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.

For more information visit redbacktech.com
### Specifications

**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
- **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**: 6900W AC (10 seconds maximum)
- **Maximum AC current to utility grid**: 21.7A continuous, 30A for 10 seconds maximum
- **Voltage THD**: Less than 3.0% (with linear loads)
- **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**: Refer to Redback Battery Enclosure data sheet
- **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): 57V 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