

Sentinel Rack

1:1 1500-3000 VA



ONLINE



Rack



Plug & Play
installation



USB
plug



HIGHLIGHTS

- **Power factor 0.9**
- **Operating flexibility**
- **Emergency function**
- **Battery optimisation**
- **Runtime expandability**
- **Compact design**
- **Rack depth of 380 mm**

Sentinel Rack has compact design and improved performance developed by the Riello UPS research and development team. Sentinel Rack uses ON LINE double conversion technology, resulting in the highest levels of reliability and maximum protection for critical loads such as servers and IT and voice/data applications. For business continuity applications requiring long battery runtimes, battery autonomy can be extended up to several hours using the 3000 VA model fitted with more powerful battery charger. The front display panel has been entirely redesigned, adding an LCD display that shows the input and output voltages, battery readings and UPS operating status information. The inverter and the microprocessor control stage

provide increased efficiency and greater configuration options. Maximum expandability: the Sentinel Rack is supplied as standard with a USB port and an expansion slot for protocol conversion or relay contacts boards. With energy savings in mind, Sentinel Rack is also fitted with a shut-off switch to reduce energy consumption to zero during prolonged periods of inactivity (ECO LINE). Sentinel Rack is available in 1500 VA and 3000 VA models.

OPERATING FLEXIBILITY

Different operating modes are available to reduce energy consumption based on specific load and user requirements.

- ON LINE: maximum load protection and output voltage waveform quality;

- ECO Mode: the UPS uses LINE INTERACTIVE technology, with the load powered by the mains, reducing consumption and thus improving efficiency (up to 98%);
- SMART ACTIVE Mode: the UPS automatically selects ON LINE or LINE INTERACTIVE operation, depending on the quality of the mains supply, checking the number, frequency and type of disturbances present;
- STANDBY OFF: the UPS supplies the load only when the mains fails. The inverter begins working with a progressive start up sequence to prevent inrush currents;
- Frequency Converter operation (50 or 60 Hz).

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 Rack 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.

BATTERY OPTIMISATION

The Sentinel Rack range has a deep discharge protection device to optimise battery life. Periodically the UPS carries out a battery efficiency test (which can also be manually activated); its wide input voltage tolerance range helps to reduce battery usage and maintain performance over time.



RUNTIME EXPANDABILITY (SER 3000)

Optional battery extension packs can be connected to increase UPS runtime. SER 3000 ER version is designed without internal batteries and a more powerful battery chargers to achieve longer runtimes.

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

- Filtered, stabilised and reliable voltage: double conversion ON LINE technology (VFI compliant with IEC 62040-3) with filters for the suppression of atmospheric disturbances;
- High overload capability (up to 150%);
- Programmable Auto-restart when mains is restored;
- Battery start up (Cold Start);
- Power factor correction (UPS input power factor, close to 1);
- Wide input voltage tolerance range (from 140 V to 276 V) without battery intervention.
- Runtime extendable up to several hours;
- Fully configurable using UPS Tools configuration software;
- Highly reliable batteries (automatic and manually-activated battery test);
- High level of UPS reliability (total microprocessor control);
- Low impact on the mains (sinusoidal take up).

ADVANCED COMMUNICATIONS

- Multi-platform communication for all operating systems and network environments: PowerShield³ supervision and shutdown software for Windows operating systems 11, 10, 8, Server 2022, 2019, 2016 and previous versions, 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;
- USB port;
- Slot for communications boards.

2-YEAR WARRANTY

OPTIONS

SOFTWARE

PowerShield³
PowerNetGuard

ACCESSORIES

NETMAN 208
MULTICOM 302

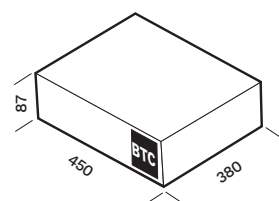
MULTICOM 352
MULTICOM 372
MULTICOM 384
MULTI I/O
MULTIPANEL
Manual Bypass 16 A Rack

BATTERY CABINET

MODELS

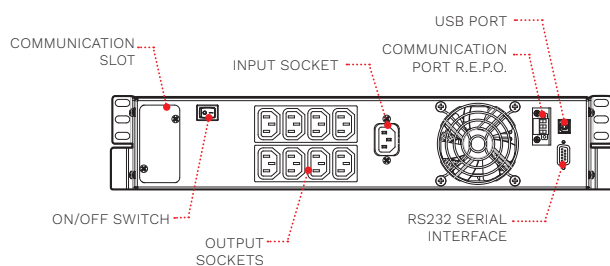
BTC SER 72V BB A5

Dimensions
[mm]

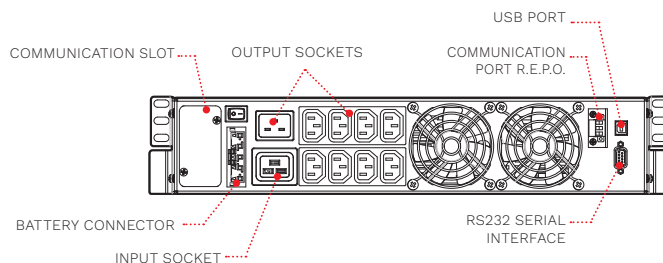


DETAILS

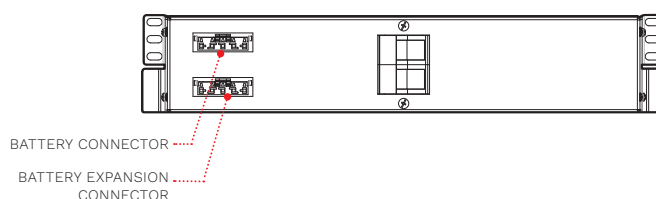
SER 1500



SER 3000



BTC



MODELS	SER 1500	SER 3000 ER
POWER	1500 VA/1350 W	3000 VA/2700 W
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	
Frequency tolerance [Hz]	50 ±5% / 60 ±5%	
Power factor	>0.99	
Current distortion	≤7%	
BYPASS		
Voltage tolerance [V]	180 / 264	
Frequency tolerance [Hz]	Frequency selected (from ±1.5 to ±5 configurable)	
Overload times	125% for 5 s, 150% for 1 s	
OUTPUT		
Voltage distortion with linear load / with non-linear load	<2% / <4%	
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 ECO and SMART ACTIVE Modes	98%	
BATTERIES		
Type	VRLA AGM maintenance-free lead based	
Recharge time	2-4 h	
OVERALL SPECIFICATIONS		
Net weight [kg]	22	14 (without batteries)
Gross weight [kg]	24	18
Dimensions (WxDxH) [mm]	450x380x87 (19"x380x2U)	
Packaging dimensions (WxDxH) [mm]	540x490x190	
Protection against overvoltage [J]	300	
Protections	Overcurrent - short circuit - overvoltage - undervoltage - temperature - excessive low battery	
Communications	USB / DB9 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	
Range of relative humidity	5-95% non-condensing	
Colour	RAL 9005	
Noise level at 1 m (ECO Mode) [dBA]	<40	
Standard equipment provided	Power cable, IEC-IEC cable, USB cable, safety manual, quick start guide	

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