

Ui33 Series Uninterruptible Power Supply

3-phase input 3-phase output: 10-600kVA

3-phase input single-phase output: 10-200kVA

Durable and reliable three-phase power protection device for industrial, data center, and critical infrastructure to prevent downtime and data loss



Nooyi digital frequency UPS uninterruptible power supply is worthy of your high reliability

The Ui33 series is a reliable solution dedicated to protecting a wide range of industrial and infrastructure applications. It uses an in-line double-conversion topology to achieve isolation between input and output with zero conversion time. A built-in transformer provides true electrical isolation and can be installed in bypass or output locations. This UPS adopts a new topology, with superior performance, advanced control, digital processing, and integrated multi-functional protection. Equipped with a standard SNMP or Modbus communication card and a user-friendly display interface (supporting multiple languages in the world), it can realize remote and local monitoring/management through the built-in communication card. Front and rear maintenance greatly improves maintainability and reparability in confined spaces, allowing for easy side-by-side cabinets.

The internal circuit board surface adopts special paint, the machine is IP21 protection grade, and dust filter device to resist harsh environment. All these features are especially suitable for applications requiring high reliability and shock resistance.

Product Features

Ui33Series

Availability

Dual Input: Allows standard installation of one or two independent power supplies

Automatic Internal Bypass: Built-in 100% rated bypass static switch, allowing the load to be switched to the utility power supply in case of severe overload to prevent power failure

Parallel 1+1 redundancy: The connected equipment can be powered by two parallel UPS to increase the system redundancy

Sturdy and durable design: The internal circuit board is protected by special paint, and it is equipped with IP21 protection grade and dust filter, which can better withstand harsh environments

Built-in Transformer: Field configurable as bypass transformer or output transformer for complete electrical isolation and enhanced load protection

Powerful Charger: A total solution that can meet most backup time requirements, and can be used with supercapacitors or lithium batteries

Industrial Design: Supports 100% non-linear/unbalanced loads and provides genset compatibility

Repairability

Manual Maintenance Bypass: An easy-to-operate maintenance bypass that allows complete isolation of system parts, allowing maintenance operations to be performed without interruption

Front and back maintenance: The power device maintenance only needs to open the front door and the rear door, and the PCB circuit board is installed on the top of the device. Meet the needs of cabinets on both sides.

Economy

Input power factor correction: cables, circuit breakers and generators no need to oversize

Smart battery maintenance calendar: Custom maintenance calendar, fully automatic charge and discharge management on time, to prevent premature battery aging and prolong battery life

A variety of operating modes: provide online, online interactive (ECO), backup optional function, select the operating mode according to the needs of the load, save energy and reduce consumption.

Easy to install

Easy Installation: Fitted with casters for easy movement, all cable connections are easily identifiable, saving installation time

Startup Wizard: Step-by-step guidance and intuitive menu display for easy setup and system navigation

Manageability

Flexible Communication Options: Equipped with dry nodes, Modbus and SNMP network cards to support remote and local monitoring and management

User-Friendly Graphical Interface: Easy-to-view LCD display with support for analog graphs, audible alarms and multilingual displays for easy operation

Ui33Series

- Industrial process control(semiconductor, automotive, etc.)
- Transportation(subway ,railway, etc.)
- Infrastructure
- Medical/Hospital
- Hydro-electric plant
- Mine



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Function Overview

Processor: ARM32-bit processor with DSP, the floating-point operation function can quickly collect and process a large amount of data, improve the Transient Response Characteristics of Equipment

Inverter: Adopt all-digital SVPWM waveform drive, dynamic characteristic. Good performance, three-phase vector control, and small distortion of output voltage waveform. Can adapt to loads of different nature, especially non-linear loads

Rectifier: Standard 6-pulse rectifier, thyristor works in full control state, fully opens after soft start, and has high voltage utilization; Optional 12 pulse rectifier and power factor compensation module can reduce input current harmonics and improve power factor.

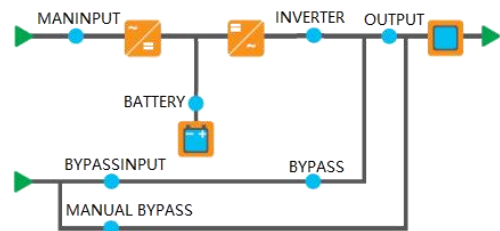
Charger: independent intelligent charging, charging current and voltage can be adjusted at will, calendar maintenance, automatic battery charge and discharge management.

Isolated transformer: Isolation transformer with unique structure, which can meet the three-phase unbalanced load needs, when the load is 100% unbalanced load, the phase angle unbalance is less than 2° .

Static bypass: Driven by high-frequency isolated DC pulses, the SCR thyristor has reliable triggering, stable operation and small conduction voltage drop.

Manual bypass: the manual bypass switch can be directly closed at any time, let the device work in manual bypass state.

Cloud service: Optional GPRS, 4G, WiFi, SNMP card can Real-time data transfer to cloud server, convenient for mobile phone and PC real time monitoring.



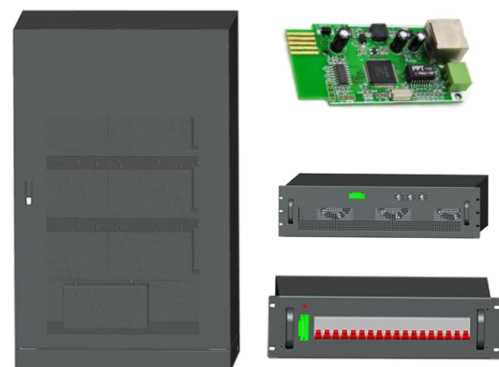
OPTIONS

External battery cabinet: for extended backup time. Equipped with circuit breakers and Temperature Sensor.

Paralleling Kit: For N+1 redundant paralleling. Support up to 8 units redundancy.

Harmonic compensation module: used to improve the power factor of the input side, reduce input current harmonics.

Intelligent power distribution module: used for output power load distribution, with various monitoring of shunt switch status, power, temperature, and contact aging control



Technical Parameters

Rated Power	10-600kVA (parallel structure for higher power)
System voltage	200/220/380/400/415V/440/690V
Phase	3+N
System frequency	45-65Hz
Rectifier Input	
Input voltage (V)	System voltage (three phase three wires)
Frequency (Hz)	45-65Hz
Soft start	0-100%, 10s
Input power factor	>0.9
Input rectifier control	SCR is in full control state and works in full bridge rectification state after soft start
THDI	<10% (with 5th harmonic filter, optional)
Input voltage range for mains supply	From -15% to +15%
Charger	
Charging voltage	Independent charger, the charging voltage is not restricted by the DC bus, and the charging voltage can be set arbitrarily according to the number of batteries
Charging current	5-100A settable (according to battery charging current)
Charging mode	Constant current charging, constant voltage charging, equal impulse, floating impulse and trickle charging
Battery	
Standby time	As required
Number of batteries	30-36 (standard 32)
Battery ampere hour	As required
Charging current	Settable (according to battery pack parameters)
Battery management	With battery calendar management, the automatic maintenance time of the battery can be set, and the automatic maintenance can be conducted 4 times a year to extend the service life of the battery
Forced equalizing function	It has the forced impulse balancing function, which can effectively repair the impedance rise of the whole battery pack caused by individual battery differences
Battery detection	Battery online detection function, early warning before battery parameter attenuation is unavailable
Battery anti reverse connection	With battery anti reverse connection function
Inverter output	
Rated output voltage (V)	According to the system voltage can be set
Number of phase	3+N
Power factor	0.9
Full load efficiency (on-line)	Highest 91%
Linear load distortion	<3%
Voltage phase shift when load balancing (degree)	<±1°
Voltage phase shift when load is unbalanced (degree)	<±2°
Voltage unbalance when load	<±1%

balancing	
Voltage unbalance when 100% load unbalance	<±3%
Non-linear load distortion (Crest factor 3:1)	<5%
Static voltage stability	±1%
Transient voltage variation range and response recovery time	±10% into 10ms
Rated frequency	Same as input
Frequency stability	When synchronizing: follow the bypass frequency ; when not synchronizing: ±0.05%
Overload	110/125/150% rated current 300分/10分/1分
0.1 second short circuit current	2times the input current
Isolation transformer	
Rated input voltage (V)	460V/480V Two way input
Rated output voltage (V)	380V
Winding connection mode	Y/Y 或 Δ/Y
Isolation transformer structure	The independent isolation transformer is not affected by the inverter, and it still has the voltage transformation function during automatic bypass and maintenance bypass, which does not affect the use
Insulation class	H
Bypass	
Rated voltage	Can be set according to system voltage
Phase number	3+N
Input voltage range	±15% (+20%-30% can be set)
Rated frequency	50/60Hz (automatic identification)
Input frequency range	±2% (±5% can be set)
Inverter/bypass transfer time (overload)	0ms
Inverter/bypass transfer time (inverter failure)	1ms
Parameter display, communication and management	
Parameter display	Input three-phase voltage, frequency and phase angle; Bypass three-phase voltage, frequency and phase angle; Inverter output three-phase voltage, frequency and phase angle; Three phase voltage, frequency and phase angle at load end; Input three-phase current, power and power factor; Inverter IGBT side three-phase current and transformer output three-phase current; Three phase current, power, power factor, active power, reactive power and load rate at load end; IGBT temperature, SCR temperature, transformer temperature
Communication interface	Standard RS485
Display control panel	7 inch touch screen

Environmental		
Working temperature	-10°C-40°C (depends on load status)	
Relative humidity	0-90% non-condensing	
Working altitude	0-1000 meters can be run at full load, if it exceeds, it should be derated	
Noise (>1m)	Under full load<54 dB	
Protection	IP20	
Size and weight		
Power (kVA)	size (H×W×D) mm	Weight (kg)
10	350×650×630	150
15	460×650×1200	210
20		260
30		310
40		365
50	780×650×1350	382
60		398
80		512
100	950×700×1500	550
120		566
160		875
200	1200×750×1800	980
250		1800
300	1400×1000×2100	2100

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Nooyi® 诺易

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- AC voltage regulator ■ Variable frequency power supply ■ DC power supply
- UPS ■ Inverter Power Supply

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While the product is being improved, the information may change without notice.