# AK-ND-04 - user manual

www.akyga.com /ak-nd-04

notebook power supplies

## Short description of the product

The Akyga AK-ND-04 power supply is used to deliver power to a notebook with direct current. The 90W power supply is compatible with all 19V/4.74A nootebooks models with 7.4x5.0mm + pin plug. A set of protectors OVP, OTP, OPP, SCP, OCP and the soft start technology provides safe and stable work of both power supply and powered device.

The product is adapted to supply voltage in the range of 100-240V, 50/60Hz.
The power consumption of powering nootebook can not exceed the power supply nominal current.

The product is compatible with the applicable national and European requirements.

## What is in the box?

- AK-ND-04 power supply
- Short user manual

## Symbols explanation:

There is a particular danger connected with service.

There is a risk of losing health or life (e.g. by electic shock).

Important tips and information.

The CE standard description on the product is the manufacturer's declaration that the marked product meets the requirements of the directive so-called The "New Approach" of the European Union (EU). For security and certification (CE) reasons, the device can not be rebuild or change in any way. In the reason of using the power supply for other purposes than those described, the product may be demaged. The incorrect use may also cause hazard such as short-circuits, burns, electric shocks, etc. Read the users manual carefully and keep it for later use. The product could be share to third partie only with the user manual included.

Product accordance with the EU directive 2002/96/EC. The symbol of the crossed out basket placed on the product means that the marked product can not be disposed of with other household waste. After use, the product must be return to collection point for used electical and electronic equipment or to the seller. Appropriate segregation of rubbish for subsequent processing, recovery or descrution contributes to avoiding negative effects on the environment and health, and also allows the recovery of raw materials from which the product is made.

The RoHS mark on the product is the manufacturer's declaration that the marked product meets the requirements of the EU Restriction of Hazardous Substances (2002/95/EC) directive, which aims to reduce the amount of hazardous substances penetrating into the environment from electrical and electronic waste.

The II protection class device. It provides protection against electric shock against direct and indirect contact, and thanks to the additional isolation it is not necessary to connect the device case with the protective earth conductor.

The device is intended only for domestic use, indoors.

## Safety Precautions

WARNING! Product heats up during operation. To reduce the risk of burns or overheating the power supply, do not place it in restricted ventilation area. Also, do not allow the working power supply to touch soft surface such as pillows, blankets or clothing. The power supply meets the limits on the surface temperatures available to the user, as defined in the International Standard for Safety of Information Technology Equipment (IEC 60950).

Connecting notebook whose demanded power is greather than power of the power supply, can cause battery failure or even damage (burn) of power supply.

An electrostatic discharge occurs when two object touch each other, for example, an electric charge that occurs when user touch metal door handle after walking on a carpet . Discharging electrostatic charges from fingers or other electrostatic conductors can damage electronic components. To avoid damaging the computer, abstain from touching electrical outlets, wires and electonic circuits. The user's contact with electronic components should be kept to a minimum.

**The manufacturer of the product is not responsible for damage or insults caused in effect of disobey the safety instructions and informations contained in these user manual.**

- Keep the product and the packaging out of range of children and animals. The package includes a foil that child could choke while playing.
- It is forbidden to apply the mechanical load to the product - strong shocks, impacts, dropping or crushing may cause its damage.
- The product operation in adverse conditions is not allowed. Adverse conditions are primarily: exposure to direct sunlight, high or very low ambient temperatures, strong vibrations, high humidity, surrounds of gases, dusts or flammable and aggressive liquids.
- If the product has been damaged, does not work properly or has been stored for a long period of time in bad or unfavorable conditions, safe operation of the device is not possible. It is essential to stop using the product and to protect it against re-use for security purposes.
- Product and power cord should not be touched with moist or wet hands under no circumstances.
- Short-circuiting the current connection is prohibited.
- Make sure that the power cord is not crushed, bent, twisted, rubbed against sharp edges or mechanically loaded in any other way. Avoid thermal load of the cable - in particular keep away from heat sources (such as stoves, radiators, fireplaces).
- Power cords should be laid in such a way as to eliminate the risk of stumbling or hooking over.
- Its forbidden to modify the power cord. In the case of modifications, the cable may be damaged, causing threats to life, health and property.
- Connection of the power supply to electricity is done by connecting cable with the IEC C5 plug (”clover”) to power supply with IEC C6 connector and then connecting appropriate plug to grounded electrical outlet.
- Before connecting the adapter to the mains socket, make sure that the voltage specified on the power supply matches voltage supplied to the household socket.

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- Mains plug should be disconnect from power socket if the product is not in use for a long time.
- When disconnecting the power cord from the socket and from the device, do not pull on the cord, but only on the part of the cable plug provided for this purpose.
- In case of any doubts regarding operation, safety or connection of the product, please contact the manufacturer or a qualified specialist for this purpose.
- All maintenance, adjustment and repair work on the product may only be carried out by a qualified person in a specialist facility.

## Removing the most common problems

| Problem | Cause | Solution |
|---|---|---|
| A laptop connected to an electrical outlet via power supply does not work | No mains voltage | • Check the correct connection of the power supply to the mains socket<br>• Check the mains fuses |
| | The power supply is overloaded | • Disconnect the power supply from the laptop, check the correctness of the current parameters |
| | There is a suspicion of a product defect | • Stop using and contact the seller |
| A laptop connected to an electrical outlet via power adapter does not charge the battery or displays a message about the non-genuine charger | The power supply does not correspond to the current parameters | • Disconnect the power supply from laptop and check if current parameters are correct<br>• Contact with seller |

## Preparing the Power Supply for Use:

1. Select and connect the appropriate connector to power supply.
2. Connect power cord to the electrical socket.
3. Connect the power supply connector to the nootebook.
4. Turn on the notebook.

## Cleaning the power supply

Disconect the power supply from the electrical socket and connected devices before cleaning.

- Use soft and antistatic cloth for cleaning the power supply.
- Do not use abrasive or chemical cleaners.

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## Technical specfication

| | |
|---|---|
| Product code: | **AK-ND-04** |
| Supply voltage: | **100-240V , 50/60Hz** |
| Output voltage and amperage: | **19V / 4.74A** |
| Maximum power: | **90W** |
| Efficiency: | **>80%** |
| OVP (over voltage protection): | **Yes** |
| OCP (over current protection): | **Yes** |
| OPP (overpower protection): | **Yes** |
| OTP (over temperaturre protection): | **Yes** |
| SCP (short circuit protection): | **Yes** |
| Soft start: | **Yes** |
| Power inlet: | **IEC C6** |
| Output connector: | **7.4x5.0 mm + pin** |
| Compilance with standards: | **CE, FCC, RoHS** |
| EAN code: | **5901720130235** |
| Connector polarity diagram: |  |



Product manufacturer:

**Ropla Computers sp. z o.o.**
**ul. Wrocławska 1c**
**52-200 Suchy Dwór**