PowerWalker

Quick Guide

PowerWalker VI (E)RT HID Series

I.   Assembly

The UPS can be assembled in a rack form using rack ears (Rack Mount Kit is not included) or in tower form using tower holder. The LCD part can be taken out and turned 90 degrees to align with orientation of the UPS.

Internal batteries are disconnected for transportation. It is necessary to open front panel (2 screws on the side, 1 screw behind the LCD) and connect the two available connectors before first usage. External batteries are connected in front using third connector.

Details at https://support.powerwalker.com/kb/faq.php?id=83 (faq.powerwalker.com)

II.   Display Panel

The LCD uses blue back-light as standard. In case of critical error the back-light changes to red. Buttons react to:
- Click – Press the button for around 1s and release
- Press – Press and hold for more than 3s, release
- Press long – Press and hold for more than 10s, release
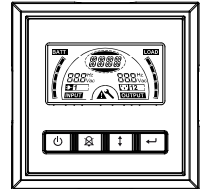
Control Button	Switch	Function
⏻	ON/OFF	Press to turn on or off the UPS. Press to release the UPS from faulty mode Cut off input power and then press to shut down the UPS.
🔕	Test Alarm Silence	Press the button to perform basic function test Press long to to perform battery life test Click to disable alarm buzzer
↕	Select	Press the Select button to select the settings value one by one
↵	Enter	Press to enter settings mode Click to enter settings item (settings string will flash) Click to confirm settings Press to exit Settings mode

III.   Description of LCD display function

No.	Description	Function
888^{Hz}_{Vac}	Input frequency and voltage	Indicates the value of input frequency and voltage
⊡1	Input plug indicator	Lights on when the input power is at no loss.
888^{Hz}_{Vac}	Output frequency and voltage	Indicates the value of output frequency and voltage
⟨·⟩12	Output plug indicator	The UPS has two groups of outlets. The output plug indicator will light on if there is output power respectively.

	UPS status/user setting display String	Strings Indicate the UPS status(see Table 4) Strings Indicate user setting options(see Table 5)
⚠	Warning indication	Lights on when the UPS is failure or alarm.
🔧	Settings	Lights on when the UPS under settings mode.
BATT	Battery volume level display	Indicates the amount of battery volume remaining. Each battery volume level bar indicates approximately 20% of total battery volume
LOAD	Load Power level display	Indicates the load level of the UPS. Each level bar indicates approximately 20% of the total UPS output Power.

IV.   Rear Panels
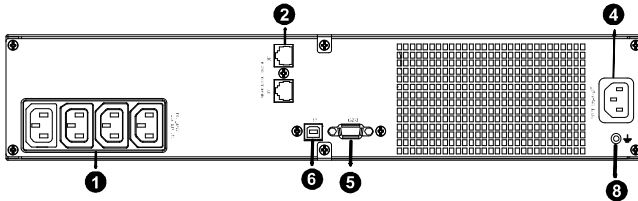
VI 1000 ERT

1. AC Output
2. Network Surge Protection
3. Intelligent Slot
4. AC Input
5. RS232 / Dry-Contact Port
6. USB Port
7. EPO
8. Grounding
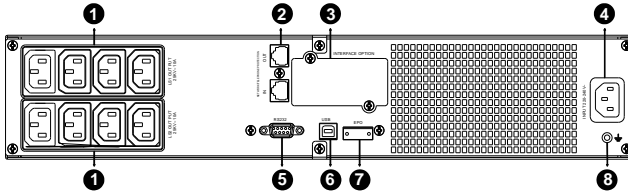
VI 1000 RT and VI 1500 RT

VI 2000 RT

1. AC Output
2. Network Surge Protection
3. Intelligent Slot
4. Fan
5. AC Input
6. RS232 / Dry-Contact Port

7. USB Port
8. EPO
9. Grounding

VI 3000 RT

V. Communication Ports

A Local communication with the software can be established via USB or RS232 cable. RS232 connector alternatively offers dry contacts for potential free signals.
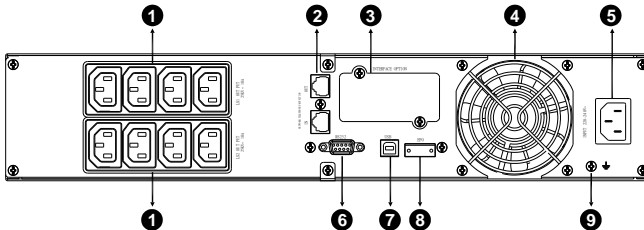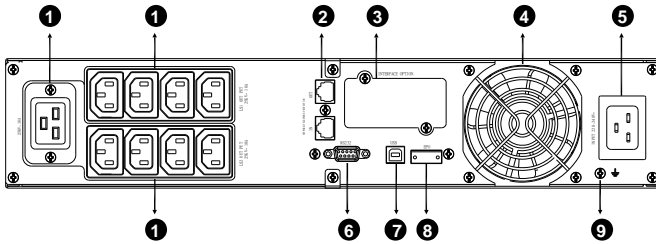

VI. DB9 Female (RS232 + dry contact) pin description
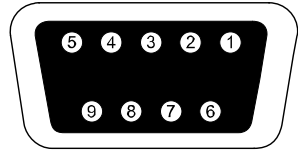
PIN #	Description	I/O	Function Explanation
1	BATLOW	Output	Battery low
2	RXD	input	RXD
3	TXD	Output	TXD
4	DTR	Input	N/A
5	Common	--	Common (tied to chassis)
6	DTR	Input	N/A
7	RING	Output	Ring
8	LNFAIL1	Output	Line fail

Dry contacts are not available for VI ERT series.

VII. Extension Slot

UPS allows extending communication means by extension cards. Please check product website for list of accessories.

VIII. UPS Initial Startup

6. Verify that the internal batteries (behind front panel) and optional battery packs are connected.
7. Plug the equipment (load), but do not turn it on
8. Plug in the UPS input power cord. The UPS front panel display illuminates and UPS status display shows "STbY"
9. Press and hold the ON/OFF button more than 3 seconds. The UPS status display

changes to "NORM"

10. Configure the UPS (i.e. EBM battery settings)

At initial startup, the UPS sets system frequency according to input line frequency.

IX. User Setting String

OPV	Output voltage mode select	220/230/240 (value in Volt)	
AVR	Input type select	[000]= Normal range mode [001]= Wide range mode [002]= Generator mode	
EbM	External battery modules	0-9 (quantity of external BPs)	
TEST	Auto self-test	[000]=Disable	[001]=Enable
AR	Automatic restart	[000]=Disable	[001]=Enable
GF	Green function	[000]=Disable	[001]=Enable
bZ	Buzzer control	[000]=Disable	[001]=Enable
LS1	Load segment 1	[000]=Turn off	[001]=Turn on
LS2	Load segment 2	[000]=Turn off	[001]=Turn on

X. Operating Mode

- Normal range mode: the UPS accepts AC input voltage range for +/-20%.
- Generator mode: the low frequency transfer point can go as low as 40Hz and as high as 70Hz before being transferred to battery mode.
- Wide range mode: the UPS accepts AC input voltage range for -30% ~ +20%.

XI. Configuring Load Segment

Load segments are groups of outlets that can be configured through the display. VI RT HID models have two configurable load segments (excluding VI ERT HID). When UPS is turned on (it has activated output), you can turn off a load segment. If the UPS is turned off (no output), then a load segment cannot be turned on.

XII. Configuring EBM quantity

Setting correct EBM (External Battery Module) quantity is critical for reaching the desired backup time. Only if this value is set correctly, UPS will be able to maximize the battery usage. (VI ERT does not have battery modules). The value represents amount of original battery packs fitted with 2 strings of 9Ah batteries.

XIII. Configuring Green Function

Green Function cuts off the load in battery mode if it detects insignificant load, for example after PC has been safely shut down, the remaining current drain may come from speakers or monitors. To allow working with small loads (i.e. routers) this function can be disabled.

XIV. UPS Status Display String

LCD Display String	Description
STbY	UPS work at Standby mode
IPVL	Input voltage is too low
IPVH	Input voltage is too high
IPFL	Input frequency is too low

IPFH	Input frequency is too high
NORM	UPS work at Line mode
AVR	UPS work at AVR mode
bATT	UPS work at Battery mode
TEST	UPS work at battery life/function test mode
OPVH	Battery mode, the output is too high
OPVL	Battery mode, the output is too low
OPST	Output short
OVLD	Overload
bATH	Battery voltage is too high
bATL	Battery voltage is too low
OVTP	Internal temperature is too high
FNLK	Fan is locked
bTWK	Batteries are weak

XV.   Indicators and Audible alarm

Audible alarm	**Backup Mode**	Sounding every 4seconds	"bATT" on the screen
	Low Battery	Sounding every second	"bATL" on the screen
	UPS Fault	Continuously Sounding	Red display
	Overload	Sounding every second	"OVLD" on the screen
	Battery Replacement	Sounding every second	

Alarm can be muted when it is activated, but it will sound in case of low battery, fan fault, overheat and other major fault.

XVI.   Technical Specification

Model		**1000 ERT**	**1000 RT**	**1500 RT**	**2000 RT**	**3000 RT**
Power	**Watt**	900W	900W	1350W	1800W	2700W
Input	**Input voltage range**	161-276VAC				
	Frequency range	50/60Hz ±5Hz for Normal Mode 40-70Hz for Generator Mode				
Output	**Voltage**	220/230/240VAC				
	Voltage Regulation	±5% in battery mode				
	Frequency	50Hz or 60Hz				
	Waveform	Pure sinewave				
Overload rating	**Line Mode**	110% -0%, +8%: shutdown after 3 minutes. 150% -0%, +10%: shutdown after about 200ms				
	Battery Mode	110% ± 6%; shutdown after 30 seconds. 120 % ± 6 %; Shutdown after about 100ms				
Internal battery	**Battery Power (12V VRLA)**	2 x 9Ah	3 x 7Ah	3 x 9Ah	6 x 7Ah	6 x 9Ah
	Recharge Time to 90%	8 hours	3 hours	4 hours	3 hours	4 hours

Temperature	0 to 40°C				
Humidity	20%-80% relative humidity (non-condensing)				
Altitude	＜1500m				
Storage Temperature	-15° to 45° C				
Net weight	15.0kg	17.8kg	17.8kg	27.8kg	27.8kg
Dimensions	438 X 86.5 x 436			438 X 86.5 x 608	