suntria energy

Suntria Energy Solar System
Product Brochure 2015

We See and Think

Renewable Energy as the primary source of energy and not as an alternative energy. We think about the pollution caused by conventional sources of energy; so we harness unconventional sources of energy in every possible way & manner.

The Benefits

Economical Benefits

Using Suntria Energy products means long term benefits, such as being cushioned from future fuel shortages and price hike. Our products offer the largest potential saving compared to any other system with a fastest average return over investment period of nearing Five Years.

Environmental Benefits

Suntria Energy products do not pollute; rather by investing in one, You will be reducing your Carbon Foot-print. Thus, ensuring a better and cleaner future for the new generation and for yourself too!

The average electric water heater is responsible for about eight tons of carbon dioxide (Co2) annually, which is almost double that emitted by a typical modern automobile.

Tax Incentives and Rebates

The best part of investing in Suntria Energy PV System is that it has an accelerated depreciation of 80% in first year ; if shown as a Capital Expenditure. Banks provide a low interest loans since it is considered as a simple housing project.

Long-term Benefits and High Resale Value

You will also be contributing to reduce this country's dependence on foreign oil. Adding a Suntria Energy system to your home or workplace raises the resale value of the home or workplace by entire cost of the system. Hence, you can reclaim your entire investment when you sell it.

Enhanced Quality of Life

The development in electronics-electrical technology has poured many innovative products in the market; many of them having a high electricity consumption like "Air Conditioners". Ownership of electricity generation will surely provide a leverage; permitting one with an extensive use of such appliances, machines and gadgets. With no pinch of electricity bills, the Suntria PV systems transforms a luxurious lifestyle product to a commodity; indicating a better quality of life.

Roof Shield and Productivity

The Suntria PV System acts as a barrier to the solar radiation thus providing a shield from high temperatures which, in turn increases the life of the roof. Also, when the consumption is less than generation, the excess of electricity can be exported* to the grid, transforming an underutilized roof to a productive one. Surely, it's a feather in the cap!

Resource Ownership

Every organization consumes resources to create an economical value and it's the dream of every organization to own "every" such resource. The Suntria PV Systems gives an ownership and control of such a resource called, "Electricity"; providing a competitive advantage to the organizations.

Corporate Social Responsibility

The Suntria PV systems gives an opportunity to an organization or an individual to fulfill its Social Responsibility (often termed as Corporate Social Responsibility). There is no trade-off between being socially responsible and economic performance[1]. And there is a positive relationship between being socially responsible and economic performance that strengthens with corporate reputation[2].

[1]M. Orlitzky, "Payoff to Social and Environmental Performance" 2005
[2]M.Orlitzky, F.schmidt and S. Rynes, "Corporate, Social And Financial Performance" 2003

*grid export available in select states.

WE are SUNTRIAns

Suntria Energy, is one of the foremost leading company who have re-engineered the costly solar energy to a economical and sustainable one. At Suntria Energy we believe that "investment in sustainable energy" is a "valuable heritage" for future generations.

Suntria believes in creating a cleaner space for our children to live, breath and grow freely. To realize this goal, we have done many test-trials and finally came up with Suntria Energy products for residential and commercial operations. Our vision is not to "witness the change" but to "be the change". And we are striving to make you share our vision.

WE Believe

Customer First

Our products exists to fulfill the growing needs of Indian consumers and society at large. We have comprehended the futuristic requirements and have designed products and services that are easily tweaked and commissioned.

Inventions to Innovations

Innovative and Original products and prompt service is our core interest. To fulfill it we have built a strong R&D team which takes care of energy, enthusiasm and eagerness of consumers and developers both. Our R&D team is a key link to convert an Invention to an Innovation.

Team SYNC

The entire team of Suntria, TAGS, its vendors and resellers/distributors works in sync to offer nothing but the excellent. Suntrians are focused to "Be the change" vision, and each one makes contribution to this vision in terms of ideas, attitude, knowledge and culture. This makes us class apart.

WHY Suntria?

Customer-Centric
WE have thought about *how* and *why* people use our product. Our each product is a combination of analysis, design and evaluation all approached starting from the customer's point of view.

It's a Child's Play
Our entire product range is easy to understand and requires no technical knowledge to operate. With "on the go" advanced system monitoring it's really a child's play!

Flexible, Versatile, Durable and Serviceable
Our products are adaptable to varied roof-tops, constructions, architecture, geographical conditions and customer-needs. The Global standards make it a class-apart, durable product with almost zero future service costs. Solar installations can be easily modified to respond to altered circumstances, supports many locations and surpasses many constraints; hence are flexible. They can be installed in form of "units" and can be combined as a series of independent units; hence are modular. Their generation capacity can be increased or decreased easily; hence are scalable.

Affordable with Credentials
Our products are made of components manufactured by top companies and conforms to many IEC (International Electro-technical Commission) and Global standards. We know what it takes to make a great "Solar PV System". But our motto is to ".....make it simple and affordable."

Suntria Professional Install
Suntria energy products are skillfully installed and commissioned by TAGS (Tejam Automation and Green Solutions); which adheres to its strict norms ensuring proper installation and safety. TAGS also provides technical support and maintenance to Suntria Energy products.

We Provide

WE Offer

Suntria Residential
is a perfect solution for domestic requirements. A hybrid self-use model assures fast repayment of Investment. We have considered all the technical aspects and its wide domestic application for its optimum use, while integrating the system.

Suntria Commercial
is best for establishments like hotels, swimming pools, schools, hospitals, banks, industries etc. We have tools to size the requirement and judge the fastest payback of every rupee invested.

THE SUNTRIA ENERGY SOLAR SYSTEM

The Suntria Energy Solar System is made up of three parts. The photovoltaic panels (manufactured by Vikram Solar), the inverter (manufactured by Solax Power or SMA) and balance of system. The inverter is a critical technological component that is the heart of any PV plant. A solar inverter, or PV inverter, converts the variable direct current (DC) output of a photovoltaic (PV) solar panel into a utility frequency alternating current (AC) that can be stored or fed into a commercial electrical grid, allowing the use of ordinary commercial appliances. At Suntria Energy we are creating the PV systems of tomorrow.

PRODUCTS

Suntria Energy provides four products (all grid tied) depending upon the need of the consumer. These four products are rigorously tested by our R&D partner TAGS (Tejam Automation and Green Solution).

X-Hybrid Self-Use (Single phase, expandable to three phase)

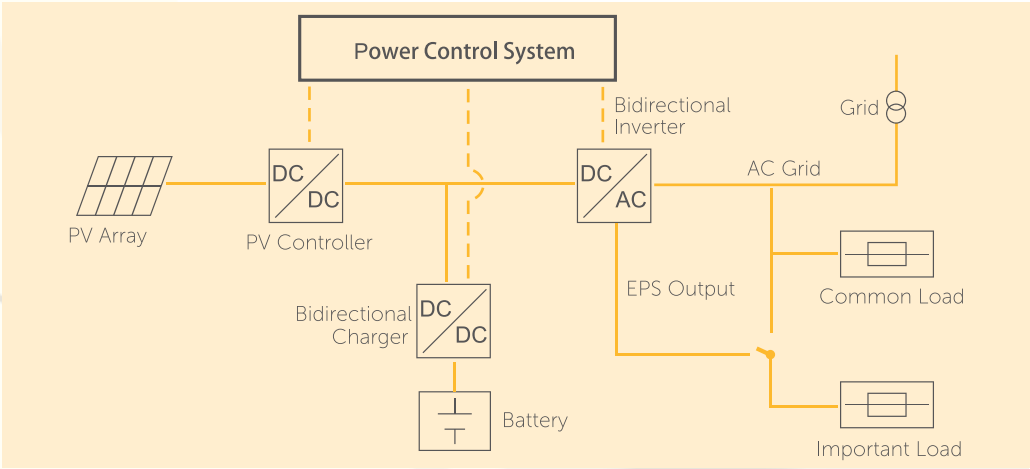
- Flexible system : For those who want maximum utilization of solar energy with *flexible* energy storage.
- Fixed System : For those who want maximum utilization of solar energy with *fixed* energy storage.

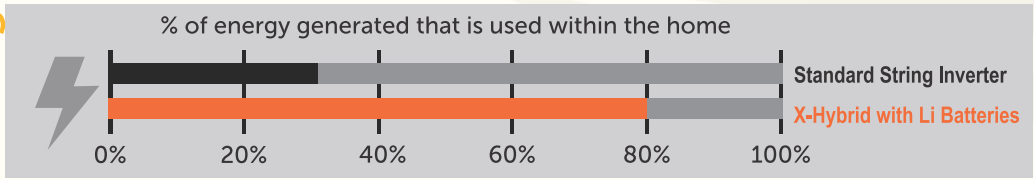
Simple Grid tied System with export control

- Single Phase : For residential use with simple backup system.
- Three Phase : For commercial use with simple backup system.

HYBRID WORKING THEORY

X-Hybrid Self-use Energy Storage System converts DC electricity generated by solar panels to AC electricity for grid and load to DC for the battery. The electricity will be provided for load first, and the excessive electricity will be stored in the battery, after the battery is fully charged, the electricity will be fed into the grid. Once the power goes down, the inverter will activate the Emergency Power Supply (EPS) to ensure the energy from the panels and batteries can be used to power the home.





COMPARED TO TRADITIONAL GRID-TIED SOLAR SYSTEM

- Save money on your power bills by increasing the proportion of self-use electricity generated by your solar system from 30% to more than 80%.
- Save money by becoming independent from ever increasing energy prices & frequent breakdowns.
- Reduce stress on the grid by reducing your solar power feed.
- Manage property consumption and generation remotely via built -in CT & WIFI monitoring solution.

X-Hybrid Advantages

X-Hybrid Advantages

COMPARED TO OTHER BRANDS

Reliable

- European, American and Japanese made key components.

Efficient

- Highly effective solar power utilization and long battery life by intelligently designed charging module.

User-friendly

- Intelligent man-machine interaction mode.

USE ENERGY, STORE IT,
OR FEED IT INTO THE GRID,
IT IS NOW POSSIBLE WITH X-HYBRID.

Achieve your independence from traditional power providers considering the intelligent Suntria Hybrid Series System (with charger).

As we know, Solar panels generate the most energy during the day when the sun is shining and when you and your family/co-workers tend to use the least energy or have the lowest consumption levels.

With ongoing increasing energy prices and the continual decrease of the feed-out tariff (available in select states), you must make the most out of your solar energy. Our X-Hybrid "Self-use Energy System" is the perfect solution to solve this problem and to get the most of your solar energy both today and in the future. Our Hybrid solution makes it possible to utilize solar power time-independently by storing unused capacity. It converts and directs solar power to where it is needed; when it is needed.

X-Hybrid Self-Use

*HY-FL*3000/*HY-FL*3700/*HY-FL*5000

SUPPORTS 25A/50A/100A EXTERNAL
BATTERY MANAGEMENT UNIT

Flexible System

HYSU-FL3000 / HYSU-FL3700 /HYSU-FL5000

Prepare for energy independence by using this premium quality hybrid ready inverter. This unit gives you the opportunity to monitor property loads over time and evaluate your energy usage patterns.

*HY-FX*3000/*HY-FX*3700/*HY-FXSU*5000

BUILT-IN 50Amps
BATTERY MANAGEMENT UNIT

Fixed System

HYSU-FX3000 / HYSU-FX3700 / HYSU-FX5000

The SU series of hybrid inverter includes one built-in battery manager unit and solar MPPT. This intelligent hybrid inverter provides a full solution for energy consumers to maximize the use of their generated solar energy and minimize their energy bills.

EPS

Emergency Power Supply

Power your home during grid outage

X-Hybrid Self-Use**
Flexible System

HYSU-FL3000 / HYSU-FL3700 /HYSU-FL5000

Single phase, expandable to three phase

**Self-use only with external battery management unit.

TECHNICAL DATA

Model	HYSU-FL3000	HYSU-FL3700	HYSU-FL5000
➤ **PV Modules**			
Number of modules	10	13	17
Company and series	Vikram Solar, Eldora Grand 300P		
➤ **Inverter general speciafications**			
No of units (single phase/three phase)	1/3	1/3	1/3
Company and series	Solax, X-hybrid SK-TL(E) series		
Number of MPP trackers / Strings per MPP	1/1	2/1	2/1
AC nominal power [W]	3000	3680	4600
Nominal AC voltage; range [V]	230VAC 50/60HZ; 180~270VAC		
AC nominal current [A] / Max AC current [A]	13 / 14.4	16 / 16	20 / 21.1
MPPT efficiency, Euro-efficiency, Max.	99.9%, 97.0%, 97.6%		
Display	LCD, Back-light 16*4 character		
Communication interfaces	Ethernet/Dry contact /WIFI		
Max. No. of supported external BMU	1		
Noise emission (typical) [dB] / Altitude [m]	<40dB / <2000m		
Operating temperature range [°C]	-10~+50 (derating at 40)		
Cooling concept / Humidity [%]	Forced airflow / 0~95 (non-condensing)		
Protection class / Topology	IP 20 (for indoor use) / Transformer-less		
EMC standard / Weight [kg]	IEC61000-6-1/2/3/4 / 23.5 kg		
Dimensions (W /H / D) [mm]	490 x 595 x 167		
Standard Warranty [years]	5 (10 optional)		
➤ **Inverter specifications on EPS mode only with external BMU**			
EPS rated power [VA]* / EPS rated current [A]*	3000 / 13	3680 / 16	4000 / 17.3
EPS rated voltage / Frequency	230VAC 50/60HZ		
EPS peak power [VA]	1.5xPrated, 10s	1.5xprate, 10s	1.5xPrated, 10s
Total harmonic distortion (THD) / Switch Time	<3% / <5sec		

*can work with 100A external charger only.
EPS voltage and current will drop with lowering from 100A charger

X-Hybrid Battery Management Unit for Flexible System

HY-BMU1300 / HY-BMU2500 / HY-BMU4600

The battery manager can be used with HY-FL system series for extending the battery capability of self use. Three options gives your flexibilities when build up your own energy storage system.

TECHNICAL DATA

Model	HY-BMU1300	HY-BMU2500	HY-BMU5000
➤ Battery Management Unit (general)			
Company and series	Solax, X-Hybrid SK-BMU series		
Future support for lithium Batteries	Yes		
Charging curve	3-stage adaptive with maintenance		
Battery nominal voltage [V]	48		
Battery voltage range [V]	40-60		
Battery capacity [KWh] / Max supported [Ah]	4.8 / 100Ah	10 / 200Ah	20 / 400Ah
Over current / temperature protection	Yes		
Communication interfaces	Can/RS232		
Battery reverse polarity protection	Yes		
Battery anti-shock design	Yes		
Operating temperature range [°C]	-10~+50 (derating at 40)		
Cooling concept	Forced airflow		
Protection class	IP20 (for indoor use)		
EMC standard	IEC61000-6-1/2/3/4		
Dimensions (W /H / D) [mm]	289 x 595 x 167		460 x 595 x 167
Weight [kg]	13		23
Standard Warranty on Inverter	5 (10 optional)		
➤ Battery Management Unit-Charge/Discharge			
Maximum power [KWh]	1300	2500	4600
Maximum current (charge/discharge) [A]	25	50	100
Depth of discharge	80% for lithium battery 50% for lead-acid battery (adjustable)		
➤ Batteries			
Type of batteries	lead-acid tubular batteries		
No of batteries	4		
Battery capacity at STC [Ah] / Voltage [V]	200Ah / 12V		
Low maintainenece	Yes		
Warranty	3 years		

X-Hybrid Self-Use Fixed System

HYSU-FX3000 / HYSU-FX3700 /HYSU-FX5000

Built-in 50Amps Battery Management Unit
Single phase, expandable to three phase

DATA TECHNICAL

Model	HYSU-FX3000	HYSU-FX3700	HYSU-FX5000
➤ **PV Modules**			
Number of modules	10	13	17
Company and series	Vikram Solar, Eldora Grand 300P		
➤ **Inverter general specifications**			
No of units (single phase/three phase)	1/3	1/3	1/3
Company and series	Solax, X-hybrid SK-SU(E) series		
Number of MPP trackers / Strings per MPP	1/1	2/1	2/1
AC nominal power [W]	3000	3680	4600
Nominal AC voltage; range [V]	230VAC 50/60HZ; 180~270VAC		
AC nominal current [A] / Max AC current [A]	13 / 14.4	16 / 16	20 / 21.1
MPPT efficiency, Euro-efficiency, Max.	99.9%, 97.0%, 97.6%		
Display	LCD, Back-light 16 x 4 character		
Communication interfaces	Ethernet/Dry contact /WIFI		
Max. no of supported external BMU	0		
Operating temp. [degree Celsius]	-10+50 (derating at 40)		
Altitude [m] / Cooling concept	<2000 / Forced airflow		
Noise emission [dB]	<40		
Humidity [%]	0~95 (non-condensing)		
Protection class	IP 20 (for indoor use)		
Over voltage category	III (electric supply side), II (PV side)		
EMC standard	IEC61000-6-1/2/3/4		
Topology	Transformer-less		
Dimensions (W/H/D) [mm]	680 x 595 x 167		
Weight [kg]	32		
Standard Warranty on Inverter [years]	5 (10 optional)		

Table continued on next page

TECHNICAL DATA

Model	HYSU-FX3000	HYSU-FX3700	HYSU-FX5000
➤ Inverter specifications on EPS (built-in BMU)			
EPS rated power [VA] / EPS rated current [A]	2000 / 9	2000 / 9	2000 / 9
EPS rated voltage / Frequency	230VAC 50/60HZ		
EPS peak power [VA]	1.5xPrated, 10s	1.5xprate, 10s	1.5xPrated, 10s
Total harmonic distortion (THD) / Switch Time	<3% / <5sec		

➤ Battery Management Unit (in-built)	
Future support for lithium batteries	Yes
Battery nominal voltage [V]	48
Battery voltage range [V]	40-60
Battery capacity [KWh] / Charging curve	2.4 KWh/ 3-stage adaptive with maintenance
Max. charging current [A]	50(adjustable)
Over temperature/current protection	Yes
Communication interfaces	Can / RS232

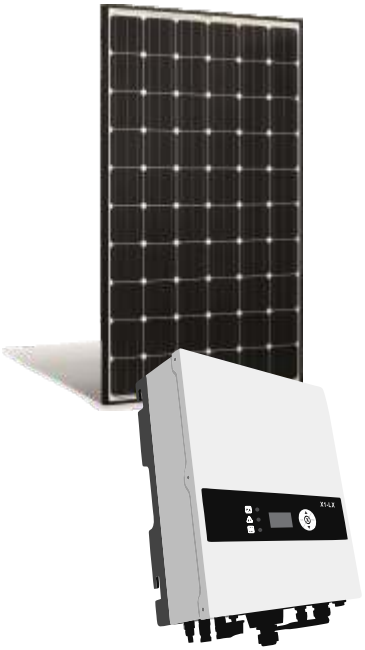
➤ Battery Management Unit-Charge/Discharge	
Maximum power (charge/discharge) [KWh]	2500
Maximum current (charge/discharge) [A]	50
Depth of discharge	80% for lithium battery 50% for lead-acid battery (adjustable)

➤ Batteries	
Type of batteries	lead-acid tubular batteries
No of batteries	4
Battery capacity at STC [Ah] / Voltage [V]	200Ah / 12V
Low maintenance	Yes
Warranty	3 years

SINGLE PHASE SYSTEM

GT-SP2200 / 3300 / 3600 / 4600 / 5200

Export Control & Cable Monitoring



SINGLE PHASE DUAL MPPT

High Performance

- High MPPT efficiency up to 99.9%.
- Max DC to AC efficiency up to 97.6%.
- Dual MPP tracker can work either independently or parallel.
- Wide MPPT working range.

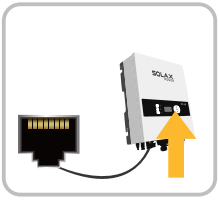
Flexibility and reliability

- Fanless design, quiet , low maintenance and long life span.
- High protection class IP65 for indoor and outdoor use.
- Easy installation, hang and fix, no need to align to the hole.
- Power factor adjustable.
- Export control, no impact to the grid
- Load control function (with an optional I/O card and sockets) reducing the energy cost.

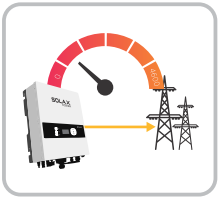
User-friendly

- Integrated DC switch.
- Integrated WIFI and cabling function with free monitoring system.
- Easy upgrading via ethernet port.
- Professional settings with multilayer password management.

Load Remote Control



Easy Upgrading via Ethernet Port



Export Control to the Grid

Internal **WIFI** & Remote Monitoring

SINGLE PHASE SYSTEM

TECHNICAL DATA

Model	GT-SP2200	GT-SP3300	GT-SP3600	GT-SP4600	GT-SP5200
▸ PV Modules					
Number of modules	8	11	12	16	18
Company and series	Vikram Solar, Eldora Grand 300P				
➤Inverter general specifications					
Company and series	Solax, Single phase X1-LX series				
Number of MPP trackers	1	1	2	2	2
Strings per MPP	1	1	1	1	1
AC nominal power [W]	2000	3000	3600	4200	4600
Nominal AC voltage; range [V]	220/230/240 (180-280)				
AC nominal current [A]	9	13	16	18	20
Max AC current [A]	10	14	16	20	22
Efficiency MPPT/Euro/Max	99.9% / 97.0% / 97.6%				

▸ Safety and Protection	
Over voltage/under voltage protection, DC isolation impedance monitoring	Available in all models
Grid monitoring, Ground fault current monitoring	Available in all models
DC injection monitoring, Residual current detection	Available in all models
Anti-islanding protection, Over heat protection	Available in all models

▸ Others	
Dimension (W/H/D) [mm], Gross Wt. (Kg)	384 x 462 x 152.5, 20 Kg
Cooling concept, Noise emission	Natural cooling, <25 dB
Operating temperature range [°C]	-20~+60 (derating at 45)
Max. permissible relative humidity	0%~90% (non-condensing)
Altitude [Km]; Degree of protection	<2000 Km; IP65
Topology; Internal consumption [W]	Transformer-less; <3
LCD display	Backlight 16 x 4 character
Communication interface	Ethernet / WIFI / Dry contact / I/O(optional)
Standard warranty on inverter (years)	5 (10 Optional)

SUNTRIA THREE PHASE SYSTEM (Gen 2)

GT-TP10000 / 12000 / 15000 / 17000 / 20000

Optimised three phase inverter

THREE PHASE DUAL MPPT

High Performance

- MPPT efficiency up to 99.9%.
- Maximum efficiency up to 98.2%.
- Maximum DC input voltage of 1000V.
- Photon Double A rated.
- Dual MPP tracker & wide MPPT voltage range for flexibility.
- Configuration and higher yield.

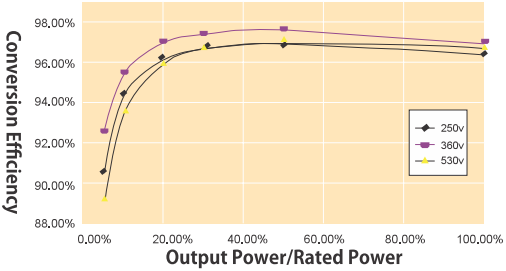
Flexibility and reliability

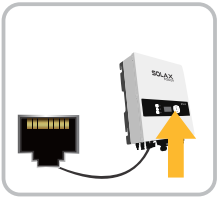
- Integrated DC switch.
- Temperature controlled fan.
- High protection class IP65 (indoor/outdoor use).
- Multiple protections: RCD, isolation, over voltage, and earth protection, etc.

User-friendly

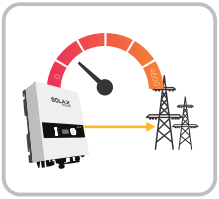
- Multi-lingual display.
- Graphic LCD display.
- RS485, WIFI(Optional) and 3G (optional) communication for monitoring.
- "Plug & play" connection for easy installation & maintenance.

Efficiency Curve





Easy Upgrading via Ethernet Port



Export Control to the Grid

TECHNICAL DATA

Model	TP10000	TP12000	TP15000	TP17000	TP20000
➤ PV Modules					
Number of modules	34	40	50	57	67
Company and series	Vikram Solar, Eldora Grand 300P				
➤ Inverter general specifications					
Company and series	Solax, Three Phase, ZNDY-LX series				
No of MPP / Strings per MPP	2/A:3 B:1	2/A:3 B:1	2/A:3 B:3	2/A:3 B:3	2/A:3 B:3
AC nominal power [W]	10000	12000	15000	17000	20000
Nominal AC voltage; Range [V]	3/N/PE 230/400; 160-280				
Max AC current [A]	16	20	24	25	29
Efficiency MPPT /Euro/Max.	99.9% / 97.0% / 97.6%				
▸ Safety and Protection					
Over voltage/under voltage protection, DC isolation impedance monitoring	Available in all models				
Grid monitoring, Ground fault current monitoring	Available in all models				
DC injection monitoring, Residual current detection	Available in all models				
Anti-islanding protection, Over heat protection	Available in all models				
Protection class(IEC62103)/overvoltage category (IEC60664-1)					
➤ Environment limits					
Protection class	IP65 (IP54 for fan)				
Operating temperature range [°C]	-20~60 (derating at 45)				
Humidity [%]	0~95 (non-condensing)				
Altitude [m]	2000				
Storage temperature [°C]	-20~60				
Noise emission (typical) [dB]	<50				
➤ Dimensions and weight					
Dimensions (WxHxD) [mm]	513 x 651.5 x 207				
Weight [kg]	48	48	50.5	50.5	51
Cooling / Topology / Display	Temperature controlled fan / Transformer-less / Graphic LCD				
Communication interfaces	RS485/RS232/Dry contact (WIFI,3G optional)				
Standard Warranty on inverter	5 (10 optional) years				

MONITORING SYSTEM

COMMON FEATURES FOR SUNTRIA PRODUCTS

- Remote monitoring via Portal.
- A variety of communication methods available, including Ethernet, WiFi, and 3G (optional)
- Quick installation and easy operation with "Plug & Play" function. Storage of over 25 years.
- Graphical display of PV system data. Operational failures can be detected rapidly and transmitted via email.
- Report of collected data and performance can be sent via email regularly.
- Free standard access to Portal for the entire service life of the PV system.

- 24 hours monitoring for Windows/Android/Apple devices
- Batch inverters monitoring for installers and distributors
- Easy data reading with vivid charts and graphs
- Specially designed for energy storage system

	ZDNY-WE01
▶ **General**	
Max. number of inverters	1-21
Inverter communication	RS485/422/232
Remote communication	WIFI(802.11b/g/n), Ethernet
Max. communication range	<1km
Data collection intervals	5 min (default) / 1-15 min (optional)
Memory	Card / EEPROM (optional)

How it works

1. Our inverters upload operational data to the cloud via WIFI.

2. Coud collects and processes those data every 5 minutes.

3. You can then monitor the data by simply logging into a registered account via your PC, iPhone or Android device.

vikramsolar
vision in action

ELDORA

ELDORA GRAND SERIES I POLYCRYSTALLINE SOLAR PV MODULES I 72 CELLS

ELDORA GRAND SERIES

High Efficiency Solar PV Modules

Designed for

HIGH AREA EFFICIENCY

Suited for roof-top and ground mounted applications & solar pumping application.

GUARANTEED (0 to +4.99) Wp POWER

output tolerance, ensuring high return over investment.

Extremely

RELIABLE PRODUCT

suiting all environment conditions.

Engineered to provide

EXCELLENT LOW LIGHT RESPONSE

APPLICATIONS

- On-grid large scale utility systems
- On-grid residential, commercial and industrial roof-top installations
- Off-grid residential systems
- Solar pumping applications

CERTIFICATES

- Factory: ISO 14001:2004, ISO 9001:2008, BS OHSAS 18001:2007, SA 8000*
- Products: IEC 61215 Ed2, IEC 61730, IEC 61701, IEC 62716, MCS, PV Cycle

QUALITY AND SAFETY

- 25 years of limited power output warranty**
- Rigorous quality control meeting the highest international standards
- 100% EL tested to ensure micro crack free modules
- Ammonia & Salt mist corrosion resistant

TECHNICAL DATA

ELDORA GRAND SERIES (72 CELLS)

ELDORA GRAND SERIES I POLYCRYSTALLINE SOLAR PV MODULES I 72 CELLS

Electrical Parameters

All data refers to STC (AM 1.5, 1000 W/m^2, 25°C)

Peak Power (0-4.99Wp) P_{max}(Wp)	280	285	290	295	300	305	310	315
Maximum Voltage V_{mpp}(V)	36.75	36.79	36.88	37.21	37.28	37.82	38.11	38.33
Maximum Current I_{mpp}(A)	7.62	7.75	7.87	7.93	8.05	8.08	8.14	8.22
Open Circuit Voltage V_{oc}(V)	43.62	43.77	44.32	44.55	45.1	45.45	45.72	46.04
Short Circuit Current I_{sc}(A)	8.44	8.56	8.61	8.69	8.74	8.79	8.81	8.85
Module Efficiency (%)	14.58	14.85	15.11	15.37	15.63	15.89	16.15	16.41

1) Tolerance ± 3% except P_{max}

Mechanical Data

Length x Width x Height	1955mm x 982mm x 36mm
Weight	20.50kg
Junction Box	IP65, 3 Bypass diodes
Cable & Connectors	1000mm length cable / MC4 Compatible connectors
Application Class	Class A (Safety Class II)
Superstrate	High transmission low iron tempered glass
Cells	72 polycrystalline solar cells; 2BB/3BB
Cell Encapsulation	EVA (Ethylene Vinyl Acetate)
Back Sheet	Composite film
Frame	Anodized aluminium frame with twin wall profile
Mechanical load test as per IEC	2400Pa

Warranty and Certifications

Product Warranty**	10 Years
Performance Warranty**	Guaranteed power output of 90% for 12 years and 80% for 25 years
Approvals and Certificates	IEC 61215 Ed2, IEC 61730, IEC 61701, IEC 62716, MCS, PV Cycle

* All (*) Certifications under progress .

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INVERTER CERTIFICATES

Series		HY-FX	HY-FL		HY-BMU		GT-SP (NEW)	GT-TP	
Solax nomanclature		SK-SU(E)	SK-TL(E)		SK-BMU		X1-LX	ZNDY-TL	
Certificates/ Model no		3000 3700 5000	3000 3700	5000	1300	2500 5000	2200 3300 3600 4600	10000 12000 15000 17000	20000
CE	LVD	√	√	√	√	√	√	√	√
	EMC	√	√	√	√	√	√	√	
Australia	SAA	√	√	√	√	√	√	√	√
UK	G83	√	√	√	√	√			
	G59			√	√			√	√
Germany	VDE0126						√	√	√
	VDE4105	√	√	√	√	√	√	√	√
Greece	VDE0126							√	
Belgium	C10/11	√	√	√	√	√		√	
France	UTE-15712							√	
Netherlands	EN50438	√	√	√	√	√		√	
Czeche	EN50438							√	
Denmark	EN50438	√	√	√	√	√		√	
Slovenia	EN50438							√	
Bulgaria	VDE0126							√	
Spain	RD1699							√	
Austria	OVE/ONORME B001-4-712	√	√	√	√	√			
China	CQC							√	√
Italy	CEI-021	√	√	√	√	√			

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Address Flat no 415, Himshikhar Apart., Plot no 11, Behind Kothari Jewellers, Shivaji Nagar, Nagpur, Maharashtra, India-440010

Tel +91-99751-94439

email contact@suntriaenergy.com

Installation and Service Support

Address Tejam Automation & Green Solutions (TAGS)
13/A, Behind Hotel Zharana,Janta College Square, Civil Lines, Chandrapur, Maharashtra, India-440022

Tel +91-94221-36517, +91-96897-81432

email support@suntriaenergy.com