Sentinel Dual2

1:1 1-3 kVA

VFI TYPE
ONLINE

P&P
Plug & Play
installation

ToweRack

USB
USB plug

GS Nemko
certified

Bluetooth

Energy
Share

TÜVRheinland

Hot swap
battery

HIGHLIGHTS

- **Power factor 1**
- **Simplified installation**
- **Installation versatility**
- **Reduced running costs**
- **Runtime expandability**
- **Low noise level**
- **Configurable via Bluetooth mobile APP or PC**

Sentinel Dual2 is the new range of high density double conversion ON LINE UPS, suitable for powering a wide range of devices such as servers, storage systems, VOIP telephony equipment, network and medical system as well as industrial applications. It is also ideal for powering and protecting Server systems with high input power factor. With only 2U rack unit height, Sentinel Dual2 is ideal for 19" rack cabinet installations.

Sentinel Dual2 has a practical, modern design and includes several performance advantages over traditional ON LINE UPS. All developed by the Riello UPS research and development team.

The newly-designed inverter is one of the best energy conversion systems on the market, with a power factor 1 and high efficiency in ON LINE Mode. For business continuity applications requiring long battery runtimes, battery autonomy can be extended up to several hours using ER models fitted with more powerful battery chargers.

The front display panel includes a LCD display that shows the input and output voltages and battery readings, while the UPS operating status information can be seen immediately using the LED status bar below the display.

Sentinel Dual2 can be used in a tower or rack format, by simply turning the display and adding the supplied handles or optional runners.

Configuration is now simplified by the possibility to use the bluetooth mobile app to configure the UPS.
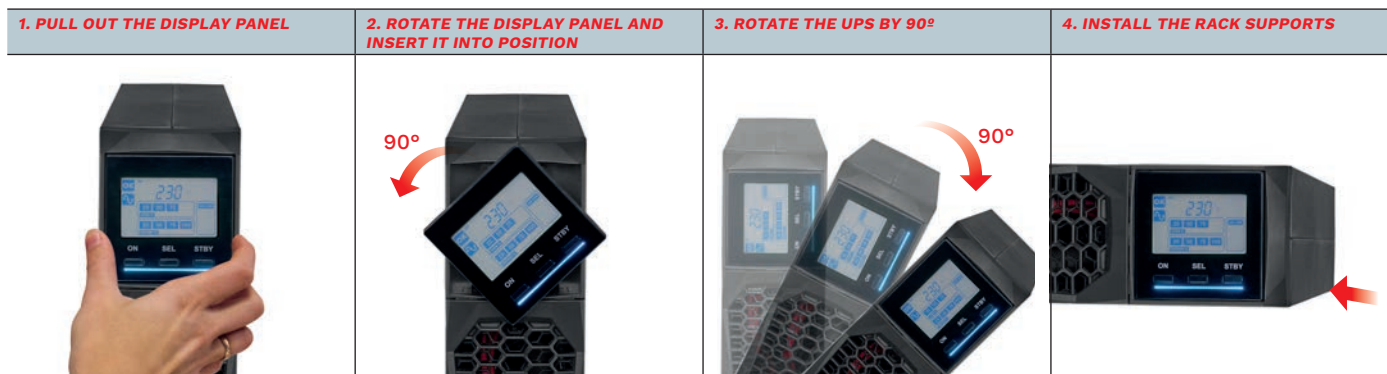
DESIGNED FOR EASE OF USE

- Rack or Tower installation by simply turning the display and adding the supplied handles or optional runners;
- LCD screen;
- LED status bar indicating the UPS operating mode;
- Remote UPS shutdown;
- Configurable via UPStoolsBT app;
- Available in different power ratings, from 1 kW to 3 kW;
- Available with various options, such as extended runtime with increased battery charging current;
- Dedicated matching battery cabinets with various capacity available.

EMERGENCY FUNCTION

This configuration ensures the operation of emergency systems that must be supplied 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.

Sentinel Dual2 is compliant for installation in medium-voltage transformer rooms in accordance with applicable legislation, for the power supply with reserve charge of medium-voltage coils.

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 (ON LINE double conversion technology (VFI compliant with EN62040-3) with filters for the suppression of atmospheric disturbances;
- Power factor correction: UPS input power factor 1 and sinusoidal current uptake.

HIGH BATTERY RELIABILITY

- Automatic and manual battery test;
- Batteries are user replaceable without switching off equipment and without interruption to the load (Hot Swap);
- Unlimited extendible runtime using matching battery cabinets.

LOW NOISE LEVEL

Thanks to the use of high frequency components and load-based fan speed control, the noise produced by the UPS is less than 40 dBA.

FEATURES

- Output voltage can be selected via software (220/230/240 V);
- Auto-restart when mains power is restored (programmable via software);
- STANDBY ON bypass: when the machine is switched off, it automatically goes into bypass and battery charge mode;
- Minimum load switch-off;
- Battery discharge warning;
- Start up delay;
- Total microprocessor control;
- Automatic bypass without interruption;
- Status, measurements and alarms available on standard backlit display;
- UPS firmware updating via PC;
- Input protection via resettable thermal switch (versions up to 1500 VA);
- Backfeed protection standard: to prevent energy from being fed back to the network;
- Configurable via UPStoolsBT bluetooth app;
- Manual switching to bypass.

ADVANCED COMMUNICATIONS

Sentinel Dual2 offers maximum flexibility for integration with all types of communication systems.

- Multi-platform communication for all operating systems and network environments: PowerShield[3] supervision and shutdown software for Windows operating systems, Windows Server Virtualization Hyper-V, macOS, Linux, Citrix XenServer and other Unix operating systems;
- UPS Tools configuration and customisation software supplied as standard;
- RS232 serial port and opto-isolated contacts;
- Serial port over RJ45 connector and opto isolated contacts;
- USB port;
- Slot for communications boards such as Modbus/Jbus, TCP/IP-SNMP and relay contacts.

2-YEAR WARRANTY
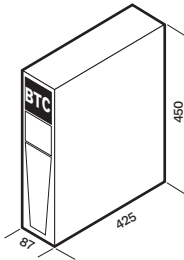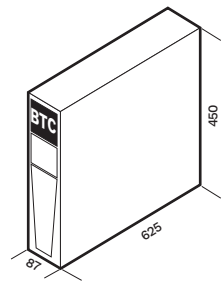
OPTIONS

SOFTWARE
PowerShield[3]
PowerNetGuard

ACCESSORIES
NETMAN 208
MULTICOM 302
MULTICOM 352
MULTICOM 372
MULTICOM 384
MULTICOM 411
MULTICOM 421
MULTI I/O
MULTIPANEL
Manual Bypass 16 A
Manual Bypass 16 A Rack

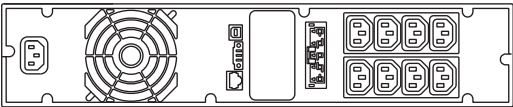| PRODUCT ACCESSORIES |
|---|
| Universal rails for installation in rack cabinets |
| Slot Adapter |

BATTERY CABINET

MODELS	BTC SD2 36V BB A3 BTC SD2 36V BB M1	BTC SD2 72V BB A3 BTC SD2 72V BB M1
Dimensions [mm]	450 / 425 / 87	450 / 625 / 87

DETAILS

SD2 1000

BTC

SD2 1500

- INPUT SOCKET
- USB PORT
- ENERGYSHARE
- OUTPUT SOCKETS
- RS232 SERIAL
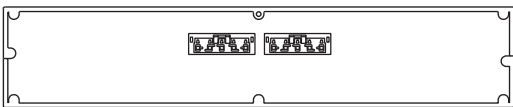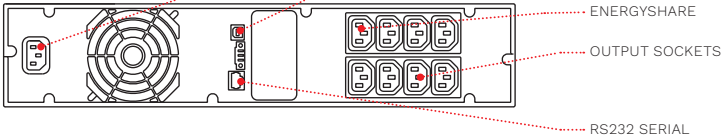
SD2 2200-2200 ER
SD2 3000-3000 ER

- BATTERY EXPANSION SOCKET
- INPUT PLUG
- ENERGYSHARE
- COMMUNICATION PORT R.E.P.O.
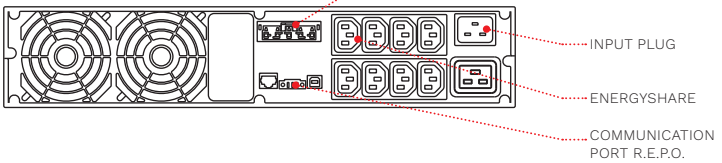
MODELS	SD2 1000	SD2 1500	SD2 2200	SD2 2200 ER	SD2 3000	SD2 3000 ER
INPUT						
Rated voltage [V]	220 / 230 / 240					
Voltage range without battery intervention [V]	140 <Vin <276 @ 50% load / 184 <Vin <276 @ 100% load					
Voltage tolerance [V]	230 ±20%					
Maximum permitted voltage [V]	300					
Rated frequency [Hz]	50 / 60 ±5					
Frequency tolerance [Hz]	50 ±5% / 60 ±5%					
Power factor	1					
BYPASS						
Configurable Voltage range [V]	Minimum threshold 180 ÷ 200 Maximum threshold 250 ÷ 264					
Frequency tolerance [Hz]	Configurable 3% ÷ 10%					
OUTPUT						
Output power [W]	1000	1500	2200		3000	
Voltage distortion with linear load / with non-linear load	<2% / ≤3.5%					
Frequency [Hz]	Selectable: 50 or 60 or self-learning					
Static variation	±1%					
Dynamic variation	≤5% in 20 ms					
Waveform	Sinusoidal					
Current crest factor	3:1					
Efficiency	up to 93.7%					
Efficiency ECO and SMART ACTIVE Modes	98%					
Overload Times	<150% for 4 s, 150% for 1 s					
BATTERIES						
Type	VRLA AGM maintenance-free lead based					
Expandability	Yes	No	Yes			
Recharge time	2-4 h			N.A.	2-4 h	N.A.
OVERALL SPECIFICATIONS						
Net weight [kg]	15	16	24.8	12.5	27.2	12.7
Gross weight [kg]	18.5	19.5	28.8	16.5	31.2	16.7
Dimensions (WxDxH) [mm]	(T- 87x425x450) (R- 19"x425x2U)		(T- 87x625x450) (R- 19"x625x2U)			
Packaging dimensions (WxDxH) [mm]	550x600x245		600x760x245			
Protection against overvoltage [J]	300					
Protections	Overcurrent - short circuit - overvoltage - undervoltage - temperature - excessive low battery					
Communications	USB / RJ45 with RS232 and contacts / Slot for communications interface					
Input plugs	1x IEC 320 C14 (10 A)		1x IEC 320 C20 (16 A)			
Output sockets	8x IEC 320 C13 (10 A)		8x IEC 320 C13 (10 A) + 1x IEC 320 C19 (16 A)			
Standards	European directives: LV 2014/35/EU low voltage Directive EMC 2014/30/EU electromagnetic compatibility Directive Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2; RoHS compliant Classification in accordance with IEC 62040-3 (Voltage Frequency Independent) VFI - SS - 111					
Ambient temperature for the UPS	0 °C - +40 °C					
Recommended temperature for battery life	+20 °C - +25 °C					
Relative humidity	5-95% non-condensing					
Colour	RAL 9005					
Noise level at 1 m (ECO Mode) [dBA]	<40					
Standard equipment provided	Power cable, serial cable, USB cable, safety manual, quick start guide					