LOCAL AREA NETWORKS (LAN) | SERVERS | DATA CENTRES | CASH REGISTERS | INDUSTRIAL PLCS | ELECTRO-MEDICAL DEVICES | EMERGENCY DEVICES (Lights/Alarms)

Sentinel Dual *High Power*

RIELLO ELETTRONICA

riello AROS ups

3.3-10 kVA
single/single-phase
and three/single-phase

Highlights

- Simplified Installation
- Operation selection
- High quality output voltage
- High battery reliability
- Emergency Back-up function
- Battery optimisation
- EnergyShare
- Reduced noise
- On-line (VFI)

ECO 6 ENERGY LEVELS

SENTINEL DUAL is the best solution for powering sensitive and vital “mission critical” utilities and safety devices (electro-medical), ensuring maximum power reliability.
The flexibility of installation and use (digital display, user-removable batteries) and the many communication options, make SENTINEL DUAL a UPS suitable for many applications, from information technology to security.
SENTINEL DUAL can be installed on the floor or in rack cabinets for networking applications.
The SENTINEL DUAL is available in 3.3-4 5-6-8-10 kVA models and uses double conversion On-line technology (VFI): the load is powered continuously by the inverter which supplies sinusoidal voltage that is filtered and stabilised in terms of voltage, form and frequency; in addition, the input and output filters significantly increase the load’s immunity to network disturbances and lightning strikes.
Technology and performance: selectable Economy Mode and Smart Active Mode functions Diagnostics: standard digital display, RS232 and USB interface with PowerShield[3] software included, and communication slot for connectivity accessories.

Simplified Installation

- May be installed on the floor (tower version) or in rackmount cabinets (rack version). The mimic panel can be rotated (using the key supplied)

- Low noise (<40dBA): can be installed in any environment thanks to its PWM digitally-controlled ventilation, dependent on the load applied and on the use of a high frequency switching inverter
- Can be connected to an external maintenance bypass (5-6-8-10 kVA SDLs)
- Features guaranteed up to 40°C (the components are designed for high temperatures and are thus subject to less stress at normal temperatures)
- Availability of two built-in IEC output sockets with thermal protection (5-6-8-10 kVA SDLs)
- On the 5-6-8-10 kVA models it is possible to programme two 10A output sockets (EnergyShare function) to turn off when the mains power supply fails.

Operation selection

The functions may be programmed using software or manually via the mimic panel

- On-line
- ECO Mode, to increase output (up to 98%), allows for selection of Line Interactive technology (VI) to power low priority loads from the mains.
- Smart Active, the UPS automatically decides upon the operating mode (VI or VFI) based on the quality of the network.
- Back-up, the UPS can be selected to function only when mains power fails (emergency mode only)
- Frequency converter (50 or 60 Hz).

High quality output voltage

- Even with non-linear loads (loads with a rest 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 IEC 62040-3) with filters for the suppression of atmospheric disturbances.
- Power factor correction: UPS input power factor, close to 1 and sinewave current absorption

High battery reliability

- Automatic and manual battery test
- Reduced ripple component (detrimental to the batteries) thanks to the “LRCD” system (Low Ripple Current Discharge)
- Batteries are user replaceable without interruption to the power to the load (Hot Swap)
- Unlimited extendible runtime via dedicated modular design Battery Boxes
- The batteries are not activated during mains failure of <40 ms (high hold up time) or when there are variations in input voltage (from 84V to 276V).

Emergency Back-up function

This configuration ensures the operation of those devices that require continuous and lasting power during mains failure, such as emergency lighting systems, fire detection/ extinction systems, alarms etc.
In case of a black-out, the inverter begins powering the load with a progressive start (Soft start) in order to prevent overloading.

Battery optimisation

The wide input range and a high Hold Up Time value minimise battery interventions and increase efficiency and battery life; for smaller power breaks, energy is drawn from a group of appropriately-sized capacitors.

EnergyShare (5÷10kVA)

The presence of two configurable IEC output sockets, allows for runtime optimisation, programming the switch-off of low priority loads; alternatively, emergency only loads, normally not powered when the mains is present, can be activated.

Reduced noise

Thanks to the digital PWM control, the speed of the fans is adjusted depending on the temperature of the two internal heatsyncs, ensuring extended life and a reduction in noise to less than 45dB.

Other features

- Output voltage can be selected using software (220-230-240V)
- 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)
- Statuses, measurements and alarms available on standard, backlit display.
- UPS digital updating (flash upgradable)
- Input protection through resettable thermal switch
- Standard Back-feed protection: to prevent energy from being fed back to the network
- Manual switching to bypass.

1. Release the mimic panel by applying pressure to the catch

2. Rotate the mimic panel counter clockwise and then secure it back in place

3. Rotate the UPS 90°

4. Attach the rack supports

Advanced communication

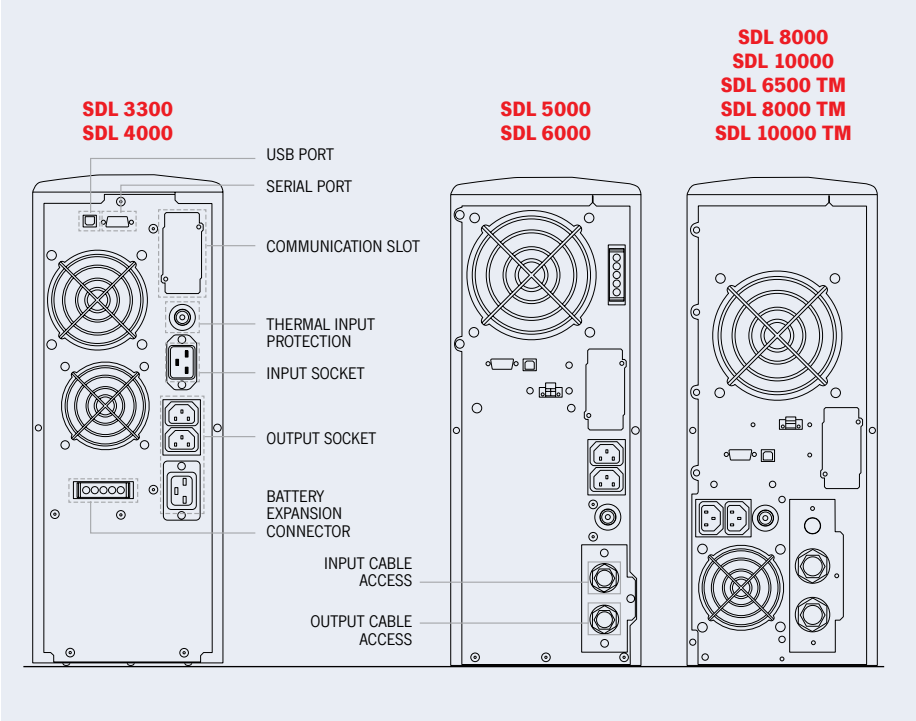
- Advanced multi-platform communication for all operating systems and network environments; supervision and shutdown PowerShield[3] software for Windows operating systems 7, 2008, Vista, 2003, XP, Linux, Mac OS X, Sun Solaris, VMware ESX and other Unix operating systems.
- Plug and Play function
- USB Port
- RS232 serial port
- Slot for installation of communications boards

2-YEAR WARRANTY

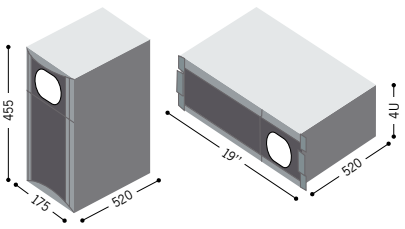
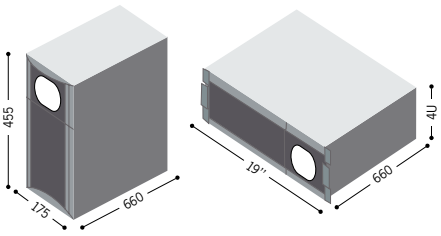
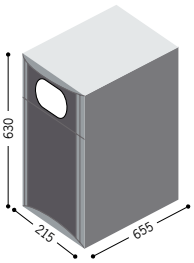
Options

- Battery cabinets for extended runtimes, with or without batteries
- Telescopic rails for rack cabinet mounting

details



battery box

MODELS	BB SDL 108-A4 / BB SDL 108-M1	BB SDL 192-A3/ BB SDL 192-A6	BC SDL 108-B1
MODELS SDL	SDL 3300-4000	SDL 5000-6000 SDL 6500TM-8000-8000TM-10000-10000TM	SDL 3300-4000 Tower
Dimensions (mm)			

4U = 176 mm; 19" = 438 mm

MODELS	SDL 3300	SDL 4000	SDL 5000	SDL 6000	SDL 8000	SDL 10000
POWER	3300VA/2300W	4000VA/2400W	5000VA/3500W	6000VA/4200W	8000VA/6400W	10000VA/8000W
INPUT						
Nominal voltage	220-230-240 Vac					
Minimum voltage	164 Vac @ load 100% / 84 Vac @ load 50%					
Nominal frequency	50 or 60 Hz ±5Hz					
Power factor	> 0.98					
Current distortion	≤7%					
BY PASS						
Voltage tolerance	180 - 264 Vac (selectable in Economy Mode and Smart Active Mode)					
Frequency tolerance	Selected frequency ±5% (selectable by user)					
OUTPUT						
Nominal voltage	220-230-240 Vac selectable					
Voltage distortion	< 3% with linear load / < 6% with non-linear load					
Frequency	50 or 60 Hz selectable					
Static variation	1.5%					
Dynamic variation	≤ 5% in 20 ms					
Waveform	Sinusoidal					
Crest factor	3 : 1					
BATTERIES						
Charging time	4-6 hours					
OVERLOAD TIMES						
100% < Load < 110%	1 minute					
110% < Load < 150%	4 seconds					
Load > 150%	0.5 seconds					
OTHER FEATURES						
Net weight (kg)	38	40	62	64	94	95
Gross weight (kg)	42.5	44.5	70	72	102	103
Dimensions (hwd) (mm)	455 x 175 x 520 tower 175(4U)x19"x483 rack		455 x 175 x 660 tower 175(4U)x19"x660 rack		2 x 455 x 175 x 660 tower 2 x 175(4U)x19"x660 rack	
Packaging dimensions (hwd) (mm)	540 x 620 x 280		720 x 530 x (270+15)		780 x 555 x (270+15)	
Line-Interactive/ Smart Active output	98%					
Protection devices	Overcurrent - short-circuit - overvoltage - undervoltage - thermal - excessive low battery protection devices					
Communication	USB / RS232 + slot for communications interface					
Input sockets	1 IEC 320 C20		Terminal board			
Output socket	2 IEC 320 C13 + 1 IEC 320 C20		Terminal board + 2 IEC 320 C13			
Regulations	EN 62040-1 EMC EN 62040-2 Directive 73/23 - 93/68 - 2004/108 EC EN 62040-3					
Ambient temperature	0°C / +40°C					
Relative humidity	< 95% non-condensing					
Colour	Dark grey RAL 7016					
Noise level	< 40 dBA a 1 m		< 45 dBA a 1 m			
Standard equipment provided standard	Two 10A cables; One IEC-16A plug; software; serial cable; keys to release mimic panel; handles kit		Two cable guides; terminal board connections; One IEC-16A plug; software; serial cable; keys to release mimic panel; handle kit			

MODELS	SDL 6500 TM	SDL 8000 TM	SDL 10000 TM
POWER	6500VA/5200W	8000VA/6400W	10000VA/8000W
INPUT			
Nominal voltage	400 Vac Three-phase + N		
Minimum voltage (F + N)	164 Vac @ load 100% / 84 Vac @ load 50%		
Nominal frequency	50 or 60 Hz ±5Hz		
Power factor	> 0.95		
BY PASS			
Voltage tolerance	180 - 264 Vac (selectable in Economy Mode or Smart Active Mode)		
Frequency tolerance	Selected frequency ±5% (selectable by user)		
OUTPUT			
Nominal voltage	220-230-240 Vac selectable		
Voltage distortion	< 3% with linear load / < 6% with non-linear load		
Frequency	50 or 60 Hz selectable		
Static variation	1.5%		
Dynamic variation	≤ 5% in 20 ms		
Waveform	Sinusoidal		
Crest factor	3 : 1		
BATTERIES			
Charging time	4-6 hours		
OVERLOAD TIMES			
100% < Load < 110%	1 minute		
110% < Load < 150%	4 seconds		
Load > 150%	0.5 seconds		
OTHER FEATURES			
Net weight (kg)	91	94	95
Gross weight (kg)	99	102	103
Dimensions (hwd) (mm)	2 x 660x175x455 / 2 x 4Ux19"x660		
Packaging dimensions (hwd) (mm)	780 x 555 x (270+15)		
Smart Active Output	up to 98%		
Protection devices	Overcurrent - short-circuit - overvoltage - undervoltage - thermal - excessive low battery protection devices		
Communication	USB / RS232 + slot for communications interface		
Input sockets	Terminal board		
Output socket	Terminal board + 2 IEC 320 C13		
Regulations	EN 62040-1 EMC EN 62040-2 Directive 73/23 - 93/68 - 2004/108 EC EN 62040-3		
Ambient temperature	0°C / +40°C		
Relative humidity	< 95% non-condensing		
Colour	Dark grey RAL 7016		
Noise level	< 45 dBA a 1 m		
Standard equipment provided standard	Two cable guides; terminal board connections; One IEC-16A plug; software; serial cable; keys to release mimic panel; handle kit		

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FLVSDLGB101RU - In the interest of product improvement Riello UPS reserves the right to change specifications without notice.