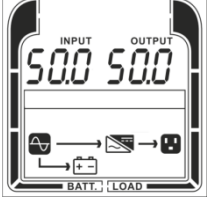
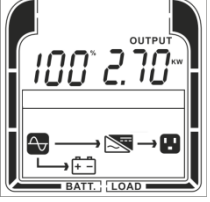


# PowerWalker VFI 1000-3000 AT

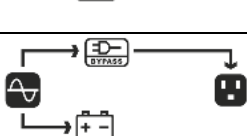
## Quick Guide

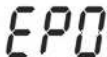
### LCD Panel

The UPS has an LCD panel with 6 pages to scroll.

|                                                                                                                                                          |                                                                                                                                                                |                                                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>Left side: Input Voltage [V]<br/>Right side: Output Voltage [V]</p> |  <p>Left side: Input frequency [Hz]<br/>Right side: Output frequency [Hz]</p> |  <p>Left side: Load level [%]<br/>Right side: Load in kW</p>               |
|  <p>Left side: Load level [%]<br/>Right side: Load in kVA</p>           |  <p>Left side: Battery capacity [%]<br/>Right side: Battery voltage [VDC]</p> |  <p>Left side: Backup Time [min]<br/>Right side: Battery voltage [VDC]</p> |

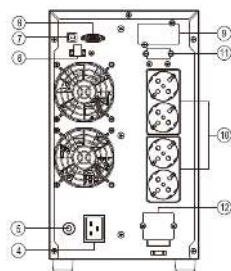
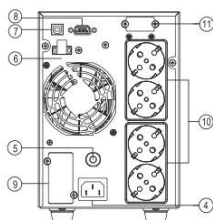
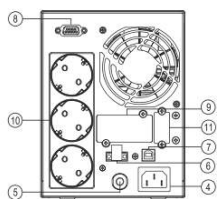
### Modes and warnings

| Operation mode          | LCD display                                                                         | Description                                                                                                |
|-------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Line Mode               |  | Outlets supplied with power. Batteries are charged.                                                        |
| Battery                 |  | The unit provides output power from battery.                                                               |
| ECO mode <sup>[1]</sup> |  | When the input voltage is within set range, UPS bypasses input to output for energy saving. <sup>[1]</sup> |
| Bypass <sup>[2]</sup>   |  | UPS bypasses voltage to output.                                                                            |

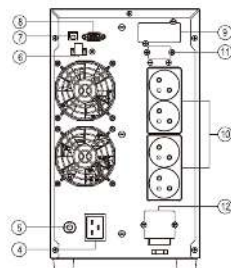
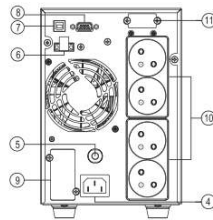
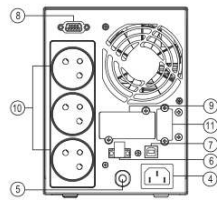
|                          |                                                                                   |                                                                                                               |
|--------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Converter <sup>[3]</sup> |  | The UPS is set to a constant frequency of 50Hz or 60Hz if the input frequency is within range. <sup>[3]</sup> |
| Standby                  |  | Output is switched off. The batteries are charged.                                                            |
| EPO                      |  | Emergency Power Off – the UPS output is turned off.                                                           |
| Fault                    |  | The UPS is in fault mode because of short-circuit on the output.                                              |
|                          |  | Units defining the numeric value: percentage, kilowatt, volt-ampere, minute, hertz                            |
|                          |  | Fault                                                                                                         |
|                          |  | Sound disabled                                                                                                |

## Rear panel view

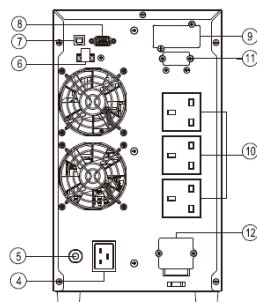
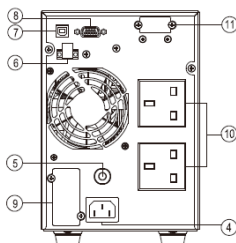
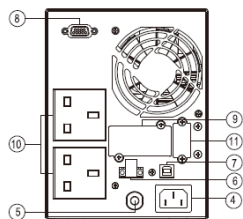
Schuko



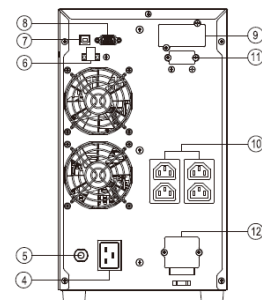
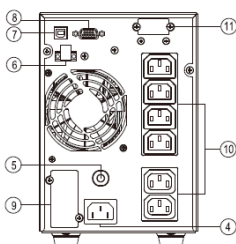
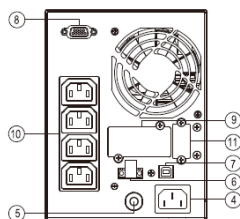
French



UK



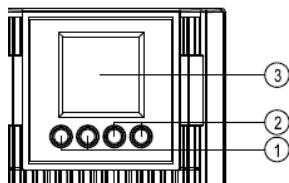
IEC



1000

2000

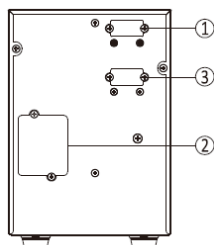
3000



1. Power On/Off button
2. Function buttons
3. Display
4. AC Input
5. Input Circuit Breaker

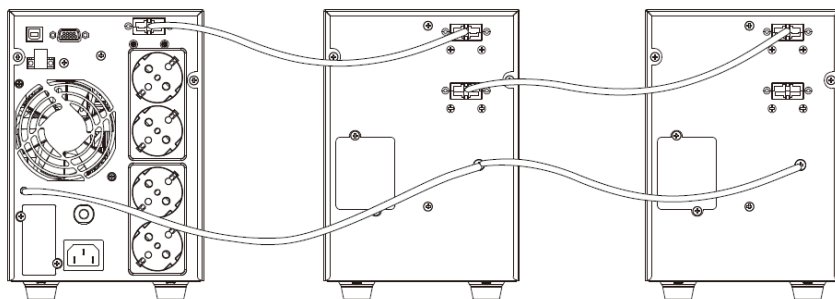
6. EPO (Emergency Power Off) Connector
7. USB port
8. Serial Port
9. Extension slot
10. Output sockets
11. Battery Pack connector
12. Output Terminal Block

### Battery Pack connection



1. Input connector
2. Fuse Board
3. Output connector

Battery Packs are connected in parallel. Grounding wire must be fixed to the housing.

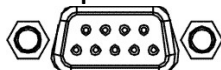


## Communication connection

### USB port



### RS232 port



### Extension Slot



Apart from standard USB Port, the UPS is equipped with RS-232. Those two ports do not work at the same time.

## Button control

### The ON button

- Press this button to turn on the UPS.
- In line mode, ECO mode or converter mode, press the button for 5 seconds to activate the battery test.

### The OFF button

- Press this button to turn off UPS.

### Enter button

- Press this button for 5 seconds to get into setting mode while in bypass mode or standby mode.
- In setting mode, click this button to confirm selection, or press this button for 5 seconds to save the changes and exit the setting mode.
- Press this button to scroll up in the LCD menu.

### ESC button

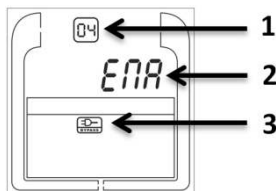
- In setting mode, click this button to display next selection or press this button for 5 seconds to exit setting mode without saving changes.
- Press the button for 5 seconds to disable and enable buzzer alarm.
- Press this button to scroll down in the LCD menu.

### Enter + ESC buttons

- Switch to bypass mode: When the main power is normal, press these two buttons simultaneously for 5 seconds, the UPS will enter bypass mode.

## UPS Setting

1. Setting Item
2. Setting Value
3. Additional Icon



| item | Configure submenu                           | Available Settings                            |
|------|---------------------------------------------|-----------------------------------------------|
| 001  | Output Voltage                              | = [208V] [220V] <b>[230V]</b> [240V]          |
| 002  | Output Frequency                            | = <b>[50.0Hz]</b> [60.0Hz]                    |
| 003  | ECO Mode <sup>[1]</sup> input voltage range | <b>[0%] (Disabled)</b> [10%] [15%] (Enabled)  |
| 004  | Bypass Mode <sup>[2]</sup>                  | [DIS] (Disabled) <b>[ENA] (Enabled)</b>       |
| 005  | Converter Mode <sup>[3]</sup>               | <b>[CF DIS] (Disabled)</b> [CF ENA] (Enabled) |
| 006  | EPO/ROO <sup>[4]</sup>                      | <b>[EPo]</b> /[Roo]                           |
| 007  | Quantity of Battery Packs <sup>[5]</sup>    | <b>[0bP]</b> /[1bP]/[2bP]/[3bP]               |
| 008  | Bypass when UPS is Off                      | <b>[DIS] (Disabled)</b> [ENA] (Enabled)       |
| 009  | Buzzer                                      | <b>[DIS] (Disabled)</b> [ENA] (Enabled)       |

Default settings are marked **bold**.

### Event description and troubleshooting

| Event                | Description                                                                                                                                                        |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>E11, E12, A62</b> | Various issues related to batteries. Please check if batteries are connected and they are in good condition.                                                       |
| <b>E14</b>           | Issue related to the load. Check if there is no short-circuit or excessive load. Test the UPS without the load.                                                    |
| <b>E18, E19, A68</b> | Issues related to overheating or fan failure. Please check that the fan is rotating, ventilation holes are not covered and the ambient temperature is within norm. |
| <b>EPO</b>           | Missing EPO connection.                                                                                                                                            |

### Technical Specification

| MODEL                  | 1000                                                                                                        | 2000             | 3000                                                                                         |
|------------------------|-------------------------------------------------------------------------------------------------------------|------------------|----------------------------------------------------------------------------------------------|
| <b>CAPACITY</b>        | 1000 VA / 900 W                                                                                             | 2000 VA / 1800 W | 3000 VA / 2700 W                                                                             |
| <b>INPUT</b>           |                                                                                                             |                  |                                                                                              |
| <b>Voltage Range</b>   | 80-300V for 0-30% load<br>120-300V for 30-60% load<br>140-300V for 60-80% load<br>160-300V for 80-100% load |                  | 80-300V for 0-30% load<br>140-300V for 30-60%<br>160-300V for 60-80%<br>190-300V for 80-100% |
|                        | all values are $\pm 5\%$                                                                                    |                  |                                                                                              |
| <b>Frequency Range</b> | 40Hz ~ 70 Hz                                                                                                |                  |                                                                                              |

|                                     |                                                                                                                                                                                             |                 |                 |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------|
| Power Factor                        | 0.99 @ nominal voltage (input voltage)                                                                                                                                                      |                 |                 |
| OUTPUT                              |                                                                                                                                                                                             |                 |                 |
| Output voltage                      | 208/220/230/240VAC                                                                                                                                                                          |                 |                 |
| ECO Mode Voltage <sup>[1]</sup>     | Adjustable ±10% or ±15%                                                                                                                                                                     |                 |                 |
| AC Voltage Regulation               | ±1% (Batt. Mode)                                                                                                                                                                            |                 |                 |
| Frequency Range (Synchronized Mode) | Adjustable 1-10% (default ±8%)<br>Outside of the range, it switches to converter mode                                                                                                       |                 |                 |
| Frequency Range (Batt. Mode)        | 50/60 Hz ± 0.5 Hz                                                                                                                                                                           |                 |                 |
| Overload                            | Line Mode: warning @ 100-110%; bypass after 60s @ 110-120%;<br>bypass immediately @ >120%<br>Battery Mode: warning @ 100-110%; shutdown after 10s @ 110-120%; shutdown immediately @ > 120% |                 |                 |
| Current Crest Ratio                 | 3:1                                                                                                                                                                                         |                 |                 |
| Harmonic Distortion                 | < 3 % THD (linear load); < 5 % THD (non-linear load)                                                                                                                                        |                 |                 |
| Transfer Time                       | Zero                                                                                                                                                                                        |                 |                 |
| Waveform (Batt. Mode)               | Pure Sinewave                                                                                                                                                                               |                 |                 |
| Efficiency                          | Energy saving technology. ECO mode over 95%                                                                                                                                                 |                 |                 |
| Protection                          | UPS output cut off immediately or input fuse.<br>Surge protection IEC 61000-4-5 level 4                                                                                                     |                 |                 |
| BATTERY                             |                                                                                                                                                                                             |                 |                 |
| Numbers                             | 2 x 9Ah                                                                                                                                                                                     | 4 x 9Ah         | 6 x 9Ah         |
| Recharge Time                       | 4 hours recover to 90% capacity (Typical)                                                                                                                                                   |                 |                 |
| Battery Pack                        | Battery Pack Connector available <sup>[5]</sup>                                                                                                                                             |                 |                 |
| PHYSICAL                            |                                                                                                                                                                                             |                 |                 |
| Dimension, W x H x D (mm)           | 140 x 191 x 327                                                                                                                                                                             | 151 x 225 x 390 | 196 x 342 x 416 |
| Net Weight (kgs)                    | 14.5                                                                                                                                                                                        | 17.14           | 21.3            |
| Operation Humidity                  | 20-90 % RH @ 0- 40°C (non-condensing)                                                                                                                                                       |                 |                 |
| MANAGEMENT                          |                                                                                                                                                                                             |                 |                 |
| Smart RS-232 or USB Software        | Supports Windows®, Linux, Unix, macOS and HID support for USB<br>PowerMaster available at <a href="http://powermaster.powerwalker.com">powermaster.powerwalker.com</a>                      |                 |                 |
| Optional SNMP                       | Power management from SNMP manager and web browser                                                                                                                                          |                 |                 |

[1] ECO Mode offers higher efficiency in line mode, but transfer time is not guaranteed to be 0ms.

[2] When bypass is disabled, the UPS will not turn on to bypass in case of overload or fault.

[3] The load capacity will be derated to 60%. ECO Mode, Bypass Mode are disabled (regardless of the settings)

[4] If ROO (Remote On/Off) is enabled, UPS can be turned on/off by the ROO port (opened circuit turns off; closed circuit turns on). EPO (Emergency Power Off) only turns off the UPS' output. After closing the circuit UPS needs to be manually turned on.

[5] UPS cannot detect the number of Battery Packs, so this setting is essential. If BP is 1-3, the charger current is increased to 4A.