



## FR-UK 33 Series Online UPS (10 - 500kVA)

### Main Features:

- Online double conversion
- IGBT inverter and output isolation transformer
- 3 phases UPS, allow 100% unbalanced load
- Fully DSP control, high reliability and performance
- Wide input voltage range
- DC cold start function
- Advanced battery charging management
- Intelligent fan speed control
- ECO mode and EPO function.
- Intelligent RS232/RS485 communication port
- SNMP adapter (optional)
- Advanced no-master-slave parallel technology (optional)
- Intelligent battery monitor system - MMBM (optional)
- 12 Pulse rectifier (optional)
- Bypass isolation transformer (optional)
- CE, RoHS, TUV, CB, FCC, SONCAP certified
- ISO 9001, ISO14001, OHSAS 18001 certified
- IEC 62040-2; EN/IEC 62040-1-1; IEC 61000-4-2/3/4/5
- One Year Warranty

### Application:

- Computer Room
- Data Center, Telecommunication and Utility Centers
- Precision Instruments and Machinery in Factories
- Intelligent and Monitoring Equipment



# Features of FR-UK33 Series

- **Advanced working mode Double Conversion on-line design**, which makes the output a pure sine wave source with tracking frequency, phase-lock and voltage regulation, noise suppression, and without power fluctuation interference, providing the load with more comprehensive protection.
- **Zero transfer time of output**, satisfy high standard power requirements of precision equipment.
- **Input power factor is 1.0 with the Filter** which improves the energy efficiency, reduces the harmonic pollution of the power grid and lowers the UPS running cost.
- **Full DSP Control**
  - The digital control brings the excellent performance, avoids the risks because of analog devices failure and makes the control system more stable and reliable.
- **High output power factor**
  - The output power factor can reach 0.9 (lagging), which has a higher actual load capacity, saving the user's investment.
- **Strong environmental adaptability**
  - The range of AC input voltage is (380Va/ 400Vac/415Vac)±20%, thereby reducing the frequency of battery usage and greatly extending the battery life.
  - Wide input frequency range from 40Hz~65Hz, ensure all types of fuel generators connected work stable.
- **Optimization of high-performance battery**
  - Adapt intelligent battery management( ABM) technology, thus extending battery life.
  - Advanced floating switching and charging technology maximizes the current retention capacity of the battery, thus saving the charging time and extends the battery life.
- **Battery discharge time prediction** ;  
When battery is discharging, the system detects the discharge current and predicts the discharge time according to the battery intelligent management system, thus informs the users to do the appropriate measures to take.
  - The battery self-test on a regular basis to detect battery problems in time. Set the start time and self-test duration according to the different time periods (monthly or weekly).
  - **Adjustable Charger (10A–80A depending on UPS capacity)** helps to optimally re-charge batteries of different ratings and configurations.
- **N+X Parallel redundancy**
  - Adapt N+X parallel redundant design. Users can configure different redundancy number according to the importance of load.
  - Easy to realize the parallel function. The parallel can be achieved just by connecting the parallel cables and doing the setting on UPS. 6 units can be connected in parallel at most.
  - **Non-fixed Master-Slave relationship** : Among the several UPS in parallel, the unit startup first is Master UPS, the others are Slave UPS. The master and slave can be exchanged. If the inverter of one UPS fails, the UPS will automatically cut off the output, then the load will be powered by remaining UPS.
- **Strong overload capability**
  - When overload 110%/125%/150% , it can be maintained 60min/10min/1min.
- **Compatible with the generator**
  - Specially designed power walk in function reduces the in-rush current when system starts, thus lowers the requirement of the generator that the parallel system demands.
- **LBS synchronization**
  - The LBS synchronization function supports the two independent power inputs, which improves the reliability of the system.
- **Comprehensive and reliable protection**
  - **Self-diagnosis function before start-up**, avoid the risks that a possible UPS failure may lead to.
  - The multi-protections such as AC input under/over voltage, overload, short-circuit, over-current, over bus voltage, over-temperature, fan failure, auxiliary power failure, battery under voltage, battery over-charge and so on greatly ensure the system stability and reliability.
  - **Bypass function**. When overload or UPS fails, it can transfer to bypass without interruption to provide AC power to load and provide the alarm information as well.
- **EPO function**
  - An EPO button is embodied in the LCD display panel. Press the EPO button in emergency can shut down the UPS. The EPO button adapts the concave design with a transparent cover, which can avoid misuse.
- **User-friendly network management functions**:
  - The LCD accurately displays the status of operation and data for users.
  - Communication with computer can be realized by RS232 with corresponding monitoring software. The various parameters can be shown on the communication interface.
  - **External SNMP adapter**. The UPS with remote network management capability can provide real-time data for communication and management through a variety of network management systems.

## Specification:

MODEL	FR-UK 3310	FR-UK 3320	FR-UK 3330	FR-UK 3340	FR-UK 3350	FR-UK 3360	FR-UK 3380	FR-UK 33100	FR-UK 33120	FR-UK 33160	FR-UK 33200	FR-UK 33300	FR-UK 33400	FR-UK 33500	
<b>INPUT</b>															
Voltage(Vac)	380/400±20%														
Rectifier Frequency	40~65														
SYNC Frequency Tracking	50/60±5% (±10% optional)														
Phase	3φ4W+PE														
<b>OUTPUT</b>															
Capacity (KVA/KW)	10/8	20/16	30/24	40/32	50/40	60/48	80/64	100/80	120/96	160/128	200/160	300/240	400/320	500/400	
Phase	3φ4W+PE														
Voltage (Vac)	L-N : 220/230±1%, L-L:380/400±1%,														
Frequency(Hz)	50/60±0.5% (battery mode)														
Waveform	Pure sine wave, THD≤3% (linear load)														
3 Phases 100% Load Unbalance Voltage Stability	≤2%, allow 100% unbalance														
Overload	110%load for 30 mins, 125%load for 10 mins, 150%load for 1min.														
<b>BATTERY</b>															
Voltage (Vdc)	12V×29=348														
BATT Type	External														
Charger Current(A)Max	10~40A setting										20~80A setting				
Battery Self-testing	Automatically alarm and estimate battery status in battery abnormal status														
<b>OTHER</b>															
Maintenance Bypass	Yes														
Communication Interface	RS232/RS485 and dry contact (MODBUS and SNMP adapter are optional)														
Display	LCD Display indicates frequency, voltage, load, battery voltage, etc. LED indicates running status														
Alarm	Overload, abnormal AC input, low battery, UPS failure														
Protection	Low battery, overload, over temperature, short circuit, output over voltage, output low voltage														
Noise (dB)	< 65														
Working Temperature	0 ~ 40°C														
Relative Humidity	0 ~ 95%, No condensation														
Dimension (W×D×H)(mm)	500×800×1180			800×800×1600			1000×800×1800				1800×800×2000	2200×1000×2000		4200×1000×2000	
Weight(Kg)	195	240	290	450	470	490	690	725	775	905	1700	2350	2580	2800	

◆ Specification is subject to change without prior notice.