



MHSI-12K-05LP1

Features



Excellent Performance

Up to 150% usable PV power with 3 MPPTS.
Max battery charge/discharge current of 210A.
Continuous 110% of nominal AC power.



High Flexibility

Support 40-64V Lithium or Lead-acid battery
Max battery charge/discharge current of 210A.
Max. 9 units parallel for on-grid and off-grid operation.
Support smart load/generator/AC Coupling.
3 inverters in parallel for three phase.



Safety & Reliability

IP65: Indoor or outdoor installation.
Seamless transition to backup mode, for protection
against power outages.
Multiple built-in protections.



Intelligent Maintenance

4.3" LCD color touchscreen, easy to operate.
Intelligent Management, local & remote monitoring.
3 application modes, mixed with battery scheduling.



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• Efficiency

Max. Efficiency (PV to AC)	98.00%
Max. Efficiency (BAT to AC)	94.50%

• Input (PV)

Max. PV Usable Power	15,000W
Max. PV Voltage	600V
Start-up Voltage	90V
MPPT Operating Voltage Range	70V-540V
Max. Input Current per MPPT	20A/20A/20A
Max. Short Circuit Current per MPPT	30A/30A/30A
String per MPPT	1/1/1
Nos. of MPPT	3

• Input/Output (BAT)

Battery Type	Lithium-ion/Lead-acid
Nominal Battery Voltage	48V
Battery Voltage Range	
Max. Charge/Discharge Current	210A/210A
Max. Charge/Discharge Power	10,000W/10,000W

• Output (Grid)

Nominal AC Output Power	12,000W
Max. AC Output Apparent Power	12,000VA
Max. AC Output Power (PF=1)	12,000W
Nominal AC Output Current	52.2A
Nominal Grid voltage	220V/230/240V, L+N+PE
Grid Voltage Range	150V-300V (Adjustable)
Nominal Grid Frequency	50Hz/60Hz
Grid Frequency Range	45Hz-55Hz/55Hz-65Hz (Adjustable)
Power Factor	> 0.99 @rated power (Adjustable 0.8 LD - 0.8 LG)
THDI	<3% (Rated Power)

• Output (Back Up)

Nominal Output Power	12,000W
Nominal Output Current	52.2A
Peak Output Apparent Power (1s)	20,000VA
Nominal Output Voltage	220V/230/240V, L+N+PE
Nominal Output Frequency	50Hz/60Hz
Transfer Time	<10ms (typical)
THDV	<3% @100% R Load

• Protection

Protection Category	Class I
DC Switch	Yes
Anti-islanding Protection	Yes
AC Overcurrent Protection	Yes
DC/AC Overvoltage Protection	DC Type II, AC Type III
AC Short Circuit Protection	Yes
DC Reverse Protection	Yes
Surge Arrester	DC Type II, AC Type II
Insulation Resistance Detection	Yes
Leakage Current Protection	Yes
Generator	Yes

• General

Max. Operation Altitude	4000m (>2000m derating)
Ingress Protection Degree	IP65
Operating Temperature Range	-25°C-60°C (>45°C derating)
Relative Humidity	0~100%
Cooling Method	Fan Cooling
Mounting	Wall bracket
Dimensions (W*H*D)	420mm*800mm*240mm
Weight	39Kg

• HMI & COM

Display	4.3 Inch Touch LCD
Communication Interface	CAN (for BMS), DRM/RS485 (for Meter), RS485, Optional: Wi-Fi/LAN

• Certification

Safety	EN IEC 62109-1&2
EMC	EN IEC 61000
Warranty	5 Years

Remarks: The range of output voltage and frequency may vary depending on different grid codes.
 · Specifications are subject to change without advanced notice.

