

Stress Free From Blackout!

PROTECT your system with Nipron "Nonstop" power supply!

Nonstop Power Supply Special Feature

The most feared thing for systems would be the loss of confidence and trust from customers. Blackout may cause the crash of the system in the worst case following its abnormal system shutdown, which burdens vast amounts of money loss to customers. Because of the trouble of electric power company or natural hazard such as thunderstorm, we face "blackout" or "instantaneous power failure" at switching of transmission grid, and "instantaneous drop" of line voltage. "Blackout (AC stop)" may occur due to cabling trouble, breaker trip, or wrong operation. That is why it takes measures against power failures, and it must be secured for critical systems just in case. Responding to the case, we feature, this time, Nipron's "Nonstop power supply" in a bid to guard customer's critical system from power failures.

Troubles from Blackout

When inputting important data during data servers operated

- Data corruption
- HDD failure
- Start up error after the forced shutdown

When using cash handling machines such as ATMs or ticket machines

- Withdrawn money does not come out
- Deposits and withdrawals data corruption

When making the products on the production line

- The interruption of production process
- The initialization of equipment configuration

Even setting our own electric generators...

- During the instantaneous period between blackout and the start up of a private electric generator, stable energy can not be supplied.

Here is a solution for all the troubles!

Nipron "Nonstop power supply" safely backs up the important system from sudden blackout or natural disaster.

What is Nonstop Power Supply?

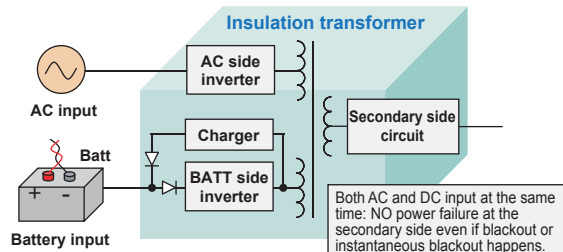
The Unique Technology of Nipron

Nipron's original blackout backup circuit is embedded into "Nonstop" power supplies. With a battery package connected, the power supply can keep providing stable power without any abnormality and fluctuation even at input problems such as blackout, instantaneous blackout, and voltage drop.

Power Feeding with NO instantaneous interruption

Nonstop power supply has NO time loss to switch to battery operation at blackout. It compares the voltage level of each inverter at AC and DC (Battery) side, and transfers higher voltage automatically. Thus it achieves high reliable power feeding without any instantaneous interruption. Please refer to the right for the major diagram of Nonstop power supply.

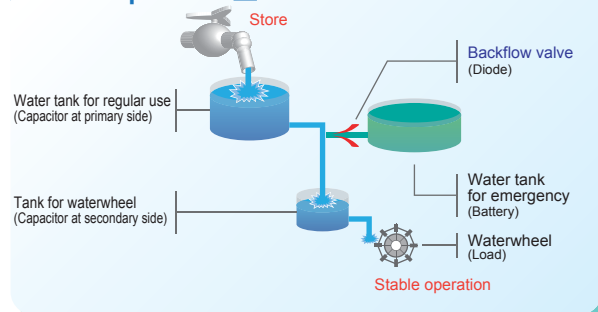
Nonstop power supply simple diagram



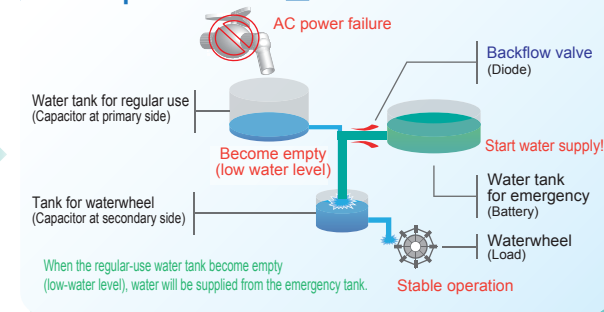
Comparing the uninterruptible power feeding to water flow...

As in below compare the power to water flow, "Nonstop" power supply consists of the regular-use tank for AC input and emergency use tank for battery input. The water level of the secondary is always kept constant as the water is always supplied from the tank with higher pressure.

At AC operation



At AC power failure



What's the difference between "Nonstop" power supply and UPS?

UPS (Uninterruptible Power Supply) is well known as one of the countermeasures against blackouts. "Nonstop" power supply also has uninterruptible power feeding function and high reliability. Then, what is the difference between "Nonstop" power supply and UPS? Here are the answers for the difference between "Nonstop" power supply and UPS.

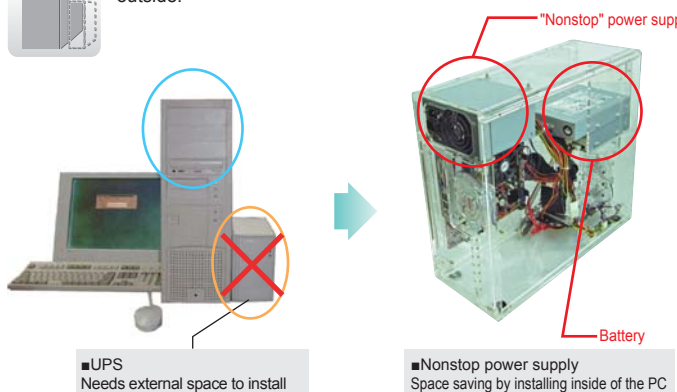
Comparison between Nonstop Power Supply and UPS

Features comparison of UPS systems

UPS system	Items	Voltage accuracy at normal operation	Switching time	Efficiency	Size	Weight	Price
Standby power system		△	△	◎	◎	○	◎
Line interactive power system		○	○	○	△	△	○
Online power system		◎	◎	△	○	△	△
Multi-processing power system		◎	◎	○	◎	○	○
Nipron 2G-2E system "Nonstop" power supply		◎	◎	◎	◎	◎	◎

Space Saving

Battery package for "Nonstop" power supply can be installed to 5-inch bay or 3.5-inch bay PC case, so "Nonstop" power supply achieves space saving unlike UPS which needs to be mounted outside.



Solve the Problem of Unstable Operation Related to Output Waveform

Low-cost UPS usually outputs the square wave which causes coil noise or unstable operation. Also, in some cases UPS falsely recognizes the waveform distortion of input voltage as blackout, then it switches to the battery operation and shuts PC down. "Nonstop" power supply solves all these problems with its original blackout backup circuit.

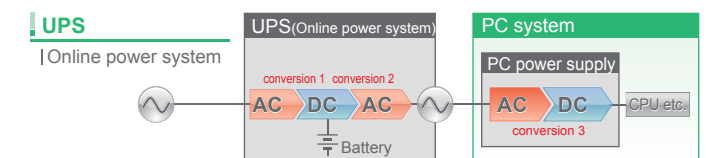
Improve the Reliability

While UPS supplies power to PC system with connected in series, Nonstop power supply is connected to a battery in PC system. Since AC line and DC line from the battery are connected in parallel, low failure rate and high reliability are realized.

High Efficiency, Energy Saving

At normal operation, UPS has two times power conversion inside. Additionally, there is one more time power conversion in the PC. Therefore, there are three times power conversions in total at last. Also, there are two conversions at blackout in total. On the other hand, "Nonstop" power supply converts only one time. Regardless of input voltage condition, normal or blackout, it results in energy saving in comparison with UPS.

The simplified diagram of power conversion of Nonstop power supply and UPS



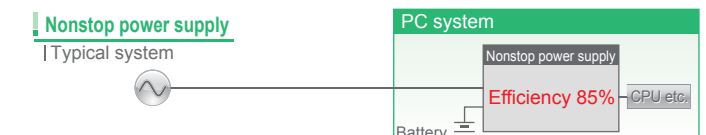
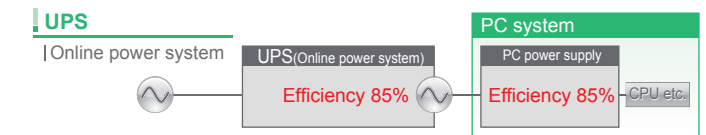
The number of power conversion: Total 3

Nonstop power supply



The number of power conversion: Total 1

The Difference of Total Efficiencies



In case of 24-hour continuous operation with PC load capacity 300W

	Efficiency	Load capacity	Input capacity	Electricity expense (year)	CO ₂ emission
UPS	72%	300W	416W	73,000 yen	2,025kg
Nonstop power supply	85%	300W	353W	61,835 yen	1,716kg

Calculated by JPY 20/kWh, 0.555kg CO₂/kWh

Compare to the "Nonstop" power supply and UPS with above efficiency, "Nonstop" power supply can reduce electricity expense approx. 11,165 yen/year, and CO₂ emission approx. 309 kg/year.

80PLUS BRONZE and ErP directive compliant, Nonstop power supply

HNSP9-520P-S20 series

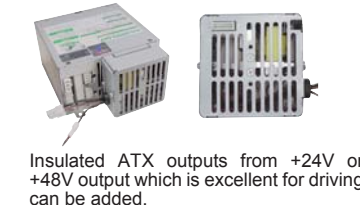


Continuous: 400W Peak: 520W

Safety standards: IEC/UL/CSA60950-1 Approved

- 80PLUS BRONZE approved
- High efficiency with synchronous rectification circuit
- Min. load current 0A for all outputs
- With built-in thermal-sensing variable speed fan, sound reduction can be achieved. Heat-related issues for CPU can be settled with fan speed changeover switch.

Additional +24V or +48V output available



Insulated ATX outputs from +24V or +48V output which is excellent for driving can be added.

Intelligence battery package Mi-packII



Schedule operation which can set up a specific date and time is available. In addition, lifetime calculation based on characteristics, and lifetime prediction by the temperature, the frequency and elapsed time etc. is available.

"80PLUS and ErP directive compliant", "Medical standard approved", "DC start-up available", "Single output power supply"
More than 20 models of "Nonstop" power supplies available!
Many different Nonstop power supplies available for each of your applications due to avoid any troubles from blackout.