

USER MANUAL

RELAY VOLTAGE STABILIZERS



Standard series

**550, 1000, 2000, 5000,
8500, 11000, 12500, 16000,
20000**



Platinum series

11000, 12500, 16000, 20000



PR series

500, 1000, 2000

Produced 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. PURPOSE

The electronic type AC voltage stabilizer with digital indication "SUNTEK", hereinafter referred to as the stabilizer, is designed to supply devices and devices with a single-phase voltage of a sinusoidal shape, with filtering of network interference and without introducing distortion into its shape.

2. OPERATING CONDITIONS

- the environment is non-explosive, without the content of aggressive substances in the air (vapors 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 - 30 °C to +50 °C;
- the relative humidity of not more than 80% at a temperature of +25 ° C;
- degree of protection of the product - IP20 (unpressurized);
- indoors or under a canopy in the absence of shocks, vibration, dirt

3. TECHNICAL SPECIFICATIONS

The voltage stabilizer provides:

- the main technical characteristics specified in Table 1, 2 and 3;
- indication of the main operating modes of the stabilizer, input and output voltage;
- automatic load shutdown in case of short circuit or overload;
- automatic shutdown of the load when low or high voltage dangerous for the connected load appears at the output of the stabilizer;
- do not distort the sine wave;
- continuous, round-the-clock operation;
- effective smoothing of pulse interference in the network
- "transit" mode ("bypass") the models have 5000VA and above.

Table 1. Technical specifications Standard series

Name of the parameter	Stabilizer model (relay)								
kVA	0,55	1	2	5	8,5	11	12,5	16	20
	Parameter value								
Operating range of input voltage, V	120 - 285								
Frequency of the supply network, Hz	50/60								
Number of correction levels	4								
Response rate to changes in input voltage, V/min	150								
Efficiency (at 100% load), not less than, %	95								
Load change limits, %	0 - 100								
Accuracy of output voltage stabilization (when the input voltage is changed within the range of 152-255 V), %	at least 8								
Upper cut-off voltage, V	245 ± 5								
Automatic power-on delay	3 seconds								
Housing material	Metal								
Display	Input\Output voltage								
Stabilizer model, kVA	0,55	1	2	5	8,5	11	12,5	16	20
Overall dimensions, (HxWxD), not more than, sm	28x18x13			38x25x16	43x28x18		50x27x17		35x33x54
Net weight, not more than, kg	3 kg	4 kg	6 kg	12 kg	16 kg	19 kg	21 kg	22 kg	40 kg

Table 2. Technical specifications SUNTEK Platunum series stabilizer

Name of the parameter	Stabilizer model (relay)				
kVA	11		12,5	16	20
	Parameter value				
Operating range of input voltage, V	90 - 285				

Frequency of the supply network, Hz	50/60			
Number of correction levels	4			
Response rate to changes in input voltage, V/min	150			
Efficiency (at 100% load), not less than, %	95			
Load change limits, %	0 - 100			
Accuracy of output voltage stabilization (when the input voltage is changed within the range of 152-255 V), %	at least 8			
Upper cut-off voltage, V	242 ± 5			
Automatic power-on delay	3 seconds			
Housing material	Metal			
Stabilizer model, kVA	11	12,5	16	20
Overall dimensions, (HxWxD), not more than, sm	46x29x17		48x32x19	
Net weight, not more than, kg	21,3 kg	22,6 kg	26,5 kg	31 kg

Table 3. Technical specifications SUNTEK PR series relay type stabilizer

Name of the parameter	Stabilizer model (relay)		
kVA	0,5	1	2
	Parameter value		
Operating range of input voltage, V	120 - 285		
Frequency of the supply network, Hz	50/60		
Number of correction levels	4		
Response rate to changes in input voltage, V/min	150		
Efficiency (at 100% load), not less than, %	95		
Load change limits, %	0 - 100		

Accuracy of output voltage stabilization (when the input voltage is changed within the range of 152-255 V), %	at least 8		
Upper cut-off voltage, V	242 ± 5		
Protection against electric shock	Class I according to GOST IEC 335-1		
Automatic power-on delay	adjustable (3 seconds or 180 seconds)		
Housing material	Plastic		
Stabilizer model, kVA	0,5	1	2
Overall dimensions, (HxWxD), not more than, sm	32x15x8		
Net weight, not more than, kg	3 kg	4 kg	5 kg

4. COMPLETENESS

Voltage stabilizer 1 pc.

Manual 1 pc.

Package 1 pc.

5. DEVICE AND OPERATING PRINCIPLE

The stabilizer is structurally made in a metal (plastic) housing of universal (wall/floor) execution and consists of the main parts:

- enclosures;
- control schemes;
- display schemes;
- power switches (electromechanical relays);
- power transformer with five voltage regulation taps;
- the output filter suppresses interference.

On the front wall of the stabilizer housing there is a 5-digit seven-segment indicator showing the input/output voltage, overload and extreme positions of the operating range.

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 SUNTEK 5000, 8500, 11000, 12500, 16000, 20000 VA and through the grounding contact of the mains plug in the nominal values of SUNTEK 550, 1000, 2000 VA and PR 500, 1000, 1500, 2000 VA



6. INDICATION OF SECURITY MEASURES

Attention! In working condition, a life-threatening voltage is supplied to the stabilizer from the power grid. Installation, disassembly and repair of the stabilizer should be carried out only when the power is turned off.



PROHIBITED:

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

Grounding of the stabilizer is carried out through the grounding contact of the power cord intended for connection to the network.



- operation of the stabilizer in the presence of deformation of the housing elements, which may lead to their contact with the current-carrying components of the stabilizer;
- operation of the stabilizer in case of smoke or odor characteristic of burning insulation, increased noise or vibration;
- 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




7. INSTALLATION, CONNECTION AND OPERATION PROCEDURE

A) Preparation of the stabilizer for operation. First, choose a place to install the stabilizer, it should be dry, dust-free and easily ventilated. The stabilizer itself must be carefully unpacked, familiarized with its external device using this product passport. If the stabilizer was transported at subzero temperatures, it is necessary to keep it at room temperature for at least four hours before connecting it.

This stabilizer has the possibility of both installation on a horizontal surface and vertical mounting. Which allows it to be used in the most favorable angle for the buyer.

B) Connection. At the moment of switching on, pay attention that the stabilizer is turned off – the automatic power switch is in the "Off" position and the stabilizer must be connected to the mains with grounding, otherwise the stabilizer must be grounded separately.

Attention! After switching on the automatic power switch, the output voltage indication appears after an automatic delay of 3 seconds (3 seconds or 180 seconds for PR series)	
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"Automatic delay" function is necessary so that the stabilizer can diagnose the network and enter the operating mode.

After the countdown, the output voltage indicator lights up on the scoreboard. By pressing the "input/output" button, we can get information about what the input voltage is at a given time.

The Bypass system allows you to connect the load directly from the network bypassing the stabilizer without turning it off. This function is provided only on models 3000-20000 VA, because it is in these models that the connection is provided through the terminal block.

So, at the moment of switching on, the tabs "Network" and "Bypass" should be lowered down. Next, lift up the tab "network" - the stabilizer works.

During operation, the following information may appear on the stabilizer display:

The letter "H"

The appearance of the letter "H" on the scoreboard means that the mains voltage has risen above the operating range (above 285 V) and the overvoltage protection has worked, the stabilizer has turned off the output voltage to avoid load failure. When the input voltage returns to the operating range, the output voltage will appear again on the display and the stabilizer will automatically switch to operating mode.

The letter "L"

The appearance of the letter "L" on the scoreboard means that the mains voltage has dropped below the operating range (below 120 V) and the under voltage protection has been triggered, the stabilizer has turned off the output voltage to avoid load failure. When the input voltage returns to the operating range, the output voltage will appear again on the display and the stabilizer will automatically switch to operating mode.

Letters "C-H"

The appearance of the letters "C-H" on the scoreboard means that the total power of the devices connected to the stabilizer exceeded the rated power of the stabilizer and the thermal protection was triggered. Or the stabilizer overheats due to the high ambient temperature. It is necessary to reduce the load. Then the stabilizer itself will automatically switch to operating mode.

8. 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.

9. MALFUNCTIONS AND WAYS TO ELIMINATE THEM

Malfunction	Possible cause	Method of
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	Repair at authorized service centers or at the manufacturer
There is no output voltage and at the same time there is an indication on the stabilizer display	Other malfunctions	
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.

10. 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%.

11. SEALING AND MARKING

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

WARRANTY CARD

Model

Serial number

Date of sale

Seller's stamp

References on all issues related to warranty obligations:



www.electrosheff.com