MESS-50K-02HP3

Versatile Application

- Ideal for factories, hotels, and farms with DC / AC-coupled solar-storage
- No external switching device is requied, on/off-grid switching time about 10ms,support direct output backup load

Safe & Reliable

- 314ah large capacity cell,higher energy density
- Carbon monoxide detection, Sound and light alarm, Exhaust fan, Explosion vent window, Inlet valve, Fire water injection port

Smart Energy

- Supports self-consumption, peak shifting, time-of-use, and battery backup
- Integrated self-developed BMS / EMS for flexibility

High Performance

- Long-lasting battery cycle life

Easy Operation

- Compact design saves space
- Cloud control with 24 / 7 monitoring



Technical Parameters	ML20K-HVR-10		
Battery Type	LiFe (LiFePO4)		
Battery Module Capacity	20.09 kWh		
Number of Modules	4	5	6
Total Battery Capacity	80.38 kWh	100.48 kWh	120.57 kWh
Nominal Voltage	256 V	320 V	384 V
Operating Voltage Range	228 ~ 288 V	285 ~ 360 V	342 ~ 432 V
Charging / Discharge Rate	0.5 C		
Standard Charging / Discharging Current	157 A / 157 A		
Cycles	8000@80%DOD		
General Parameters			
Dimensions (W x H x D)	1060 x 1380 x 2085 mm		
Weight	< 1.36 T	< 1.5 T	< 1.64 T
Installation Site	Outdoor		
IP Protection	IP54		
Anti Corrosion Level	C4		
Operation Humidity	0 ~ 95% (No Condensing)		
Operation Temperature	-30°C ~ +50°C		
Max. Operation Altitude	≤ 3000 (> 2000m Derating)		
Communication Port	Ethernet; CAN; RS485		
Communication Protocol	CAN; TCP		
Cooling Method	Intelligent Air Cooling		
Certificates	UL 9540A; UN38.3; MSDS; IEC 62040; IEC 62477; IEC 62619; IEC 63056; IEC 61000-6-2/4		

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Hybrid Inverter Parameters

Product Specifications	MHSI-20K-07HP3	MHSI-25K-07HP3	MHSI-29.9K-07HP3	MHSI-30K-07HP3	MHSI-40K-07HP3	MHSI-49.9K-07HP3	MHSI-50K-07HP3
PV Side							
MPPT Voltage Range	250 ~ 950 Vdc (Max. 1000 Vdc)						
MPPT Rated Voltage	720 Vdc						
MPPT Rated Voltage (Full Load)	300 ~ 800 V	350 ~ 800 V	400 ~ 800 V	400 ~ 800 V	500 ~ 800 V	600 ~ 800 V	600 ~ 800 V
Max. PV Power	40 kWp	50 kWp	60 kWp	60 kWp	80 kWp	100 kWp	100 kWp
Number of MPPT / Strings per MPPT	4 / 2						
Max. Current per MPPT	45 A						
Battery Side							
Battery Voltage Range	150 ~ 950 Vdc						
Battery Rated Voltage Range	180 ~ 800 Vdc						
Max. DC Current	40 Adc x 2	50 Adc x 2	60 Adc x 2	60 Adc x 2	80 Adc x 2	80 Adc x 2	80 Adc x 2
Max. DC Power	22 kW	27.5 kW	29.9 kW	33 kW	44 kW	49.9 kW	55 kW
Number of DC Inputs	2						
AC Side (On Grid)							
Nominal AC Output Power	20 kW	25 kW	29.9 kW	30 kW	40 kW	49.9 kW	50 kW
Max. AC Output Power	22 kVA	27.5 kVA	29.9 kVA	33 kVA	44 kVA	49.9 kVA	55 kVA
Max. AC Input Power (Single-phase)	20 kW	25 kW	25 kW	25 kW	27.5 kW	37.5 kW	37.5 kW
Rate AC Output Current	29 A	36 A	43.5 A	43.5 A	58 A	72.4 A	72 A
Max. AC Input Current	87 A	110 A	110 A	110 A	120 A	163 A	163 A
AC Rated Voltage / Voltage Range	230 / 400 Vac; 220 / 380 Vac; 3L+PE+N; -15% ~ +10%						
Nominal Grid Frequency / Frequency Range	50 Hz / 60 Hz (±5 Hz)						
THDi	< 3% (100% Load)						
Adjustable PF Range	-0.8 (Lagging) ~ 0.8 (Leading)						
Backup Output							
Nominal AC Voltage	230 / 400 V; 220 / 380 Vac; 3L+PE+N						
THDv	< 3% (Rated Power)						
Nominal Grid Frequency / Frequency Range	50 Hz / 60 Hz						
Nominal AC Output Power	20 kW	25 kW	29.9 kW	30 kW	40 kW	49.9 kW	50 kW
Max. AC Output Power (Single-phase)	20 kW	25 kW	25 kW	25 kW	25 kW	25 kW	25 kW
Max. Output Current	87 A	110 A	110 A	110 A	110 A	110 A	110 A
Genset Input							
Max. Input Current	87 A	110 A	110 A	110 A	110 A	110 A	110 A
Efficiency							
Max. Efficiency	97.5%						
Protection							
Reverse DC Connection Protection	Yes						
Anti-Islanding Protection	Yes						
Over-Temperature Protection	Yes						
Grid Monitoring / Earthing Fault Detection	Yes						
Insulation Monitoring	Yes						
DC / AC Surge Protection	DC Type II; AC Type II						
AFCI	Optional						
General Parameters							
Dimensions (W x H x D)	900 x 730 x 355 mm						
Weight	101 kg						
Topology	Transformerless						
IP Protection	IP66						
Operation Temperature Range	-25 ~ 60℃ (> 45℃ Derating)						
Operation Humidity Range	0 ~ 100% (No Condensing)						
Cooling Method	Intelligent Air Cooling						
Max. Operation Altitude	4000 m (> 3000 m Derating)						
Communication Port	RS-485 / CAN						