

# User Manual

## **Rack/Tower Online UPS 1K/1.5K/2K/3K**

Uninterruptible Power Supply System

Version: 1.2

## 2. Installation and setup

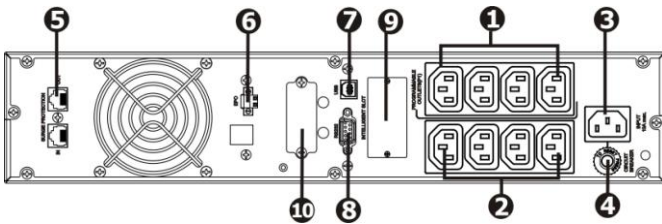
**NOTE:** Before installation, please inspect the unit. Be sure that nothing inside the package is damaged. Please keep the original package in a safe place for future use.

**NOTE:** There are two different types of online UPS: standard and long-run models. Please refer to the following model table.

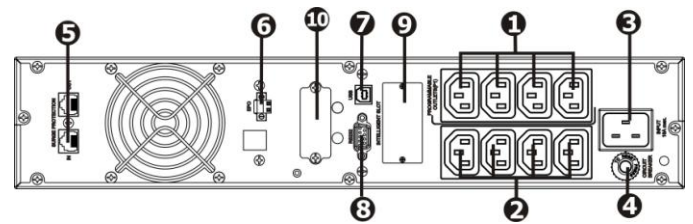
Model No.	Type	Model No.	Type
1K	Standard	1KL	Long-run
1.5K		1.5KL	
2K		2KL	
3K		3KL	

### 2-1 Rear panel view

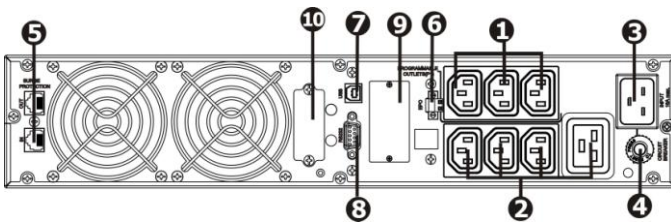
#### 1K/1.5K IEC



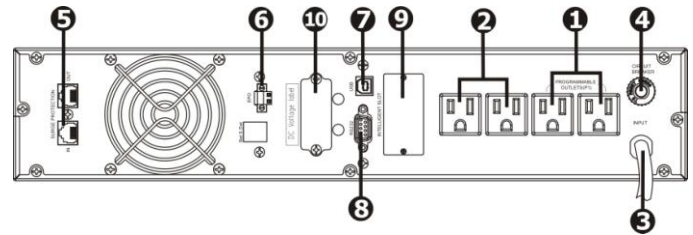
#### 2K IEC



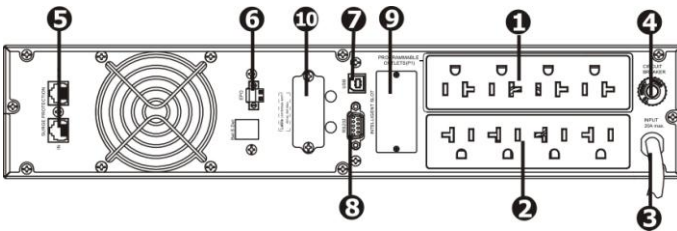
#### 3K IEC



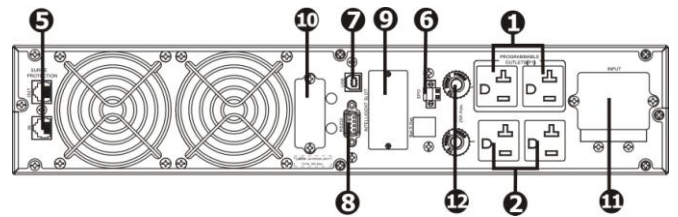
#### 1K/1.5K NEMA



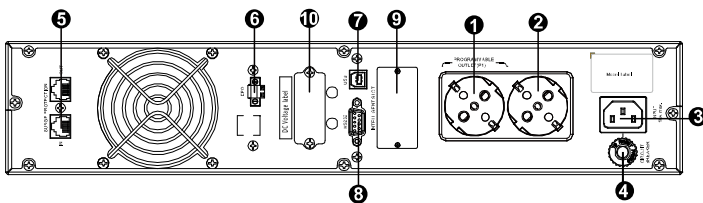
#### 2K NEMA



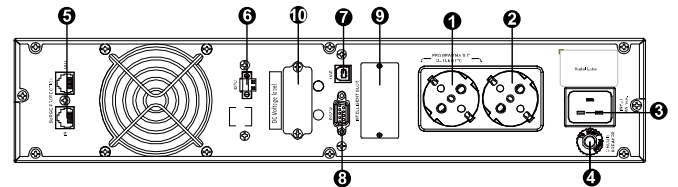
#### 3K NEMA



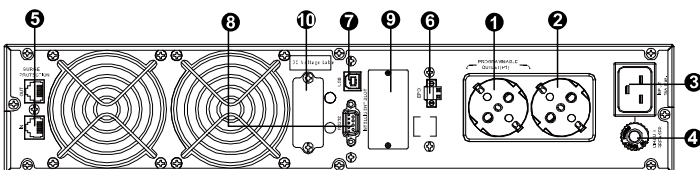
#### 1K/1.5K Schuko



#### 2K Schuko



#### 3K Schuko

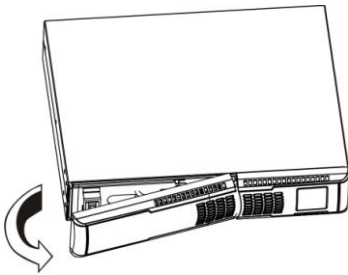


1. Programmable outlets: connect to non-critical loads.
2. Output receptacles: connect to mission-critical loads.
3. AC input
4. Input circuit breaker
5. Network/Fax/Modem surge protection
6. Emergency power off function connector (EPO)
7. USB communication port
8. RS-232 communication port
9. SNMP intelligent slot
10. External battery connector (only available for long-run models)
11. Input terminal
12. Output circuit breaker

## 2-2. Install the UPS

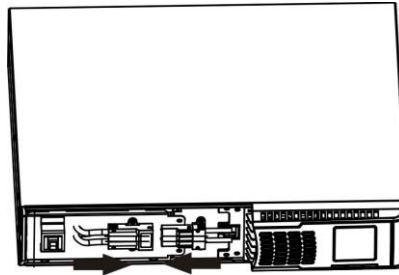
For safety consideration, the UPS is shipped out from factory without connecting battery wires. Before install the UPS, please follow below steps to re-connect battery wires first.

### Step 1



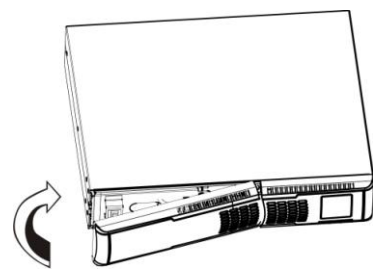
Remove front panel.

### Step 2



Connect the AC input and re-connect battery wires.

### Step 3

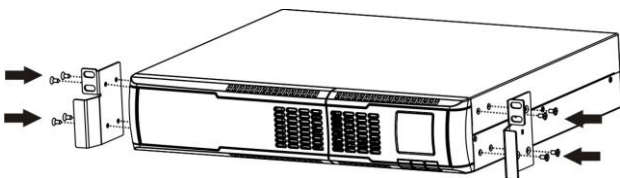


Put the front panel back to the unit.

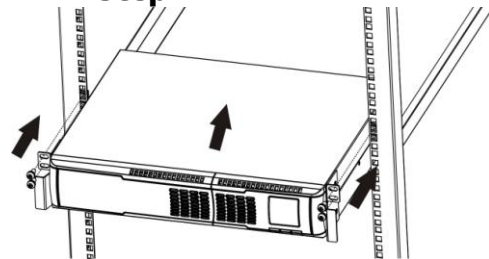
This UPS can be either displayed on the desk or mounted in the 19" rack chassis. Please choose proper installation to position this UPS.

## Rack-mount Installation

### Step 1



### Step 2



## 6. Specifications

MODEL		1K	1KL	1.5K	1.5KL	2K	2KL	3K	3KL
Capacity	VA/W	1000 VA / 900 W		1500 VA / 1350 W		2000 VA / 1800 W		3000 VA / 2700 W	
<b>INPUT</b>									
Voltage Range	Low Line Transfer	80 VAC/70 VAC/60 VAC/55 VAC $\pm$ 5 % or 160 VAC/140 VAC/120 VAC/110 VAC $\pm$ 5 % (based on load percentage 100%-80% / 80%-70% / 70%-60% / 60%-0)							
	Low Line Comeback	85 VAC/75 VAC/65 VAC/60 VAC $\pm$ 5 % or 170 VAC / 150 VAC / 130 VAC / 120 VAC $\pm$ 5 %							
	High Line Transfer	150 VAC $\pm$ 5 % or 300 VAC $\pm$ 5 %							
	High Line Comeback	140 VAC $\pm$ 5 % or 290 VAC $\pm$ 5 %							
Frequency Range		40Hz ~ 70Hz							
Power Factor		$\geq$ 0.99 @normal voltage							
<b>OUTPUT</b>									
Output Voltage		100*/110*/115*/120/127 VAC or 200/208/220/230/240 VAC							
AC Voltage Regulation		$\pm$ 1%							
Frequency Range		47 ~ 53 Hz or 57 ~ 63 Hz (Synchronized Range)							
Frequency Range		50Hz $\pm$ 0.5% or 60Hz $\pm$ 0.5% (Bat. Mode)							
Current Crest Ratio (CF)		5:1 (max.)							
Harmonic Distortion (THDU)		$\leq$ 2% THD (Linear load) $\leq$ 4% THD (Non-linear load)							
Transfer Time	AC to DC	Zero							
	Inverter to Bypass	4 ms (Typical)							
Waveform (Batt. Mode)		Pure Sinewave							
<b>EFFICIENCY</b>									
AC Mode		87%		88%		88%		89%	
Battery Mode		85%		86%		86%		87%	
ECO Mode		94%		95%		95%		97%	
<b>BATTERY</b>									
Battery Type	12V/9Ah	Depending on application	12V/9Ah	Depending on application	12V/9Ah	Depending on application	12V/9Ah	Depending on application	12V/9Ah
Numbers	2		3		4		6		
Typical Recharge Time		4 hours recover to 90% capacity (for standard model only)							
Charging Current (max.)	1 A	1A/2A/ 4A/8A	1 A	1A/2A/ 4A/8A	1 A	1A/2A/ 4A/8A	1 A	1A/2A/ 4A/8A	
Charging Voltage	27.4 VDC $\pm$ 1%		41.1 VDC $\pm$ 1%		54.7 VDC $\pm$ 1%		82.1VDC $\pm$ 1%		
<b>INDICATORS</b>									
LCD	UPS status, Load level, Battery level, Input/Output/battery info, Discharge time and Fault indicators								
<b>ALARM</b>									
Battery Mode	Sounding every 4 seconds								
Low Battery	Sounding every second								
Overload	Sounding twice every second								
Fault	Continuously sounding								
<b>PHYSICAL</b>									
Dimension, DxWxH (mm)	380 x 438 x 88		480 x 438 x 88		480 x 438 x 88		600 x 438 x 88		
Net Weight (kgs)	12.9	8.6	17.6	10.7	20.6	11.3	28	13.8	
<b>ENVIRONMENT</b>									
Humidity	20-90 % RH @ 0- 40°C (non-condensing)								
Noise Level	Less than 50dBA @ 1 Meter								
<b>MANAGEMENT</b>									
Smart RS-232/USB	Supports Windows 2000/2003/XP/Vista/2008/7, Linux, Unix, and MAC								
Optional SNMP	Power management from SNMP manager and web browser								

\*Derate capacity to 95% when the output voltage is adjusted to 115VAC. Derate capacity to 90% when the output voltage is adjusted to 110VAC and derate capacity to 80% when the output voltage is adjusted to 100VAC/200VAC/208VAC.