

SOLAR .. UPS .. INVERTERS ..

SAVE

CONSERVE

RENEW



INTRODUCTION

The solar inverter is a critical component in a solar energy system. It performs the conversion of the variable DC output of the Photovoltaic (PV) module(s) into a clean sinusoidal 50 or 60 Hz AC current that is then applied directly to the commercial electrical grid or to a local, off-grid electrical network.

At the heart of the inverter is a real-time microcontroller. The controller executes the very precise algorithms required to invert the DC voltage generated by the solar module into AC. This controller is programmed to perform the control loops necessary for all the power management functions necessary including DC/DC and DC/AC. The controller also maximizes the power output from the PV through complex algorithms called maximum power point tracking (MPPT). The PV maximum output power is dependent on the operating conditions and varies from moment to moment due to temperature, shading, soilage, cloud cover, and time of day so tracking and adjusting for this maximum power point is a continuous process. For systems with battery energy storage, the controller can control the charging as well as switch over to battery power once the sun sets or cloud cover reduces the PV output power

SOLAR INVERTER SYSTEM

Solar Inverter System operates during daytime and can be set in manual power ON/OFF mode with the help of controller. This system can be available from 650VA to 7.5KVA for Domestic use and 7.5KVA onwards for commercial use as required or customized that consists of ;

1. Solar Panel
2. Inverter SW with Charge controller
3. Solar Batteries for storage
4. Interconnecting Cables and Fixtures

SOLUTIONS (Domestic)

The chart shows the point-wise distribution and consumption for 1BHK flat.



Solar UPS 850VA/12V					
Load	A	B	C	D	E
PC	1				
TV			1		
Tube Light	3	2	3	4	
Fan	3	2	3	4	
Room Cooler		1			
CFL				2	36

In the same way, we can provide the solution for 2 & 3BHK flat by increasing the capacity of inverter, solar panel, batteries, etc.

SOLUTIONS (Commercial – Solar Power Pack)

Features



1. Safe & Easy to Install
2. Clean, Green energy with No Noise or Smoke Pollution
3. Cost effective
4. No Recurring Costs
5. Very Low Maintenance
6. A Reliable Power source
7. Helps to increase productivity for business operations.
8. Available in Different Configuration - Can also be designed to suit customer
9. Elegant & Efficient Luminary
10. Provision for Operating Extra Loads
11. Advanced Charge Controller
12. Longer Battery Life ensured

SOLUTION FOR SMALL OFFICE

MODEL	2KVA SW	
Autonomy 3 Days	Quantity	Working Hrs/Day
Light	2	8 Hours
Fan	1	2 Hours (Average)
Computer	2	8 Hours
Printer	1	8 Hours
Socket	1	3 Hours
Type of Lamp	CFL	
Rated Power of Lamp	2 Lamps of 9W	
DC FAN	1 x 15Watt	
Computer	2 x 140W	
Printer	1 x 75W	
SOCKET	1 x 20 Watts	
Input / Operating Voltage	48V	

Type of Module	Multi-Crystalline
Maximum Power at P_{max} [W]	1100 Watt
Number of Modules	110W x 10
Operating Voltage at P_{max} , V_{mp} [V]	17.0V
Current at P_{max} , I_{mp} [A]	6.61A
Open Circuit Voltage under STC V_{oc} [V]	21.42V
Short Circuit Current I_{sc} [A]	7.49A
Power Tolerance	$\pm 3\%$
Terminal Box - Provision for opening/replacing cables	Yes
Type of Battery	VRLA SMF Lead Acid Battery
Capacity of 150AHx2Nos	300Ah

Power Package for Education

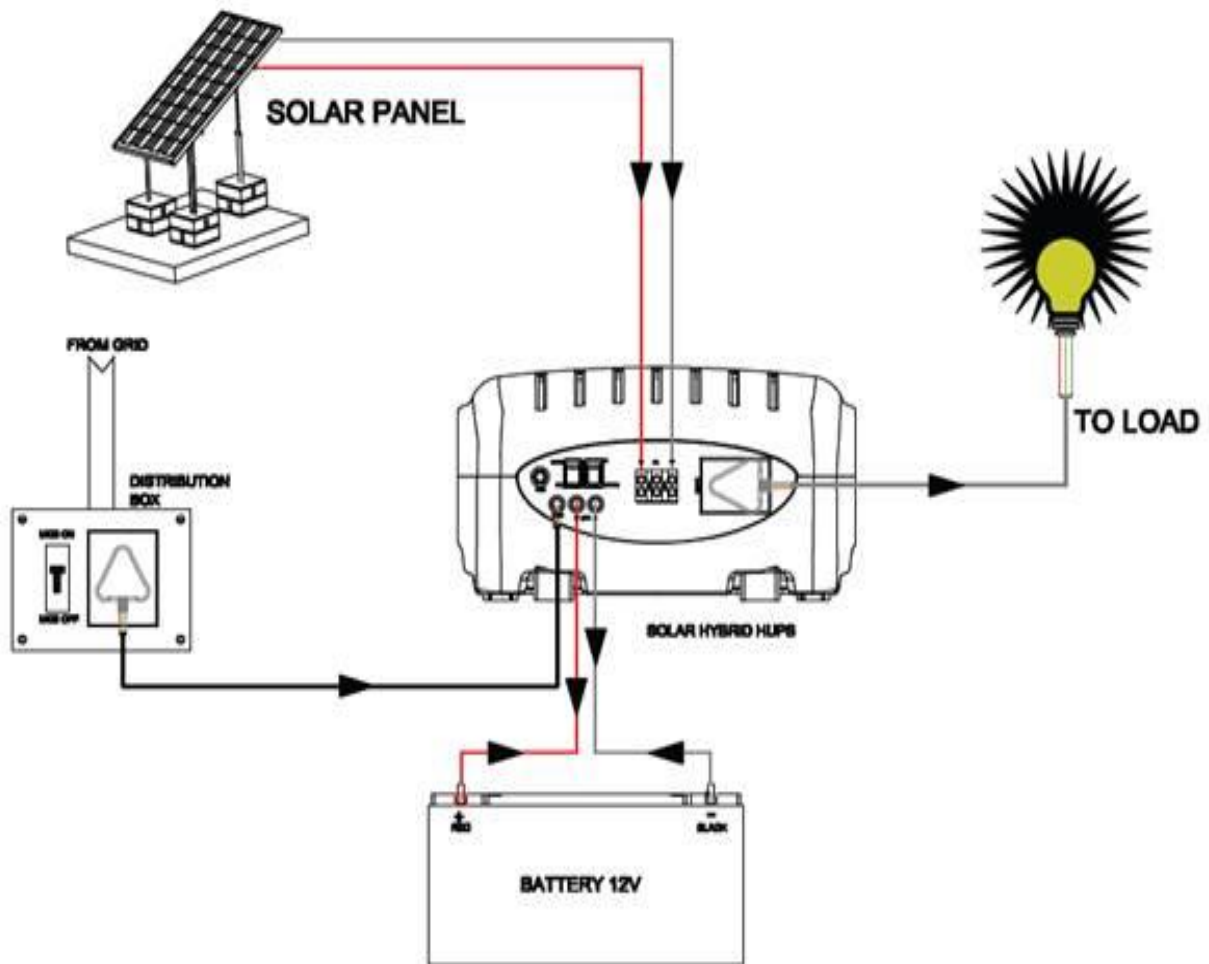


Solar Power Pack for education is designed to provide power for Computer, Printer, TV, DTH, Lighting and Fan in schools. These systems are used where Grid connection is not available or where Power supply is very erratic.

Specifications

MODEL	SPP-01		SPP-02		SPP-03	
	Quantity	Working Hrs/Day	Quantity	Working Hrs/Day	Quantity	Working Hrs/Day
AUTONOMY 3 DAYS						
TV (21")	1	4	-	-	1	4
DTH	1	4	-	-	1	4
Computer	-	-	1	4	1	4
Printer	-	-	1	2	1	2
Socket	1	4	1	4	1	4

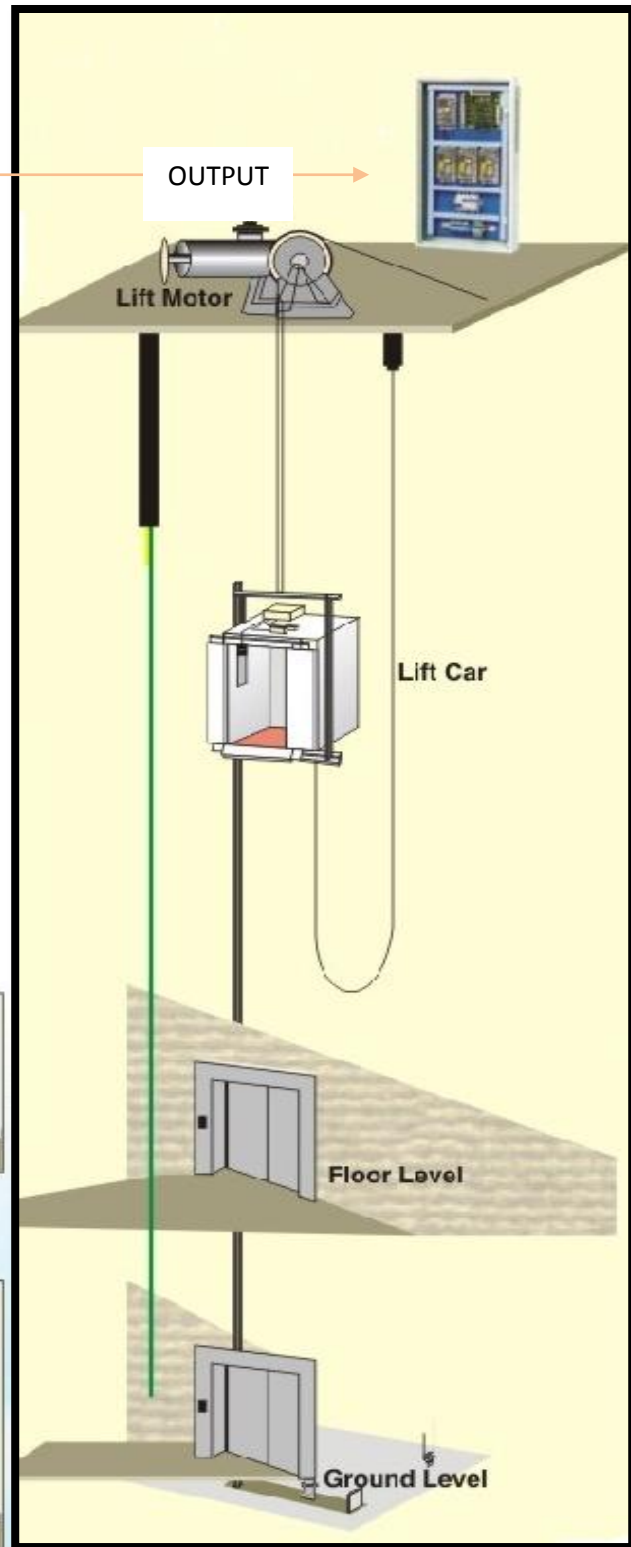
Schematic Diagram



LIFT OPERATING SYSTEM

ELOS Emergency Lift Operating System, is a Static Converter designed to generate 3 phase Output to support Lifts / Elevators during utility failure. In addition to this, important load like staircase, parking, compound & common lights, security systems, water pump, fire pump etc. can be supported through this innovative product.

The Inverter provides Three Phase Pure Sinewave Power to the Lift and other related load, utilizing the energy stored in Battery bank. The inverter is customised to handle high inrush current, capable of driving motor loads such as Lift, Elevators, Water Pumps, Fire Pumps etc.

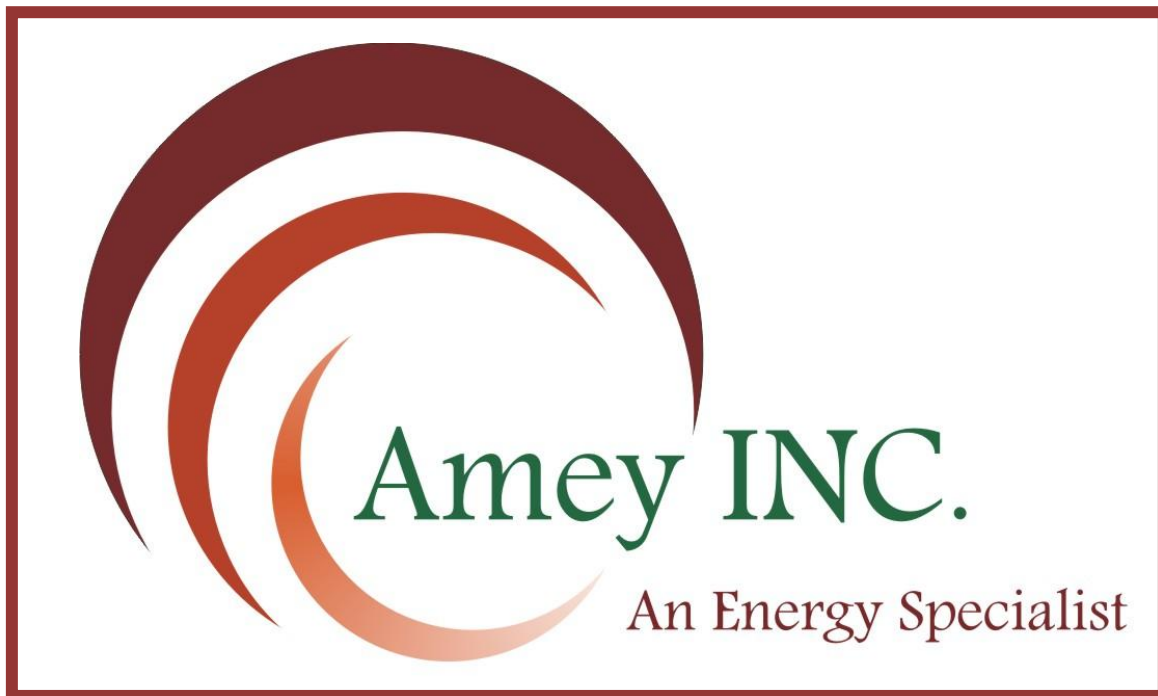


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