



MHSI-20K-05LP3

Features



Excellent Performance

3 MPPTs with Max. PV Input power of 30kW.
Support high power module with 20A PV input current.
Up to 380A max. charging/discharging current.
Max. Grid Passthrough Current of 45A.



High Flexibility

Support 40-60V Lithium or Lead-acid battery.
3-Phase unbalanced output: Increase the self-use rate of solar energy.
Support smart load/generator/AC Coupling.
Max. 9 units parallel for on-grid and off-grid operation.



Safety & Reliability

IP65: Indoor or outdoor installation.
MC4 PV connectors, convenient for installation.
Multiple built-in protections, with optional AFCI 2.0/RSD/Battery breaker.
Seamless transition to backup mode, for protection against power outages.



Intelligent Maintenance

4.3" LCD color touchscreen, easy to operate.
6 time periods for battery charging/discharging.
Intelligent Management, local & remote monitoring.



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• Efficiency

Max. Efficiency	97.60%
Eur. Efficiency	97.00%

• Input (PV)

Max. PV Access Power	40,000W
Max. PV Usable Power	30,000W
Max. PV Input Voltage	1000V
Start-up Voltage	120V
MPPT Operating Voltage Range	160V-980V
Max. Input Current per MPPT	20A/20A/20A
Max. Short Circuit Current per MPPT	30A/30A/30A
Nos. of MPPT	3
String per MPPT	1/1/1

• Input/Output (BAT)

Battery Type	Lithium-ion/Lead-acid
No.Of Battery Input	2 *
Battery Rated Voltage	48V
Battery Voltage Range	40V-60V
Max. Charge/Discharge Current	380A/380A
Max. Charge/Discharge Power	20,000W/20,000W

• Input/Output (Grid)

Nominal AC Output Power	20,000W
Max. AC Output Apparent Power	22,000VA
Nominal AC Output Current	3*30.3A/3*29A/3*27.8A
Max. AC Output Current	3*33.3A
Max. Single Phase Power	8,500W
Max. Continuous AC Passthrough (grid to load)	45A
Nominal Grid Voltage	220V/380V; 230V/400V, 240V/415V 3W+N+PE
Nominal Grid Frequency	50Hz/60Hz
Power Factor	> 0.99 @rated power (Adjustable 0.8 LD - 0.8 LG)
THDI	<3% @rated power

• Output (Back up)

Nominal AC Output Power	20,000W
Max. AC Output Apparent Power	22,000VA
Nominal AC Output Current	3*30.3A/3*29A/3*27.8A
Max. AC Output Current	3*33.3A
Peak Output Apparent Power	150%, 10s
Nominal Grid Voltage	220V/380V; 230V/400V, 240V/415V 3W+N+PE
Nominal Grid Frequency	50Hz/60Hz
Transfer Time	<10ms (Typical)
THDV	<3% @100% R Load
Input (Generator)	
Max. Input Power	30,000W
Protection	
Protection Category	Class I
DC Switch	Yes
Anti-islanding Protection	Yes
AC Overcurrent Protection	Yes
DC Reverse Protection	Yes
Overvoltage Protection	Yes
Surge Arrester	DC Type II, AC Type II
Insulation Resistance Detection	Yes
Leakage Current Protection	Yes
Built-in Battery Breaker	400A, Optional
AFCI 2.0/RSD	Optional

• 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	Smart Cooling
Mounting	Wall bracket
Dimensions (W*H*D)	460mm*742mm*266mm
Weight	50Kg

• HMI & COM

Display	LED+LCD
Communication Interface	RS485/CAN (for BMS), RS485 (for Meter), DRMs, CAN (for parallel), 2*DO, 2*DI, USB (for Wi-Fi/LAN,Optional)

• Certification

Safety	IEC/EN 62109-1/-2
EMC	IEC/EN 61000-6-1/-2/-3/-4, IEC/EN 62920
Grid	IEC 61727/62116, IEC 60068, IEC 16883, NRS 097-2-1, EN 50549-1/10
Warranty	5 Years (optional)

Remarks:- The range of output voltage and frequency may vary depending on different grid codes.

• Specifications are subject to change without advanced notice.

*: if only one set of terminals is used, the max battery charge/discharge current will be limited to 250A

