

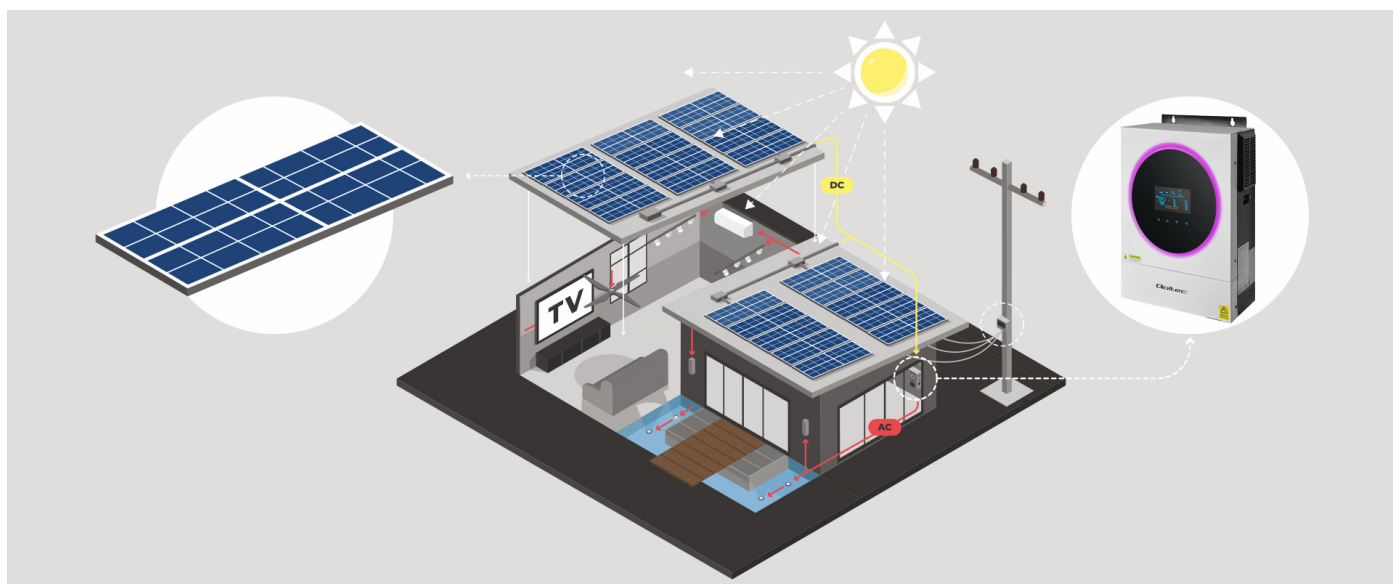


Qoltec Hybrid Solar Inverter Off-Grid 4kVA | 4kW | 120A | MPPT | LCD | Wi-Fi | BMS | Sinus

Product code: 53874

The off-grid hybrid inverter converts the energy created by the PV modules into energy to power electrical appliances. Equipped with a multifunctional LCD display, it records operating data allowing continuous monitoring and management of the entire system. It operates in off-grid mode. It has a built-in 120A MPPT charge controller and BMS. Compatible with LiFePO₄, AGM, GEL and DEEP Cycle batteries.

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, **changing the DC current generated by the photovoltaic panels into AC current used by household appliances.** The off-grid hybrid inverter **combines the photovoltaic system, the energy storage and the power 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 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, Wi-fi

- Pure sine wave inverter,
- automatic restart during power restoration,
- easy-to-read 4.3-inch LCD multifunctional touchscreen display,
- 120A MPPT charge controller,
- ability to be powered by mains or generator,
- ability to change AC/Solar charger priority settings via LCD display,
- intelligent charger design for optimal battery performance,
- configurable input voltage range for home appliances and personal computers using the settings on the LCD display panel,
- configurable battery charging current according to devices and personal computers via settings on the LCD display panel,
- cold start function,
- built-in Wi-Fi for mobile monitoring (Android/iOS app available),
- reserved communication port for BMS (RS485, CAN-BUS, Rs232),
- housing with RGB LEDs.

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.

BATTERY MANAGEMENT SYSTEM (BMS)

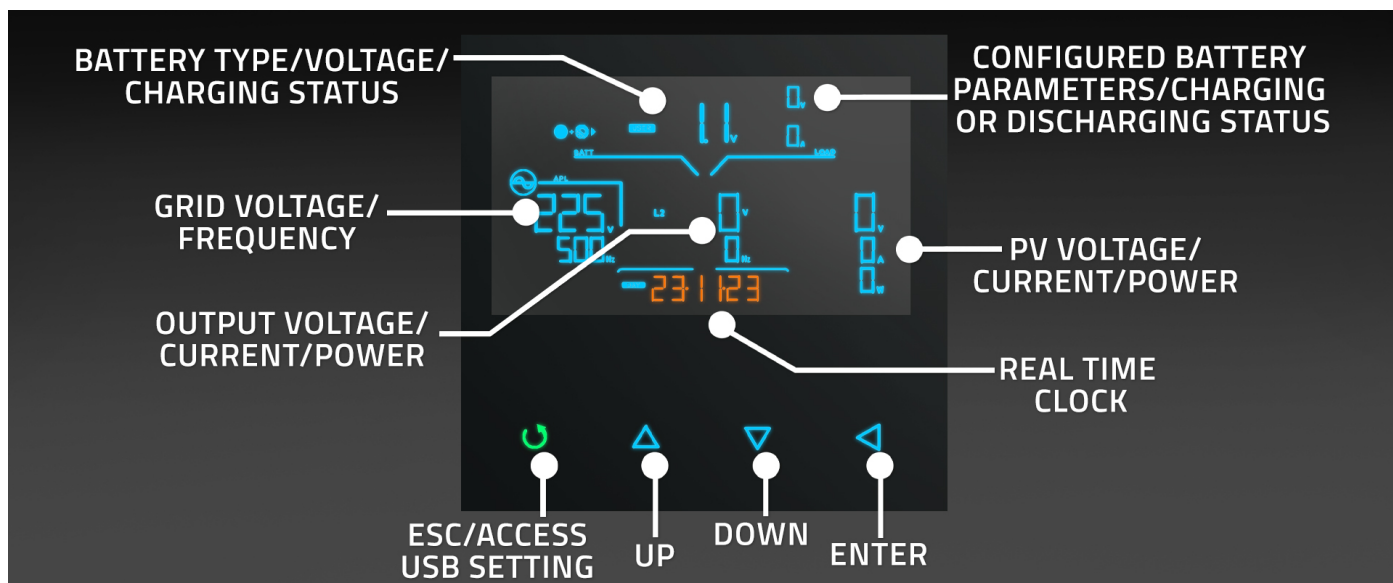


Battery Management System

Continuous monitoring of battery performance

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.

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.

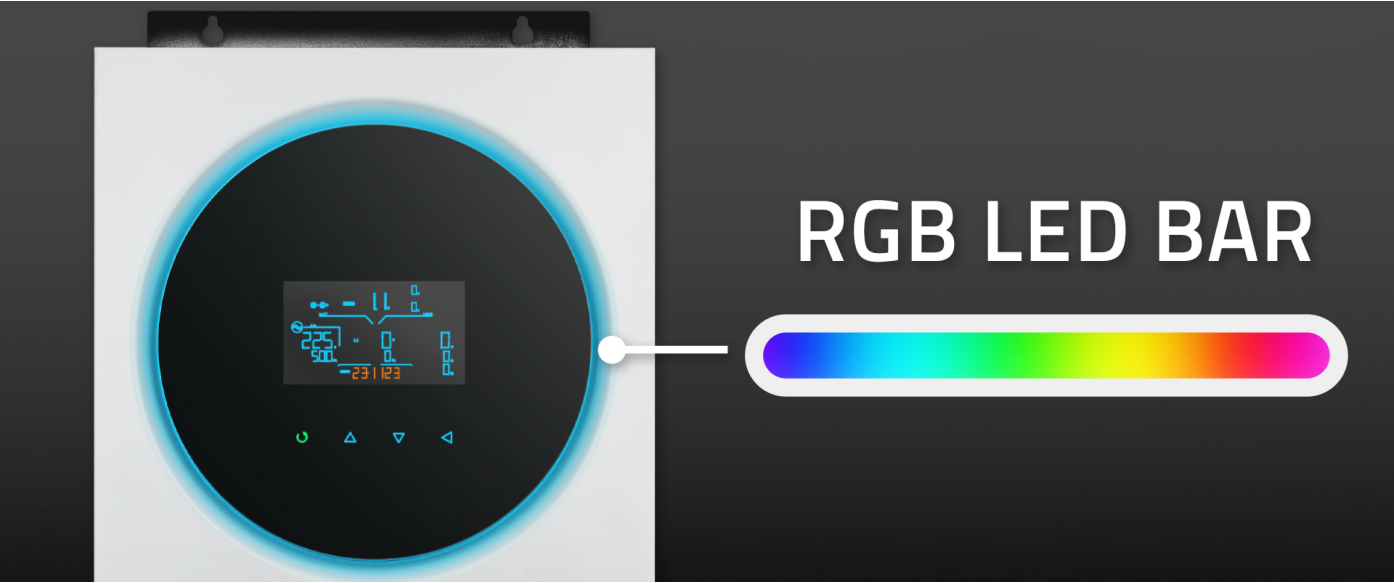
MANAGE AND MONITOR EASILY



Remote management using a dedicated mobile app

With the SmartESS mobile app for iOS and Android devices, users can monitor and control the unit via their smartphones. This makes it possible to quickly detect possible faults or performance reductions in the installation.

UNIQUE COMBINATION OF FUNCTIONALITY AND AESTHETICS



RGB lights

The solar inverter housing with RGB diodes is an attractive design element for modern spaces combined with functionality. The use of RGB LEDs allows the colours of the housing to change dynamically. The RGB LED backlighting not only adds to the aesthetics, but also plays a practical role in informing users of faults.

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 | 1 |
| Rated Power | 4000VA/4000W |
| Input parameters | |
| Nominal Input voltage | 230VAC |
| Maximum AC input voltage | 300VAC |
| Working frequency | 50/60 HZ (auto detection) |
| Output parameters | |
| Efficiency | 93% |
| Transfer time | 10 ms (PC) 20 ms (home appliances) |
| Waveform | Pure sine wave |
| Features of the battery | |
| Type of charging | MPPT |
| Battery voltage | 24VDC |
| Variable charging voltage | 27VDC |
| Battery overcharge protection | Yes |
| Maximum battery charging current from PV | 120A |
| Solar charger | |
| Maximum PV array open circuit power | 5000W |
| Maximum charging current | 27A |

| | |
|---------------------------------------|---|
| MPPT operating voltage range | 60 ~ 450VDC |
| Maximum PV array open circuit voltage | 500VDC |
| Other parameters | |
| Screen | LCD, touch panel |
| Interface | RS-232, Wi-fi, micro USB, BMS |
| Cooling system | 2 x fan |
| Noise level | 45 dB |
| Protection | Anti-short-circuit Against overheating Against overload Against overload |
| Colour | White, black |
| Additional information | Support LiFePO4 AGM, GEL, Deep cycle batteries Support BMS |
| 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 |
| Storage humidity | 10-90% without condensation |
| Size | 465 x 300 x 115 mm |
| Package contents | 1 x Solar inverter 1 x RS232 communication cable 1 x User manual 1 x CD 1 x Fuse 1 x Device installation protocol 1 x Warranty card |
| Package depth / length [mm] | 540 |
| Package height [mm] | 390 |
| Package width [mm] | 230 |
| Net weight [kg] | 9.700 |
| Gross weight [kg] | 10.700 |
| Certificate | CE |
| Warranty | 24 month |
| EAN code | 5901878538747 |