

Emergency devices



Highlights

- High reliability
- “Hot Replacement” function
- Advanced communication

Riello UPS systems are also designed and built to be used in applications such as centralised power supply systems for emergency lighting, alarms, and electro-medical equipment. Regulatory standards CEI 64-8 V2, EN 50171 and other guidelines, define the features and capabilities that the systems must have; below the main features/capabilities are summarised:

- Runtime of up to 3 h
- Battery recharge time under 12 hours
- Galvanic isolation input/output
- Advanced diagnostics (information on equipment’s mimic panel)
- Interface device to provide information remotely (usually via voltage free contacts)
- High short circuit current

These applications require a UPS configured as follows:

- Standard UPS with high capacity battery charger
- Isolation transformer (when required)
- Ability to communicate with remote peripheral devices.

Features

- Total microprocessor control: for reduced overall size and superior reliability
- Use of IGBT technology (Isolated Gate Bipolar Transistor) has been used in UPS devices for over 10 years to optimise electrical performance including overload management and small size.
- Advanced communications interface (UPS devices equipped with free contact interfaces, RS232/485 serial interface for communication with local PC or network PC)
- “TeleNetGuard” teleassistance for remote equipment control and diagnostics.
- LCD display for complete control of equipment (statuses/alarms/measurements/event logs)
- Option of expanding the power and/or of increasing reliability through the parallel connection of several models (8kVA models and higher)

CSS CONFIGURATIONS

Model	Sentinel Pro	Sentinel Dual	Sentinel Power	Multi Sentry
Runtime up to 3 hours: Power	1.600 W	2.000 W	3.000 W	30.000 W
Runtime up to 1 hour: Power	2.100 W	3.500 W	7.000 W	64.000 W

Options

- Communications interfaces: see accessories table of individual models
- Isolation transformers

Advanced communication


Multi-platform communication for all operating systems and network environments: PowerShield³ supervision and shutdown software for Windows operating systems 7, 2008, Vista, 2003, XP, Linux, Mac OS X and Sun Solaris, VMware ESX and other Unix operating systems.


Regulatory Compliance


Riello UPS systems comply with European and available national guidelines.

A full range of CSS, from 700VA to 200kVA

The CSS range is comprised of the following blocks:


 **Rectifier:** converts the alternating current input voltage, coming from the mains power supply or from an alternative source (generator) into continuous current voltage.

 **Inverter:** converts the continuous current voltage supplied by the rectifier into alternating current voltage: in this way, the voltage is reconstructed, filtered and stabilised compared to the input voltage.

 **By-pass:** allows switching between the inverter and the mains

power supply. In the “always powered” operating mode, the CSS load is always powered by the inverter and is only switched onto the mains via the bypass circuit in the event of a failure. In the “powered from the mains” mode, the load is powered and only switched onto the inverter when there is no mains power. In “emergency only” mode the load is only powered by the inverter if there is no mains power. The inverter has a soft-start feature, to handle current surges when powered utilities are switched on, and limit the value of the power required. In “always powered/emergency only” mode two outputs can be used: one always powered (such as for powering computer loads) and one that is only powered when there is no mains power (such as for powering emergency lights that by law

must switch on within 0.5 seconds of a mains failure).

 **Batteries:** used to power the inverter for a period of time required by law (up to 3 hours if there is no generator). The batteries used are generally valve-regulated, lead-acid batteries, and do not require maintenance or a special installation environment as they have very low gas emissions.

Diagrams of the various system solutions

