

riello ups

Sentinel Dual

High Power



SOHO



DATACENTRE



E-MEDICAL



INDUSTRY



TRANSPORT



EMERGENCY



ONLINE



Tower Rack



1:1 3:1 3,3-10 kVA



USB plug



Hot swap battery



Energy share

HIGHLIGHTS

- High Power Factor 0,9
- Simplified installation
- Operating mode selection
- High quality output voltage
- High battery reliability

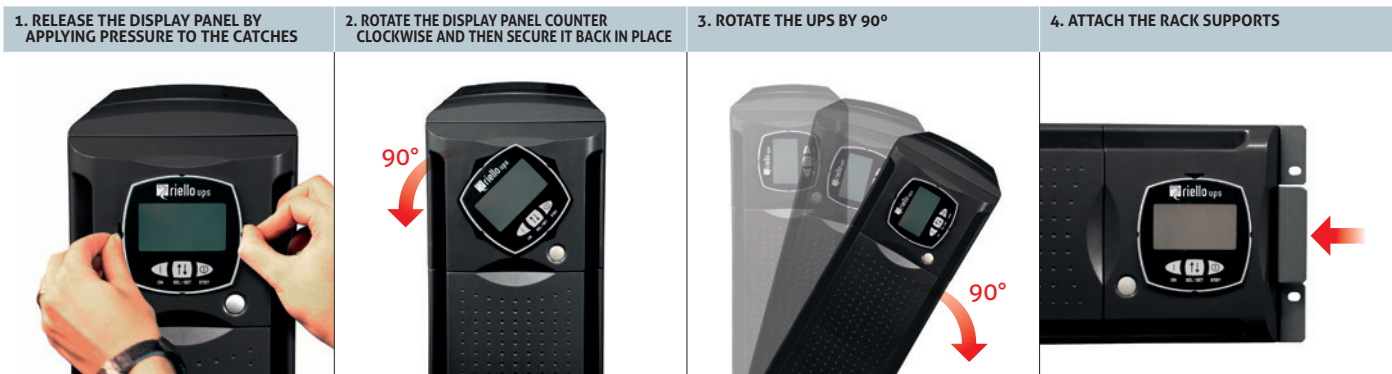
Sentinel Dual is the best solution for powering mission critical applications and electro-medical devices requiring maximum power reliability.

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 3,3-4-5-6-8-10 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 Economy Mode and Smart Active Mode functions. Diagnostics: Standard digital display, RS232 and USB interfaces with PowerShield³ 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.
- External bypass option for maintenance with interruption-free switching (5-6-8-10 kVA SDL)
- Operation guaranteed up to 40°C (the components are designed for high temperatures and are thus subject to less stress at normal temperatures)
- Two built-in IEC output sockets with thermal protection (5-6-8-10 kVA SDL)
- On the 5-6-8-10 kVA models, it is also possible to program two 10 A output sockets when the mains power supply fails (PowerShare function).

Operating mode selection

Functions 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.

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.

EnergyShare (5-10 kVA versions)

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.

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: PowerShield³ 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

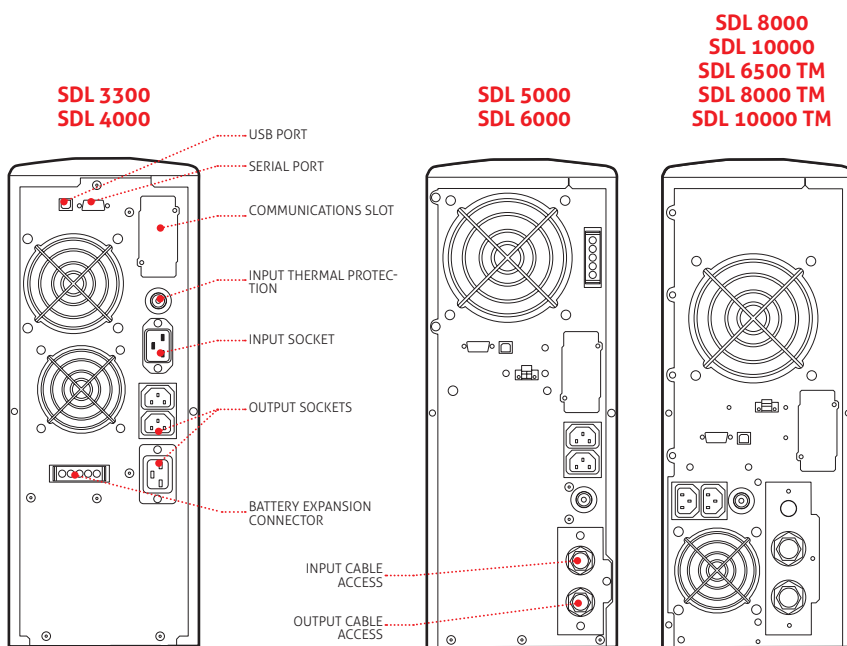
- More power delivered
- More real output power (W)

2-YEAR WARRANTY

BATTERY BOX

| MODELS | BB SDL 108-A4 / BB SDL 108-M1 | BB SDL 192-A3/ BB SDL 192-A6 | BC SDL 108-B1 |
|-----------------|-------------------------------|------------------------------|---------------|
| Dimensions (mm) | | | |

DETAILS



OPTIONS

SOFTWARE

PowerShield³
PowerNetGuard

ACCESSORIES

NETMAN 204
MULTICOM 302
MULTICOM 352
MULTICOM 372
MULTICOM 382
MULTICOM 401
MULTI I/O
Interface kit AS400
MULTIPANEL
RTG 100

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

Note: 3300-4000 VA

| MODELS | SDL 3300 | SDL 4000 | SDL 5000 | SDL 6000 | SDL 8000 | SDL 10000 |
|---|---|----------------|--|----------------|--|-----------------|
| POWER | 3300 VA/2300 W | 4000 VA/2400 W | 5000 VA/4500 W | 6000 VA/5400 W | 8000 VA/7200 W | 10000 VA/9000 W |
| INPUT | | | | | | |
| Nominal voltage | 220-230-240 Vac | | | | | |
| Minimum voltage | 184 Vac | | | | | |
| Nominal frequency | 50/60 Hz ±5Hz | | | | | |
| Power factor | > 0,98 | | | | | |
| Current distortion | ≤7% | | | | | |
| BYPASS | | | | | | |
| Voltage tolerance | 180 - 264 Vac (selectable in Economy Mode or Smart Active Mode) | | | | | |
| Frequency tolerance | Selected frequency ±5% (selectable by user) | | | | | |
| Overload Times | 125% for 4 seconds, 150% for 0,5 seconds | | | | | |
| OUTPUT | | | | | | |
| 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 | | | | | |
| BATTERIES | | | | | | |
| Type | VRLA AGM maintenance-free lead based | | | | | |
| Recharge time | 4-6 hours | | | | | |
| OTHER FEATURES | | | | | | |
| Net weight (kg) | 38 | 40 | 62 | 64 | 94 | 95 |
| Gross weight (kg) | 42,5 | 44,5 | 70 | 72 | 102 | 103 |
| Dimensions (WxDxH) (mm) | 175 x 520 x 455 tower 19" x 520 x 4U rack | | 175 x 660 x 455 tower 19" x 660 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 | | 720 x 530 x (270+15) | | 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 block | | | |
| 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 73/23 - 93/68 - 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 | | < 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 | | | |

| MODELS | SDL 6500 TM | SDL 8000 TM | SDL 10000 TM |
|----------------------------------|---|-----------------------|------------------------|
| POWER | 6500 VA/5850 W | 8000 VA/7200 W | 10000 VA/9000 W |
| INPUT | | | |
| Nominal voltage | 400 Vac three-phase + N | | |
| Minimum voltage (F + N) | 164 Vac @ 100% load / 84 Vac @ 50% load | | |
| Nominal frequency | 50/60 Hz ±5 Hz | | |
| Power factor | > 0,95 | | |
| BYPASS | | | |
| Voltage tolerance | 180 - 264 Vac (selectable in Economy Mode or Smart Active Mode) | | |
| Frequency tolerance | Selected frequency ±5% (selectable by user) | | |
| Overload Times | 125% for 4 seconds, 150% for 0,5 seconds | | |
| OUTPUT | | | |
| 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 | | |
| BATTERIES | | | |
| Type | VRLA AGM maintenance-free lead based | | |
| Recharge time | 4-6 hours | | |
| OTHER FEATURES | | | |
| Net weight (kg) | 91 | 94 | 95 |
| Gross weight (kg) | 99 | 102 | 103 |
| Dimensions (WxDxH) (mm) | 2 x (175 x 660 x 455) tower / 2 x (19" x 660 x 4U) rack | | |
| Packaged dimensions (WxDxH) (mm) | 780 x 555 x (270+15) | | |
| Smart Active efficiency | up to 98% | | |
| Protections | Overcurrent - short-circuit - overvoltage - undervoltage - temperature - excessive low battery | | |
| Communications | USB / RS232 + slot for communications interface | | |
| Input plugs | Terminal block | | |
| Output sockets | Terminal board + 2 IEC 320 C13 | | |
| Standards | EN 62040-1 EMC EN 62040-2 Directives 73/23 - 93/68 - 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) | < 45 dBA | | |
| Standard equipment provided | 2 cable guides; cable tips; software; serial cable; keys for releasing display panel; handles kit | | |

RPS S.p.A.

ITALY

LEGNAGO (VR)

Head Office

Viale Europa, 7
37045 LEGNAGO (Verona)
Tel +39 0442 635811
Fax +39 0442 629098
www.riello-ups.com
riello@riello-ups.com

CORMANO (MI)

Sales Office

Via Somalia, 20
20032 CORMANO (Milano)
Tel +39 02 663271
Fax +39 02 66327351

ROME

Sales Office

Via Fosso della Magliana, 34/G
00148 ROME
Tel +39 06 65192125
Fax +39 06 65192247

UNITED KINGDOM

RIELLO UPS Ltd.

Unit 50 Clywedog Road North
Wrexham Industrial Estate
Wrexham LL13 9XN
Tel +44 800 269 394
Fax +44 1978 729 290

CONSTANT POWER SERVICES Ltd.

Riello House, Works Road,
Letchworth
SG6 1AZ Hertfordshire
Tel +44 330 1230125
Fax +44 1462 422754

GERMANY

RIELLO UPS GmbH

Wilhelm-Bergner-Str.9b
21509 Glinde
Tel +49 40 / 527 211-0
Fax +49 40 / 527 211-200

RIELLO POWER SYSTEMS GmbH

Neufahrner Str. 12b
85375 Neufahrn/Grüneck
Tel +49 8165 / 9458-0
Fax +49 8165 / 9458-26

FRANCE

RIELLO ONDULEURS S.a.r.l.

2/4 Rue du Bois Chaland,
ZAC du Bois Chaland
91090 Lisses
Tel +33 1 60 875454
Fax +33 1 60 875450

Agence Rhone Alpes - Sud
147 Avenue M. Mérieux,
Parc de Sacuny, Park Avenir 1
69530 Brignais
Tel +33 4 72 177108
Fax +33 4 78 351422

SPAIN

RIELLO ENERDATA s.l.u.

C/ Labradores,
13 Parque Empresarial
Prado del Espino
28660 Boadilla del Monte -
Madrid
Tel +34 916 333 000
Fax +34 916 321 793

Delegacion Andalucia
C/ Aviación 18, P. I. Calonge,
Edificio Morera y Vallejo 1,
1ª Planta
41007 Sevilla
Tel +34 955 040 044
Fax +34 955 040 041

RIELLO TDL s.l.

C/Berguedà, 6 bis
Pol. Ind. Plà de la Bruguera
08211 Castellar del Vallès,
Barcelona
Tel +34 93 74 71 210
Fax +34 93 71 46 562

ROMANIA

S.C. Banattika S.r.l.

(Riello UPS Romania)
Str. Varsovia Nr. 4
307160 Dumbravita
Timis County - Romania
Tel +40 256 214 681
Fax +40 256 214 682

AUSTRALIA

RIELLO UPS AUSTRALIA Pty. Ltd.

Unit 22/80 Box Road
Taren Point NSW 2229
Tel +61 2 9531 1999
Fax +61 2 9531 1988

Unit 17/810-818 Princes Hwy
Springvale VIC 3171
Tel +61 3 9574 6922
Fax +61 3 9574 6933

PO Box 2251
Yokine South WA 6060
Tel +61 1300 138,709

ASIA PACIFIC

RIELLO UPS SINGAPORE Pte Ltd.

No. 506 Chai Chee Lane,
#07-01, Singapore 469026
Tel +65 6441 2005
Fax +65 6441 2095

CHINA

Riello UPS (Asia) Co., Ltd.

Bolg2, No.451 Duhui Road,
Minhang District-201108
Shanghai
Tel +86 21 50464748
Fax +86 21 50464648

Sales office Beijing

Unit 3B, Building B,
Jinyuan Century Business Centre,
No.1, Yuanda Road, Haidian
District
100097 Beijing
Tel +86 10 82038861 / 8862
Fax +86 10 82038863

Sales office Guangzhou

Address Unit 1507 East Building,
Dongshan Square, No. 65,
Xiantie Zhong Road, Yuexiu District
510095, Guangzhou
Tel +86 20 28848001
Fax +86 20 28848002

Sales office Jinan

Room 3508, Building2
Inzone Center, No.22799
Jingshi Road, Jinan
Tel +86 531 87969877
Fax +86 531 87960977

Sales office Xi'an

A2604, Oak Constellation,
No. 3, Ke Ji 5th Road,
High-Tech Zone, Xi'an
Tel +86 29 89526941
Fax +86 29 89526943

Sales office Chengdu

Room 1703, Level 17,
Raffles City Tower 2,
No. 3 Section 4,
South Renmin Road, Chengdu
Tel +86 28 6511 2870/71
Fax +86 28 6511 8199

INDIA

RIELLO PCI India Pvt. Ltd.

Prime Tower: 287-288
Udyog Vihar, Phase II
122015 Gurgaon (HR)
Tel.: +91-124-6656999
Fax: +91-124-4871698



PRE-SALES SUPPORT

(TEC)
tec@riello-ups.com



AFTER-SALES SUPPORT

(UPService)
service@riello-ups.com



Follow us on Social Networks

