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

Sentinel Dual *High Power*

3.3-10 kVA

single/single-phase and three/single-phase

ENERGY LEVELS 6

Highlights

- Simplified installation
- Operation selection
- High quality output voltage
- High battery reliability
- Emergency back-up function
- Battery optimisation
- Power Share
- Low noise level
- On-line (VFI)

SENTINEL DUAL is the best solution for powering mission critical applicaitons and eletro-medical devices requiring maximum power reliability. The UPS is suitable for a wide variety of applications, offering a flexible format (tower or rack), digital display, communication options and user-replaceable batteries.
The SENTINEL DUAL is available in 3.3-4 5-6-8-10 kVA models and uses 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 network disturbances and lightning strikes.

Technology and performance: selectable Economy Mode and Smart Active Mode functions.
Diagnostics: digital display, RS232 and USB interface with PowerShield[3] software included, and communication slot for connectivity accessories.

Simplified Installation

- Can 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 high frequency switching PWM inverter and load-dependent digitally controlled fan.
- External bypas option maintenance (5-6-8-10 kVA)

- 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)
- Two 10A outpit sockets with Power Share on the 5-6-8-10 kVA models that can be turned off when the mains power supply fails.

Operation selection

Programmed using the software supplied or manually via the front mimic panel

- On-line double conversion Mode: to provide maximum protection.
- ECO Mode:to increase output (up to 98%), operating in line interactive (VI) mode, powering loads from the mains.
- Smart Active Mode: the UPS automatically decides upon the operating mode (VI or VFI) based on the quality of the mains power supply.
- Emergency Mode: 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) using the “LRCD” (Low Ripple Current Discharge) system
- Batteries are user replaceable without interruption to the load (Hot Swap)
- Unlimited extendible runtime using matching Battery Boxes
- High hold-up time and wide input voltage range. The batteries are not used during mains power supply failures of <40 ms or within an input voltage range of 84-276V.

Emergency Back-up function

This configuration is designed for emergency systems incljuding lighting, fire detection/exit systems and alarms. When the mains power supply fails, the inverter begins powering the loads with a progressive start (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.

Power Share (5-10kVA)

Two configurable IEC output sockets, for runtime optimisation, with the facility to programme the sockets to switch-off low priority loads on mains power failure; alternatively, emergency loads, normally not powered when the mains is present, can be activated.

Low noise output

Using digital PWM control, the speed of the load dependent fans is adjusted depending on the temperature of the two internal heatsinks, to achieve a reduced noise level of 45dB and help extend their operating life.

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

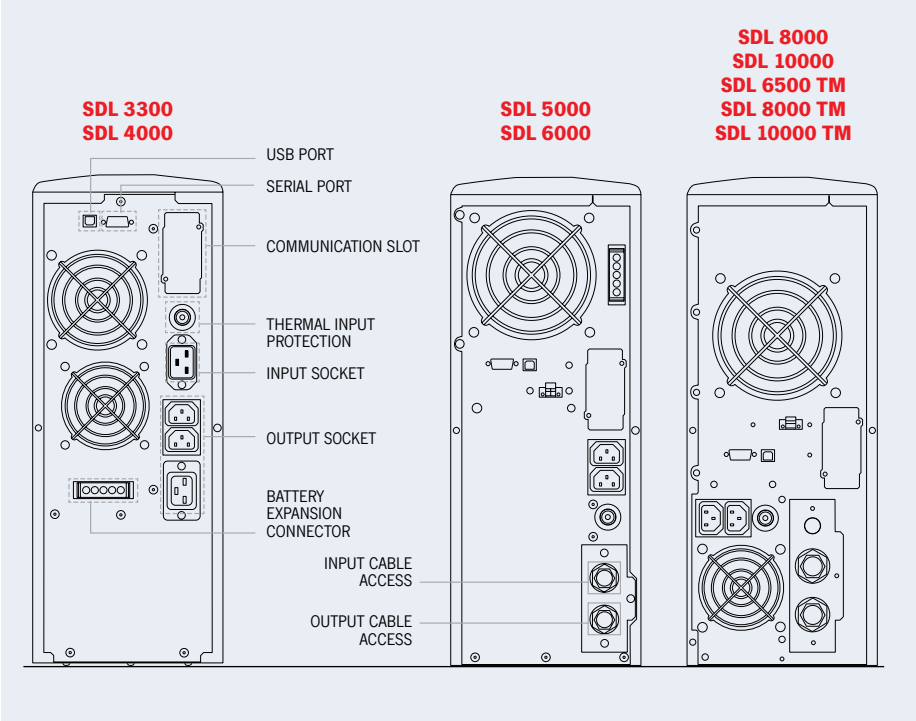
- Advanced multi-platform communication for all operating systems and network environments; supervision and shutdown PowerShield[3] software for Windows operating systems 7, 2008, Vista, 2003, XP, Linux, Mac OS X, Sun Solaris, VMware ESX and other Unix operating systems.
- Plug and Play function
- USB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

2-YEAR WARRANTY

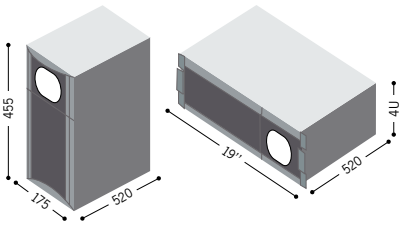
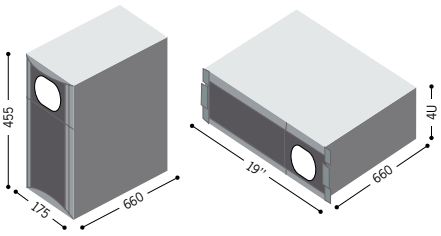
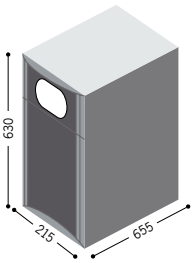
Options

- 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 - low battery discharge protection					
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	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 - low battery discharge protection		
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		
	Two cable guides; terminal board connections; One IEC-16A plug; software; serial cable; keys to release mimic panel; handle kit		