IGFOTON SPIN OFF PRODUCTS FOR PV APPLICATIONS

PV COMPACT SYSTEMS, DESIGNED AND MANUFACTURED BY IGFOTON

MUTAH University, 24 November 2014
Spin-off Workshop
We can offer a professional solution to everybody for electrification in everywhere. We have in all the world a lot of people without electricity from conventional electric grid power. These people need a professional answer, IGFOTON and NETENERGY, can give the solution with quality and nice price.

Our solution give to the user, a good solution with very high quality electric power signal, according European standard with guarantee of quality and electric safety according international rules.

IGFOTON offer a professional solution for multiple uses and needs. Our different products can give a response from domestic user until industrial user, on grid and off grid applications.
PV compact systems for rural electricity in a domestic user or a little company situated far of conventional grid power. This systems required batteries. The systems give AC signal, pure sine, single phase, for low power requirement. Plug & Play concepts

PV solar compact 150-50/60 (real 150 W in AC)
PV150-50/60CB
(professional systems, very resistant box and autonomy of 24 h of total power requirement. More autonomy can be Provided if the customer is required)

Other models:
PV Solar Compact 400-50/60 (real 400 W in AC)
(PV400-50-60CB)
PV Solar Compact 800-50/60 (real 800 W in AC) New in 2015
(PV800-50/60CB)

PV compact systems. High Power for Industrial purpose and micro-electric power grid in stand alone application. High quality electric energy signal pure sine 50/60 Hz.

All system are installed in standard container (10ft o 20ft), these equipment can be provided for on-grid connected or off-grid applications (with batteries).

PV1K-50/60CB (1kW)
PV2K-50/60CB (2kW)
PV3K-50/60CB (3kW)
PV4K-50/60CB (4kW)
PV5K-50/60CB (5kW)
PV10K-50/60CB (10kW)

Off-grid models, with batteries

On grid (self-consumption) can be installed in electrical box until 5 kW (domestic application) and 10 or 20 kW can be installed in container for industrial application. PV(1...20)K-50/60CG

www.grupoigfoton.es
PV COMPACT SYSTEMS FOR RURAL ELECTRICITY IN DOMESTIC APPLICATION AND SMALL INDUSTRIAL IN OFF GRID USES. PROFESSIONAL SOLUTION FOR LOW POWER AND LOW COST

PV COMPACT SYSTEM TO OFF-GRID APPLICATION

Our models are for different output power, 150 W, and 400W. The new model for 2015 will be offer 800 W. All output are in real AC power. Output signal is sine pure.

The battery is situated out of Central control box, with a very and safety connection. The PC modules are connected in its connectors without error, and with safety guarantee.

The autonomy is 24 h to full power (standard value), we can provided more autonomy if customer require. Battery with high safety, AGM or Gel, don’t problem with acid and security with users.

Professional systems, not a toy. Protected against high temperature, cooling system with temperature sensor, Dust filter to protect the electronic Circuit, develop by IGFOTON R&D team.

Include all protection in DC side, and AC side, the first security of user.


INFORMATION VIDEO

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OUR PRODUCT  PV150-50/60CB, PV400-50/60CB

OFF GRID USE

Easy use, professional results

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OUR PRODUCT PV150-50/60CB, PV400-50/60CB

OFF GRID USE. DIFFERENT UNITS ARE DISTRIBUTED AND OPERATION IN AFRICA. GUINEA BISSAU, AS EXAMPLE

Easy installations Plug&play concepts

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PV COMPACT SYSTEMS TO OFF GRID APPLICATIONS

Professional and industrial applications in every where

Install in standard container (10ft, 20 ft or 40 ft)

The PV plant is tested in IGFOTON labs and the Cadiz University Labs.

The system is provider with low voltage certificate according international electric standard.

Total autonomy 24 h al full power. For more autonomy the customer can ask to IGFOTON and the maximum capacity of batteries will be design according specification of customer.

The system has into container all parts, control, batteries, regulators, inverters, electrical protection box, etc. COMPLETE PLANT. Module can be install on roof top of container until 5 kW, for more power of the plant more space very close to container will be required. Quality, safety and puer sine output is guarantee.

PV1K-50/60CB
PV2K-50/60CB
PV3K-50/60CB
PV4K-50/60CB
PV5K-50/60CB
PV10K-50/60CB(1)
PV20K-50/60CB(1)

(1) Anex space for module install is required

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PV COMPACT SYSTEMS TO OFF GRID APPLICATIONS

ACCESSORIES AND OPTIONS

Electric fire system protection, by extinguisher

Manuals end complete electric schemes to easy maintenance and operations.

This systems are compatible with IGFOTON water plant treatment, as power unit, if Renewable Energies are required.

SOME SPECIAL OPTION

Remote monitoring system can be included with a complete graphicals interface to control and test the plant status.

- Power supply to mobile telephone station

- INTERNET service with WIFI, WIMAX, etc. To give the service to isolated communities, military camps, etc.

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OUR TEST PLANT. REAL EXAMPLE WITH A EXPERIENCE FOR MORE THAN 5 YEARS IN THESE PRODUCTS

PROFESSIONAL EQUIPMENT INSIDE, ADVANCE DESIGN BY OUR ENGINEER TEAM. 5 kW of real AC POWER, PURE SINE.

COMPLETE PV COMPACT PLANT.
OUR PLANT CAN BE HYBRID WITH PV AND WINDMILLS TECHNOLOGY

In the picture can see the windmills technology apply to the PV compact plant. Now this plant is a hybrid electric plant.

In the example we uses two little wind mills of 3 kW each one and in this plant 4.5 kWp of PV modules-

The reliability of this test plant is very high and the response is very nice.

In the right picture can see the windmills regulators with electronic and automatic protection against high wind velocity or battery full capacity. All Spanish technology

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SOME SPECIAL APPLICATION OF GRID FOR OUR PLANTS

- For electrification in remote sites of houses, small companies, office, little village, military camp, etc

Example: Remote office in a remote place, with our PV compact installations

- For rural electrification, lights, water and agriculture requirements, aquiculture application in remote places

Example: Little aquiculture plant in Guatemala, was electrificate with RE only and IGFOTON cooperation with university (Cadiz and San Carlos of Guatemala)

- For rural electrification with micro electric grid concepts for small village, military camps, etc
**PV COMPACT PLANT TO GRID CONNECTED APPLICATIONS**

DECENTRALIZED ELECTRIC ENERGY PRODUCTION. NEW STRATEGY IN THE WORLD

**CONCEPTS**

*Conventional model . Centralized system*

-The electric energy production is done very far of the consumption place
-This model require a huge electric power plants
-The electric system require a very long power line transmission and very high voltage
-The energy losses in power lines is high more or less 10-15% of the total energy.
-Normally the local people wasn’t construct great power line near of their houses.
PV COMPACT PLANT TO GRID CONNECTED APPLICATIONS

DECENTRALIZED ELECTRIC ENERGY PRODUCTION. NEW STRATEGY IN THE WORLD

CONCEPTS

Centralized Spanish Model

Similar to all countries in the world, a new model is coming, REALLY NEW MODEL IS HERE

RENEWABLE ENERGY ARE THE SOLUTIONS FOR THE ENERGY INDEPENDENCE

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PV COMPACT PLANT TO GRID CONNECTED APPLICATIONS

DESCENTRALIZED ELECTRIC ENERGY PRODUCTION. NEW STRATEGY IN THE WORLD

CONCEPTS

Left Picture is partial self-consumption, and user can sell the energy excess to the grid (need a contract), is useful for companies.

Right picture is a total self-consumption, called NET MEETERING is very interesting with high economical interest for domestic user. The user don’t sell electric energy to the grid, only the grid exchange the excess of one moth with energy consume in the next. The number of moth for exchange period is different in each country.
GRID PARITY. This is the point where the conventional electricity cost is the same of PV electricity cost in on grid applications.

- Es más barato comprar la electricidad a la compañía eléctrica
- Toda la electricidad FV generada tiene que recibir una tarifa
- La electricidad FV es más barata que la electricidad de red
- Es preferible auto-consumir a comprar electricidad a la compañía eléctrica

Nota: * Levelized Cost Of Electricity
Fuente: Análisis de Eolareon
PV COMPACT PLANT TO GRID CONNECTED APPLICATIONS

IGFOTON COMPACT SOLUTION. OUR PRODUCTS FOR DOMESTIC USER

Control Box with three model, 1 kW, 2 kW, 3 kW

LOW COST are distribute by NETENERGY in Jordan, as Partner of IGFOTON

For industrial application ON GRID, our container without batteries

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