

The background of the entire page is a grayscale image of a large cruise ship. Overlaid on the ship is a white wireframe grid that follows the contours of the hull and decks. On the right side of the image, there is a large, semi-circular red graphic that partially obscures the ship. Inside this red area, there are faint, red wireframe outlines of various electronic components, including what appears to be a satellite dish and two power supply units.

POWER SUPPLY PROTECTION IN **ON-BOARD** SECURITY **SYSTEMS**

RIELLO ELETTRONICA

 **riello ups**



The strength of a large group at your service

Riello UPS, a Riello Elettronica Group brand, is a leading Italian manufacturer of uninterruptible power supplies (UPS) for civil and industrial applications. The company is one of the world's top four in technological research, production, sales and support, and offers the shipbuilding industry a rich array of experience, research and development, advanced production equipment and highly qualified technical staff.

Riello UPS is a trusted technology partner that guarantees high quality standards by relying on cutting-edge, efficient production processes, all designed, implemented and monitored in accordance with the highest international standards.



Targeting international markets through in-situ companies which provide an extremely high level of qualified service in every region has allowed RIELLO UPS to build up a presence throughout Europe and also in China, Singapore, Australia, Vietnam, India and the USA. From IT to industry, from merchant and passenger shipping applications to hospitals and the metro systems of major cities, Riello UPS is there, with the quality of its products and the reliability of its services.



Design

The wide experience accrued by Riello UPS in resolving all kinds of challenges for its customers and in creating dedicated applications for each specific context amounts to an impressive body of technical expertise. This know-how today allows Riello UPS to manufacture not only uninterruptible power supplies to high technological and efficiency standards, but also integrated solutions designed and tailored to the customer's needs.

For these assignments, the design office is the first point of contact for Riello UPS customers. Here, highly-skilled and motivated technicians gather the data necessary to implement solutions for any kind of request.

Organising and analysing the customer's problems and readily facing market challenges head-on with the sole purpose of effecting improvements while constantly searching for new solutions is a daily commitment for Riello UPS, ensuring that its customers can rely on cutting-edge products and solutions.

Production

Each device is developed and manufactured entirely at the Riello UPS plant in Cormano (MI), which occupies an area of more than 11,000 m², about 9,000 of which are indoor or enclosed.

The production cycle is constantly monitored by specialised personnel operating in full compliance with ISO 9001 standards.

The customer can easily check the production progress of the equipment and interact with technical staff to arrange changes and adaptations at any time.



Control and Quality

A single contact person for each project means that the customer can always get an answer to their queries.

A Riello UPS project manager monitors the entire product journey, from design to construction through to testing, installation and commissioning.

Testing is always done at the presence of the customer.

The accuracy and consistency of the application of procedures described in the quality manual are verified by inspections and guaranteed by the quality certification issued by Det Norske Veritas in accordance with ISO 9001 standards.

The company's quality system covers design, manufacture, sales and after-sales support.



A unique service

SUPPORT ANYWHERE

Riello UPS supports its customers well beyond commissioning through an efficient Support Centre available worldwide 24/7, providing the customer with an immediate solution, including preventive measures, for any issues arising during the life of every device.

Nothing is left to chance in the diagnostics and remote management of UPS and the daily activities of the research and development centres

Riello UPS guarantees that its monitoring software and hardware are constantly updated. In this way the continuous monitoring of systems allows the scheduling of maintenance and the prevention of possible anomalies, thus protecting the customer's investment.



Powered loads on-board ships



- Marine automation
- Dynamic Positioning System
- Azipod propulsion control
- Satellite communications
- Internal cable TV
- Emergency public announcements
- Waterproof doors
- Energy distribution, filtering system
- Control/monitoring system
- IT systems
- Emergency lights
- Voyage Data Recorder
- Navigation equipment
- Radio and telecommunications

References

PRINCESS CRUISE LINE

Sun Princess
Dawn Princess
Sea Princess
Grand Princess
Ocean Princess
Golden Princess
Star Princess
Caribbean Princess
Crown Princess
Emerald Princess
Royal Princess
Regal Princess
Sky Princess

CARNIVAL CRUISE LINE

Sunshine
Triumph
Victory
Glory
Conquest
Valor
Liberty
Freedom
Splendor
Dream
Magic
Breeze
Vista
Horizon
Panorama

HOLLAND AMERICA LINE

Zuiderdam
Ooesterdam
Westerdam
Noordam
Eurodam
Nieuw Amsterdam
Koningsdam
Nieuw Statendam

COSTA CROCIERE

Fortuna
Magica
Serena
Pacifica
Deliziosa
Favolosa
Fascinosa
Diadema
P&O
Pride of Rotterdam
Pride of Hull
Arcadia
Ventura
Azura

CHANTIER DE PONANT

Le Boreal
L'Austral
Le Soleal
Le Lyrial

DISNEY CRUISE LINE

Magic
Wonder

REGENT

Seven Seas Explorer
Seven Seas Splendor

MSC

Seaside
Seaview

SOC. DE TRAVERSE DU QUEBEC

F.A.Gauthier





Technical features of power supply systems for the shipping sector

CABINETS

- Certifications: Rina Lloyd's;
- IP rating: IP 55, with ventilation openings IP 23;
- Ventilation: forced from the front panel;
- Cable entry/exit: from above/from below, from the side;
- Cabinet structure: in compliance with marine anti-vibration regulations;
- Accessibility: total from the front – all maintenance operations can be performed from the front panel;
- Handling: cabinets provided with eyebolts and supporting feet that facilitate handling from above and from below by pallet trucks.

SYSTEM

- Input: double power supply with moulded case circuit breakers with high breaking capacity, highly sophisticated control logic for management of penetration times between the two lines;
- Output: alternating single/three-phase 230V, continuous 24/48/110 220V dc, with moulded case and modular integrated distribution with vertical selectivity;
- Certification: in our test room by inspectors of shipping registers;
- Interface: local display panel control/status display. Remote via communication cards for alarm signalling via voltage-free contacts or via software for the most commonly used systems.





UPS

- Double conversion, low input current distortion;
- Complete insulation - input, output and battery;
- Parallelables: up to 8 units;
- Power range - 10÷70kVA pf 1, 3/1 phase (single unit);
- Power range - 15÷330kVA pf 1, 3/3 phase (single unit);
- Control logic cards: tropicalised;
- Flame retardant and low smoke emission cables;
- Magnetic parts: insulation class H, operation class B/F;
- Operating temperature: -10/+45°C.

BATTERIES

- Cabinets: batteries set on containment trays treated with anti-acid paint;
- Protection: circuit breaker with trip indicator;
- Charging voltage: controlled by the control logic also based on working temperature (cabinet fitted with thermal probe);
- Battery type: sealed lead-acid, life 10-12 years, UL 94-V0.

Main Conf

UPS

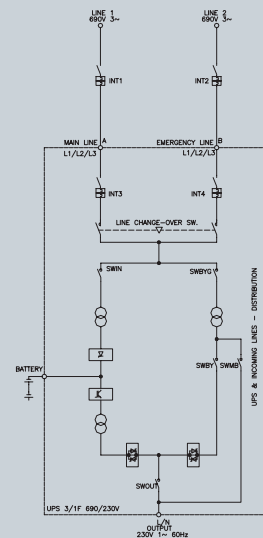
Input » double power supply with automatic change over, three phase 690V. ac. 60Hz.

Output » single phase 230V. ac. 60Hz.



TYPE

A



UPS

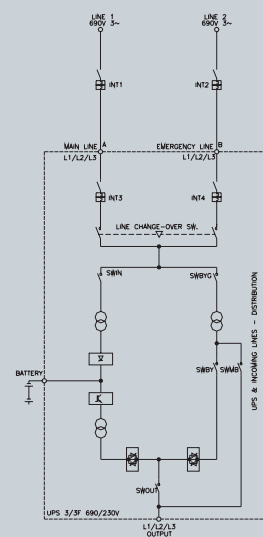
Input » double power supply with automatic change over, three phase 690V. ac. 60Hz.

Output » three phase 220V. ac. 60Hz.



TYPE

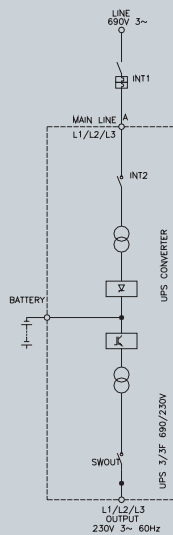
B



Configurations

TYPE

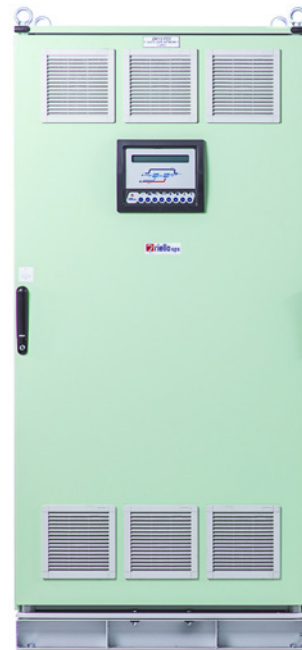
C



UPS

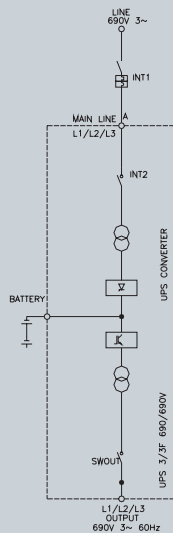
Input » three phase 690V. ac. 60Hz.

Output » three phase 230V. ac. 60Hz.



TYPE

D



UPS

Input » three phase 690V. ac. 60Hz.

Output » three phase 690V. ac. 60Hz.



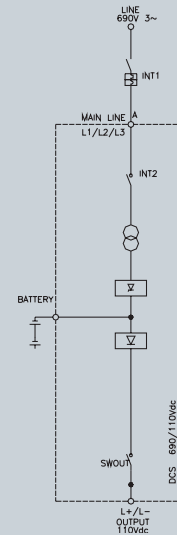
RECTIFIER

Input » three phase 690V. ac. 60Hz.

Output » 110V. dc.



TYPE



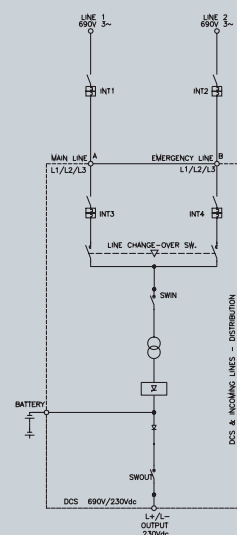
RECTIFIER

Input » double power supply with automatic change over, three phase 690V. ac. 60Hz.

Output » 230V.dc.



TYPE

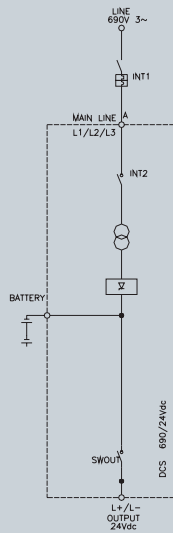


TYPE G

RECTIFIER

Input » Input - three phase 690V. ac. 60Hz.

Output » 24V. dc.

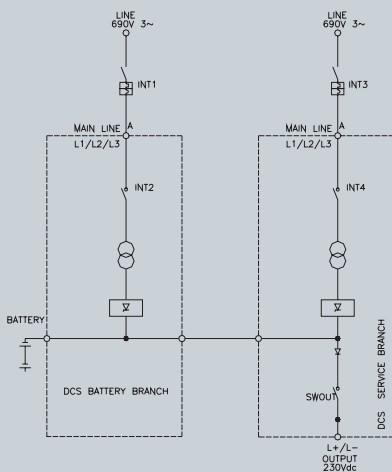


TYPE F

RECTIFIER DOUBLE BRANCH

Input » three phase 690V. ac. 60Hz.

Output » 230V. dc.



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