

# Solar Hybrid Power Solution



## PowerCube 1000 S1: Pure Solar Solution

### Introduction

Pure solar power system S1 provides power for low/medium power loads from 0 to 1.5 kW in some areas with enough sunshine but poor grid or off grid, and implements intelligent alternate working mode of solar and batteries and intelligent self-adapting scheduling logic, maximize solar energy utilization efficiency and provides the most economical power.

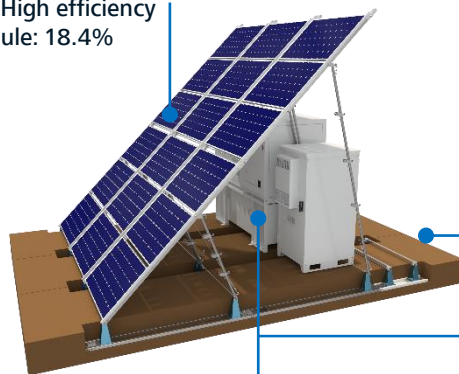
### Features

- Leading SolarMax technology
- Compact controller with MPPT technology
- Remote energy management by NetEco (optional)
- Smooth evolution and easy expansion
- 3 level anti-theft design

### Scenarios

- Off grid or poor grid areas
- Adequate sunshine
- Outdoor (mountainous area or isolated islands)
- Require environment protection

300Wp High efficiency  
PV module: 18.4%



Solar cycle battery or  
temperature cycle battery



BoostLi Energy  
Storage Module



Unified controller  
with advanced  
SolarMax technology



High precision MPPT:  
up to 99.8%

### Configuration



Solution1 (Outdoor)



Solution2 (Outdoor)



Solution3 (Outdoor)



Solution4 (Indoor)

## Specifications

Solution Type		Solution1 (Outdoor)	Solution2 (Outdoor)	Solution2 (Outdoor)	Solution3 (Indoor)
Condition	Typical Load	< 1.5 kW			
	Energy Input	Solar			
	Photovoltaic Array	Max. 3000Wp (1 controller) Max. 3 controllers parallel	Max. 24000Wp	Max. 24000Wp	Max. 24000Wp
Configuration	Integrated Cabinet	ICC100-N5 + ESC300-N1	ICC330-H1-C2 + ESC330-D3 + ESC300-N1 / ESC710-D2	ICC330-HD1-C1+ ESC330-D3 + ESC300-N1 / ESC710-D2	ICC200-N1-C5 + battery shelf
	Battery Type	TCB-A/SCB-A/DCB-A, Max.4 cabinet, 800Ah/Cabinet	TCB-A/SCB-A/DCB-A, Max.4 cabinet, 800Ah/Cabinet ESM-4850A1, Max. 50Ah*32		
	Solar Supply Unit	/	Max. 8 × S4850G1		
	Controller	ICC100-N5	ECC500S		
System	Installation Mode	Pole-mounted/Wall-mounted	Ground installation		
	Cabling Mode	From the bottom			From the top
	Cooling for Equipment	Natural cooling	HEX: 150 W/K		Natural cooling
	Cooling for Battery	Natural cooling		Direct ventilation	Natural cooling
	Maintenance Mode	From the front			
	Protection Level	Equipment cabinet: IP55 Battery cabinet: IP34			Equipment cabinet: IP20 Battery cabinet: NA
	Noise Level	≤ 65 dB(A) @ 1.5 m, satisfy the GR487 standard			
	Remaining Space <sup>1</sup>	N/A	21 U (according to the actual configuration of ATO pre- installation)	7 U (according to the actual configuration of ATO pre- installation)	34 U (according to the actual configuration of ATO pre- installation)
	MTBF	> 100,000 hours			
	DC Distribution	DCDU Type	N/A	DCDU-400AN2	
Output Voltage		-48 Vdc			
Maximum Capacity		Max. 50 A	Max. 400 A		
Battery Branch		1 × 100 A MCB	2 × 250 A Fuse		
BLVD Branch <sup>2</sup>		1 × 100 A MCB	1 × 63 A MCB, 4 × 32 A MCB, 2 × 16 A MCB (LLVD2)		
LLVD Branch		1 × 32 A MCB, 2 × 10 A MCB	2 × 80 A MCB, 2 × 63A MCB (LLVD1)		
SPD		10/20 kA (8/20μs)			
Environment	Operating Temperature	Equipment cabinet: -20°C to +45°C (including solar radiation) Battery cabinet: ESC330-D3: 0°C to +40°C (Cabinet installed under the PV structure) ESC300-N/ESC710-D: -10 °C to +40 °C (-10 °C to +45 °C if integrated with TCB-A) + solar radiation			-10°C to +45°C
	Storage Temperature	-40°C to +70°C			
	Operating Humidity	5% to 95% (no condensation)			
	Altitude	0 to 4000 m (1°C per 200 m temperature derating from 2000 to 4000 m)			

1. The remaining space for customer use should according to the actual configuration of equipments

2. DCDU-400NA2: LLVD load connect to LLVD1 , BLVD load connect to LLVD2

### Remark:

■ DCDU: Direct Current Distribution Unit ■ PSU: Power Supply Unit ■ BCU: Battery Charge Unit ■ SPD: Surge Protective Device

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