

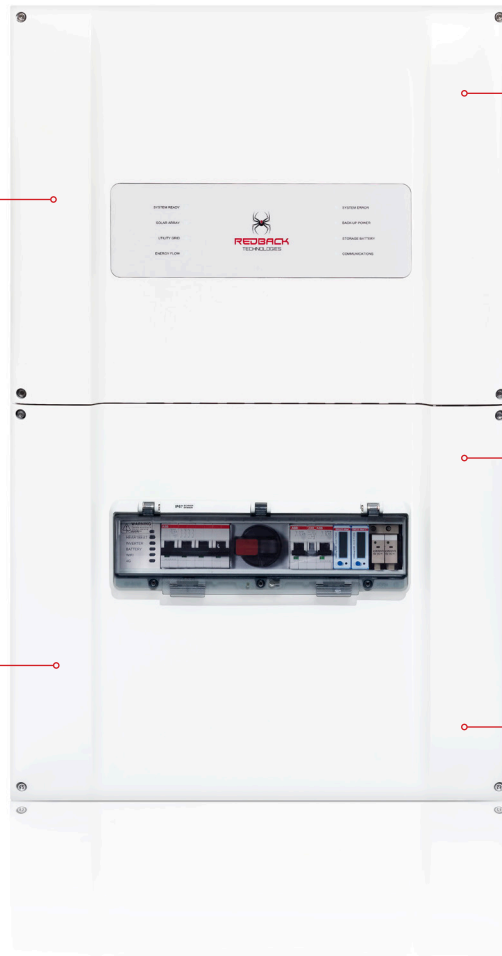
Smart Hybrid Inverter SH5000

Intelligent system

Maximise self-consumption through built in relays.

Prewired BoS

For fast and low cost installation, including approved DC isolator.



Uninterrupted power supply

Ensuring that your lights stay on, powered by your batteries.

IP65 rated

Can be installed inside or outside.

Monitoring

Generation and consumption monitoring via the cloud.

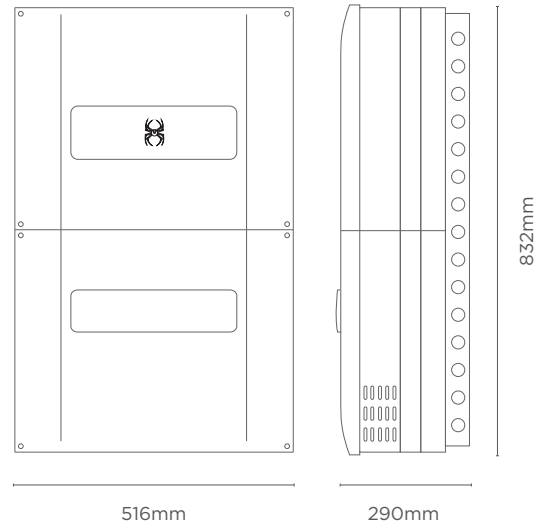
Energy for the future

Redback Technologies has a vision to enable every household and business to be entirely powered by low cost renewable energy all day, every day. The Redback Smart Hybrid System is the platform which facilitates all energy users to participate in the network of the future through clean, efficient and smart energy management. Redback Technologies, helping the world switch on renewable energy today for a cleaner tomorrow.

Energy flow



Dimensions



Specifications

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

| Solar array | | SH5000 |
|---|---|---|
| Number of solar array inputs | 2 | (individual maximum power point tracking) |
| Maximum DC open circuit voltage | 580V | DC |
| MPPT operating range | 125 – 550V | |
| Starting voltage | 125V | DC |
| Maximum DC input current (for each solar array input) | 11A | DC |
| Solar array switch rating | 1000V | DC |
| Input connectors | H4 | |
| Residual current and insulation monitoring | Integrated | |
| Utility interface | | |
| Nominal AC voltage/frequency | 230V AC, 50Hz, | single phase |
| Continuous AC power rating | 5000W | AC |
| Maximum AC power to utility grid | 5000W | AC (derated over 45C ambient) |
| Maximum AC current to utility grid | 21.7A | 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 | 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 4 pole DC breaker 63A | DC per pole |
| Control interfaces | | |
| Signal relay outputs | 4 | |
| DRM modes | 0-8 | |
| Remote firmware updates | Supported | |
| Relays | 2 x 10A | Omron |

| 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 | 21.7A | 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 | |
| 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 832 mm x 290 mm | |
| Mounting and weight | Inverter 32kg, BoS 12kg, | total 44kg |
| Ambient temperature range | -25 to 60°C | derate above 45°C |
| Relative humidity | 0 to 95% | |
| 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-coloured LED | indicators |
| Communications | Integrated WiFi + ethernet | for smartphone and web monitoring |
| Remote access | Web and android/iOS | application |
| Power/energy monitoring | Includes 3 x utility grade (class 1) | meters |