

# ES SERIES

1kVA-3kVA **1:1**  
PHASE

## ONLINE UPS



Control Panel

### Introduction

ES Series Online High Frequency UPS which adopt advanced DSP digital control technology and tower design, with good function and high reliability, provide perfect solution for the fluctuant AC input voltage and frequency, and is the safe and reliable backup power for load.

### Application Area



Data Center



Finance Network



Security Monitoring



Automatic Control



Communication Server



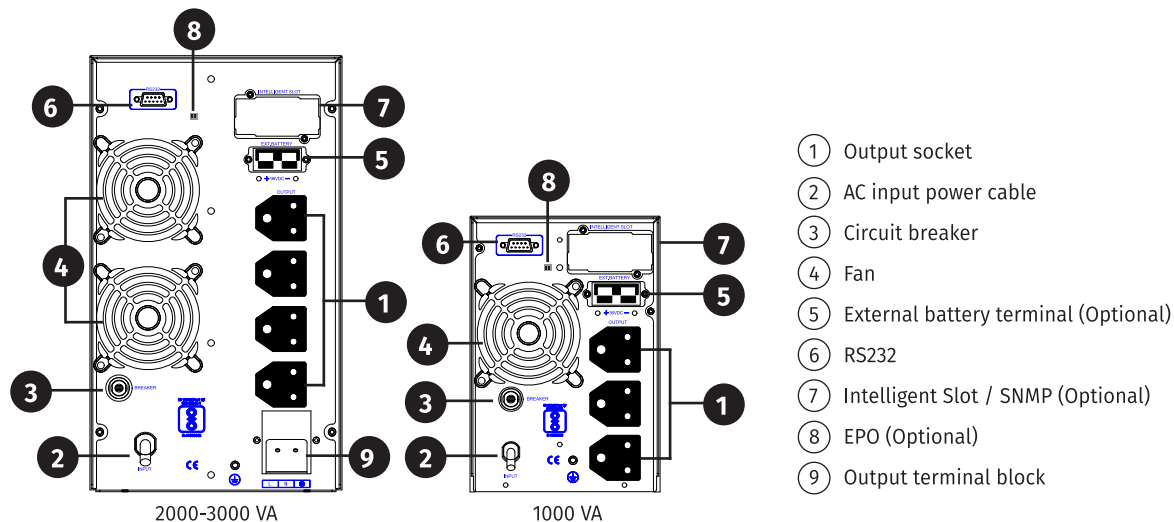
Self-service System

### Features

- True Online, Double Conversion, PWM Technology
- Fully Digitized Microprocessor Control, High Frequency, Pure Sine Wave Output
- IGBT Based - Inverter & Rectifier
- Large input operating range, eliminates unnecessary battery discharge
- Versatile LCD human-computer interface
- Near unity power factor, high AC-AC efficiency
- Advanced Battery Management
- Automatic Battery Charge in UPS Off Mode
- Static Bypass and Cold Start
- Optional isolation transformer
- EMI/RFI and Noise Filter
- Generator and Solar Compatible
- Auto-restart Function, ECO Mode
- Compact size, light weight, low shipping costs
- Long backup time option



## Back Panel



## Electrical Parameters

Model	ES1004		ES2004			ES3004		
	ES1004B3	ES1004L	ES2004B8	ES2004L6	ES2004L	ES3004B8	ES3004L6	ES3004L
CAPACITY(VA/W)	1000VA/800W		2000VA/1600W			3000VA/2400W		
<b>INPUT</b>								
Input Phase	Single phase with ground							
Rated Input Voltage	220Vac/230Vac/240Vac							
Acceptable Voltage Range	120-300Vac (depend upon load level)							
Frequency Range	45-55Hz @50Hz, 55-65Hz@60Hz, Auto Sensing for 50/60Hz UTILITY							
Power Factor	>=0.99							
Generator Input	Support							
<b>OUTPUT</b>								
Voltage	208Vac/220Vac/230Vac/ 240Vac can be set on panel, 220Vac (default)							
Power Factor	0.8 standard, 0.9/1.0 optional							
Voltage Regulation	±1%							
Frequency Range	±0.05Hz, Synchronized with utility on AC mode							
Current Crest Ratio	3:1							
Harmonic Distortion	<=3% THD (Linear Load)							
Output Waveform	Pure Sinewave							
Overload Capacity	105%-150%, 30s turn to bypass mode, >150% 300ms turn to bypass mode							
Transfer Time	0ms (Utility to Battery ), 4ms Typical (Inverter to Bypass)							
Bypass output when UPS off	Support (set by LCD)							
Efficiency	Up to 94% Double Conversion Mode, 99% Eco Mode							
<b>BATTERY</b>								
BATTERY TYPE	12V/7AH	External	12V/7AH	External		12V/7AH	External	
Quantity (12V DC)	3	3	8	6	8	8	6	8
Charging current (A) (max.)	1.0	6.0/12.0	1.0	6.0/12.0	5.0/10.0	1.0	6.0/12.0	5.0/10.0
Typical Recharge Time	6-8 Hours (90% of Full capacity)							
Charging voltage (VDC)	41.1+/-1%		109.6+/-1%	82.2+/-1%	109.6+/-1%	109.6+/-1%	82.2+/-1%	109.6+/-1%
<b>Function, Communication &amp; Standard</b>								
LCD Indication	Input Voltage/Frequency, Output Voltage/Frequency, Battery Voltage, Load Watt/VA and %, Inverter Temperature, Operation Mode such as "On Line", "ON Batt" or On "Bypass", Fault Codes, Battery & Load Bar graph							
LED Indication	Normal Operation, Bypass Abnormal, Fault and Battery Mode							
Protection Function	Over Temperature, Fan Fault, Output short Circuit, Low Voltage of Battery, Over or lack of input Voltage, overload and so on							
Communication	Standard: RS232, Optional: USB, External Modbus, SNMP Card, Dry Contact							
Standard	IEC/EN62040-1, 62040-2, 62040-3, Complying to CE, BIS							
<b>ENVIRONMENT</b>								
Operating temperature	Operating: 0~45°C, Storage: -10°C ~ 55°C							
Relative Humidity / Altitude	0~95% RH Non-condensing / <1500m. when >1500m, derating							
Noise Level	Low Audible Noise Level							
<b>PHYSICAL</b>								
Dimension (DxWxH) mm	400x144x215				469x191x339			
Net Weight (kg)	12	5.8	28.5	11.4	11.4	29	11.4	11.4