MARSTEK
Power Anywhere & Anytime

WireLite™



MARSTEK VENUS G

1000V V-Boost Stackable 10kW Three-Phase AC-Coupled PV ESS

One-Stop Energy Solution
All-in-One Generation, Storage, Usage & Backup for Your Home

High-Efficiency PV Compatibility
Dual Independent MPPT with 12kW PV Input for Maximized Energy Efficiency

Seamless Power Support
10kW Uninterrupted Power for Your Entire Home, Steady and Secure

V-Boost Battery
Active Voltage Balancing Ensures Stable, Long-Lasting System & Battery Health

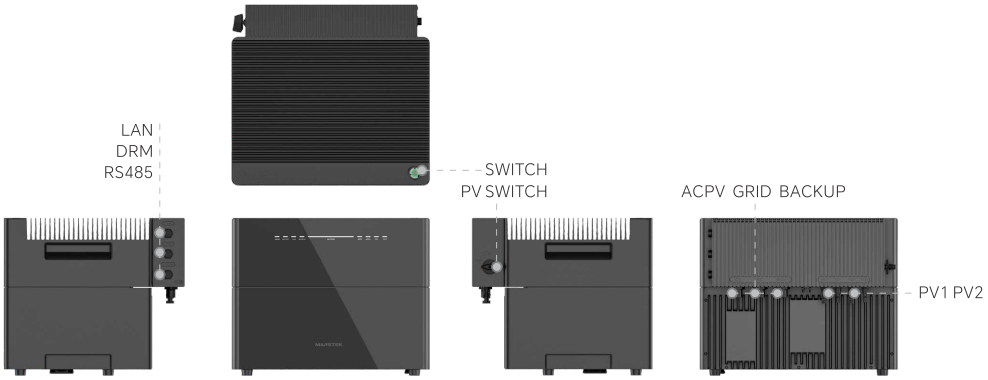
WireLite
Simplified Wiring for Fast System Integration

Safe & Durable
10-Year Warranty, IP65 Rated, Built to Last

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SPECIFICATIONS



Model	VENUS G-5.0KTP	VENUS G-8.0KTP	VENUS G-10.0KTP
DC Input (From PV)			
Max. PV Power	7.5kW	12kW	12kW
Max. DC Input Voltage		1000V	
Nominal DC Input Voltage		650V	
Start-up Voltage		200V	
MPPT Voltage Range		200V~850V	
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	5kW	8kW	10kW
Nominal Output Current	7.2A	11.6A	14.5A
Nominal Output Voltage/Frequency		380V/400V (50Hz/60Hz)	
Power Factor		0.8 leading ~ 0.8 lagging	
Total Current Harmonic Distortion		THDi < 3%	
Max. Input Apparent Power	7.5kVA	12kVA	15kVA
Max. Input Current	10.9A	17.4A	21.7A
Efficiency			
Max. Efficiency	98.2%	98.2%	98.5%
European Efficiency		97.80%	
MPPT Efficiency		99.50%	
Battery Conversion Efficiency		97.80%	
AC PV Input			
Max. Input Apparent Power	7.5kVA	12kVA	15kVA
Nominal Input Voltage/Frequency		3L/N/PE; 380V/400V (50Hz/60Hz)	
Max. Input Current	10.9A	17.4A	21.7A
AC Output (Backup)			
Nominal Output Power	5kW	8kW	10kW
Max. Output Apparent Power	5kVA	8kVA	10kVA
Max AC Output Current	7.6A	11.6A	14.5A
Peak Output Power (1 second)		150%~200%	
Nominal Output Voltage/Frequency		380V/400V (50Hz/60Hz)	
Total Voltage Harmonic Distortion		THDv < 2%	
Disruption Time of Backup Switch		10ms	
Battery Connection			
Battery Module Models		MST-VENUS G-5.0KBAT	
Number of Modules per Inverter		1~6PCS	
Battery Type		LiFePO4	
Cell Capacity		314Ah	
Nominal Voltage of Battery Module		800V	
Voltage Range of Battery Module		650V~950V	
Max. Charging Power	5kW	8kW	10kW
Max. Charging Current	7.7A	12.3A	15.4A
Max. Discharging Power	5kW	8kW	10kW
Max. Discharging Current	7.7A	12.3A	15.4A
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)		480*178*(360+65)mm	
Weight		41kg	
Storage Temperature Range		-40°C~70°C	
Operating Temperature Range		-25°C~60°C	
Relative Humidity Range		0~100%	
Operating Altitude		Derating from 2000m	
Cooling		Natural Cooling	
Standby Power Consumption		25W	
System Ingress Protection Rating		IP65	
Noise Level		30dB	
Display		LED, App	
Communication		RS-485 for EMS, Wifi/BT/Ethernet, Battery Access CAN (Internal)	
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	