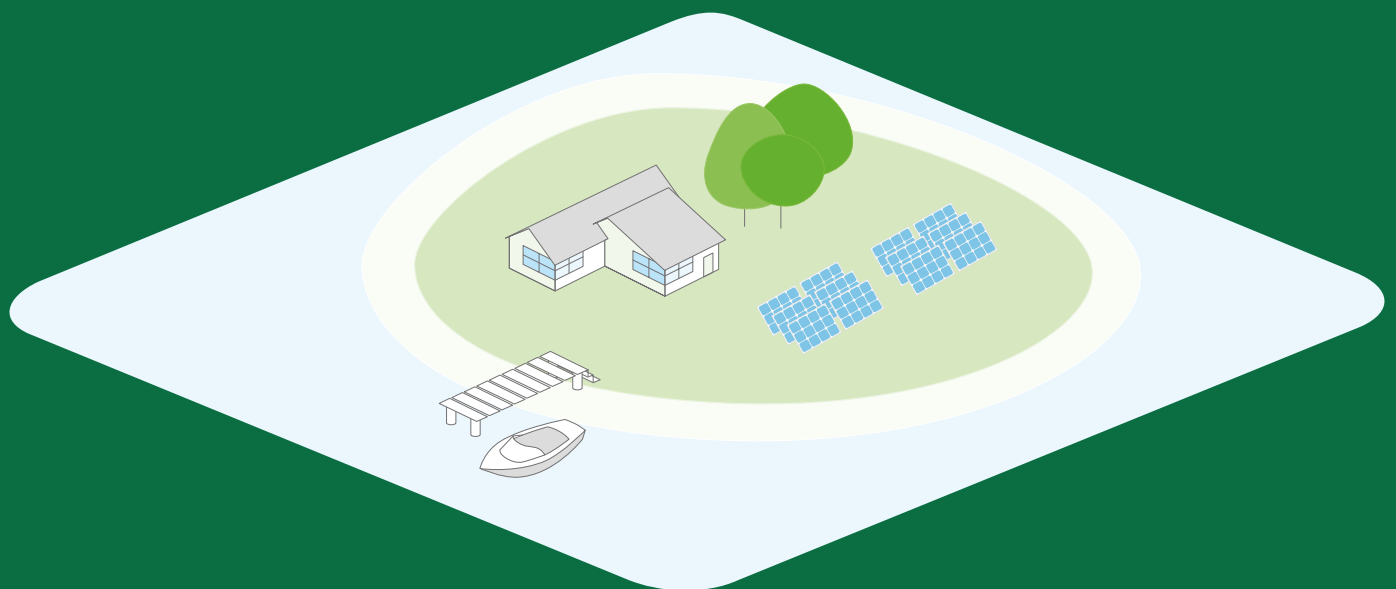



COMPLETE SOLAR POWER SYSTEM

10KW / 20KW OFF GRID
PHOTOVOLTAIC SOLAR SYSTEM



A large-scale off-grid solar system installation is shown. In the foreground, several rows of dark blue monocrystalline solar panels are mounted on a metal frame. The panels are tilted towards the sky. In the background, more solar panels are visible, supported by a series of concrete pillars. A yellow warning sign with a triangle and the text "AREA TEGANGAN TINGGI" (High Voltage Area) is attached to one of the metal frames. The sky is overcast with grey clouds, and palm trees are visible in the distance.

OFF GRID SOLAR SYSTEM

10KW-20KW SINGLE PHASE



Product Description

Total electrical independence starts here. Sunpal Power has carefully designed and engineered all of our off-grid solar power systems to be faster and easier to install. Our off-grid solar power systems produce zero emissions, are noiseless, and easy for installation.

Standard Grid-tie systems will not provide electricity directly to your house during a power outage due to safety regulations (anti-islanding) even if the solar modules are producing DC current. Off-grid systems are independent of the standard utility grid, and can typically deliver the equivalent expectations of the traditional grid.

Whether you will be using an off-grid solar system for your remote cabin, your place of business, or your full-time residence, Sunpal Power has an off-grid solution that can fit almost any installation requirement.

Product Benefits

- Become completely energy independent
- Reduce the burning of fossil fuels for a healthier environment
- Eliminate the problems of grid blackouts

Common Application

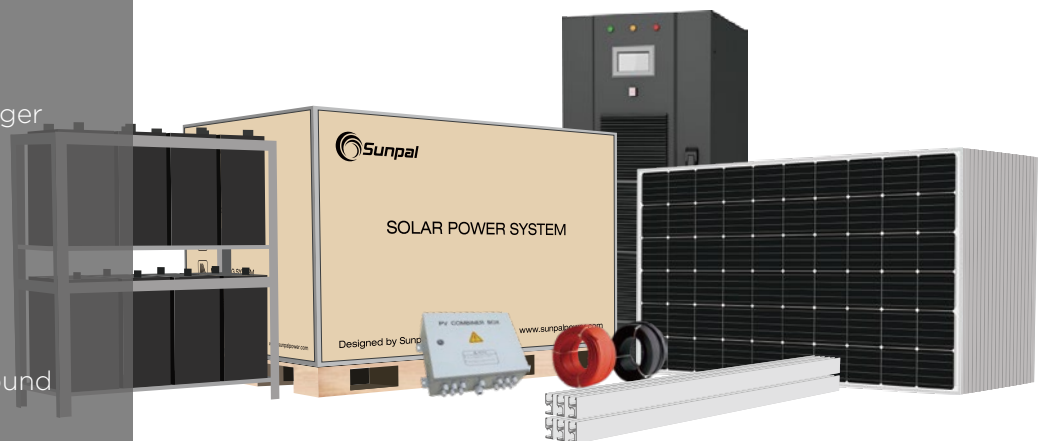
- Installation sites where bringing in the electricity from the grid is too expensive or difficult
- Locations where liquid fuel costs are too high or difficult to maintain
- Those looking to be completely independent from the grid
- Those who cannot afford to lose power or have power outages

OFF-GRID SOLAR SYSTEM

PV System

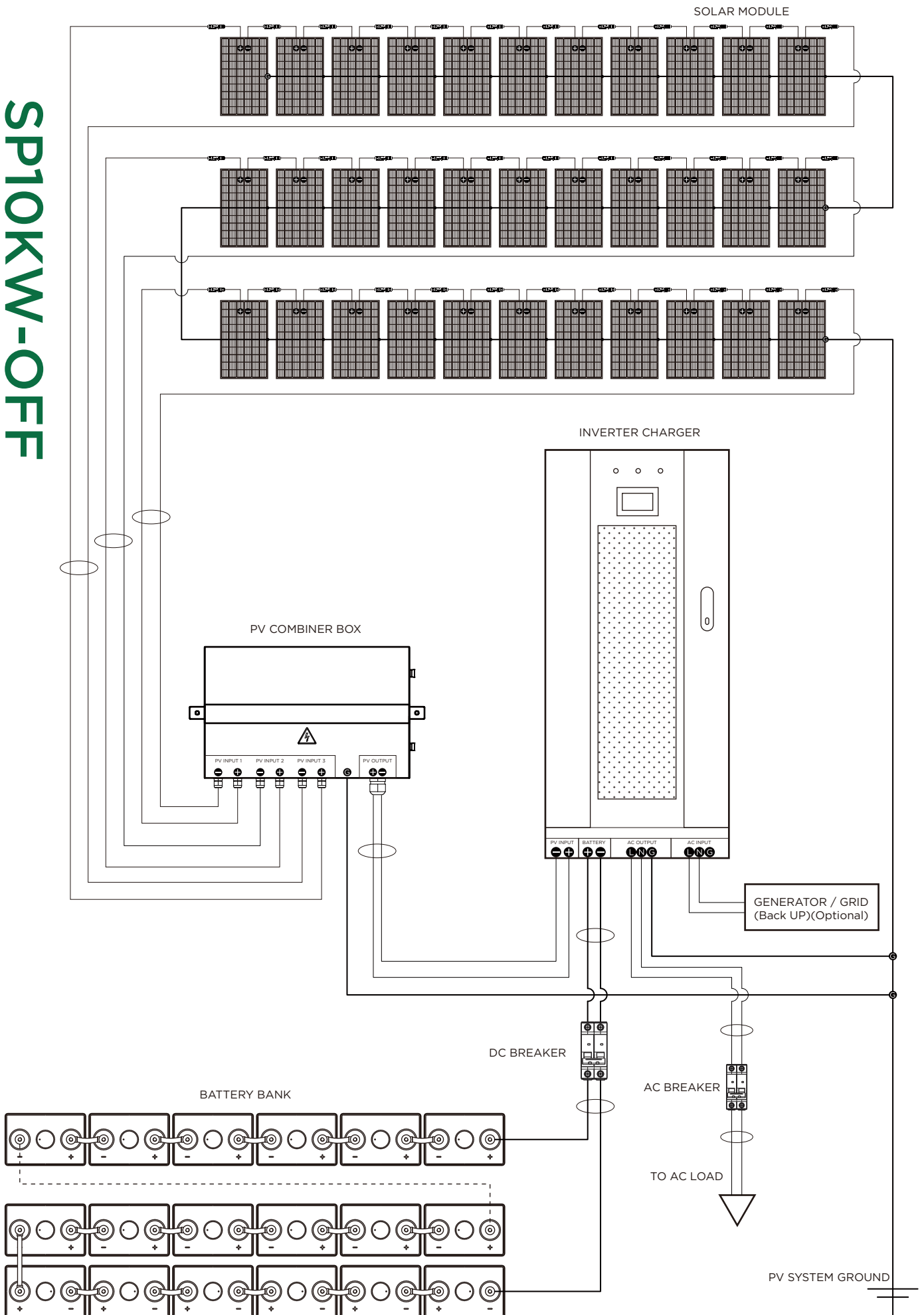
Include

- Solar modules
- Off-Grid inverter/charger
- Battery bank
- PV combiner box
- PV mounting system
- Battery bank rack
- PV, battery bank & ground wiring harnesses
- Wire management kits



PRODUCT MODEL	SPI0KW-OFF	SP20KW-OFF
PV System Size Nominal (Inverter Power) (kVA)	10	20
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/CHARGER SPECIFICATIONS		
Rated Output Power (kVA / kW)	10 / 8	20 / 16
Peak Power (kVA / kW)	30 / 24	60 / 48
Over Load Capacity	105%-110%, 10mins; 110%-125%, 1min; >125%,10s	
AC Voltage	L / N / PE, 220 / 230 / 240VAC	
AC Frequency (Hz)	50 / 60 ±5%	
Battery Voltage (V)	220	
MPPT Charge Current (A)	50	100
PV Input Power (W)	11000	22000
PV Voltage Range (V)	250 - 450	
Protections	Input over/under voltage, output over/under voltage, overload, short circuit over temperature, reverse polarity, lightning surge protection	
Wave Form	Pure Sine Wave	
Display	LCD + LED	
Dimensions (W x H x D) (mm)	550 x 600 x 1450	
Inverter Weight (kg)	210	230
BATTERY BANK SPECIFICATIONS		
Battery Type	Lead-acid gel	
Battery Voltage (V)	2	
Battery Bank Voltage (V)	220	
Battery Current (Ah)	200	400
Battery Bank Current (Ah)	200	400
Battery Bank Power - Total (Wh)	44000	88000
Battery Bank Power - 50% DOD (Wh)	22000	44000
Battery Dimensions (L x W x H) (mm)	172.5 x 110 x351	271 x 176 x 353
Battery Weight (kg)	14	26
Full Cycles (50% DOD)	1800	
Total Batteries - *storage can be increased	110	
Connection	Series	
Certifications	CE / RU / ISO 14001 / OHSAS 18001	
BOS		
PV Combiner Box (Type / #)	3 to 1 / 1	3 to 1 / 2
*PV Wire Harness - 4mm ² (m)	300	600
*DC Wire (Combiner Box to Inverter) - 10mm ² (m)	100	200
*Ground Wire - 4mm ² (m)	100	200
PV Mounting System	Customized	
Battery Bank Rack	Customized	
*Extra wire is available up request		
SYSTEM LAYOUT		
Number of Modules	33	66
Number of Inverters	1	
PV Array Surface Area (m ²)	56.1	112.2
PV Array Weight (kg)	613.8	1227.6
PV Module	No. of PV Modules / String	11
	Total Strings	3
String	String Voc (V)	426.8
Configuration	String Vmp (V)	349.8
	String Imp (A)	8.31
PRODUCTION ESTIMATES (kWh AC)		
*Projectd Yearly Output at 4 PSH / Day	31.4	62.8
*Projectd Yearly Output at 5 PSH / Day	39.3	78.5
*Projectd Yearly Output at 6 PSH / Day	47.1	94.2
*Based on 85% system efficiency (formula = DC Power x Peak Sunshine Hours / Day x System Efficiency) (PSH = Peak Sunshine Hours)		
SYSTEM OPTIONS		
Monitoring Device	RS485	
PV Module Type	Monocrystalline(Poly also available upon request)	
Mounting System Types	Metal Roof,Asphalt Shingel,Tile Roof,Tin Roof,Flat Concerte,Ground	
AC Back Up Input	Power Generator / Utility Grid	
Battery	12V Gel / 2V Gel / Tubular Gel (OPzV)	

SP10KW-OFF





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