

Solar & Wind Hybrid Power Generation Training System Nvis 436SW



Hybrid Renewable Energy Systems are becoming popular as stand-alone power systems for providing electricity in remote & urban areas due to advances in renewable energy technologies and subsequent rise in prices of petroleum products. A hybrid energy system usually consists of two or more renewable energy sources used together to provide increased system efficiency as well as greater balance in energy supply.

Solar and Wind hybrid power plant is an integrated hybrid energy solution capable of harnessing both the sunlight onsite and wind energy available at low altitudes in urban and rural environment.

Nvis has designed 436SW Solar & Wind Hybrid Power Generation Training System to explain fundamentals of power generation and storage of Solar and Wind energy. This system includes controller-based digital measuring instruments for accurate results and protection devices for safety. It also includes an inbuilt Inverter which can be operated with both mains and through batteries. Users can easily understand how to configure Hybrid Solar & Wind system to get the maximum electrical energy for domestic and industrial use.

Features

- A Hybrid system for power generation and learning concepts.
- Equipped with Hybrid Solar & Wind charge controller with overload and low battery protection.
- Designed considering all safety measures.
- Specially designed patch cords for extra safety.

- Highly accurate microcontroller-based measuring instruments.
- Equipped with multifunction meter to analyze output parameters.
- System is flexible to operate on mains as well as inverter mode.
- Solar technology learning software (optional)



Hybrid Inverter

Technical Specifications

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Power Rating	: 1KW	Capacity	: 1000VA
Celltype	: Polycrystalline	Input Voltage	: 190~260V
Solar panel structure		Output voltage	: 210~245V (inverter mode)
Material	: GI	Output frequency	: 50Hz ±0.1Hz (inverter mode)
Assembly	: Detachable and easy to install	Output waveform	: Modified sine wave (inverter mode)
Solar battery	: 4nos.	Efficiency at full loa	ad : >80%
Capacity	: 100Ah	Protection	: Overload & short circuit
Туре	: C10	Technology	: Microcontroller based design
Wind Turbine		Digital meters	
Wind Turbine	: 300 watt(Design specification)	AC voltmeter	: 500V
Charging Current	: 0.3-0.4A	AC ammeter	: 10A
Generator voltage	: 24V approx.	DC voltmeter	: 300V
Actual Output Pow	ver : 10W - 15W.	DC ammeter	: 40A
Blades	: 3nos.	AC multifunction r	notor
Rotor	: Three FRP blades along with standard steel nut-bolts	Measurements	: AC voltage, AC current,
Structure	: 5ft, with floor stand	Ontional according	Frequency, Power, KWH
Hybrid charge controller		Player for wind turking	
Quantity	: 1no.		(Nvis Bl01)
Voltage	: 24V		
Protection	: Overload and low-battery protection		

: BS10 type for safety purpose

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Dutput frequency	: 50Hz ±0.1Hz (inverter mode)			
Output waveform	: Modified sine wave (inverter mode)			
fficiency at full load:>80%				
Protection	: Overload & short circuit			

Measurements	: AC voltage, AC current,		
	Frequency, Power, kWH		
Optional accessories: AC/DC Load (Nvis 726)			
	Blower for wind turbine		
	(Nvis Bl01)		



Note Shown image is just for illustration original may differ

Scope of Learning

- Study of hybrid charge controller.
- Analysis of the effect of dust on solar PV module.
- Study of safety and precaution for Solar system and • Wind turbine installation.
- Study of solar & wind (hybrid) power generation. ٠

Designed & Manufactured in India by

Nvis Technologies Pvt. Ltd. 141-A, Electronic Complex, Pardesipura, Indore-452010, India. © +91-731-4211500, ⊠ info@nvistech.com,
www.NvisTech.com