MAGNIZON
GREEN ENERGY

Model # HG1000

220/230/240V, 50/60Hz, 1000VA, 12VDC Smart Combined Inverter/Charger

Product Description: Magnizon's HG series is a Smart DC-to-AC inverter with auto line-to-battery transfer and integrated Battery charge, serving as an extended run UPS, a standalone power source or an automotive inverter. HG series Smart inverter supplies power from AC power and DC source. When AC cable is connected to a wall socket, utility power goes to connected equipment(s) and/or charges the battery set via charging system. In battery mode, Smart inverter automatically converts battery energy into AC power for backing up the connected devices. Large LCD displays real time information along with operational schemes, and can also display error codes for easy repair and maintenance. Reliable transformer less IGBT based design and frequency controlled power, very much compatible to all domestic loads: refrigerators, TV's, Computers, and power tool and battery chargers. Smart micro controller based 3-stage built in charging system properly charge and maintain battery bank.

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Applications:

- Well designed for applications where grid power is not stable or brownouts.
- Versatile inverter/charger with PWM Sine wave system with seamless transfer switching serves as an automotive inverter for RVs, trucks, standalone alternative power source with high end back up times with various battery technologies(VRLA, GEL, Deep cycle and many more)
- Perfectly suitable for Off-grid and Hybrid applications using additional MPPT controller
- Small PV plants for houses/villas and small offices.
- Remote closets and small computer room applications.

Key Feature:

- 12VV DC or 220/230/240V AC input; 220/230/240V, 50 /60Hz output
- 100VA continuous output with double boost capacity.
- Microprocessor controlled Smart volume design
- Built in 8~15A Smart Utility based battery charger
- PWM Sine wave output
- Automatic line-to-battery switchover
- High efficient DC-to-AC conversion, minimizing energy loss
- Rack design & wall-mounted design for flexible installation
- Intelligent 3-stage charger control for efficient charging and preventing overcharge of battery
- Auto restart while AC recovery
- User-friendly LCD+LED indications
- Multiple protection: low battery alarm, low battery shutdown, over
- charged protection, overload protection, over temperature protection, short circuit protection
- With the environmental temperature control charge management
- Quiet, high efficiency operation, high surge capacity and low idle current
- CE Safety
- Compatible to mains voltage or generator power
- Auto restart while AC is recovering
- Overload, over temperature and battery deep discharge protection
- Cold start function

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Specifications:

Model	HG1000
Rated Power	1000VA
INPUT AC	
Nominal Input Voltage	220/230/240V AC
Low Loss Voltage	170V AC +/- 7V (UPS mode)
	90V AC +/- 7V (Appliance mode)
Low loss return Voltage	180V AC +/- 7V (UPS mode)
	100V AC +/- 7V (Appliance mode)
High loss Voltage	280VAC +/- 7V
High loss Return Voltage	270VAC +/- 7V
Max AC input voltage	300V AC
Frequency Range	50Hz/60Hz (auto sensing)
Low loss frequency	40+/-1Hz
Low loss return frequency	42+/-1Hz
High loss frequency	65+/-1Hz
High loss return frequency	63+/-1Hz
Efficiency	>97%
OUTPUT	
AC Voltage Regulation	230V AC +/- 5%
Rated Output Power	1KVA/800W
Output Voltage Waveform	PWM Sine wave
Output Frequency	50Hz/60Hz (auto sensing)
Surge Power	2000VA
Efficiency	95-97%
Over Load protection	5sec @>150% load; 10sec@110~150% load
Nominal DC input Voltage	12V DC
Cold Start Voltage	11.5V DC
Low DC Warning Voltage	
@load < 20%	11.0V DC
@ 20% < load < 50%	10.7V DC
@ load > 50%	10.1V DC
Low DC Warning Return Voltage	
@load < 20%	11.5V DC
@ 20% < load < 50%	11.2V DC

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@ load > 50%	10.6V DC
Low DC Cut-off Voltage	
@load < 20%	10.5V DC
@ 20% < load < 50%	10.2V DC
@ load > 50%	9.6V DC
High DC Recovery Voltage	14.5V DC
High DC Cut-off Voltage	15.5V DC
No Load Power Consumption	<10W
Saving Mode Power Consumption	<5W
Transfer Time	6-10mSec
Efficiency	90~93%
Charge Mode Specs (AC charger)	
Battery Voltage	12V DC
Floating Charge Voltage	13.5V DC
Overcharge Protection	15.5V DC
Maximum Charge Current	8~15Amp
Bulk Charging Voltage (Flooded Battery)	14.6V DC
Bulk Charging Voltage (AGM/GEL battery)	14.1V DC
Charging Algorithm	3-Stage (CC-CV-Floating)
Display Indicators	
AC/DC mode	Displays output power, Output Voltage etc
Battery Mode	Yes. Battery symbol flickers every one sec
Battery	Displays Battery charge status
Fault	Displays fault codes (refer the service manual)
Audible Alarm	
Low Battery at Battery Mode	Sounding every 2 seconds
Over Load	Sounding every 0.5seconds
Faults	Continuous sounding
Protection	
Battery deep discharge Protection	Yes
Battery Over charge protection	Yes
Inverter Over load protection	Yes
Over temperature protection	Yes
General Specs	
Dimension (WxHxD-mm)	224*255*80mm

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Net Weight (kgs)	2.5kgs
Humidity	5% to 95% Relative Humidity (non-condensing)
Operating Temperature	0degC to 40deg C
Storage Temperature	-15degC to 50degC
Noise Level	less than 50dB
Quality/Safety standards	ISO9001:2015/ISO14001:2015
Safety	EMC/CE/ROHS
Certification/Confirmity	
Disturbance at Mains Terminals	EN61000-6-3:2007+ A1: 2011+ AC:2012
Radiated Disturbance	EN61000-6-3:2007+ A1: 2011+ AC:2012
Harmonic Current Emission	EN61000-3-12: 2011
Voltage fluctuations & flickering	EN61000-3-11: 2000
Electrostatic Discharge (ESD)	IEC 6100-4-2:2008
Radio-frequency & continuous radiated disturbances	IEC 6100-4-3:2006 + A1:2007 + A2:2010
EFT/B Immunity	IEC 6100-4-4:2012
Surge immunity	IEC 6100-4-5:2014
Conducted RF immunity	IEC 6100-4-6:2013
Power frequency magnetic field	IEC 6100-4-8:2009
Voltage DIP, >95% reduction	IEC 6100-4-11:2004
Voltage DIP, >30% reduction	IEC 6100-4-11:2004
Voltage Interruption	IEC 6100-4-11:2004