

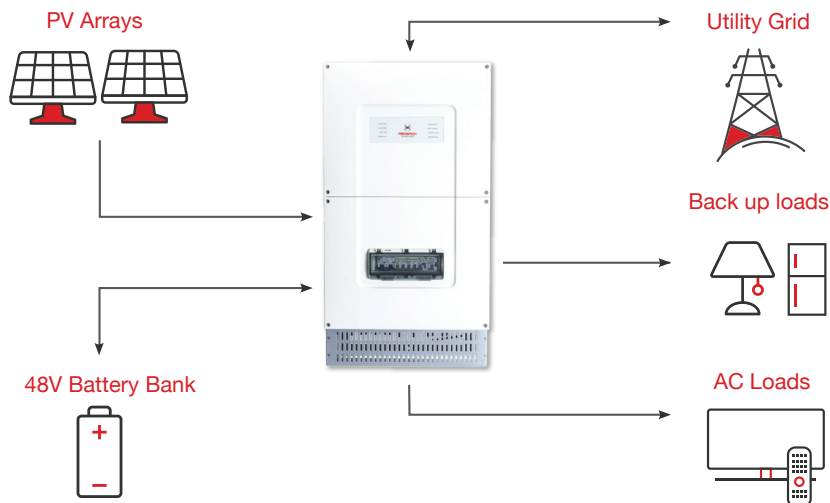
# Smart Hybrid Inverter

SH4600



- **UPS/battery backup** in one robust unit
- **Export control** that can be managed according to local grid regulations
- **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

## About the tech



## Redback App



Configure and monitor the current energy output of your Smart Hybrid Inverter.

# Smart Hybrid Inverter

<b>Solar Array</b>	
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
Input connectors	Amphenol H4
Residual current and insulation monitoring	Integrated
<b>Utility Interface</b>	
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)
<b>Battery Interface</b>	
Nominal DC voltage	48V DC
Battery compatibility	LG Chem LV Lithium-ion and PylonTech Lithium-ion
Maximum charging and discharge power (from battery)	4600W DC
Maximum charging current	85A DC
Maximum discharging current	100A DC
Battery charging method	BMS controlled
Typical charging voltage (bulk/absorption phase)	57.0V DC
Battery disconnect	Integrated 125A DC breaker (2 pole)
<b>Back Up Loads Output</b>	
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	25A MCB
Manual back-up load AC bypass switch	Integrated
<b>Efficiency</b>	
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
<b>General Data</b>	
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
<b>User Interface</b>	
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
<b>Ouija Board</b>	
Signal relay outputs	4
DRM modes	0-8
Remote firmware updates	Supported
Relays	2 x 10A Omron