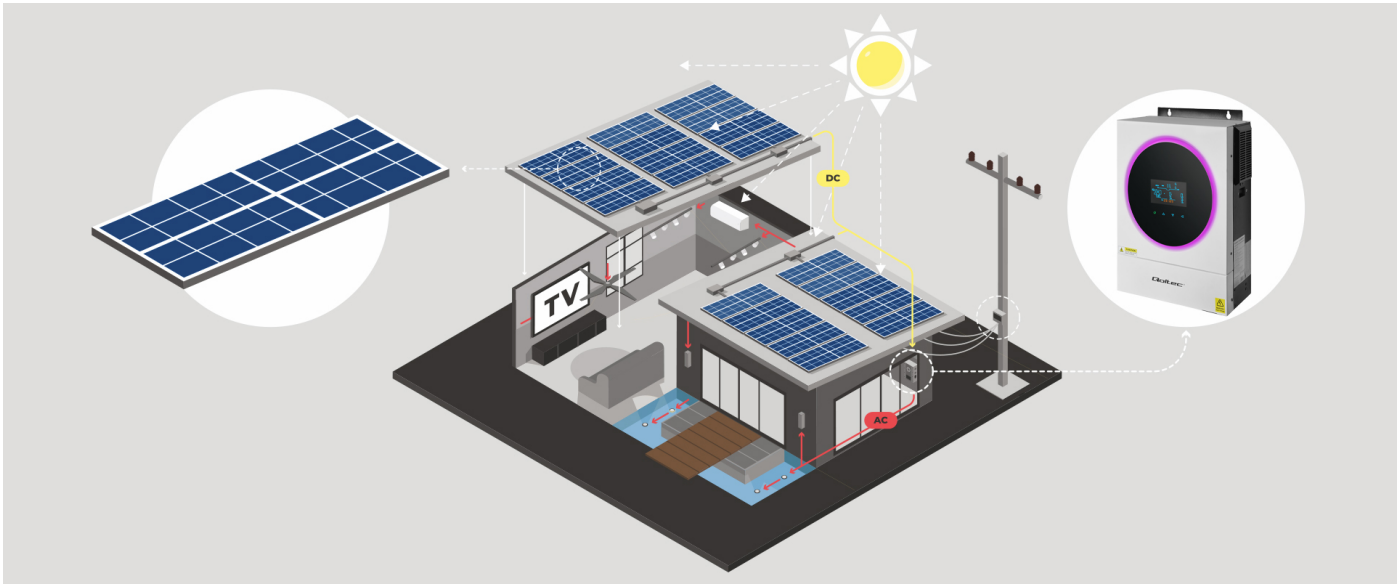


Qoltec Hybrid Solar Inverter Off-Grid 4kVA | 4kW | 120A | MPPT | LCD | Wi-Fi | BMS | AGM GEL LiFePO4 | Sinus

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)

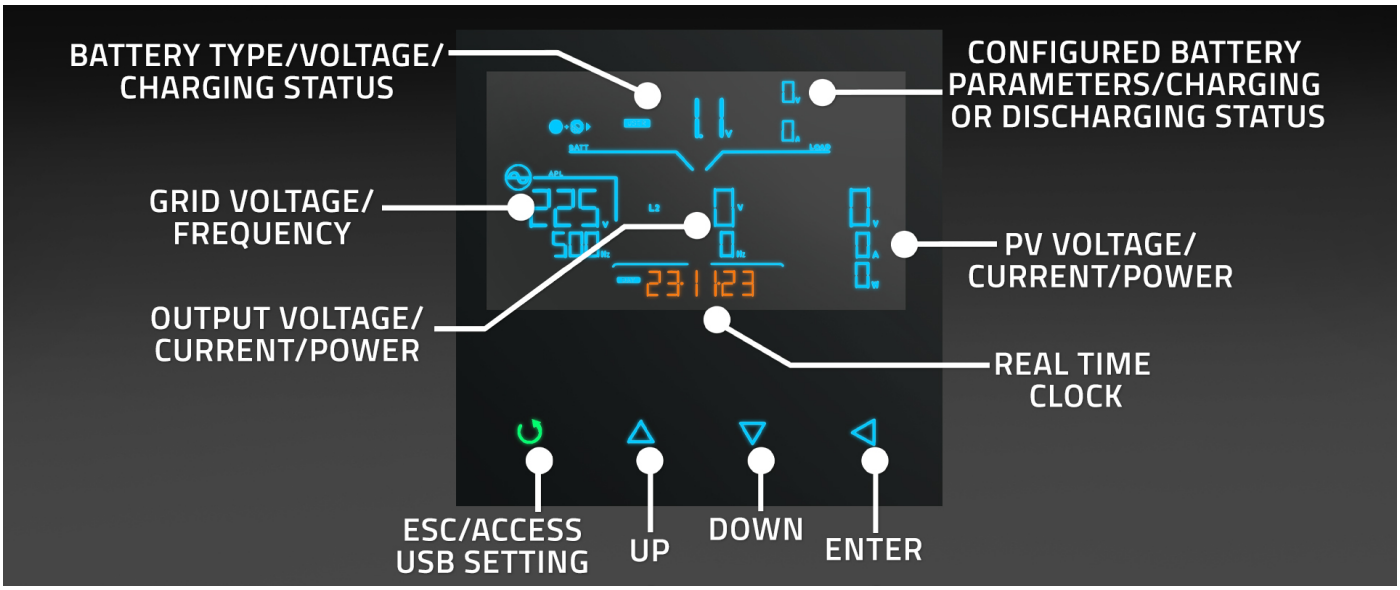


Battery Management System

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.**

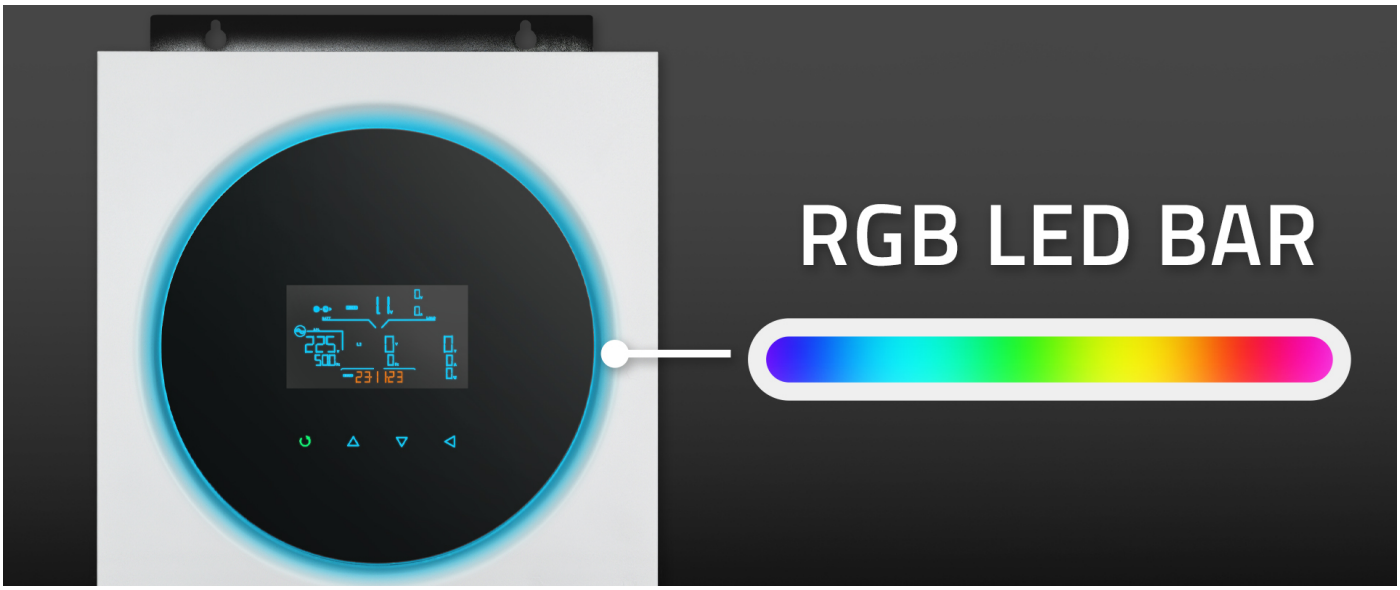
MANAGE AND MONITOR EASILY



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
BATTERY PARAMETERS	
Type of charging	MPPT
Battery voltage	24VDC
Maximum charging current	27A
Variable charging voltage	27VDC
Battery overcharge protection	Yes
Maximum battery charging current from PV	120A
Work without battery	Yes
PV PARAMETERS	

Maximum PV array open circuit power	5000W
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	Short-circuit protection Overheating protection Overload protection Overcharge protection
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
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