



SOHO



DATACENTRE



E-MEDICAL



INDUSTRY



TRANSPORT



EMERGENCY

# Sentinel Dual

## High Power



ONLINE



Tower Rack



**1:1** 3.3-4 kVA

**3:1** 6.5-10 kVA



USB plug



Hot swap battery



Energy share

### HIGHLIGHTS

- Simplified installation
- Operating mode selection
- High quality output voltage
- High battery reliability

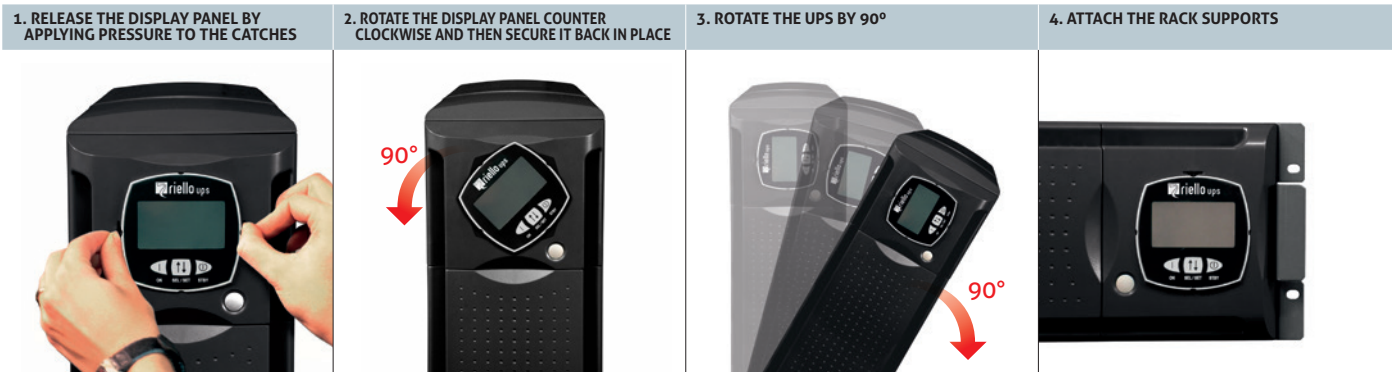
Sentinel Dual is the best solution for powering mission critical applications and electro-medical devices requiring maximum power reliability.

Flexibility of installation and use (digital display, user-replaceable battery set), as well as the many communication options available, makes Sentinel Dual suitable for many different applications from IT to security.

Sentinel Dual can be installed on the floor or in rack cabinets for networking applications. The Sentinel Dual range is available in 3.3-4 and 6.5-10 kVA 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. In addition, the input and output filters significantly increase the load's immunity to mains disturbances and lightning strikes.

Technology and performance: selectable Eco Mode and Smart Active Mode functions. Diagnostics: Standard digital display, RS232 and USB interfaces with PowerShield<sup>3</sup> software included, communications slot for connectivity accessories.



## Simplified installation

- Can be installed on the floor (tower version) or in rack mount cabinets (rack version). The display panel can be rotated (using the key supplied)
- Low noise (<40 dBA): can be installed in any environment thanks to its high frequency switching inverter and PWM load-dependent digitally controlled fan.
- Operation guaranteed up to 40°C (the components are designed for high temperatures and are thus subject to less stress at normal temperatures)

## Operating mode selection

Functions can be programmed via software or manually via the front display panel.

- **On line**
- **Eco 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.

## High battery reliability

- Automatic and manual battery test
- Reduced ripple component (detrimental to the batteries) using a low ripple current discharge (LCRD) system
- Batteries are user replaceable without switching off equipment and without interruption to the load (Hot Swap)
- 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.

## Emergency function

This configuration ensures the operation of those emergency systems that require continuous, reliable and long-lasting power supply in the event of a mains power failure, such as emergency lighting, fire detection/ extinguishing systems and alarms. When the mains power supply fails, the inverter begins powering the loads with a progressive start-up (Soft Start) in order to prevent overload.

## Battery optimisation

The wide input voltage range and a high hold-up time minimise battery usage and increase efficiency and battery life; for smaller power breaks, energy is drawn from a group of appropriately-sized capacitors.

## Other features

- Selectable output voltage (220-230-240 V)
- Auto-restart when mains power is restored (programmable via software)
- Bypass on: when the machine is switched off, it automatically goes into bypass and battery charge mode
- Minimum load switch-off
- Low battery warning
- Start-up delay
- Total microprocessor control
- Automatic bypass without interruption
- Use of IMS modules (Insulated Metallic Substrates)
- Status, measurements and alarms available on standard backlit display

- UPS digital updating (flash upgradeable)
- Input protection via resettable thermal switch
- Back-feed protection standard: to prevent energy from being fed back to the network
- Manual switching to bypass.

## Advanced communications

- Advanced multi-platform communications for all operating systems and network environments: PowerShield<sup>3</sup> 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
- Plug and play function
- USB port
- RS232 serial port
- Slot for installation of communications boards.

## High Power Factor

- More power delivered
- More real output power (W)

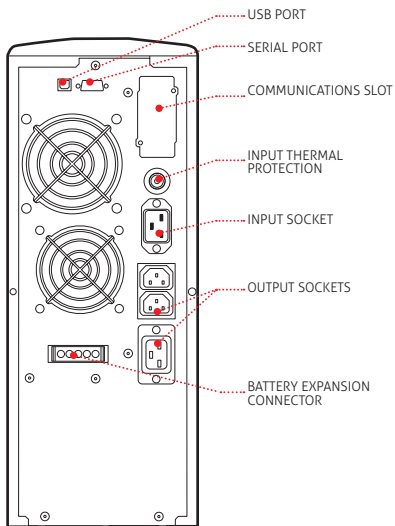
## 2-YEAR WARRANTY

# BATTERY BOX

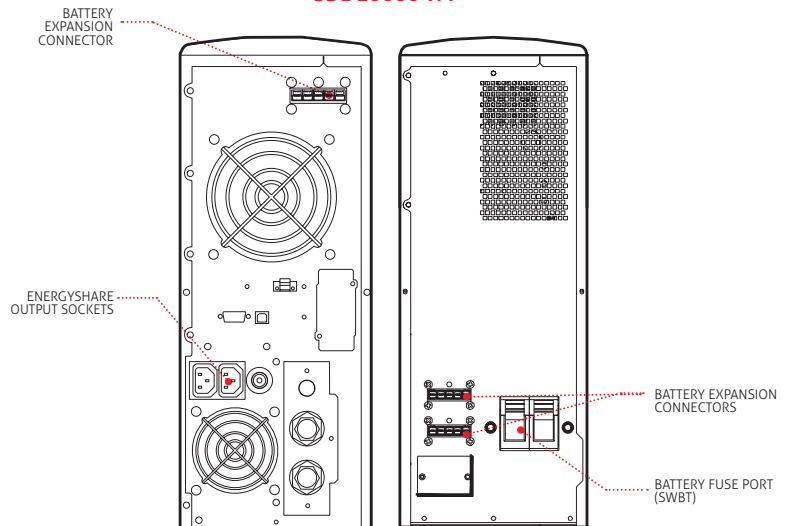
MODELS	BB SDL 108-A4 / BB SDL 108-M1	BC SDL 108-B1
Dimensions (mm)		

## DETAILS

**SDL 3300  
SDL 4000**



**SDL 6500 TM  
SDL 8000 TM  
SDL 10000 TM**



## OPTIONS

### SOFTWARE

PowerShield<sup>3</sup>  
PowerNetGuard

### ACCESSORIES

NETMAN 204  
MULTICOM 302  
MULTICOM 352  
MULTICOM 372  
MULTICOM 384  
MULTI I/O

### MULTIPANEL

Manual Bypass 16 A  
Manual bypass 16 A Rack  
Automatic bypass 16 A  
Automatic bypass 16 A Rack

### PRODUCT ACCESSORIES

Universal rails for installation in rack cabinets

MODELS	SDL 3300	SDL 4000	SDL 6500 TM	SDL 8000 TM	SDL 10000 TM
<b>POWER</b>	3300 VA/2300 W	4000 VA/2400 W	6500 VA/5850 W	8000 VA/7200 W	10000 VA/9000 W
<b>INPUT</b>					
Nominal voltage	220-230-240 Vac		400 Vac three-phase + N		
Voltage tolerance	230 Vac ± 20%		400 Vac ± 20%		
Minimum voltage	184 Vac @ 100% load / 92 Vac @ 50% load				
Nominal frequency	50/60 Hz ± 5 Hz				
Power factor	> 0.98		> 0.95		
<b>BYPASS</b>					
Voltage tolerance	180 - 264 Vac (selectable in Eco Mode or Smart Active Mode)				
Frequency tolerance	Selected frequency ±5%				
Overload Times	125% for 4 seconds, 150% for 0,5 seconds				
<b>OUTPUT</b>					
Nominal voltage	220-230-240 Vac selectable				
Voltage distortion	< 3% with linear load / < 6% with non-linear load				
Frequency	50/60 Hz selectable				
Static variation	1.5%				
Dynamic variation	≤ 5% in 20 ms				
Waveform	Sinusoidal				
Crest factor	3 : 1				
<b>BATTERIES</b>					
Type	VRLA AGM maintenance-free lead based				
Recharge time	4-6 hours				
<b>OTHER FEATURES</b>					
Net weight (kg)	38	40	91	94	95
Gross weight (kg)	42.5	44.5	99	102	103
Dimensions (WxDxH) (mm)	175 x 520 x 455 tower 19" x 520 x 4U rack		2 x (175 x 660 x 455) tower / 2 x (19" x 660 x 4U) rack		
Packaged dimensions (WxDxH) (mm)	540 x 620 x 280		780 x 555 x (270+15)		
Efficiency Line-interactive/Smart Active	98%				
Protections	Overcurrent - short-circuit - overvoltage - undervoltage - temperature - excessive low battery				
Communications	USB / RS232 + slot for communications interface				
Input plugs	1 IEC 320 C20		Terminal board		
Output sockets	2 IEC 320 C13 + 1 IEC 320 C20		Terminal board + 2 IEC 320 C13		
Standards	EN 62040-1 EMC EN 62040-2 Directives 2014/35/EU - 2014/30/EU 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		< 45 dBA		
Standard equipment provided	2 10 A cables; 1 IEC-16 A plug; software; serial cable; keys for releasing display panel; handles kit		2 cable guides; cable tips; software; serial cable; keys for releasing display panel; handles kit		

The information in this document is subject to change without notice. Riello UPS assumes no responsibility for any errors that may appear in this document. DATSDLA1Y18CREN