

Sentinel Tower

Riello UPS System Sentinel Tower, STW - High Power, tower mount, on line double conversion UPS System with internal or extended battery backup options



Available in:

Single phase input/single phase output 1:1
- parallelable
- high power tower case UPS backup system for 5 kVA (5 kW), 6 kVA (6kW), 8kVA (8 kW) and 10 kVA (10 kW)

Three phase input/single phase output 3:1
- parallelable
- high power tower case UPS backup system for 8 kVA (8 kW) & 10 kVA (10 kW)

The Sentinel TOWER high power backup UPS system is the twin product to the Sentinel Dual UPS thus also offering the best and most technically advanced, high power, on line double conversion UPS solution suitable for powering all types of critical applications for all industries and all load types that require extreme power reliability of exceptional standards during power failures or bad and unreliable utility power grids with repeated rolling black outs.

The Sentinel TOWER UPS's, Easy and adaptable installation and use, along with vast and powerful communication options and protocols, using latest technologies including SNMP upto latest version 3, Modbus, Jbus and many more interfaces make the AROS RIELLO Sentinel Tower UPS, suitable for any emergency power or clean backup power application in all types of industries including small and medium data centers with extremely high power density demand per square meter, security systems, fire systems, medical systems, PLC and industrial uses with industrial communication interfaces to name but a few.

The Sentinel Tower UPS can be operated as a stand alone system or in parallel configurations of a dual parallel redundant UPS plant ie 1+1 or as a N+1 redundant configuration, thus giving the user drastically improved reliability for highly critical connected loads with 99.999% uptime.



The Sentinel Tower UPS systems use the proven and most reliable on line, double conversion technology whereby the load is always powered by the static, three level inverter (guarantees maximum efficiency and lowest electricity usage cost), which delivers clean and stable sine-wave power of the highest and purest technical standards. The addition of input and output filter circuits ensures a much reduced load susceptibility and increased resistance to lightning strikes and mains disturbances during normal grid supply conditions and under utility power rolling blackout conditions

The Sentinel Tower UPS generates an extremely low noise level of <45 dBA, by means of pulse width modulation controlled fan speed that is dependant on the percentage of load connected as well as the high frequency switching for the inverter making, all making it much less audible than any other UPS in its class.

Easy and Simple installation

- The Sentinel Tower's high power UPS system is installed on the floor (tower version)
- Built-in IEC sockets that are thermally protected ensure hassle free load connection
- The inclusion of a manual bypass on this range of units allows for easy and effective maintenance while the load is still connected

Modes of operation

The Sentinel Tower on line double conversion UPS systems operational parameters and modes can be manually set up via the front panel or using the service interface software.

- On line: As much as 95% efficiency
- Eco Mode: As much as 98% efficiency
- Smart Active Mode: The Sentinel Tower UPS system will automatically determine the best operation mode depending on the utility supply quality of power. This mode will give the connected load the best backup power solution under all types of utility power quality but also has the added benefit of affording the user, the lowest running cost to power supply quality and thus maximum cost saving
- Emergency: the Sentinel Tower UPS system can also be set up to only work when the utility power fails and thus this option offers the best running cost solution with the added benefit of a high power UPS solution

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Best quality inverter output voltage

- The SDU UPS system can operate with all types of loads and its 3 level, high efficiency, high power inverter, will still deliver crest factor load currents of 3 x I_{peak} versus I_{rms} even with non-linear IT or industrial loads
- The Sentinel Tower UPS can deliver very high short-circuit currents using bypass to assist
- The high power inverter has a very high and unique overload capability of over 150% even when the utility power is off or out of specification limits
- The Sentinel Tower inverter guarantees clean, filtered and stable sinusoidal power to the UPS connected load, that is compliant with the specification for EN62040-3 with even further filtering for atmospheric interference and affects
- The unity input power factor guarantees a sinusoidal true power draw on the utility supply that helps to reduce the metered running cost of any building with very low harmonic affect or addition to the supply.

Maximum battery reliability and caring

- The Sentinel Tower UPS offers an auto or manual battery testing function to ensure the connected UPS VRLA sealed lead acid battery is at optimum performance at all times and warn the UPS user of any battery malfunction that may be detected during these tests
- The very low percentage ripple current and voltage, generated by the UPS's highly advanced technology battery charger, ensures maximum battery life and lowest UPS life running cost
- The Sentinel Tower UPS is available with hot swap battery function, so that the load will not be affected during a battery change due to a shutdown not been required
- Battery backup run times at rated or calculated loads are limitless in time as the Sentinel Tower UPS is available with an extended version rectifier for long battery backup especially like is experienced in the Southern African power utility supply and rolling blackouts
- The wide input operational voltage of the Sentinel Tower UPS system ensures that the VRLA sealed lead acid batteries are not discharged when the utility supply varies between 184 to 276 VAC 50Hz or when mains dips, brown outs or black outs/power failures are less than 20 milli seconds where the internal power capacitors are used for bridging these small breaks in power, thus ensuring maximum VRLA sealed lead acid battery backup and service life

Additional to the inbuilt battery backup protection Standby Systems's technical team can offer a wide range of battery health status checks and preventative maintenance to include:

1. Battery impedance measurements to determine battery internal impedance and thus give a more in depth look as to the batteries internal health and status
2. Battery discharge tests into the connected UPS inverter load and graph plotting to compare battery backup discharge data with the battery manufacturers published discharge tables and thus the batteries ability to perform during a UPS input utility power supply blackout or brown out
3. Battery discharge testing into a highly specialised DC battery discharge unit, capable

of testing the battery capacity at various rates of upto C10 with blue tooth interfacing per cell being discharged, to the main unit processor, for storage and later plot out and detailed reporting for battery analysis, by one of the Standby Systems DC, Battery backup experts

4. Thermography testing of any battery system to determine any internal hotspots that will show up in a discharge thereby showing any weakpoints in the connected battery bank.

Advanced communications offer the UPS user

- Technologically leading multi-platform communications interface and shutdown software for all types of IT operating systems and networks are available including but not limited to Windows operating systems 10, 8, 7, Hyper-V, 2019, 2016, 2012, as well as earlier versions, Mac OS X, Linux, VMWare ESXi, Citrix XenServer and other Unix operating systems
- Plug and play with RS232 and USB port interfaces
- Comms board slot for addition of different protocol converter cards including SNMP, Mod bus, Jbus and many other communication highways

Models	STW	STW	STW	STW	STW	STW
	5000	6000	6000 ER	8000	10000	10000 ER
	- 5000	- 6000	- 6000	- 8000	- 10000	- 10000
	VA/W	VA/W	VA/W	VA/W	VA/W	VA/W

Input

Voltage	230 Vac ± 20%, 50/60Hz ± 5Hz	400 Vac ± 20% 230 Vac ± 20%
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Bypass

Voltage Tolerance	180 - 264 Vac (selectable in Eco- or Smart Active Mode); Selected frequency ± 5% (selectable by user)
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Output

Nominal Voltage (V)	220 - 230 - 240 Vac selectable; 50/60Hz selectable; Sinusoidal
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Batteries

VRLA AGM Maintenance-free lead-acid internal battery. Recharge time is 6 - 8 hrs.

Other Features

Net Weight (kg)	62	63	25	78	84	28
Dimensions (W x D x H) mm	250 x 698 x 500					
Efficiency	Up to 95% on line mode, 98% ECO mode					
Protection	Overcurrent - short-circuit - overvoltage - under voltage - temperature - excessive low battery					
Parallel Operation	Optional Parallel Card					
Communication	USB / RS232 / Slot for communications interface / REPO + input contact					
Input Connection	Terminal block					

Models	STW	STW	STW	STW	STW	STW
	5000	6000	6000 ER	8000	10000	10000 ER
	- 5000	- 6000	- 6000	- 8000	- 10000	- 10000
	VA/W	VA/W	VA/W	VA/W	VA/W	VA/W

Standards

EN 62040-1 EMC EN 620040-2 and Directive 2014/30/EU - 2014/30/EU EN 62040-3

Operating Conditions

0°C / + 40°C, < 95% non-condensing

Colour

Black

Noise Level at 1m (ECO Mode)

< 48 dB

