

# Long backup Online UPS

# TSR RACK 1-2-3KVA

## Features:

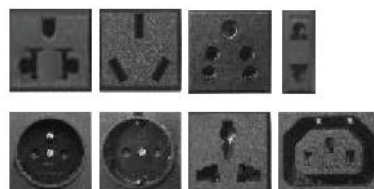
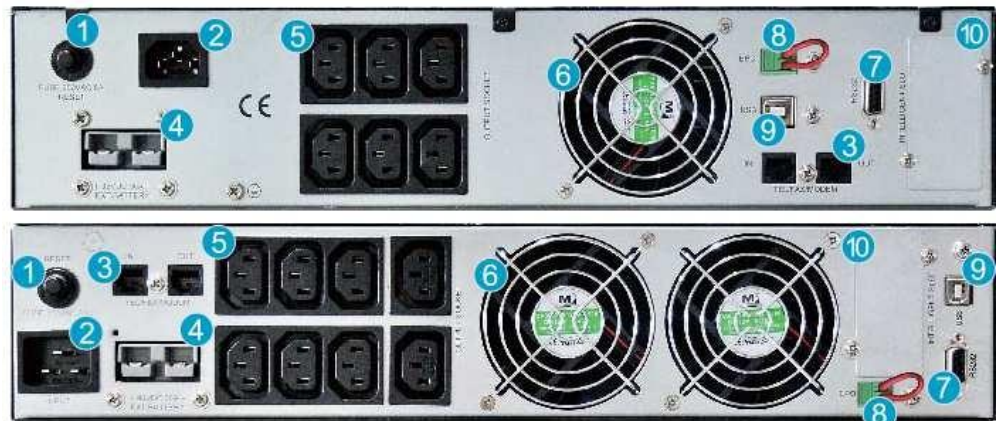
- High frequency on-line double conversion technology
- DSP (Digital signal processors) control technology
- Active power factor correction (APFC), input power factor up to 0.99
- Output power factor 0.9
- Wide input voltage range (110 V ~ 300 Vac) and frequency range (40 ~ 70 Hz)
- Auto sensing frequency
- 50/60Hz frequency conversion
- Cold start
- Rear ventilation design and variable speed fan
- Effective software and hardware protection
- Quick and stable charging, 90% capacity restored in 3 h (standard model UPS)
- Linear derating in low voltage input reducing battery discharging times
- Settable delayed start when power is restored
- Advanced battery management (ABM)
- Multiple functions settable via LCD: output voltage, EOD, auto-start, bypass mode, ECO mode and frequency conversion mode
- Multi-platform communications: RS232 (standard), USB/RS485/SNMP/dry contacts (optional)



Use external battery pack

## Rear panel

- 1. Overcurrent Protection
- 2. AC Input
- 3. Modem/Tel/Fax
- 4. DC Input
- 5. Outlets
- 6. FAN
- 7. RS232
- 8. EPO (optional)
- 9. USB (optional)
- 10. Intelligent Slot



Optional socket

## Available Options:

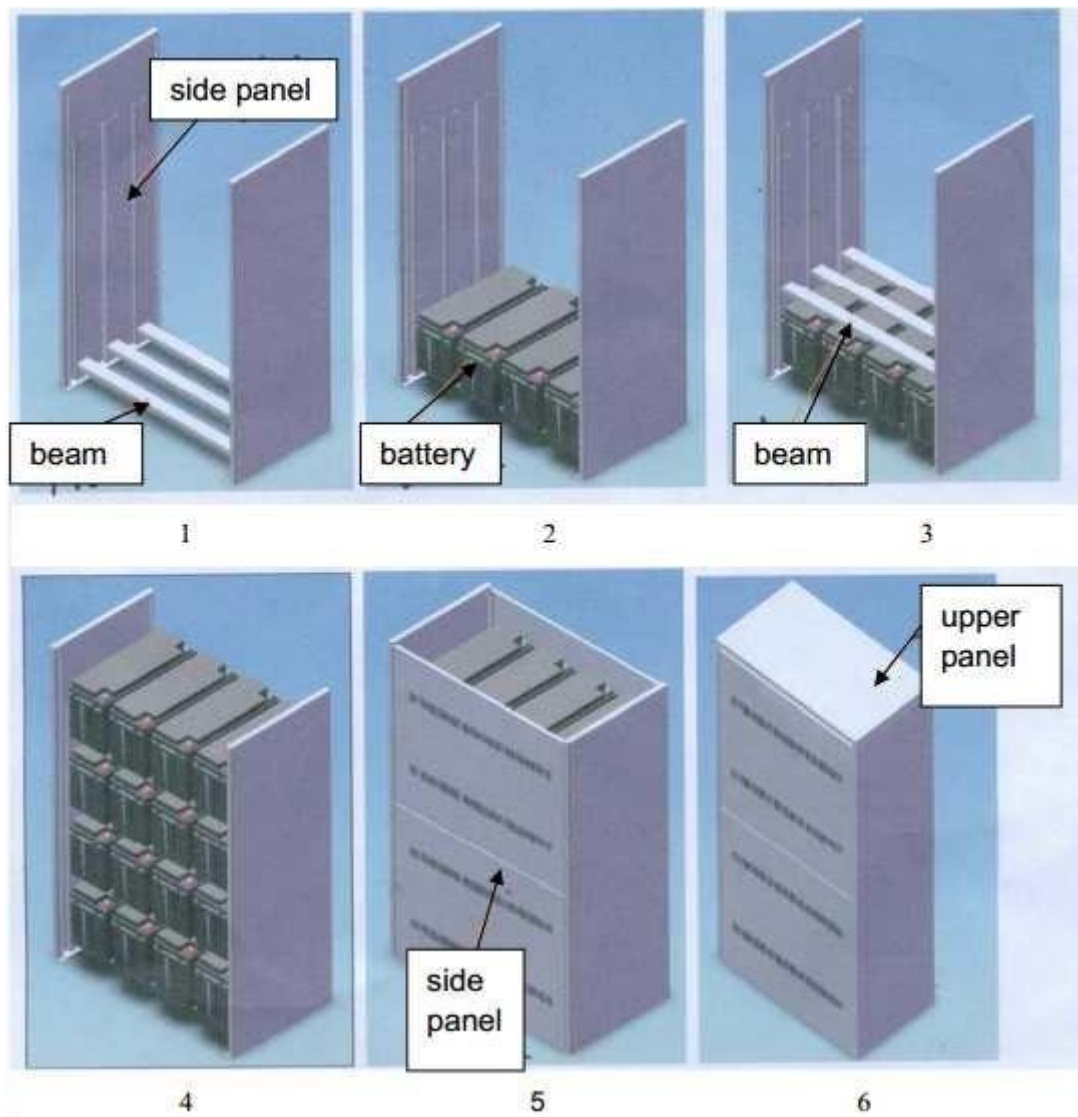
- Optional USB, RS485 card, AS400 dry contacts, SNMP card, SMS alarms, EPO function, MBS (External maintenance bypass switch)

## Specifications:

MODEL	TSR901LBR	TSR902LBR	TSR903LBR
Capacity	1 kVA / 900 W	2 kVA / 1800 W	3 kVA / 2700 W
<b>INPUT</b>			
Rated voltage	208 V / 220 V / 230 V / 240 Vac		
Voltage range	110 ~ 176 Vac (linear derating between 50% and 100% load); 176 ~ 280 Vac (no derating); 280 ~ 300 Vac (derating 50%)		
Frequency	40 ~ 70 Hz (auto-sense)		
Power factor	≥ 0.99		
Bypass voltage	-25% ~ +15% (settable)		
<b>OUTPUT</b>			
Voltage	208 V / 220 V / 230 V / 240 Vac (settable via LCD)		
Voltage regulation	± 1%		
Frequency	45 ~ 55 Hz or 55 ~ 65 Hz (synchronized range); 50 / 60 Hz ± 0.1 Hz (battery mode)		
Waveform	Sinusoidal		
Crest factor	3:1		
Harmonic distortion	≤ 2% (linear load); ≤ 5% (non-linear load)		
Transfer time	Mains mode to battery mode: 0 ms Inverter mode to bypass mode: 4 ms (typical)		
Overload capacity	105% ~ 125% for 1 min, 125% ~ 150% for 30 s, > 150% for 300 ms		
<b>EFFICIENCY</b>			
Mains mode	≥ 90%	≥ 91%	≥ 92%
Battery mode	≥ 85%	≥ 86%	≥ 87%
ECO mode	≥ 95%	≥ 96%	≥ 97%
<b>BATTERIES</b>			
DC voltage	36 V	72 V	96 V
Inbuilt battery	/	/	/
Charging current (max.)	6 A	6 A	6 A
Recharger time	8 h		
<b>ALARMS</b>			
Utility failure	4 s per beep		
Low battery	1 s per beep		
Overload	1 s twice beep		
UPS fault	Long beep		
<b>OTHERS</b>			
Communications	RS232 (standard), USB / RS485 / dry contacts / SNMP (optional)		
temperature	0~40°C		
Relative humidity	0~90%(non-condensing)		

Noise level	≤50dB (1m)									
<b>Dimensions (WxDxH) (mm)</b>	440 x 468 x 88			440 x 658 x 88		440 x 468 x 88	440 x 658 x 88	440 x 468 x 88 (UPS)	440 x 468 x 88	
								440 x 440 x86 (BAT)		
<b>Packaged dimensions (WxDxH) (mm)</b>	545 x 592 x 198			545 x 782 x201		545 x 592 x 198	545 x 782 x201	545 x 592 x198 (UPS)	545 x 592 x 198	
								590 x 580 x 200 (BAT)		
<b>Net weight(kg)</b>	12.26	13.78	7.58	22.73	25.86	9.66	29.26	9.45 (UPS)	27.2 (BAT)	10.04
<b>Gross weight(kg)</b>	15.78	17.3	11.1	26.63	29.76	13.18	33.16	12.97(UPS)	30.2 (BAT)	13.56

## BATTERY PACK:



Please follow the following steps:

1. fix the left and right side panel, and then connect these two panels with beams;
2. put in the battery
3. connect the left and right side with beams again (if need to install the second layer of battery);
4. put in all the battery like the above 2steps. There must be beams under each layer of battery to bear their weight;
5. fix the front and rear panel;
6. fix the upper panel