

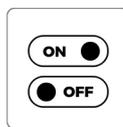
# All-In-One Hybrid System 510

## YOUR ALMIGHTY KNIGHT

This residential ESS is with 3.6/5kW hybrid single-phase inverter and 10kWh battery module. This product can capture more precise data for stricter VPP requirements. Also, in off-grid scenario, this one has better performance and can work parallel.



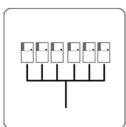
Load Detection <10W



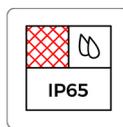
UPS Ability, On/Off  
Switch < 10ms



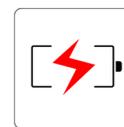
24/7 App  
Monitor & Control



Max. 6PCs Parallelable



IP65 Waterproof



Wide DC Voltage  
180-550V

Inverter Model	BW-INV-SPH3.6K	BW-INV-SPB5K	BW-INV-SPH5K
<b>Battery Input</b>		<b>Li-Ion / Lead-acid</b>	
Nominal Battery Voltage		96V	
Battery Voltage Range		75-400V	
Max. Charging Current	45A	65A	65A
Max. Discharging Current	45A	65A	65A
<b>PV Input</b>			
Max. PV Input Power	7.36kW	-	10kW
Max. PV Input Voltage	580V	-	580V
MPPT Range	100-550V	-	100-550V
Full Load MPPT Range	125-550V	-	180-550V
Startup Voltage	100V	-	100V
Max. Input Current	15A/15A	-	15A/15A
Max. Short Circuit Current	18.75A/18.75A	-	18.75A/18.75A
<b>Grid Port</b>			
Rated Output Power	3.68kVA	5kVA/4.6kVA(DE)	5kVA/4.6kVA(DE)
Max. Input Power	7.36kVA	10kVA	10kVA
Rated Grid Voltage		230Vac	
Grid Voltage Range		180-270Vac	
Rated Grid Frequency		50/60Hz	
Power Factor		-0.8~+0.8	
THDi		<3%	
<b>Backup Port</b>			
Max. Backup Power	7.36kVA/7.36kW	10kVA/10kW	10kVA/10kW
Rated Backup Voltage		230Vac	
Rated Backup Frequency		50/60Hz	
THDv	<3% (Linear Load) / <5% (Non-linear Load)		
DCV		<100mV	
Crest Ratio		3:1	
Transfer Time		<10ms	
<b>Efficiency</b>			
Max. Efficiency	97.3%	-	97.3%
Europe Efficiency	96.2%	-	96.2%
MPPT Efficiency	99.9%	-	99.9%
Round Trip Efficiency	90%	90%	90%
<b>System</b>			
Operating Temperature Range		-20~60°C	
Relative Humidity		0-95% (No Condensing)	
Operating Altitude		≤4000m	
Cooling		Nature Convection	
Noise		<30dB	
Topology		Transformerless	
Dimensions (W*H*D)		610x370x200 mm	
Protection Degree		IP65	
Weight	18kg	18kg	19.5kg
Warranty		5 years / 10 years (optional)	
<b>HMI &amp; Comm.</b>			
Communication with BMS		CAN / RS-485	
Load Monitoring		Meter / CT / Backup box	
External Communication		RS-485 / WIFI / 4G / Ethernet	
User Interface		LED / LCD	
<b>Certificate</b>			
Grid Regulation	CEI 0-21, VDE 4105-AR-N, VDE 0126-1-1, EN 50438, G99, G100, AS4777.2 NRS 097, EN 50549, C10/C11, UNE, UTE, NCRfC/PTPIREE		
Safety Regulation	IEC 62109-1&2; IEC 62477		
EMC EN 61000-6-1,	EN 61000-6-2, EN 61000-6-3, EN 61000-6-4		
<b>Note: Specifications are subject to change without advance notice.</b>			

<b>Battery</b>		<b>BW-BAT-10.1P</b>
<b>Electrical</b>		
Battery Capacity	10.1kWh	
Usable Capacity	9.7kWh	
Depth of Discharge (DoD)	96%	
Nominal Voltage	96V	
Operating Voltage Range	91.5-106.5V	
Internal Resistance	<30 mΩ	
Cycle Lifetime	8000	
<b>Operation</b>		
Max. Charging Current	52.5A	
Max. Discharging Current	52.5A	
Operating Temperature Range	-10-50°C	
Relative Humidity	0-95% (No Condensing)	
<b>Physical</b>		
Battery Type	LFP	
Weight	95kg	
Dimensions (W*H*D)	610x690x200 mm	
Protection Degree	IP65	
Warranty	5 years product warranty, 10 years performance warranty	
<b>BMS</b>		
Modules	1~6 in parallel	
Capacity	10.1 / 20.2 / 30.2 / 40.3 / 50.4 / 60.5 kWh	
Usable Capacity	9.7 / 19.4 / 29.0 / 38.7 / 48.4 / 58.1 kWh	
Communication	CAN / RS-485 (Optional) 90%	
<b>Certificate</b>		
Transportation	UN38.3	
Safety Regulation	IEC 62619 (Call and Pack)	
EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	

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