

UPSDC-110W

DC Uninterruptible Power Supply System with Nominal Output Voltage 12VDC with Output Power up to 110W

Uninterruptible power supply system **continues to supply DC output power during a loss of input AC power**. This system is created with an AC/DC power supply, an internal back-up battery and an additional electronic board. **If the AC power is present** the power supply feeds the supplied device and the back-up battery is charged with a defined charging current at the same time.

After input AC power outage the device is powered from the battery. There is no voltage outage on the output of the power supply system, because the **transition from AC/DC power supply to battery power is continuous and without any interruption**. If the battery voltage decreases below the certain minimum value, the battery is disconnected from the powered device automatically. The system is activated again after input AC power recovery.

The system including the battery is built in a metal cover with an AC input line cord, AC input line switch, DC output voltage switch and output terminals. There are two LEDs on the front panel of the cover for the indication of the system state.

Specification:

- Input Voltage Range: **90VAC to 264VAC / 47Hz to 440Hz** or: **120VDC to 370VDC**
- Nominal Output Voltage of the System and the Battery:
12V for type: UPSDC-12110
- Built-in battery: maintenance-free sealed lead-acid battery **12V/12Ah**
- Maximum Output Voltage of the System: **14.0V**
- Minimum Output Voltage of the System: **10.0V**
- Maximum Charging Current of the Battery: adjustable, set at **2.0A** at factory
(rectangular constant current – constant voltage charging characteristic curve)
- Maximum Output Current to the powered Device: **7A** (simultaneous battery charging with the current up to **2A** is possible at the same time).
- Maximum Total Output Power of the Power Supply/Battery Charger: **110W**
- Minimum Battery Voltage, when the the battery is disconnected from the powered device automatically: adjustable, set at **10.0V** at factory
- Maximum Battery Charging Voltage set at **13.8V** (for ambient temperature +25°C),
compensation of the temperature dependence of the battery voltage: **-24mV/°C**
- **LED** indication on a front panel of the power supply:
AC Input: green: operation from AC / **red:** operation from battery
DC Output: green for DC output voltage present
- EMI/RFI: EN55022, Level B
- Safety: EN60950 (SELV Output, Protection Class I)
- Isolation Voltage: Input/Output: 3000 VAC, Input/Chassis: 1500 VAC
- Dimensions (including the battery):
W = 172 mm (6.77") , H = 115 mm (4.53") , D = 310 mm (12.2")
- Weight (including the battery): 7.3 kg (16.1 lbs)
- Operating Ambient Temperature Range: 0°C to +50°C, -25°C to +50°C for -T version
(forced air cooling with a built-in fan)

Description of the operation:

Backed-up operation:

- AC Input switch **ON**
- LED "AC Input" is shining:
 - o **Green:** AC input line present (AC line operation)
 - o **Red:** AC input line absent (battery backed-up operation)
- LED "AC Input" is not shining: the AC input line is still not present and the battery has been disconnected from the system after the battery voltage dropped below 10V
- DC Output switch **ON**
- LED "DC Output" is shining **green** – DC output voltage is present
- LED "DC Output" is not shining – DC output voltage is not present (battery has been disconnected from the system after the battery voltage dropped below 10V)

Emergency operation (start of the system, if AC input line voltage is not available):

DC Output switch **OFF**. Push the "ACTIVATION" button and hold it. Then DC output switch **ON**. Release the "ACTIVATION" button. The system is ready to give the DC output voltage and its behaviour is then the same as in the Backed-up operation (if the AC input line is not present).

Internal battery charging only:

- AC Input switch **ON**
- LED "AC Input" is shining **green**
- DC Output switch **OFF**
- LED "DC Output" is not shining



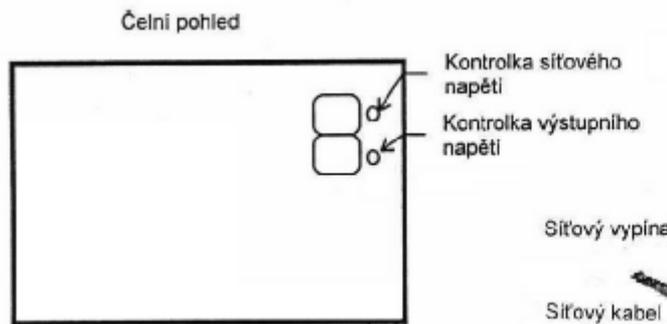
Disconnection of the system:

- DC Output switch **OFF**
- AC Input switch **OFF**
- LEDs "AC Input" and "DC Output" are not shining

Application:

The DC Uninterruptible Power Supply System is designed for battery back-up feeding of a device with nominal voltage 12VDC. Maximum total output power of the Power Supply/Battery Charger is 110W. Also 24VDC output system is available. There is also possible to change the maximum battery charging current and/or low and high limits of the battery voltage.

Front view



Rear view

