

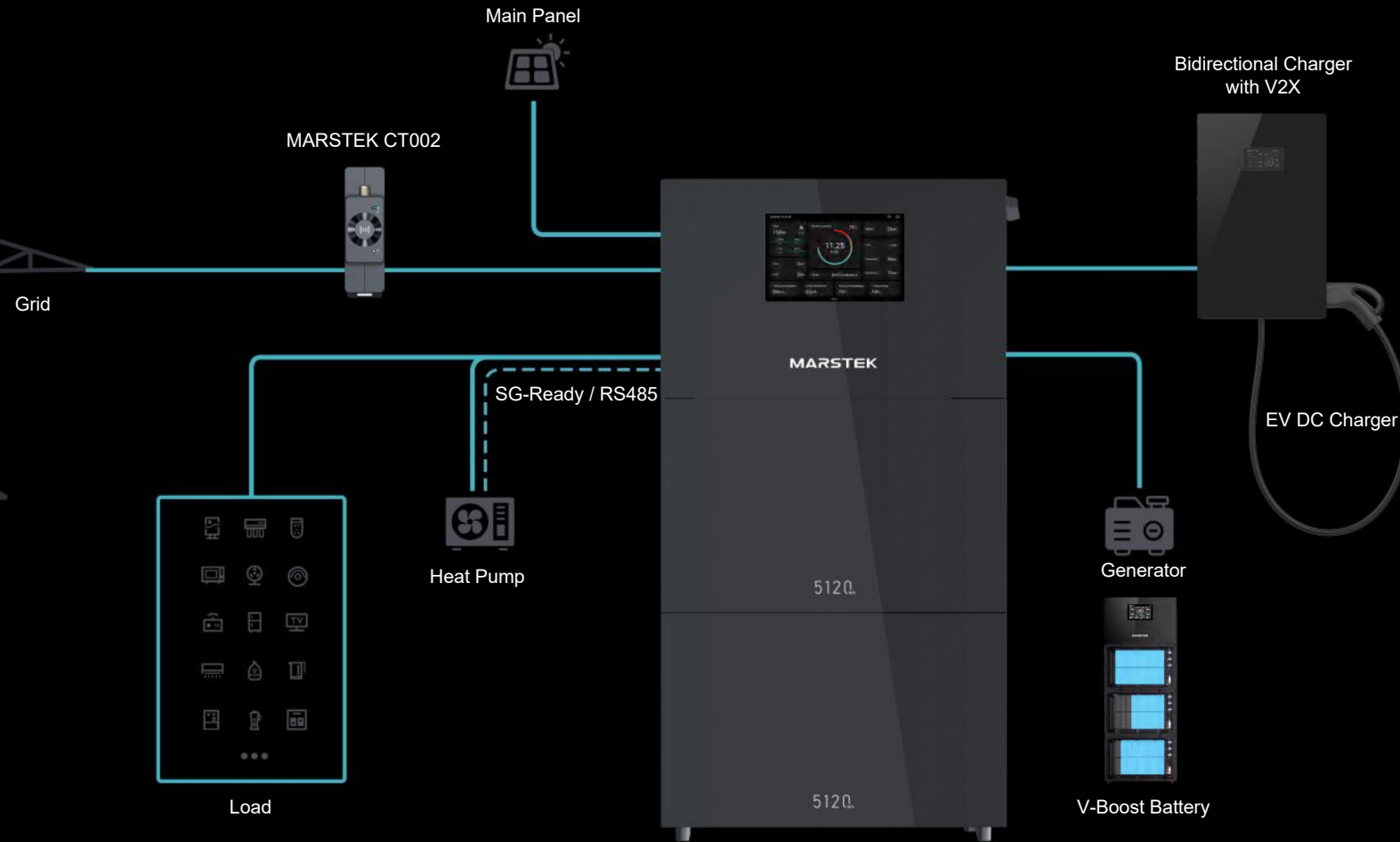
MARSTEK MARS I PLUS

7-in-1 1000V V-Boost Three-Phase Residential ESS

6-in-1 550V V-Boost Single-Phase Residential ESS

7-in-1 Total Energy Solution

12kW Hybrid Inverter | 24kW MPPT | 1000V V-Boost Battery | 25kW EV DC Charger | 12kW V2X | Heat Pump Management | Localized EMS

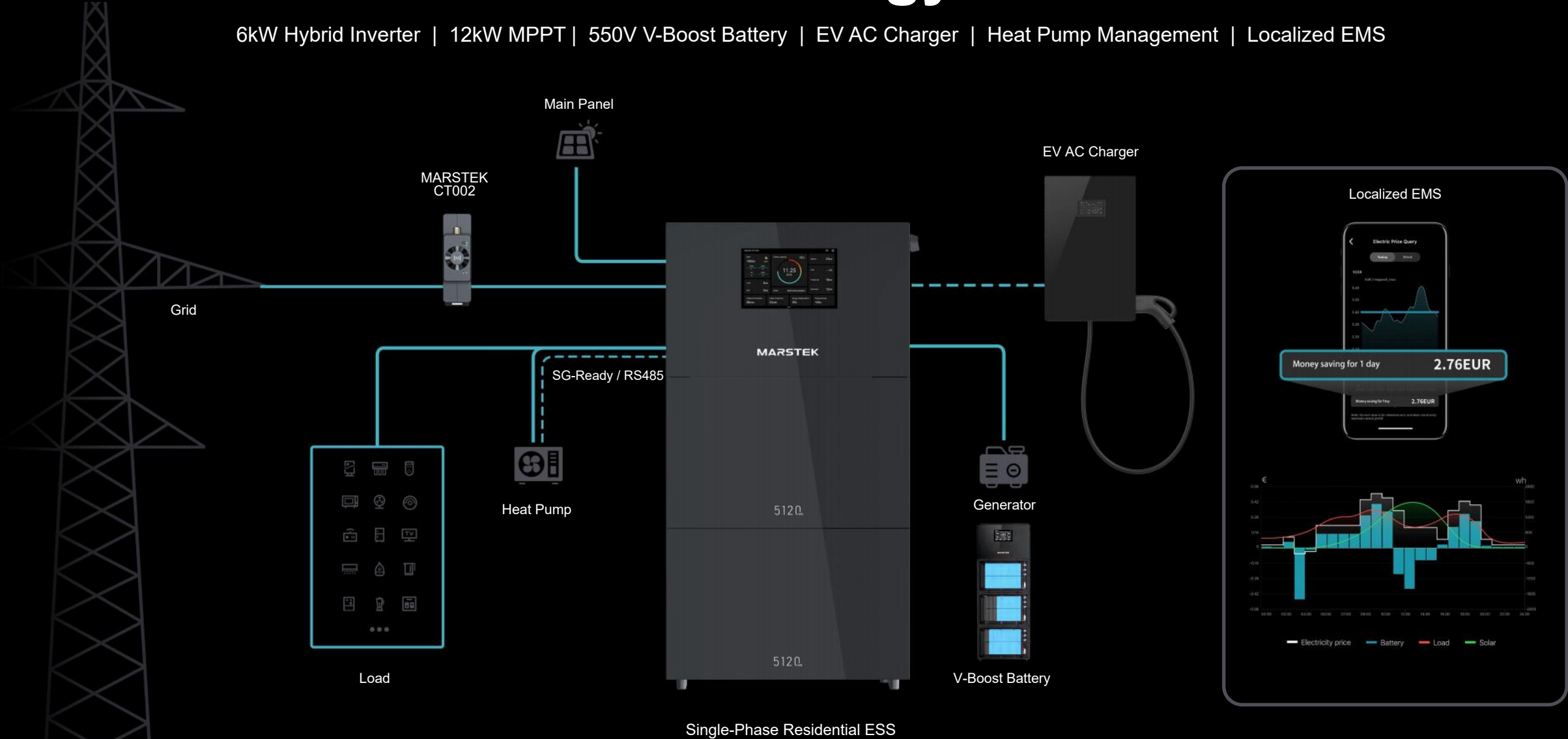


Three-Phase Residential ESS



6-in-1 Total Energy Solution

6kW Hybrid Inverter | 12kW MPPT | 550V V-Boost Battery | EV AC Charger | Heat Pump Management | Localized EMS



Efficient Energy Integration

MARSTEK MARS I PLUS Three Phase

12kW Three-Phase Inverter

24kW PV Input | 4 MPPT

25kW EV DC Charging Power (EV DC Charger Required)

12kW V2X Power (EV DC Charger Required)

MARSTEK MARS I PLUS Single Phase

6kW Single-Phase Inverter

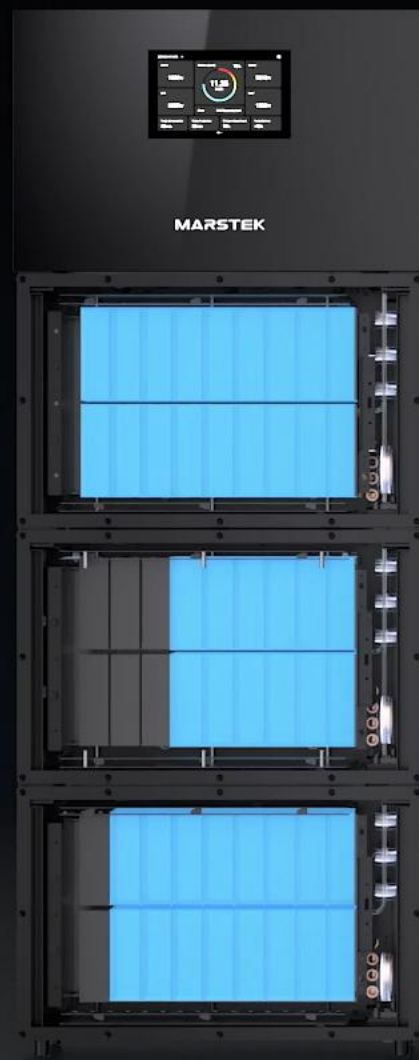
12kW PV Input | 2 MPPT

Compatible with EV AC Charger



V-Boost Battery

Eliminates Battery Imbalance



MARSTEK MARS I PLUS



Traditional Residential Battery

Modular Design



5.12kWh

Per Battery Pack

30.72kWh

Flexible Expansion up to 6 Battery Packs



Parallel Scalability

Single Phase

12kW ~ 48kW MPPT

6kW ~ 24kW On-Grid Power

10.24kWh ~ 122.88kWh Capacity

Three Phase

24kW ~ 96kW MPPT

12kW ~ 48kW On-Grid Power

15.36kWh ~ 122.88kWh Capacity



10.1"

HD Touchscreen

with Localized EMS





SG-Ready Heat Pump Integration

Anti Feed-in with Smart Meter





AI Optimization

TOU Management for Cost Savings

Command with MARSTEK App



LFP

Battery

6000+

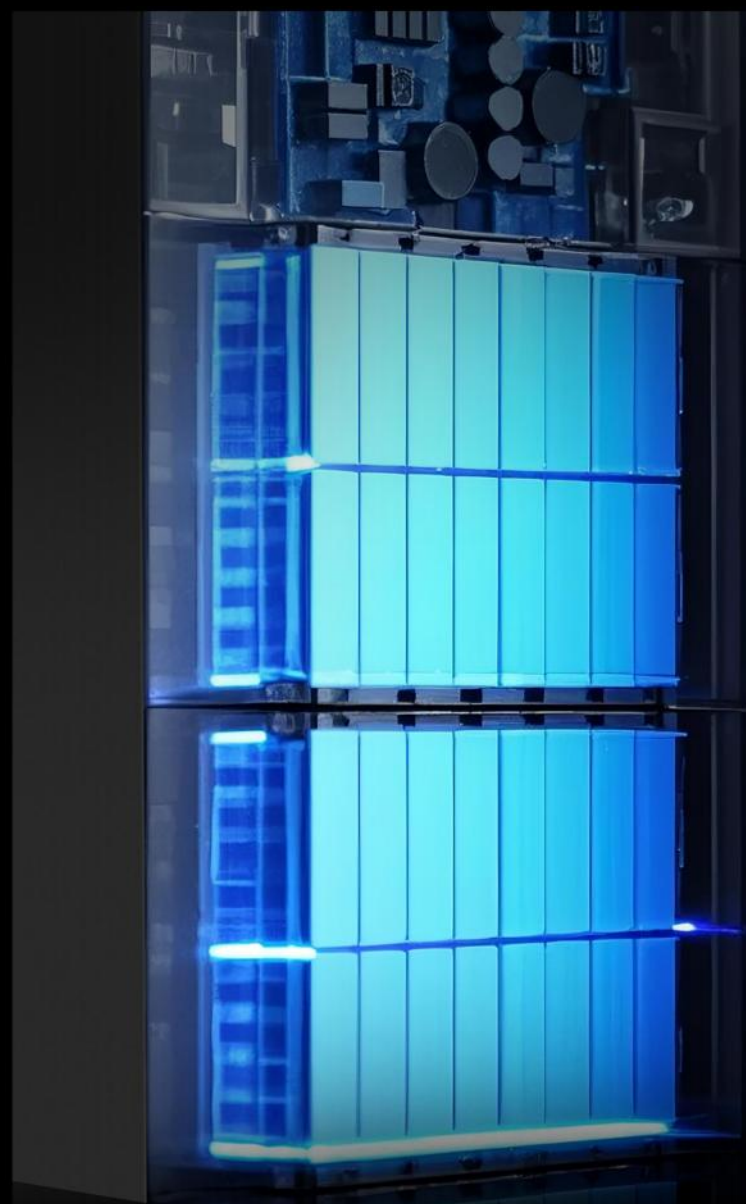
Life Cycles

10

Years Warranty

15

Years Lifespan



10.1"
HD Touchscreen

With Localized EMS



Max. 24kW
4 MPPT



Up to 12kW
Three-Phase Inverter

SG Ready

Heat Pump Integration



Integration of Fuel Generator
for Emergency Charging

Whole-Home Backup

Switchover <10ms



MARSTEK MARS I PLUS

7-in-1 1000V V-Boost Three-Phase Residential ESS

6-in-1 550V V-Boost Single-Phase Residential ESS



V-Boost Battery

Eliminates Battery Imbalance



25kW EV Charging Power 12kW V2X Power

EV DC Charger Required

Compatible with EV AC Charger



AI Optimized

TOU Management for Cost Savings
Command with MARSTEK App



Anti Feed-in

With Smart Meter



Modular Battery | Flexible Expansion

Up to 6 Battery Packs &
30.72kWh



Parallel Scalable Power and Capacity

Up to 48kW &
122.88kWh



Open API for Third-Party EMS Integration

LFP

Battery

6000+

Life Cycles

10

Years Warranty

15

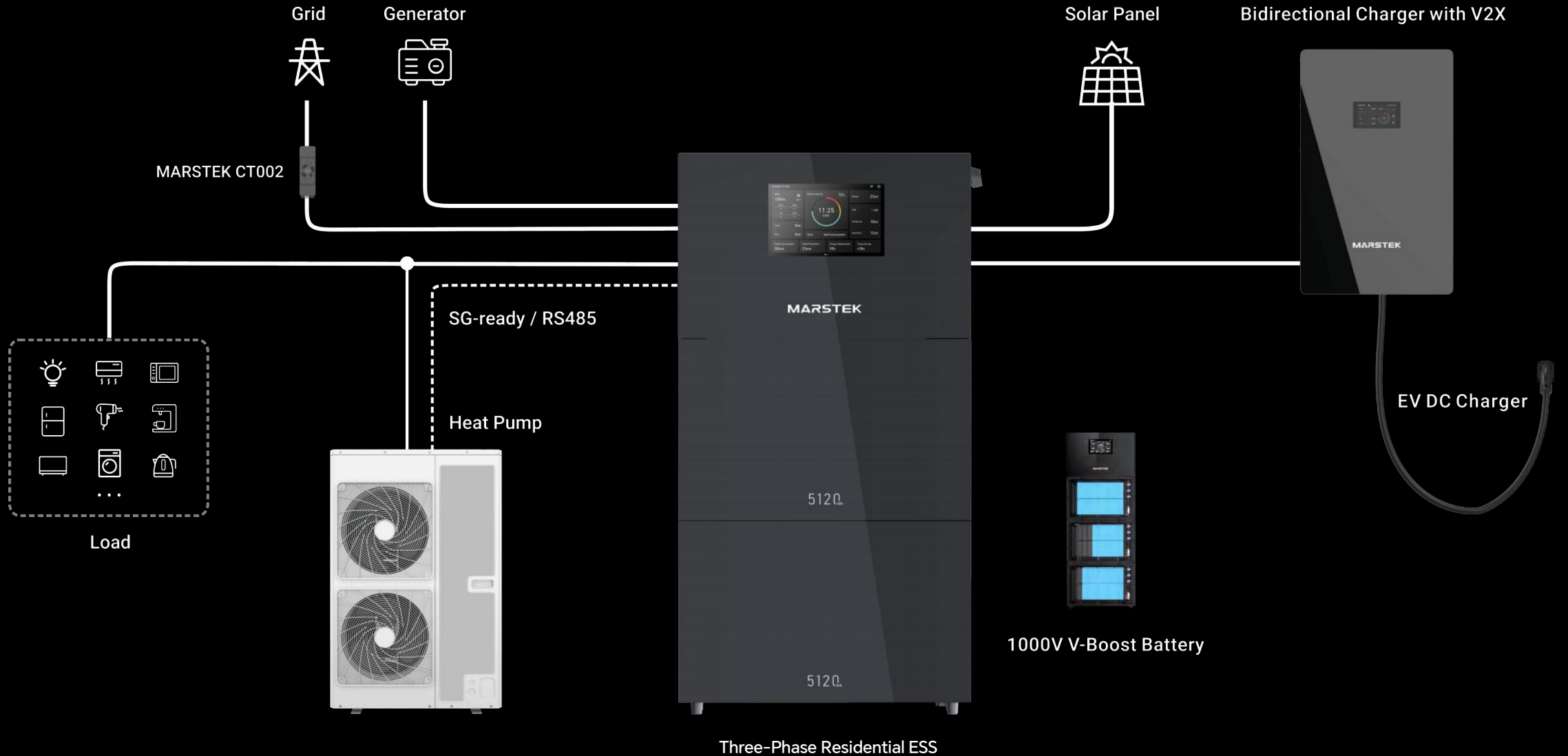
Years Lifespan

-25°C to 60°C

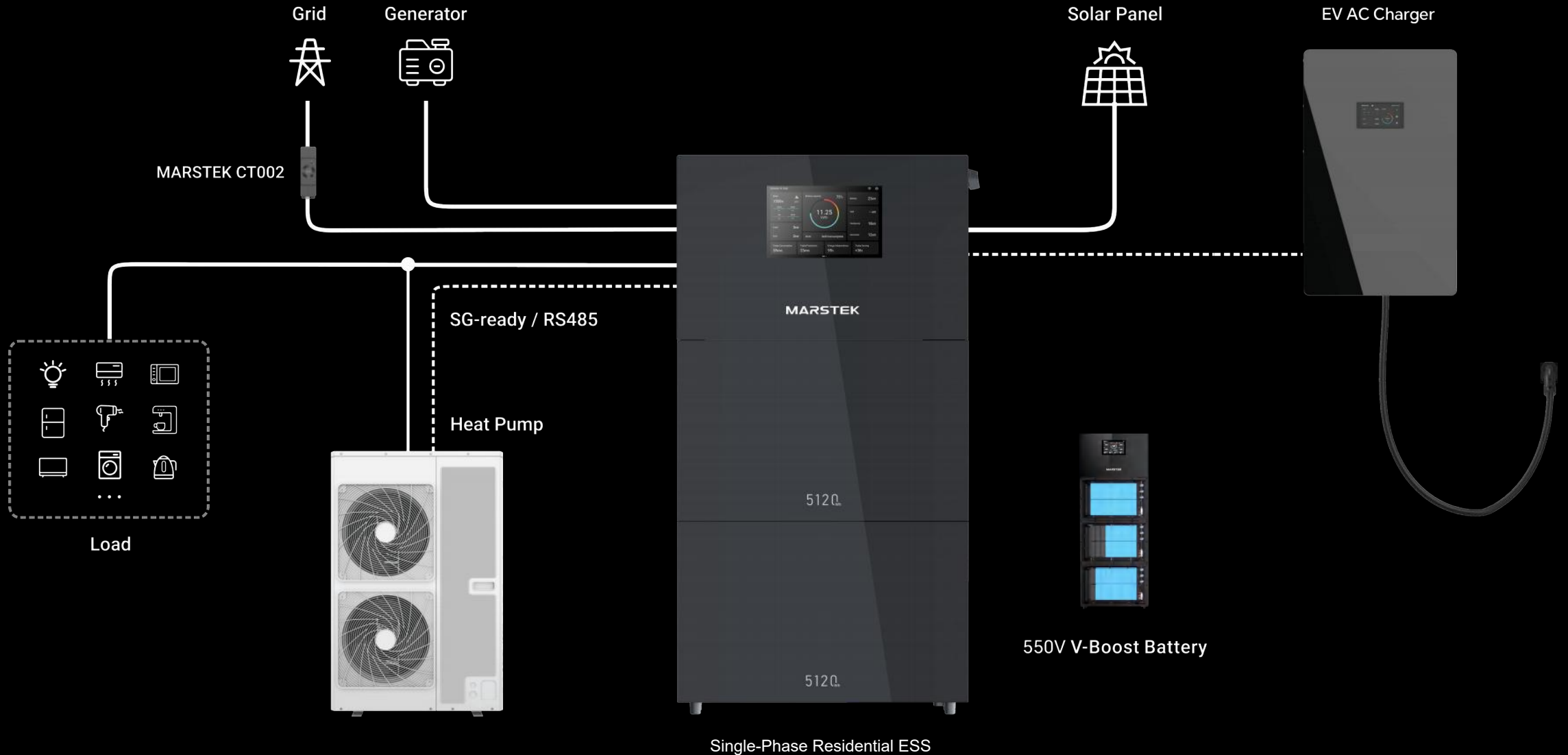
IP65 Waterproof

Sub-30dB

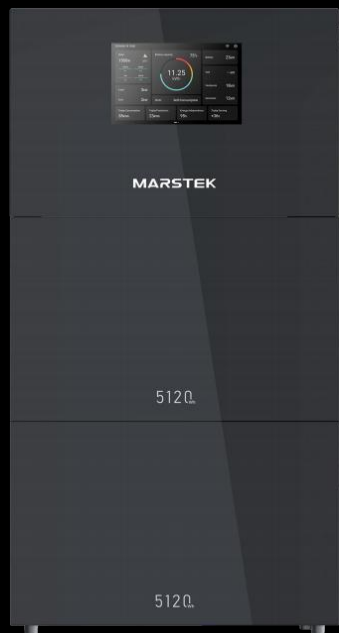
Installation & Wiring Layout for MARSTEK MARS I PLUS



Installation & Wiring Layout for MARSTEK MARS I PLUS

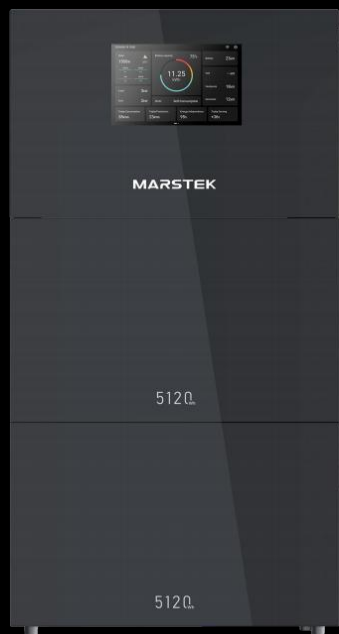


MARS I PLUS-12KTP



Model	MST-MARS I PLUS-12KTP
PV Input	
Max. PV Power	24kW
Max. DC Input Voltage	1000V
Nominal DC Input Voltage	650V
Start-up Voltage	200V
MPPT Voltage Range	200V-850V
Number of MPP. Trackers	4
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	12kW
Nominal Output Current	17.4A
Nominal Output Voltage	380V/400V
Nominal Grid Frequency	50Hz/60Hz
Power Factor	0.8 leading- 0.8 lagging
Total Current Harmonic Distortion	THDi<3%
Max. Input Apparent Power	18kW
Max. Input Current	26.1A
Efficiency	
Max. Efficiency	98.20%
European Efficiency	97.80%
MPPT Efficiency	99.50%
Battery Conversion Efficiency	97.80%
Generator	
Max. Input Apparent Power	18kVA
Nominal Input Voltage	3L/N/PE; 380V/400V
Frequency	50Hz/60Hz
Max. Input Current	27.3A
AC Output (Backup)	
Nominal Output Power	12kW
Max. Output Apparent Power	12.6kVA
Max. AC Output Current	18.3A
Peak Output Current (1s)	150%-200%
Nominal Output Voltage	380V/400V
Power Factor	50Hz/60HZ
Total Voltage Harmonic Distortion	THDv<2%
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	800V
Voltage Range of Battery Module	650V-950V
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*498mm
Weight	55kg
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	<25W
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 (For V2G), RS485 for EMS, Wi-Fi/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

MARS I PLUS-6KTP



Model	MST-MARS I PLUS-6KSP
PV Input	
Max. PV Power	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	6kW
Max. Output Apparent Power	6.6kVA
Nominal Output Current	26.1A
Max. Output Current	30A
Nominal Output Voltage	230V
Nominal Grid Frequency	50Hz/60Hz
Power Factor	0.8 leading~0.8lagging
Total Current Harmonic Distortion	THDi<3%
Max. Input Apparent Power	7.5kVA
Max. Input Current	32.6A
Efficiency	
Max. Efficiency	97.60%
European Efficiency	97.10%
MPPT Efficiency	99.60%
Battery Conversion Efficiency	97.00%
Generator	
Max. Input Apparent Power	7.5kVA
Nominal Input Voltage	230V
Frequency	50Hz/60Hz
Max. Input Current	32.6A
Ac Output (Backup)	
Nominal Output Power	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, Wi-Fi/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, VDE4105:2018, VDE0126-1-1, EN50438, Italy CE10-21

MARS I PLUS-5.0KBAT

5kWh



Marstek Battery	5.0kWh	Units
Performance Specification		
Battery Type	LiFePO4	
Cell Capacity	50	Ah
Number of Battery Strings	32	
Total Energy Capacity	5.12	kWh
Usable Energy Capacity	5	kWh
Battery Modules Voltage Range (Three Phase)	650~950	V
Nonimal Current of Battery Module (Three Phase)	7.7	A
Max. Charge Power	5	kW
Max. Discharge Power	5	kW
Protection		
Safety Protection Feature	Cell and pack OT/UT/OV/UV/OC/SC protection, Type II DC surge protection.	
General Data		
Dimensions (W/H/D)	628*390*194	mm
Weight	63	kg
Relative Humidity Range	0~100%	
Cooling	Natural Cooling	
Standby Power Consumption	10	W
System Ingress Protection Rating	IP65	
Noise Level	30	dB
Communication	Battery Parallel CAN, Inverter Access CAN	
Standard Compliance		
Safety Standard	IEC/EN60730-1, IEC/EN62619, IEC/EN63056 UL1973, UL9540, UL9540A, UL1998	
EMC Standard	IEC/EN61000-6-1~4 Class B FCC Pat 15 Class B	
Transportation	UN38.3	

THANKS!

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