

Qoltec®



USER MANUAL

AUTOMATIC VOLTAGE STABILISER

2000VA/1200W

3000VA/1800W

Model: 50450, 50449

Introduction

Thank you for choosing the QOLTEC Automatic Voltage Stabiliser. The stabiliser protects connected household appliances and office electronic equipment by increasing or decreasing the output voltage to match the operating level of the connected devices, ensuring their trouble-free operation. It is equipped with a short-circuit protection function, which protects connected devices from damage in the event of short circuits or overloads on the power supply line.

This manual is a guide to the installation and use of the stabiliser. It contains important information regarding safety during operation and correct installation. In the event of any problems with the stabiliser, please read this manual before contacting the service department.

Important safety instructions

1. To avoid damage to the device, transport it only in its original packaging.
2. Sudden changes in temperature – e.g. moving the device from a cold environment into a warm room – may cause condensation to form inside the housing. In such cases, the stabiliser must be completely dried out before switching it on. It is recommended to wait at least 2 hours before starting it up.
3. Once dry, ensure that the ambient conditions comply with the requirements specified in the ‘Environment’ section of the technical specifications table before connecting the device to the mains supply.
4. The earthing cable should be selected according to the current-carrying capacity. All devices connected to the stabiliser must be earthed using a suitable protective conductor. Failure to earth the device or connecting devices without approved earthing poses a risk to the user’s health and significantly increases the risk of damage to the electronic circuits.
5. When installing the stabiliser, the use of cables with unsuitable technical specifications may be dangerous both to the user and to the device itself.
6. Position all cables so that they do not pose a tripping hazard or risk being stepped on. Before connecting the stabiliser to the mains supply, carefully read all the instructions and warnings contained in the ‘Installation’ section of this manual.
7. Do not insert any foreign objects, such as paper clips, nails or other metal items, into the stabiliser.

8. In the event of an emergency (such as damage to the casing, front panel or power cables, liquid spillage or foreign objects entering the stabiliser), switch off the device immediately, disconnect it from the mains and contact an authorised service centre.
9. Do not connect devices to the stabiliser whose power requirements exceed its permissible parameters.
10. In the event of excessive input voltage distortion or excessive resistance, the stabiliser may not function correctly.
11. Keep the original packaging for possible servicing or transport.
12. The wiring should be securely fastened to prevent it from becoming loose and the contacts from oxidising.

Warning of electric shock / dangerous voltage (Icon 1 – Figure 1 in the appendix to the manual)

Warnings and other recommendations (Icon 2 – Figure 2 in the appendix to the manual)

CAUTION: The stabiliser may only be repaired by authorised technical service personnel. Any attempt by the user to open or repair the unit themselves may be dangerous.

Intended for installation in a controlled environment:

- a. The operating environment must comply with the requirements set out in the technical specifications.
- b. Do not install or use the stabiliser in or near water.
- c. Do not place the stabiliser on an unstable trolley, stand or table.
- d. Do not expose the stabiliser to direct sunlight or place it near heat sources.
- e. Do not place the stabiliser's power cable in locations where it may be damaged by heavy objects.

Special precautions:

When the stabiliser is powered by a generator:

- a. The generator's output power must be higher than the stabiliser's rated power – otherwise, both the stabiliser and the generator may not function correctly.

b. The generator's output frequency must be within the range of 45 Hz to 65 Hz, and the voltage waveform must be sinusoidal – otherwise, the operation of the stabiliser and the generator may be disrupted.

Notes:

1. The automatic voltage stabiliser is a single-phase device.
2. Each stabiliser has been 100% tested prior to dispatch. Upon unpacking, please check that the stabiliser has not been damaged. Ensure that the stabiliser housing is not damaged. If you notice any damage, please contact an authorised dealer.

Description of the stabiliser

To ensure correct operation and full use of the stabiliser's functions, please familiarise yourself with its components and operating principles, as shown in the diagrams below.

Stabiliser side panel

Model: 50449 (Figure 3 in the appendix to the manual)

Model: 50450 (Figure 4 in the appendix to the manual)

Front panel of the stabiliser – Dual digital display

Models: 50449, 50450 (Figures 5 and 6 in the appendix to the manual)

1. Input voltage display
2. Output voltage display
3. Delay button
4. Green LED (indicates 'POWER ON')
5. Yellow LED (indicates 'DELAY')
6. Red LED (indicates 'PROTECTION')

Switching on the stabiliser

1. Move the power switch to the "ON" position.

In the event of a power failure:

1. Switch the stabiliser and all connected devices to the 'OFF' position.
2. Once power has been restored, repeat the above steps.

3. Switch the regulator to the “OFF” position, then reduce the load by disconnecting some of the devices.
4. Wait a few minutes, then switch the power to the “ON” position.

LED indicators

The stabiliser is equipped with three LEDs:

Green LED – when lit, this indicates that the power is on and the input and output voltages are correct; the stabiliser is operating correctly.

Yellow LED – when lit and flashing, this indicates that the stabiliser is in delay mode; the voltage output will be delayed.

Red LED – when lit and flashing, this indicates that the stabiliser is in protection mode.

Start-up delay function

The product is equipped with a delay function to protect devices with compressors, which should not be switched on immediately after being switched off. The default delay time is 6 seconds. This function is essential for devices with motors and compressors to prevent damage caused by frequent switching on and off.

To activate delay mode, press the DELAY button on the front panel. The delay LED will light up and ‘ZERO’ will appear on the display. The delay time is 6 or 180 seconds and can be changed by pressing the delay button again.

Once the delay time has elapsed, the LED will go out and the AC output voltage will appear on the display.

Overvoltage/undervoltage protection

The stabiliser is equipped with a special circuit to protect against excessively high or low output voltage.

The unique circuit design is intended to protect connected devices in the event that the output voltage exceeds the permissible range.

If the output voltage is above or below the normal range, the power supply will be automatically cut off.

Once the supply voltage returns to normal, the stabiliser will automatically resume the output supply.

Overload and short-circuit protection

1. The stabiliser is equipped with a special overload and short-circuit protection circuit.
2. In the event of an overload, the current transformer detects excessive current draw and sends a signal to the PCB, which automatically disconnects the stabiliser.
3. In the event of a short circuit, a miniature circuit breaker located at the rear of the unit will trip, cutting off the input power.
4. Check that the stabiliser is not connected to an excessive load. If so, disconnect any excess devices so as not to exceed the rated power, and then replace the fuse/circuit breaker.
5. If the above steps do not resolve the issue, a short circuit has likely occurred — in which case, contact an authorised service centre.

WARNING

1. Avoid overloading! Do not use the stabiliser above its maximum output power.

When connecting a device with a built-in motor or compressor, bear in mind that the starting current of such devices is usually several times higher than the rated power stated on the label. Ensure that the total starting current of all connected devices does not exceed the stabiliser's maximum output power. For colour televisions, assume a current equal to twice their rated power.

2. Ensure that the stabiliser has the same output voltage and frequency as the devices connected to it, and that the mains voltage falls within the stabiliser's permissible input voltage range.
3. Only place the stabiliser in a location that:
 - is well ventilated,
 - is not exposed to direct sunlight or heat sources,
 - is out of reach of children,
 - is free from water, moisture, oil or grease,
 - does not contain flammable substances,

- is stable and there is no risk of the device falling over.
- 4. If the power cord is damaged, it must be replaced only by an authorised service centre or a qualified person to avoid any risk.
(Icons – Figure 7 in the appendix to the manual)

Technical specifications

Input voltage range	125–270 V
Input frequency	50Hz–60Hz
AC output voltage	220V–240V
Output frequency	Synchronisation with input frequency
Output voltage accuracy	±10%
Distortion	<3%
Efficiency	>95%
Delay time	6 seconds/180 seconds
Protections	Against overvoltage, undervoltage, overload, overheating, short circuit
Noise	<65dB (at a distance of 1m)
IP	IP20
Operating temperature	-10°C to 40°C
Operating humidity	Max 95% non-condensing
Storage temperature	-20°C to 40°C

Service and repair

Please note that incorrect repairs may lead to serious damage to the device and even pose a risk to the user. If you experience problems with the device and do not have the experience or knowledge to repair it yourself, it is advisable to seek assistance from a specialist or technical support. You may be eligible for warranty repairs if the fault is due to a manufacturing defect. Warranty repairs may involve repairing the damaged component, replacing parts with new ones, or replacing the entire product if repair is not possible.

Maintenance and cleaning

- 1) Switch off the power before cleaning.
- 2) Wipe the device with a dry cloth. Do not use chemicals or water.

Disposal

Avoid disposing of the device in ordinary rubbish bins to prevent environmental pollution. Take the device to appropriate electronic waste collection points or to shops that recycle electronic equipment.

Warranty

The product is covered by a 24-month manufacturer's warranty.

Attachment 1

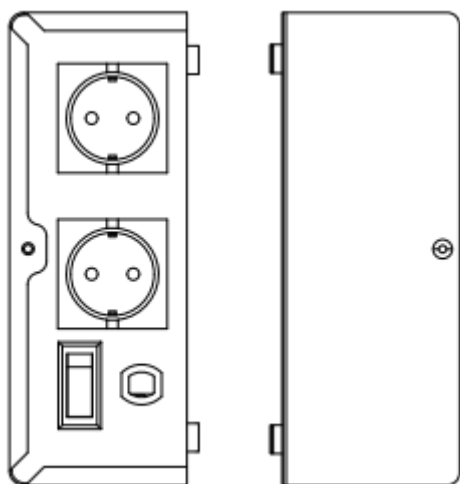
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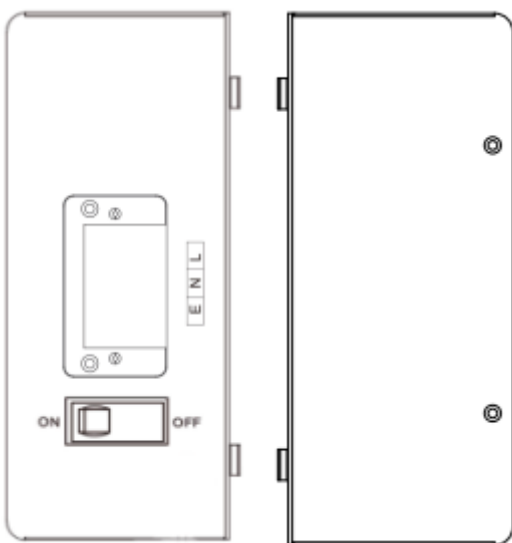
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