

**SVEN**®  
YOU WANT - WE CAN

Automatic Voltage Regulator

## OPERATION MANUAL



**VR-R600**  
**VR-R1000**

[www.sven.fi](http://www.sven.fi)

***Congratulations on your purchase of Sven Automatic Voltage Regulator!***

Please read this Operation Manual before using the unit and retain this Operation Manual in a safe place for future reference.

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**1. UNPACKING**

- Unpack the device carefully. Make sure there are no accessories left in the box. Check up the device for damage; if the product was damaged during transportation, address the firm which carried out the delivery; if the product functions incorrectly, address the dealer at once.
- Shipping and transportation equipment is permitted only in the original container.
- Does not require special conditions for realization.
- Dispose of in accordance with regulations for the disposal of household and computer equipment.

*Technical support is on [www.sven.fi](http://www.sven.fi)*

## Operation Manual

# VR-R600 VR-R1000

### 2. PACKAGE CONTENTS

- Automatic Voltage Regulator — 1 pc
- Operation Manual — 1 pc
- Warranty card — 1 pc

### 3. SAFETY PRECAUTIONS

- When the input voltage is higher than 290V, failure of the AVR is possible.
  - Do not operate the AVR in the environment with temperatures other than allowed in Technical Specifications.
  - The case heats up during operation. Operate the AVR in the environment with good air convection only.
  - The socket for connection should be located close to the device and be easily accessible.
  - In case of emergency, switch off the AVR and unplug the power cord.
  - Do not open the device or make repairs by yourself.
  - Do not connect household appliances with power load higher than allowed.
- ⚠ Connection of electric heating devices is forbidden.



**Caution! High voltage inside! To avoid the risk of electric shock do not open or touch elements inside.**

### 4. TECHNICAL DESCRIPTION

VR-R600 and VR-R1000 - these are the entry level models of the range of stabilizers (AVR) Sven, that protect any electronic equipment from high or low voltage, pulse interference and dangerous high voltage. Maximum power capacity of VR-R600 and VR-R1000 is respectively 300 watts / 500 watts.

Automatic Voltage Regulators are designed for the operation of electrical appliances in regions with unstable voltage. Modern electronic equipment capacity has the minimum required margin of resistance to voltage instability network settings, but constant work in conditions of low or high line voltage significantly reduces the life of any consumer electronics.

Surge VR-R600 and VR-R1000 ensure the optimal mode of operation of your equipment.

#### Special features

- Microprocessor control
- Wide input voltage range
- Improved accuracy of the output voltage stabilization
- Consumer appliances protection against the high and low voltage
- Protection of AVR against short circuit and overload
- Thermal protection of autotransformer
- Built-in surge protector

- LED indication of operating modes
- Combined with switch automatic fuse

## 5. INSTALLATION AND OPERATION GUIDE

**Attention! Before connecting the regulator, make sure that all consuming devices connected to it are off, and stabilizer switch is set to «OFF» position.**

**Attention! When choosing an AVR, it is necessary to consider that reduction of input voltage increases value of input current, which means that maximum power of AVR is reduced too! Such dependence is shown in the graph (Fig.5).**

**Note. Adhere strictly to such dependence. If the condition stated above is not adhered to, warranty servicing becomes void!**

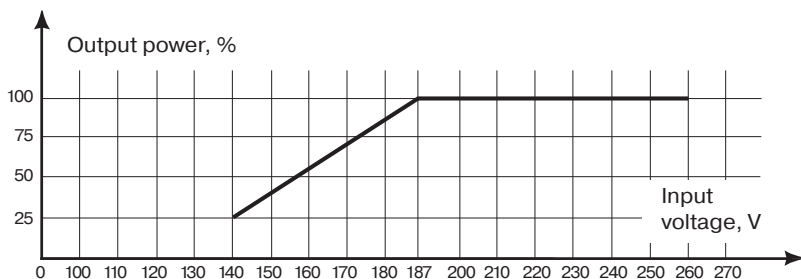


Fig. 5.

- Before installing the AVR, please make sure that total power of all consumers is lower than AVR power. Besides, take into account the starting load and power factor of consumers, it is necessary to apply power margin factor of 1.2–1.5; it should be 1.5–2 for such equipment as air conditioners, fridges, etc.
- Connect the necessary equipment to the power outlet (s) of the stabilizer.
- Connect the regulator to the power network of 230 V.
- Turn on the stabilizer. When the built-in LED lights up the key, and LED light up: for a short period to test, «Стабилизатор» and «Перегрузка», constantly, «Сеть».
- When the self-test is complete LED «Перегрузка» will go out and voltage connection to the output receptacles will happen. If the LED «Перегрузка» at the end of the test did not go out, it is prohibited to operate the regulator to eliminate the problem.
- «Стабилизатор» LED will light when the regulator to increase or decrease in the input voltage.
- In case of overload or short circuit the thermal fuse is ready installed on the rear wall is triggered. Turn on the stabilizer after removing the cause of the overload by pressing the power button.
- When voltage input is more than 280 V or below 150 V regulator will disconnect the load. «Перегрузка» LED will light up.
- «Перегрузка» indicator will light up in case of overheating auto-transformer, protection will work. The load deenergises. After cooling down auto-transformer load power is restored automatically.

## 6. TROUBLESHOOTING

Problem	Cause	Solution
The stabilizer does not turn on voltage.	<ol style="list-style-type: none"> <li>1. Switch is off.</li> <li>2. There is no voltage in the mains socket.</li> <li>3. Excessive load is connected. Triggering of protection fuse.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn on the switch.</li> <li>2. Make sure there is input voltage.</li> <li>3. Disconnect a part of load. Turn on the protective fuse.</li> </ol>
Stabilizer turned on wherein the light does not go out «Перегрузка» and there is no output voltage.	<ol style="list-style-type: none"> <li>1. Test curcuit crash.</li> <li>2. Overheating of the autotransformer.</li> </ol>	<ol style="list-style-type: none"> <li>1. Switch the AVR off and on again. If the problem is not solved, address a service center.</li> <li>2. Wait until the product cools down.</li> </ol>
Voltage regulator keeps clicking with constant blinking of «Стабилизатор» LED.	Input voltage is very unstable.	It is normal. The AVR is regulating the output voltage.
Stabilizer disabled load. «Перегрузка» and «Стабилизация» indicators are on.	The input voltage is too low / high.	When the input voltage reaches 150-280 V, the AVR will resume its operation.

If none of the above can solve the problem, please seek professional advice at your nearest service center. Never attempt to repair the product yourself.

## 7. TECHNICAL SPECIFICATIONS

Model		
Parameter	VR-R600	VR-R1000
Load carrying capacity, W	300	500
Fuse, A	5	8
Input voltage, V	~150 – 280±3%	
Input frequency, Hz	50	
Output voltage, V	~230 (-14/+10%)	
Output frequency, Hz	50	
Max. suppressed energy of high-voltage pulses, J.	≤320	
Maximum time withstand interference current, A	10,000/6,500	
Output socket, pc	2 × CEE7/4	2 × CEE7/4 + 1 × IEC 320
Input plug, pc	1 × CEE7/7	
Indicators	power network, overload, stabilization mode	
Protection	against high/low voltage, high-voltage pulse, short circuit and overload, built-in thermal protection	
Operating environment	0-40°C, 10-90% humidity, non-condensing	
Dimensions, mm	118 × 112 × 106	124 × 124 × 119

**Notes:**

- **Technical specifications given in this table are supplemental information and can not lead to legal claims.**
- **Technical specifications are subject to change without notice due to improvement of SVEN products.**

## Automatic Voltage Regulator

**SVEN**®  
YOU WANT – WE CAN



Models: **VR-R600, VR-R1000**

Импортер в России: ООО «РЕГАРД», 109052,

РФ, г. Москва, ул. Нижегородская, д. 86, корп. Б.

Уполномоченная организация в России: ООО «РТ-Ф»,

105082, г. Москва, ул. Фридриха Энгельса, д. 75, стр. 5.

Условия гарантийного обслуживания смотрите  
в гарантийном талоне или на сайте [www.sven.fi](http://www.sven.fi).

Гарантийный срок: 24 мес.

Срок службы: 5 лет.

Производитель: «СВЕН ПТЕ. Лимитед», 176 Джу Чиат Роуд,

№ 02-02, Сингапур, 427447. Произведено под контролем

«Свен Скандинавия Лимитед», 48310, Финляндия, Котка,

Котлахдентие, 15. Сделано в Китае.

Manufacturer: SVEN PTE. LTD., 176 Joo Chiat Road,  
№ 02-02, Singapore, 427447. Produced under the control  
of Oy Sven Scandinavia Ltd. 15, Kotolahdentie, Kotka,  
Finland, 48310. Made in China.

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**VR-R600**  
**VR-R1000**