



# Sentinel Pro



ONLINE



Tower



USB plug



Plug & Play installation



GS Nemko certified



Supercaps UPS



**1:1** 700-3000 VA

## HIGHLIGHTS

- **Power factor 0.9**
- **Operating flexibility**
- **Emergency function**
- **Battery optimisation**
- **Runtime expandability**
- **Low noise level**

Sentinel Pro has a unique, modern design and improved performance created by the Riello UPS research and development team. Sentinel Pro 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 ER models fitted with more powerful battery chargers.

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 has been completely redesigned to provide increased efficiency and greater configuration options.

Maximum expandability: the Sentinel Pro 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 Pro is also fitted with a shut-off button to reduce energy consumption to zero during prolonged periods of inactivity (ECO LINE). Sentinel Pro is available in 700 VA, 1000 VA, 1500 VA, 2200 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 Pro 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 Pro 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

Optional battery extension packs can be connected to increase UPS runtime. In addition the Sentinel Pro range includes ER versions with no internal batteries and more powerful battery chargers for 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: PowerShield<sup>3</sup> supervision and shutdown software for Windows operating systems 10, 8, 7, Hyper-V, 2019, 2016, 2012, and previous versions, Mac OS X, Linux, VMWare ESXi, 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

PowerShield<sup>3</sup>

PowerNetGuard

### ACCESSORIES

NETMAN 204

MULTICOM 302

MULTICOM 352

MULTICOM 372

MULTICOM 384

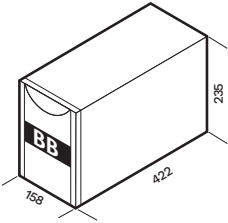
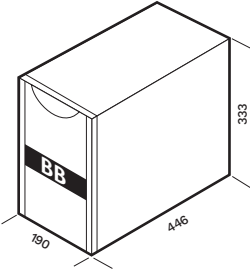
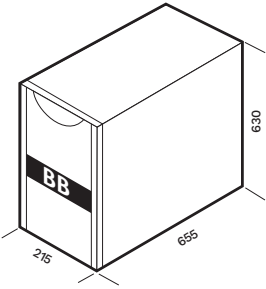
MULTICOM 411

MULTI I/O

MULTIPANEL

Manual Bypass 16 A

## BATTERY CABINET

MODELS	BB SEP 36-A3 / BB SEP 36-M1	BB SEP 72-A3 / BB SEP 72-M1	BB SEP 36-B1 / BB SEP 72-B1
Dimensions [mm]			

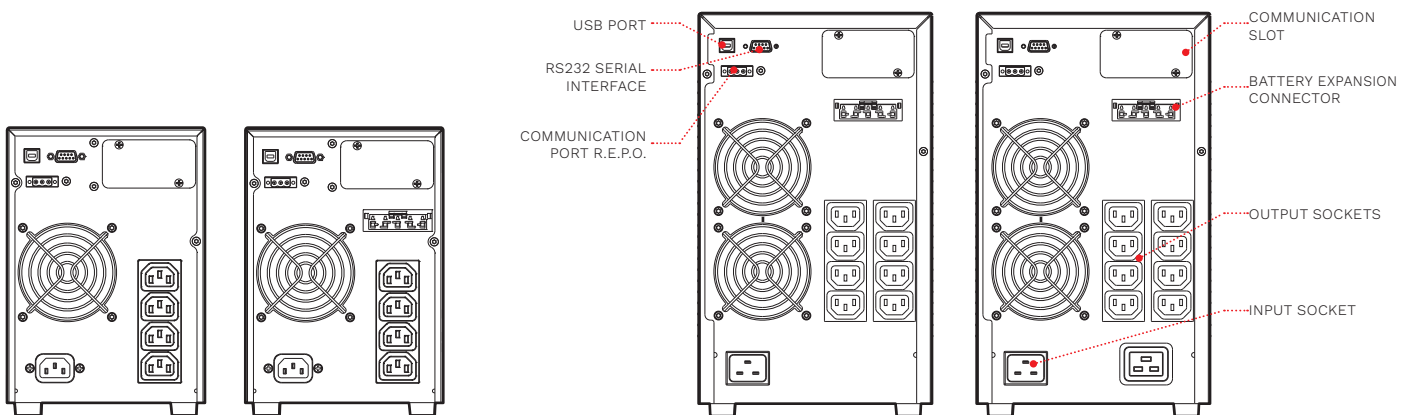
## DETAILS

SEP 700  
SEP 1500

SEP 1000  
SEP 1000 ER

SEP 2200  
SEP 2200 ER

SEP 3000  
SEP 3000 ER



MODELS	SEP 700	SEP 1000	SEP 1000 ER	SEP 1500	SEP 2200	SEP 2200 ER	SEP 3000	SEP 3000 ER
<b>POWER</b>	700 VA/630 W	1000 VA/900 W		1500 VA/1350 W	2200 VA/1980 W		3000 VA/2700 W	
<b>INPUT</b>								
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%							
<b>BYPASS</b>								
Voltage tolerance [V]	180 / 264							
Frequency tolerance [Hz]	Frequency selected (from ±1.5 to ±5 configurable)							
Overload times	125% for 5 sec., 150% for 1 sec.							
<b>OUTPUT</b>								
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 msec.							
Waveform	Sinusoidal							
Current crest factor	3:1							
Efficiency ECO and SMART ACTIVE Modes	98%							
<b>BATTERIES</b>								
Type	VRLA AGM maintenance-free lead based; Supercaps							
Recharge time	2-4 h	N.A.		2-4 h	N.A.		2-4 h	N.A.
<b>OVERALL SPECIFICATIONS</b>								
Net weight [kg]	10.9	13.3	7	14.8	25.6	14	28	15
Gross weight [kg]	12.5	14.9	8.6	15.5	28.8	17	31.2	18
Dimensions (WxDxH) [mm]	158x422x235				190x446x333			
Packaging dimensions (WxDxH) [mm]	245x500x340				325x585x470			
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	1 IEC 320 C14				1 IEC 320 C20			
Output sockets	4 IEC 320 C13				8 IEC 320 C13		8 IEC 320 C13 + 1 IEC 320 C19	
Standards	European directives: L V 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	Black							
Noise level at 1 m (ECO Mode) [dBA]	<40							
Standard equipment provided	Power cable, IEC-IEC cable, USB cable, safety manual, quick start guide							

The information in this document is subject to change without notice. Riello UPS assumes no responsibility for any errors that may appear in this document. DATSEPAY20AREN