

MARSTEK

Power Anywhere & Anytime

MARSTEK MARS I PLUS

550V V-Boost Single-Phase Residential ESS

Up to 6kW Hybrid Inverter, 2 MPPT for Max. 12kW PV Input

550V V-Boost Battery Eliminates Battery Imbalance

SG Ready Heat Pump Integration

Compatible with 7kW EV AC Charger

Whole-Home Backup, Switchover <10ms

Integration of Fuel Generator for Emergency Charging

AI Optimized TOU Management for Cost Savings

Anti Feed-in with Smart Meter of MARSTEK, Shelly, etc.

10.1" HD Touchscreen with Localized EMS

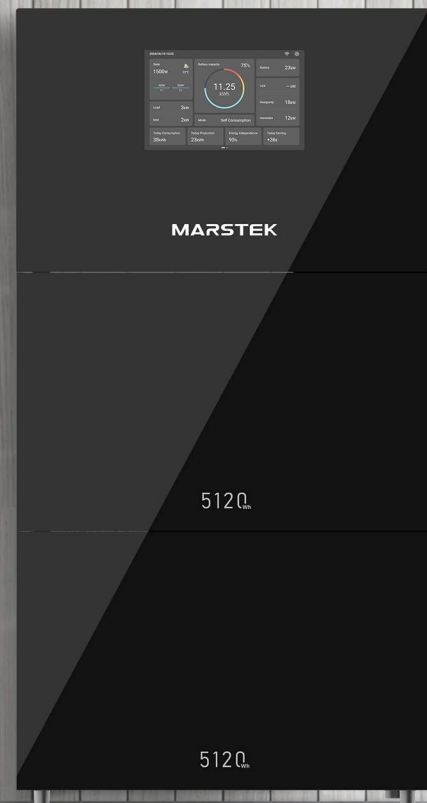
Open API for Third-Party EMS Integration

Modular Design, Flexible Expansion up to 6 Battery Packs & 30.72kWh

Parallel Scale up to 4 Sets, 24kW & 122.88kWh

LFP Cells with 6000+ Cycles, 10 Years Warranty

IP65 Waterproof, -25°C to 60°C, Sub-30dB Operation



Marstek Energy Co., Limited

Add: BLDG#A, Changfang Industrial Park, No.2 Guihua 5th Road, Pingshan District, Shenzhen, Guangdong, China

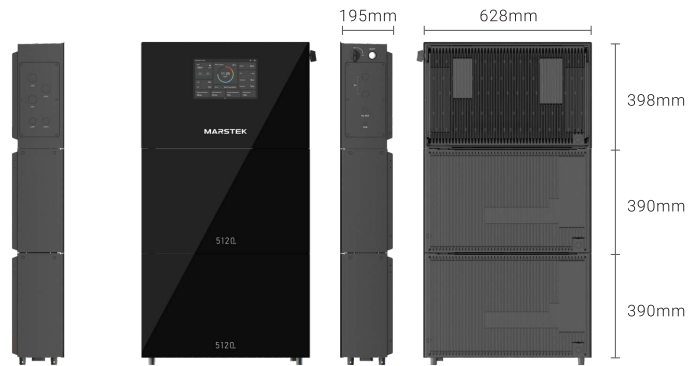
Tel: 86-755-28398778

Email: market@marstekenergy.com

Web: www.marstekenergy.com



SPECIFICATIONS



Model	MST-MARS I PLUS-3.6KSP	MST-MARS I PLUS-4.6KSP	MST-MARS I PLUS-5KSP	MST-MARS I PLUS-6KSP
PV Input				
Max. PV Power	7.2kW	9.2kW	10kW	12kW
Max. DC Input Voltage	550V			
Nominal DC Input Voltage	360V			
Start-up Voltage	150V			
MPPT Voltage Range	125V~500V			
Number of MPP Trackers	2			
Number of PV Strings Per MPPT	1			
Max. Input Current Per MPPT	16A			
Max. Short-circuit Current Per MPPT	20.8A			
AC Output and Input (On-grid)				
Nominal Output Power	3.6kW	4.6kW	5kW	6kW
Max. Output Apparent Power	4kVA	5.1kVA	5.5kVA	6.6kVA
Nominal Output Current	15.7A	20A	21.7A	26.1A
Max. Output Current	18A	23A	25A	30A
Nominal Output Voltage	230V			
Nominal Grid Frequency	50Hz / 60Hz			
Power Factor	0.8 leading ~ 0.8 lagging			
Total Current Harmonic Distortion	THDi < 3%			
Max. Input Apparent Power	5.9kVA	7.5kVA	7.5kVA	7.5kVA
Max. Input Current	25.7A	32.6A	32.6A	32.6A
Efficiency				
Max. Efficiency	97.60%	97.60%	97.60%	97.60%
European Efficiency	97.10%	97.10%	97.10%	97.10%
MPPT Efficiency	99.60%	99.60%	99.60%	99.60%
Battery Conversion Efficiency	97.00%	97.00%	97.00%	97.00%
Generator				
Max. Input Apparent Power	5.4kVA	6.9kVA	7.5kVA	7.5kVA
Nominal Input Voltage	230Vac			
Frequency	50Hz / 60Hz			
Max. Input Current	23.5A	30A	32.6A	32.6A
AC Output (Backup)				
Nominal Output Power	3.6kW	4.6kW	5kW	6kW
Peak Output Current (1s)	150%~200%			
Nominal Output Voltage	230V			
Power Factor	50Hz / 60Hz			
Total Voltage Harmonic Distortion	THDv < 3%			
Disruption Time of Backup Switch	<10ms			
Battery Connection				
Battery Module Models	MST-MARS I PLUS-5.0KBAT			
Number of Modules Per Inverter	1~6PCS			
Nominal Voltage of Battery Module	400V			
voltage Range of Battery Module	350V~550V			
Protection				
Safety Protection Feature	Insulation monitoring, Residual current monitoring, Anti-islanding protection, DC reverse polarity protection, AC OV / OC / SC protection, Type II DC / AC surge protection			
General Data				
Dimensions (W/H/D)	628*195*398mm			
Weight	35kg			
Storage Temperature Range	-40°C~70°C			
Operating Temperature Range	-25°C~60°C			
Relative Humidity Range	0~100%			
Max. Operating Altitude	4000m, derating from 2000m			
Cooling	Natural cooling			
Standby Power Consumption	<35W			
System Ingress Protection Rating	IP65			
Noise Level	<30dB			
Display	10.1" LCD, App			
Communication	RS485 for Meter, RS485 for Heat Pump, Parallel CAN * 2, DC BUS CAN, RS485 for EMS, USB A for EMS Dongle, Wifi/BT/Ethernet, Battery Access CAN (Internal)			
General IO	DI*4, DO*2, CT*3, +5V power, +12V power, DRAM			
Standard Compliance				
Safety Standard	IEC/EN62109-1			
EMC Standard	IEC/EN61000-6-1~4 Class B			
On-grid Standard	EN 50549-1:2019, VDE 4105:2018, VDE 0126-1-1, EN 50438, Italy CEI 0-21			