Inverters VE.Direct

250VA – 1600VA, 230V and 120V, 50Hz or 60Hz

www.victronenergy.com



Inverter 12/375 VE.Direct



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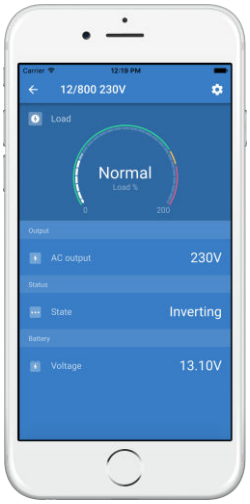




VE.Direct communication port

The VE.Direct port can be connected to:

- A computer (VE.Direct to USB interface cable needed)
- Apple and Android smartphones, tablets, MacBook's and other devices (VE.Direct Bluetooth Smart dongle needed)

Fully configurable:

- Low battery voltage alarm trip and reset levels
- 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

Monitoring:

- In- and output voltage, % load and alarms

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 (min load: 15W). Once in standby the inverter will switch on for a short period (adjustable, default: every 2,5 seconds). If the load exceeds a preset level, the inverter will remain on.

Remote on/off

A remote on/off switch can be connected to a two-pole connector, or between battery plus and the left-hand contact of the two-pole connector.

LED diagnosis

Please see manual for a description.

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

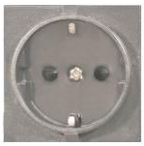
For our low power inverters, we recommend our Filax Automatic Transfer Switch. The Filax features a very short switchover time (less than 20 milliseconds) so that computers and other electronic equipment will continue to operate without disruption.

DC connection with screw terminals

No special tools needed for installation

Available with different output sockets

Schuko



UK



AU/NZS



IEC-320
(male plug included)



Nema 5-15R



GFCI



Inverter 12 Volt / 24 Volt / 48 Volt	12/250 24/250 48/250	12/375 24/375 48/375	12/500 24/500 48/500	12/800 24/800 48/800	12/1200 24/1200 48/1200	12/1600
Cont. power at 25°C (1)	250VA	375VA	500VA	800VA	1200VA	1600VA
Cont. power at 25°C / 40°C	200 / 175W	300 / 260W	400 / 350W	650 / 560W	1000 / 850W	1450 / 1200W
Peak power	400W	700W	900W	1500W	2200W	2200W
Output AC voltage / frequency (adjustable)	230VAC or 120VAC +/- 3% 50Hz or 60Hz +/-0,1%					
Input voltage range	9,2 - 17 / 18,4 - 34,0 / 36,8 - 62,0V					
DC low shut down (adjustable)	9,3 / 18,6 / 37,2V					
Dynamic (load dependent) DC low shut down (fully configurable)	Dynamic cut-off, see https://www.victronenergy.com/live/ve.direct:phoenix-inverters-dynamic-cutoff					
DC low restart and alarm (adjustable)	10,9 / 21,8 / 43,6V					
Battery charged detect (adjustable)	14,0 / 28,0 / 56,0V					
Max. efficiency	87 / 88 / 88%	89 / 89 / 90%	90 / 90 / 91%	90 / 90 / 91%	91 / 91 / 92%	92%
Zero-load power	4,2 / 5,2 / 7,9W	5,6 / 6,1 / 8,5W	6 / 6,5 / 9W	6,5 / 7 / 9,5W	10 / 11 / 12W	12W
Default zero-load power in ECO mode (default retry interval: 2,5 s, adjustable)	0,8 / 1,3 / 2,5W	0,9 / 1,4 / 2,6W	1 / 1,5 / 3,0W	1 / 1,5 / 3,0W	1 / 1,5 / 3,0W	1,8W
ECO mode stop and start power setting	Adjustable					
Protection (2)	a - f					
Operating temperature range	-40 to +65°C (fan assisted cooling) Derate 1,25% per °C above 40°C					
Humidity (non-condensing)	max 95%					
ENCLOSURE						
Material & Colour	Steel chassis and plastic cover (blue Ral 5012)					
Battery-connection	Screw terminals					
Maximum cable cross-section	10mm² / AWG8	10mm² / AWG8	10mm² / AWG8	25 / 10 / 10mm² AWG4 / 8 / 8	35 / 25 / 25mm² AWG2 / 4 / 4	50mm² AWG1
Standard AC outlets	230V: Schuko (CEE 7/4), IEC-320 (male plug included) UK (BS 1363), AU/NZ (AS/NZS 3112) 120V: Nema 5-15R, GFCI					
Protection category	IP 21					
Weight	2,4kg / 5,3lbs	3,0kg / 6,6lbs	3,9kg / 8.5lbs	5,5kg / 12lbs	7,4kg / 16,3lbs	8,9kg / 20lbs
Dimensions (h x w x d, mm) (h x w x d, inch)	86 x 165 x 260 3.4 x 6.5 x 10.2 120V Nema GFCI 85 x 182 x 255 3,3 x 7.2 x 10.2	86 x 165 x 260 3.4 x 6.5 x 10.2 120V Nema GFCI 85 x 182 x 260 3.3 x 7.2 x 10.2	86 x 172 x 275 3,4 x 6,8 x 10,8 120V Nema GFCI 85 x 182 x 274 3.3 x 7.2 x 10.8	105 x 216 x 305 4.1 x 8.5 x 12.1 (12V model: 105 x 230 x 325 4.1 x 9 x 12.8)	117 x 232 x 327 4.6 x 9.1 x 12.9 (12V model: 117 x 232 x 362 4.6 x 9.1 x 14.2)	117 x 232 x 395 4.6 x 9.1 x 12.9
ACCESSORIES						
Remote on-off	Yes					
Automatic transfer switch	Filax					
STANDARDS						
Safety	EN-IEC 60335-1 / EN-IEC 62109-1 / UL 458 (3)					
EMC	EN 55014-1 / EN 55014-2 / IEC 61000-6-1 / IEC 61000-6-2 / IEC 61000-6-3					
Automotive Directive	ECE R10-4					

1) Nonlinear load, crest factor 3:1
2) Protection key:
a) output short circuit
b) overload
c) battery voltage too high
d) battery voltage too low
e) temperature too high
f) DC ripple too high

3) UL 458 only for inverters with GFCI output socket



Battery Alarm
An excessively high or low battery voltage is indicated by an audible and visual alarm, and a relay for remote signalling.



BMV Battery Monitor
The BMV Battery Monitor features an advanced microprocessor control system combined with high resolution measuring systems for battery voltage and charge/discharge current. Besides this, the software includes complex calculation algorithms 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.



VE.Direct Bluetooth Smart dongle (must be ordered separately)

Victron Energy B.V. | De Paal 35 | 1351 JG Almere | The Netherlands
E-mail: sales@victronenergy.com
www.victronenergy.com

victron energy
BLUE POWER