

Phoenix Inverters Smart 1600VA & 2000VA

www.victronenergy.com



Phoenix Inverter Smart 12/2000





Bluetooth built-in: fully configurable with a tablet or smartphone

- Low battery voltage alarm
- Low battery voltage cut-off and restart levels
- · Dynamic cut-off: load dependent cut-off level
- Output voltage: 210 245V
- Frequency: 50 Hz or 60 Hz
- ECO mode on/off and ECO mode sense level
- Alarm relay

Monitoring:

• In- and output voltage, load and alarms

VE.Direct communication port

The VE.Direct port can be connected to a computer (VE.Direct to USB interface cable needed) to configure and monitor the same parameters.

Proven reliability

The full bridge plus toroidal transformer topology has proven its reliability over many years. The inverters are short circuit proof and protected against overheating, whether due to overload or high ambient temperature.

High start-up power

Needed to start loads such as power converters for LED lamps, halogen lamps or electric tools.

ECO mode

When in ECO mode, the inverter will switch to standby when the load decreases below a preset value. Once in standby the inverter will switch on for a short period every 2,5 seconds (adjustable).

If the load exceeds the preset level, the inverter will remain on.

Remote on/off

A remote on/off switch or relay contact can be connected to a two pole connector. Alternatively, the H terminal (left) of the two pole connector can be switched to battery plus, or the L terminal (right) of the two pole connector can be switched to battery minus (or the chassis

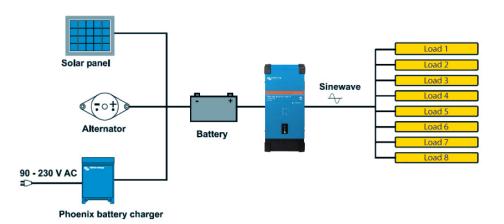
LED diagnosis

Please see manual for a description.

of a vehicle, for example).

To transfer the load to another AC source: the automatic transfer switch

For our low power inverters we recommend our Filax Automatic Transfer Switch. The Filax features a very short switchover time (less than 20 milliseconds) so that computers and other electronic equipment will continue to operate without disruption. Alternatively use a MultiPlus with built-in transfer switch.





Phoenix Inverter Smart 22/1600 24/2000				
Parallel and 3-phase operation	Phoonix Invertor Smart			
Input voltage range (1)				
Input voltage range (1)	Parallel and 3-phase operation			
Output Output voltage: 230VAC a 2% 50 Hz or 60Hz a 0,1% (1) Cont. output power at 25°C (2) 1600VA 2000VA Cont. output power at 40°C 1200W 1450W Cont. output power at 40°C 1200W 1450W Cont. output power at 40°C 800W 1000W Peak power 3000VA 4000VA Dynamic (load dependent) DC low shut down fully configurable) Dynamic cut-off, see https://www.victronenergy.com/live/ve direct/phoenix-inverters-dynamic-cutoff Max. efficiency 12/24 /48 V 92/94/94% 92/94/94% Zero load power 12/24 /48 V 8 /9 /11W 8 /9 /11W Zero load power 12/24 /48 V 8 /9 /11W 8 /9 /11W Zero load power 12/24 /48 V 8 /9 /11W 8 /9 /11W Zero load power 12/24 /48 V 8 /9 /11W 8 /9 /11W Zero load power 12/24 /48 V 8 /9 /11W 8 /9 /11W Zero load power 12/24 /48 V 8 /9 /11W 8 /9 /11W Zero load power 12/24 /48 V 8 /9 /11W 8 /9 /11W Zero load power 12/24 /48 V 8 /9 /11W 8 /9 /11W Zero load power 12/24 /48 V 8 /9 /11W 8 /9 /11W	INVERTER			
Cont. output power at 25°C (2)	Input voltage range (1)	9,3 – 17V 18,6 – 34V 37,2 – 68V		
Cont. output power at 25°C Cont. output power at 40°C Cont. output power at 40°C Cont. output power at 40°C Cont. output power at 65°C 800W 1000W Peak power 3000VA 14000VA Dynamic (load dependent) DC low shut down (fully configurable) Max. efficiency 12, 24 /48 V 2ero load power 12, 24 /48 V 8 /9 /11W 8 /9 /1 /9 /1 /9 /1 /9 // /9 /	Output	Output voltage: 230VAC ±2% 50 Hz or 60Hz ± 0,1% (1)		
Cont. output power at 40°C 1200W 1450W 1000W	Cont. output power at 25°C (2)	1600VA	2000VA	
Cont. output power at 65°C 800W 1000W 4000VA	Cont. output power at 25°C	1300W	1600W	
Peak power Dynamic (load dependent) DC low shut down fully configurable) Dynamic (load dependent) DC low shut down fully configurable) Max. efficiency 12/24/48V By 92/94/94% Pero load power 12/24/48V By 91/1W B	Cont. output power at 40°C	1200W	1450W	
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down fully configurable) Max. efficiency 12/24/48 V 92/94/94% Zero load power 12/24/48 V 88/9/11W Zero load power in ECO mode CENERAL Programmable relay (2) Stop & start power ECO-mode Protection (3) Bluetooth wireless communication For remote monitoring and system integration VE Direct communication port For remote monitoring and system integration VE Direct communication port For remote monitoring and system integration VE Direct communication port For remote monitoring and system integration VE Direct communication VE Direct communication For remote monitoring and system integration Ves Common Characteristics Operating temperature range: —40 to +65°C (fan assisted cooling) Humidity (non-condensing): max 95% ENCLOSURE Common Characteristics Material & Colour: stainless steel (blue RAL 5012; and black RAL 9017) Protection category: IP 21 Battery-connection M8 botts Salva (Automotice) M8 botts Salva (Battery Connection Screw terminals Weight 12kg 13kg Dimensions (hxwhd) 485x219x125mm STANDARDS Safety EN 60335-1 Emission Immunity EN 55014-1 / EN 55014-2 / IEC 61000-6-2 / IEC 61000-6-3 Automotive Directive 1) Non-linear load, crest factor 3:1 2) Programmable relay that can a.o. be set for general alarm, DC under voltage or genses start/stop function. A Crating: 230 V/ A Do Ziga (V/ A) Do Justery voltage too loig of battery voltage too loig of the voltage or genses and the control of the	Peak power	3000VA	4000VA	
Zero load power 12 / 24 / 48 V 8 / 9 / 11 W 8 / 9 / 11 W 0,6 / 1,3 / 2,1 W 0,6 / 1,3		Dynamic cut-off, see https://www.victronenergy.com/live/ve.direct:phoenix-inverters-dynamic-cutoff		
Series S	Max. efficiency 12/ 24 /48 V	92 / 94 / 94%	92 / 94 / 94%	
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Stop & start power ECO-mode Protection (3) Bluetooth wireless communication VE.Direct communication port Remote on-off Common Characteristics Poperating temperature range: -40 to +65°C (fan assisted cooling) Humidity (non-condensing): max 95% ENCLOSURE Common Characteristics Material & Colour: stainless steel (blue RAL 5012; and black RAL 9017) Protection category: IP 21 Battery-connection Screw terminals Weight 12kg 13kg Dimensions (hxwhd) 485x219x125mm 485x219x125mm 485x219x125mm STANDARDS Safety Enission Immunity Enission Immunity EN 55014-1 / EN 55014-2 / IEC 61000-6-1 / IEC 61000-6-2 / IEC 61000-6-3 Automotive Directive 1) Non-linear load, crest factor 3:1 2) Programmable relay that can ao. be set for general alam, DC under voltage or genset start/stop function. AC rating: 230 V AC, 1a up to 69VDC DC rating: 4 A up to 35 VDC, 1a up to 69VDC Le imperature to on high (1) and purpose to line (1) be reperature to on high (1) and purpose to line (1) and purpose to lin	GENERAL			
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	Programmable relay that can a.o. be set for general alarm, DC under voltage or genset start/stop function. AC rating: 230 V / 4 A	a) output short circuit b) overload c) battery voltage too high d) battery voltage too low e) temperature too high f) 230 V AC on inverter output		



Phoenix Inverter Control

This panel is intended for remote on/off control of all VE.Direct Phoenix inverters



Color Control GX

Provides monitor and control. Locally, and also remotely on the VRM Portal.



VE.Direct to USB interface

Connects to an USB port.



Bluetooth wireless communication

Connects to a smart phone (both iOS and Android).





BMV-712 Smart Battery Monitor

The BMV Battery Monitor features an $advanced\ microprocessor\ control\ system$ combined with high resolution $\stackrel{-}{\text{measuring systems}} \ \text{for battery voltage}$ and charge/discharge current. Besides calculation algorithms, like Peukert's formula, to exactly determine the state of charge of the battery. The BMV selectively displays battery voltage, current, consumed Ah or time to go. The monitor also stores a host of data regarding performance and use of the battery.

Several models available (see battery monitor documentation).

