

MARSTEK

Power Anywhere & Anytime

MARSTEK MARS I PLUS

7-in-1 Single-Phase Residential ESS

6kW On-grid, 12kW 2 MPPT PV Input
Modular Batteries, 1 Unit 5.12kWh,
Dynamic Expand up to 6 Units, Total 30.72kWh

Support Anti Feed-in, 100% Self Consumption
Maxium Money Saving with AI Optimization
With "MARSTEK CT002" / "Shelly" Smart Meter

Support Heat Pump by SG-Ready / RS485
Support Wi-Fi / BT / Ethernet / RS485

DC EV Charger 40kW, V2G 6kW

HD Touchable Screen
IP65 Waterproof



Marstek Energy Co., Limited

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

Tel: 86-755-28398778

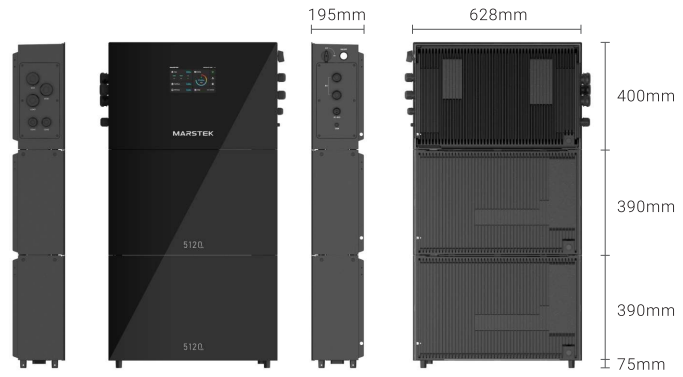
Email: market@marstekenergy.com

Web: www.marstekenergy.com



RESIDENTIAL ESS | SINGLE-PHASE

SPECIFICATIONS



Model	MST-MARS I-3.6KSP		MST-MARS I-4.6KSP		MST-MARS I-5KSP		MST-MARS I-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	23A							
AC Output and Input (On-grid)								
Nominal Output Power	3.6kW		4.6kW		5kW		6kW	
Max. Output Apparent Power	4kVA		4.6kVA		5kVA		6kVA	
Nominal Output Current	17.4A		20A		21.7A		27.3A	
Max. Output Current	17.4A		20A		21.7A		27.3A	
Nominal Output Voltage	230V							
Nominal Grid Frequency	50Hz / 60Hz							
Power Factor	0.8 leading ~ 0.8 lagging							
Total Current Harmonic Distortion	THDi < 3%							
Nominal Input Power	4kW		4.6kW		5kW		6kW	
Max. Input Apparent Power	4kVA		4.6kVA		5kVA		6kVA	
Nominal Input Current	17.4A		20A		21.7A		27.3A	
Max. Input Current	17.4A		20A		21.7A		27.3A	
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%	
AC Output (Backup)								
Nominal Output Power	3.6kW		4.6kW		5kW		6kW	
Peak Output Current (60s)	27.3A (6KW)		30A (6.9KW)		32.6A (7.5KW)		39.1A (9KW)	
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	360V~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*400mm							
Weight	30 kg							
Storage Temperature Range	-30°C~80°C							
Operating Temperature Range	-25°C~60°C							
Relative Humidity Range	0~90%							
Max. Operating Altitude	4000m, derating from 2000m							
Cooling	Natural cooling							
Standby Power Consumption	<35W							
System Ingress Protection Rating	IP65							
Noise Level	<30dB							
Display	7" LCD, App							
Communication	RS485 for Meter, RS485 for Heat Pump, Parallel CAN * 2, DC BUS CAN (For V2G), RS485 for EMS, USBa 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							