

Operating instructions for the backup power supply Avansa

Thank you for purchasing this power supply and for showing your trust in the AVANSA® product. Please read the installation and safe usage instructions carefully.

This product belongs to the group of professional automatic backup power supplies (UPS) specifically designed and manufactured for uninterrupted power supply of solid fuel boilers in the event of a power failure. In the event of a power failure, the backup power supply (UPS) provides immediate energy from the battery, so the water pump will remain running and the boiler will be safely cooled.

WARNING! This is only a safety device that is used only in the event of a power outage.

This system can be used to ensure the operation of other electrical appliances that require stability and stable parameters of electrical energy. This product should not be used as a converter (with unlimited operation from a 12 V battery).

The main feature of this device is the input power curve during battery operation. The curve is a clean sine wave, identical to the main power source from your home. When the main power from your home is on, the backup power supply will charge the battery and ensure a long battery life. The backup power supply (UPS) works only with an external 12V battery (for model 1050 W with a 24V battery). Only lead-acid batteries should be used, as the backup power supply is designed for charging this type of battery. Using gel batteries may cause explosions.

WARNING! Be careful when handling the battery. When connecting the backup power supply, remove all metal objects (e.g. bracelets, chains, watches, rings, etc.). This is because a short circuit of the electric current may occur, which could lead to melting of metal materials on the consumer's body. When connecting the battery, maintain polarity: the red (+positive) cable will be connected to the battery terminal + and the black (-negative) cable will be connected to the terminal - connector. Metal connectors are used to connect the cable to the battery poles. Tighten the connector using a wrench to ensure a secure contact. Also follow all rules from the battery user manual.

Install the backup power supply (UPS) in a dry place, without moisture, out of reach of water or snow. The installation location of the backup power supply (UPS) must be sufficiently large to not hinder the cooling system of the backup power supply. Furthermore, this location should be free of dust or coal dust, which could block the fan of the backup power supply. The installation location should be well ventilated to prevent system overheating. To avoid electric shock, check that all cables are in good condition and without exposed parts. Operation of the backup power supply (UPS) can cause sparking. The backup power supply should not be installed in flammable environments.

WARNING! The backup power supply (UPS) only works when connected to an external battery. It should not be used without connecting a battery. After connecting the battery, plug the main power cable into a socket (230V, 50 Hz) with grounding, from the home main network. On the back of the power supply, connect the device you want to operate during a power outage. Follow the following order: connect the battery, connect the main power, and then connect the consumer (device) to the backup power supply (UPS). To turn on the power supply, press and hold the power button (ON/OFF) for 4 seconds.

System operation begins with automatic detection of the battery voltage state. If the battery voltage drops below 10.8V, it can be assumed that the battery is damaged and cannot be started. If the battery is in good condition and the voltage is low only because the battery has not been charged for

a longer period, please charge the battery with a special charger until the voltage rises to 10.8V. Normal operation and battery charge level can be monitored on the color LCD display.

If the main power is not available or its parameters are not within the normal range, the backup power supply (UPS) automatically switches to the battery. The switch of the backup power supply (UPS) to the battery is displayed on the backup power supply (UPS) display. The device (UPS) also indicates the switch of the backup power supply (UPS) to the battery with an acoustic signal.

When the battery voltage drops below the minimum value (battery is discharged), the backup power supply (UPS) increases the frequency of the warning sound and disconnects the power supply.

If the device connected to the backup power supply (UPS) exceeds the maximum power by 110 %, the backup power supply (UPS) will start emitting an intermittent acoustic signal and will automatically shut down. For inductive devices (e.g. water pumps and electric motors), it is recommended to use the device up to 50% of the maximum power from the backup power supply (UPS), because inductive devices may require double the power value at start-up.

WARNING! Danger! Do not touch the battery terminals during operation.

TO stop the backup power supply (UPS), hold the ON/OFF button for 4 seconds. The backup power supply will then emit an acoustic signal and stop.

WARNING! This is only a safety device used only during a power outage. Please do not leave this device near fuel when using it.

Main functions:

If the backup power supply (UPS) has a cooling fan, it is automatically controlled according to the needs of the backup power supply (UPS). Do not worry if you hear the fan running, even if the battery is fully charged or there is no electricity consumption. The fan automatically turns on and off according to the needs of the backup power supply (UPS). □

Grounded: The backup power supply (UPS) stops in case of battery leakage current. If the battery is discharged to 10.8V, the backup power supply disconnects the power supply to prevent battery damage. Fast acoustic alarm indicates: - Overload protection: In case the load of the backup power supply (UPS) exceeds 110% of the rated power, the backup power supply (UPS) stops to prevent destruction. □

Short circuit protection: The backup power supply (UPS) stops in case of a short circuit. – Voltage regulator (AVR) ensures constant voltage for devices within the given range. Battery activation: the system switches to the battery and provides uninterrupted power supply for the device. – Bypass function:

In case the electric motor requires more force to start, it is necessary to compensate for the difference. – Microprocessor: all functions are supported by a high-frequency microprocessor (32 bit). □

Automation: as long as the main network switch of suitable parameters is not suitable, the backup power supply automatically switches to the battery. – Conversion for starting tasks: in some cases, a higher starting power is required than the rated power of the backup power supply (UPS). In this case, the backup power supply (UPS) solves this problem by supplying 110% of its capacity. After delivering the capacity, it turns off.

High charging current: the initial charging current is about 10A. Charges the battery faster than standard chargers. □

Battery preservation in standby mode: after the battery is fully charged, the backup power supply (UPS) keeps the battery charged. To achieve optimal results, the battery must have a capacity within the following range: 50 Ah -150 Ah. Do not use a battery with a capacity less than 50Ah, as the initial charging current of the backup power supply (UPS) (up to 10A) may reduce the battery life. For the backup power supply (UPS) 1050W/1500, a 24V battery or two 12V batteries must be used. If you use two 12V batteries, they should be of the same age and capacity.

The values below are theoretical for new, fully charged, and very high-quality batteries.

For consumption of 100W:

the backup power supply (UPS) with a 65 Ah battery will operate for 3.5 hours. □
the backup power supply (UPS) with a 120 Ah battery will operate for 6.5 hours. □
the backup power supply (UPS) with a 150 Ah battery will operate for 8 hours. □

For consumption of 200W:

the backup power supply (UPS) with a 65 Ah battery will operate for 2 hours. □
the backup power supply (UPS) with a 120 Ah battery will operate for 3 hours. □
the backup power supply (UPS) with a 150 Ah battery will operate for 4 hours. □

For consumption of 300W:

the backup power supply (UPS) with a 65 Ah battery will operate for 1.5 hours. □
the backup power supply (UPS) with a 120 Ah battery will operate for 2.5 hours. □
the backup power supply (UPS) with a 150 Ah battery will operate for 3 hours. □

Maximum capacity	500VA 800VA 1000VA 1500VA
Maximum rated power	300W 500W 700W 1050W
Main input power	150 – 270 VAC
Input frequency	45 – 65 Hz
Output power	207 – 241 VAC
Input frequency	50 – 60 Hz
Switching time	<4ms
Battery capacity	12V DC / 24V DC (for 1050 W)
Overload protection	110% 130% (30 seconds)

Problem	Possible cause	What to do
The backup power supply (UPS) does not start, the LCD display does not work	The ON button was not pressed sufficiently The battery is not connected The backup power supply (UPS) has blown fuses	Press the ON button for 4 seconds Connect the battery Replace the fuses
The backup power supply operates only on battery	The main power cable is broken The fuses are blown The main power source is below 160V or above 260V The backup power supply (UPS) is damaged	Replace the cable Replace the fuses Check the power connection Replace or repair the backup power supply
Fast audio signal	Overload Battery is discharged	Disconnect the device Replace or charge the battery
The backup power supply (UPS) operates on battery for only a short time	Batteries are discharged due to intensive operation, or incorrect charging during use. Batteries are old or damaged	Allow the backup power supply (UPS) to charge the battery Replace the battery