Sentinel Power Green

**HIGHLIGHTS**

- Small footprint
- Power factor 0.9
- High efficiency 97%
- Parallelable 2+1
- Simplified installation
- High quality output voltage

Sentinel Power Green is the ideal solution for protecting IT systems, telecommunications equipment and mission critical systems such as safety devices, ensuring maximum power reliability. Sentinel Power Green is designed and built using state-of-the-art technology and components to provide maximum protection to the powered loads with no impact on downstream systems and optimised energy savings.

The series includes 6 kVA single/single-phase and 8-20 kVA single/single-phase and three/single-phase models with online double conversion technology (VFI): the load is powered continuously by the inverter which supplies a sinusoidal voltage, filtered and stabilised in terms of form and frequency. Input and output filters provide significant further immunity from mains disturbances and lightning strikes.

In terms of technology and performance, Sentinel Power Green is one of the best UPS available on the market today: selectable Economy Mode and Smart Active Mode functions; custom diagnostics LCD display, RS232 and USB interfaces with Powershield software, ESD input, interface slot with optional boards.
High UPS reliability
- Total microprocessor control.
- Interruption-free static and manual bypass.
- Specifications guaranteed up to 40°C (the components are designed to work at high temperatures and thus are subject to less stress at normal temperatures).

Parallelable
Parallel configuration of 3 units for (2+1) redundant or power parallel system. The UPS continue to operate in parallel even if the connection cable is interrupted (Closed Loop).

Operating mode selection
The operating mode can be programmed via software or manually via the front display panel.
- **On line**: double conversion Mode: for critical applications.
- **Economy Mode**: to increase efficiency (up to 98%), allows for the selection of Line Interactive technology (VI) to power low priority loads from the mains supply.
- **Smart Active**: the UPS automatically decides upon the operating mode (VI or VFI) based on the quality of the mains power supply.
- **Emergency**: the UPS can be selected to function only when the mains power supply fails (emergency only mode).
- **Frequency converter** operation (50 or 60 Hz).

High quality output voltage
- Even with non-linear loads (IT loads with a crest factor of up to 3:1).
- High short circuit current on bypass.
- High overload capacity: 150% by inverter (even with mains failure).
- Filtered, stabilised and reliable voltage (double conversion on-line technology - VFI compliant with EN62040-3), with filters for the suppression of atmospheric disturbances.
- Power factor correction: UPS input power factor close to 1 and sinusoidal current uptake.

Simplified installation
- UPS can be installed on a single-phase or three-phase distribution network.
- Output terminal board + 2 IEC sockets for powering local consumers (computers, modems, etc.).
- Simplified positioning (built-in castors).

High battery reliability
- Automatic and manual battery test.
- Proper battery care is critical to ensuring correct UPS operation in emergency conditions. The Riello UPS battery care system consists of a series of features and capabilities to optimise battery management and obtain the best performance and operating life possible.
- Unlimited extendible runtime using matching Battery Boxes.
- The batteries do not cut in during mains failures of <40 ms (high hold up time) or when the input supply is between 84 V to 276 V.

Low impact on the mains
Sinusoidal uptake of input current on single-phase/single-phase series.

Other features
- Advanced diagnostics: status, measurements and alarms available on custom LCD display.
- Low noise (<40 dBA): can be installed in any environment thanks to its high frequency switching inverter and PWM load-dependent digitally controlled fan (>20 kHz, value above audible range).
- Auto restart (automatic when mains supply is restored, programmable via software or display panel).
- Emergency function: the UPS can be selected to function only when the mains power supply fails (emergency lights).
- Back-feed protection standard: to prevent energy from being fed back to the network.
- UPS digital updating (flash upgradeable).

Advanced communications
- Compatible with Riello UPS TeleNetGuard remote monitoring.
- Advanced multi-platform communications for all operating systems and network environments: PowerShield® monitoring and shutdown software for Windows operating systems 8, 7, Hyper-V, 2012, 2008, and previous versions, Mac OS X, Linux, VMware ESXi, Citrix XenServer and other Unix operating systems.
- RS232 serial and USB ports.
- Plug and play function.
- Slot for installation of communications boards.
OPTIONS

SOFTWARE
- PowerShield
- PowerNetGuard

ACCESSORIES
- NETMAN 204
- MULTICOM 302
- MULTICOM 352
- MULTICOM 372
- MULTICOM 382
- MULTICOM 401
- MULTI I/O
- Interface kit A5400
- MULTIPANEL
- RTG 100
- Manual Bypass MBB 100 A

PRODUCT ACCESSORIES
- Isolation transformer module (hlp): 500 x 400 x 265 / 80 (only for 5000-6000 VA models)

DETAILS

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BATTERY BOX

MODELS
- BB SPM 180-A3 / BB SPM 180-M1
- BB SPM 240-A3 / BB SPM 240-M1
- BB MST 1320 480

Dimensions (mm)

- SPM 6 - SPM 8 - SPM 10
- SPM 10 ER
- SPH 15 - SPH 20 - SPH 20 ER
## MODELS

<table>
<thead>
<tr>
<th>POWER</th>
<th>SPM 6</th>
<th>SPH 8</th>
<th>SPH 10</th>
<th>SPH 10 ER</th>
<th>SPH 15</th>
<th>SPH 20</th>
<th>SPH 20 ER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6000 VA/ 5400 W</td>
<td>8000 VA/ 6400 W</td>
<td>10000 VA/ 9000 W</td>
<td>10000 VA/ 9000 W</td>
<td>15000 VA/ 13500 W</td>
<td>20000 VA/ 18000 W</td>
<td>20000 VA/ 18000 W</td>
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</table>

## INPUT

<table>
<thead>
<tr>
<th>Nominal voltage</th>
<th>220-230-240 Vac 1 ph</th>
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</thead>
<tbody>
<tr>
<td>Minimum voltage without battery intervention</td>
<td>176 Vac @ 100% load / 110 Vac @ 50% load</td>
</tr>
<tr>
<td>Maximum operating voltage</td>
<td>276 Vac</td>
</tr>
<tr>
<td>Nominal frequency</td>
<td>50/60 Hz ±10 Hz</td>
</tr>
</tbody>
</table>

## BYPASS

| Voltage tolerance | 160 - 276 Vac (selectable in Economy Mode or Smart Active Mode) |
| Frequency tolerance | Selected frequency ±10% |
| Overload Times | 125% for 1 min, 150% for 10 seconds |

## OUTPUT

| Nominal voltage | 220-230-240 Vac selectable |
| Voltage distortion | < 2% with linear load / < 5% with non-linear load |
| Current distortion | 3 % |
| Frequency | 50/60 Hz selectable or with automatic selection |
| Static variation | ± 1.5 % |
| Dynamic variation | ± 5% in 20 ms |
| Waveform | Sinusoidal |
| Crest factor | ≥ 3:1 |

## BATTERIES

| Type | VRLA AGM maintenance-free lead based |
| Recharge time | 6-8 hours |
| Recharge current (only for ER versions) | n.a. 8 A n.a. 8 A |

## OTHER FEATURES

| Net weight (kg) | 63 78 84 28 146 157 48 |
| Gross weight (kg) | 77 92 98 42 164 175 66 |
| Dimensions (W x D x H) (mm) | 262 x 654 x 708 350 x 731 x 818 |
| Packaged dimensions (W x D x H) (mm) | 720 x 428 x 970 870 x 475 x 1075 |
| Smart Active efficiency | up to 98% |
| Protections | Overcurrent - short-circuit - overvoltage - undervoltage - temperature - excessive low battery |
| Communications | USB / RS232 + slot for communications interface |
| Parallel | max. 2 units in parallel with optional kit |
| Input plugs | Terminal block |
| Output sockets | Terminal block + 2 IEC 320 C13 |
| Standards | EN 62040-1 EMC EN 62040-2 Directives 2006/95/EC - 2004/108 EC EN 62040-3 |
| Operating temperature | 0 °C / +40 °C |
| Relative humidity | < 95% non-condensing |
| Colour | Dark grey RAL 7016 |
| Noise level at 1 m (ECO Mode) | < 40 dBA |
| Moving the UPS | castors |