REAL-EL

OPERATION MANUAL

AUTOMATIC VOLTAGE REGULATOR

STAB WM–5000
STAB WM–10000

Congratulations on your purchase of the REAL-EL products!

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

CONTENTS

1. BUYER RECOMMENDATIONS

• 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.
• Check up the package contents and availability of the warranty card. Make sure the warranty card has a shop stamp, a legible signature or the seller's stamp and purchase date, and the goods number corresponds to that in the warranty card. Remember that at the loss of warranty card or lack of coincidence of numbers you are deprived the right on warranty repair
• Do not switch on the product immediately after you bring it into a room from environment with negative temperature! After unpacking, the product should be kept in conditions of room temperature for at least 4 hours.

2. FEATURES

• IC control
• Delay function
• Wall mounting
• Wide range input voltage
• Overload and short circuit protection

3. PACKAGE CONTENTS

• Automatic voltage regulator – 1 pc
• Operation Manual – 1 pc
• Warranty card – 1 pc

4. SAFETY MEASURES AND PRECAUTIONS

Before using this device, please read the safety rules carefully:

• It is strongly forbidden to open the cover of the device, there is high voltage inside. If some problems occur, please read the operation manual carefully and address an authorized service center. For the list of authorized service centers please go to ***www.real-el.com***.

• Do not let liquid get inside the device, it can cause short circuit or electric shock.

• In case there are signs of improper operation of the device (sparkling, unusual smells, etc.), unplug the device from the mains immediately and address your nearest authorized service center.

• It is forbidden to connect the automatic voltage regulator to devices with power consumption higher than its maximum output power. It can cause breakdown of the device.

• This device is not intended for use by persons (including children) with reduced physical, mental capabilities, lack of experience or knowledge; use of the device by such persons is permitted only under the condition of supervision or instructions for the use of household appliances by persons responsible for their safety.

• Children should be supervised by authorized personnel to exclude their playing with the appliance.

• Do not use the appliance with a damaged power cord or plug, or after handling liquids, falling or any other damage. To avoid electric shock, do not attempt to disassemble or repair the appliance yourself. If necessary, contact a specialized service center.

WARNING!
High voltage inside which can cause electric shock.

It is strongly forbidden to operate the device in the following conditions:

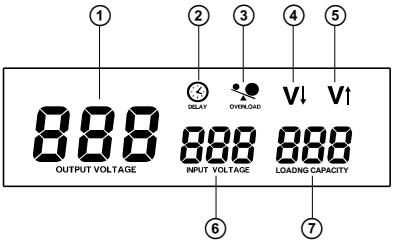
– in dusty environment or environment containing highly inflammable gas;
– at temperature higher than 40 °C or lower than 0 °C;
– at humidity level higher than 90 %;
– in direct sunlight or next to heating elements;
– in vibration areas;
– outdoors.

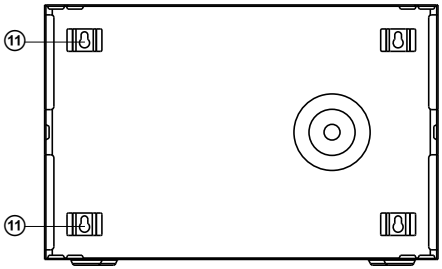
• In case of fire use only powder fire extinguisher, as water can cause electric shock.

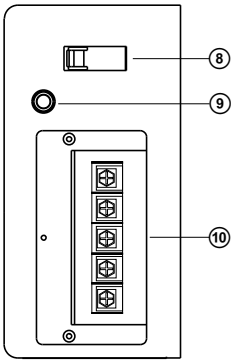
• The automatic voltage regulator should be installed in proximity to power supply, then it will be easier to unplug the device if necessary.

The grounding cable should be selected according to the current. All devices connected to the AVR must be grounded. Devices without grounding or with untested grounding are dangerous for the user and may cause malfunction of the electronic control board. Using the wrong diameter grounding cable can be dangerous for users and device.

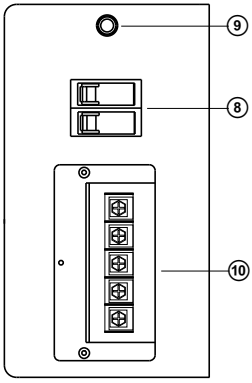
Connecting to generator:
The output power of the generator must be higher than the rated power of the AVR. The frequency of the generator should be in the range of 45 - 65 Hz, and the form of the voltage at the output should be Pure sine wave. If these conditions are not met, the stabilizer and generator may not work correctly.







STAB WM-5000



STAB WM-10000

5. TECHNICAL DESCRIPTION

① Output voltage indicator
② Delay activation indicator
③ Overload indicator
④ Under voltage protection
⑤ Over voltage protection
⑥ Indicator of input voltage
⑦ Loading capacity
⑧ AVR switch with built-in fuse
⑨ Delay switch 6/180 sec
⑩ Input/output connection terminal
⑪ Wall mounting holes

6. INSTALLATION

Warning! Installation and connection must be done by qualified specialists!
Before installing the AVR, make sure that all fixation elements are firmly fixed in the wall!

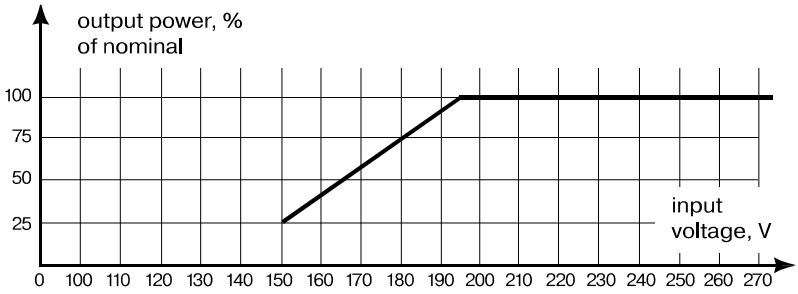
• For reliable attachment to the wall, it is necessary to determine the type of material (wood, brick, concrete, plasterboard, etc.) of the wall in order to select the appropriate fasteners.
• The place of installation of the AVR should be close to the mains outlet.
• Install the fastening elements (purchased separately) in the wall, taking into account the placement of the holes on the back wall of the stabilizer.
• Install the stabilizer on the fasteners.

7. CONNECTION AND OPERATION

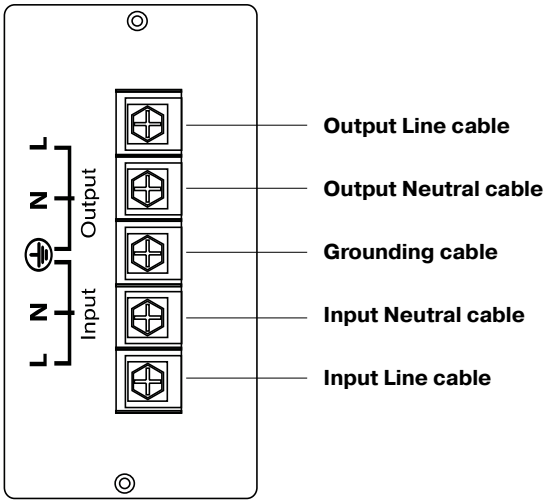
Warning! Before connecting the AVR, make sure that all consumer devices that are connected to it are turned off.

• Before connecting the stabilizer, make sure that the total power of all consumers is lower than the power of the stabilizer. Also, taking into account starting loads and the power factor of consumers, it is necessary to take a power reserve with a factor of 1.2–1.5, and for such devices as air conditioners, refrigerators and other electric motors — 1.5–2 times.

WARNING! When choosing AVR, you need to know that when the input voltage decreases, the input current increases, and therefore the maximum power of the automatic voltage regulator decreases! This dependence is schematically shown in the graph below:



Note. In the process of selection and further operation, it is necessary to clearly observe this dependence. In case of non-compliance with the specified condition, the right to warranty repair is lost!



Make sure all connected devices are off, set the AVR power switch to the "OFF" position. Connect the cables as shown in the connecting figure.

• If the mains voltage exceeds the stabilization limits (lower threshold 150 V, upper threshold 270 V) or in case of overload, the AVR automatically switches off the load.

WARNING! If the AVR is not used for a long time, its recommended to disconnect the AVR and all connected devices from the mains.

8. "PAUSE" FUNCTION

• This function is intended to protect connected equipment or devices. This is especially important for consumer devices with electric motors or compressors. After the power supply is restored, the AVR will turn on after 6 or 180 seconds - it depends on the position of the "DELAY" button.

9. FUNCTION OF PROTECTION AGAINST INCREASED AND REDUCED INPUT VOLTAGE, OVERLOAD AND OVERHEATING

• The AVR is equipped with a protection function against increased and decreased input voltage and overload. If the mains voltage deviates above 270 V or below 150 V, the AVR automatically turns off the load. After the input voltage returns to the range of 150-270 V, the AVR automatically resumes operation.

• In case of overload or short circuit, the circuit breaker will trip. After eliminating the cause of overload or short circuit, press the switch button (RESET position) and the AVR will resume operation.

10. NOT A FAULT

Problem	Cause	Explanation
The AVR often clicks.	Relay switching	The phenomenon is normal. The AVR regulates the output voltage.
Input and output voltage indicators are the same within ~230 V ± 10% (207-253V)	The input voltage is unstable	Not a fault. According to standard EN 50160:2010, the voltage in the mains should be 230V ±10%, where 10% is the maximum permissible deviation from the standard value! All connected household devices work normally.

11. TROUBLESHOOTING

Problem	Cause	Solution
The AVR does not turn on.	1. The switch is not turned on. 2. There is no voltage in the power outlet. 3. The automatic fuse has tripped. 4. An overload is connected.	1. Press the power button again. 2. Make sure there is voltage in mains. 3. Turn on the automatic fuse and turn on the AVR again. 4. Disconnect part of the load.
The AVR turns on, but there is no output. Voltage, red light is active. The AVR turned off the load.	The input voltage exceeds the range of possible stabilization of 150-270 V. The network has a critical voltage value.	After normalization of the input voltage, the AVR will turn on automatically.

If none of the above methods solves the problem, please contact the nearest service center for professional advice. Never repair device independently.

12. TECHNICAL SPECIFICATIONS

Model	STAB WM-5000	STAB WM-10000
Maximum load	5000 VA \ 4000 W	10000 VA \ 8000 W
Input voltage	~150 – 270 V \ 50 Hz	~150 – 270 V \ 50 Hz
Output voltage	~230 V ± 8 % \ 50 Hz	~230 V ± 8 % \ 50 Hz
Switch time	⩽10 ms	⩽10 ms
Protection against short circuit and overload	auto switch off	auto switch off
Power-on delay	6/180 sec	6/180 sec
Working temperature	0 – 40 °C	0 – 40 °C
Relative humidity	before 90 % (without condensation)	before 90 % (without condensation)
Dimensions	380 x 234 x 105 mm	440 x 289 x 145 mm
Weight	8.92 kg	20 kg

Notes:

- *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 TM REAL-EL production.*

Models: **STAB WM-500, STAB WM-10000**

Manufacturer: ENEL GROUP OU, Katusepapi tn 6, Lasnamäe linnaosa, Tallinn, Harju maakond, 11412, Estonia. Made in China.