IMEON 3.6

USER GUIDE

IMEON ENERGY

Your Power, Your Rules

USER GUIDE IMEON 3.6

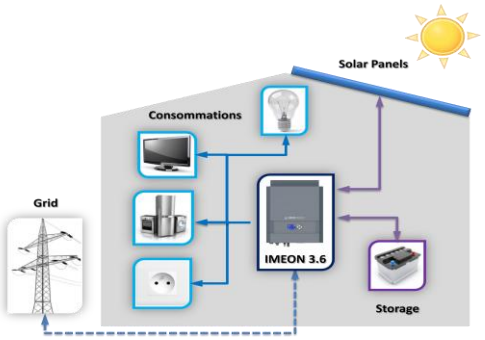
Indice des modifications

Index	Date	Modified pages	Modification description	Author
A	30/07/2015	-	Initial drafting	F.M.

IMEON 3.6

Smart management of all self-consumption solar installations

IMEON is the result of high innovation and technology. The IMEON multi-sources phase coupling (Phase Coupling Energy, or PCE) is used to couple several energy sources (eg: PV / batteries / grid). There is no longer a need for source switching, which often leads to micro-cuts of electricity supply. PCE solves age old renewable energy concerns such as intermittence and fluctuation. IMEON's PCE has now made it possible to guarantee constant power supply and optimal solar yields.



- **Smart self-consumption inverter**
- **Compact "ALL IN ONE" system**
- **Smart Grid / Back-Up / Off-grid / On-grid modes**
- **Smart battery management**
- **Simple and fast Plug & Play installation**
- **Easy to use and configure**
- **Real time local and remote monitoring**

SMART GRID

With the smart management and the real time multi-energy phase coupling, IMEON optimises solar yields by choosing the ideal energy mode: direct consumption (self-use), storing the surplus of production, drawing from the grid, or injecting the solar surplus to the grid. IMEON adapts automatically to the installation without complex configurations.

ECONOMIC

There is no longer the need for separate components such as charge controllers or added inverters. The overall cost of the photovoltaic system can therefore be reduced. IMEON's innovative Smart-Grid function allows to lower the storage capacity, reduce battery cycling, as well as further prolonging the battery life.

ALL IN ONE

The IMEON Smart Grid Inverter is specifically designed for any solar installation, regardless whether the system is an Of f-Grid, Back-Up, Grid-Tie, or a hybrid power system. IMEON is a complete Plug-and-Play smart inverter which simplifies the installation process and reduces the overall setup time of a solar system.

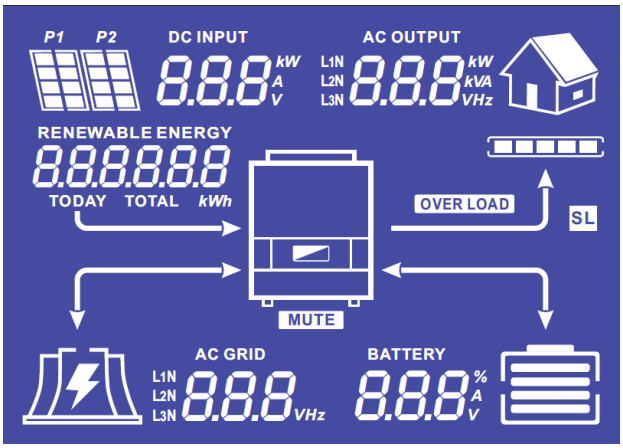
⚠ **WARNING:** Authorized service staff should reduce the risk of electrical shock by disconnecting AC, DC and battery power from the inverter before attempting any maintenance or cleaning or working on any circuits connected to the inverter. Turning off controls will not reduce this risk. Internal capacitors may remain charged for 5 minutes after disconnecting all sources of power.

1- Inverter supervision

1-1 LCD information

Note : To light up the screen, you can press any button.

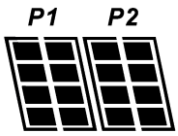
Display screen :



Indicators	Units
AC OUTPUT L1N L2N L3N kW kVA VHz	Indicates AC OUTPUT active power, apparent power, frequency and voltage. kW : Active power. kVA : Apparent power. Hz : Frequency. V : Voltage.
BATTERY % A V	Indicates BATTERY voltage, charge current and percent of charge. % : Percentage of charge. A : Current. V : Voltage.
AC GRID L1N L2N L3N VHz	Indicates AC GRID input voltage and frequency. V : Voltage. Hz : Frequency.
RENEWABLE ENERGY TODAY TOTAL kWh	Indicates PV input voltage and frequency. Today kWh : Today production. Total kWh : Total production.
DC INPUT kW A V	Indicates the generated PV production DC INPUT. kW : Active power. A : Current. V : Voltage.

FR

EN

	Indicate the PV.
	Indicates the grid. If the icon flashes, that means the grid is unavailable.
	Indicates the battery state of charge. - Left icon : battery fully charged. - Center icon : If the icon flashes, that means the batteries is unavailable. - Right icon : Battery has low voltage.
	Indicates the AC OUTPUT is activated and that loads are delivered.
	Indicates the percentage of charge in AC OUTPUT.
	Indiques an overload.

FR
EN

1-2 Display by indicator light

	Indicates the IMEON is supplied and functional
	Indicates an anomaly in the system

1-3 Button definition

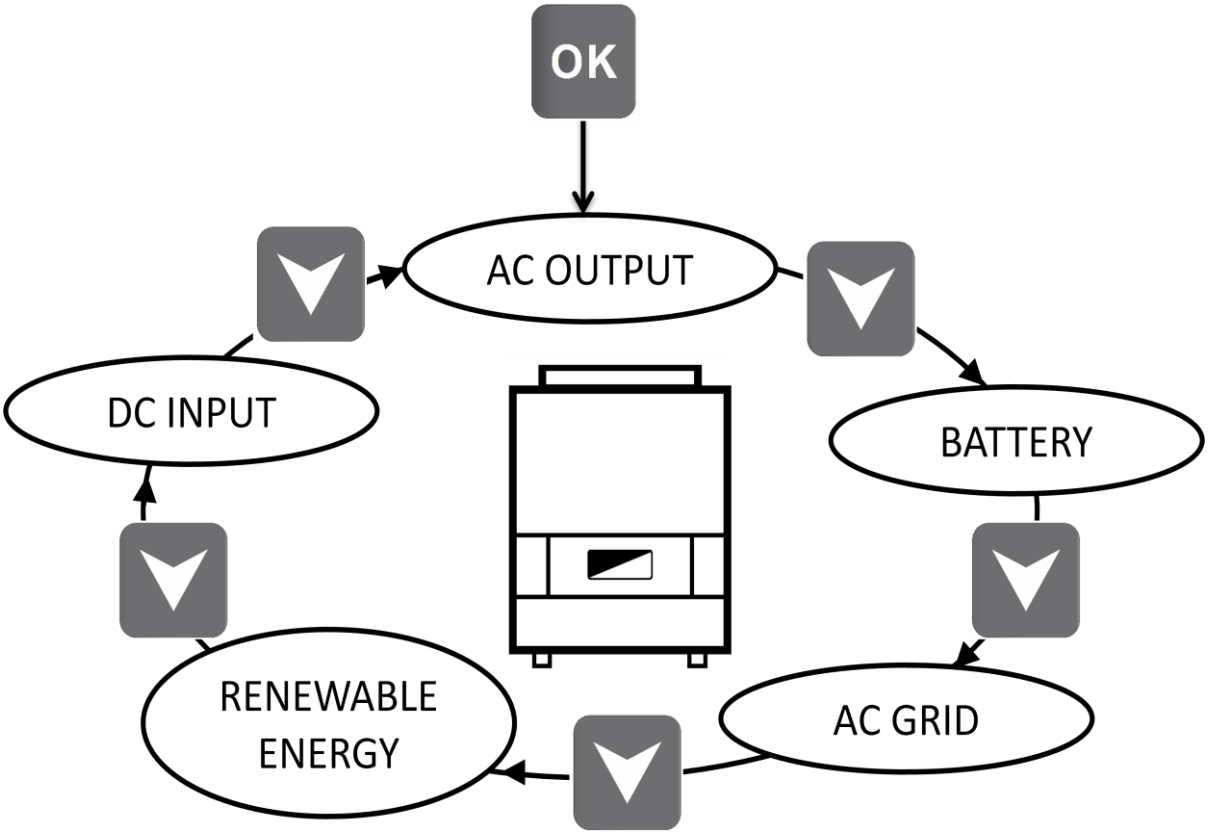
Button	Function
	> Change the indicators clockwise. > Change the unit of the selected indicator.
	> Change the indicator counterclockwise. > Change the unit of the selected indicator.
	> Select indicator. > Confirm the choice of the indicator. > Hold 3 seconds the button unitl the buzzer emission to activate the AC OUTPUT.
	> Go back to the previous indicator or exit the indicator. > Hold 3 seconds the button until the buzzer emission to deactivate the AC OUTPUT.

1-4 Query Menu Operation

This display shows the current contents of your system. These values can be changed in the menu with the buttons. There are five indicators available.

Choice of the indicator :

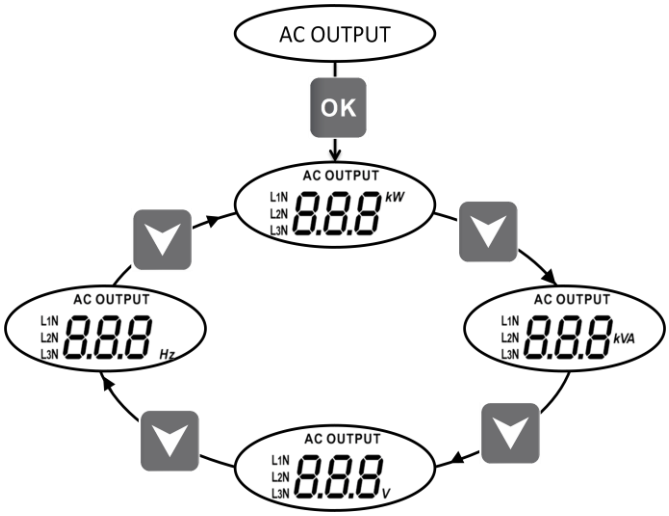
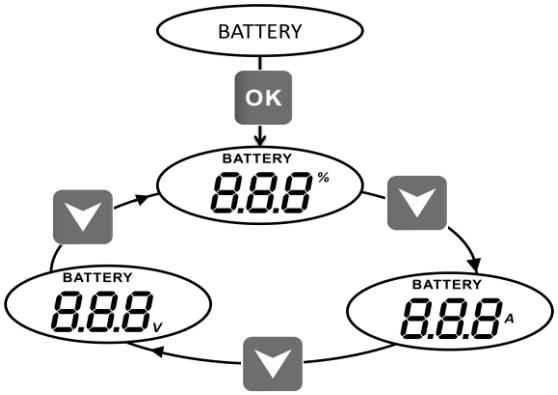
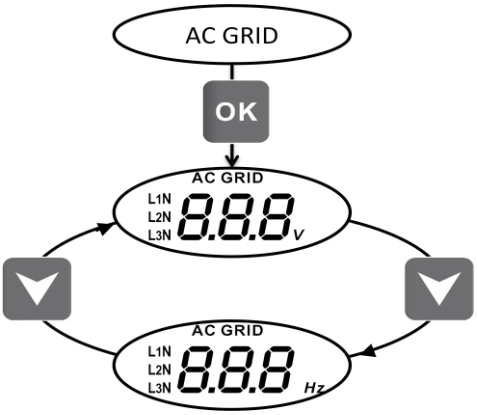
Press the button OK once, the indicator is flashing, then press the button ▲ or ▼ to select the required indicator.



FR
EN

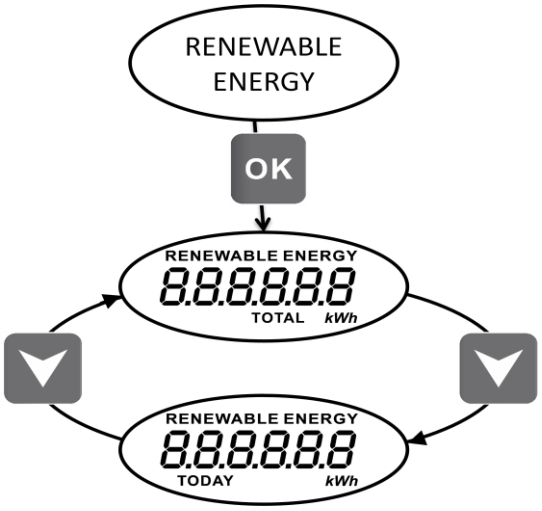
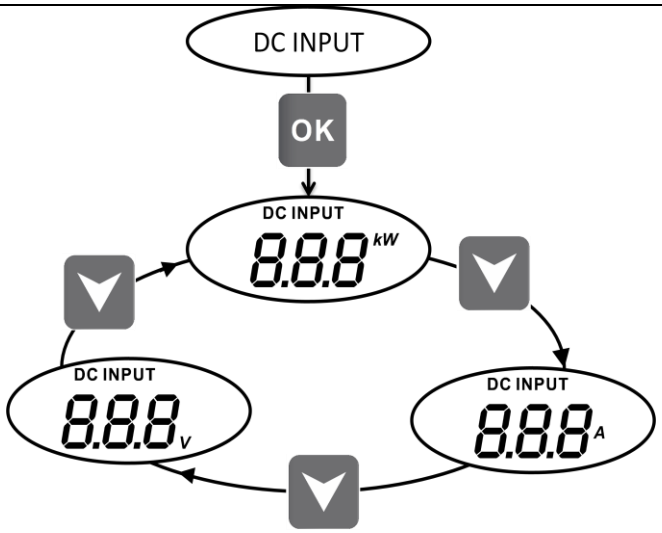
Choice of the indicator unit

Press the button OK once, then press the button ▲ or ▼ to visualize the value of the unit.

Indicator AC OUTPUT : -Apparent power (kVA) -Active power (kW) -Voltage (V) -Frequency (Hz)	
Indicator BATTERY : -Charge percentage (%) -Charge current (A) -Voltage (V)	
Indicator AC GRID : -Voltage (V) -Frequency (Hz)	

FR

EN

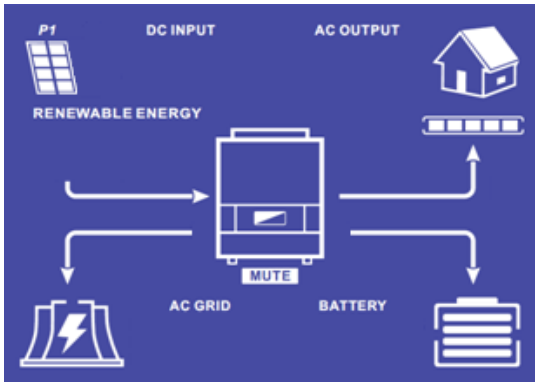
Indicator RENEWABLE ENERGY : -Total production (kWh) -Daily production (kWh)	
Indicateur DC INPUT : -Power (kW) -Current (A) -Voltage (V)	

Enable and disable « AC OUTPUT »

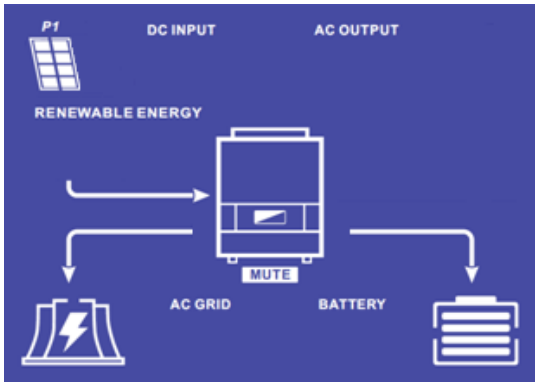
To enable the « AC OUTPUT » of the IMEON, hold pressed during 3 seconds the OK button and release until the sound signal is emitted. The house and arrow icons appear indicate that the « AC OUTPUT » is activated.

To disable the « AC OUTPUT » hold pressed during 3 seconds the Esc button and release until the sound signal is emitted. The house and arrow icons disappear indicate that the « AC OUTPUT » is inactivated.

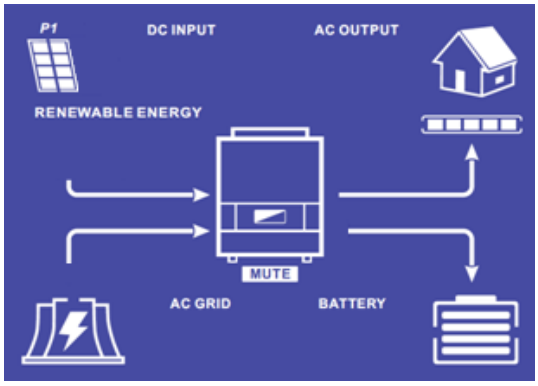
2- Affichage suivant le mode de fonctionnement



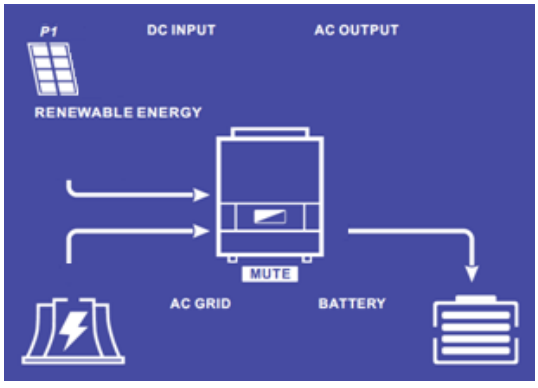
The photovoltaic production allows to supply the load, to charge the batteries and to feed-in the surplus of energy to the grid.



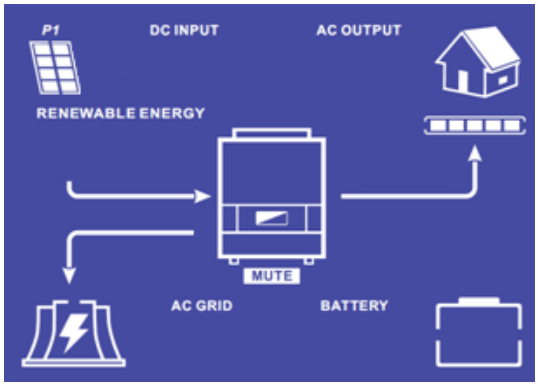
The photovoltaic production allows to charge the batteries and to feed-in the surplus of energy to the grid.
The “AC OUTPUT” is deactivated, the load is not supplied.



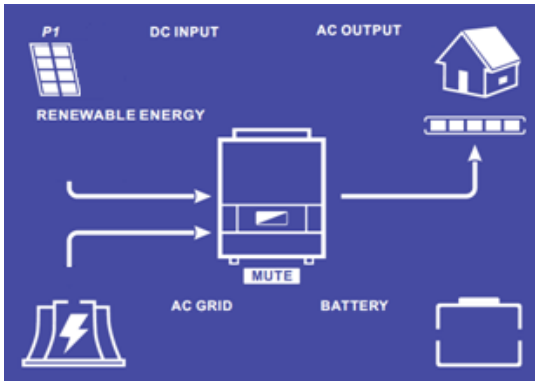
The photovoltaic production allows to supply the load and to charge the batteries. The grid supplies the additional needs to charge the batteries.



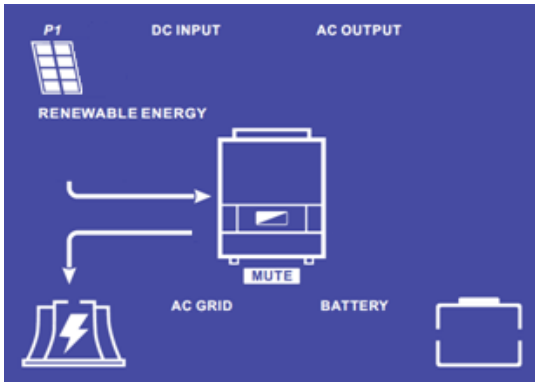
The photovoltaic production allows to charge the batteries. The grid supplies the additional needs to charge the batteries.
The “AC OUTPUT” is deactivated, the load is not supplied.



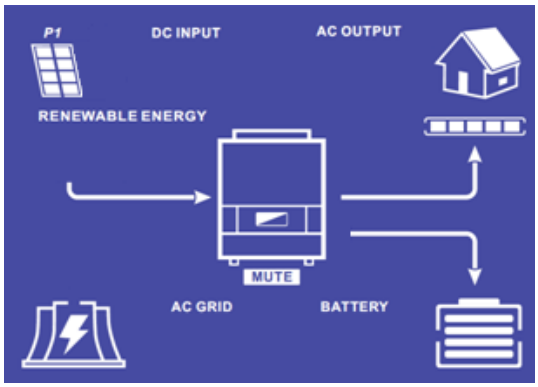
The « BATTERY » icon is flashing, the batteries are disconnected from the IMEON.
The photovoltaic production allows to supply the load and to feed-in the surplus of energy to the grid.



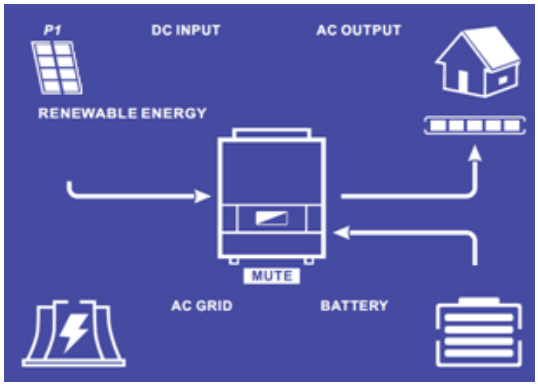
The « BATTERY » icon is flashing, the batteries are disconnected from the IMEON.
The photovoltaic production allows to supply the load. The grid brings the additional needs to supply the load.



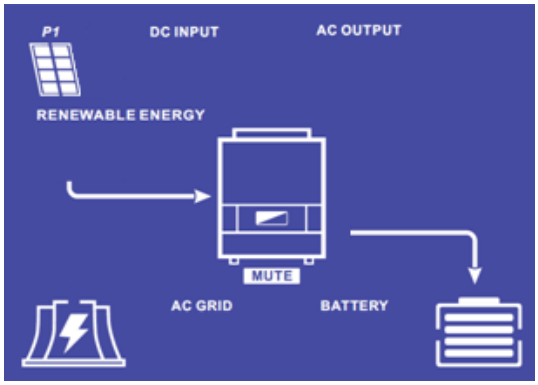
The « BATTERY» icon is flashing, the batteries are disconnected from IMEON.
The photovoltaic production allows to feed-in the surplus of energy to the grid.
The “AC OUTPUT” is deactivated, the load is not supplied.



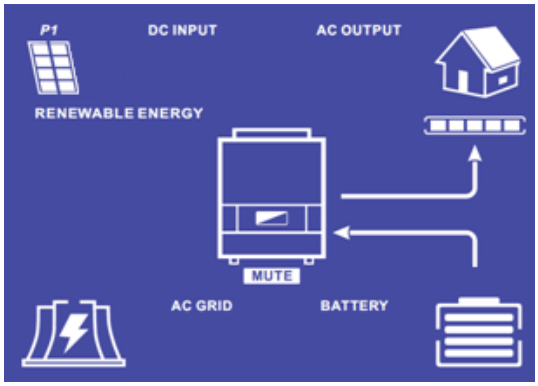
The « AC GRID » icon is flashing, the grid is disconnected from IMEON.
The photovoltaic production allows to supply the load and to charge the batteries.



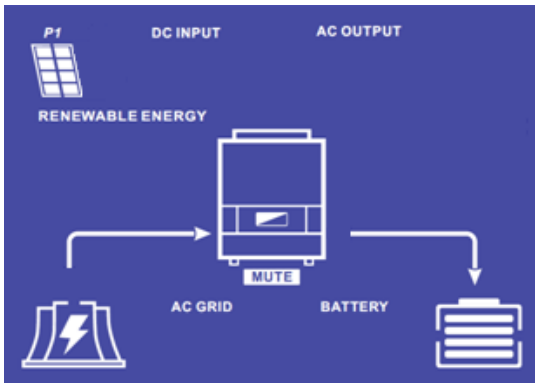
The « AC GRID » icon is flashing, the grid is disconnected from the IMEON.
The photovoltaic production allows to supply the consumers. The batteries supply the additional needs for extra loads.



The « AC GRID » icon is flashing, the grid is disconnected from the IMEON.
The photovoltaic production allows to charge the batteries.
The “AC OUTPUT” is deactivated, the load is not supplied.



The « AC GRID » icon is flashing, the grid is disconnected from the IMEON.
The « DC INPUT » icon is flashing, the photovoltaic panels are disconnected from the IMEON.
The batteries supply the loads.



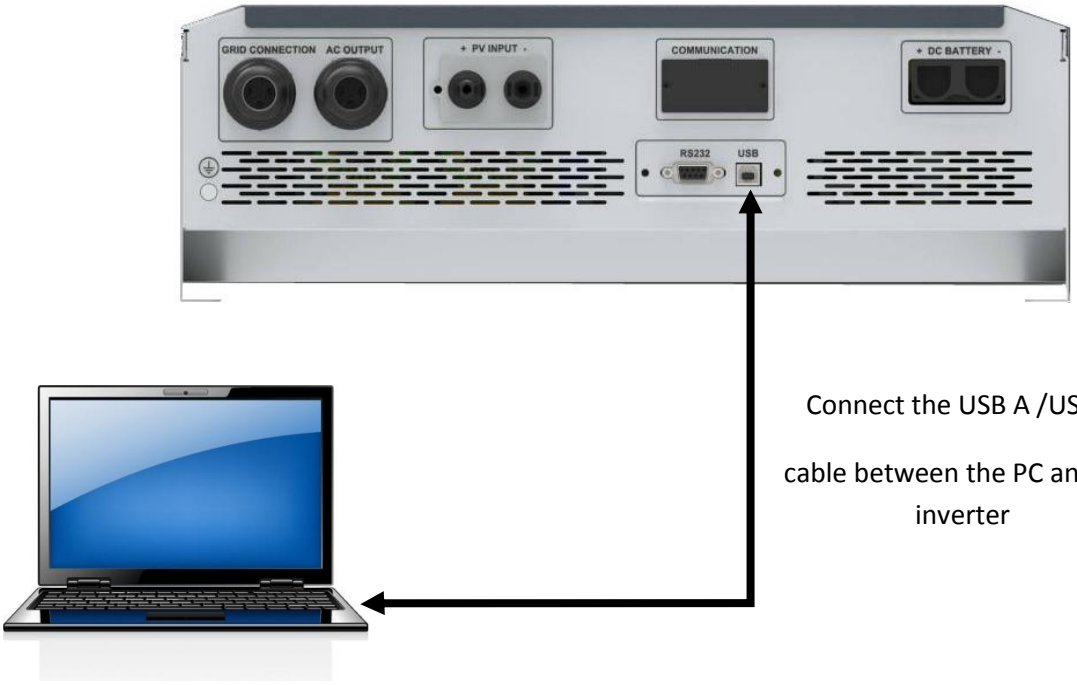
The « DC INPUT » icon is flashing, the photovoltaic panels are disconnected from IMEON.
The grid supplies the additional loads.
The “AC OUTPUT” is deactivated, the load is not supplied.

FR

EN

3- Programme IMEON MANAGER

The IMEON MANAGER is USB-based software that can be installed on a Windows PC, which allows easy and immediate settings of the IMEON functionalities.



Connect the USB A /USB B

cable between the PC and the inverter

FR

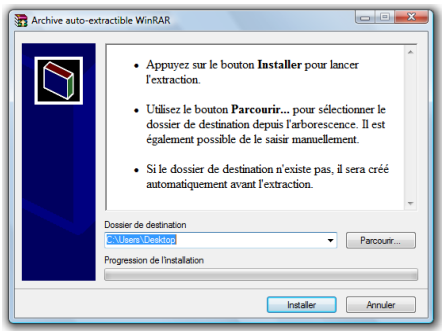
EN

1- Download of the software IMEON Manager

Download the software IMEON Manager from the IMEON ENERGY website at the following address: http://www.imeon-energy.com/
Save the software on a folder on your computer.

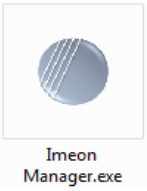
2- Installation of the software IMEON Manager

Run the software IMEON Manager.exe and select a folder to install by clicking on the « Browse » button. Then click on the « Install » button.



3- Run the IMEON Manager software

Open the folder where the software IMEON Manager is installed.
Run the software by double clicking on the IMEON Manager.exe icon.

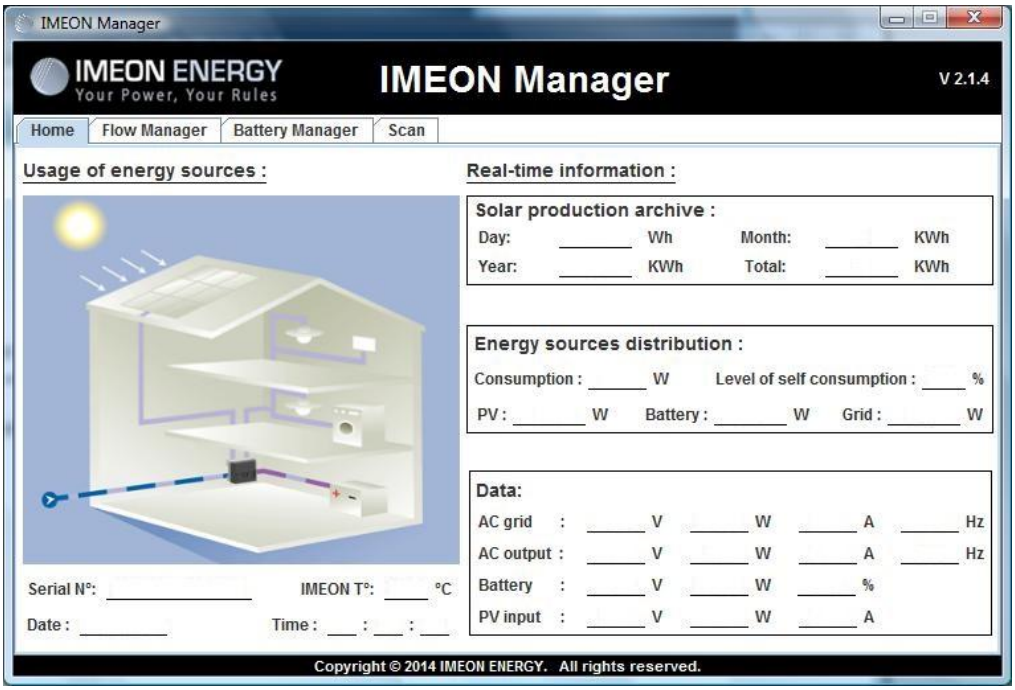


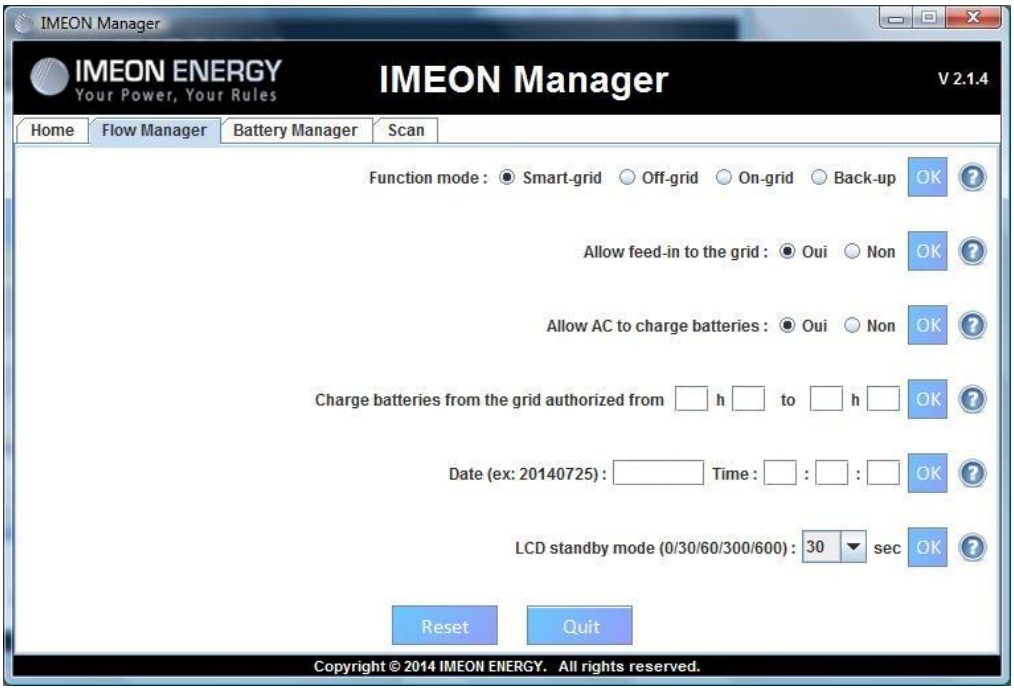
The window of the language selection appears: French or English.

4- Using the IMEON Manager software

WARNING: Before performing any modifications, make sure that you follow the standards in your country. Only the IMEON MANAGER software can be used for any configuration of the IMEON smart inverters. The use of any software other than the IMEON MANAGER that is unauthorize

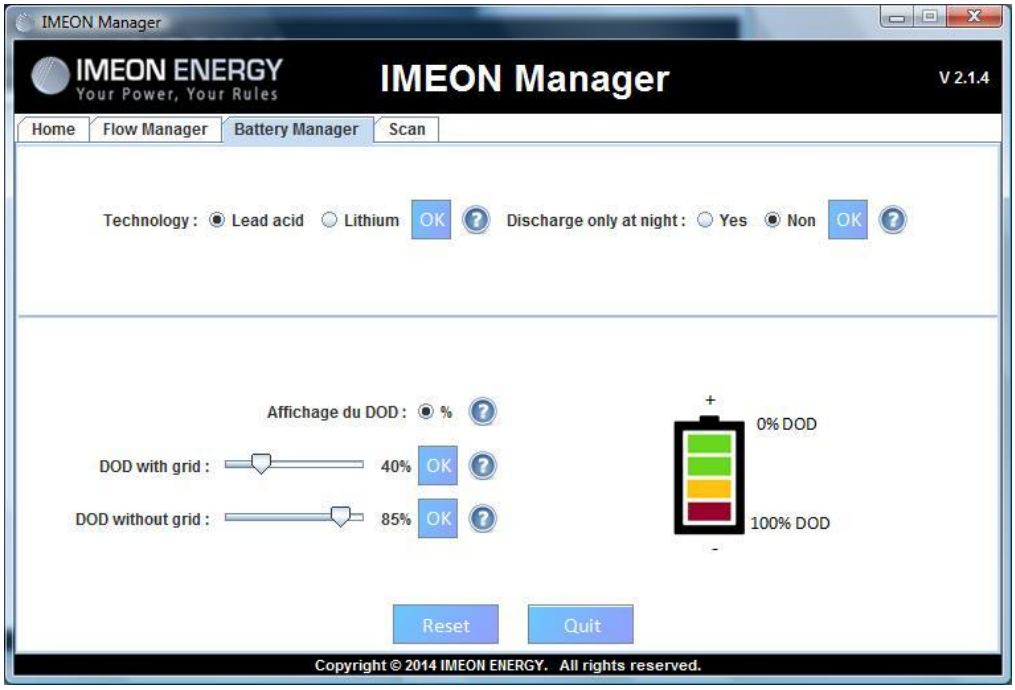
There are four tabs available: « **Home** », « **Flow Manager** », « **Battery Manager** » and « **Scan** ».

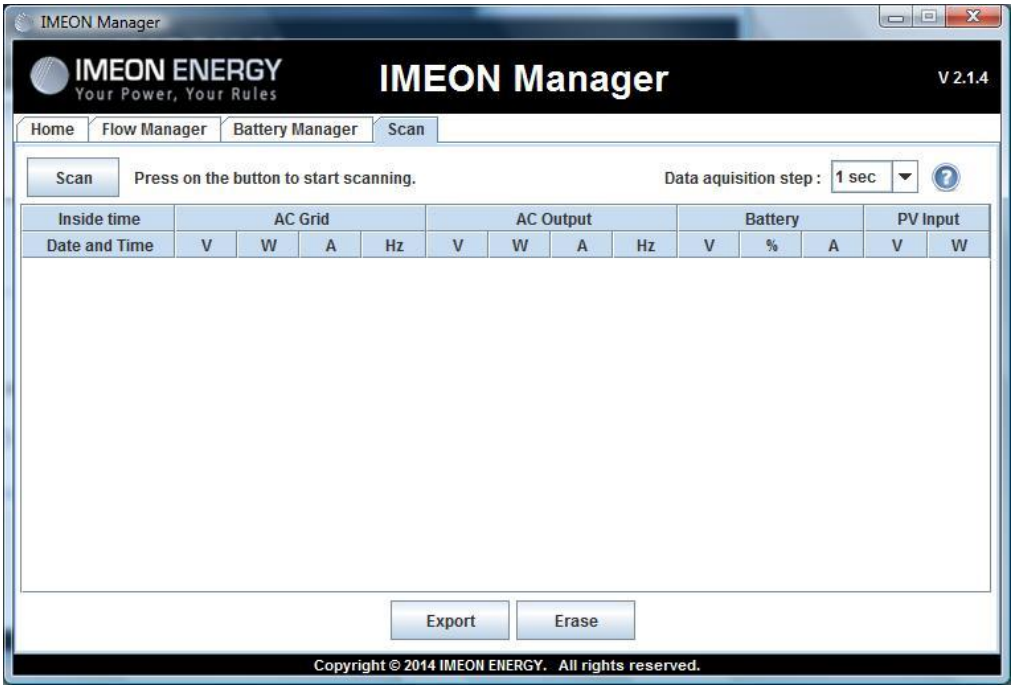




FR

EN


IMEON Manager
IMEON ENERGY
Your Power, Your Rules
IMEON Manager
V 2.1.4
Home
Flow Manager
Battery Manager
Scan
Technology : Lead acid Lithium OK
Discharge only at night : Yes Non OK
Affichage du DOD : %
DOD with grid : 40% OK
DOD without grid : 85% OK
+
0% DOD
100% DOD
-
Reset
Quit
Copyright © 2014 IMEON ENERGY. All rights reserved.


IMEON Manager
IMEON ENERGY
Your Power, Your Rules
IMEON Manager
V 2.1.4
Home
Flow Manager
Battery Manager
Scan
Scan
Press on the button to start scanning.
Data aquisition step : 1 sec
Inside time
Date and Time
AC Grid
AC Output
Battery
PV Input
V
W
A
Hz
%
Export
Erase
Copyright © 2014 IMEON ENERGY. All rights reserved.

4.1 – Home

The home page shows the information of the inverter and the general status operation.

Usage of energy sources :

Serial N° : Indicates the serial number of the inverter.

IMEON T° : Indicates the internal temperature of the inverter.

Date : Indicates the internal date of the inverter.

Time : Indicates the internal hour of the inverter.

Solar production archive :

Day : Indicates the daily solar production in kWh.

Month : Indicates the monthly solar production in kWh.

Year : Indicates the annual solar production in kWh.

Total: Indicates the total solar production in kWh since beginning of the installation.

Energy sources distribution :

Consumption : Indicates the power of the consumers in W.

Level of self consumption : Indicates the self production rate in%.

PV : Indicates the instantaneous solar power in W.

Battery : Indicates the battery power in W.

Grid : Indicates the public grid power in W.

Data :

AC Grid : Indicates the voltage, power, current and frequency of the public grid.

AC Output : Indicates the voltage, the power and the frequency of the AC OUTPUT.

Battery : Indicates the voltage, the power, the current and the frequency of the battery bank.

PV input : Indicates the voltage, the power and the current of the solar production.

4.2 – Flow Manager :

Function mode :

- Smart-Grid Mode optimized for self-consumption and efficiency.

- Off-Grid Mode optimized for electrification of isolated sites (without grid).

- On-Grid Inject the totality of the solar production in the « GRID CONNECTION » connector. Using batteries is not possible with this mode.

- Back-Up Mode optimized for Uninterrupted Power Supply (UPS). Batteries are maintained in charge permanently. Discharge of batteries is allowed only in the case of grid outage.

Allow feed-in to the grid :
Allow to block or authorize injection of electricity to the « GRID CONNECTION » connector.

Allow AC to charge batteries :
Allows the public grid to charge the batteries.
Not charging batteries for a prolonged period may cause a deep discharge that would result in irreversible consequences on the batteries.

Charge batteries from the grid authorized from :
Function related to allow charging the batteries from the grid.
It allows setting a time frame during which charging is allowed.
If you wish to activate charging permanently, you must insert the values « 00:00 – 00:00 ».

Date / Time :
Allows adjusting the internal clock of IMEON.
Date format - YYYYMMDD (ex : 20150122)
24 hours format – HH :MM :SS (ex : 12 : 15 : 05).

LCD stand by mode :
Allows setting the timing of the screen light of the IMEON.
Possibilities: 0/30/60/300/600 seconds.

4.3 – Battery Manager :

Technology :
Allows choosing the technology of the battery connected to IMEON: Lead Acid (GEL, AGM, OPz) or Lithium.

Discharge only at night :
By choosing « Yes », the batteries will be discharged only when the solar installation is not producing energy.

DOD display :
IMEON manages two depths of discharge of the batteries according to the state of the public grid. The DOD without grid is obligatorily superior or equal to that of the grid. The DOD has an important impact on the batteries life.

- High DOD = Lower life time but higher amount of energy used.
- Low DOD = Optimized life time, however amount of energy used is reduced.

4.4 – Scan

Allows recording the calculated channels AC GRID, AC OUTPUT, BATTERY and PV INPUT.

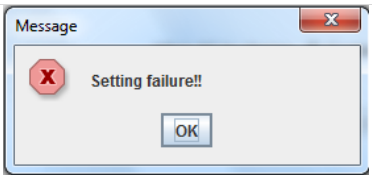
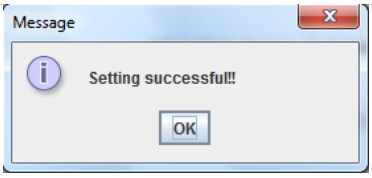
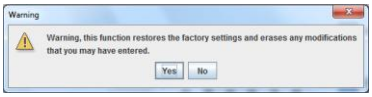
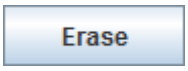
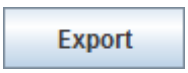
AC GRID : Voltage (V).
Power (W).
Current (A).
Frequency (Hz).

AC OUTPUT : Voltage (V).
Power (W).
Current (A).
Frequency (Hz).

BATTERY : Voltage (V).
State of charge (%).
Current (A).

PV INPUT : Voltage (V).
Power (W).

5- Buttons and messages of the software :

	Validates the IMEON settings modifications.
	Allow restoring the IMEON factory parameters. This button erases previously made settings.
	Allows to exit the software.
	Allows displaying the information about the parameter.
	Message showing that the modification of the parameter is not possible.
	Message showing that the modification of the parameter is done with success.
	Message confirms the setting of the factory values of all parameters after clicking on the « Reset » button.
	Allows recording the faults and events.
	Allows stopping the record of the faults and events.
	Allows erasing the record of the faults and events.
	Allows exporting the recorded faults and events in an Excel file.

IMEON ENERGY / FRANCE

Address :
300 rue Pierre Rivoalon
29200 BREST - FRANCE
Tel : +(33) 1 84 17 51 15

After-Sales Service : Contact your local distributor

www.imeon-energy.com