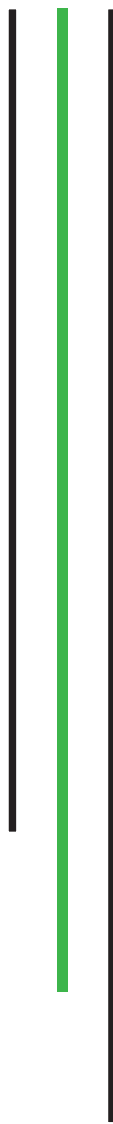


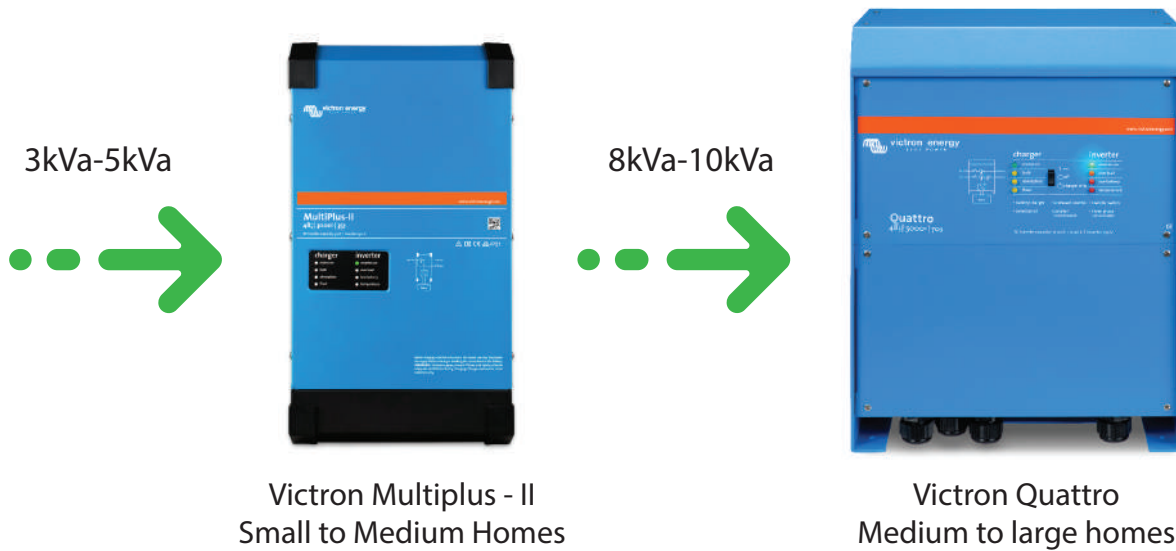
# VICTRON ENERGY RESIDENTIAL BROCHURE



Grid-tied battery back-up systems offer a turn-key solution for a quick and easy installation. Make huge savings by supplementing your power now! If you experience frequent power outages but want to keep your connection to the utility grid, a grid-tied battery back-up system might be just the thing for you! The peace of mind gained by knowing your essential loads will be "up" when grid power is "down" make it worth the extra startup costs.

# Victron Inverters

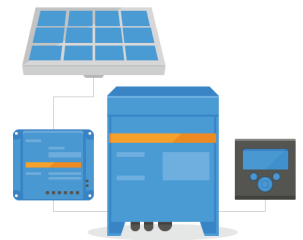
We have 2 residential inverters which differ in capacity, for residential applications the 5kVa capacity is most commonly installed product but if you require more power we have the 8kVa and 10kVa options readily available



\*Up to 15 kVA per unit and 60 kVA per phase with 4 units, and 180 kVA 3 phase

## PowerAssist

Victron inverters will prevent overload of a limited AC source, such as a generator. First, battery charging will automatically be reduced when otherwise an overload would occur. The second level will boost the output of a generator with power taken from the battery.



## Uninterrupted AC power (UPS function)

In the event of a grid failure, or when shore or generator power is disconnected, the inverter within the Victron is automatically activated and takes over the supply to the connected loads. This happens so fast (less than 20 milliseconds) that computers and other electronic equipment will continue to operate without disruption.

## Remote Monitoring and Control

Monitor and control your Victron and system or systems' locally (LAN) or remotely via the internet from anywhere in the world, using the free VRM app and free VRM portal website. Access can be from a phone, tablet, laptop or PC for multiple operating systems

## ESS: Energy Storage Systems

A Victron inverter provides the flexibility to combine with MPPT Solar Chargers or Grid-tie PV Inverters

# Components

## Solar charge controller ←

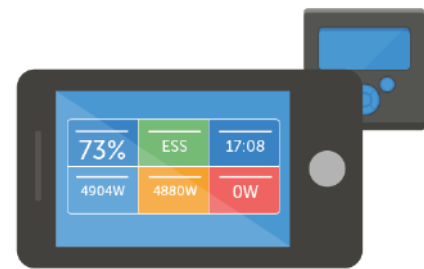


A solar charger gathers energy from your solar panels and stores it in your batteries. Using the latest, fastest technology, SmartSolar maximises this energy-harvest, driving it intelligently to achieve full charge in the shortest possible time.

SmartSolar maintains battery health, extending its life.

### MPPT: Ultra Fast Maximum Power Point Tracking

By constantly monitoring the voltage and current output of your solar (PV) panels, MPPT technology ensures that every drop of available power is rinsed out of your panels, and harvested for storage. The advantage of this is most noticeable when the sky is partially clouded, and light intensity is constantly changing



## → Panels and system monitoring

### Intuitive system overview - all you need to know

At a single touch, Color Control GX provides an instant overview of your system: battery state of charge; present power consumption; power harvest from PV; power provision from mains/generator.

### Energy Storage Systems - 24 hour Monitoring

The Color Control GX manages Energy Storage Systems. It keeps back-up batteries at 100% ; kicks-in during power-cuts; and diverts excess power to self-consumption - saving you money



# Battery Backup

SolarEPC installs high quality TIER 1 lithium ion batteries such as the PylonTech the system is modular meaning you may add more batteries to the array different capacities to suit any battery backup needs you have.



US3000 - the latest HESS battery system provided by Pylontech with our abundant experience of delivering our product into more than 20000 homes. It's long life character, highest energy and power density in the industry, fashionable design, easiness of installation and expansion, all reflects the real requirements of end users and strongest technical capability of Pylontech.

Vertical industry integration ensures more than 6000 cycles with 90% DoD  
Compact and fashionable design fits in your sweet home environment  
Modular design gives the end customers the power of choice of capacity

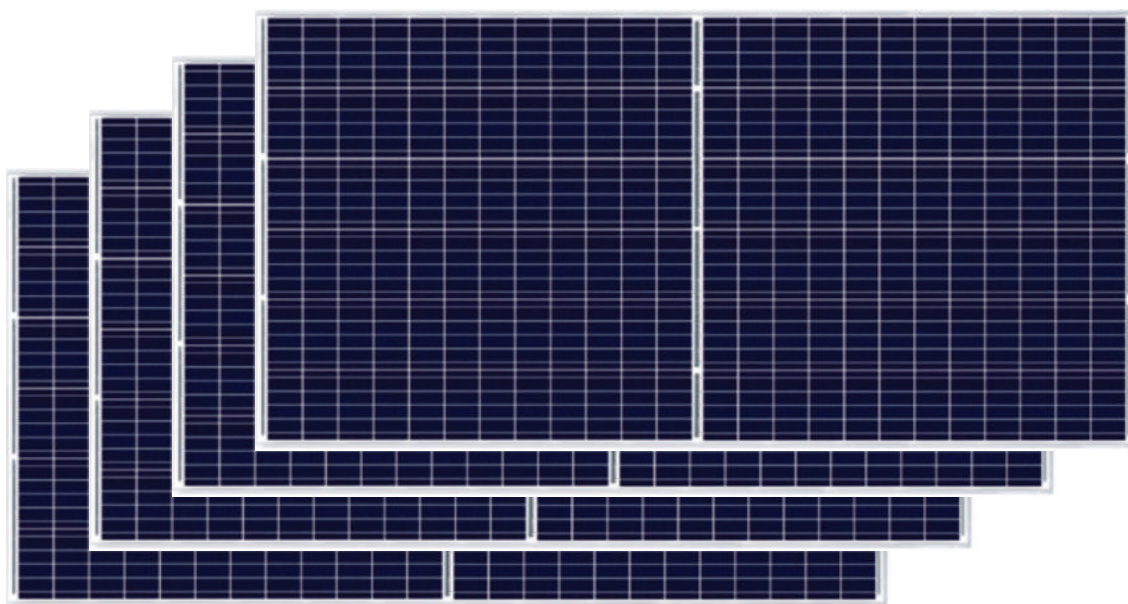


## FEATURES

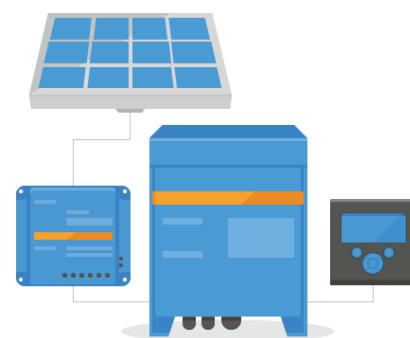
- Developed with Lithium Ion Phosphate cell to ensure the highest safety
- BMS protects the cell in every aspect including, abnormal temperature, current, voltage, SoC and SoH
- Vertical industry intergration ensures more then 6000 cycles with 90% DoD
- Modular design gives the customer the power of choice regarding capacity





# Canadian Solar Panels

SolarEPC installs TIER 1 Panels such as Canadian Solar's series of robust solar panels. Canadian Solar's modules use the latest innovative cell technology, increasing module power output and system reliability, ensured by 17 years of experience in module manufacturing, well-engineered module design, stringent BOM quality testing, an automated manufacturing process and 100% EL testing. With Canadian Solar's poly cell technology and the industry leading innovative LIC (Low Internal Current) module technology..



In South Africa, Canadian Solar has sales and technical support and works with SegenSolar to provide product training across the country. Its PV panels are particularly well suited to the harsh environment and extreme temperature ranges common in the region.



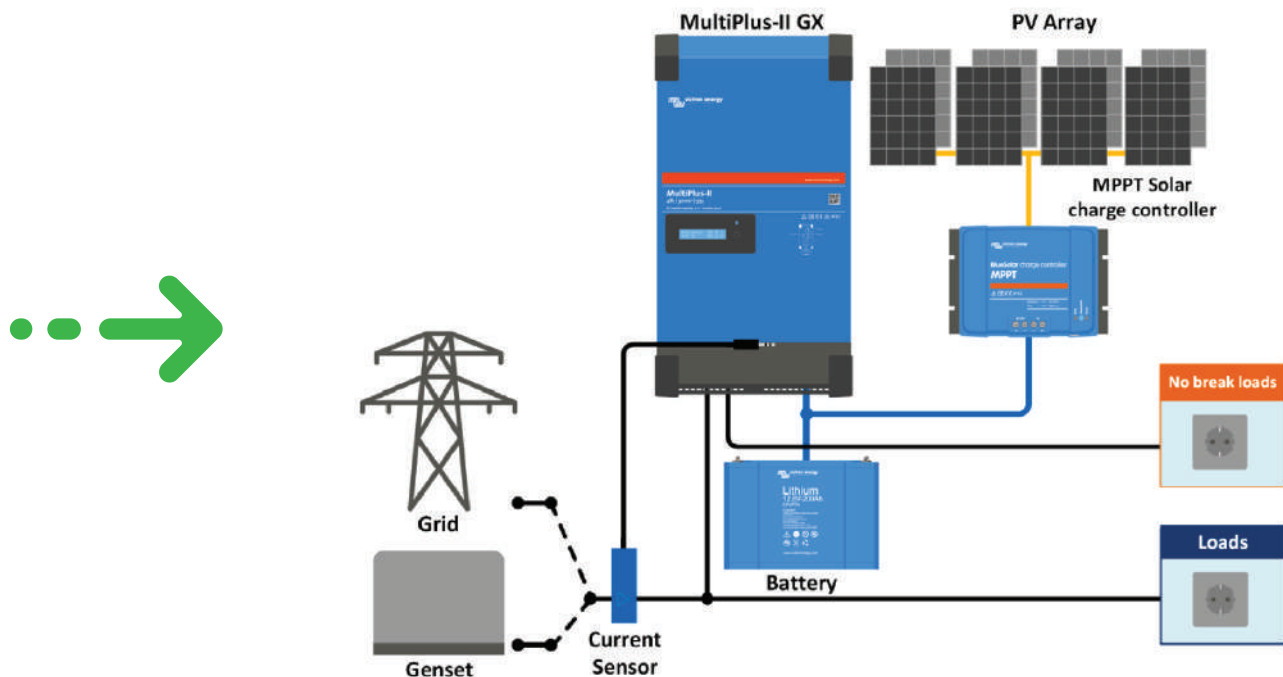
-  **Low power loss in cell connection**
-  **Low NMOT:  $42 \pm 3 \text{ }^\circ\text{C}$   
Low temperature coefficient (Pmax):  $-0.37 \text{ } \%/ \text{ }^\circ\text{C}$**
-  **Better shading tolerance**
-  **High PTC rating of up to: 93.11 %**

**25**  
years  
**linear power output warranty\***

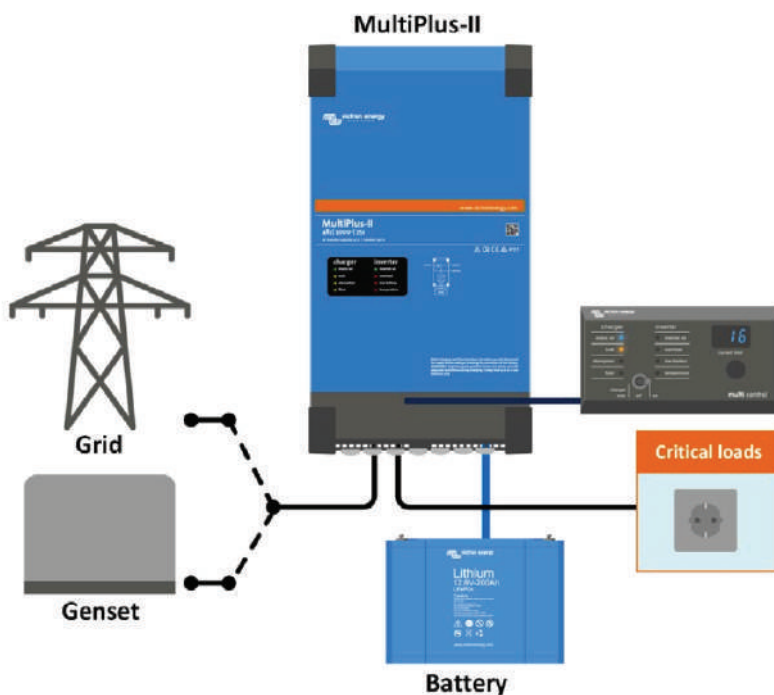
**12**  
years  
**enhanced product warranty on materials and workmanship\***

# How Your System Works

Grid tied solar installation with battery backup



Loads that should shut down when AC input power is not available can be connected to a second output (not shown). These loads will be taken into account by the PowerControl and PowerAssist function in order to limit AC input current to a safe value when AC power is available.



Grid tied installation without solar

The MultiPlus-II will use data from the external AC current sensor or power meter to optimise self-consumption and, if required, to prevent grid feed. In case of a power outage, the MultiPlus-II will continue to supply the critical loads

# Recent Residential Victron Installations



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Laser Park