Hetronix

THE POWER OF NATURE

Hetronix™ Wind Turbine Systems

Hybrid Inverter SR specifications

Hybrid Inverter

The Hybrid Inverter is a powerful supply system , with an integrated solution of “Wind power” and “Solar power” that provides a pure sine wave output power, combined with the optional multi-stage battery charger and built-in solar charger.
Applicable to any type of load, such as air conditioning, household appliances and Industrial equipment. The Hybrid Inverter system is based on battery power as the main output. Under normal circumstances Hetronix Keith_2K hybrid windturbine system will give priority to the use of wind power and/or solar power. When there is a wind/sun disruption, the Hybrid Inverter will switch to the electrical utility. The built-in 5-stage solarcharger, automatically charges any type of batteries without the risk of overcharge. Solar panels with a maximum of 4kW can be connected directly to the Hybrid Inverter. The compact & modular design makes utility interactive installations easier and more cost effective. It is a high quality product that offers the best price/performance ratio in the industry; especially for areas without a stable power supply or totally dependent on diesel generators on islands, or high on a mountain ridge.

Hybrid Inverter Key Features

* Support Solar panels with max. 4kW
* Un-limited batteries back-up time
* DC start and automatic self-diagnostic function
* Multi-stage charger supports batteries up to 600AH
* Controllable & Removable panel with LCD
* Optional Multiple interfaces cards available
* Un-limited load applicability
* Compatible with both linear & non-linear load
* 24 hours operation on the Inverter.
* Low heat dissipation in long time operation.
* Design to operate under harsh environment.
* Parameter Pre-settable.

Build In SOLAR Charger Module Specification

Normal DC (Battery)	12V	24V	48V
Charging Voltage	13.8V	27.6V	55.2V
Operating High Voltage (Solar In)	25V	50V	100V
Operating Low Voltage (Solar In)	12V	24V	44V
Solar Panel Capacity (Maximum)	1KW	2KW	4KW
Maximum Charging Current	50A	50A	50A
Polarity Reverse Protection	Yes	Yes	Yes
Current Reverse Protection	Yes	Yes	Yes

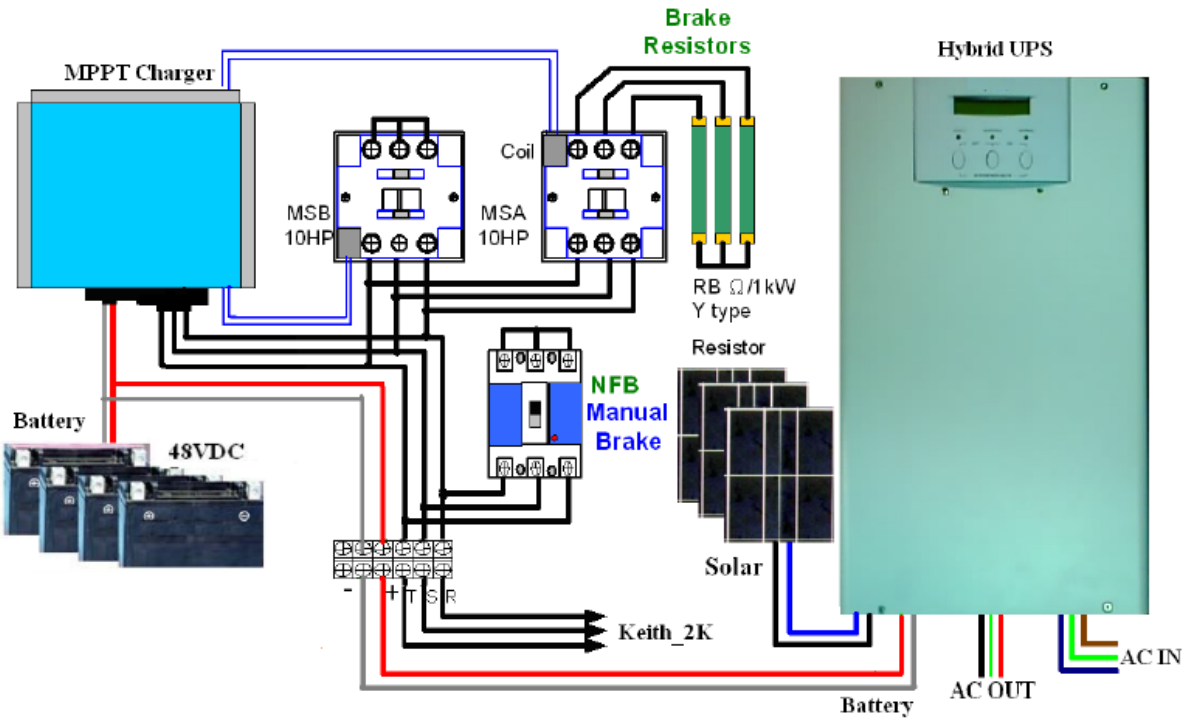
Specification Hybrid Inverter range SR-602 / 802

Specification

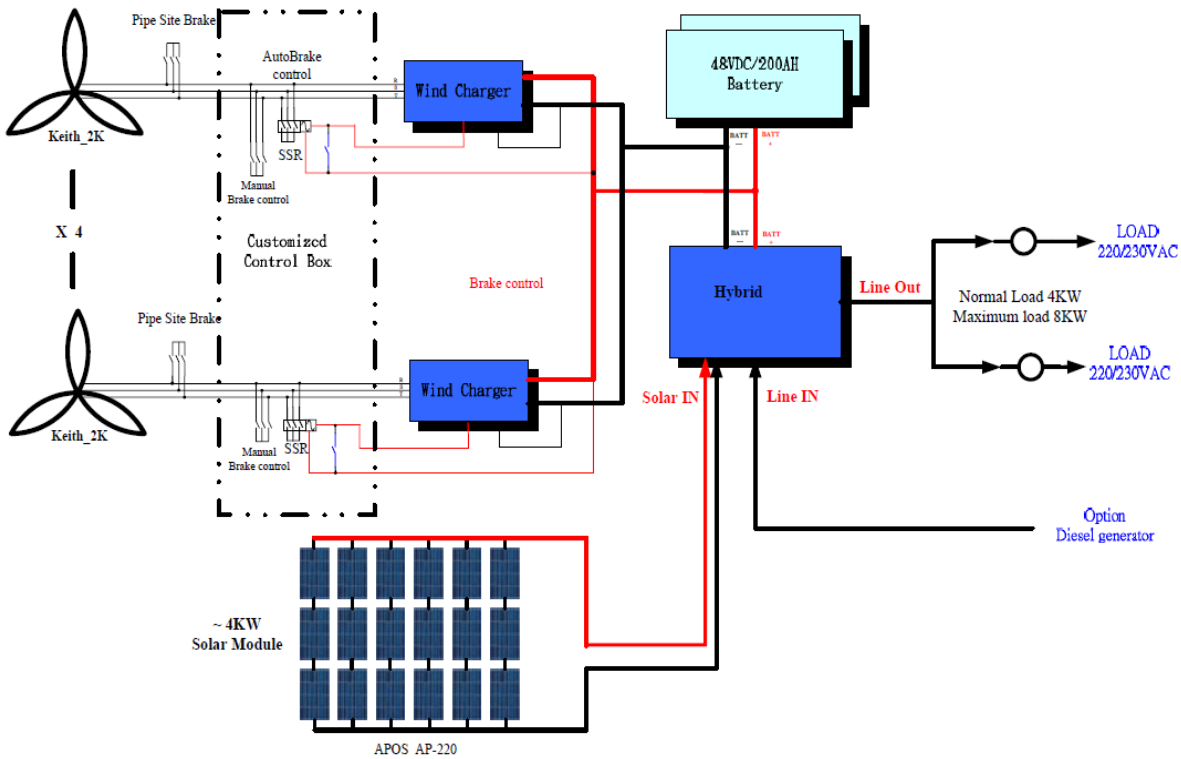
- Specifications are subjected to change without prior notice.

Model			SR-602	SR-802
Capacity	VA / Watt		6KVA / 6000W	8KVA / 8000W
Input	Nominal Voltage		220Vac; 110Vac	220Vac only
	Voltage Range	Acceptable Voltage Range	120-275Vac ; 60-135Vac	120-275Vac
		Frequency	50Hz / 60Hz (45Hz - 70Hz)	50Hz / 60Hz (45Hz - 70Hz)
		Line Low Transfer	120VAC ± 2% ; 60VAC ± 2%	120VAC ± 2%
		Line Low Return	130VAC ± 2% ; 65VAC ± 2%	130VAC ± 2%
		Line High Transfer	275VAC ± 2% ; 135VAC ± 2%	275VAC ± 2%
		Line High Return	260VAC ± 2% ; 130VAC ± 2%	260VAC ± 2%
Output	Voltage		220Vac (230V or 240VAC re-settable via LCD panel); 110Vac (115V or 120VAC re-settable via LCD panel)	
	Voltage Regulation (Battery. Mode)		< 3% RMS for entire battery voltage range	
	Frequency		50Hz or 60Hz	
	Frequency Regulation (Battery. Mode)		±0.1Hz	
	Power Factor		1.0	
	Waveform		Pure Sinewave	
	Efficiency		> 80%	
	Overload Protection	Line Mode	Circuit Breaker	
		Battery Mode	110% ~ 150% for 30 sec. , >150% for 200ms	
Transfer Time	Typical		< 8 ms.	
Battery	Battery Voltage		48Vdc	
	Backup Time (at full load)		long time available	
	Max. Charging Current (5 steps selectable)		> 60A	
Display LCD	LCD		UPS status, I/P&O/P Voltage Frequency, Load%, Battery Voltage & %, Charge current, Temperature, Model	
	LED		Normal (Green), Warning (Yellow), Fault (Red)	
Audible Alarm	Battery Mode		Beeping every 4 seconds	
	Low Battery		Beeping every second	
	UPS Fault		Beeping Continuously	
	Overload		Beeping twice per second	
Environment	Operation Temperature		0-40 degree C; / 32-104 degree F	
	Relative Humidity		0-95% non-dondensing	
	Audible Noise		Less than 55dBA (at 1M)	
Physical	Net Weigh (Kgs)		51.4Kg	53.6Kg
	(WxHxD)mm Wall Mounted		415*600*260	415*600*260

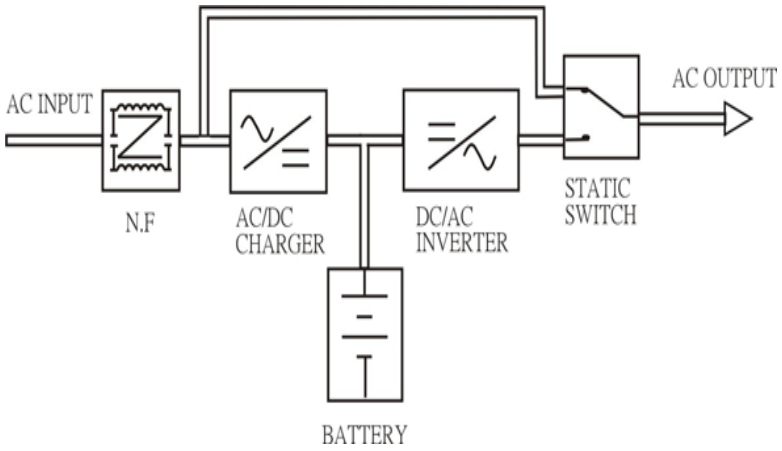
Hybrid System Architecture



Layout Hybrid with 4kW Solar Modules

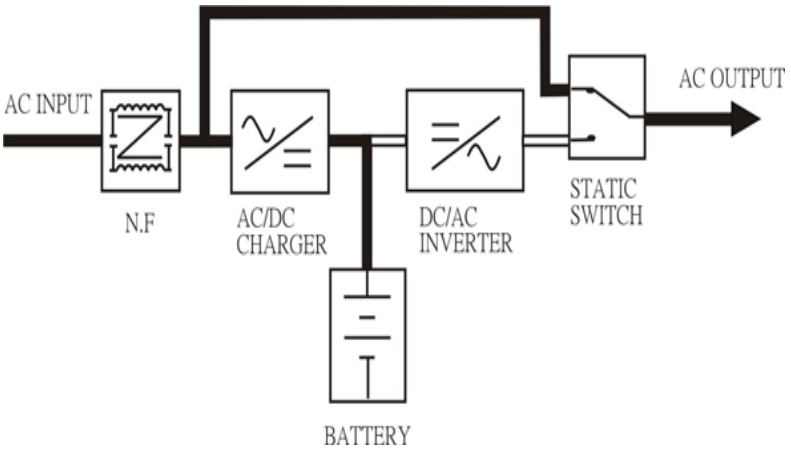


A] Hybrid Inverter System Block Diagram



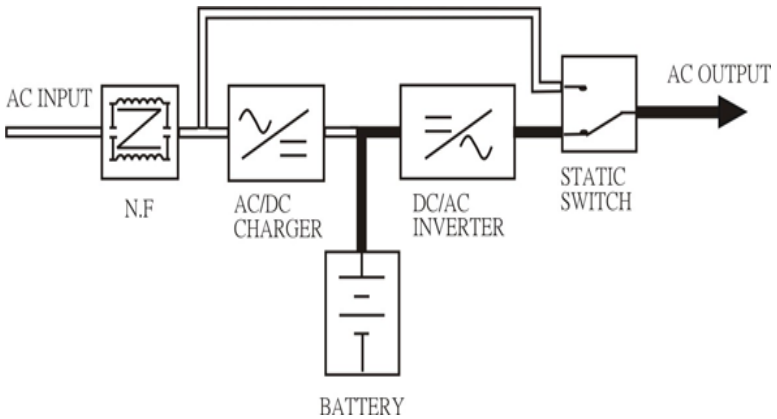
B] Hybrid Utility Failure (AC Mode)

There are two main loops when AC utility is normal: the AC loop and the battery charging loop. The AC output power comes from AC utility input and passes through static switch to support power to load. The battery charging voltage comes from AC utility input and converted by AC/DC charger to support battery-charging power.



C] Normal Operationon

The AC output comes from battery, passing through DC/AC inverter and static switch within the battery backup time.



Tested and Certified

CE marked Certification

Verification of MD & LVD Compliance
EN 61400-2: 2006 (Wind Turbine Generator Systems - Part 2: Safety of Small Wind Turbines)
EN ISO 12100-1: 2003, EN ISO 12100-2: 2003, EN 60204-1: 2006, EN 1050: 1996
Machinery directive: 98/37/EC
Low Voltage directive 2006/95/EC
Certified by SGS Taiwan LTD Electronics & Communication Services
Certificate No: EZ/2008/50037 C

Verification of EMC Compliance
EN 61000–6-2: 2005, EN 61000-6-4: 2007
EMC Directive: 89/336EEC amended by 2004/108/ EC
Certified by SGS Taiwan LTD Electronics & Communication Services
Certificate No: ED/2008/50046C

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