

ES kompakt

The compact solution for energy independence



Colour graphic display



Portal for monitoring
incl. free APP



Emergency power capable &
solar rechargeable



Compact dimensions

More. Future.

Technical specifications

	3000 ES	4500 ES	6000 ES ²
DC inputs			
Maximum input power	3.1 kW	4.7 kW	6.3 kW
Maximum input voltage		600 V	
Minimum input voltage		115 V	
Nominal input voltage		400 V	
FV MPPT voltage range		100 V - 550 V	
DC voltage range - independent MPPTs	100 V - 550 V @ 2 kW	100 V - 550 V @ 3 kW	100 V - 550 V @ 4 kW
DC voltage range - MPPT connected in parallel	100 V - 550 V @ 3.1 kW	100 V - 550 V @ 4.7 kW	100 V - 550 V @ 6.3 kW
Maximum power x MPPT	2 kW	3 kW	4 kW
Maximum MPPT power - maximum imbalance	2 kW @ MPPT1 + 1.1 kW @ MPPT2	3 kW @ MPPT1 + 1.7 kW @ MPPT2	4 kW @ MPPT1 + 2.3 kW @ MPPT2
Maximum input current x MPPT	10 A	15 A	20 A
Short-circuit current x MPPT	15 A	20 A	26 A
Number of MPPTs		2	
Maximum number of strings x MPPT		1 + 1	
Mains frequency		50 Hz	
Battery charge			
Battery type		Lead-acid / Lithium	
Battery voltage range		40 V - 60 V	
Battery current range		35 A (programmable)	
Maximum charging / discharging power		1.8 kW	
Discharge strategy		3 stage, adaptive with maintenance	
Temperature compensation		As standard	
AC inputs			
Mains connection		Single-phase	
AC voltage range		230 Vac \pm 15 % ¹	
Mains frequency		50 Hz	
Maximum input current		32 A	
AC output			
Mains connection		Single-phase	
Sn nominal power	3 kVA	4.5 kVA	6 kVA ²
P maximum active power	3 kW	4.5 kW	6 kW ²
Q maximum reactive power	3 kVA	4.5 kVA	6 kVA ²
AC voltage range		230 Vac \pm 15 % ¹	
Output nominal current	13 A	19.6 A	21.1 A
Contribution to the short-circuit current		32 A	
Mains nominal frequency		50 Hz	
Frequency range		47 Hz - 53 Hz ¹	
Cos ϕ		1 (adj \pm 0.80)	
Maximum smax power in BACKUP		1.8 kVA	
Intervention time		< 5 % sec ¹	
THD		< 3 %	
Protective Devices			
DC polarity reversal		As standard	
Battery polarity reversal		As standard	
Battery overload protection		As standard	
Safety interlock		Integrated	
AC short-circuit protection		As standard	
Isolation monitoring unit		As standard	
interface protection and anti-islanding		In compliance with local legislation	
RCMU (residual current monitoring unit)		As standard	
Battery galvanic isolation		As standard	
DC overvoltage protective device (MOV + surge protector)		As standard	
AC overvoltage protective device (MOV + surge protector)		As standard	
Battery overvoltage protection (MOV)		As standard	



The quality management system of SOLARMAX GmbH is certified according to ISO 9001:2015.

1) The range depends on the grid connection standard valid in the country of installation.

2) Maximum grid feed-in power in Germany limited to 4,5 kVA.

All rights, modifications and errors excepted.

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and start directly!



Until
10 YEARS
Warranty

Technical specifications

	3000 ES	4500 ES	6000 ES ²
Operating performance			
Maximum efficiency		97 %	
European efficiency		96 %	
Battery typical efficiency		94 %	
Equipment			
DC connector		Quick coupling	
AC connector		Screw terminal strip, M25 cable gland	
Battery connection		Screw terminal strip, M25 cable gland	
DC disconnect		As standard	
Battery automatic isolator		Integrated	
AC inputs magnetic thermal circuit breaker		As standard	
AC output magnetic thermal circuit breaker		As standard	
AC-BYPASS switch		As standard	
Display		Graphic Touch Screen 4.3" colour LCD	
Interface		USB, CAN Bus, Ethernet, RS485 (optional), WLAN (optional via USB-Stick)	
External alarm signal		As standard	
Data logger		Integrated	
Standard warranty		5 years, 10 years (optional)	
Ambient conditions			
Ambient temperature		- 20 °C ... + 60 °C	
Power derating temperature range		+ 40 °C ... + 60 °C	
Storage temperature		- 30 °C ... + 70 °C	
Relative humidity		5 % ... 95 % without condensation	
Noise levels		< 50 dB(A) @ 1 m	
Maximum operating altitude		2,000 m (without derating)	
Standard data			
Protection class		IP21	
Overvoltage category (IEC 62109-1)		II (DC battery, generator inputs)	
Ventilation		I-cool	
Dimensions (W x H x D)		476 mm x 730 mm x 160 mm	
Weight		21 kg	
Fitting system		Wall bracket	
Safety			
Protection class		I	
Insulation level DC - AC		Transformerless	
Insulation level battery - AC and DC		Safety transformer	
Certifications		CE	
EMC and safety standards		EN 62109-1; EN 62109-2; EN 61000-6-2; EN 61000-6-3; EN 61000-3-2; EN 61000-3-3; EN 61000-3-11; EN 61000-3-12	
Mains connection standards		VDE 0-126-1-1; VDE AR-N 4105	



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Lithium-ion batteries

Pylontech US2000 Plus

LiFePO4 Modular batteries of the latest generation

The Pylontech US2000 Plus lithium-battery represents the latest technological frontier for storage applications for photovoltaic systems and offers an extended 10-year warranty. The simplicity and modularity of the US2000 Plus (capacity of 2.4 kWh) makes it suitable for the implementation of small and large capacity energy storage systems that can be expanded to meet current and future energy needs.

LiFePO4 lithium technology also offers the following advantages:

- Expandable at any time, as each unit has its own BMS.
- The internal molecular structure of LiFePO4 batteries is more stable and therefore safer.
- Scalable from 2.4 kWh to 19.2 kWh.



Tested and certified for the perfect operation with the Storage system ES kompakt and the ES-AC series from SOLARMAX

Technical data*



US2000 Plus

Exit	
Nominal voltage	48 V
Rated current	50 A
Capacity	2.4 kWh
Operating voltage	45 V - 54 V
Charging voltage	52.5 V - 54 V
Maximum peak discharge current	100 A per 1 minute
Maximum peak charging current	100 A per 1 minute
DOD	90 %
Data bus	
Communication bus	RS232, RS485, CAN
Communication protocol	YD/T 1363.3-2005
Environment & dimensions	
Number of cycles	> 6.000 with 90 % DOD
Dimensions	440 mm x 89 mm (2U) x 410 mm
Weight	24 kg
Discharge temperature range	- 10 °C ... 50 °C
Charging temperature range	0 °C ... 50 °C
Storage temperature range	- 40 °C ... 80 °C
Rules in force	Transport: UN3090 / EMC: IEC 61000, EN 55022 / surrounding: GB/T 2423 / Seismik: GR-1089
Markings	TÜV, CE, UN38.3, TLC



(*) All data of the battery manufacturer can be found on the internet. Subject to change without notice.

The US2000 Plus lithium-ion battery is a product of from Pylontech.