AC2300 – AC2305
Line Interactive UPS 600 VA

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Manual

www.act-connectivity.com

AC2300 – AC2305 | Line Interactive UPS 600 VA

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1.0 Introduction

Congratulations with the purchase of this high-quality ACT product! This product has undergone extensive testing by ACT's technical experts. Should you experience any problems with this product, you are covered by ACT warranty. Please keep this manual and the receipt in a safe place.

Register your product now on www.act-connectivity.com and receive product updates!

1.1 Functions and features

The AC2300 – AC2305 are UPS systems designed to effortlessly handle a power failure without the loss of important data. Because these devices are also equipped with a backup function, you can shut down your computer or have it make a backup without the chance of losing data. These UPS systems are all equipped with a sound alarm which is activated as soon a power failure occurs, warning you to shut down your computer or to make a backup.

1.2 Packing contents

The following parts need to be present in the packing:

- AC2300 / AC2305 Line Interactive UPS with AVR

2.0 Remarks about Safety

In order to keep safe in using the UPS, please comply with the following:

- Please charge the battery at least 24 hours before the UPS is in operation.
- After the battery is discharged or over three months without operation, the battery should be charged immediately for at least 12 hours, ensuring the battery is full and avoiding any unnecessary damage of the battery.
- The UPS is specially designed for computer only and it should not be connected with any inductive or capacitive load, like electromotor, daylight lamp, laser printer, etc.
- The UPS is not suitable for being used in life support systems, because it may have some problems and bring trouble to the life support systems. The responsibility will be users', if they insist on using the UPS in life support systems.
- It is normal that the temperature of the UPS surface reaches up to 50℃ when it is in operation.
- When AC fails and the “ON” button on the front panel is pressed, the UPS will output voltage; if the “OFF” button on the front panel is pressed, the UPS will not output voltage.
- It is forbidden to open the case, because there is danger with electricity. If there is problem, please handle with the instruction of experts.
- It is forbidden to put container containing liquid inside on the UPS, because it will cause danger of electric shock or fire when the UPS short-circuits.
- When the UPS is abnormal, please cut off power immediately and turn to experts or the dealer for help.
- As there is no overload protection of the UPS, it cannot be overloaded. Otherwise, it would cause danger.
- It is strictly forbidden to place and operate the UPS in the following environment：
    - Place with inflammable gas or corrosive gas or much dust；
    - Place with very high temperature or very low temperature(above 42℃ or below

- 0℃) or high humidity(above 90%) ;
- Place with direct sunlight or near heater ;
- Place with strenuous vibration ;
- Outside

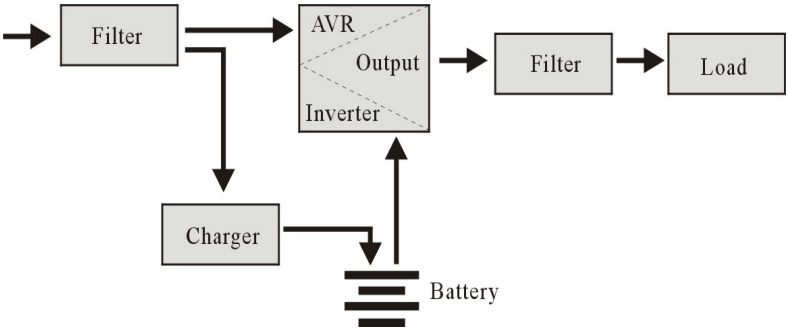
- Please use dry powder fire extinguisher in case of fire; it is forbidden to use fluid fire extinguisher because it will cause electric shock.
- Please put the socket near the UPS, in this way, it is convenient to disconnect the socket and cut off power in case of emergency.

Attention! Please ground the UPS for safety purpose

3.0 Working Principle

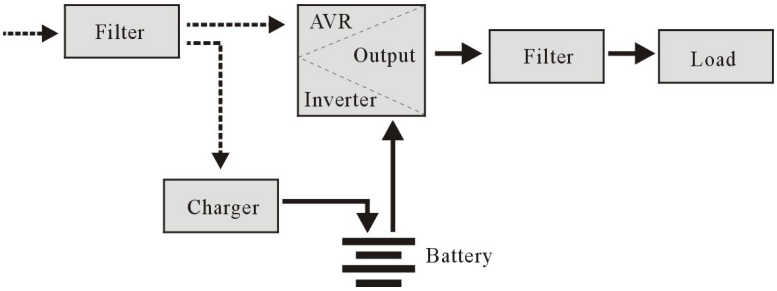
3.1 In AC mode

When UPS is in normal working mode, AC goes through the filter and the harmful waves are filtered. After that, AC charges the battery and meanwhile, passes UPS AVR and the filter and provide power for the equipment.



3.2 AC Failure

When AC fails, the battery will supply power to the inverter and then passes filter and provide power for the equipment, ensuring the continuous power supply.



3.3 UPS outputs

The AC2300 UPS has 6 outputs:

- At the left side three outputs for power failure (surge/spike) protection.
- At the right side three outputs for power failure (surge/spike) protection with a backup function when AC fails. The built-in battery will continue to supply power for the connected equipment.

The AC2305 UPS has 2 outputs 1x IEC (C13) + 1x EU socket type F female:

Both outputs are for power failure (surge/spike) protection with a backup function when AC fails. The built-in battery will continue to supply power for the connected equipment.

3.4 Battery and Charging:

- When the UPS is connected to AC, the charger will charge the battery fully in about 10 hours.
- When the battery is used up, please turn off the UPS and charge the battery for a least 10 hours when. Then turn on the UPS

4.0 Main Features

4.1 Unattended Operation

- Please connect the UPS to AC and press the ON button on the front panel, the UPS is turned on and the AC outputs stabilized voltage.
- When AC fails, UPS will supply power to the equipment immediately. And when the battery is used up, UPS will turn off automatically.
- When AC comes back, UPS will turn on automatically.

4.2 Protection

- Battery discharge protection: when the battery discharges and the UPS is in inverter mode, the UPS will check and monitor the working status of the battery; when the battery voltage drops to the limited lowest voltage, the inverter will turn off automatically and protect the battery; When AC comes back, the UPS will turn on automatically.
- Short-circuit Protection: when the UPS is in inverter mode and there is shock or short-circuit, UPS will output limited currency, protecting the UPS(When in AC mode, the UPS will be protected first by input fuse and then transfers to the inverter working mode).

4.3 Four Kinds of Alarm Function

- When AC fails, and the UPS supplies power, UPS will alarm once every 10 seconds and the beep stops about 40 seconds later.
- When the battery is nearly used up, the UPS will alarm automatically and the beep frequency is once every 1 second.
- Overload, when the UPS is overloaded, UPS will alarm once every 0,5 second
- Fault, if there is a faulty operation of the UPS, UPS will alarm continuously.

4.4 Lock Phase Function

In AC mode, the UPS system automatically tracks AC phase and ensures that the output wave form of the inverter is the same with AC voltage wave form. In this way, it reduces the peak pulse and surge voltage to minimizes the interference and damage to the equipment.

4.5 The Function of the Self-set Frequency

When the UPS is turned on for the first time, the acquiescence frequency is 50/60Hz; when it is connected to AC, the frequency is automatically set to 50Hz or 60Hz in accordance with AC.

5.0 UPS Led

LED indicator:

AC Mode	Green LED is ON
Battery Mode	Yellow LED is flashing
Fault mode	Red light is ON

6.0 Installation and Operation

1. Shut down the load (for example PC)
2. Put UPS on the proper position
3. Connect load (for example PC) to the UPS
4. Put the plug to the AC power socket(make sure GND is connected well)

SUGGESTION: This UPS is the power supply for the computer, monitor and hard disk(CD) etc. It has a limited backup time for the load, so you'd better not connect a printer or other equipment to it.

5. Press the On/Off button on the UPS, the green LED and yellow LED will light up, then you can turn on your computer etc.

Remark :

1. *Generally speaking, don't turn off the UPS so the battery keeps charging.*
2. *When AC fails the UPS will turn to battery mode. Please save important documents in time.*

7.0 Maintenance

7.1 Preventative Maintenance

Preventive Maintenance ensures the longer Service life of UPS. Please check the following steps every month:

1. Turn off the UPS;
2. Make sure the air grid is not blocked;
3. Make sure that the UPS surface is not covered by dust;
4. Check whether the input and output connectors are firmly connected
5. Make sure that the UPS is not affected with damp;
6. Turn on the UPS;
7. Let the UPS work in battery mode for about 5 minutes. If there is no other alarm in this period, then the UPS is working normal; if there is another alarm message, please contact the local dealer for help.

7.2 Battery Maintenance

The UPS contains a sealed lead-acid maintenance-free battery (batteries). Bad environmental conditions, to high discharge frequency, to high temperature, etc will dramatically reduce the battery life. The battery life will also reduce even if it is not used. It is suggested to discharge the battery once every 3 months when AC is normal. The following steps explains how to check the battery. When the battery is near the end of its life, the battery will end in bad performance. So, please remember the following steps of checking and maintenance:

1. Connect the UPS to AC and turn on the UPS, charge the battery for at least 10 hours. Do not attach any load to the UPS while charging.
2. Connect any load to the UPS (UPS and Surge outputs) and remove the input plug from the UPS to simulate AC failure. The battery of the UPS will discharge until the UPS turns off automatically.
3. Please record the connected load and discharge time for a later check.
4. When the discharge time is 80% of the initial discharge time, the performance of the battery will be weakened faster and accordingly the checking frequency of the battery should be changed to every month.

7.3 Handling of abnormity

The UPS can serve and provide protection to users equipment, but if there is something abnormal, please turn to local UPS dealer for help, avoiding unnecessary damage to the UPS.

When the UPS has the following problems, please follow the Steps below and if the problem still cannot be solved, Please contact the local dealer.

Phenomenon	Trouble Shooting
Battery fails to supply power.	Check whether the battery isn't charged enough? Check whether the UPS is turned on correctly?
UPS doesn't turn to AC (the input plug of the UPS has been plugged into the AC socket and AC is normal, and the “on/off” button has been pressed, but the AC indicating light is not bright and the alarm beeps.	Check whether the fuse is broken? The fuse is placed on the UPS back panel or near the AC input After disconnecting the AC plug, put out the fuse and check whether the fuse is broken, if so, please replace it with a new fuse.
When AC fails, the computer doesn't work.	When AC is working normal, please turn on the UPS and charge the battery for at least 10 hours. Please be sure the load is connected to the correct output
AC output is normal, but the alarm beeps.	AC is over voltage or low voltage.

8.0 Specifications

8.1 AC2305 Specifications

INPUT	
Capacity	600VA/360W
Nominal Input Voltage	110/120 Vac or 220/230/240 Vac
Operating Voltage Range	81～145 Vac/162～290 Vac
Operating Frequency Range	60/50Hz (Auto sensing)
OUTPUT	
AC Voltage Regulation (Batt. Mode)	±10%
Transfer Time	Typical 2-6ms, 10ms Max.
Waveform (Batt. Mode)	Simulated Sinewave

BATTERY	
Battery Voltage	12Vdc
Battery Type & Number	12 V/7Ah×1
Typical Recharge Time	4～6 hours recover to 90% capacity
PROTECTION	
Full Protection	Short circuit, Overload , Overcharge and overdischarge protection
MANAGEMENT	
Communication Port	USB or RS232(Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7, Linux, Unix, and MAC)
OPERATING ENVIRONMENT	
Humidity	0-90 % RH @ 0- 40°C (Non-condensing)
Noise Level	Less than 45dB
PHYSICAL	
Approx. Dimension (D×W×H)	298×101×142mm
Approx. Net Weight	Approx. 4.3kg

8.2 AC2300 Specifications

INPUT	
Capacity	600VA/360W
Nominal Voltage	220/230/240Vac
Operating Voltage Range	162～290Vac
Operating Frequency Range	50/60Hz (1±10%) auto-sensing
OUTPUT	
AC Voltage Regulation (Batt. Mode)	±10%
Frequency Range (Batt. Mode)	50/60Hz±1Hz
Transfer Time	Typical 2-6ms, 10ms Max.
Waveform (Batt. Mode)	Simulated Sinewave
BATTERY	
Battery Voltage	12Vdc
Battery Type & Number	12 V/7Ah×1
Typical Recharge Time	6~8 hours recover to 90% capacity
PROTECTION	
Full Protection	Short circuit, Overload , Overcharge and

	overdischarge protection
MANAGEMENT	
Communication Port	USB or RS232(Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7, Linux, Unix, and MAC)
OPERATING ENVIRONMENT	
Humidity	0-90 % RH @ 0- 40°C (Non-condensing)
Noise Level	Less than 45dB
PHYSICAL	
Approx. Dimension (D×W×H)	293×202×93mm
Approx. Net Weight	Approx. 3.6kg

9.0 Frequently Asked Questions and other related information

Select **support** on the ACT website to find the latest frequently asked questions for your product. ACT will update these pages frequently to assure you have the most recent information. Check www.act-connectivity.com for more information about your product.

10.0 Service and support

This user manual has been carefully written by ACT's technical experts. If you have problems installing or using the product, please check the **support** link at the website www.act-connectivity.com.

11.0 Warning and points of attention

Due to laws, directives and regulations set out by the European parliament, some (wireless) devices could be subject to limitations concerning its use in certain European member states. In certain European member states the use of such devices could be prohibited. Contact your (local) government for more information about this limitations.

Always follow up the instructions in the manual*, especially where it concerns devices which need to be assembled.

Warning: In most cases this concerns an electronic device. Wrong/improper use may lead to (severe) injuries!

When you connect the device to the mains, make sure it will not be damaged or subject to (high) pressure.

A power socket is needed which should be close and easy accessible from the device.

Repairing of the device should be done by qualified ACT staff. Never try to repair the device yourself. The warranty immediately voids when products have undergone self-repair and/or by misuse. For extended warranty conditions, please visit our website at www.act-connectivity.com

Dispose of the device appropriately. Please follow your countries regulation for the disposal of electronic goods.

Please check below safety points carefully:
- Do not apply external force on the cables
- Do not unplug the device by pulling the power cable
- Do not place the device near heating elements
- Do not let the device come in contact with water of other liquids
- If there is any strange sound, smoke or odor, remove the device immediately from the power outlet.
- Do not put any sharp objects into the venting hole of a product
- Do not use any damaged cables (risk of electric shock)
- Keep the product out of reach of children
- Wipe off the product with soft fabric, not water mop.
- Keep the power plug and outlet clean
- Do not unplug the device form the power outlet with wet hands
- Unplug the device when you don't use it for a long time
- Use the device at a well ventilated place

**Tip: ACT manuals are written with great care. However, due to new technological developments it can happen that a printed manual does not longer contain the most recent information. If you are experiencing any problems with the printed manual or you cannot find what you are looking for, please always check our website www.act-connectivity.com first for the newest updated manual.*

*Frequently asked questions (FAQ). Consult **support** on our website www.act-connectivity.com and see if you can find the right information about your product here. It is highly advisable to consult the FAQ section first, the answer is often here.*

12.0 Warranty conditions

The ACT warranty applies to all ACT products. After buying a second-hand ACT product the remaining period of warranty is measured from the moment of purchase by the product's initial owner. ACT warranty applies to all ACT products and parts, indissolubly connected or mounted to the product it concerns. Power supply adapters, batteries, antennas and all other products not directly integrated in or connected to the main product or products of which, without reasonable doubt, can be assumed that wear and tear during use will show a different pattern than the main product, are not covered by the ACT warranty. Products are not covered by the ACT warranty when exposed to incorrect/improper use, external influences or when opening the service parts of the product by parties other than ACT. ACT may use refurbished materials for repair or replacement of your defective product. ACT cannot be held responsible for changes in network settings by internet providers. We cannot guarantee that the ACT networking product will keep working when settings are changed by the internet providers. ACT cannot guarantee the working of web services, apps and other third party content that is available through ACT products

When my product gets defective

Should you encounter a product rendered defective for reasons other than described above: Please contact your point of purchase for taking care of your defective product.

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