MARSTEK

Power Anywhere & Anytime

MARSTEK VENUS A

2.4kW 4 MPPT Balcony ESS with 1.2kW AC-Coupling

4 MPPT for 2.4kW Solar Power, 1.2kW Bidirectional On-Grid Power
1.2kW Backup Power, Peak at 1.44kW
EPS Switchover in 15ms

Plug & Play, Seamlessly Integrates with Your Existing Solar Setup
Modular Design, 2.12kWh Per Unit, Flexible Expansion up to 5 Units & 12.72kWh

Anti Feed-In with Smart Meter of MARSTEK, Shelly, etc.
Whole-Home Backup with MARSTEK SmartBox
AI Optimized TOU Management for Cost Savings

LFP Cells with 6000+ Cycles, 10 Years Warranty, 15 Years Lifespan
IP65 Waterproof, -20°C to 60°C



Marstek Energy Co., Limited

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

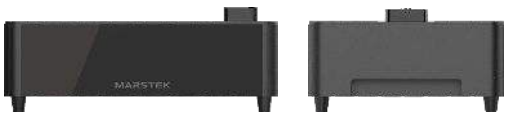
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Product Manual

SPECIFICATIONS



Model	MARSTEK VENUS A
Host Battery Parameter	
Rated Voltage	41.6V (13S)
Battery Energy	2.12kWh
Life Cycle	>6000(25°C)
Battery Type	$LiFePO_4$
Depth of Discharge	90%
PV Input	
Maximum Input Power	2.4kW
MPPT Operating Voltage Range	16V~60V
Maximum Input Current (Single Channel)	20A
MPPT Track Number	4
MPPT Efficiency	99.80%
Back-up (Off-grid)	
Rated Output Power	1.2kVA
Peak Output Power	1.44kVA, 60s
Rated Output Voltage	230V, 50Hz
THDu (Linear Load)	<3%
AC Input/Output	
Rated Output Power	1.2kVA
Working Phase	L/N/PE
Rated Grid Voltage	230V, 50Hz
Rated Grid Output Current	5.22A / 3.48A & 5.22A
Power Factor	> 0.99(default), 0.8lagging...0.8leading(adjustable)
THDi	<3%
Efficiency	
Battery Side - AC Side Maximum Efficiency	>94.5%
Protection	
Protection Class	I
Overvoltage Withstand Level	DC II /AC III
Basic Parameters	
Ambient Temperature Range	-20°C~ + 60°C (Storage-30°C~ + 85°C)
Relative Humidity	0-95%
IP Level	IP65
Cooling Method	Natural Cooling
Maximum Altitude	2000m
Photovoltaic connection	MC4
Off-grid port	European Socket
Display	LED
Communication	Bluetooth, WIFI, EtherNet
Dimensions	400*285*168mm
Weight	24kg



Model	MST-E2.0ST
Battery Parameter	
Rated Voltage	41.6V (13S)
Battery Energy	2.12kWh
Life Cycle	>6000(25°C)
Battery Type	$LiFePO_4$
Depth of Discharge	90%
Number of Storage Units	0~5PCS
Total Storage Capacity	2.12kWh ~ 12.72kWh
Basic Parameters	
Ambient Temperature Range	-20°C ~ + 60°C (Storage -30°C ~ + 85°C)
Relative Humidity	⩽95%
IP Level	IP65
Cooling Method	Natural Cooling
Maximum Altitude	2000m
Dimensions	400*285*108mm
Weight	17kg