stabilizer must be stored in the manufacturer's packaging in heated rooms with natural ventilation at ambient temperatures from -20 °C to +50 °C with a relative humidity of no more than 80%.

10. SEALING AND MARKING

The marking of the side panel contains the name of the stabilizer model.

11.WARRANTY CARD

Model

Serial number

Date of sale

Stamp

References on all issues related to warranty obligations:



www.electrosheriff.com