

## U-EQ33 Series

### True On-Line Double Conversion Isolated Frequency Converter

#### ■ Power range

10kVA-400kVA

#### ■ Way of working

3 Phase in, 3 Phase out

#### ■ Application field

Medical equipment, Data center, Precision instrument,  
Banks, ETC, Industrial Production Lines& Controlling  
System

#### ■ Performance characteristics

##### Safe and Reliable

- Allowing Installation against the wall
- N+1 Redundant fan variable speed cooling system
- Maintenance bypass switch
- Output Isolation transformer
- Maximum parallel 8 units.

##### Comprehensive protection function

- Self-diagnosis function to avoid fault when  
power on
- Surge/overload/short circuit/over temperature  
/battery load voltage protection

#### Intelligent Management

- 7 inch touch screen
- Settable battery voltage: 30-34 units
- RS232/RS485 communication port, SNMP optional
- Cold start function



10kVA--200VA

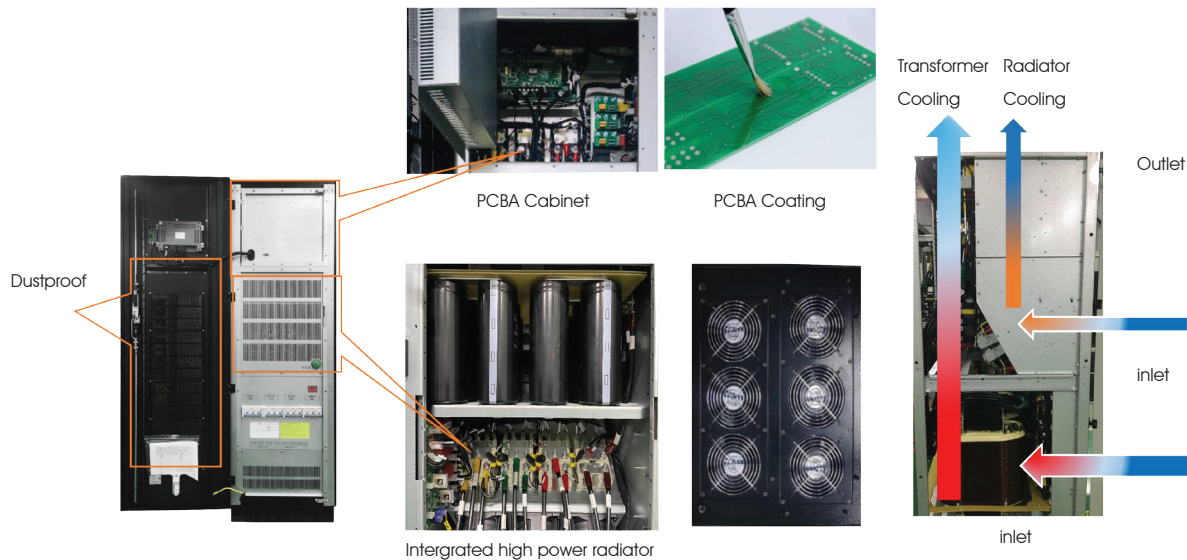


300kVA--400kVA

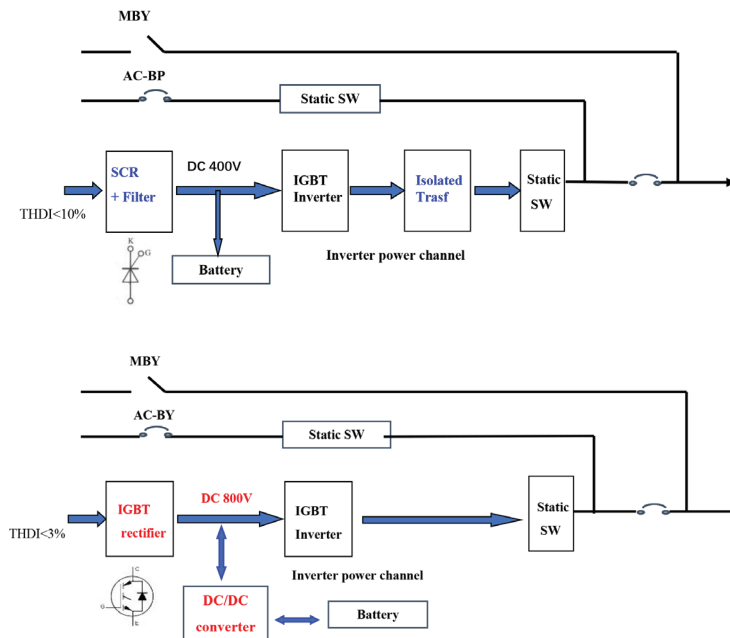
# U-EQ 33 Series

## Feature and Advantages

Conformal Coating, Thermal Insulation Design,  
Strong Environmental Adaptability



## "LF&LV" Structure Design, Higher Reliability



### LF UPS - Low Frequency & Low Voltage

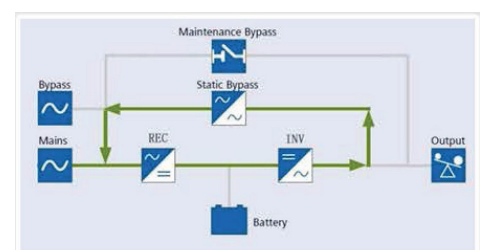
- Built-in output isolation transformer (with isolation boost function)
- Frequency rectifier SCR (50Hz)
- The battery is directly connected to the UPS bus without DC/DC
- The internal DC voltage is 400V DC low voltage

### HF UPS - High Frequency & High Voltage

- No output isolation transformer
- High frequency rectifier IGBT (20000Hz)
- The battery needs to be connected to the UPS bus through the DC/DC circuit
- The internal DC voltage is 800V DC

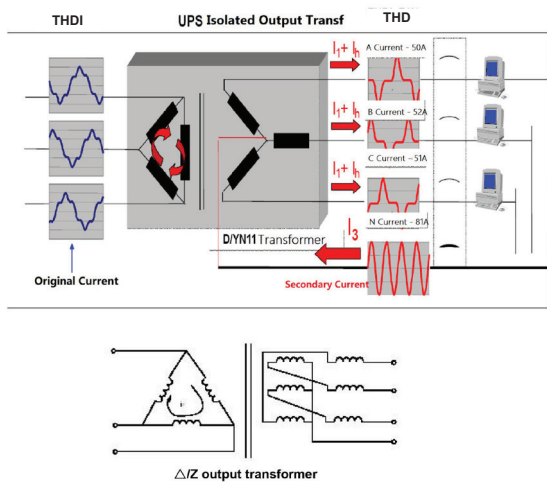
## Self-aging function

Intelligent and convenient self-aging function is to save energy by more than 95% (not necessary to rent fake load), saving operation and installation costs



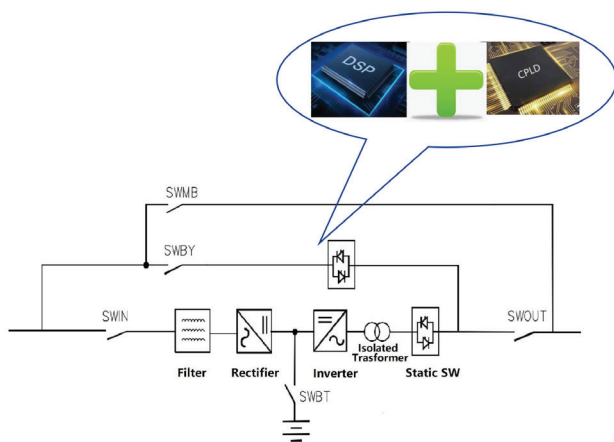
## ■ Feature and Advantages

## Output Isolated Transformer, Handle Load Surge and Interference



- Boost the inverter output voltage to 380V
- Reduce the peak value of non-linear load current
- Isolate the harmonic of the load current
- In case of output short-circuit, the output transformer can effectively reduce the peak value of the short-circuit current and protect the UPS.
- $\Delta$  / Z-type output isolation transformer to reduce load current unbalance

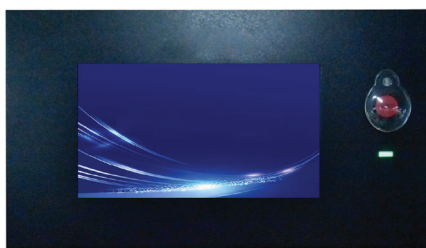
“1 + 1” Composite With DSP + CPLD Microprocessor Control,  
Strong Load Adaptability



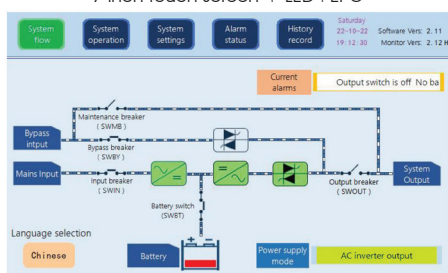
Hardware: DSP+CPLD, fast speed, high precision

Software: double-loop control + harmonic compensation control, dynamic and stable

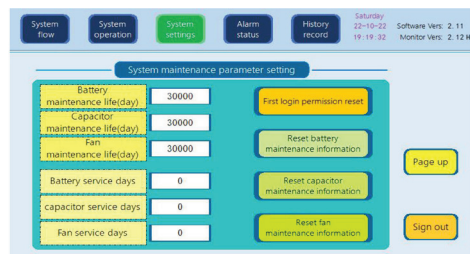
## HMI-Graphic LCD 7-inch Large Screen: Visually Partitioned, Comprehensive and Intuitive



7 inch touch screen + LED+EPO



#### 4 SW" graphical dynamic presentation



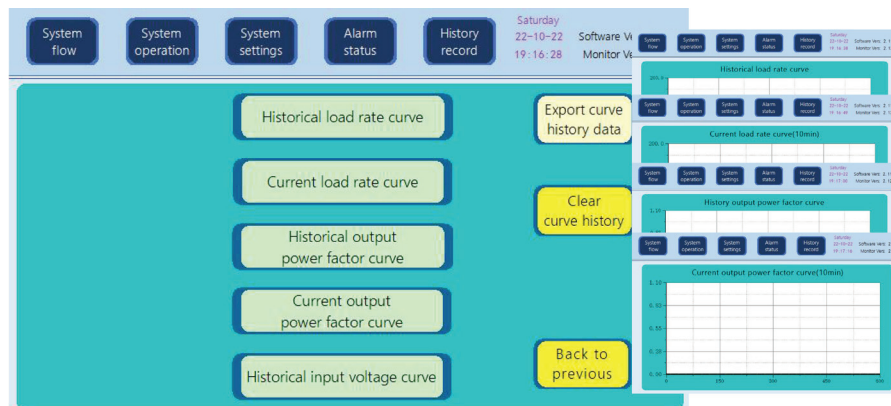
### Consumable parts replacement reminder

System alarm	Status	Alarm item	Status	Alarm item
Load alarm	OK	A phase output overload error	OK	Output load shock error
	OK	B phase output overload error	OK	Frequent load shock error
	OK	C phase output overload error	OK	Frequent load shock locked
Bypass alarm	OK	IGBT_A overtemperature error	OK	Output load short circuit error
Rectifier alarm	OK	IGBT_B overtemperature error		
	OK	IGBT_C overtemperature error		
Inverter alarm	OK	Main transformer overtemperature		
Parallel alarm	OK	A phase output overload locked		
	OK	B phase output overload locked		
System status	OK	C phase output overload locked		

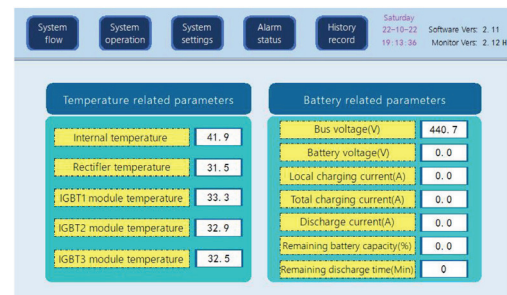
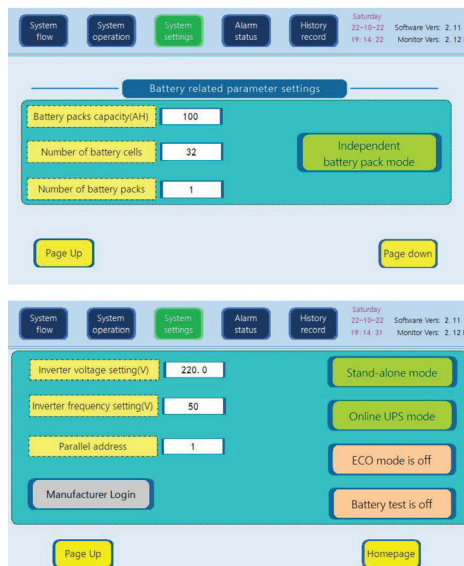
## Alarm and fault tabular management

## ■ Feature and Advantages

### Real-time Monitoring and Recording of Electrical Environment Data, and Working Conditions



### E-BAT Smart Battery Management, Professional and Flexible



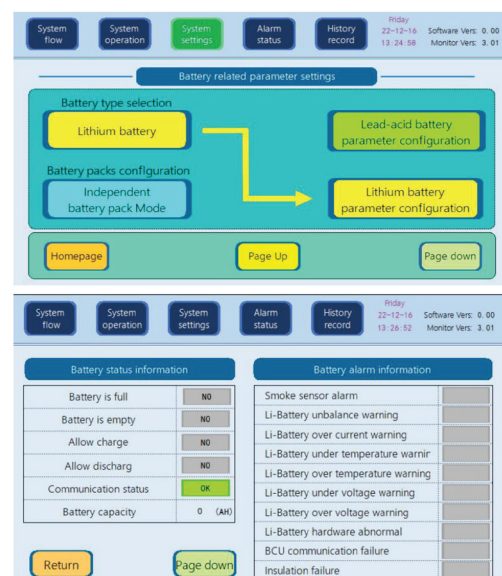
- Number of batteries: 29-34 odd numbers adjustable
- Charging current: 10-40A can be set
- Support battery cold start (10-80kVA)
- Supports parallel sharing of battery packs
- Support battery discharge test function
- Compatible with lithium batteries

### LF UPS New Feature: Lithium Battery Optional

GGL data: the use of lithium batteries in UPS system is less than 5% in 2019, and it is expected to reach at least 40% in 2025



U-EQ33 UPS + lithium batt system



## \*SPECIFICATIONS : True On-line Double Conversion With Isolated Transformer

Model : U-EQ	U-EQ3310L	U-EQ3315L	U-EQ3320L	U-EQ3330L	U-EQ3340L	U-EQ3360L	U-EQ3380L	U-EQ33100L	U-EQ33120L	U-EQ33160L	U-EQ33200L	U-EQ33300L	U-EQ33400L
Capacity (kVA / kW)	10kVA 9kW	15kVA 13.5kW	20kVA 18kW	30kVA 27kW	40kVA 36kW	60kVA 54kW	80kVA 72kW	100kVA 90kW	120kVA 108kW	160kVA 144kW	200kVA 180kW	300kVA 270kW	400kVA 360kW
Input													
Rated Voltage	380/400/415Vac (3P4W+PE) (Optional : 440Vac)												
Voltage Range	± 25 % (± 30% Optional)												
Rated Frequency	50 / 60 Hz Auto-sensing												
Frequency Range	45Hz ~ 65Hz												
The bypass features													
Rated Voltage	380/400/415Vac (3P4W+PE)												
Rated Frequency Range	±15 % (± 10 %, ± 20% settable on display)											+40%, +20 settable	
Rated Frequency	50 / 60 Hz												
Frequency Range	±2 % (± 5 % settable on display)											±2,±5,±10,±20 settable	
Inverter/Bypass switch	<1ms												
Overload Capacity	150% last for 10 mins; 175% last for 1 mins; 200% for 18 seconds.												
Output													
Output PF	0.9 (1 Optional)												
Rated	380/400/415Vac, (3P4W+PE) (Settable on Display) ± 1 %												
Waveform / Transfer Time	Pure Sine Wave / 0ms												
Crest factor	3: 1												
Voltage Waveform Distortion	<2%@100% linear load; <4%@100% non-linear line												
Rated Frequency	50/60Hz (Settable on Display) ± 0.1 %												
Transient voltage response	± 5 %<10ms												
Overload	110%~125% last for 10mins; < 150% last for 1min.												
System Efficiency	≥92%@100%load												
Battery Input Type Seal lead acid maintenance free / Lithium (Optional)													
Number Charging	348VDC (348~408 Settable)												
Current	10-40A(settable)												
System													
Communication Port	RS232 / RS485 (MODBUS) / Dry contact / SNMP (Optional)												
Working	0 ~ 40 °C												
Humidity	0~95 % (no condensation)												
Altitude	<1000M no derating, > 1000M, derating 1% if every 100 meters increased												
Noise	≤65 dB@1M												
Protection System	Automatic Self - Diagnostics Test, Input Over & Under Voltage, Output Over & Low Voltage, Output Stabilizer, Overload, Low & End - Dischager Battery, MOV Surge & Short - Circuit, EMI & RFI Noise Filter, Over Temperature												
Size&Weight													
WxDxH (mm)	500 x 600 x 1250				500 x 800 x 1600			700 x 800 x 1800			1400X10 00X1800	1640X85 5X1900	2265X85 5X1900
Weight (g)	230	250	260	300	400	450	520	600	650	825	1075	1630	2105

Spec. STD.20-03-24

