

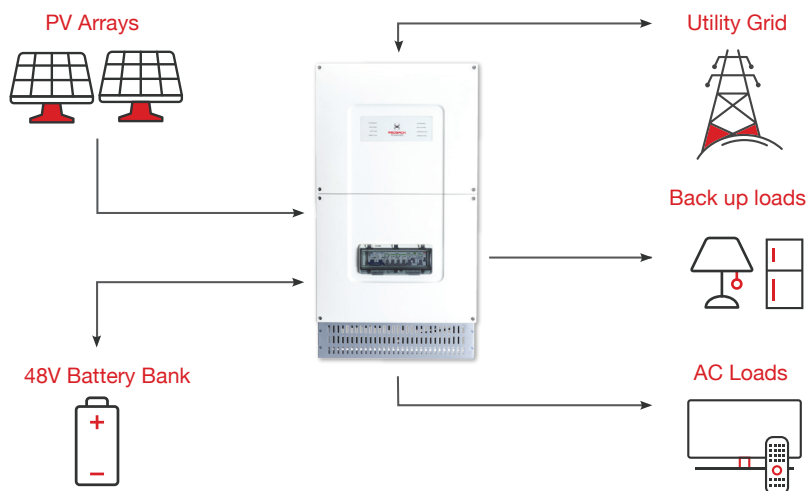
Gen 1.1
SH4600



Smart Hybrid Solar Inverter System

- **UPS/battery backup** in one robust unit
- **Easy to mount**, configure and quick installation
- **Export control** that can be managed according to local grid regulations
- **WiFi, generation, and consumption** monitoring included – no external devices required
- **IP65 outdoor unit** with unparalleled charge and discharge capabilities
- **Intelligent system** that maximises self-consumption and provides market leading return on investment
- **Ouija board** with cloud based control and programmable relays

About the tech



Redback App



Configure and monitor the current energy output of your customers' Smart Hybrid Solar Inverter System.

Smart Hybrid Solar Inverter System | **Generation 1.1**

Solar Array		SH4600
Number of solar array inputs	2 (individual maximum power point tracking)	
Maximum DC open circuit voltage	580V DC	
MPPT operating range	125-550V DC	
Starting voltage	125V DC	
Maximum DC input current (for each solar array input)	11A DC	
Overcurrent protection (for each solar array input)	20A DC	
Input connectors	Amphenol H4	
Residual current and insulation monitoring	Integrated	
Utility Interface		
Nominal AC voltage/frequency	230V AC, 50Hz, single phase	
Continuous AC power rating	4600W AC	
Maximum AC power to utility grid	4600W AC	
Maximum AC current to utility grid	20A AC	
Maximum AC current from utility grid	40A AC	
Nominal AC output range	180 to 270V AC, 45 to 55Hz (adjustable)	
Current THD	Less than 1.5%	
Power factor	0.8 leading to 0.8 lagging (adjustable)	
AC overvoltage category	Category III	
Anti-islanding and AC overcurrent protection	Integrated	
Inverter topology	Transformerless (with HF transformer isolation for battery)	
Battery Interface		
Nominal DC voltage	48V DC	
Battery compatibility	Lithium, flow or lead acid	
Maximum charging and discharge power (from battery)	4600W DC	
Maximum charging current	85A DC	
Maximum discharging current	100A DC	
Battery charging method	Three stage (adaptive with maintenance charging)	
Typical charging voltage (bulk/absorption phase)	57.0V DC	
Battery disconnect	Integrated 125A DC breaker (2 pole)	
Back Up Loads Output		
Nominal AC voltage/frequency	230V AC, 50Hz, single phase	
Continuous AC power rating	4600W AC (derate over 45°C ambient)	
Maximum AC power rating	6900W AC (10 seconds maximum)	
Maximum AC current	20A continuous, 30A for 10 seconds maximum	
Voltage THD	Less than 3.0% (with linear loads)	
Back-up loads AC disconnect & residual current leakage protection	Integrated combined 32A MCB & RCD	
Manual back-up load AC bypass switch	Integrated	
Efficiency		
Maximum efficiency (to utility grid)	97.6%	
European averaged efficiency	97.0%	
Maximum power point tracking efficiency	99.9%	
Efficiency (powering loads from battery)	90% typical	
Standby losses	Less than 8W AC	
General Data		
Dimensions (W x H x D)	516 mm x 950 mm x 278 mm	
Mounting and weight	Wall (mounting plate included), 40kg	
Ambient temperature range	-25 to 60°C (derate above 45°C)	
Relative humidity	0 to 100%	
DC overcurrent category	Category II	
Moisture location category	4K4H	
Environmental protection rating	IP65	
Cooling	Natural convection	
Noise emissions	Less than 25dB	
Warranty	5 years	
User Interface		
Front panel display	Multi-colouring LED indicators	
Communications	Integrated WiFi + ethernet for smartphone and web monitoring	
Software	Web and android/iOS application	
Power/energy monitoring	Includes grid meter with clip-on 120A AC sensor	
Ouija Board		
Signal relay outputs	4	
DRM modes	0-8	
Remote firmware updates	Supported	
Relays	2 x 10A Omron	

Grid regulation compliance: AS4777.2, AS4777.3 Safety certification: AS3100, IEC62109-1, IEC62109-2, IEC62040-1