INFOSEC™
UPS SYSTEM

L'Énergie Sans Limite !
Safe Energy for Life !

Renewable Energies

C3 MPPT

From 1000 to 5000 VA

C3 MPPT inverter charger is the perfect solution to provide a temporary or permanent electric autonomy to places suffering long electric power shortage, such as unstable environment, boats, RVs...

A smart solution with an optimal solar efficiency

C3 MPPT is a versatile inverter/charger equipped with the MPPT technology, allowing to control the solar charger in order to maximize and regulate the current from a PV installation. Batteries can be loaded thanks to the solar panels or the mains. With its compact and optimized design, C3 MPPT provides a reliable current conversion.

A reliable and performant technology

C3 MPPT offers some of the best technical performances on the market, such as:

- High-Frequency Technology with Galvanic Isolation: the battery (DC) remains isolated from the output (AC) by a transformer.
- Selectable input voltage to be adapted to various uses: domestic appliances, informatical equipment...
- Wide voltage input range.
- Compatible with generators and inductive charges: engine, air-conditioning, microwave ovens, refrigerators, pumps, laser-printers, compressors, TV...
- Solar charger with embedded DSP control.
- High charging power from the potovoltaic array: up to 60A for C3+ MPPT models. Batteries charging power from the mains up to 30A.
- High solar efficiency thanks to the MPPT technology.
- Photovoltaïc UPS for isolated places.

C3 MPPT offers a maximum security level and a guaranteed reliability under any circumstance. Several protections against overload, overheating, short circuit and polarity inversion are integrated.

A friendly and functional design

This product was designed for an easy and useful instalation and use, thanks to its wall fixing:

C3 MPPT is user-friendly and easy to use:

- LCD screen to adjust the parameters to any type of needs,
- Intelligent charger to optimize the performances of the batteries,
- Cold start with the batteries in case the mains input is missing,
- Automatic reboot when the mains is back,
- Parallel installation available up to 6 devices for C3+ MPPT 4K and 5KVA.

WARRANTY 2 YEAR 2 ANS GARANTIE

Pure sinewave

LCD

LCD screen

η

High efficiency of the solar charger (98%)

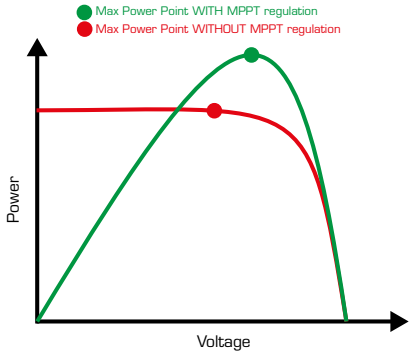
Remote control Software

MPPT Technology

C3 MPPT supports the connection to one or several photovoltaic panels that wil supply current to the batteries and the connected loads depending on the available luminosity.

MPPT Technology (Maximum Power Point Tracking), which standing for the tracking of the maximum power point of the DC/DC inverter (Photovoltaic Panel / Batteries charger), constantly adjusts the electric parameters, thus providing an optimal efficiency of the connected systems, whether they be photovoltaic panels systems or batteries.

Efficiency with the MPPT Technology



Adjustable batteries and backup time

When they are connected externally, the type and amount of batteries can be modified to provide different backup time lengths.

Model	Load (VA)	Number of batteries	Backup time @ 12Vdc 100Ah (min)*	Backup time @ 12Vdc 200Ah (min)*
1KVA-24V	50%	2	266	635
	100%	2	112	269
1KVA-48V	50%	4	482	1035
	100%	4	186	471
2KVA-24V	50%	2	112	269
	100%	2	50	112
2KVA-48V	50%	4	268	615
	100%	4	106	257
3KVA-24V	50%	2	68	164
	100%	2	28	67
3KVA-48V	50%	4	159	402
	100%	4	63	155
4KVA	50%	4	112	269
	100%	4	50	112
5KVA	50%	4	90	215
	100%	4	40	90

* For information purposes only

Choice of the type of batteries

Depending on the use, it is possible to connect des batteries standards au plomb (type AGM), soit des batteries cycliques. Setting the parameters of C3 MPPT can then be done according to the connected batteries in order to optimize their use and increase their backup capacity.

Charging current of the batteries

In order to optimize the available power, and depending on the use (standard or cyclic), C3 MPPT can be set in order to adjust the charging current of the batteries.

Chosing the main source with the LCD screen

The interface on the LCD screen allows to conveniently set the main source of input power, and the main source of output power.

Main charging source: When the mains and solar supply are both available, one of the two sources can be selected to charge the batteries in priority. If the priority goes to the solar source, but that the weather conditions do not allow the batteries to be loaded, the mains will take the turn automatically to proceed to loading the batteries.

Prority output source: It is possible to chose whether the outputs are supplied by solar or mains energy. If the priority is given to the solar source, in case of a lack of capacity to supply energy, the battery will automatically proceed to backing up the outputs (and then the mains). On the contrary, if the priority is given to the mains, but that a power shortage occurs, the solar source will automatically back the output up (and then the batteries).

Selecting the type of input

C3 MPPT allows to set the mains input voltage range depending on the needs of the connected equipment:

- If some domestic appliances are supplied by C3 MPPT, the domestic mode will set a wider input voltage range in order to maintain the devices functioning even if the voltage drops importantly.

- For other uses, the UPS mode will provide a smaller input voltage range so that the batteries can back the appliances up without damaging sensitive appliances such as computers.

A user-friendly LCD screen

The LCD screen and its keyboard provide easy access to set all the parameters. The user will be able to customize the loading of the batteries, the priority between the AC charger and the solar charger, the type of installed batteries and the acceptable input voltage range according to the needs of the equipment.

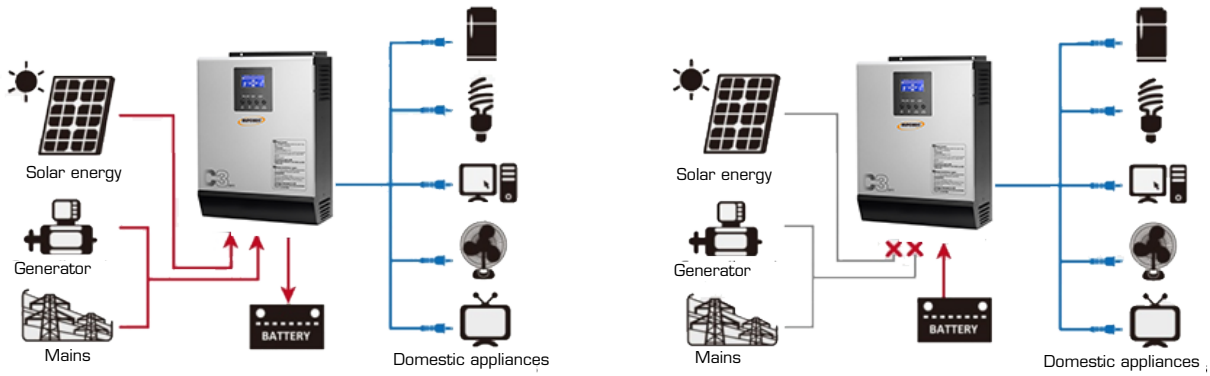
USE CASES EXAMPLES

Ideal solution for nautical or nomad use

Boats and leasure vehicles such as RVs and trailers have strong electric consumption needs. Installing a C3 MPPT with batteries and a photovoltaic panel, for example, will allow the use of any type of electric device such as a refrigerator, a microwave oven, a DVD player, a hair-dryer or other machines. C3 MPPT can easily convert your 12V or 24V into 230V / 50 Hz.
C3 MPPT allows to recharge the batteries thanks to a solar panel or a generator (or on the mains during a supply break), in order to use any kind of appliance in full autonomy and independence from the mains.

WORKING DIAGRAM

2 working steps: load and restitution



Batteries loading circuit

Appliances supplying circuit

PARALLEL INSTALLATION AND 3-PHASE CONFIGURATION

Parallel installation up to 6 inverters

4k and 5k versions can be set in parallel up to 6 inverters, giving the possibility of reaching a total output from 24k VA to 30k VA. The most demanding devices and appliances can then be supplied in full independence from the mains through C3 MPPT.

3-phase configuration for industrial applications

4k and 5k versions can be configured and installed into several combinations, allowing to choose between a single-phase and a three-phase configuration. Industrial equipment with a critical need for energy can therefore be protected from any interruption of the mains power supply in the most isolated environments.

Communication

With the RJ45 port and the RS 232 protocol, C3 MPPT inverter can remain connected and be remotely controlled from a computer in order to optimize its use.

The SolarPower management software is provided within the packaging C3 MPPT:

- User-friendly interface: allows to visualize the state of the system, measurment levels, events history…
- Monitoring of the energy production.
- Text messaging to remain constantly informed of the state installation and the production.

Remote control panel

A remote control panel is available as an option for an easy and comfortable use of C3 MPPT.

The panel can be installed in a living room from where it allows to manage C3 MPPT when the inverter/charger is located in a spot where access is complicated.

This option allows to reduce the noise generated by the installation in frequented rooms, and also to minimze the space occupied by C3 MPPT, while still benefiting from the same setting possibilities.

USE CASE EXAMPLES

Guaranteeing backup time in demanding technical environments

C3 MPPT can be the ideal solution to provide backup time to places that can not suffer any power shortage.

Laboratories specialized in medical analyses or refrigerators/freezers of pharmacies or grocery stores have a constant need of electrical supply. C3 MPPT is the most flexible and economic solution that can be set in order to ensure an uninterrupted power supply. The number and type of batteries are adjustable, and a solar panel can be added to the array to increase autonomy.

C3 MPPT
From 1000 to 5000 VA

CONNECTIONS

1. AC input
2. AC output
3. Photovoltaic input
4. Battery input
5. Fuse
6. Communication port
7. On / Off
8. Parallel port (option)

C3 MPPT 1 KVA

C3+ MPPT 2-3 KVA

C3+ MPPT 4-5 KVA

TECHNICAL SPECIFICATIONS

		C3 MPPT 1000-24V	C3 MPPT 1000-48V	C3 + MPPT 2000-24V	C3 + MPPT 2000-48V	C3 + MPPT 3000-24V	C3 + MPPT 3000-48V	C3 + MPPT 4000	C3 + MPPT 5000
GENERAL SPECIFICATIONS									
Power (VA)		1000 VA	1000 VA	2000 VA	2000 VA	3000 VA	3000 VA	4000 VA	5000 VA
Power (W)		800W	1000W	1600W	1600W	2400W	2400W	3200W	4000W
Power factor		0,8	1	0,8					
PHYSICAL CHARACTERISTICS									
Standard version	**Dimensions H x L x W (mm)**	100 x 272 x 355		140 x 295 x 479				140 x 295 x 540	
	Net weight (kg)	6,8		11,5				12,5	13,5
INPUT									
Voltage		230V							
Voltage range		170-280 VAC (for personal computers)							
		90-280 VAC (for home appliances)							
Frequency range		50 Hz/60 Hz (auto detection)							
Phase		Single-phase or Triple-phase (thanks to the parallel option)							
SORTIE									
Voltage		230 VAC ± 5 %							
Surge Power		2000VA		4000VA		6000VA		8000VA	10 000VA
Efficiency		90% ~ 93%						93%	
Transfer time		10 ms (for personal computers)							
		20 ms (for home appliances)							
BATTERY									
Battery voltage		24 VDC	48 VDC	24 VDC	48 VDC	24 VDC	48 VDC	48 VDC	48 VDC
Floating Charge Voltage		27 VDC	54 VDC	27 VDC	54 VDC	27 VDC	54 VDC	54 VDC	54 VDC
Overcharge Protection		31 VDC	62 VDC	31 VDC	62 VDC	31 VDC	62 VDC	60 VDC	60 VDC
SOLAR AND AC CHARGERS									
Maximum PV Array Power		600W	900W	1500W	3000W	1500W	3000W	3000W	3000W
MPPT range @ operating voltage		30VDC ~ 66VDC	60VDC ~ 88VDC	60VDC ~ 115VDC	60VDC ~ 115VDC	60VDC ~ 115VDC	60VDC ~ 115VDC		
Maximum PV Array Open Circuit Voltage		75 VDC	102 VDC	145 VDC					
Maximum solar charge current		25A	18 A	60A					
Maximum charge current		10A / 20A	10A / 15A	20A / 30A	10A / 15A	20A / 30A	10A / 15A	60A	
Maximum efficiency		98%							
Standby power Consumption		2W							
DISPLAY AND ALARMS									
LCD screen		Yes							
Sound alarms		Yes							
ENVIRONMENT									
Humidity		5% to 95% of relative humidity (without condensation)							
Working mode temperature		From 0°C to 55°C							
Storage temperature		From -15°C to +60°C							
NORMS									
Standard		USB						RS232 & USB	
Option		SNMP							
NORMS									
Standard		CE RoHS							
COMMERCIAL INFORMATION									
Warranty		2 years							
EAN codes		3700085 63210 9	3700085 63211 6	3700085 63212 3	3700085 63213 0	3700085 63214 7	3700085 63215 4	3700085 63216 1	3700085 63217 8

Packaging content

- C3 MPPT / C3+ MPPT
- USB Cable
- User's manual
- Management Software CD

Options

- Remote control panel
- Parallel installation kit (4k & 5k VA models)
- External SNMP Box

Communication solutions and remote management

USB & RS 232 (for 4k & 5k VA models) communication ports.

Software:

- Inverter start/stop programming
- Data and events saving allowing a daily maintenance
- E-mail messaging to manage the status of the inverter at any time through the local network.
- Free download on the Internet website

Warranty

Full 2 years warranty for any manufacturing defect when used normally and respecting the caution warning held within the user's manual.

Warranty to be activated on the website within 10 days after the purchase.

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