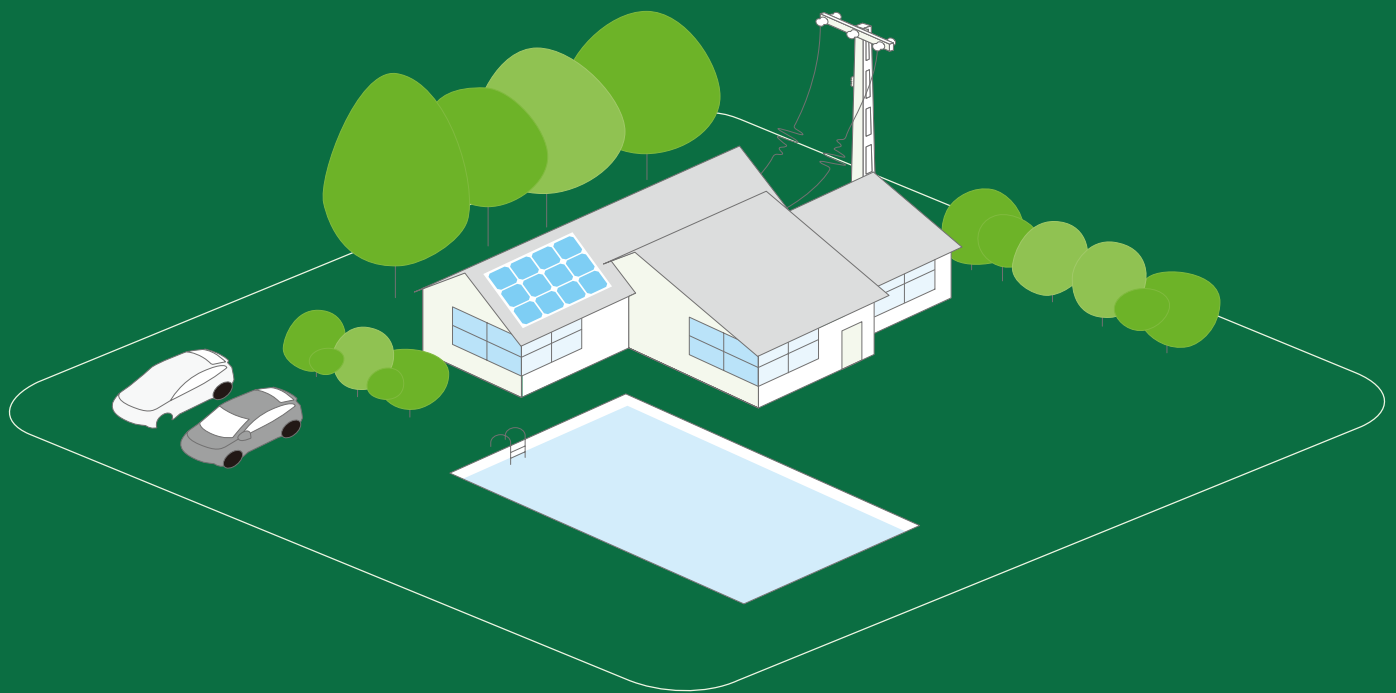




ALL IN ONE SOLAR SYSTEM

RESIDENTIAL HYBRID
PHOTOVOLTAIC SOLAR SYSTEM KIT



RESIDENTIAL HYBRID 3KW-5KW-10KW



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



PRODUCT MODEL	SP3KW-HY	SP5KW-HY	SPI0KW3-HY
PV System Size Nominal (kWp)	3.36	5.6	11.2
PV MODULE SPECIFICATIONS (*Mono)			
Power (W)		280	
Vmp (V)		31.8	
Voc (V)		38.8	
Isc (A)		9.33	
Imp (A)		8.81	
Dimensions (L x W x H) (mm)		1650*992*35	
PV Module weight (kg)		18.6	
Certifications	CE / TUV (IEC 61215 & IEC 61730) / UL (UL1703)		

*Polycrystalline PV modules also available up on request

INVERTER SPECIFICATIONS

Inverter Size (kW)	3	5	10
Max DC Power (W)	4000	6000	13000
Max DC Voltage (V)	600	600	1000
MPPT Voltage Range (V)	125 - 550	125 - 550	330 - 800
Number of MPPTS	1	1	2
Nominal AC Power (W)	3000	4999	10000
Max Output Current (A)	14.4	21.7	16
AC Nominal Voltage / Voltage Range (V)	230 / 180-270	230 / 180-270	400 / 360 -440
AC Grid Frequency Range (Hz)		50 / 60	
Number of Phases	1	1	3
Dimensions (W x H x D) (mm)	460 x 477 x 181.5	460 x 477 x 181.5	655 x 465 x 208
Inverter Weight (kg)	26.9	26.9	40
Certifications	IEC62109-1-2 / IEC62040 / EN61000-6-1 / EN61000-6-2 / EN61000-6-3 VDE0126-1-1 A1:2012 / VDE-AR-N4105 / G83 / G59 / AS4777 / EN50438 / CEIO-21 / VDE2510		

EPS (Off Grid Model with Battery)

Rated Power (VA)	4000	5000	10000
Max Charge / Discharge Current (A)	20	20	25
*Max Power (W) for 10 Seconds	8000	8000	16000

*Assumes PF = 1

BATTERY BANK SPECIFICATIONS

Battery Type	Li - Ion (LifePO4)		
Total Batteries	2	4	8
Battery Bank Power - Total (kWh)	4.8	9.6	19.2
Battery Voltage (V)		48	
Battery Bank Voltage (V)	96	192	384
Battery Current (Ah)		50	
Battery Bank Current (Ah)		50	
Full Cycles (At Designed 80% DoD)		4000	
Connection		Series	
Certifications		TUV / CE	
Design Life (Years) / Warranty (Years)		>10 / 5	

*Lead Acid batteries available upon request

BOS

DC / AC Disconnect	1 / 1	2 / 1	2 / 1
*PV Wire Harness - 4mm (m)	100	200	200
*Ground Wire - 4mm (m)	30	50	100
Battery Cables		Included	

*Extra wire is available up request

SYSTEM LAYOUT

Number of Modules	12	20	40	
PV Array Surface Area (m ²)	20.4	34	68	
PV Array Weight (kg)	223.2	372	744	
PV Module	No. of PV Modules / String	12	10	20
String	Total Strings	1	2	2
	String Voc (V)	465.6	388	776
Configuration	String Vmp (V)	381.6	318	636
	String Imp (A)		8.81	

PRODUCTION ESTIMATES (kWh AC)

*Projectd Yearly Output at 4 PSH / Day	11.4	19.0	38.1
*Projectd Yearly Output at 5 PSH / Day	14.3	23.8	47.6
*Projectd Yearly Output at 6 PSH / Day	17.2	28.6	57.1

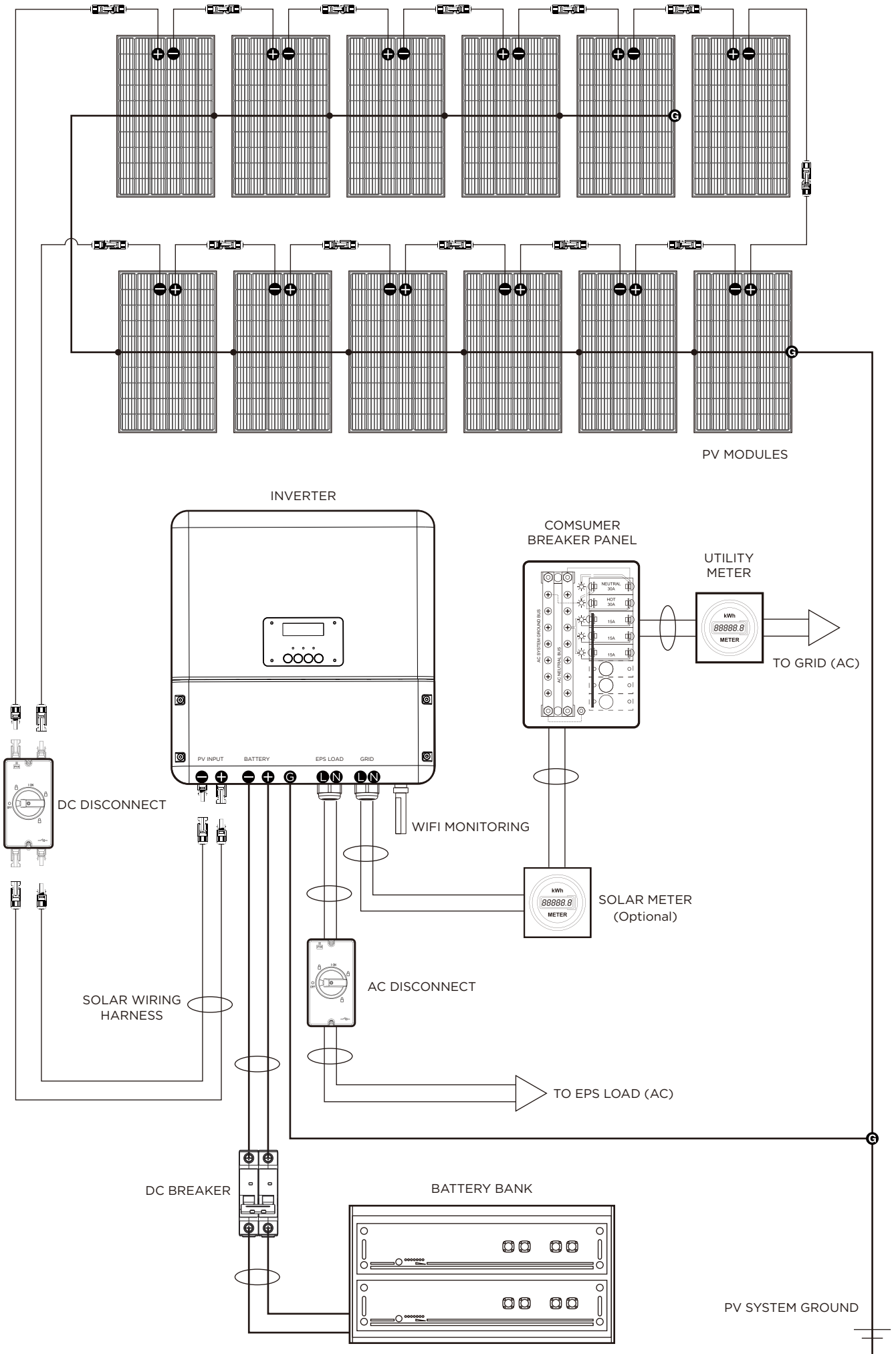
*Based on 85% system efficiency (formula = DC Power x Peak Sunshine Hours / Day x System Efficiency) (PSH = Peak Sunshine Hours)

SYSTEM OPTIONS

Monitoring Device	Wi-Fi or GPRS
PV Module Type	Monocrystalline(Poly also available upon request)
Mounting System Types	Metal Roof,Asphalt Shingle,Tile Roof,Tin Roof,Flat Concrete
Inverters Stacked	Up to 10
Battery Bank	Li-Ion or Lead Acid

SHIPPING

PV Kit Weight (kg)	431	689	1070
PV Kit Shipping Size	1.7 x 0.7 x 1 / 0.5 x 0.5 x 0.5	1.7 x 1 x 1 / 0.5 x 0.5 x 0.5	1.7 x 1 x 1 / 0.5 x 0.5 x 0.5
Total Number of Boxes	2	2	4





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