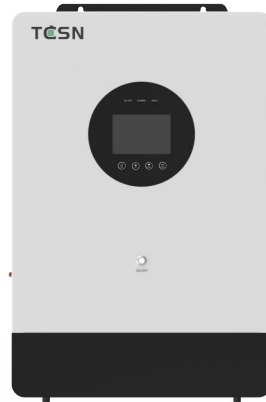


# Solar Storage Inverter



## Introduce

Solar energy storage inverter features an industrial design with a modern aesthetic, easy to install and operate. It supports pure sine wave output and MPPT intelligent management for stable and reliable power supply, ideal for home energy storage, emergency power backup and household electrical appliances.



**Reliable and long-lasting**

Easy and quick maintenance  
Design life: 15 years



**Safe and worry-free**

Lithium Battery Activation &  
Wake-Up Protection:  
OTP / OLP / OVP / OCP / SCP



**Quick Installation**

Industrial design with  
modern aesthetic  
Easy to install and operate



**Scalable Capacity**

It supports up to 6 units in parallel  
operation.



**High Efficiency**

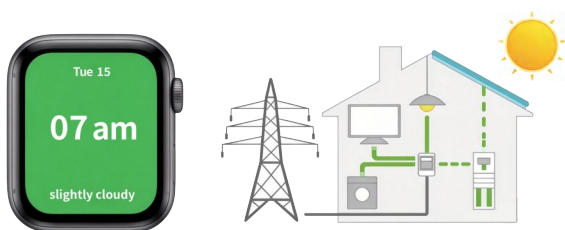
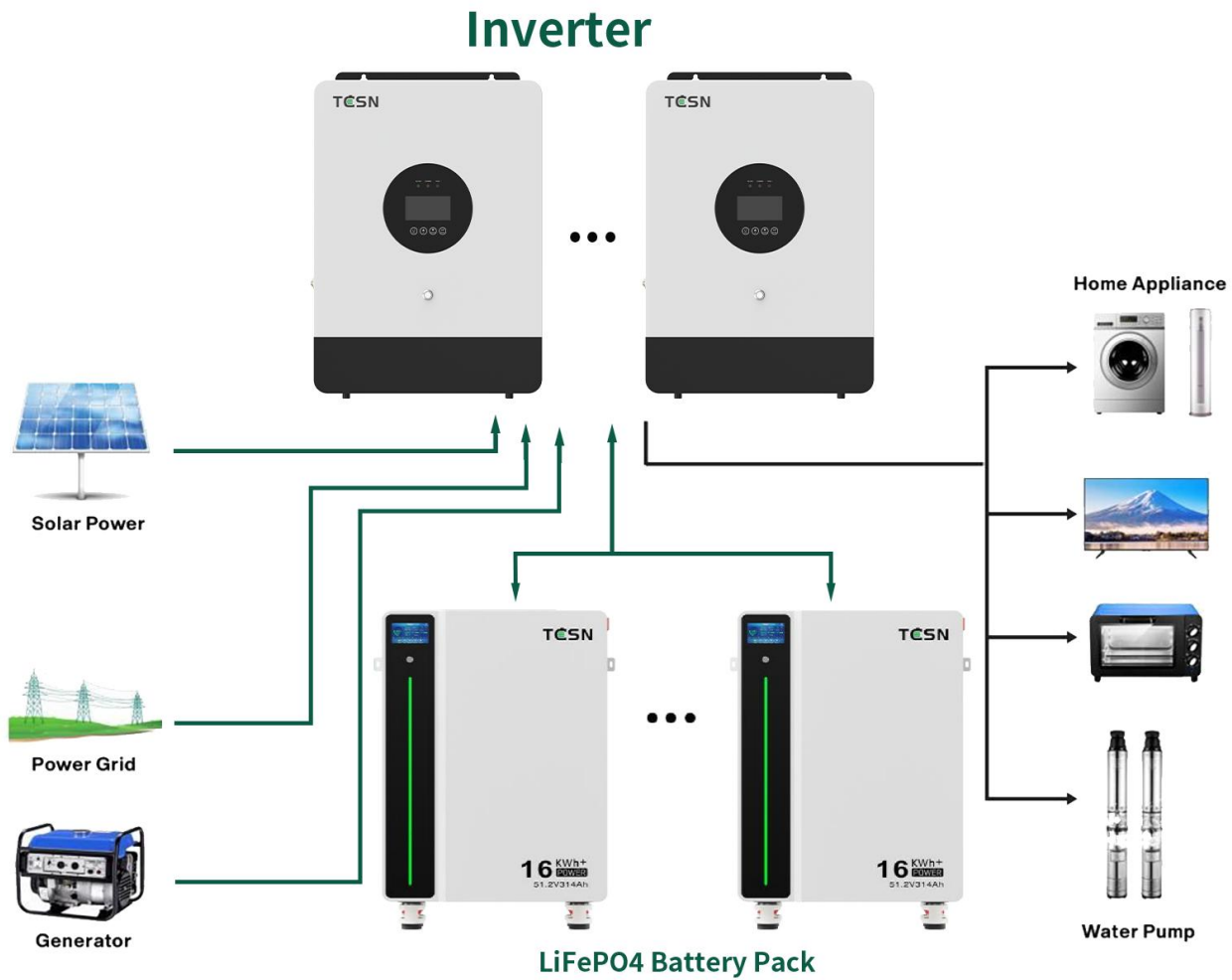
High power density, low cost  
Typical switching time: 10ms



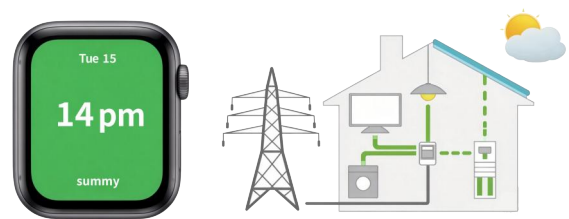
**Integrated Functions**

Supports RS485 / USB  
WiFi wireless network (optional)

# System Management Diagram



Solar energy is best used to power household appliances, with any excess energy stored in the battery.



During the day, when there is insufficient light, the energy stored in the battery will be used to supplement the power supply.



At night, the energy stored in the battery powers household appliances.



When the stored energy in the battery is depleted, the public grid supplies power to household appliances.

# Specifications

<b>Model</b>	<b>Merak SPI B48-12K</b>
<b>AC Input</b>	
Rate Input Voltage(VAC)	220/230;L+N+PE
Voltage Range(VAC)	90~280±3 (normal mode) ; 170~280±3 (UPS mode)
Frequency(Hz)	50Hz/60Hz (Auto detection)
<b>AC Output</b>	
Rated Capacity(kW)	12
Voltage Regulation	≤5%
Rate Voltage(VAC)	230,L+N+PE
Power Factor(PF)	1
Frequency	50Hz±0.3Hz/60Hz±0.3Hz
Transfer Time(ms)	10ms(Typical)
Maximum Efficiency	>94%
OverLoad Capacity	(102% < load < 125%) ±10%: report error and turn off the output after 5 minutes; (125% < load < 150%) ± 10%: report error and turn off the output after 10 seconds; Load >150% ±10%:report error and turn off the output after 5 seconds;
Permitted parallel number	No/1-6
<b>Charger(PV/AC)</b>	
Solar Charger Type	MPPT
Max PV input power(W)	9000+9000
PV Voltage Accuracy	±2%
MPPT tracking range (VDC)	90~450
Maximum PV input current	27A+27A
Max PV voltage(VDC)	500
PV charging current range	150A(Can Be Set)
<b>Charger(AC Mode)</b>	
Max AC Charge Current(A)	150A(Can Be Set)
Rated Charge Voltage	54.4V~55.2V
<b>Battery</b>	
Battery type	Lithium-ion/VRLA/Custom
Battery over Voltage Protection (VDC)	60
Battery under voltage Protection(VDC)	40
<b>Interface</b>	
HMI	LCD
Monitoring	WiFi(Optional)
<b>General Data</b>	
Ingress Protection	IP20
Operating Temperature	-10°C~50°C
Relative Humidity	20%~95%(Non-condensing)
Storage Temperature	-25°C~60°C
Net Weight(kg)	19.2
Dimensions(W*D*H)	365×550×140mm
Max.Operating Altitude	4000m(Derating above 1000m)
Noise Emission	≤60dB