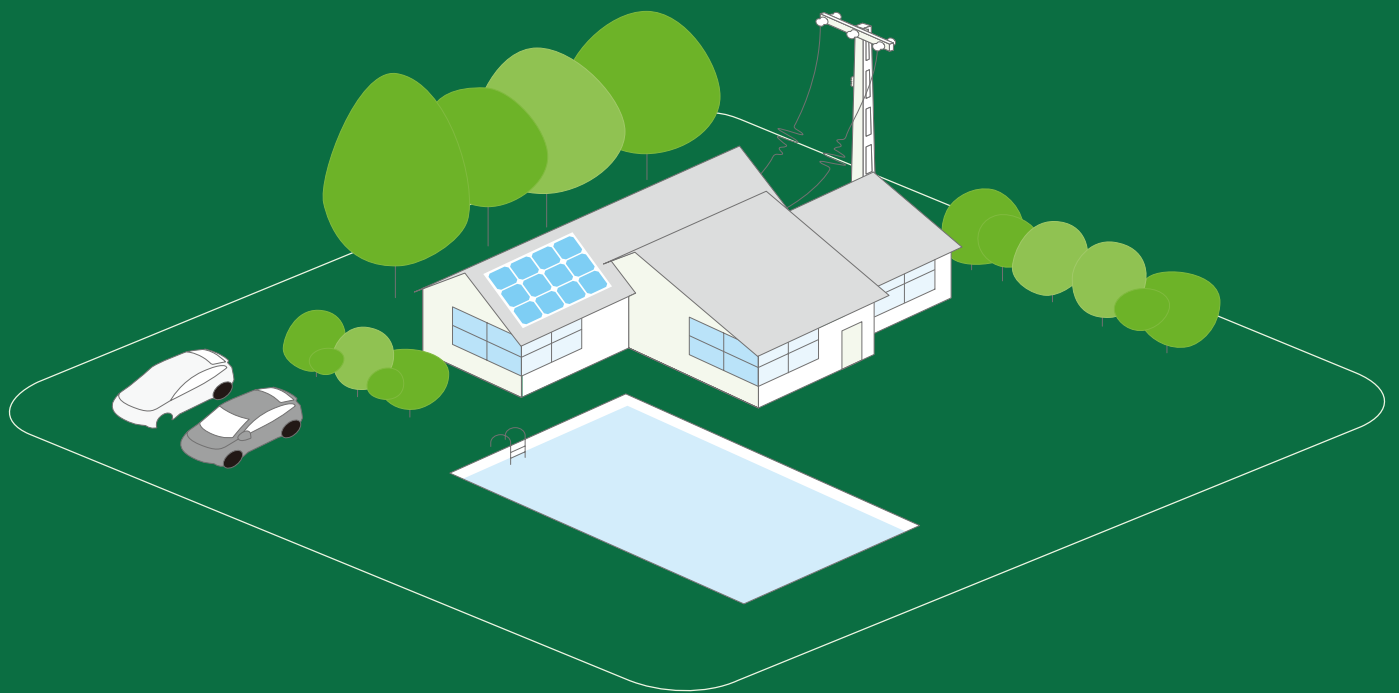




ALL IN ONE SOLAR SYSTEM

RESIDENTIAL HYBRID
PHOTOVOLTAIC SOLAR SYSTEM KIT





RESIDENTIAL HYBRID

5KW-8KW-10KW-12KW



Product Description

Sunpal Power's Hybrid PV kits combine the innovation of both on-grid and off-grid technologies and are offered as grid-tied solar with battery storage. Similar to the on-grid benefits, Sunpal Power's hybrid systems generate power that can be used and/or stored using either a Lithium Iron Phosphate Battery Bank or Lead Acid Gel Battery Bank. Any excess energy can be sold back to the utility company (if net metering is available), when the utility rates are higher thus lowering your return on investment.

Our hybrid systems seamlessly adjust to fluctuations in power from both the utility and the solar array maximizing the energy storage and consumption. With a number of different configuration settings users can decide when and how much energy is stored or sold back to the utility. Integration has never been easier or more simplified, our single unit inverter allows seamless integration with solar array and battery bank.

Product Benefits

- Can operate in on-grid or off-grid mode
- Sell power back to the grid or store excess power for later use
- Use grid power or solar energy to charge the battery bank

Common Application

- Residential locations with unstable grids
- Locations that do not allow net metering
- People who want to take advantage of the utility rate changes
- Those who cannot afford to lose power or have power outages

RESIDENTIAL ON/OFF HYBRID

PV Kits

Include

- Solar modules
- Hybrid inverter/charger
- Custom mounting system
- Battery bank
- Main disconnect box
- PV, battery bank & ground wiring harnesses
- Wire management kits



System MODEL	SP5KW-HY	SP8KW-HY	SP10KW3-HY	SP12KW3-HY
PV System Size Nominal (kWp)	5.5	8.8	11	13.2
PV MODULE SPECIFICATIONS (*half cell mono)				
Power (W)			550	
Vmp (V)			41.96	
Voc (V)			49.90	
Isc (A)			14.00	
Imp (A)			13.11	
Dimensions (L x W x H) (mm)		2279*1134*35		
PV Module weight (kg)		28.6		
Certifications	CE / TUV (IEC 61215 & IEC 61730) / UL (UL1703)			

*Polycrystalline PV modules also available up on request

INVERTER SPECIFICATIONS

Inverter Size (kW)	5	8	10	12
Max DC Power (W)	6500	10400	13000	15600
Max DC Voltage (V)	500	500	1000	1000
Start-up Voltage(V)	150	150	160	160
MPPT Voltage Range(V)	150-425	125-425	200-650	200-650
Number of MPPTS			2	
Strings per MPPT	1+1	2+2	2+1	2+1
Max. AC Current(A)	20.8	33	23	27
Output Frequency			50/60Hz	
Output Voltage	220,230Vac	220,230Vac	220/380,230/400Vac	220/380,230/400Vac
Grid Type	Single Phase	Single Phase	Three Phase	Three Phase
Pack Dimensions(WxHxD)(mm)	789*490*357	880*600*360	890*610*460	890*610*460
Inverter Weight GW(kg)	25	37.5	46	46
Grid Regulation	CEI 0-21, VDE-AR-N 4105, NRS 097, IEC 62116, IEC 61727, G99, G98, VDE 0126-1-1, RD 1699, C10-11			
Safety EMC/Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2			

UPS (Off Grid Model with Battery)

Rated Power (VA)	5000	8000	10000	12000
Max DC Charge/Discharge Current(A)	120	190	210	240
*Max Power(W)for 10 Seconds	7500	12000	15000	18000

*Assumes PF = 1

BATTERY BANK SPECIFICATIONS

Battery Type	Li-Ion(LifePO4)			
Total Batteries	1	2	3	4
Battery Bank Power(kWh)	4.8	9.6	14.4	19.2
Battery Voltage (V)			48	
Battery Current(Ah)			100	
Battery Bank Voltage(V)			48	
Battery Bank Current(Ah)	100	200	300	400
Full Cycles(80% DoD)			6000	
Connection			Parallel	
Certifications	UN38.3,MSDS,UL1973(Cell),IEC62619(Cell)			
Warranty(Years)	10			

*Lead Acid batteries available upon request

BOS

DC / AC Disconnect	2/2	2/2	2/2	2/2
*PV Wire Harness - 4mm (m)	200	300	300	300
*MC4	10	10	10	10
Battery Cables	Included			

*Extra wire is available up request

SYSTEM LAYOUT

Number of PV Modules	10	16	20	24
PV Array Surface Area (m²)	25.9	41.4	51.7	62
PV Array Weight (kg)	286	457.6	572	686.4
PV String	No. of PV Modules / String	5	8	10
	Total Strings	2	2	2
	String Voc (V)	249.5	399.2	499
	String Vmp (V)	209.8	335.68	419.6
	String Imp (A)		13.11	503.52

PRODUCTION ESTIMATES (kWh AC)

*Projectd Yearly Output at 4 PSH / Day	20.2	32.4	40.5	48.6
*Projectd Yearly Output at 5 PSH / Day	25.3	40.5	50.6	60.7
*Projectd Yearly Output at 6 PSH / Day	30.4	48.6	60.8	72.9

*Based on 85% system efficiency (formula = DC Power x Peak Sunshine Hours / Day x System Efficiency) (PSH = Peak Sunshine Hours)

SYSTEM OPTIONS

Monitoring Device	Wi-Fi or GPRS
PV Module Type	Monocrystalline
Mounting System Types	Metal Roof,Asphalt Shingle,Tile Roof,Tin Roof,Flat Concrete
Inverters Stacked	Up to 16
Battery Bank	Lead acid battery optional

SHIPPING

PV Kit Weight (kg)	420	640	770	1000
PV Kit Shipping Size	2290*740*1144	2290*930*1144	2290*1110*1144	2290*1490*1144
Total Number of Boxes	1	1	1	1

SP12KW-HY

