Online UPS

ES-SU6K-RL series

Automate Industrial Network Telecom Household Security

Features

- DSP control technology
- Supports fuel generator input
- Input power factor ⩾0.99
- Input current harmonic distortion <4%
- Output power factor of 1
- 50Hz/60Hz frequency conversion mode
- Emergency power-off function(EPO)
- USB/RS-232 communication interfaces
- LCD diaplay panel

Applications

- Data center
- Financial institution
- Smart Buildings
- Industrial automation

Global Trade Item Identifier

- MW Search：http://www.meanwell.com.cn/serviceGTIN.aspx

Description

The ES-SU6K-RL is a 6KVA online UPS system. providing rack type and tower type two appearance structures, using advanced digital control technology, combined with high integrated circuits and optimized design, enhance anti-interference ability, and ensure stable performance. The producthas a full load efficiency of up to 89%, an input power factor of over 0.99, and acurrentharmonic of less than 4%, which can effectively prevent additional energy loss and reduce grid pollution. Its ultra-wide voltage input range is compatible with unstable power grids and fuel generators, which can easily cope with harsh power environments, reduce the need for frequent switching to battery power, and accuratelymatch the needs of highly sensitive loads such as servers and medical equipment. In addition, the product has built-in EPO emergency power-off function and USB/RS-232 dual communication interfaces, which further strengthens the system security and remote control capabilities, It provides efficient, stable and flexible power protection solutions for key scenarios such as data centers, intelligent manufacturing, and communication base stations.

Model Encoding

ES - SU6K - RL

- RL: Exterior structure (Rack)
- SU6K: Power
- Series Name
- ES: Product Categories (Energy Storage category)

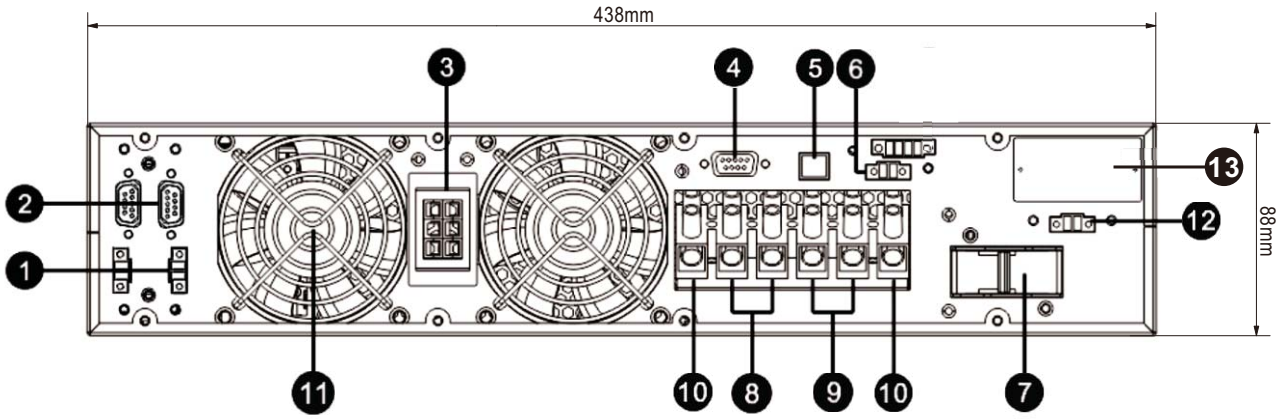
Specification		ES-SU6K-RL		
INPUT				
Nominal Voltage		208/220/230/240 VAC		
Voltage Range		176~300VAC±3%		
Frequency Range		46~54Hz@50Hz/56~64Hz@60Hz		
Power Factor		≥0.99@100%load		
THDi		<4%@full linear load		
Battery				
Numbers		16-20		
Charging Voltage (FV)		12V*N(N=16~20,depended on the number of UPS batteries configured.)		
Low-Voltage Protection Point		10.7V*N		
High-Voltage Protection Point		14.4V*N		
Charging Current(max.)		4A		
OUTPUT				
Power		6KVA/6KW		
Output Voltage		208*/220/230/240 VAC		
AC Voltage Regulation		±1%		
Frequency	Synchronized Range	46~54Hz/56~64Hz		
	Battery Mode	50/60±0.1Hz		
Waveform	Battery Mode	Pure Sinewave		
Harmonic Distortion		≤2%THD(Linear Load); ≤6%THD(Non-linear Load)		
Transfer Time	AC Mode to Battery Mode	0		
	Inverter to Bypass	0		
Overload	AC Mode	100%~110%: 10min, 110%~130%: 1min, >130%: 1sec		
	Battery Mode	100%~110%: 30sec, 110%~130%: 10sec, >130%: 1sec		
Efficiency	AC Mode	89%		
	ECO Mode	95%		
	Battery Mode	89%		
SAFETY & EMC				
SAFETY STANDARDS		UL1778:2014 R10.17,CSA C22 No.107.3-14		
EMC EMISSION		Parameter	Standard	Test Level / Note
		Conducted emission	CFR47 FCC Part15 ICES-003 Issue 6 2017	Class A
		Radiated emission	CFR47 FCC Part15 ICES-003 Issue 6 2017	Class A
OTHER				
Communication interface		RS232/USB		
Phase		1 phase in/1 phase out		
Display		LCD		
Operating temperature		0~40℃		
Humidity		20-90%(non-condensing)		
Weight		17kg		
Size		684*438*88mm(2U)		

NOTE

1. Derate capacity to 60% of capacity in CVCF mode
2. Derate capacity to 90% when the output voltage is adjusted to 208VAC or parallel svstem is operated
3. When using 16 pieces of balteres.the outpu power factor wl be derated to 0.8.
4. fuing 18 or 19 pieces of batenes. the outout power factor wil be derated to 0.9
5. if the UPS is installed or used in a place where the altitude is above than 1000m. the outout power must be derated one percent per 100m.

■ Rear panel View

■ ES-SU6K-RL



(684*438*88mm)

1: Share current port
2: Parallel port
3:External battery connector
4:RS-232 communication port
5:USB communication port
6:Emergency power off function connector (EPO connector)
7: Input circuit breaker
8: Output terminals
9: Input terminals
10: Ground
11: Cooling Fan
12: External maintenance bypass switch port
13.Control Card Slot

■ Single UPS Installation

Installation and wiring must be performed in accordance with the local electric laws/regulations and execute the following instructions by professional personnel.

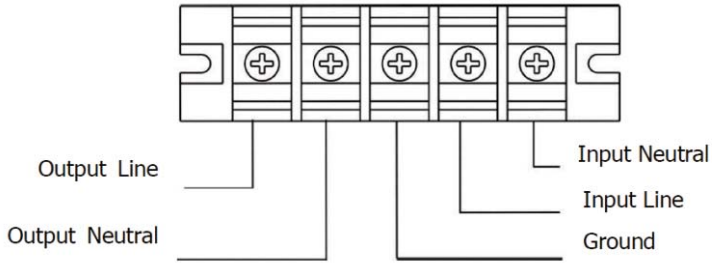
1) Make sure the mains wire and breakers in the building are enough for the rated capacity of UPS to avoid the hazards of electric shock or fire.
NOTE: Do not use the wall receptacle as the input power source for the UPS, as its rated current is less than the UPS's maximum input current. Otherwise the receptacle may be bured and destroyed.
2) Switch off the mains switch in the building before installation.
3) Turn off all the connected devices before connecting to the UPS
4) Prepare wires based on the following table:

Model	Wiring spec(AWG)			
	Input	Output	Battery	Ground
ES-SU6K-RL	10	10	10	10

NOTE 1: The cable should be able to with stand over 40A current, It is recommended to use10AWG or thicker wire for safety and efficiency.

NOTE 2: The selections for color of wires should be followed by the local electrical laws and regulations.

5) Remove the terminal block cover on the rear panel of UPS. Then connect the wires according to thefollowing terminal block diagrams: (Connect the earth wire first when making wire connection. Disconnect the earth wire last when making wire disconnection!)



Terminal Block wiring diagram

NOTE: Make sure that the wires are connected tightly with the terminals
NOTE: Please install the output breaker between the output terminal and the load, and the breaker should be qualified with leakage current protective function if necessary

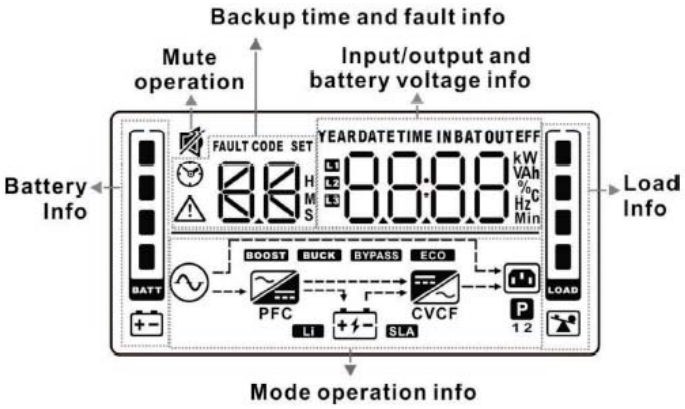
6) Put the terminal block cover back to the rear panel of the UPS

■ Button Operation

Button	Funcation
ON/Enter Button	·Turn on the UPS: Press and hold the button more than 0.5s to turn on the UPS · Enter Key: Press this button to confirm the selection in setting menu
OFF/ESC Button	· Tum off the UPS: Press and hold the button more than 0.5s to turn off the UPS · Esc key: Press this button to return to last menu in setting menu
Test/Up Button	· Battery test: Press and hold the button more than 0.5s to test the battery while in Ac mode, or CVCF mode · UP key: Press this button to display next selection in setting menu
Mute/Down Button	· Mute the alarm: Press and hold the button more than 0.5s to mute the buzzer · Down key: Press this button to display previous selection in setting menu
Test/Up +Mute/Down Button	· Press and hold the two buttons simultaneous more than 1s to enter/escape the setting menu

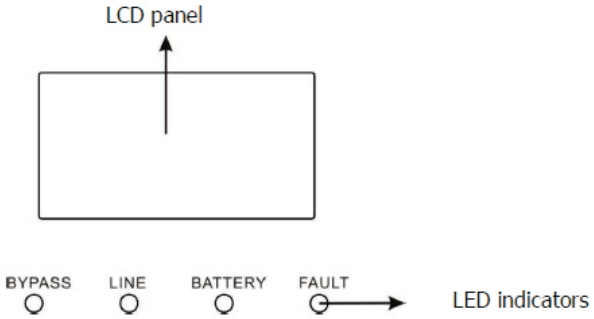
*CVCF mode means converter mode.

■ LCD Panel



Diaplay	Function
Backup time information	
	Indicates battery diacharge time in number H:hours, M: minutes, S: seconds
Fault information	
	Indicates that the warning and fault occurs
	Indicates the fault codes
Mute operation	
	Indicates that the UPS alarm is disabled
Output & Input & Battery voltage information	
	Indicates the output voltage, frequency or battery voltage Vac: output voltage, Vdc: battery voltage, Hz: frequency
Load information	
	Indicates the load level by 0-25%、26-50%、 51-75%、and 76-100%。
	Indicates overload
Mode operation information	
	Indicates the UPS connects to the mains
	Indicates the battery is working
BYPASS	Indicates the bypass circuit is working
ECO	Indicates the ECO mode is enabled
	Indicates the Inverter circuit is working
	Indiactes the output is working
Battery information	
	Indicates the battery capacity by 0-25%,26-50%, 51-75% and 76-100%

■ LED Indicators



There are 4 LEDs on front panel to show the UPS working status

LED / Mode	BYPASS	LINE	BATTERY	ALARM
UPS Start up	●	●	●	●
No Output mode	○	○	○	○
Bypass mode	●	○	○	○
AC mode	○	●	○	○
Battery mode	○	○	●	○
CVCF mode	○	●	○	○
Battery Test	●	●	●	○
ECO mode	●	●	○	○
Fault	○	○	○	●

Note: ● means LED is lighting, and ○ means LED is faded

■ Audible Alarm

Description	Buzzer status	Muted
UPS status		
Bypass mode	Beeping once every 2 minutes	Yes
Battery mode	Beeping once every 4 seconds	
Fault mode	Beeping continuously	
Warning		
Overload	Beeping twice every second	Yes
Others	Beeping once every second	
Fault		
All	Beeping continuously	Yes

■ Optional accessories(Need to be ordered separately)

Model	Item	Description	Funcation
PSWG-ES-SU-SNMP		SNMP Communication Card	・Multiple UPS systems can be controlled and monitored via the RJ-45 interface. ・UPS data (voltage, frequency, load level, battery capacity) is displayed in a real-time and dynamic graphical interface. ・Warning notifications can be sent via audible and visual alarms, broadcasts, mobile messengers, SNMP traps, and emails. ・Historical data can be stored in the database of the terminal computer. ・Simple firmware update. ・It has the functions of password security protection and remote access management.
PSWG-ES-SU-MOD		Modbus Card	・Multiple UPS systems can be controlled and monitored via the RS-485 interface. ・It supports the MODBUS RTU communication protocol. ・Data reading and writing operations can be performed via registers. ・It provides surge protection.
PSWG-ES-SU-AS9P		Relay Card(9-Pin wire-locking terminal)	・It provides contact signals to enable remote monitoring of the UPS. ・To meet different environmental requirements, the signal status (open circuit or closed circuit) of the dry contacts can be set via jumpers.
PSWG-ES-SU-ASDB9		Relay Card(DB9 connector)	