



High voltage energy storage system

Product model
Merak S-HESS-G T24-54

Product Features

High Efficiency

- ★ High power density
- ★ low cost
- ★ High charge and discharge Efficiency
- ★ Digital remote monitoring
- ★ Four PV inputs

Safe and Reliabe

- ★ Support lithium battery
- ★ Low temperature heating function
- ★ Built-in fire module
- ★ Protection:
Over Temperature,Over Load,
Over Voltage,Over Current,
Short circuit protection

User Friendly

- ★ Easy Installation
- ★ Easy Configuration

Hybrid Inverter Specifications

Product Model	24K
DC Input	
Recommended maximum PV module power	40kW
Maximum available PV input power	30kW
Maximum input voltage	1000V
Rated input voltage	600V
Starting voltage	120V
MPPT voltage range	120-950V
Maximum input current	4x16A
Maximum input short-circuit current	4x20A
Number of MPPT/Maximum number of input group routes	4-4
Battery	
Battery type	LFP
Battery voltage range	120-600V
Maximum charge/discharge power	24kW
Maximum charge/discharge current	50A
Communication mode	CAN
AC Output (Grid Side)	
Rated output power	24kW
Maximum output apparent power	24kVA
Rated network voltage	3/N/PE,230V/400V
Rated network frequency	50Hz/60Hz
Rated grid output current (380V AC/400V AC)	36.5A/34.6A
Maximum output current (380V AC/400V AC)	36.5A/34.6A
Power factor	>0.99
Total current harmonic distortion rate	<30%
AC Input (Grid Side)	
Input voltage range	320~400V
Maximum input current (380V AC/400V AC)	36.5A/34.6A
Rated network frequency	50Hz/60Hz
Frequency range	45-55Hz/55-65Hz
Generator Input (optional)	
Maximum input power	24kW
Maximum input current (380V AC/400V AC)	36.5A/34.6A
Rated input frequency	50Hz/60Hz
AC Output (Off-Grid Side)	
Rated output power	24kW
Maximum output apparent power	long-term operation at 1.05 times the Rated Power; Support 300ms output more than 1.05 times the Rated Power;
And off-grid switching time	<10ms
Rated output voltage	3/N/PE,230V/400V
Rated frequency	50Hz/60Hz
Rated output current(380V AC/400V AC)	36.5A/34.6A
Total voltage harmonic distortion rate	<3%
Efficiency	
Maximum efficiency	96.0%
European efficiency	97.5%
PV Maximum charging efficiency	97.0%
Maximum charging and discharging efficiency of a battery	97.2%
Protection	
Island protection	Integrated
AC output overcurrent protection	Integrated
AC short circuit protection	Integrated
DC arc fault protection	Optional
Integrated DC switch	Integrated
DC reverse protection	Integrated
PV overvoltage protection	Integrated
Battery reverse protection	Integrated
Basic Parameter	
Maximum three-phase unbalanced carrying capacity	100%
Maximum single-phase carrying capacity	33% Rated Power
Dimensions (W x D x H)	750*270*520mm
Weight	28kg
Topology	No transformer
Electricity consumption at night	<25W
Ambient temperature/humidity	>40°C,Derated use
Protection Level	IP65
Noise Emission (typical)	10/12KW(<35dB);15/18/20/24KW(<55dB)
Cooling Mode	10/12KW (naturally cooled); 15/18/20/24KW (Intelligent air cooling);
Maximum working altitude	Maximum altitude 4000m, derating above 2000m (1% for every 100m rise)
Authentication	
Certificate	TUV
Grid connection standard	VDE-AR-N-4105
Safety /EMC standards	IEC/EN 62109-1/-2,IEC/EN 61000-6-1/-2/-3/-4
Peculiarity	
PV port	MC4 connector
Battery port	Integrated
AC port	Integrated
Display screen	/
Communication mode	RS485/ Ethernet

Battery Specification



Performance	Battery Moudle x6 Battery Base x1
System Normal Voltage(VDC)	500
Operating Voltage Range(V)	350-550
Battery Nominal Voltage(V)	28.8
Battery Capacity(Ah)	1884
Battery Nominal Capacity(kWh)	54.2
Max.Output Power(W)	24000
Max.Input Power(W)	24000
Maximum Continuous Charging Current (High Voltage Side)(A)	48
Maximum Continuous Discharge Current (High Voltage Side)(A)	48
Maximum Continuous Charging Current(Battery Side)(A)	828
Maximum Continuous Discharge Current(Battery Side)(A)	828
Charging Voltage (High Voltage Side)(V)	500
Discharge Cut-off Voltage (High Voltage Side)(V)	350
Charging Voltage (Battery Side)(V)	32.6
Discharge Cut-off Voltage (Battery Side)(V)	22.5
Battery Cell Type	LFP
General Data	
Ingress Protection	IP65
Operating Temperature(°C)	-20 to 40°C(Reduce power usage when the temperature exceeds 40 degrees)
Relative Humidity	20% to 95%(Non-condensing)
Max. Operating Altitude(m)	4000
Cooling Method	Natural convection
Active Aerosol Fire prevention Module	Integrated
Low temperature heating function	Optional
Net Weight(kg)	429±2
Dimension(WxDxH)(mm)	750*270*1520
Installation	Floor stand
Noise Level(dB)	≤ 40
Compliance	
Certificates	CE
Safety Standard	EN62619
Delivery Standard	UN38.3 MSDS
EMC	EN61000-6-3/EN61000-6-4