MARSTEK

Power Anywhere & Anytime



MARSTEK VENUS D

4kW 4 MPPT Balcony ESS with 2.2kW AC-Coupling

4 MPPT for 4kW Solar Power, 2.2kW Bidirectional On-Grid Power
2.2kW Backup Power, Peak at 2.5kW
EPS Switchover in 15ms

Plug & Play, Seamlessly Integrates with Your Existing Solar System
Modular Design, Flexible Expansion up to 6 Units & 15.36kWh

Anti Feed-In with Smart Meter of MARSTEK, Shelly, etc
Support Whole-home Single/Three Phase Backup with MARSTEK SmartBox
Single-Phase: up to 3 Units Parallel, 6.6kW/46.08kWh
Three-Phase: Each Phase up to 3 Units Parallel
Total 9 Units Parallel, 19.8kW/138.24kWh
AI Optimized TOU Management for Cost Savings

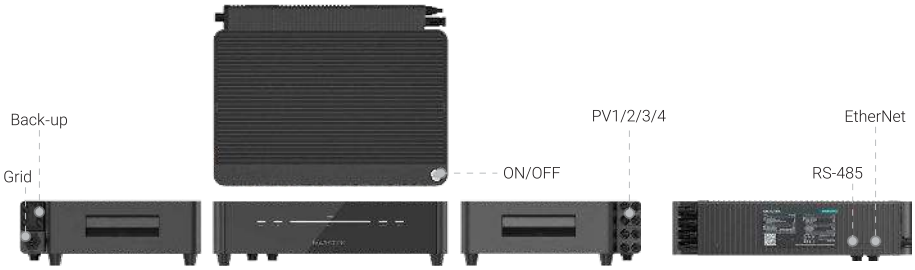
LFP Cells with 6000+ Cycles, 10 Years Warranty
IP65 Waterproof, Operates within -20°C to 60°C

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SPECIFICATIONS



Model	MARSTEK VENUS-D
Energy Storage Unit (Stack)	
Adaptive Energy Storage Unit	MST-E2.5ST-D
Number of Energy Storage Unit	6PCS (Max)
Total Capacity of the Product	2.56kWh~15.36kWh
PV Input	
Maximum Input Power	4kW
MPPT Operating Voltage Range	25V~55V
Maximum Input Current (Single Channel)	32A
MPPT Track Number	4
MPPT Efficiency	99.80%
Back-up (Off-grid)	
Rated Output Power	2.2kVA
Peak Output Power	2.5kVA, 60s
Rated Output Voltage	230V
THDu (Linear Load)	<3%
AC Input/Output	
Rated Output Power	2.2kVA / 0.8kVA & 2.2kVA
Working Phase	L/N/PE
Rated Grid Voltage	230V
Rated Grid Frequency	50Hz
Rated Grid Output Current	9.57A / 3.48A & 9.57A
Power Factor	> 0.99(default), 0.8lagging...0.8leading(adjustable)
THDi	<3%
Efficiency	
Battery Side - AC Side Maximum Efficiency	>94.5%
Basic Parameters	
Ambient Temperature Range	-20°C ~ +60°C (Storage -30°C~ +85°C)
Relative Humidity	0-95%
IP Level	Ip65
Dimensions	480*320*105mm
Weight	17.5kg
Cooling Method	Natural Cooling
Maximum Altitude	2000m
General	
Grid connection	BC05
Photovoltaic connection	MC4
Off-grid port	European Socket
Display	LED
Communication	Bluetooth, WIFI & RS-485, EtherNet



Model	MST-E2.5ST-D
Battery Parameter	
Rated Voltage	51.2V (16S)
Battery Energy	2.56kWh
Life Cycle	>6000(25°C)
Battery Type	$LiFePO_4$
Depth of Discharge	90%
Battery Capacity	50Ah
Basic Parameters	
Ambient Temperature Range	-20°C ~ +60°C (Storage -30°C ~ +85°C)
Relative Humidity	≤95%
IP Level	IP65
Dimensions	480*320*150mm
Weight	26kg
Cooling Method	Natural Cooling
Maximum Altitude	2000m