

UPS IN THE NETWORKING AREA

RIELLO ELETTRONICA



riello ups

Reliable power for a sustainable world



riello ups

Innovation - the secret of an all-Italian success story

Riello UPS offers a vast range of products, organised into 23 ranges of uninterruptible power supplies (UPS), based on several different state-of-the-art technological architectures. Thanks to its two research centres in Legnago (Verona) and Cormano (Milan), world class centres of excellence for the design, development and testing of uninterruptible power supplies, Riello UPS can constantly innovate its product portfolio, keeping it at the pinnacle of performance, reliability and competition. Riello UPS designs and manufactures its UPS in Italy in order to maintain direct control over quality and reliability standards, and by closely following the entire manufacturing process, sales and after-sales service.

www.riello-ups.com



Networking area

Modern buildings are increasingly sophisticated, numerous systems allow communication between users, communication with the outside world and the automated operation of the building itself. These complex structures evolved separately until the complexity of the different interconnection systems convinced the need for a single communication infrastructure.

The first to find a common distribution arrangement were the data network and the telephone network but daily more and more services and utilities are added to the infrastructure: IP cameras, sound diffusion, intrusion detection systems, building BUS systems, etc. The infrastructure is conceptually constituted by communication channels and interface nodes where the connection between the communication channels themselves, between the infrastructure and the users, between the infrastructure and the building and finally between the infrastructure and the outside world. The nodes are typically organized in

cabinets built in the standard 19 "rack that allow the assembly in a single physical space of equipment made by different manufacturers in a harmonious, rational and safe whole.

The integration of different systems into a single infrastructure on the one hand simplifies the connections, rationalizes maintenance and increases the flexibility of the systems, on the other it makes the reliability of the whole an increasingly critical factor. Reliability that, from the point of view of materials, installation techniques and immunity to noise has reached levels of respect, remains exposed to the most trivial of problems: the continuity and quality of power supply of active equipment.

The need to protect this aspect of the functionality of the systems saw at first the habit of feeding the rack cabinets with UPS groups in the tower, then began to insert the same inside the cabinets, solving the problem of 'feeding at the expense of a great expenditure of the increasingly precious space inside the cabinets.

Features of IT applications

The presence of a data centre, even if small, now represents a fundamental asset starting from small-medium enterprises, passing through the public administration, up to the large telecommunications and information technology companies. These environments are created with the aim of guaranteeing a safe and/or support environment for "vital" instruments, such as personal computers, servers, storage devices, communication and security. It is therefore comprehensible the attention paid to interruptions in the supply of energy, which in addition to generating loss of working hours, data and equipment failures, could also cause serious economic, image and customer losses.

The RIELLO UPS uninterruptible power supply units, realized in standard



19" rack format, allow to respond in a functional and rational way to the continuity and quality problems of the power supply of the active devices, optimizing the use of space and improving the maintainability of the cabinets themselves. The rack series is available with models featuring VFD, VI and VFI technology, with a wide range of available power and an adjustable autonomy on the need of the application.



POWER QUALITY

Networking systems are subject to the same phenomena that affect electronic equipment in general, so an uncontrolled power supply can cause:

- Restarting devices;
- Loss of programming parameters;
- Excessive latency;
- Degradation and breakdown of equipment.

These problems are particularly critical with applications with higher bit rates and real-time applications.

Another fundamental aspect in integrating a UPS in the IT environment is its connectivity. Through the PowerShield³ software it is possible to guarantee an efficient management of the UPS, able to display the main electrical quantities, provide notifications such as sending messages via e-mail or SMS, make SNMP traps, manage events, logs and perform automatic shutdowns. **PowerShield³** client/server architecture makes it an ideal tool for managing multiplatform systems, including virtualized systems.

When the monitoring needs go beyond those of the normal UPS, requiring control of the surrounding environment, the temperature and humidity sensors

that are connected to the NetMan network card, are able to monitor and record the conditions of a specific environment or rack cabinet, sending notifications if the measures exceed the set thresholds. It is also possible to monitor the status of digital inputs and control hardware devices such as smoke sensors, air conditioners and light/siren signals.



UPS VFD



LINE
INTERACTIVE



ONLINE

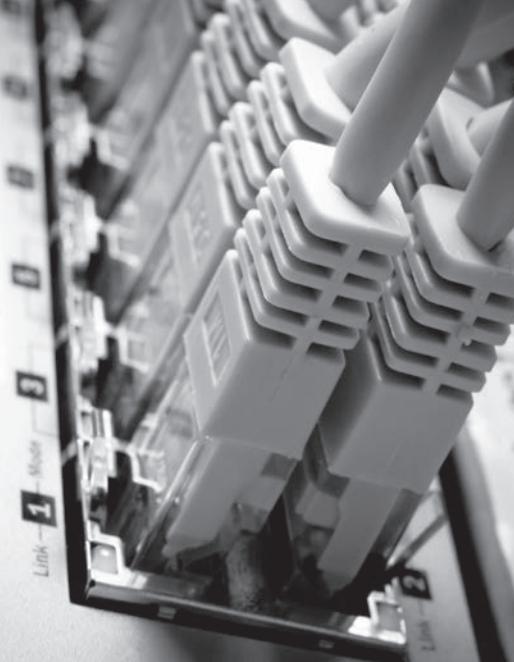
Which group to choose?

Small computer users: generally these are applications that see the presence of hardware devices such as modems, routers and/or switch, installed in wall rack cabinets. In these applications, small UPS are required to cover the need for short power failures. The types of groups assigned for this purpose are those of type VFD (Off Line) or VI (Line Interactive).

Professional users: this classification includes workstations, telephone switchboards, storage systems, VoIP and video surveillance. For these applications, type VI UPS with sinusoidal waveform output or VFI (ON LINE Double Conversion) are used to guarantee greater load immunity from disturbances, overvoltages and interference from the network.

Networking, telecommunications and Internet: most computer systems implement data transfer systems; communications are managed by networks that can be local (LAN) or more widespread (WAN). Local networks are those that are used within a company system to connect hardware peripherals, operating systems, software, databases and back-up units. It is clear that in networking applications as well as in Telcom and the Internet, interruptions in the supply of services due to a blackout, would provoke not only inconveniences, but also serious economic losses. Therefore the UPS to be preferred are of the VFI type equipped with SNMP cards able to integrate the device into the network. Given the importance of the systems, the redundancy request is becoming



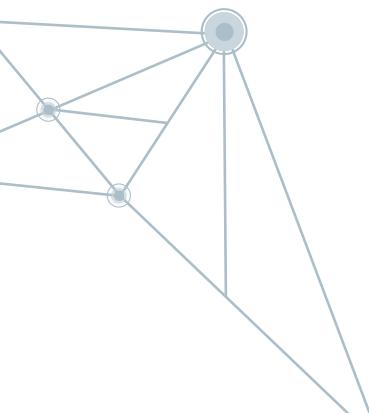


A UPS ALLOWS TO:

- Avoid short-lived blackouts and ensure reliable and quality energy supply;
- Safeguard the integrity and functionality of the equipment over time;
- Ensure data integrity and transmission quality;
- Ensure correct and continuous information storage.

increasingly frequent during the design phase by adopting monolithic UPS in parallel configuration or with modular architecture UPS.

Riello UPS, for years leader in Italy in the production of uninterruptible power supplies, is able to ensure high quality products, distributors and points of sale throughout the territory, an always present and extensive network assistance service that ensures original spare parts, even after years of installation.



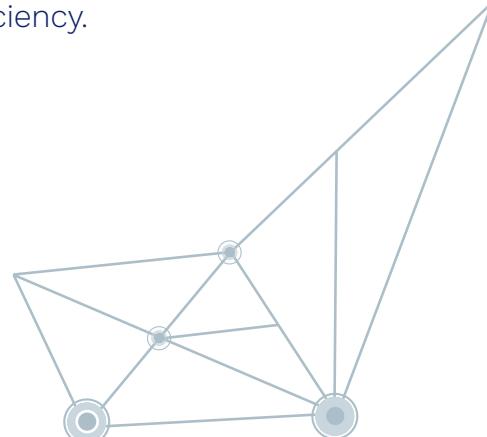
UPS monitoring and management

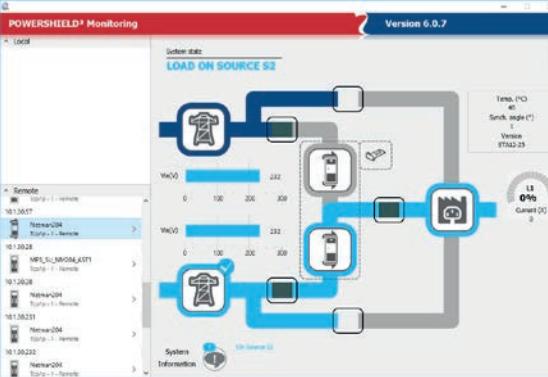


PowerShield³ guarantees an effective and intuitive UPS management, displaying all the most important information such as input voltage, applied load, battery capacity. In the event of a fault, it is also able to provide detailed information on the status of the UPS. Its client/server architecture makes it an ideal tool for managing multiplatform network systems.

PowerShield³ permits to initiate live migration of virtual machines (VM) to automatically and transparently migrate VMs during power disturbance to protected devices by UPS with migration systems such as VMware vMotion™ and Microsoft Live Migration.

PowerShield³ can monitor and manage UPS either inside or outside the data centre. Can also measure power consumption to help calculate power usage effectiveness (PUE), a the standard metric utilized for gauging data centre power efficiency.





HIGHLIGHTS

- Graphic monitoring and detailed display of all UPS parameters and environmental sensors;
- Integrated SNMP agent;
- Event log and graphic display of main parameters;
- UPS control programming;
- Block diagram of operation;
- The fully paid PowerShield³ version supports up to a maximum of 32 UPS for all operating systems.

**Scan the QRcode
to download the
PowerShield³ version
compatible with your
operating system:**



Our Solutions

iDialog Rack (IDR)



- Design for telco rack
- Silent operation
- Auto restart
- Low power consumption



Vision Rack (VSR)



- Automatic voltage regulation (AVR)
- Reduced space (1U)
- Sinusoidal Waveform
- Cold Start function
- Communication slot



Vision Dual (VSD)



- Power factor of 0.9
- Automatic voltage regulation (AVR)
- Flexibility of installation
- Sinusoidal Waveform
- Communication slot
- Runtime expandability



Sentinel Dual SDH



- Power factor 0.9
- Maximum protection
- Simplified installation
- Sinusoidal Waveform
- Communication slot
- ER versions for long autonomy



Sentinel Dual SDU



- Power factor 1 kW = kVA
- Parallelable up to 3 unit
- Simplified installation
- Operating mode selection
- High quality output voltage



Multi Power (MPW e MPX)



- Utmost Availability
- Ultimate Scalability
- Unmatched Power Density
- Efficiency > 96.5%
- Multiple Controls
- Highly Flexible
- Multiple comms



NetMan 204 & Environmental sensors



NetMan 204 network agent allows UPS directly connected over LAN 10/100 Mb connections to be managed using the main network communication protocols (TCP/IP, HTTP and SNMP). With environmental sensors instead possible to monitor and record environmental conditions as well as activities in protected areas and the area where the UPS is installed.

Multipass-R 16A



The Multi Pass manual bypass cuts out UPS in the event of malfunction or breakage without shutdown the load Available in both rack (16A) and wall (10 and 16A) versions.

Multi Socket PDU



The Riello UPS Multi Socket PDU (MDU) is designed to distribute AC power from a single source to 8 outputs with advanced load monitoring and local or remote ON/OFF switching control of individual outlets.



Plug & Play
Installation

Multi Switch



The Riello UPS Multi Switch is a high availability and versatile intelligent switch that provides redundant power to connected equipment with two AC input sources.



Plug & Play
Installation

Multi Switch ATS



Multi Switch ATS offers a simple and effective solution, able to manage power redundancy from two independent sources with a maximum input current up to 30A.



Plug & Play
Installation

Master Switch STS Single-phase



The single-phase STS series, available in sizes 32, 63 and 120A, allows the transfer without any interruption, automatic or manually controlled from a main power source to a secondary power source.



Plug & Play
Installation

RPS S.p.A. - Member of the Riello Elettronica Group

Viale Europa, 7 - 37045 LEGNAGO (Verona) - Italy
T +39 0442 635811 - www.riello-ups.com



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