Ⅰ Industrial UPS

1. Overview

The industrial UPS is based on Robinlet's many years of field implementation experience and UPS solutions. It uses a dual-conversion structure of the output isolation transformer and advanced all-digital control technology to achieve stable, clean and uninterrupted power supply output.At the same time, it also provides a variety of communication solutions, and a friendly human-machine interface, which is convenient for users to set up and monitor the machine.

2. Application

This series of products are used in the harsh environment of power industry, metallurgical industry and petrochemical industry.

3. Features

3.1 High reliability

▪ High-performance DSP chip (32-bit 150MHZ, independent multiplier) full digital THDV control

Precise control of UPS parameters and comprehensive control, providing sufficient computing power to ensure that the UPS is in optimal working condition at any time

▪ Inverter and battery adopt HCT, precise control compensation

More accurate detection and faster response.

▪ Using 6 temperature detection sensors, with early warning function

Achieve comprehensive monitoring of rectification, inverter, STS early warning function, easy to intelligently supervise and manage UPS, to ensure smooth operation of UPS.

▪Signal line/electronic line independent routing, improved operational reliability

Reduced signal interference and improved UPS operational reliability.

▪ Standard dual input power supply

Preventing the risk that the UPS cannot continue to supply power stably after one power failure, ensuring reliable operation of the load.

▪ Installation error with protection function (input, output misconnection, battery reverse connection)

Prevent damage to the UPS or cause casualties.

▪ Battery switch detection

The battery open circuit detection function is realized to prevent the problem that the UPS cannot continuously output the power without the battery and the mains power is cut off.

▪ ECO mode

The ECO mode is more efficient than the double conversion mode. In the ECO mode, the full load efficiency can reach over 95%, saving energy and economy.

▪ Output performance

THDV linear load is less than <1%, nonlinearity is less than <2% (according to 1095 I class), output power factor is optional 0.9

▪ DC voltage 220VDC

220VDC is the standard voltage of DC grid, the safety voltage of insulation voltage is large, the DC switch has low pressure requirement, the selection range is wide, the number of series batteries is small, the battery failure rate is low, and the service life is long. Due to the small number of batteries, battery inspection is easier and reliability is high.

3.2 Strong resistance to load shock

▪ Meet full load nonlinear transient non-transfer bypass

Enhanced load capacity.

▪ Input and output isolation transformer

It can realize complete electrical isolation of UPS, can withstand severe load fluctuations, and resist and eliminate various power quality problems such as harmonics, overvoltage, undervoltage, surge, voltage sags, power outage, overload, short circuit, surge current, etc.

3.3 Strong adaptability

▪ Circuit board adopts fully automatic injection type three protection

Three anti-function: insulation, moisture, leakage, shock, dust, corrosion,

anti-aging, corona resistance, to ensure that components and wiring are protected from harsh environments.

- Protection class IP20, optional IP42

In order to better protect the UPS installed in it, a thick special protective spray is applied to the surface of the chassis. Generally, the power and control components of industrial grade UPS can meet IP40 or IP42 standards in terms of moisture resistance and pollution prevention, and even IP51 can be used for harsh working environments.

- Extremely wide input voltage and frequency range

With an input voltage range of ±20% and a frequency range of ±10%, it can be adapted to harsh grid environments.

- Cold start function

It can be turned on when there is no city power.

3.4 Improve working life

- Intelligent fan speed control, under the condition of redundancy or half load, the whole machine running noise is lower than 60db (according to 1095 II level)

The fan speed can be adjusted according to the actual load on the site, ensuring that the UPS works in a suitable environment, improving the service life of the UPS and reducing noise.

- Optimized for the wind tunnel, improving heat dissipation efficiency

The ventilation mode is in and out, natural convection, and the transformer and the power device respectively adopt a unique air duct design to improve the heat dissipation efficiency, and at the same time protect the power device from the influence of the transformer and improve the product life.

- Prevents battery backflow in case of long-term undervoltage of mains

The battery will not be discharged within the range of the mains, which will increase the battery life.

3.5 Easy to install and maintain

- Front flip structure
- Easy to disassemble, install and maintain.

Full front installation and maintenance

▪ Modular design

The consumable parts are modular and can be quickly replaced.

▪ Easy to remove inner door

Ⅱ Customized UPS

A UPS developed to meet the diverse needs of customers.

1 Characteristics

• Input

– Optional input isolation transformer

– Optional switch and lightning arrester

– AC reverse connection protection, DC reverse connection protection

• Output

– Output harmonics (linear load) <1%, (non-linear load) <2%

– Various output formats compatible with Y and Δ

• Other

– Customizable cabinet size and color

– Control system, rectification and inverter integrated single module, can be replaced online, easy to maintain

2 Application

The application environment is in the industrial environment of energy and chemical industry, China National Petroleum Corporation and Sinopec.