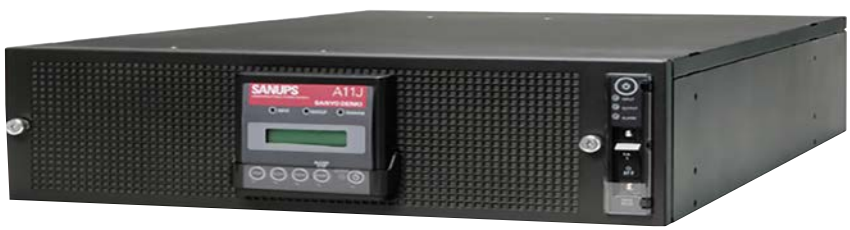
SUPPLYING ELECTRICAL POWER PROTECTION FOR COMPANIES REQUIRING CLEAN, STABLE ELECTRICAL POWER FOR MISSION-CRITICAL EQUIPMENT

UNINTERRUPTIBLE POWER SUPPLY ADVANTAGES

- WIDE RANGING POWER INPUT
- PROTECTION FROM BROWN/BLACK-OUTS
- CORRECTS POWER SAGS AND SURGES
- POWER SCALABILITY
- REDUNDANCY



REPUBLIC POWER SYSTEMS

POWER PROTECTION FOR MISSION CRITICAL EQUIPMENT

Today's companies are ever more dependent on microprocessors, computers, programmable logic controllers and other dedicated circuitry and software for commercial business applications. Just one or two seconds of a power surge or outage may bring your business to a complete standstill for hours or possibly days. Business Week estimates that power surges cost $26 billion a year in lost time, equipment repair and replacement costs.

COMMON ELECTRICAL POWER ISSUES

OVER-VOLTAGE EVENTS

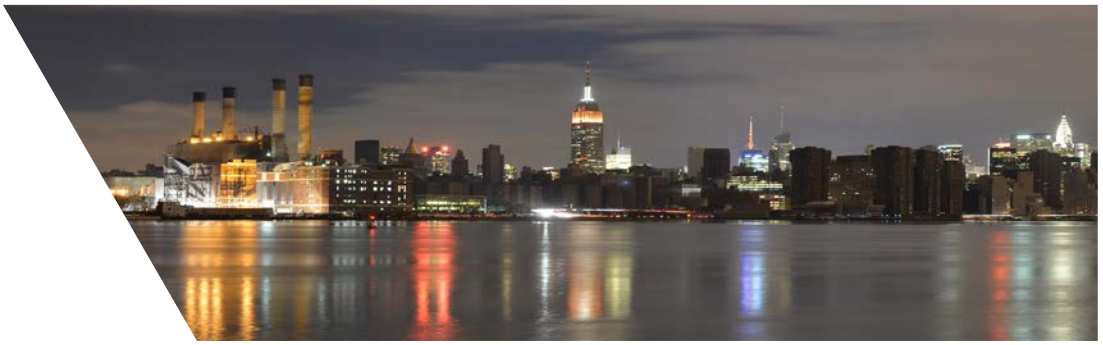
Over-voltage events are essentially any voltage higher than what should typically deliver from a power utility or on-site generation. Spikes and surges are both examples of an over-voltage condition. A spike is a very short over-voltage condition (billionths to millionths of a second), which is rarely harmful to most electronic equipment. A surge, however, can be quite damaging to electronic devices. While surges can be stronger than spikes in terms of volts, the damage is done by the length of the surge itself (thousandths of a second).

UNDER VOLTAGE EVENTS

Sags, brownouts, and blackouts are all under-voltage conditions. Power sags are the most common power disturbance. It is a brief reduction in voltage, typically lasting from a cycle to a second or so, or tens of milliseconds to hundreds of milliseconds. Generally caused by an abrupt increase in loads such as a short circuit or fault, motors starting up or lose cabling connections. Sags rarely affect electronic devices, while brownouts lasting must longer in duration will usually cause a computer to reboot due to short periods of under-voltage (lasting up to several seconds). Blackouts, of course, are extended periods (minutes to hours) of complete loss of incoming electrical power.

LINE NOISE

Line noise disruptions are distortions superimposed on the AC power waveform, caused by interference from Electro Magnetic Interference (EMI) and or Radio Frequency Interference (RFI) sources. Line noise is unavoidable and will appear on every signal at some point, though it is not always detrimental, or even noticeable. If not unchecked and corrected will cause damage to electronic circuitry, data corruption, and loss of overall power efficiency. Line noise can be created from many different sources, both natural as well as man-made.



NYC Power Outage November 3rd 2012 (Hurricane Sandy)

WHY UNINTERRUPTIBLE POWER SUPPLY PROTECTION

ELECTRICAL POWER ISSUES

Electrical power issues like spikes, voltage sags, harmonic distortion, electrical noise, and rolling brownouts and ultimately total power loss can wreak havoc on sensitive electrical production equipment. These electrical issues can prematurely age, cause calibration issues, damage and in some cases destroy equipment such as lasers, variable speed drive controls,
programmable logic controllers, robotics and power supplies. These electrical issues can cost thousands to millions of dollars to a company through the loss of productivity, production inventory/data and in the repair and or replacement of costly manufacturing equipment.

COMMON REASONS FOR ELECTRICAL FAILURE

Roughly 75% of all electrical issues come from within the facility infrastructure itself, if a building is 15 years or older, it may contain faulty and or outdated electrical wiring and or power transmission equipment. Additionally, large and sudden power draws from internal as well as nearby heavy equipment can also affect the power quality of incoming commercial and on-site generated power. The remainder of electrical related issues come from outside factors stemming from local power providers performing grid or capacitor switching or equipment breakdowns and other uncontrollable events such as down power lines, construction mishaps, automobile accidents, and severe weather events.

UNINTERRUPTIBLE POWER SUPPLY SOLUTIONS

By deploying power conditioning UPS equipment at strategic locations, a company can correct most electrical power issues on the spot and or avoid troubleshooting minor to major electrical power issues that may require intrusive and costly repairs to the buildings' electrical infrastructure. As well as supply continued electrical power for 7/24 uptime for critical equipment.

DOUBLE ONLINE POWER CONVERSION

Electrical power in the United States is rated to be 99.9% reliable. This results in roughly 9 hours a year in electrical disruptions. It is believed that the US economy loses between $200 billion and $570 billion a year due to power outages and other electrical disturbances.

Offering the highest level of power protection, the Double Online UPS is ideal for medical equipment that is sensitive to power fluctuations or loss of power. By isolating the device from raw utility power, the UPS converts the output electrical current to a pure sine wave in both voltage and frequency. Additionally, this UPS provides instantaneous battery back-up power in the event of total power loss.

WIDE RANGE POWER INPUT

Electrical power supplied from a municipal power grid can range widely enough to disrupt IT and medical equipment. Commercially supplied electrical voltage can range from 8.3% of documented specifications.

With a wide input voltage range of plus or minus 15%, the UPS will regulate output power to target equipment isolating protecting sensitive medical equipment from electrical surges and sags. Additionally, the wide power input range keeps the UPS from switching to the backup batteries, keeping them at full charge and helps to extend the target equipment and well as the UPS' operational life.

POWER SCALABILITY

Multiple configuration options are available depending on the required uptime, power draw and physical space available.

Multiple UPS units can be joined together to increase back up power uptime. As an example up to 5x 1kVA units can be combined increasing capacity to a maximum of 5 kVA when run in parallel operation. This configuration allows for additional expansion when required now or at a later date.

REDUNDANCY

The front-access "Hot Swappable" battery module design, allows users to replace battery packs even while supplying power to target systems.

Select UPS products can be configured into an N+1 redundant scheme, up to five UPS systems are combined into one system. During normal operations, the load is shared equally across all modules, which behave as if they were a single large UPS device. If a single module fails or needs to be taken off-line for service, the UPS system will still be able to provide an adequate supply of power because it's already configured with one extra module. Redundancy is critical for applications where 7/24 uptime is mandatory.

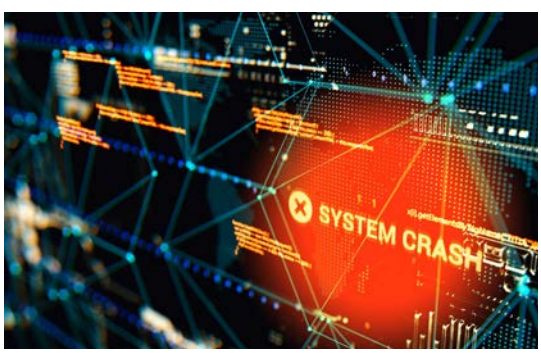
REPUBLIC POWER SYSTEMS

Republic Power Systems was created in response to identifying a need in the Uninterruptible Power Supply market space. At one end of the spectrum, are faceless resellers who do not offer customer support or customization capabilities, and at the other end, larger OEM UPS manufactures who have focused more extensive programs and are generally slow or unresponsive to customized requests. Fitting in between these two groups is Republic Power Systems. RPS is positioned to not only offer COTS UPS equipment, but its strength is in its customer service and support as well as its ability to offer modified off the shelf (MOTS) UPS equipment for use in the commercial, industrial, medical and military market space.

SANYO DENKI

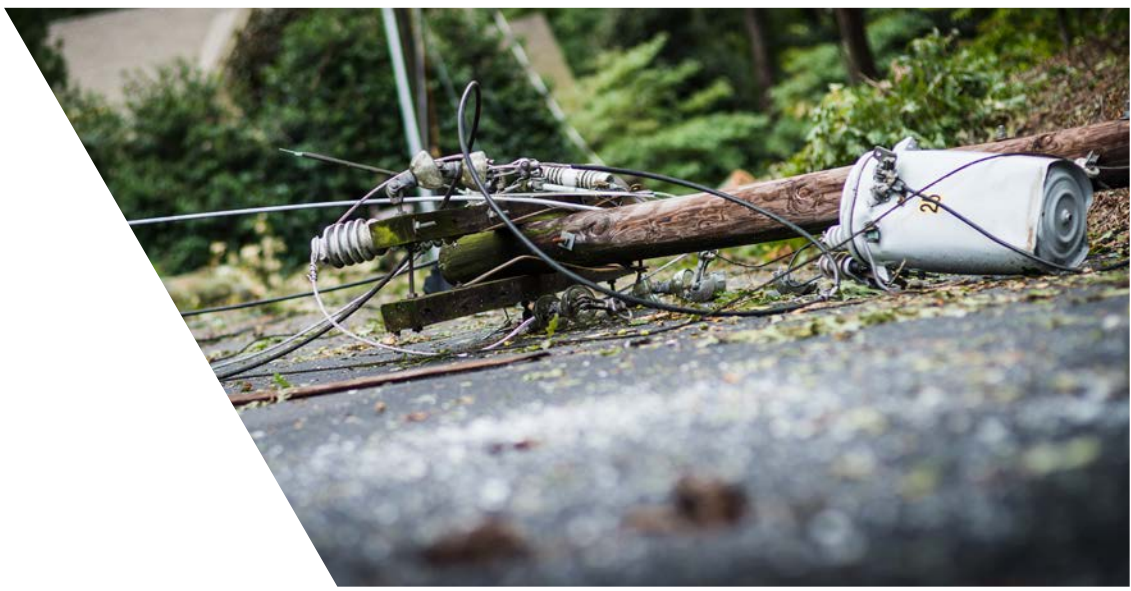
For over 90 years, Sanyo Denki has been manufacturing electrical power products. The company specializes in the manufacture of double conversion, Hybrid and parallel or redundant N+1 configurable UPS plat forms. Sanyo Denki strives for delivering performance, quality, and reliability for all its SANUPS product lines. Each product is designed and manufactured under an uncompromising commitment to excellence through, ISO manufacturing standards, procurement of high-end system components, and validation of design through testing and certification.

Having an Uninterruptible Power Supply in place will safeguard against the potential loss of data, damage to equipment and system downtime. It is believed that the US economy loses between **$200 billion and $570 billion** a year due to power outages and other electrical disturbances.



SANYO DENKI

SANYO DENKI has been innovating UPS power products for over 90+ years. All research and development, as well as manufacturing, is performed in Japan under strict ISO 9001 manufacturing standards. Headquartered in Tokyo, Japan Sanyo Denki employees over 3,200 people, it has 41 office locations and eight manufacturing facilities. Republic Power Systems is an authorized distributor of SANYO DENKI UPS products and services for North America focusing on commercial, industrial, medical and military markets.



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