



## Short description of the product

The Akyga AK-CI-01 150W car power inverter provides power to 230V devices via 12V cigarette lighter plug. It has an electrical CEE 7/5 socket and two USB ports (2.1 A and 1 A). A set of protectors OVP, OTP, OPP, SCP and OCP provides safe and stable operation of both power inverter and connected device. A set of protectors OVP, OTP, OPP, SCP and OCP provides safe and stable work of both power power inverter and powered device.

The product is adapted to supply voltage of the cigarette lighter socket 11 - 15V. 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-CI-01 car power inverter
- 20 A fuse
- 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 electric 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 damaged. 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 electrical and electronic equipment or to the seller. Appropriate segregation of rubbish for subsequent processing, recovery or descrtion 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.

## Safety Precautions



**WARNING!** Product heats up during operation. To reduce the risk of burns or overheating the car power inverter, do not place it in restricted ventilation area. Also, do not allow the working car power inverter 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 devices whose demanded power is greater than power of the car power inverter, can cause power failure or even damage (burn) of car power inverter.



230 V voltage can be very dangerous for user. Improper use of the device may result in an electric shock and lead to threats to life, health and property.



An electrostatic discharge occurs when two objects touch each other, for example, an electric charge that occurs when user touches 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 powered devices, abstain from touching electrical outlets, wires and electronic 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 disobeying the safety instructions and information contained in this user manual.**



- Keep the product and the packaging out of range of children and animals. The package includes a foil that a child could choke on while playing.
- It is forbidden to apply 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, surroundings 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.
- Product must be connected in compliance with the polarity.
- 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.
- It is forbidden to modify the power cord. In the case of modifications, the cable may be damaged, causing threats to life, health and property.
- The car power inverter can be connected only with 12 V battery. It can not be powered by 6 and 12 V battery.
- Power source must be able to supply enough power for inverter. Divide the power consumption of the powered device (in Watts) by 10 to determine the demand for the power. For example: for 150 W car power inverter the power source needs to deliver 15 A.



- Do not connect devices which require voltage greater than 5 V DC and current greater than 2.1 A and 1 A (depending on the socket) to USB sockets.
- It is forbidden to connect devices equipped with transformer or induction motors, i.e. power tools, household appliances, transformer power supplies or pumps. It may damage the inverter.
- Do not power the inverter with a flat or broken battery.
- Do not connect the inverter to an AC power source.
- Product can work both the car engine turned on and off.
- To prevent car battery from discharging, it is recommended to start the engine for about 15 minutes for every 2 hours of operation of the inverter.
- Turn off the inverter before turning on the car engine.
- If the fuse is blown, replace it with a new one.
- Avoid placing the inverter near to radio and antenna, because it can cause interference of the signal.
- The product can not work without surveillance.
- The inverter can not be used after changing a cold to a warm room. Wait until the inverter reaches the room temperature.
- It is forbidden to insert objects inside the inverter case.
- Connection of inverter to electricity is made by plugging the cable with the cigarette lighter plug to corresponding socket in your vehicle.
- Inverters plug should be disconnected from the 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.

## Preparing the Car Power Inverter:

1. Turn off the inverter.
2. Insert power plug of the inverter in cigarette lighter socket.
3. Turn on the inverter. When the green LED (normal) is shining the inverter works properly.
4. Connect selected device to the inverter. When the red LED (warning) is shining the inverter can be overloaded or car battery is flat.

## Fuse changing

1. Prepare a new glass 20 A fuse.
2. Unscrew the end of the plug.
3. Remove broken fuse.
4. Insert a new fuse.
5. Tighten the end of the plug.

## Cleaning the Car Power Inverter:



Disconnect the power inverter from the electrical socket and connected devices before cleaning.



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

## Removing the most common problems

Problem	Cause	Solution
The car power inverter or device connected to it does not work	No voltage	<ul style="list-style-type: none"> <li>• Check if power inverter is properly connected to the cigarette lighter socket</li> <li>• Check the cigarette lighter fuses</li> </ul>
	The inverter is overloaded	<ul style="list-style-type: none"> <li>• Disconnect the power inverter from powered device, check the correctness of the current parameters</li> </ul>
	Problem with the plug	<ul style="list-style-type: none"> <li>• Check if power inverter is properly connected to the cigarette lighter socket</li> </ul>
	Undervoltage on the battery	<ul style="list-style-type: none"> <li>• Charge the battery or replace it with a new one</li> </ul>
	There is a suspicion of a product defect	<ul style="list-style-type: none"> <li>• Stop using and contact the seller</li> </ul>
The inverter has turned off	The battery has to low current	<ul style="list-style-type: none"> <li>• Charge the battery or replace it with a new one</li> </ul>
	The inverter is overloaded	<ul style="list-style-type: none"> <li>• Disconnect the power inverter from powered device, check the correctness of the current parameters</li> </ul>
	The power inverter is overheated	<ul style="list-style-type: none"> <li>• Disconnect the power inverter from the cigarette lighter socket and wait until it cools down</li> </ul>
There are video noise or radio frequency interference	Electromagnetic interference occur.	<ul style="list-style-type: none"> <li>• Place the power inverter away from interferenced receiver</li> <li>• Check the correctness of antenna's operation (in the case of TV)</li> <li>• Use shielded cables</li> </ul>

## Technical specification

<b>→</b> Product code:	<b>AK-CI-01</b>
input voltage:	<b>12 V (10.5 - 15 V) DC</b>
Output voltage:	<b>230 V</b>
Maximum power (continuous):	<b>150 W</b>
Instantaneous power (impulsive):	<b>300 W</b>
Sine wave type:	<b>50 +/- 2 Hz</b>
Output frequency:	<b>Modified sine wave</b>
Efficiency:	<b>&gt;85 %</b>
Power consumption with no load:	<b>&lt;0.25 A</b>
Temperature:	<b>&lt;65 °C</b>
OVP (over voltage protection):	<b>Yes</b>
OCP (over current protection):	<b>Yes</b>
OPP (overpower protection):	<b>Yes</b>
OTP (over temperature protection):	<b>Yes</b>
SCP (short circuit protection):	<b>Yes</b>
USB connector:	<b>2 pcs</b>
USB output voltage:	<b>5 V / 2.1 A i 5V / 1 A</b>
Power inlet:	<b>French plug CEE 7/5</b>
Cable plug:	<b>Cigarette lighter plug with fuse</b>
Output connector:	<b>4.8x1.7 mm</b>
Compliance with standards:	<b>CE, RoHS, REACH</b>
EAN code:	<b>5901720132970</b>
Connector polarity diagram:	

car power inverter

Product manufacturer:

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