USER'S MANUAL

Online UPS

420-00039-01

USER'S MANUAL

Online UPS

6K(S)/10K(S)/3P10KS/3P15KS/3P20KS

Appliances

PC | TV | Air-conditioning | Fridge | Washing machine

No.	Fault indication
1	Communication error
2	INV Short
3	Over Load
4	Over Temperature, NTC Abnormal
5	BUS Over, BUS Under
6	INV High, INV Low
7	BUS Short, PFC Fail
8	INV Neg Power
9	React Power
10	Abnormal Power
11	INV Rly Stick
12	INV Rly Open
13	Line SCR Fault
14	Fuse Break
15	Battery Abonrmal
16	Fan Fault
17	Unknown Cabinet Type
18	Slave Board Fail
19	Module Addr Same
20	Turn On Abnormal
21	Over Charge
22	Charge Fail
23	Eeprom Fail

*** The table above details the status of the UPS is in the corresponding warning lights flash and LCD display code**

Please comply with all warnings and operating instructions in this manual and on the unit strictly.

Save this manual properly.Do not operate this unit before reading through all safety information and operating instructions carefully.

INDEX

3		56%~75% Load capacity				●	●	●		●	●		none
4		76%~95% Load capacity			●	●	●	●		●	●		none
5		96%~105% Load capacity		●	●	●	●	●		●	●		none
6	Battery Mode	0~20% Battery capacity		●							●	●	Beep once every sec
7		21%~40% Battery capacity		●	●						●	●	Beep once every 4 sec
8		41%~60% Battery capacity		●	●	●					●	●	Beep once every 4 sec
9		61%~80% Battery capacity		●	●	●	●				●	●	Beep once every 4 sec
10		81%~100% Battery capacity		●	●	●	●	●			●	●	Beep once every 4 sec
11	Bypass mode			↑	↑	↑	↑	●	●	●			Beep once every 2 min.
12	overloaded in utility mode and UPS still in INV mode		●	●	●	●	●	●		●	●		Beep twice every sec.
13	overloaded in utility mode and UPS still in bypass mode		●	●					●	●			Sustained beep
14	Utility power abnormal			↑	↑	↑	↑	●	★	↑	↑	↑	↑
15	Overloaded in battery mode, Early-warning		●	●	↑	↑	↑	↑			●	●	Beep twice every sec.
16	Overload in battery mode, Cut off the output		●	●									Continuously beep
17	Over temperature		●					●	↑	↑			Continuously beep
18	Inv abnormal		●				●		↑	↑			Continuously beep
19	Output short circuited		●	●			●		↑	↑			Continuously beep
20	BUS voltage abnormal		●			●			↑	↑			Continuously beep
21	Charger or battery failed		●		●		●		↑	↑		★	Continuously beep
22	Battery voltage abnormal		↑	↑	↑	↑	↑	●		●		★	↑
23	BAT SCR failed		●		●			●					Continuously beep
24	Fan abnormal		●	●				●	●	●			Continuously beep
25	Bypass STSfailed		●				●	●	●	●			Sustained beep
26	INV RLY failed		●			●		●	●	●			Sustained beep
27	Communication abnormal		●		●	●			↑	↑			Sustained beep

● : Sustained lit ★ : Flash ↑ : LED display and alarm warning are dependent on other conditions

●Complete description of problem, including the LED display. alarm warning, and power condition and load capacity. If your UPS is a long backup time model, you may also provide the battery information.

- Power ON/OFF: To turn on the UPS simply by pressing the ON/OFF button on the front panel continuously for 1 second. Press the “ON/OFF” button on the font panel continuously for 1 second to turn off the UPS.
- Bypass LED (orange LED): Whenever the bypass LED is turned on, it shows that the loading current is supplied directly from the utility power.
- Utility power LED(green LED): Whenever the utility power LED is turned on, it shows that the utility power is normal.
- INV LED(green LED): Whenever the INV LED is turned on, it shows that the loading current is supplied from utility power or battery via the inverter.
- Battery LED（orange LED）: Whenever the battery LED is turned on, it shows that the loading current is supplied for battery via the inverter.
- Fault LED（red LED): Whenever the fault LED is turned on, it shows that the UPS is in abnormal condition.
- #2-#6 LEDs (the #2 LED is orange and the #3-#6 LEDs are green): these LEDs indicate the percentage of the load capacity in utility power mode or battery capacity level in battery mode.

Chapter 5 Trouble shooting

No.	Operating state		LED display										Alarm warning
			1#	2#	3#	4#	5#	6#	7#	8#	9#	10#	
1	Utility Power Mode	0~35% Load capacity						●		●	●		none
2		36%~55% Load capacity					●	●		●	●		none

Chapter 1 Brief Introduction

1. 1 System and model description

This Online Series is an uninterruptible power supply incorporating double-conversion technology. It provides perfect protection specifically for computer equipment, Communication Systems to computerized instruments.

The double-conversion principle eliminates all mains power disturbances. A rectifier converts the alternating current from the utility power to direct current . This direct current charges the batteries and powers the inverter. On the basis of this DC voltage. the inverter generates a sinusoidal AC voltage which is constantly powering the loads.

Computers and Peripherals are thus powered entirely by the UPS. In the event of power failure, the maintenance-free batteries power the inverter.

This manual is applicable to the following models:

1）The 3P10KS is a three-phase input and single-phase output long backup time model, which is able to connect to external batteries. Hereinafter called three-phase 10KS.

2） The 3P15KS is a three-phase input and single-phase output long backup time model, which is able to connect to external batteries. Hereinafter called three-phase 15KS.

3） The 3P20KS is a three-phase input and single-phase output long backup time model, which is able to connect to external batteries. Hereinafter called three-phase 20KS.

1. 2 Description of commonly used symbols

The following symbols will be used in this manual and may appear during the course of your practical applications. Therefore, all users should be familiar with them and understand their meanings.

Notation and Explanation	
Notation	Explanation
	Alert you to pay special attention
	Caution of high voltage
	Turn on the UPS
	Turn off the UPS
	Idle or shut down the UPS
	Alternating current source (AC)
	Direct current source (DC)
	Protective ground
	Alarm silence
	Overload indication
	Battery check
	Recyclable
	Do not dispose with ordinary trash

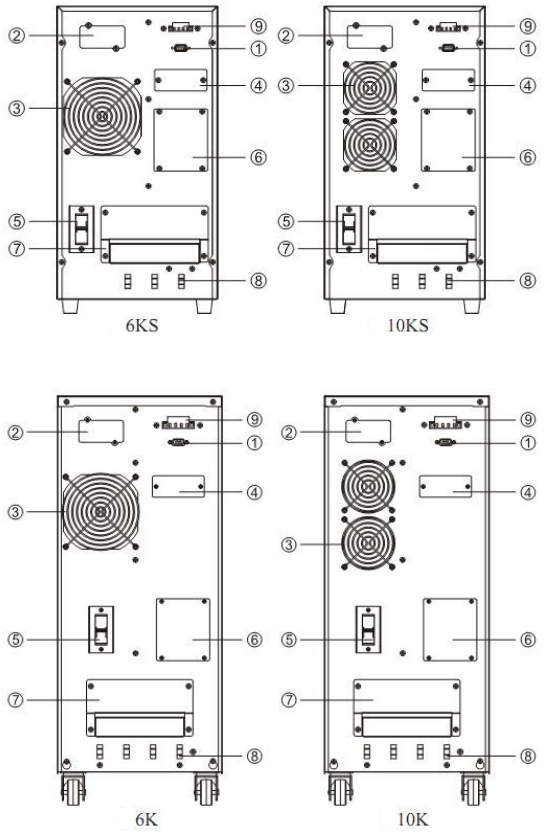
UPS beeps continuously	load equipmentis faulty	reduce the number of loads connected to the UPS. Check that the loads are not failed.
The #1 Fault LED and the battery LED are turned on, the buzzer beeps every second	The chargerof the UPS is defective.	Please contact the distributor or service center
Battery LED flashes	Battery low or battery not connected	Check the battery If the battery is damaged, replace the battery immediately and ensure that the battery breaker is in the “ON” position.
The utilitypower is normal, but the UPScan not turn in line mode	Bypass breaker in theOFF position	Set the bypass breaker in the “ON” position.
Battery discharging time diminishes	Battery not yet been fully charged	Keep UPSconnected to utility power persistently for more than10 hours to recharge the batteries again.
	UPS overloaded	Check the loads and remove the no-critical equipment.
	Battery aged	Replace the batteries. Please contact the distributor to obtain the parts and replacement serviced.
The UPS cannot power on after pressing the “ON” button	The “ON” button is pressed too briefly	Press the ON button for more than 1 second.
	The UPS is not connected to the battery or the battery pack voltage is too low.	Check the battery or recharge the battery.
	UPS fault	Please contact the distributor or service center

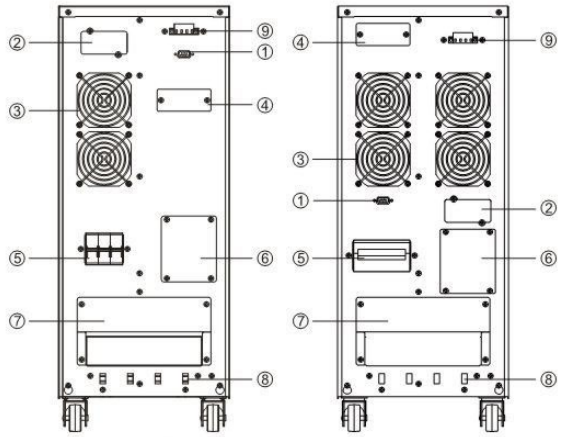
When you contact the service center, please provide the following information:

●Model No. and the serial No.of the UPS; ●The date when the problem arose;

4. 1. 1. 1 Problem	Possible cause	Solution
The #1 Fault LED and the #6 LED are turned on, the buzzer beeps continuously	The UPS shutdown due to internal overheat	Make sure the UPS is not overloaded; the air vents is not blocked and the ambient temperature is not too high. Wait for 10 minutes for the UPS to cool down before turning on again. If failed, please contact the distributor or service center
The #1 Fault LED and the #2 and #5 LED are turned on, and the buzzer beeps continuously	The UPS output is short circuit.	Turn off the UPS. Remove all the loads. Ensure that the load is not failed or the UPS has no internal faults before turning it on again. If failed, please contact the distributor or service center
The #1 Fault LED and the #4 LED are turned on, the UPS beeps continuously	The UPS shuts down due to its internal fault.	Please contact the distributor or service center.
The #1 Fault LED and the #5 LED are turned on, the UPS beeps continuously	The UPS shuts down due to its internal fault.	Please contact the distributor or service center.
The #1 Fault LED and the #3 LED are turned on, the UPS beeps continuously	Overcharging protection	The charger of the UPS is failed. Please contact the distributor or service center
The utility power LED flashes	The voltage or frequency of the utility power is out of the input range of the UPS.	The UPS is running in battery mode to save your data and close the application program. Make sure the utility power is within the input voltage or frequency range permitted by the UPS.
The #1 Fault LED and the #2 LED are turned on, the	The UPS is overload or the	Check the loads and remove all no-critical equipment. Recalculate the load power and

1. 3 Rear View





①Computer Interface

②Intelligent Slot

③Fan

④Parallel Cover（Optional）

⑤Input Switch

⑥Maintain Switch Cover（Optional）

⑦Terminal Cover

⑧Cable fix frame

⑨EPO（Optional）

1. 4 Product specification and performance

- General specification

Power rating	Model	Frequency (Hz)	Input		Battery
			Voltage	Current *	Voltage
6KVA/4.8kW	6K	50/60	(120-275) VAC	31A max.	192VDC
6KVA/4.8kW	6KS	50/60	(120-275) VAC	31A max.	192VDC
10KVA/8kW	10K	50/60	(120-275) VAC	50A max.	192VDC
10KVA/8kW	10KS	50/60	(120-275) VAC	50A max.	192VDC

materials from the authorized distributors or service centers, So as to avoid overheat or spark resulting in fire due to insufficient capacity.

3）Do not dispose of batteries or battery packs in a fire， they may explode.

4）Do not open or mutilate batteries, released electrolyte is highly poisonous harmful to the skin and eyes.

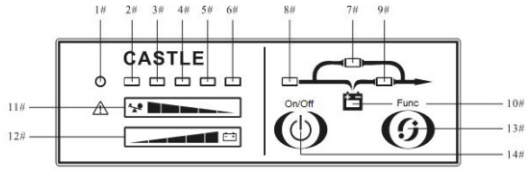
5）Do not short the positive and negative of the battery electrode, otherwise, it may result in electric shock or fire.

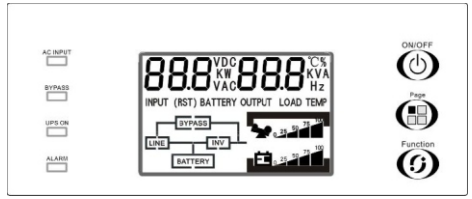
6）Make sure that there is no voltage before touching the batteries. The battery circuit is not isolated from the input potential circuit. There may be hazardous voltage between the battery terminals and the ground.

7）Even though the input breaker is disconnected, the components inside the UPS are still connected with the batteries, and there are potential hazardous voltage. Therefore, before any maintenance and repairs work is carried out, switch off the breaker of the battery pack or disconnect the jumper wire of connecting between the batteries.

8） Batteries contain hazardous voltage and current Battery maintenance such as the battery replacement must be carried out by qualified personnel who are knowledgeable about batteries. No other persons should handel the batteries.

Trouble shooting





Chapter 4 Notes for battery disposal

- This series UPS only requires minimal maintenance. The battery used for standard models are regulated sealed lead-acid maintenance free battery. These models require minimal repairs. The only requirement is to charge the UPS regularly in order to maximize the expected life. When being connected to the utility power, whether the UPS is turned on or not, the UPS keeps charging the batteries and also offers the protective function of overcharging and over discharging.
- The UPS should be charged once every 4 to 6 months if it has not been used for a long time.
- In the regions of hot climates, the battery should be charged and discharged every 2 months. The standard charging time should be at least 12 hours.
- Under normal conditions, the battery life last 3 to 5 years. In case if the battery is found not in good condition earlier replacement should be made. Battery replacement should be performed by qualified personnel.
- Replace batteries with the same number and same type of batteries.
- Do not replace the battery individually. All the batteries should be replaced at the same time following the instructions of the battery supplier.
- Normally, the batteries should be charged and discharged once every 4 to 6 months. Charging should begin after the UPS shuts down automatically in the course of discharging, the standard charging time for the standard UPS should be at least 12 hours.

1） Before disposing of batteries, remove conductive jewelry such as necklace, wrist watches and rings.

2）If it is necessary to replace any connection cables, please purchase the original

10KVA/8kW	3-phase10KS	50/60	(207-476)VAC	50A max.	192VDC
15KVA/12kW	3-phase15KS	50/60	(207-476)VAC	86A max	192VDC
20KVA/16kW	3-phase20KS	50/60	(207-476)VAC	100A max.	192VDC

Power rating	Model	Battery	Output		Dimensions (W×L×H(mm)	Weight (kg)
		Current	Voltage	Current		
6KVA/4.8kW	6K	—	220VAC	27A	240x515x458	84
6KVA/4.8kW	6KS	34A max,	220VAC	27A	240x515x458	35
10KVA/8kW	10K	—	220VAC	45A	248x500x616	93
10KVA/8kW	10KS	56A max.	220VAC	45A	240x515x458	38
10KVA/8kW	3-phase10KS	56A max.	220VAC	45A	240x515x458	39
15KVA/12kW	3-phase15KS	83A max.	220VAC	68A	248x500x616	55
20KVA/16kW	3-phase20KS	112A max.	220VAC	91A	248x500x616	55

* When ups input 187V. Output up to full load, It reaches max input current.

- Electrical performance

Input			
Model	Voltage	Frequency	Power Factor
6K(S)/10K(S)	Single-phase	46Hz-54Hz	>0.98 (Full load)
Three-phase 10KS/15KS/ 20KS	Three-phase	46Hz-54Hz	>0.95 (Full load)

Output					
Voltage regulation	Power factor	Frequency tolerance	Distortion degree	Overload capacity	Current crest ratio
±1%	0.8lag	Synchronized 46~54Hz in Line mode(AC mode) ±0.1% of normal frequency in Battery mode.	THD<2% Full load (linear load)	105% ~130% load transfers to bypass mode after 10 minutes. >130% load transfers to bypass mode after 1 second and shutdown the output after 1 minutes	3:1 maximum

- Operating environment

Temperature	Humidity	Altitude	Storage temperature
0℃~40℃	20%~90%	<1000m	-15℃~40℃

*Note: if the UPS is installed or used in a place where the altitude is above than **1000m**, the output power must be derated in use,please refer to the following:*

Altitude（M）	1000	1500	2000	2500	3000	3500	4000	4500	5000
Derating power	100%	95%	91%	86%	82%	78%	74%	70%	67%

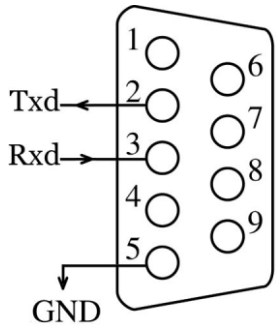
Standards

*** Safety**	
IEC/EN 62040-1	
*** EMI**	
Conducted Emission.....:IEC/EN 62040-2	Category C3
Radiated Emission.....:IEC/EN 62040-2	Category C3
***EMS**	
ESD.....:IEC/EN 61000-4-2	Level 4
RS.....:IEC/EN 61000-4-3	Level 3
EFT..... :IEC/EN 61000-4-4	Level 4
SURGE.....:IEC/EN 61000-4-5	Level 4
CS.....:IEC/EN 61000-4-6	Level 3
Power-frequency Magnetic field.....:IEC/EN 61000-4-8	Level 4
Low Frequency Signals.....:IEC/EN 61000-2-2	
Warning: This is a product for commercial and industrial application in the second environment-installation restrictions or additional measures may be needed to prevent disturbances.	

Data bit: 8 bit

Ending bit:1bit

Parity bit: None



RS232 Interface

Below is DB-9 pin assignment

Pin number	Function description	I/O
3	Rx	input
2	Tx	output
5	Ground	GND

Optional AS400 interface

This optional AS400 card provides dry contact

Following are the pin assignment and the descriptions of AS400 card:

PIN1: UPS failure (normally open, active close)

PIN2: summary alarm

PIN3: ground

PIN4: Remote shutdown

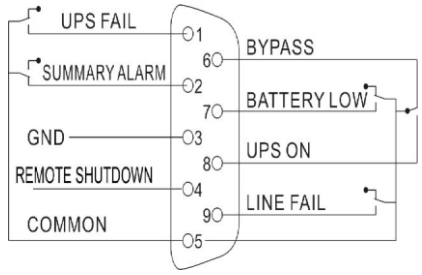
PIN5: Common

PIN6: Bypass active(relay close)

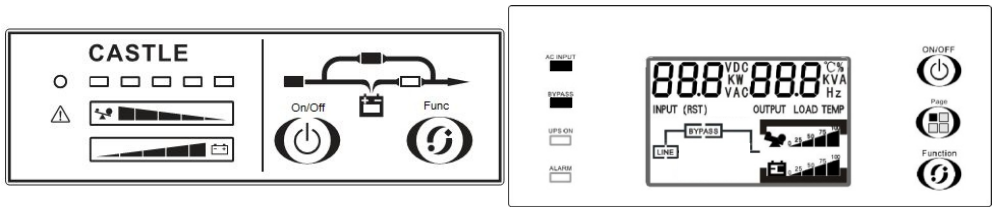
PIN7: Battery low

PIN8: UPS On(relay close)

PIN9: Utility Power failure(normally open, active close)



AS400 Interface



2） Other indications on the display panel are the same as the descriptions of utility mode.

3） The UPS does not have the backup function when it is in bypass mode. The power used by the load is supplied from the utility power via internal filter.

4. Abnormality mode

In case the fault LED is turned on when the UPS is in use, it shows that the UPS is operating in abnormal mode. Please refer to the troubleshooting in section 6 for detail.

6. Communication Port

Intelligent slot

This series is equipped with on intelligent slot for Web power (optional accessory) to achieve remote management of the UPS through internet/intranet. Please contact your local distributor for further in formation.

RS232 interface

1）The following are the descriptions and pin asssignment of Rs232 DB-9 port:

Baud rate：2400bps

Chapter 2 Installation

2. 1 Unpacking and inspection

1） Unpack the packaging and check the package contents. The shipping package contains:

- UPS
- User manual
- Communication cable

2） Inspect the appearance of the UPS to see if there is any damage during transportation. Do not turn on the unit and notify the carrier and dealer immediately if there is any any damage or lacking of some parts.

2. 2 Input and output power cords and protective earth ground installation

2. 1. 1 Notes for installation

1） The UPS must be installed in a location with good ventilation far away from water. inflammable gas and corrosive agents.

2） Ensure the air vents on the front and rear of the UPS are not blocked. Allow at least 0. 5m of space on each side.

3） Condensation to water may occur if the UPS is unpacked in a very low temperature environment. In this case it is necessary to wait until the UPS is fully dried inside out before proceeding installation and use. Otherwise there are hazards of electric shock.

2. 1. 2 Installation

Installation and wiring must be performed in accordance with the local electric code

and the following instructions by professional personnel.

For safety, please cut off the mains power switch before installation. The battery breaker also needs to be cut off if it is a long backup time model(”S”model)

1） Open the terminal block cover located on the rear panel of the UPS (please refers to the appearance diagram)

2） For 6K（S）UPS, it is recommended to select the UL1015 10AWG(6mm ^{2})wire or the other insulated wire which complies with AWG Standard for the UPS input and output wirings.

3） For 10K(S)/3 phase 10KS UPS, it is recommended to select the Ul1015 8AWG (10mm ^{2}) wire or the other insulated wire which complies with AWG Standard for the UPS input and output wirings.

4） For 3 phase 15KS／3 phase 20KS UPS, it is recommended toselect the UL 1015 6AWG(25mm^2) wire or the other insulated wire which complies with AWG Standard for the UPS input and output wirings.

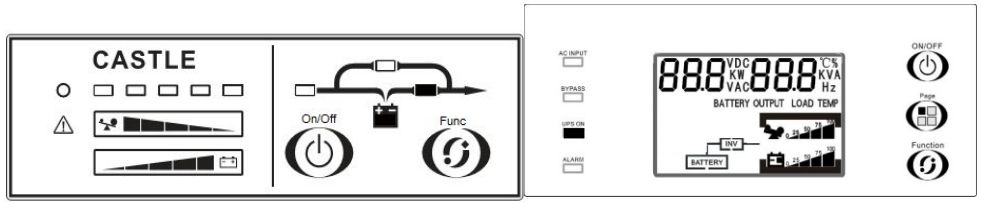
Note : Do not use the wall receptacle as the input power source for the UPS, as its rated current is less than the UPS’s maximum input current. Otherwise the receptacle may be burned and destroyed.

5） Connect the input and output wires to the corresponding input and output terminals according to the following diagram.

Note: *you must make sure that the input and output wires and the input and output terminals are connected tightly*.

6） For 6K(S) UPS, please connect the input protective earth terminal to the safe position and connect the output protective earth terminal to the position protected by the load with the green and yellow wire UL1015 10AWG(6mm^2）.

1） When the UPS is running in battery mode, the buzzer beeps once every 4 seconds. If the “Func” button on the front panel is pressed for more than 1second, the buzzer will stop beeping (in silence mode). Press the “Func” button again for morethan 1 second to resume the alarm function.



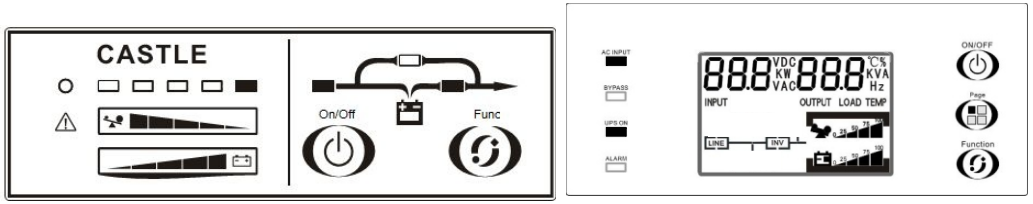
2）When the battery capacity decreases, the number of the battery capacity LEDs turned on will be reduced, If the battery voltage descends to the alarm level, the buzzer will beep once every second to remind the users of in sufficient battery capacity and the UPS is going to shut down automatically. Then the load operations should be carried out promptly and the loads should be eliminated one by one.

3. Bypass mode

The display panel in bypass mode is shown in the following diagram Fig.3-3. The utility power LED and the bypass LED are lit. The displayed number of the load LEDs will be turned on in accordance with the load capacity connected. The UPS will beep once every 2 minutes in bypass mode.

1） The utility power LED flashes, it shows that the voltage or frequency of the utility power has exceeded the normal range.

1） If the battery LED is turned on and the utility power LED flashes, it indicates the voltage or frequency of the utility power has exceeded the normal range, the UPS operates in battery mode.



2）If output overloaded, the load level LEDs will be turned on and alarm will keep twice every second. You should get rid of some the unnecessary loads one by one to decrease the loads connected to the UPS less than 90%.

Note：**Please follow the following steps to connect the generator**：

- Activate the generator and wait until the operation is stable before supplying power of the generator to the UPS (be sure that the UPS is in idle mode). Then turn on the UPS according to the start-up procedure. After the UPS in turned on. the loads are connected to the UPS one by one.
- The power capacity of the AC generator should be at least twice of the UPS capacity.

2. Battery mode

The display panel in battery mode is shown in the following diagram Fig.3-2. The battery LED and the INV LED are turned on. The displayed number of the battery level LEDs will be turned on in accordance with the battery capacity. Note that the load level LEDs. in utility power mode will indicate the level of the battery capacity in battery mode.

7） For 10K(S)/3 phase 10KS UPS, please connect the input protective earth terminal to the safe position and connect the output protective earth terminal to the position protected by the load with the green and yellow wire UL1015 8AWG（10mm^2）.

8） For 3 phase 15KS/3 phase 20KS UPS, please connect the input protective earth terminal to the safe position and connect the output protective earth terminal to the position protected by the load with the green and yellow wire UL 1015 6AWG（25mm^2）.

9） The protective earth ground wire refers to the wire connection between the equipment which consumes electric equipment and the ground wire. The wire diameter of protective earth ground wire should be at least as above mentioned for each model and green wire or green wire with yellow ribbon wire is used.

10）After having completed the installation, make sure the wiring is correct.

11）Please install the leak current protective breaker at the output power distribution panel of the UPS if necessary.

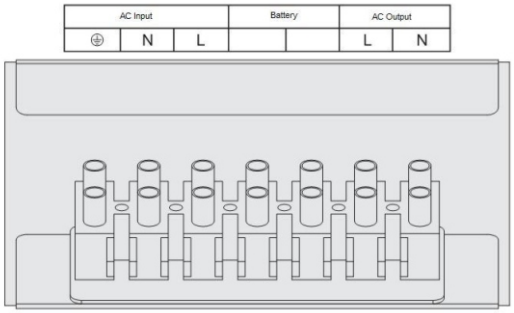
12）To connect the load with the UPS, please turn off all the loads first, then perform the connection and finally turn on the loads one by one.

13）No matter the UPS is connected to the utility power or not, the output of the UPS may have electricity. The parts inside the unit may still have hazardous voltage after turning off the UPS. To make the UPS have no output, power off the UPS, and then disconnect the utility power supply.

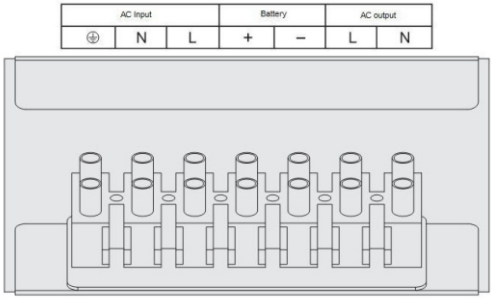
14）Suggest charging the batteries for 8 hours before use. After connection, turn the bypass breaker in the “ON” position, the UPS will charge the batteries automatically. Do not charge, you can also use the UPS immediately without charging the batteries first, but the backup time may e less than the standard

value.

15）It is necessary to connect the inductance load such as a monitor or a laser printer to the UPS, the start-up power should be used for calulating the capacity of the IPS, as its start-up power consumption is too big when it is started.



6K/10K



6KS/10KS

3） Upon completion of the above to turn it off, output of electric current of the UPS is still present. in order to cut off the output from the UPS, simply cut off the utility power supply and the UPS will perform self-diagnosis, finally not any display is shown on the display panel and no voltage output is available from the UPS output.

4. Turn off the UPS with no utility power supplied（in Battery mode）

1） Press the “ON/OFF” button continuously for more than 1second to power off the UPS.

2） When being powered off, the UPS will perform self-diagnosis, the Load/Battery level LEDs will be turned on and then off one after another in ascending order. Finally not any display is shown on the display panel and no voltage is available from the UPS output.

Suggestions: Please turn off the connected loads before turning on the UPS and turn on the loads one by one after the UPS is working in INV mode. Turn off all of the connected loads before turning off the UPS.

3. 2 Operating mode

1. Utility power mode

The display panel in utility power mode is shown in the following diagram. The utility power LED and the INV LED are turned on . The load level LEDs will be turned on in accordance with the load capacity connected.

3） When being powered on, the UPS will perform self-diagnosis, with the load/battery level LEDs turned on and then off one after another in ascending order. A few seconds later, the INV LED is turned on, the UPS is already running in the utility power mode. if the utility power is abnormal, the UPS will operate in battery mode without output interruption of the UPS.

2. Turn on the UPS with no utility power supplied（in Battery mode）

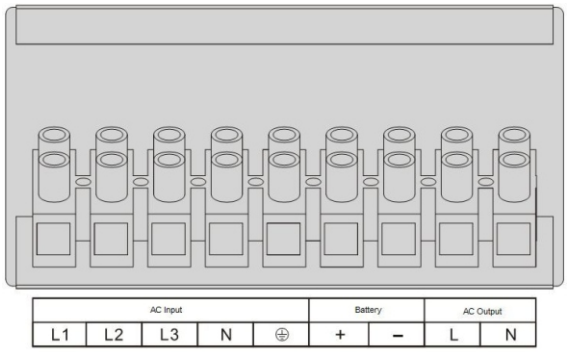
4） Press the “ON/OFF” button continuously for more than 1 second to power on the UPS. For long back up time model(”S” model). please make sure that the battery breaker is in “ON” position.

5） During the course of starting up, the UPS has the same action as if it is connected to utility power except that the utility power LED is not turned on and the battery LED is turned on instead.

3. Turn off the UPS with utility power supplied（in Line mode/AC mode）

1） Press the “ON/OFF” button continuously for more than 1second to turn off the inverter of the UPS instead.

2） When being power off, the UPS will perform self-diagnosis, the Load/Battery level LEDs will be turned on and then off one after another in ascending order, then the INV led will be turned off and Bypass LED will be turned on. The UPS is working in bypass mode.



3P10KS/3P15KS/3P20KS

2. 3 Operating procedure for connecting the long backup time model UPS with the external battery

1. The nominal DC voltage of external battery pack is 192VDC, Each battery consists of 16 pieces of 12V free batteries in series. To achieve longer back time, it is possible to connect multi-battery pack(S), but the principle of “same voltage, same type” should be strictly followed.
2. The connector of the external battery cable is used to plug into external battery socket of the UPS, the other end of the external battery cable is made of three open wires with ring terminals to connect with the external battery pack(S). The battery connecting procedure should be complied with strictly. Otherwise you may encounter the hazardous of electric shock.

1） A DC breaker must be connected between the battery pack and the UPS. The capability of breaker must be not less than the data specified in the general specification list.

2） Set the battery pack breaker in “OFF” position and connect the 20 pieces of batteries in series.

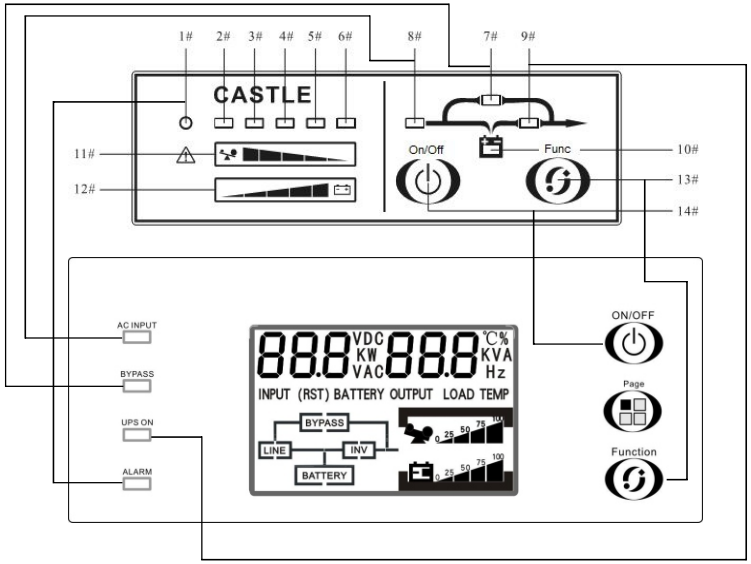
You must connect the external battery cable to the battery first for if you connect

the cable to the UPS first, you may encounter the hazardous of electric shock. The positive pole of the battery is connected to the 10KS/3 phase 10KS in parallel with blue and brown wires. the negative pole of the battery is connected to the 10KS/3 phase 10KS in parallel with black and white wires; the green and yellow ribbon wire is connected to the ground of the battery cabinet. For three-phase 15KS/20KS, the connection of battery wire is the same as that of input and output wire, and a green &brown wire UI1015 6AWG(25mm^2) must be connected between the input protective earth terminal and the battery cabinet.

It is easy to operate the equipment, with no previous training. You just need to read through this user manual and operate according to the instructions in it. The meaning of the LED indicators, please refer to the appendix 1 Display panel

Chapter 3 Operation and operating mode

3. 1 Operation



1. Turn on the UPS with utility power supplied（in Line mode/AC mode）

1） After you make sure that the power supply connection is correct. set the input breaker in the “ON” positions first. At this time the fan rotates and the UPS supplies power to the load via the bypass. The UPS operates in the bypass mode.

2） To power on the UPS by simply pressing the “ON/OFF” button continuously for more than 1second.