UPS

Sentinel DUAL SDL

Illustration photo

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 PowerShield^3 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

- External bypass option for maintenance with interruption-free switching (5-6-8-10 kVA SDL)
- 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 startup (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)

Technical specifications

Details			
1. Release the display panel by applying pressure to the catches	2. Rotate the display panel counter clockwise and then secure it back in place	3. Rotate the UPS by 90°	4. Attach the rack supports
			

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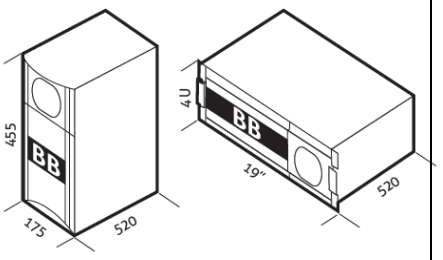
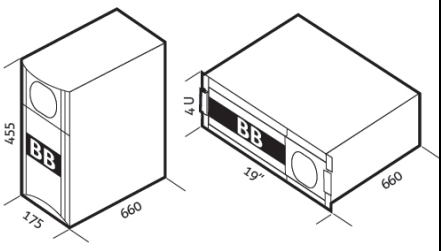
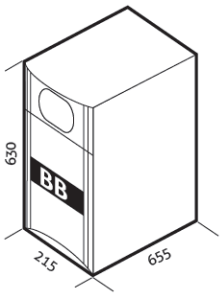
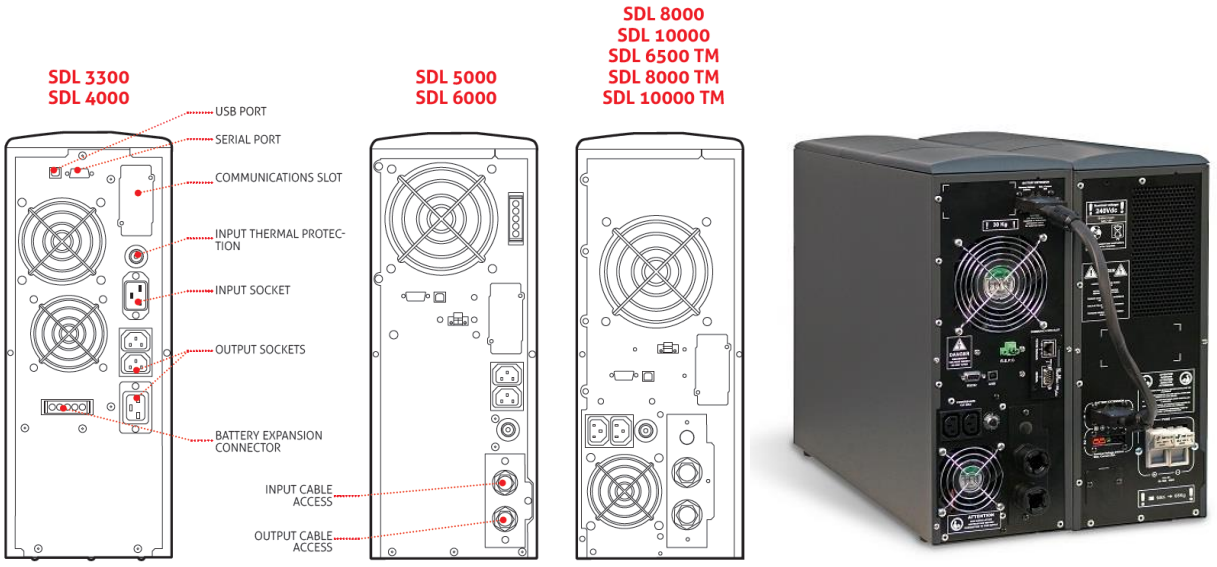
Sentinel DUAL SDL

Models Battery box	BB SDL 108-A4 / BB SDL 108-M1	BB SDL 192-A3/ BB SDL 192-A6	BC SDL 108-B1
Dimensions (mm)			
Software	PowerShield^3, PowerNetGuard		
Accessories	NETMAN 204, MULTICOM 302 (352, 372, 382, 401), MULTI I/O, Interface kit AS400, MULTIPANEL, RTG 100, *Manual Bypass 16 A (Rack), *Automatic Bypass 16 A (Rack) * only 3300 to 4000 VA version		
Details			



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Sentinel DUAL SDL

Technical specifications

Single phase input
Single phase output

Models	SDL 3300	SDL 4000	SDL 5000	SDL 6000	SDL 8000	SDL 10000
Power (VA/W)	3300/2300	4000/2400	5000/4500	6000/5400	8000/7200	10000/9000
Input	**SDL 3300**	**SDL 4000**	**SDL 5000**	**SDL 6000**	**SDL 8000**	**SDL 10000**
Nominal voltage	220 – 230 – 240 Vac					
Minimum voltage	184 Vac					
Nominal frequency	50 / 60 Hz ±5 Hz					
Power factor	> 0.98					
Current distortion	≤ 7%					
By-pass	**SDL 3300**	**SDL 4000**	**SDL 5000**	**SDL 6000**	**SDL 8000**	**SDL 10000**
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					
Batteries	**SDL 3300**	**SDL 4000**	**SDL 5000**	**SDL 6000**	**SDL 8000**	**SDL 10000**
Type	Maintenance-free lead-acid VRLA, AGM					
Charging time	4 up to 6 h					
Output	**SDL 3300**	**SDL 4000**	**SDL 5000**	**SDL 6000**	**SDL 8000**	**SDL 10000**
Nominal voltage	220 – 230 – 240 Vac (selectable)					
Voltage distortion	< 3% with linear load / < 6% with non-linear load					
Dynamic variation	≤ 5% during 20 ms					
Frequency	50/60 Hz selectable					
Static variation	1,5%					
Waveform	Sinusoidal					
Crest factor	3 : 1					
Other parameters	**SDL 3300**	**SDL 4000**	**SDL 5000**	**SDL 6000**	**SDL 8000**	**SDL 10000**
Net weight (kg)	38	40	62	64	94	95
Gross weight (kg)	42,5	44,5	70	72	102	103
Dimensions (wxdxh) (mm)	tower - 175 x 520 x 455 rack - 19” x 520 x 4U		tower - 175 x 660 x 455 rack - 19” x 660 x 4U		tower - 2 x (175 x 660 x 455) rack - 2 x (19” x 660 x 4U)	
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					
Color	Dark grey (RAL 7016)					
Noise level at 1 m (ECO Mode)	< 40 dBA @ 1m		< 45 dBA @ 1m			

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Sentinel DUAL SDL

Technical specifications

Three phase input
Single phase output

Models	SDL 6500 TM	SDL 8000 TM	SDL 10000 TM
Output power (VA/W)	6500 / 5850	8000 / 7200	10000 / 9000
Input	**SDL 6500 TM**	**SDL 8000 TM**	**SDL 10000 TM**
Nominal voltage	400 Vac 3-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		
By-pass	**SDL 6500 TM**	**SDL 8000 TM**	**SDL 10000 TM**
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	**SDL 6500 TM**	**SDL 8000 TM**	**SDL 10000 TM**
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	**SDL 6500 TM**	**SDL 8000 TM**	**SDL 10000 TM**
Type	Maintenance-free lead-acid VRLA, AGM		
Charging time	4 up to 6 h		
Other parameters	**SDL 6500 TM**	**SDL 8000 TM**	**SDL 10000 TM**
Net weight (kg)	91	94	95
Gross weight (kg)	99	102	103
Dimensions (wxdxh) (mm)	tower - 2 x (175 x 660 x 455) / rack - 2 x (19” x 660 x 4U)		
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		
Color	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		

A2B reserves the right to change any information without prior notice. (76-000222-01)