

# USER MANUAL

## Variac transformer



### **Black series**

**500, 1000, 2000,  
3000, 5000, 7000,  
10000, 15000, 20000, 30000**



### **RED series**

**500, 1000,  
2000, 5000**



### **Three-phase variac transformer**

**3000, 6000, 9000,  
15000, 20000, 30000**

**Developed in Russia  
Made in China**

## 1. Appointment

Special single-phase autotransformer, brand SUNTEK, with digital indication is designed for smooth voltage regulation under load without breaking the circuit: single-phase in a 220V 50-60Hz network, three-phase in a 380V 50-60Hz network.

### Areas of application:

- in all cases where non-standard voltage is required;
- used in industries where temperature control is required due to electricity;
- in the design of some models of voltage stabilizers;
- as an additional device to transistor recorders, machine tools;
- in scientific laboratories;
- at production facilities involved in the design and commissioning of TV receivers and other household appliances;
- when checking fuses, control relays, circuit breakers, current limiters, etc.;
- in the oil and other industries.
- in amateur radio

All models have a meter scale and a digital voltmeter reflecting the output voltage. The digital indication shows the correct output voltage regardless of the input voltage. **This equipment does not stabilize the output voltage, when the input voltage changes, the output voltage immediately changes.**

## 1. Specifications

### Variac transformers SUNTEK of the BLACK series

Model	Power (kVA)	Number of phases	Frequency (Hz)	Input voltage (V)	Output voltage range (V)	Maximum current (A)	Size (mm)
SUNTEK 500 VA	0,5	single-phase	50 / 60	220	0 - 300	2	140*150*130
SUNTEK 1000 VA	1					4	165*210*180
SUNTEK 2000 VA	2					8	190*210*180
SUNTEK 3000 VA	3					12	200*210*230
SUNTEK 5000 VA	5					20	250*250*270
SUNTEK 7000 VA	7					28	250*250*270
SUNTEK 10000 VA	10					40	400*290*250
SUNTEK 15000 VA	15					60	560*320*395
SUNTEK 20000 VA	20					80	560*320*395
SUNTEK 30000 VA	30					120	1135*320*395

## Variac transformers SUNTEK of the RED series

Model	Power (kVA)	Number of phases	Frequency (Hz)	Input voltage (V)	Output voltage range (V)	Maximum current (A)	Size (mm)
SUNTEK 500 VA RED	0,5	single-phase	50 / 60	220	0 - 300	2	140*150*130
SUNTEK 1000 VA RED	1					4	190*200*180
SUNTEK 2000 VA RED	2					8	190*200*180
SUNTEK 5000 VA RED	5					20	250*310*280

**Models 0.5-2** are equipped with an input cable for plugging into the network and a socket for connecting the load.

**Models 5** - equipped with terminals for connecting the input cable (not included) and the load cable.

**All models** are equipped with fuses that protect the variac from overload and short circuit.

## Three-phase variac transformers SUNTEK

Model	Power (kVA)	Number of phases	Frequency (Hz)	Input voltage (V)	Output voltage range (V)	Maximum current (A) per phases	Size (mm)
SUNTEK 3000 VA	3	three-phase	50 / 60	380	0 ~ 430*	4	180x250x370
SUNTEK 6000 VA	6					8	260*205*500
SUNTEK 9000 VA	9					12	290*230*520
SUNTEK 15000 VA	15					20	320*265*590
SUNTEK 20000 VA	20					26	320*265*590
SUNTEK 30000 VA	30					40	340*265*1135

\* The windings of the three-phase variac transformer models are connected according to the "star" scheme.

The phase voltage is 220 volts. Each phase is powered by a phase voltage. The line voltage is indicated as a reference value.

## Operating conditions:

- non-explosive environment that does not contain conductive and abrasive dust, aggressive vapors and gases in concentrations that destroy metals and insulation;
- ambient temperature range from -5 to +50;
- relative humidity at a temperature of 25 C, % from 60 to 80;
- atmospheric pressure, kPa from 86 to 106.5;
- protection class IP20 (leaky);
- time of continuous work no more than 6 hours;
- do not leave the switched on device unattended. You must always control the situation with the output voltage, otherwise the maximum allowed current may be exceeded and the winding may burn out.

## 2. Completeness

Variac SUNTEK 1 pcs.

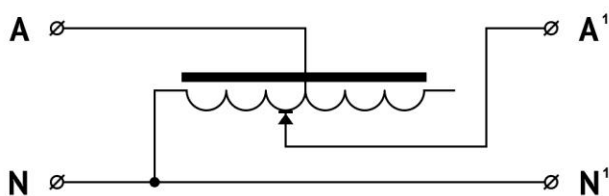
Manual 1 pcs.

Package 1 pcs.

## 3. Device and operating principle

The variac autotransformer is made on a toroidal magnetic circuit with a copper winding having an open (non-insulated) track that provides electrical contact of the load with the winding using a sliding graphite brush.

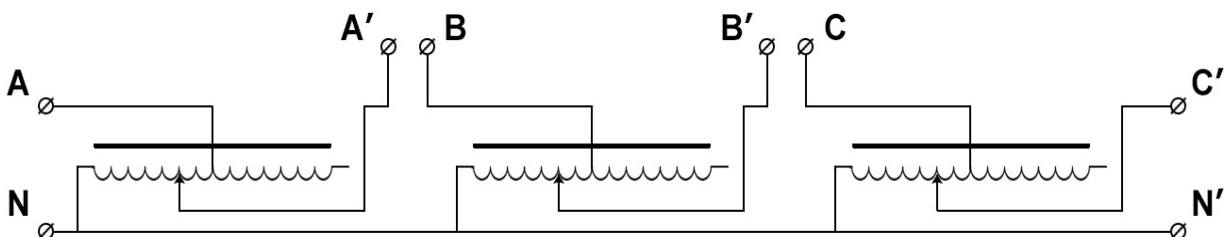
Single-phase variac transformer circuit



Input (A, N)

Output (A', N')

Three-phase variac transformer circuit



Input (A, B, C, N)

Output (A', B', C', N')

The autotransformer is placed in a metal housing that provides protection from mechanical damage, increased contamination of the uninsulated winding track and protects the user from mains voltage. All models of autotransformers are equipped with a scale for turning the knob of the regulator, as well as an indicator (voltmeter) of the output voltage.

#### **4. Warranty obligations**

- The seller guarantees that the purchased goods do not contain mechanical damage and correspond to the passport characteristics.
- Warranty period 24 months. The warranty period is calculated from the date of sale of the goods.

**An incomplete warranty card voids the buyer's warranty for the product, be careful.**

- During the warranty period, the buyer has the right to make claims against the purchased products, subject to the following conditions:
  - \* no mechanical damage to the product;
  - \* Availability of a completed warranty card.
- The seller's warranty obligations do not apply to cases of damage to the goods due to the ingress of foreign objects, insects and liquids into it, as well as non-compliance by the buyer with the operating conditions of the goods and the safety measures provided for in the product passport.

**Burnout of the copper winding of the variac is not considered a warranty case, but is considered improper operation. Except for the RED series (with fuses).**

- If the buyer discovers any malfunctions of the goods during the warranty period, he must inform the seller about this and provide the goods to the Seller for inspection.
- If the claim is justified, the seller undertakes to repair or replace the goods at his own expense.
- If the malfunction of the product is caused by a violation of its operating conditions, the presence of mechanical damage to the product or the absence of a completed warranty card from the buyer, the seller, with the consent of the buyer, has the right to repair the product for a fee.
- The seller cannot be assigned other obligations that are not provided for in these instructions.

## Rules of transportation and storage

It is allowed to transport the variac in a vertical position by any type of transport. The autotransformer must be stored in a heated, ventilated room at an air temperature from -5 to +50 C with a relative humidity of up to 80%. The storage room should be free of dust, acid and alkali vapors that cause corrosion.

### 5. Warranty card for variac SUNTEK

Variac SUNTEK \_\_\_\_\_ kVA type  
autotransformer

Serial number \_\_\_\_\_

Date of sale \_\_\_\_\_

*The absence of a correctly filled out warranty card may be the basis for refusal of warranty (free) repair!*

**References on all issues related to warranty obligations:**



[www.electrosheriff.com](http://www.electrosheriff.com)