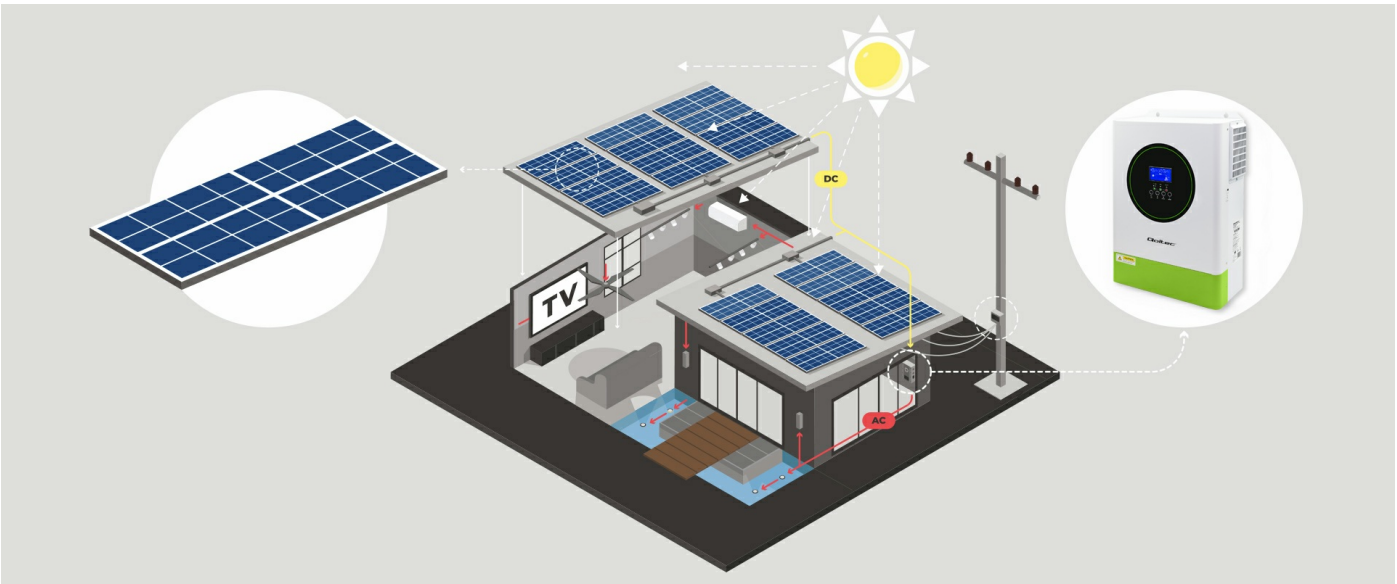


# Qoltec Modular Hybrid Solar Inverter Off-Grid 6200W | 120A | 48V | MPPT | 12 units | BMS | AGM GEL LiFePO4 | Sinus | Wi-Fi option | Power factor 1.0

**Product code: 53861**

The modular off-grid hybrid inverter converts the energy created by PV modules into energy needed to power electrical appliances. Equipped with a multi-function LCD display, it records operating data allowing continuous monitoring and management of the entire system. It operates in off-grid mode. Allows power to be supplied directly from solar panels or other energy sources, without the need for a backup battery. It has a built-in 120A MPPT charge controller, BMS and 80A AC charger. Can operate without a battery. Compatible with LiFePO4, AGM, GEL and DEEP Cycle batteries.
Possibility to connect a compatible wi-fi module: product code 53963

## BE ENERGY INDEPENDENT




How does the hybrid inverter work in off-grid mode ?
The performance of a photovoltaic system depends on the selection of the right inverter, or solar inverter. The inverter performs a key function in this system, **converting the DC current generated by the photovoltaic panels into AC current used by household appliances**. The off-grid hybrid inverter **connects the photovoltaic system, energy storage and the grid**.
It uses excess solar energy to power consumers and charge the battery. When energy production is greater than current demand, **the excess current can be transferred to charge LiFePO4, AGM, GEL or energy storage batteries, allowing energy to be stored for later use, such as at night or on cloudy days** . The hybrid inverter **can automatically switch to off-grid mode, supplying energy from the batteries**.

## WHY SHOULD YOU CHOOSE A HYBRID INVERTER ?



Advanced energy management functions: BMS, MPPT charge controller
- Inverter with **pure sine wave** inverter type,
- **automatic restart during AC power restoration,**
- **readable multifunctional touchscreen LCD display**,
- **120A MPPT charge controller**,
- option of mains or generator power supply,
- **power factor 1.0**,
- ability to change AC/Solar charger priority settings via LCD display,
- **intelligent charger design for optimum battery performance**
- configurable input voltage range for home appliances and PCs via settings on the LCD display panel,
- configurable battery charging current depending on appliances and PCs via settings on the LCD display,
- **cold start function**,
- możliwość podłączenia **do 12 jednostek**,
- reserved communication port for **BMS (RS485, RS232).**

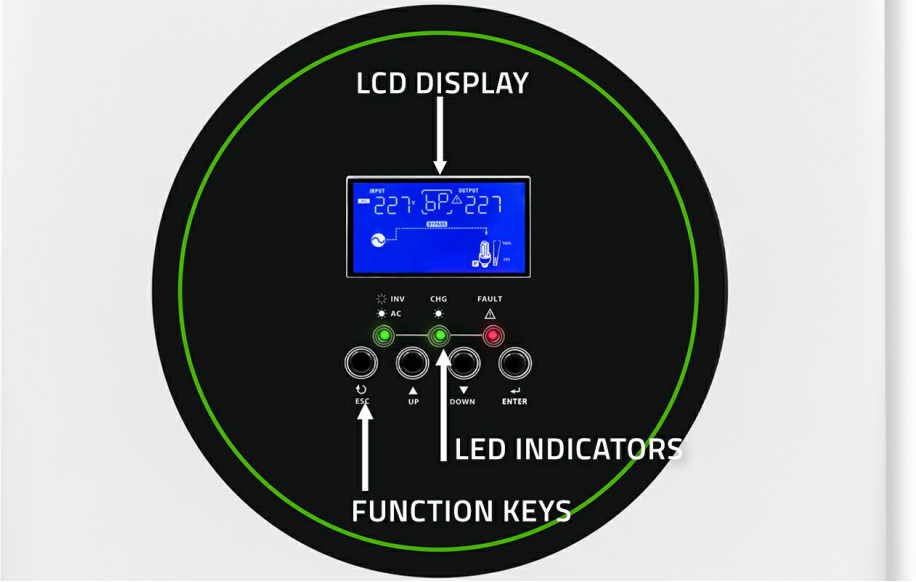
## MAXIMIZE THE POSSIBILITIES WITH MPPT TECHNOLOGY




Increase in electricity production with a significant decrease in operating costs

**The battery charging inverter uses a state-of-the-art 120A MPPT charge controller to maximize the power drawn** from the photovoltaic panels, using advanced maximum power point tracking technology. **Having this feature significantly affects the efficiency** of the photovoltaic installation - they can maintain high power even in low sunlight conditions. In addition, the controller controls the battery operation and charging process and protects the battery from damage.

## MULTIFUNCTIONAL TOUCH-SCREEN LCD DISPLAY




Continuous monitoring of battery performance

The product is equipped with a **multifunctional, easy-to-use LCD display with control panel** . Facilitates monitoring of the entire photovoltaic installation . **Allows you to configure the input voltage range** for home appliances and personal computers or change the priority settings of the AC/Solar charger. In addition, **the display records data and informs about failures, reacting accordingly if any of the parameters exceed the norm. If a fault occurs, the inverter shuts down.**

## ADVANTAGES OF A MODULAR INVERTER




Connect up to 12 units in parallel
To increase the power and efficiency of the system, up to 12 inverter units can be connected in parallel. **Advantages of combining 12 units**:
**– Ability to gradually increase the power of the system** depending on demand.
**- Greater reliability in case of failure** one unit the rest of the system continues to work.
**- Better energy management –** Intelligent load sharing between units ensures energy efficiency.
**- Loss reduction –** The ability to operate within an optimal range of voltages and intensities improves system performance.
**- Flexibility –** The ability to adjust the configuration to different operating conditions (e.g., PV priority mode, battery priority mode, hybrid mode).

## BATTERY MANAGEMENT SYSTEM (BMS)




Battery Management System

Manages battery parameters for optimal charging and discharging
The built-in BMS battery management system is crucial for the long-term life of the battery in an off-grid system. **The BMS monitors and manages battery parameters, ensuring optimal charging, discharging and protecting against overcharging or over-discharge**. This allows users to enjoy a reliable source of energy for many years.

## CONFIDENCE CONFIRMED BY A WARRANTY

Product with 24 months guarantee
Our company is committed to providing technical support and customer service, making our guarantee a comprehensive commitment to customer satisfaction for two years from the date of purchase. The accompanying protocol is an integral part of the guarantee and is necessary to make a claim for faulty goods within **24 months of purchase**.

## TECHNICAL DATA

| | |
|---|---|
| Producer | Qoltec |
| Type | Off-Grid |

| | |
|---|---|
| Phase | Single phase |
| Parallel capability | 12 units |
| Rated Power | 6200VA/6200W |
| Surge power | 12400VA |
| Input parameters | |
| Nominal Input voltage | 220/230VAC |
| Maximum AC input voltage | 300VAC |
| Input Voltage Range | 170-280VAC; 90-280VAC |
| Working frequency | 50/60 HZ (auto detection) |
| Output parameters | |
| Efficiency | 95% |
| Transfer time | 10 ms (PC) 20 ms (home appliances) |
| Waveform | Pure sine wave |
| BATTERY PARAMETERS | |
| Type of charging | MPPT |
| Battery voltage | 48V |
| Charge Current (AC) | 80A |
| Variable charging voltage | 54VDC |
| Battery overcharge protection | 63VDC |
| Maximum battery charging current from PV | 120A |
| Work without battery | Yes |
| PV PARAMETERS | |
| Maximum PV array open circuit power | 6500W |
| Maximum solar charge current | 120A |
| MPPT STARTING VOLTAGE | 60VDC |
| MPPT operating voltage range | 60 ~ 500VDC |
| Maximum PV array open circuit voltage | 500VDC |
| OTHER PARAMETERS | |
| Screen | LCD |
| Interface | RS-232, RS485 |
| Cooling system | 2 x fan |
| Protection | Short-circuit protection<br>Overheating protection<br>Overload protection<br>Overcharge protection |
| Colour | White, green |
| Additional information | Support BMS<br>Support LiFePO4 AGM, GEL, Deep cycle batteries<br>To increase the power and efficiency of the system, up to 12 inverter units can be connected in parallel. |
| Notices | We require the device to be installed by a qualified installer with the appropriate authorization. In case of installation by unauthorized persons, the warranty will automatically expire.<br>The included protocol is an integral part of the warranty and is necessary to file a claim for defective goods within 24 months from the date of purchase. |
| Working temperature | -10˚C ~ +50˚C |
| Storage temperature | -15˚C do +60˚C |
| Size | 450 x 300 x 130mm |
| Package contents | 1 x Solar inverter<br>1 x User manual<br>1 x Device installation protocol |

| | |
|---|---|
| Package depth / length [mm] | 540 |
| Package height [mm] | 395 |
| Package width [mm] | 210 |
| Net weight [kg] | 9.700 |
| Gross weight [kg] | 10.750 |
| Certificate | CE |
| Warranty | 24 month |
| EAN code | 5901878538617 |