



XPL Series

■ USER'S MANUAL ■

**XPL 1000VA
XPL 2000VA**

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Thank you for purchasing this UPS system product. For utilizing its features and benefits, please read the following instructions on its installation, usage and safety cautions thoroughly.

IMPORTANT SAFETY INFORMATION

Before installing XPL UPS 1000VA/2000VA, please read the operating instructions carefully. Special attention must be paid to the CAUTION and WARNING statements in this manual.

CAUTION

1. To reduce risk of injury, use ONLY lead-acid type rechargeable batteries. Other types of batteries may cause damage and injury.
2. DO NOT operate the XPL UPS if it has been dropped or damaged in any way.
3. DO NOT expose XPL UPS to rain, snow or liquids of any type. XPL UPS is designed for indoor installation only.
4. DO NOT disassemble XPL UPS; it contains no user-serviceable parts. Take it to an authorized service center only, when service or repair is required.
5. NEVER charge a frozen battery.
6. DO NOT obstruct the ventilation openings.

WARNING

1. Provide adequate ventilation for the battery compartment. The battery enclosure should be designed to prevent accumulation and concentration of hydrogen gas at the top of the compartment.
2. Input/output AC wiring and battery cables must be rated for 75°C or higher. Using cables diameter, to find out the rating, please refer to appendix A, according to different models. The inner diameter of the copper ring terminal which is used to connect battery cables to DC terminals should be no less than 6mm.
3. For battery installation and maintenance: read the battery manufacturer's installation and maintenance instructions prior to operating.

PERSONAL PRECAUTIONS

1. Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing, or eyes.
2. Avoid touching eyes while working near batteries.
3. NEVER smoke or allow a spark or flame in the near vicinity of a battery.
4. Remove personal metal items such as rings, bracelets, necklaces, and watches while working with batteries. Batteries can produce short circuit current high enough to make metal melt, and can cause severe burns.
5. If a remote or automatic generator start system is used, disable the automatic starting circuit or disconnect the generator to prevent accident during servicing.

Salient Features:

XPL UPS series, powers from AC power and DC source, serving as an extended run UPS. When AC cable is connected to a wall socket, utility power goes to connected equipment(s) and/or charges the battery set via charging system. In UPS mode, the XPL UPS series automatically converts battery energy into AC power for backup the connected devices.

- Up to 10A large charging ability for connecting extra external batteries
- Equipped with 2-boosts and 1-buck AVR for stabilizing output voltage
- Wider input voltage range design from 140Vac to 300Vac
- High reliable AC output voltage
- Microprocessor control design for desirable reliability
- Built-in DC start function for starting up the system without mains power
- Provides Modem/Phone line surge protection (optional) and overload protection
- Optional RS-232 and USB Communication Port
- Free software available online for real-time status monitoring and controlling
- Auto restart when AC utility is recovered
- Support Generator Input
- High Frequency Design with high DC-AC Efficiency for higher than 85%

OPERATION & INSTALLATION

Front Panel Controls and LED Indicators

Shown below are the controls and indicator lights on the front of XPL UPS 1000VA/2000VA.



Power On/Off

Power on/off button is shown as above. Once UPS unit has been properly installed and batteries are connected, press this button and UPS will turn on automatically, and works in 'mains' mode or 'inverter' mode according to the status of input AC source. Press again, to turn off UPS unit.

Mains Mode LED

The green LED will light steadily when power mains are normal.

Note: The green LED blinks every 2 seconds to indicate that battery is not fully charged when the unit switch on.

Inverter Mode LED

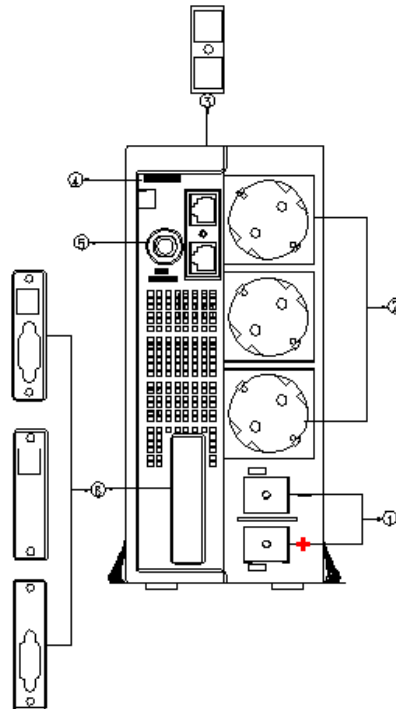
The Yellow LED will light, when power mains are abnormal, and unit will work in 'inverter' mode.

Fault LED

Red LED will blink or light steadily when fault occurs.

Back Panel Description

Shown below are the components on the back of XPL UPS.



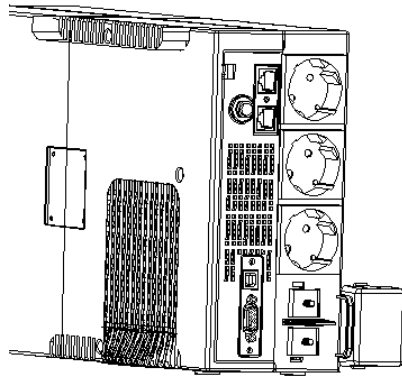
1. DC Input Connector (Battery Terminal)
2. Output Receptacle(s)
3. TVSS port (optional)
4. AC Input power cord
5. Input Breaker
6. Communication port {USB,RS232 (optional)}

BATTERY CONNECTION

Step 1- Pinch the bottom of DC input cover and Open it.

Step 2- Follow battery polarity guide located near battery terminal. Place the battery cable ring terminal over XPL's battery terminal. Tighten the M5 nut. Do not place anything between the flat part of battery terminal and the battery cable ring terminal, since overheating may occur.

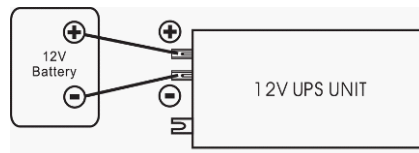
Caution! DO NOT place anything between battery cable ring terminals and battery terminals. The terminal stud is not designed to carry current. Apply Anti-oxidant paste to terminals after terminals have been torqued.



Battery Cable Connection to XPL UPS 1000VA/2000VA

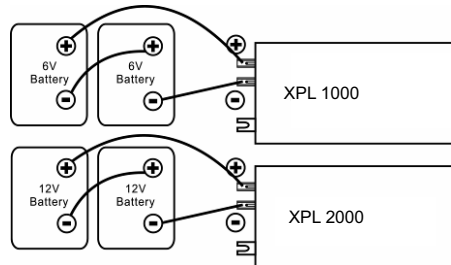
Step 3- Connect battery cables to your batteries

The battery must be wired to match the units DC input voltage specifications (12V for 1000VA, 24V for 2000VA)

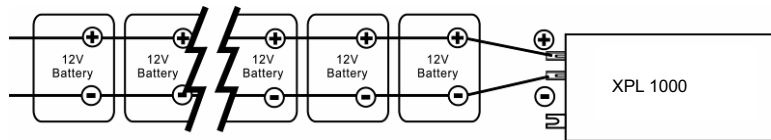


In addition, the batteries can be wired to provide additional run time. The various wiring configurations are as follows:

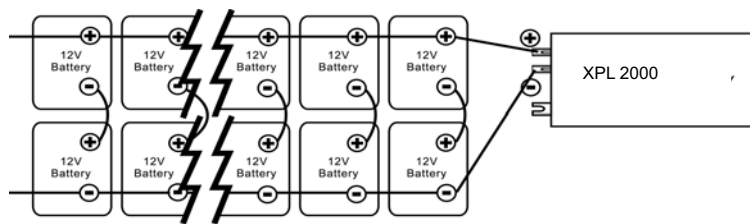
- **Series Connection:** Wiring batteries in "series" increases the total output voltage. This voltage **MUST** match the DC voltage requirements of the UPS unit, or it may damage both the UPS unit and/or the batteries.



- **Parallel Connection:** Wiring batteries in "parallel" increases the total run times; the batteries can operate the AC loads. The more batteries connected in parallel the longer the loads can be powered from the UPS unit.



- **Series-Parallel Connection:** "Series-parallel" configuration increases both the battery voltage (to match the DC requirements of UPS unit) and run time for operating the AC loads.



SPECIFICATIONS

MODEL XPL Series		XPL 1000	XPL 2000
CAPACITY	VA/W	1000VA/600W	2000VA/1200W
INPUT	Voltage	220/230/240VAC	
	Voltage Range	140-300VAC	
	Frequency	50 or 60Hz +/- 10% (auto sensing)	
OUTPUT	Voltage (on battery)	Simulated sinewave at 220V/230V/240V +12%/-18%	
	Frequency (on battery)	50Hz or 60Hz +/-0.1 Hz	
	Auto Voltage Regulator (AVR)	AVR automatically increase output voltage 15% above input voltage if -9% to-27% of nominal. AVR decrease output voltage 13% below input voltage if +9% to +27% of nominal or Booster/ Fader	
PROTECTION & FILTERING	Spike Protection	320 Joules, 2ms	
	Unit Input	Fuse or circuit breaker for overload & short circuit protection	
	Overload Protection	UPS automatic power off if overload exceeds 110% of nominal at 120 sec and 130% at 30 sec	
	Transfer Time	2 to 4 milliseconds, including detection time	
	Short Circuit	UPS output cut off immediately or input fuse protection	
Indicators	AC mode	Green lighting	
	Battery Back up	Yellow lighting	
	Battery charging mode	Green flashing every 2 sec (when the battery is not full enough in line mode). Green lighting (when the battery full)	
	Overload	Red flashing every 0.5 sec	
	Fault	Red lighting	
AUDIBLE ALARM	Battery Mode	Sounding every 10 seconds	
	Low Battery	Sounding every 2 seconds	
	Overload	Sounding every 0.5 second	
	Fault	Continuously sounding	
BATTERY	Type	Sealed lead acid, maintenance-free, with 3-5 years lifetime	
	DC Voltage	12V	24V
	Typical Recharge Time	Depending on external batteries	
	Protection	Automatic self-test discharge protection	
	Back up Time	Longer backup time depending on extra battery pack	
COMMUNICATION	RS-232 or USB	Detect battery low, schedule ups on/off, AC input/output power status display	
	Compatibility	Windows 98/NT/2000/XP/2003/Vista, Linux, Sun Solaris, IBM Aix, Compaq True64, SGI IRIX, FreeBSD, HP-U X and MAC/ME	
PROTECTION	Full Protection	Discharge, overcharge, and overload protection	
PHYSICAL	Input Inlet	IEC 320 power inlet	
	Receptacles	IEC 320 female appliance coupler (220V) or optional country-specific receptacles	
	CS model (optional)	with up to 6 output receptacles	
	Dimensions (WxDxH) mm (inch)	117 x 402 x 222 (4.58" x 15.7" x 8.69")	
	Net Weight kg (lbs)	4.9(10.78)	6.5(14.3)
ENVIRONMENT	Ambient Operation	3,500 meters max. elevation, 0-95% humidity non-condensing, 0-40°C	
	Audible Noise	<40dBA(1 meter from surface)	
	Storage Condition	15,000 meters max.	
STANDARDS & CERTIFICATIONS	Safety	EN 50091-1-1/EN 69050 (RD), IEC 60950	
	Electromagnetic compatibility	EN 50091-2, EN 50022/B, IEC 62040-2, IEC 61000-3-2, IEC 61000-3-3	
	Design, production & services	ISO 9001	
	Environment	ISO 14001 certified company	
	Marking & Certifications	CE, TUV, GC-Mark	

TROUBLESHOOTING

Problem	Possible Causes	Remedy
No LED display	1. Battery Weak	1. Re -charge battery
	2. Battery defective	2. Battery replacement.
	3. Power switch is not pressed	3. Press and hold power switch.
Mains normal but works in inverter mode	1. AC Input missing	1. Check AC input connection.
	2. Input protector is effective	2. Reset the input protector.
Alarm buzzer beeps continuously	Overload	1. Verify that the load matches the capability specified in the specs.
Back up time is shortened	Overload	1. Remove some non critical load.
	Battery voltage is too low.	2. Charge battery for 8 hours or more.

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

Appendix A

Models	Input/output cables (gauge copper wire)	Battery cables (gauge copper wire)
10 00VA/12V DC (HV)	At least 18AWG	At least 8 AWG
20 00VA24V DC (HV)	At least 16AWG	At least 8 AWG

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