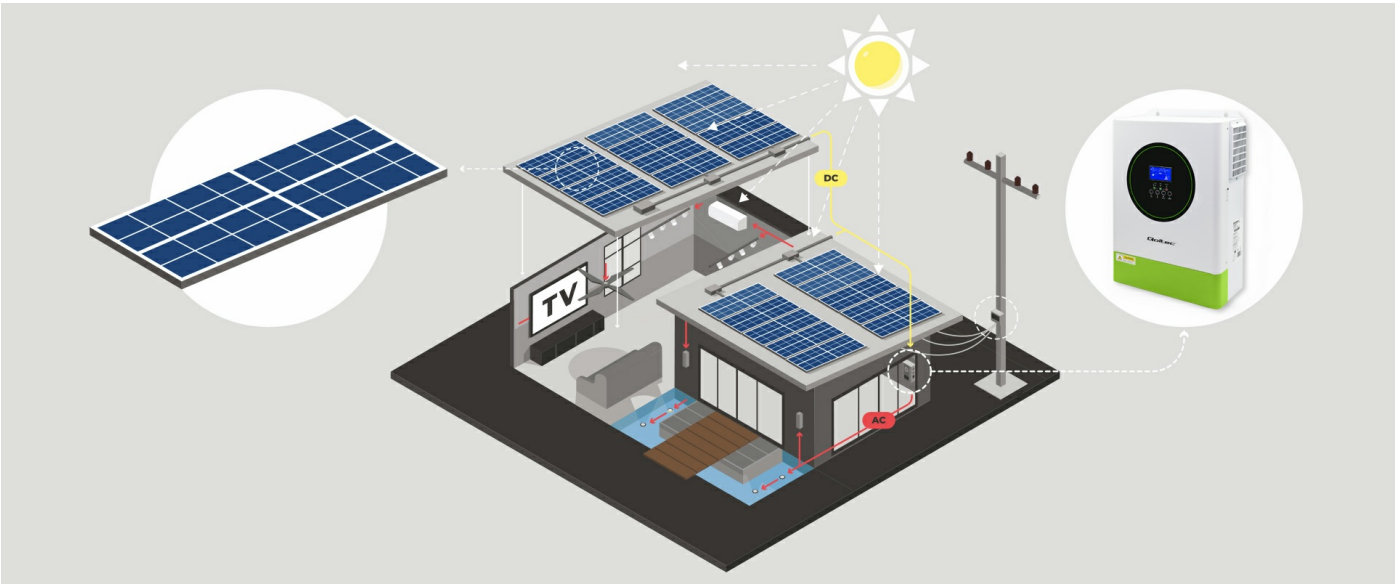
Qoltec Modular Hybrid Solar Inverter Off-Grid 6200W | 120A | 48V | MPPT | 12 units | BMS | Sinus | Wi-Fi option | Power factor 1.0

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 ?

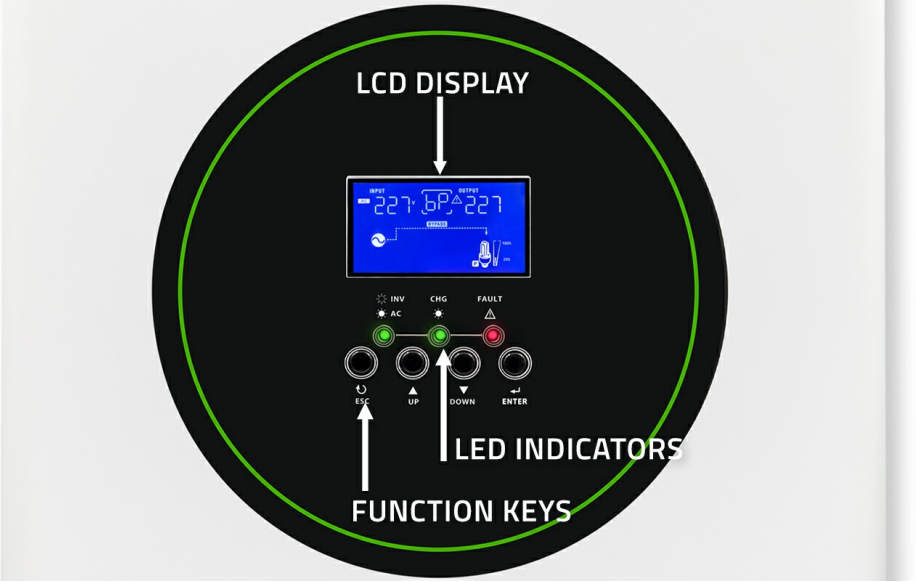
Advanced energy management functions: BMS, MPPT charge controller
- Inverter with **pure sine wave** inverter type,
- **automatic restart during AC power restoration,**
- **readable multifunctional touchscreen LCD display**,
- **120A MPPT charge controller**,
- option of mains or generator power supply,
- **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	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
Solar charger	MPPT
Battery voltage	48V
Maximum charging current	120A
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
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	Anti-short-circuit Against overheating Against overload Against overload
Colour	White, green
Additional information	Support BMS Support LiFePO4 AGM, GEL, Deep cycle batteries 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. 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 1 x User manual 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