



RELIABLE POWER SOLUTIONS FOR A NON-STOP WORLD

DSV Series UPS User Manual



DSV600, DSV800, DSV1000, DSV2000

Uninterruptible Power Supply

SAVE THESE INSTRUCTIONS – This manual contains important instructions for models DSV 600/ DSV 800/DSV1000/DSV2000 series that should be followed during installation and maintenance of the UPS and batteries.

- This product is not recommended for use with any medical equipment, life-supporting system or other specific important equipment, we recommend you consult your supplier for a suitable solution.
- Do not plug household appliances such as hair dryers, microwave ovens or vacuum cleaners into this UPS.
- Do not attach a power board or surge suppressor to the UPS.
- Do not plug the UPS into its own output.
- Connection to any other type of receptacle other than a standard Australian socket outlet may result in the hazard of electrical shock and may violate local electrical codes.
- To reduce risk of overheating the UPS, do not cover the UPS' cooling vents.
- This unit is intended for installation in a controlled environment (temperature controlled, indoor area free of conductive contaminants). Avoid installing the UPS in locations where there is water or excessive humidity and do not use it in any of the following environments:
 - Any area with combustible gas, corrosive substance or heavy dust.
 - Any area with extraordinarily high or low temperature (above 40°C or below 0°C) and humidity of more than 90%.
 - Any area exposed to direct sunshine or near any heating apparatus.
 - Any area with serious vibrations.
 - Outdoor.
- The utility power outlet should be near the equipment and easily accessible. In the event of an emergency, press the OFF button and disconnect the power cord from the AC power supply to properly disable the UPS.
- Internal short circuiting of the UPS will lead to dangers such as electric shock or fire; therefore do not allow liquids or any foreign object to enter the UPS. No water containers (such as a glass of liquid) or any other liquid-containing vessels to be placed on the top of the UPS.
- Please do not use the UPS in excess of the rated load capacity.
- Turn off and unplug the UPS prior to cleaning and do not use liquid or spray cleaners.
- Risk of electric shock, do not attempt to disassemble the unit. No user serviceable parts inside. Refer servicing to qualified service personnel.
- If UPS is to be stored for a long time, it is recommended to recharge the batteries (by connecting the utility power to UPS, switch "ON"), once a month for 24 hours to avoid a full battery discharge.

- The UPS contains one or two large-capacity batteries. So the case should not be opened, as there is a danger of electric shock. If battery replacement is required, please contact the distributor.
- Servicing should be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries.
- A battery can present a risk of electrical shock and high short circuit current. The following precautions should be observed when working on batteries:
 - Remove watches, rings, or other metal objects from the hand.
 - Use tools with insulated handles and wear rubber gloves and boots.
 - Do not lay tools or metal parts on top of batteries.
 - Disconnect charging source prior to connecting or disconnecting battery terminals.
- When replacing batteries, replace with the same type and number of the sealed lead-acid batteries.
- The maximum ambient temperature rating is 40°C.
- Do not dispose of any battery in a fire. The battery may explode.
- Do not open or mutilate any battery. Released electrolyte is harmful to the skin and eyes. It may be toxic, dispose of through a recycler
- Icon Φ on the rating label stands for single phase.
- This pluggable type A equipment with battery already installed is "plug and play"
- During the installation of this equipment it should be assured that the total current leakage of the UPS and the connected load does not exceed 3.5mA.
- Attention, if disconnecting the UPS from the mains, hazardous voltage may exist from the battery. The battery must be disconnected from the positive and negative terminals before any maintenance or service work inside the UPS is attempted.
- In the event of fire in the vicinity, only use dry-power extinguishers. The use of liquid extinguishers may expose you to an electric shock.

This product complies with the safety and environmental regulations in EU. and RCM645

To discard your product, please recycle all the components possible. Batteries and rechargeable batteries are not to be disposed in your domestic waste! Please recycle them at your local recycling point. Together we can help to protect the environment.



1. Introduction

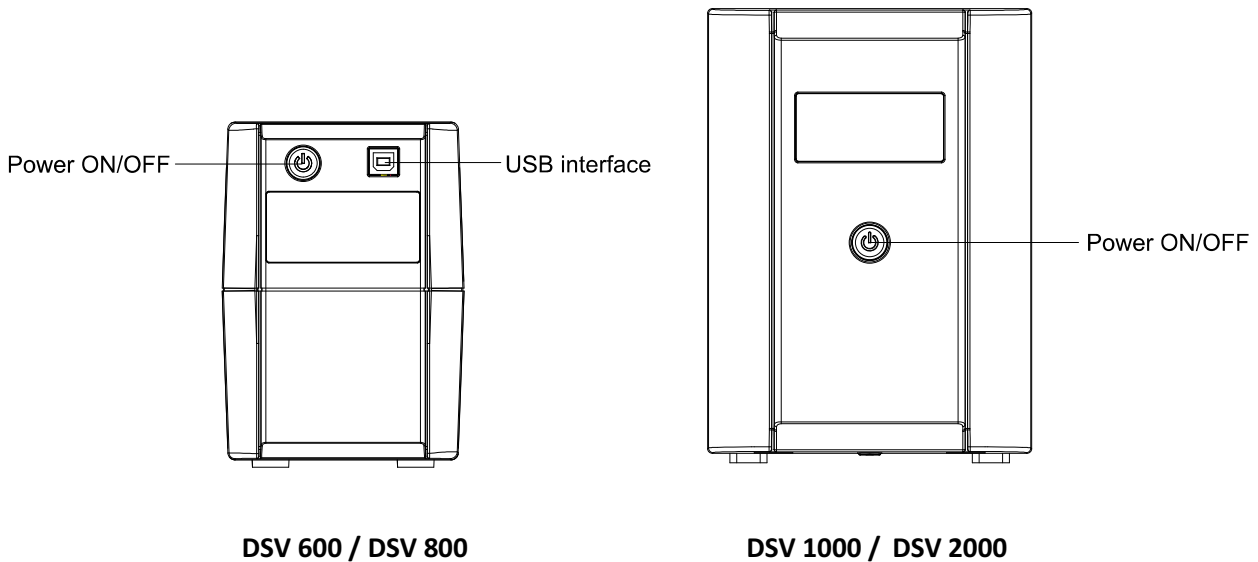
The DSV model of UPS is an intelligent and compact line interactive UPS (Uninterruptable Power Supply) which is designed to protect your personal computer or sensitive electronic equipments from all forms of power interference, including complete power failures. It is equipped with many features that enable any attached equipment to operate after mains power failure and protect against power anomalies.

2. Description of Features

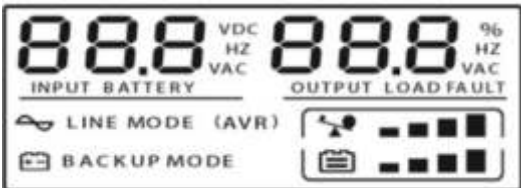
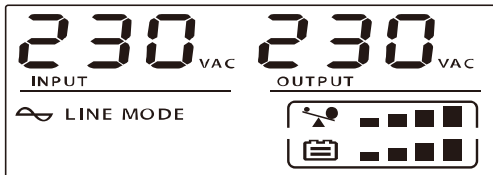
- Easy to use and install microprocessor control to maximize reliability and efficiency
- Equipped with built-in boost and buck AVR function
- DC Cold start function
- Auto restart when AC recovery.
- Provides AC Overload protection
- RJ11/RJ45 (in/out) LAN/Modem/Phone line protection


3. Product Overview

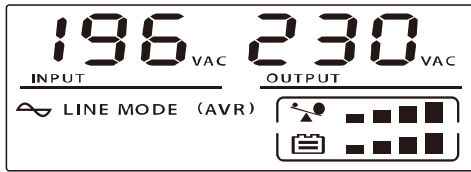
Front Panel




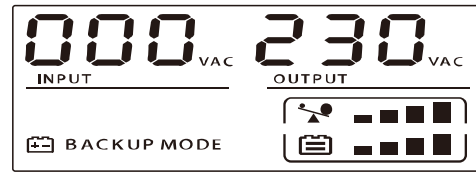
1) Display

<p>When LCD starts to work, it will display all information for 3 seconds.</p> 	<p>When in normal mode, it will display as below.</p> 
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When in AVR mode, it will display as below. And the mark  will flicker every 1second.



When in battery mode, it will display as below. And the mark  will flicker every 1second.



Note: If I/P-V<40V input voltage will display "000"





When in off but power on and charging , it will display as below.



In fault mode, it will display as below. "FAULT" character and "0" character only.







2) Load level definition:





Load level	Load bar Indication
	0%~25%
	25%~50%
	50%~75%
	75%~100%

3) Battery capacity definition:

1 x Battery mode: DSV 600, DSV 800

Battery Level	Battery bar Indication	
	UPS On Battery mode	UPS on Mains Power
	Battery voltage<11V	Battery voltage<12.7V
	11V≤battery voltage<11.5V	12.7V≤battery voltage<13.2V
	11.5V≤battery voltage<12.5V	13.2V≤battery voltage<13.5V
	Battery voltage≥12.5V	Battery voltage≥13.5V

2 x Battery model:DSV 1000, DSV 2000

Battery Level	Battery bar Indication	
	UPS on Battery mode	UPS on Mains Power
	Battery voltage<22V	Battery voltage<25.4V
	22V≤battery voltage<23V	25.4V≤battery voltage<26.4V
	23V≤battery voltage<25V	26.4V≤battery voltage<27V
	Battery voltage≥25V	Battery voltage≥27V

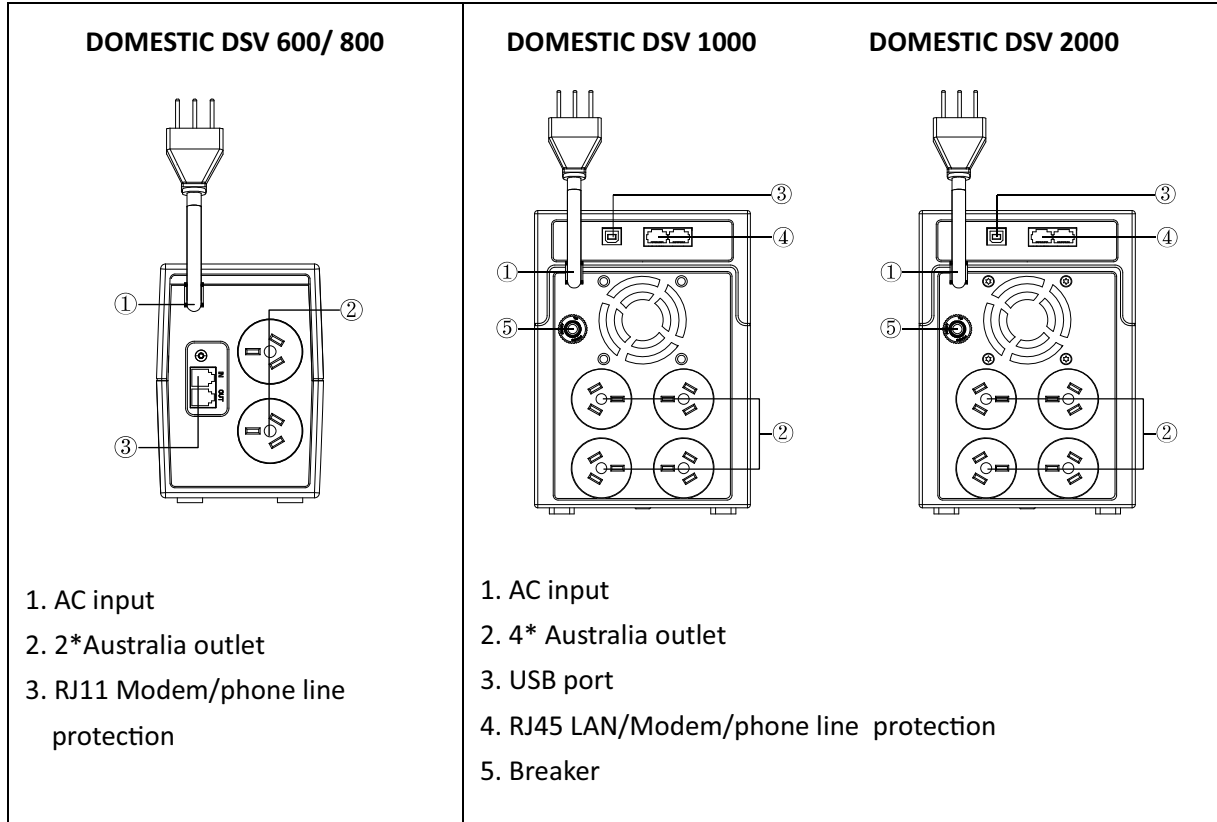
4) If UPS is over load, the mark will flicker every 1second.



5) When battery is low, the mark will flicker every 1second.



Back Panel:



4. Installation and Initial Startup

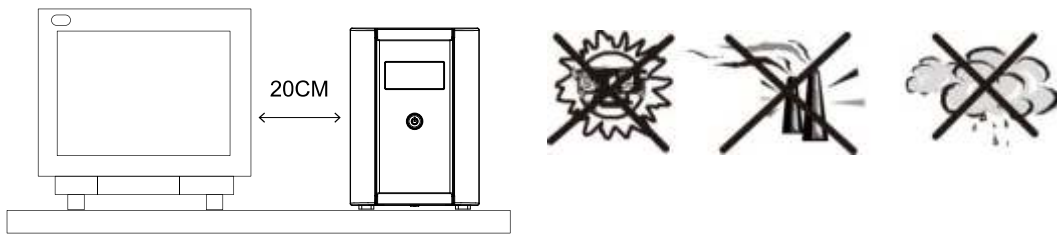


Before installation, please inspect the unit. to ensure nothing is damaged.

I: Placement & Storage Conditions

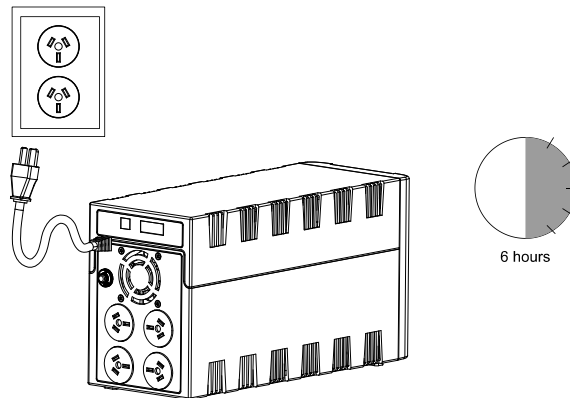
Install the UPS in a protected area free of excessive dust and ensure adequate air flow around the unit, and ensure it is free from any corrosive fumes or conductive contaminants. Please place the UPS away from other units at least 20 cm to avoid interference.

Battery condition is best suited to operating temperatures 20-25° C .



II: Connect to Utility and Charge

Plug the AC input cord in to the socket outlet. For the best results, we suggest charging the battery at least 6 hours with no load (no electrical devices such as computers, monitors, etc.) connected before initial use. The unit charges its battery when connected to the utility.



III: Connect the Loads

Plug in the loads to output receptacles on the rear panel of the UPS. Turn the power switch of UPS on, then turn connected devices on. All units connected to the UPS will be protected by the UPS.

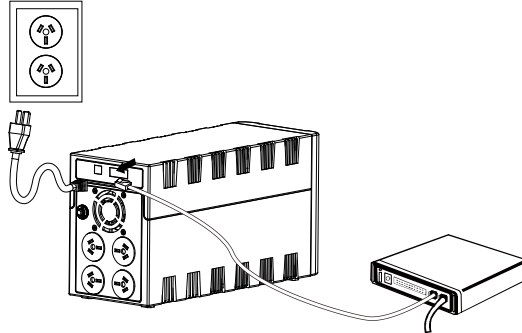


Do not attach a power strip or surge suppressor to the UPS.

IV: Connect LAN cable, Modem or Phone line for Surge Protection

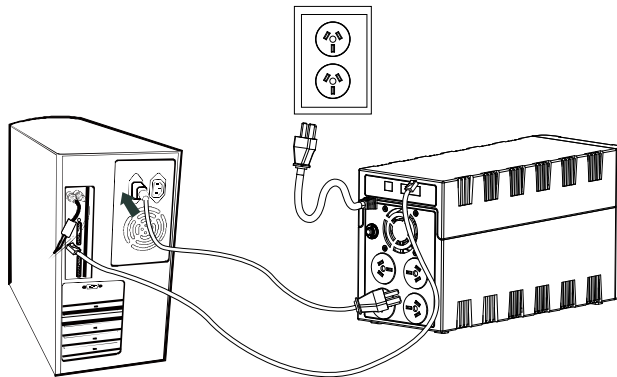
Connect a single modem or phone line into the surge-protected "IN" jack on the back panel of the UPS.

Connect from "OUT" outlet to the phone or modem with another phone cable.



V: Connect USB Cable

To monitor the UPS status, such as unattended UPS shutdown and start-up, using bundled software, please connect the UPS and PC with USB cable included.

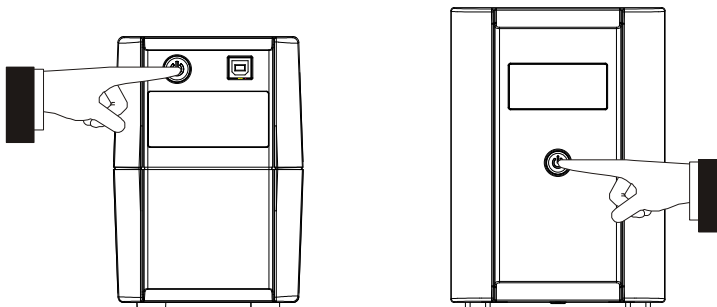


NEVER connect a **laser printer** or **scanner** to the UPS unit, because **in-rush current** generated by the **devices motor's** may overload and damage the UPS



VI: Turn On/Off the UPS

Turn on the UPS unit by pressing the power switch. Turn off the UPS unit by pressing the power switch again.



5. Functions & Operation

I: DC Start Function

DC Start Function enables the UPS to be started on battery when AC utility power is not available and the battery is fully charged. Just press the power switch to turn on the UPS.

II: AVR (Automatic Voltage Regulation)

If the quality of the incoming mains is poor, the AVR boosts a low incoming voltage or reduces (bucks) a high one. The load receives a voltage within a normal range.

III: Auto restart while AC recovery


When AC power recovers the UPS will power up and start charging the battery

IV: Audio Indicator

<u>Audible Alarm</u>	<u>Situation</u>
Sounding every 10 seconds	UPS on Battery Mode
Sounding every 1 second	Battery Low
Sounding every 0.5 seconds	UPS is in Overload
Continuous sounding	UPS is Faulty

6. Software Installation on your PC

Connected by USB to a PC or notebook, the Software enables communication between the UPS and the computer. The UPS software monitors the status of the UPS, shuts down the system before the UPS is exhausted and can remotely observe the UPS via the Network (enabling users to manage their system more effectively). Upon AC failure or UPS battery low, UPS takes all necessary actions without intervention from the system administrator. In addition to automatic file saving and system shut-down functions, it can also send warning messages via pager, e-mail etc.

- Use the bundled CD and follow the on-screen instructions to install the software WinPower.
- Enter the following serial No. to install software: 511C1-01220-0100-478DF2A
- After the software is successfully installed, and communication with UPS has been established a green icon will appear in the system tray. 
- Double-click the icon to use the monitoring software.
- You can schedule UPS shutdown/start-up and monitor UPS status through PC.
- Detail instructions please refer to the e-manual in the software.



Check <http://www.ups-software-download.com/index.htm> from time to time to get the latest updates version of monitoring software.

7. Maintenance

I. General

The UPS is virtually maintenance free: maintain proper environmental conditions and keep air inlets-outlets free of obstructions and dust.

II. Fuses

If the UPS is overloaded and the AC input fuse blows, be sure it is replaced by a compatible fuse of the same make and type.

Never short circuit batteries. When working with batteries, remove watches, rings and other metal objects, and only use insulated tools.

III. Batteries



Read all safety rules before attempting to replace the battery.

If replacing the batteries, use batteries with exactly the same specifications.

8. Trouble Shooting

Symptom	Possible Cause	Remedy
No LED display on the front panel.	1. Battery weak.	1. Charge battery up to 8 hours.
	2. Battery defect.	2. Replace with the same type of battery.
	3. No Utility Power.	3. Press the power switch again.
Alarm buzzer beeps continuously when AC supply is normal.	Overload of the UPS.	Verify that the load matches the UPS capability specified in the specs. Remove some of the load
When power failure, back-up time is shorter than normal.	1. UPS Overloaded	1. Remove some non-critical load.
	2. Battery weak.	2. Charge battery up to 8 hours.
	3. Battery weak due to age, high temperature, or environment,.	3. Replace with the same type of battery.
Mains normal but LED is flashing.	Power cord is loose.	Reconnect the power cord properly.

If any abnormal situations occur that are not listed above, please call service people immediately.

9. Specifications

Model	DSV 600	DSV 800	DSV 1000	DSV 2000
CAPACITY	600VA/360W	800VA/480W	1000VA/600W	2000VA/1200W
INPUT				
Voltage	230 VAC			
Voltage Range	170~280 VAC			
OUTPUT				
Voltage	220/230/240 VAC			
Voltage Regulation	+/-10% (Battery mode)			
Frequency Range	50/60Hz (Auto sensing)			
Frequency Regulation	±1Hz (Battery mode)			
Transfer Time	Typical 4-8ms			
Waveform	Modified Sine Wave			
PROTECTION				
Full protection	Discharge, overcharge and overload protection			
ENVIRONMENT				
Humidity	0-90 % RH @ 0° to 40° C (non-condensing)			
Noise Level	Less than 40dB			45dB
Software				
Monitoring Software	WinPower (included)			
BATTERY				
Type & Number	12V/7Ah x 1	12V/9Ah x 1	12V/7Ah x 2	12V/9Ah x 2
Charging Time	6 hours recover to 90% capacity			
Backup Time (est. 100W)	16 min	20 min	30 min	50 min
PHYSICAL				
LCD Indicator	LCD display			
Outlet	2 x Australia outlets		4 x Australia outlets	
Connector	USB port, RJ11 Surge Protection		USB port, RJ45 Surge Protection	
Dimension (DxWxH)	290mm x 100mm x 143mm		364mm x 139mm x 195 mm	
WEIGHT				
Net weight	4.4kg	5.2kg	8.9kg	10.4kg