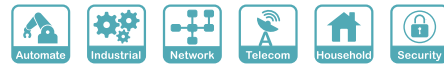




■ Features

- Supporting connection to fuel generators
- Ultra-wide input voltage range: 110V to 300Vac
- Input power factor ≥ 0.99
- Input current harmonic distortion $\leq 5\%$
- Output power factor of 1
- 50Hz/60Hz frequency conversion mode
- Emergency power-off function (EPO)
- USB/RS-232 communication interfaces
- LCD display panel
- Intelligent charging mode, adjustable charging current
- 3-year warranty



■ Applications

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

■ Global Trade Item Identifier

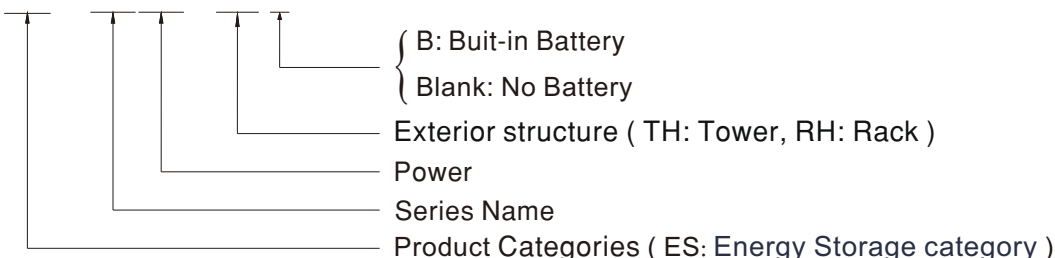
- MW Search: <http://www.meanwell.com.cn/serviceGTIN.aspx>

■ Description

ES-SU1K is a 1KVA online UPS power supply, 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 product has a full load efficiency of up to 92%, an input power factor of over 0.99, and a current harmonic of less than or equal to 5%, 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 accurately match 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.

■ Drive Model Encoding

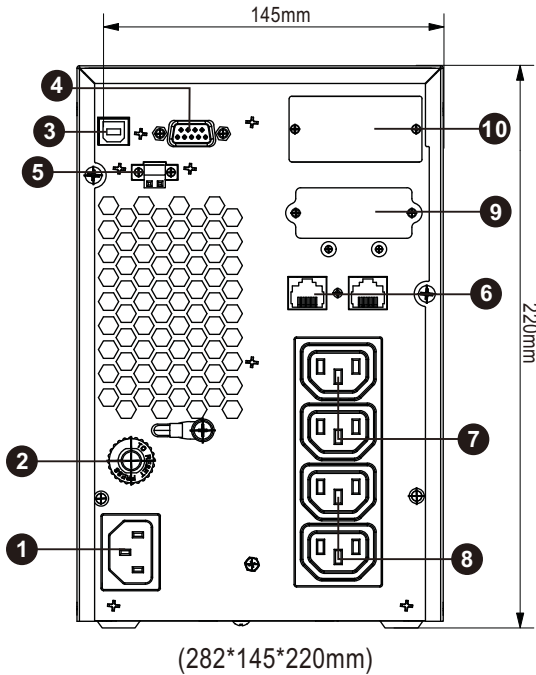
ES - SU1K - TH B



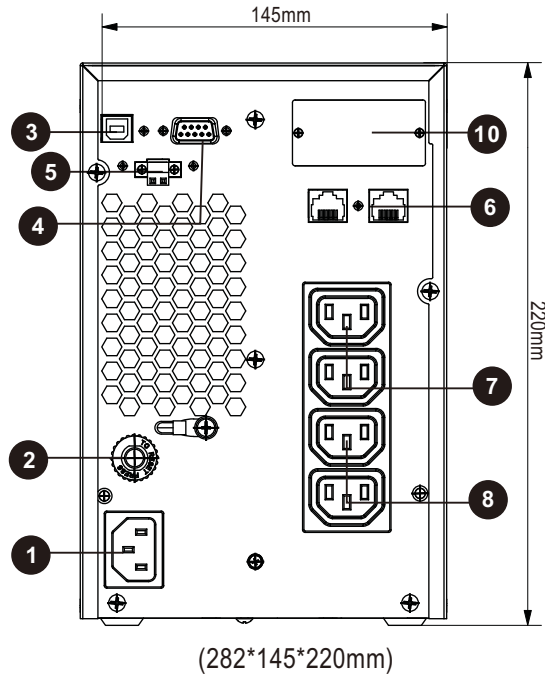
Specification		ES-SU1K-TH	ES-SU1K-THB	ES-SU1K-RH	ES-SU1K-RHB
INPUT					
Nominal Voltage		110~300Vac(Based on load at 50%); 160~300Vac(Based on load at 100%)			
Frequency Range		40~70Hz			
Power Factor		≥0.99@nominal voltage(100%load)			
THDi		≤5%@100% resistive load			
Battery					
Connection Type		external	built-in(12V/9AH*2)	external	built-in(12V/9AH*2)
Charging Voltage (FV)		24V			
Low-Voltage Protection Point		21V			
High-Voltage Protection Point		30V			
Charing Voltage		27.4V			
Charing Current (CC)		8A(1/2/4/6/8A adjustable through LCD)			
OUTPUT					
Power		1KVA/1KW			
Output Voltage(Note 1)		200/208/220/230/240Vac			
AC Voltage Regulation		±1%			
Frequency	AC Mode	47~53Hz/57~63Hz			
	Battery Mode	50/60±0.1Hz			
Waveform	Battery Mode	Pure Sinewave			
Harmonic Distortion		≤2%THD(Linear Load); ≤5%THD(Non-linear Load)			
Transfer Time	AC to Battery	0			
	Online to Bypass	4ms(Typical)			
	ECO to Battery	8ms(Typical),10ms(max)			
Efficiency	ECO Mode@full charged battery	96%			
	AC Mode @full charged battery	92%			
	Battery Mode	86%			
SAFETY & EMC					
SAFETY STANDARDS		EN IEC 62040-1:2019/A11:2021,YD/T1095-2018			
EMC EMISSION	Parameter	Standard		Test Level / Note	
	Conducted emission	EN IEC 62040-2:2018		C2	
	Radiated emission	EN IEC 62040-2:2018		C2	
	Harmonic current	EN IEC 61000-3-12:2011		Class A	
	Voltage flicker	EN IEC 61000-3-11:2019		Clause 5	
EMC IMMUNITY	Parameter	Standard		Test Level / Note	
	ESD	EN 61000-4-2:2008		Level 3, 4KV air ; Level 2: 4KV contact	
	RS	EN 61000-4-3:2006		Level 3	
	EFT	EN 61000-4-4:2012		Level 4,1KV	
	Surge	EN 61000-4-5:2014		Level 4,1KV/Line-Line 2KV/Line-Earth	
	Conducted	EN 61000-4-6:2013		Level 3	
	Magnetic Field	EN 61000-4-8:2009		Level 4	
	Voltage Dips and Interruptions	EN IEC 61000-4-11:2020		100% residual voltage for 0.5cycle; 100% residual voltage for 1cycle; 100% residual voltage for 250cycle; 30% residual voltage for 25cycle	
OTHER					
Communication interface		RS232/USB			
Phase		single phase with ground			
Display		LCD			
Operating temperature		0~40°C			
Humidity		20-90% relative humidity(non-condensing)			
Elevation(Note 2)		1000m			
Struture		Tower		Rack	
Weight		4.1kg	9.8kg	5.2kg	11kg
Size		282*145*220mm		310*438*88mm	
NOTE					
1. Derate capacity to 80% when the output voltage is adjusted to 200VAC/208VAC 2. 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. ※ Product Liability Disclaimer : For detailed information ,please refer to https://www.meanwell.com/serviceDisclaimer.aspx					

Mechanism Dimension

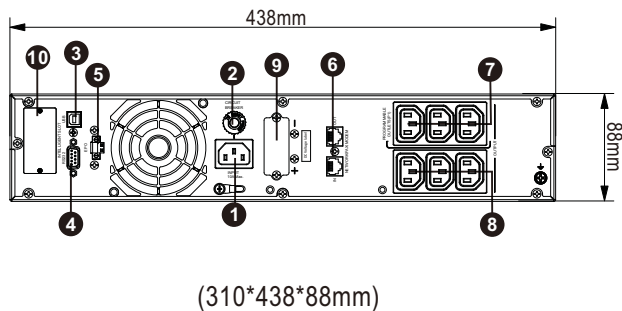
ES-SU1K-TH



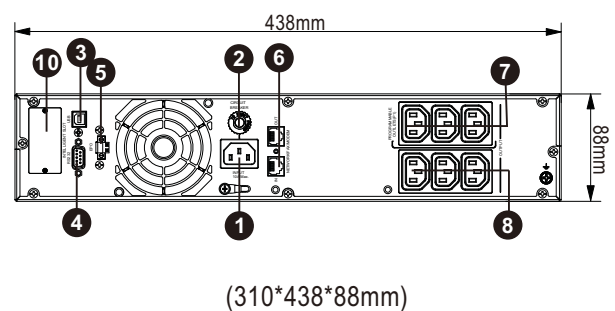
ES-SU1K-THB



ES-SU1K-RH



ES-SU1K-RHB

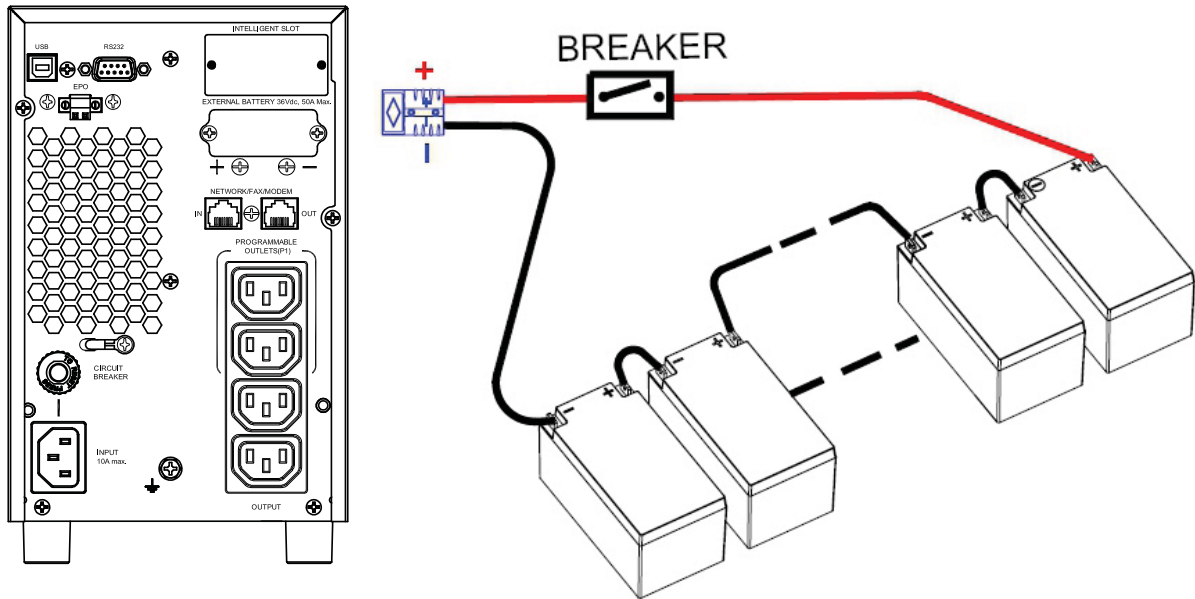


1. AC input
2. Input circuit breaker
3. USB communication port
4. RS-232 communication port
5. EPO port
6. Modem/Phone/Network surge protection
7. Programmable outlets: connect to non-critical loads
8. Output receptacles
9. External battery interface(battery-free model)
10. Control Card Slot

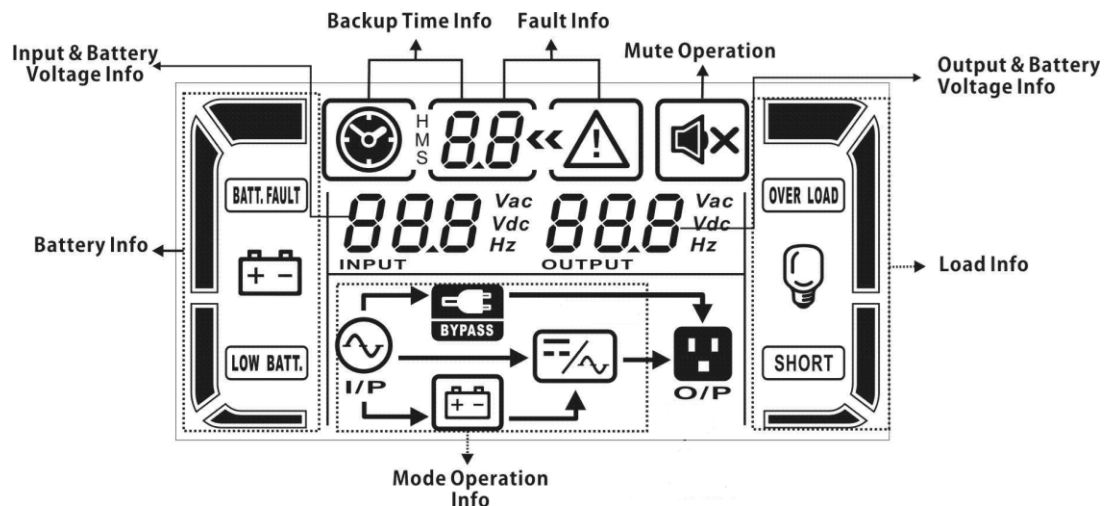
External Battery

Connecting the battery: When connecting the battery box, be sure to confirm that the polarity of the battery is correctly connected.

Required specifications of circuit breaker: voltage $\geq 1.25 \times$ battery voltage / number of groups, current $\geq 50A$
Please select the appropriate battery specifications and number of connections based on the discharge time requirements and UPS specifications..



LCD Panel



Diaplay	Function
Backup time information	
 8.8	Indicates battery diacharge time in munber H:hours, M: mintes, S: seconds
Fault information	
	Indicates that the warning and fault occurs
8.8	Indicates the fault codes
Mute operation	
	Indicates that the UPS alarm is disabled
Output & Battery voltage information	
888 ^{Vac} _{Vdc Hz} OUTPUT	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%。
OVER LOAD	Indicates overload
SHORT	Indicates the load or the output is short
Load information	
P1	Indicates that programmable management outlets are working
Mode operation information	
	Indicates the UPS connected to the mains
	Indicates thebattery is working
	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%、 和 76-100%。
BATT. FAULT	Indicates the battery is not connected
LOW BATT.	Indicates low battery level and low battery voltage
Input & Battery voltage information	
888 ^{Vac} _{Vdc Hz} INPUT 12	Indicates the input voltage or frequency or battery voltage Vac: Input voltage, Vdc: battery voltage, Hz: input frequency

■ Audible Alarm

Description	Buzzer status
Battery Mode	Sounding every 4 seconds
Low Battery	Sounding every second
Overload	Sounding twice every second
Fault	Continuously sounding
Bypass Mode	Sounding every 10 seconds

■ LCD display wording index

Abbreviation	Display content	Meaning
ENA	ENA	Enable
DIS	DIS	Disable
ESC	ESC	Escape
HLS	HLS	High loss
LLS	LLS	Low loss
BAT	BAT	battery
CF	CF	Converter
TP	TP	Temperature
CH	CH	Charger
FU	FU	Bypass frequency unstable
EE	EE	EEPROM error
EP	EP	EPO

■ Accessories List

	Object	Number
1	User Manual	1
2	Monitoring software CD-ROMs	1
3	USB cable	1
4	Computer cables	1
5	Battery cable(battery-free model)	1
6	Vertical tripod (only Rack)	2
7	Cabinet mounting brackets (only Rack)	2

■ Optional accessories(Need to be ordered separately)

Model	Item	Description	Function
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)	