

SVEN[®]

Voltage Relay

USER'S MANUAL



RN-15

www.sven.fi

Congratulations on your purchase of the SVEN voltage relay!

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Technical support is on www.sven.fi.

1. PRECAUTIONS

- Before using the device, please carefully read the following User's Manual and save it for the whole operation period.
- Before connecting the device to the power supply network, keep it within two hours in operating conditions.
- Do not use abrasive materials or organic compounds (alcohol, petrol, solvents etc.) to clean the device.
- It is prohibited to open and repair the device on your own.
- It is prohibited to open and repair any protected equipment, if it is connected to the device socket.
- It is prohibited to use the device with mechanical damages of its case.
- It is prohibited to use the device in high humidity conditions.
- Avoid ingress of water into the device.
- Does not require special conditions for realization.
- Dispose of in accordance with regulations for the disposal of household and computer equipment.
- 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.

Attention

- ***When the current consumption exceeds 15A, a protective fuse can be triggered inside the product. Replacement of the protective fuse is possible in conditions of SC.***
- ***The device is not designed for power-cut while short-circuited.***

2. PACKAGE CONTENTS

- Voltage relay – 1 pc
- User's Manual – 1 pc
- Warranty card – 1 pc

3. APPLICATION

RN-15 voltage relay is designed to protect household appliances (conditioners, washing machines, televisions, etc.) connected to it against inadmissible supply voltage deflections and impulse noises in the power supply network.

4. FEATURES

- Protection of connected devices against high/low overvoltage in the power supply network
- Protecting from high-frequency and impulsive noises
- Delay on to protect against repeated failures
- Fixed protection parameters for operation simplicity
- The possibility of manual power-on of the load, before the expiration of the pause
- Voltage relay status indication
- Protective shutters in the output socket
- Protective grounding contacts, fusible safety device 15A

5. TECHNICAL DESCRIPTION

RN-15 voltage relay presents a device with an electronic circuit with microprocessor control assembled in the case with a wall plug and socket. RN-15 voltage relay has fixed settings and does not need programming. RN-15 voltage relay provides the power supply disconnection of appliances connected to it, if the power supply voltage exceeds specified values, and automatically recovers the power supply within the specified time after voltage normalization, in such a manner, it protects the appliances connected to the power supply network against voltage swings dangerous for them. At that indicators of RN-15 display the voltage relay status.

Design description

- ① Indicator "low" entrance voltage range
- ② Indicator "norm" entrance voltage range
- ③ Indicator "high" entrance voltage range
- ④ ON: button of a force connecting of loading
- ⑤ Wall plug to connect the voltage relay to 230 V / 50 Hz power supply network socket
- ⑥ Protective shutters
- ⑦ Grounding contacts

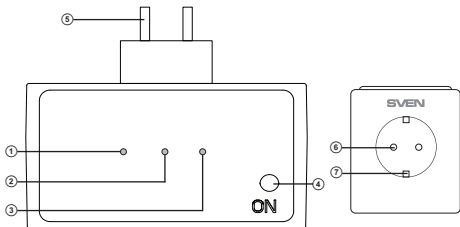


Fig. 1

6. CONNECTION

RN-15 voltage relay is connected to a standard socket of 230 V / 50 Hz power supply network. The socket must be rated at the current 16 A. Protected devices are connected to the output socket of RN-15.

The voltage relay is designed for operation indoor only. The device operation is inadmissible in places with high humidity and where ingress of liquid on its case is possible. Ambient temperature during the voltage relay operation must be in the range +10 to +35 °C.

7. OPERATION

The voltage relay has the following operation modes:

- normal operation;
- protection mode;
- turn-on delay mode.

The voltage relay is in normal operation, when the active voltage of the power supply network is within 199–252 V limit and the turn-on delay time is over. In this mode the protected equipment connected to the relay is de-energized, the indicator ② lights continuously.

If the voltage exceeds the set thresholds, the relay enters the protection mode. In this mode the equipment connected to the relay is de-energized and one of protection indicators starts to light: ③ when high voltage protection is actuated or ① when low voltage protection is actuated. The voltage relay will be in this mode as long as the supply voltage attains a value within 204–244 V ± 2% range.

The relay enters the turn-on delay mode after its connection to the power supply network or when it leaves the protection mode. In this mode the equipment connected to the relay remains de-energized till the end of delay time, and the indicator ② blinks during this time. The turn-on delay value for RN-15 voltage relay is 180 sec.

Force transition from the turn-on delay mode to the operation mode can be done by pressing the button ④.

8. TECHNICAL SPECIFICATIONS

Parameters	Value
Measured voltage range, V / Hz	~100-280/50
Maximum load current, A	15.0
Maximum permissible load, kW	max. 3,3
Protection actuation time	≤ 0,3 sec
The maximum suppressed energy of high-voltage pulses, J	≤ 125
The maximum absorbed impulse noise current, A	4500
Operation threshold to decrease power supply voltage, V	199 ± 2%
Operation threshold to increase power supply voltage, V	252 ± 2%
Output socket	1 × CEE 7/4
Dimensions, mm	72 × 86 × 39 (max 78)
Weight, kg	0.115
Color	white

Notes:

- **Technical specifications given in this table are supplemental information and cannot give occasion to claims.**
- **Technical specifications and package contents are subject to change without notice due to the improvement of SVEN production.**

Voltage Relay

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