Sentinel Power

HIGHLIGHTS

• High UPS reliability
• Operating mode selection
• High quality output voltage
• Simplified installation
• High battery reliability
• Low impact on the mains

Sentinel Power is the ideal solution for powering sensitive, mission critical systems such as safety devices (electro-medical devices), ensuring maximum power reliability. The series includes 5-6 kVA single/single-phase and 6.5-8-10 kVA single/single-phase and three/single-phase models with on-line double conversion technology (VFI): the load is powered continuously by the inverter which supplies a sinusoidal voltage, filtered and stabilised in terms of voltage, form and frequency. Input and output filters provide significant further immunity from mains disturbances and lightning strikes.

In terms of technology, performance (selectable Economy and Smart Active Modes) and diagnostics (LCD custom display, RS232 and USB interfaces with Powershell® software included, ESD input, interface slot for optional boards), Sentinel Power is one of the best UPS available on the market.
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).

Operating mode selection
The operating mode can be programmed via software or manually via the front display panel.
- **On line.**
- **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.

Energy-share
Two 10 A configurable IEC output sockets allow for runtime optimisation by programming the switching off of low priority loads on mains failure; alternatively, emergency loads that are normally not powered when mains is present can be activated.

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 port
- Plug and play function
- Slot for installation of communications boards.

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
- Reduced ripple component (detrimental to the batteries) using a low ripple current discharge (LCRD) system
- 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.
**BATTERY BOX**

**MODELS**

<table>
<thead>
<tr>
<th>BB SPW 240-A3 / BB SPW 240-A6</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC SPW 240-M1 / BC SPW 240-M4</td>
</tr>
</tbody>
</table>

 Dimensions (mm)

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**OPTIONS**

**SOFTWARE**

- PowerShield®
- PowerNetGuard

**ACCESSORIES**

- NETMAN 204
- MULTICOM 302
- MULTICOM 352
- MULTICOM 372
- MULTICOM 382
- MULTICOM 401
- MULTI I/O

- Interface kit AS400

**PRODUCT ACCESSORIES**

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

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**DETAILS**

**SPW 5000 - SPW 6000**

**SPW 6500 - SPT 8000 - SPW 10000**

- ON/OFF SWITCHES
- Communications Interface Slot
- Emergency Switch Device (ESD)
- RS232 Serial Port
- USB Port
- Maintenance Bypass (SWMB)
- Output Switch (SWOUT)
- Battery Fuse Port (SWBT)
- Input Switch (SWIN)
- IEC Sockets

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<tr>
<th>Power</th>
<th>SPW 5000</th>
<th>SPW 6000</th>
<th>SPT 6500</th>
<th>SPT 8000</th>
<th>SPT 10000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal voltage</td>
<td>220-230-240 Vac single-phase</td>
<td>220-230-240 Vac single-phase or 380-400-415 Vac three-phase + N</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum voltage without battery intervention</td>
<td>170 Vac @ 100% load / 140 Vac @ 50% load</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal frequency</td>
<td>50/60 Hz ±5 Hz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## INPUT

<table>
<thead>
<tr>
<th>Feature</th>
<th>SPW 5000</th>
<th>SPW 6000</th>
<th>SPT 6500</th>
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<th>SPT 10000</th>
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<td></td>
<td></td>
</tr>
<tr>
<td>Nominal frequency</td>
<td>50/60 Hz ±5 Hz</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

## BYPASS

<table>
<thead>
<tr>
<th>Feature</th>
<th>SPW 5000</th>
<th>SPW 6000</th>
<th>SPT 6500</th>
<th>SPT 8000</th>
<th>SPT 10000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage tolerance</td>
<td>180 - 264 Vac (selectable in Economy Mode or Smart Active Mode)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency tolerance</td>
<td>Selected frequency ±5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overload Times</td>
<td>125% for 4 seconds, 150% for 0.5 seconds</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

## OUTPUT

<table>
<thead>
<tr>
<th>Feature</th>
<th>SPW 5000</th>
<th>SPW 6000</th>
<th>SPT 6500</th>
<th>SPT 8000</th>
<th>SPT 10000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal voltage</td>
<td>220 - 230 - 240 Vac selectable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage distortion</td>
<td>&lt; 3% with linear load / &lt; 6% with non-linear load</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>50/60 Hz selectable or with automatic selection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Static variation</td>
<td>± 1.5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamic variation</td>
<td>± 5% in 20 ms</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waveform</td>
<td>Sinusoidal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crest factor</td>
<td>≥ 3 : 1</td>
<td></td>
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</tbody>
</table>

## BATTERIES

<table>
<thead>
<tr>
<th>Feature</th>
<th>SPW 5000</th>
<th>SPW 6000</th>
<th>SPT 6500</th>
<th>SPT 8000</th>
<th>SPT 10000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>VRLA AGM maintenance-free lead based</td>
<td></td>
<td></td>
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</tbody>
</table>

## OTHER FEATURES

<table>
<thead>
<tr>
<th>Feature</th>
<th>SPW 5000</th>
<th>SPW 6000</th>
<th>SPT 6500</th>
<th>SPT 8000</th>
<th>SPT 10000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net weight (kg)</td>
<td>91</td>
<td>92</td>
<td>105</td>
<td>106</td>
<td></td>
</tr>
<tr>
<td>Gross weight (kg)</td>
<td>99</td>
<td>100</td>
<td>110</td>
<td>111</td>
<td></td>
</tr>
<tr>
<td>Dimensions (Wx Dx H) (mm)</td>
<td>282 x 785 x 615</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Package dimensions (Wx Dx H) (mm)</td>
<td>863 x 388 x (650+15)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smart Active efficiency</td>
<td>up to 98%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protections</td>
<td>Overcurrent - short-circuit - overvoltage - undervoltage - temperature - excessive low battery</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communications</td>
<td>USB / RS232 + slot for communications interface</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input plugs</td>
<td>Terminal board</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output sockets</td>
<td>Terminal board + 2 IEC 320 C13</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Standards</td>
<td>EN 62040-1 EMC EN 62040-2 Directives 2006/95/EC - 2004/108 EC EN 62040-3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>0 °C / +40 °C</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Relative humidity</td>
<td>&lt; 95% non-condensing</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Colour</td>
<td>Dark grey RAL 7016</td>
<td></td>
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</tr>
<tr>
<td>Noise level at 1 m (ECO Mode)</td>
<td>&lt; 45 dBA</td>
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</tr>
</tbody>
</table>

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