

ATX-PC power unit 350W

„Jou Jye“

Item-No. 99 83 40

Version 03/08



Intended Use

The ATX power unit has to be mounted and operated in a suitable PC ATX housing. There it is used to supply PC components such as the motherboard, the hard disk, the CD-ROM etc. with power.

The motherboard must be provided with an ATX power connection.

Modification or conversion of any part of the product is not permitted; never dismantle it.

Use other than that described above can lead to damage to the product and may involve additional risks such as short circuits, fire, electrical shocks etc.



Observe all the safety and mounting instructions contained in these operating instructions.

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Contents

- Power unit
- Power Cable
- Operating instructions

Safety instructions



The warranty will lapse for damage arising due to non-compliance with these operating instructions. Liability for any and all consequential damage is excluded!

We shall not accept liability for damage to property or personal injury caused by incorrect handling or non-compliance with the safety instructions. Any claim to warranty will lapse in such cases!

- For safety and licensing (CE) reasons, unauthorised conversion and/or modifications to the product are not permitted.
- The ATX power unit is constructed in compliance with protection class 1. The only voltage source that may be used is a properly designed mains socket-outlet with the protective earth conductor of the public supply grid. The power unit is exclusively designed for use on a mains voltage of 230V~/50Hz.
- The product must not get damp or wet, it is intended only for use in dry, indoor locations. Do not place vessels such as glasses, vases etc. on or alongside the computer. Liquids could seep into the casing and in doing so impair the electrical safety of the device. There is furthermore a high risk of fire or of a life-threatening electric shock.
- In such a case, switch off the mains socket to which the product is connected (e.g. switch off the automatic fuse) and pull the mains plug out of the mains socket and the ATX power unit. After that, the ATX power unit must no longer be used; take it to a specialized workshop.
- If the ATX power unit (or the computer in which the power unit is installed) is taken from a cold environment to a warm one, it is possible that condensation water develops. Allow the power supply unit (and the computer into which the power supply unit is installed) to reach room temperature first, before connecting it with the mains voltage and switching it on. This may take several hours. Otherwise this may not only destroy the power supply unit or the computer, but there is also the risk of a life-threatening electric shock!
- The power unit, computer, mains cable and mains plug must not be handled with damp or wet hands. Otherwise there is the risk of a fatal electric shock!
- Do not pull the cable of the power supply unit to unplug it from the mains socket!
- Do not touch the mains cable if it shows any signs of damage. First of all, switch off the corresponding mains socket (e.g. via the respective circuit-breaker) and afterwards carefully pull the mains plug from the socket. Exchange the power cord with a new one with the same technical specifications. Repair of the damaged power cord is not authorized!
- The product is not a toy and must be kept out of the reach of children. Children cannot estimate the risks which can arise by the incorrect handling of electrical appliances. Be especially careful if children are around, as they could try to put objects through the opening of the housing into the device! There is a risk of a fatal electric shock.
- Do not leave packing materials unattended. They may become dangerous playing material for children.
- The regulations of the Accident Prevention & Insurance Association for electric facilities and equipment must be observed in commercial premises.
At schools, education centres, hobby and self-help workshops the operation of the product is to be supervised by trained employees.

Functional Description

The power unit is designed for use on a mains voltage of 230V~/50Hz.

The ATX power unit converts this mains voltage into the internal direct voltages required by the PC (+3.3V, +5V, +12V, -12V).

A built-in fan extracts the excessive heat that is formed during this transformation (low noise level due to large 120mm fan).

The ATX power supply unit can be switched on and off via the power switch.



However, the computer does not start up immediately when the mains switch is switched on. The power supply unit as well as the connected mainboard are in the so called "standby" mode first. To start the computer, briefly press the power button on the front side of your ATX housing. The button has to be connected via a cable with the corresponding connection on your mainboard (e.g. „ATX power“ connection or similar; see instructions for mainboard).

If the computer is switched off by the power button, the stand-by voltage is still applied to your motherboard.

This is necessary for, e.g. switching the computer on via the keyboard or mouse (if the BIOS of your computer provides this option) or for the automatic switching on/booting of a modem/ISDN call/network access (irrespective of BIOS and software).

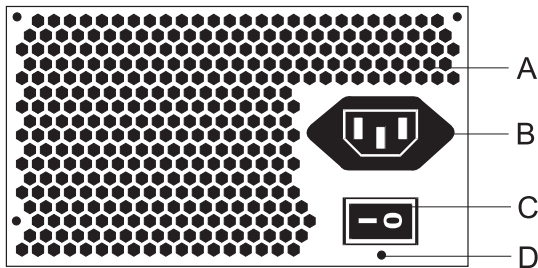
In case of interference in your computer (e.g. if you want to install a new plug-in card), the ATX power supply unit must be switched off beforehand via the mains switch which is located on the ATX power supply unit and it must be separated from the mains voltage; in addition, always disconnect the mains plug! Otherwise the mainboard as well as other components may become damaged!

Controls and Connections



Please note:

With new versions of the power unit, the arrangement of the operating elements and connections could have been altered.



A Numerous openings

The extensive arrangement of these small openings achieves, in connection with both slow moving 120mm fans, at least the same air movement as a conventional 80mm fan. Admittedly, the noise level is clearly lower.



Never cover up the air slots of the power unit. Through heat accumulation, the power unit and any connected components will be destroyed!

B Mains supply socket

The power unit is powered (230V~/50Hz) via this socket.

C Power switch

The power switch serves to switch the device on and off (I = On, 0 = Off).

D Screw holes

The four screw holes in the outside corners of the power unit are provided for fastening the power unit inside the PC housing. Use as many screws as possible with your computer housing. The high weight of the power supply unit could cause damage to the housing (eg during transport).

Installation



If you do not possess the know-how for the assembly, this should be undertaken by a SPECIALIST or by a specialized outlet!

Incorrect installation will damage the power supply unit, your computer and all connected devices. Furthermore, there are dangers involved such as short circuit, electrical shock or risk of fire.

Caution, danger of fatal injury!



Switch off the computer in which the power supply unit is to be installed and all connected devices. Isolate all devices from the mains voltage and pull out the mains power plug! Switching off via the mains switch is not sufficient!

- Open the housing of your computer and remove the cover carefully.
- If the power unit is to be used to replace a defective power unit, for example, remove the old defective power unit first. First of all, disconnect all connecting plugs for the motherboard and the installed devices. Then remove the cable ties which may be there.
- Hold the old power unit tightly and remove all retaining screws of the power unit so that it can be taken out of the housing.
- Screw down the new power unit in the housing with 4 screws (thread basing on inch-system, max. screw length ca. 5mm).
- Connect the motherboard by using the broad ATX plug (Do not use force! The connector must be easy to plug in and then lock in place). According to your motherboard (20 or 24 pin socket), a 4-pin segment can be removed from the 24-pin ATX connector. However, the latter must not be used for sockets other than motherboards!
- The ATX power unit also has a 4-pin ATX2.0 12-V plug which is required for many motherboards (e.g. motherboards for Intel P4 or AMD64 processors). It serves to additionally connect the +12V voltage via extra lines to the mainboard (serves to as a relief of the +12V line of the ATX power supply unit).
- Connect all devices in the PC housing with the respective power plugs, e.g. hard disk, DVD writer, etc.)
- Install all cables neatly in straight lines ensuring that the cables are not squeezed or damaged in any way. Protect the cables from sharp edges in the housing. Make sure that they do not become entangled in the fan of the computer.
- Use cable ties to fix the cable in the housing.
- Check the following points: Is the power button on the front of your ATX housing connected to the appropriate port on the motherboard?



Switching on via the mains switch does not result in switching on the computer (can possibly be changed via the BIOS setting!)

- Close the computer housing and re-connect the computer to all other devices, cables and accessories.
- Now, connect the computer to the mains voltage and switch on the ATX power unit via the mains switch on the rear of the ATX power unit.



Normally, the computer will not start up immediately. Briefly press the power button on the front of your ATX housing to switch the computer on.

- If your computer does not start correctly, switch it off immediately and check all the settings and cable connections.

Before you open the housing to check, remember to switch off all devices. Isolate them from mains voltage and pull out the mains power plug (see above).

Handling



Observe all safety instructions in these operating instructions!

You may only operate the product in dry indoor areas. Contact with moisture must be avoided at all times. Never touch the device and the power cord/plug when your hands are wet or damp. There is a risk of a fatal electric shock.

Avoid the following unfavourable environmental conditions at the installation location and during transportation:

- Excessive humidity or dampness
- extreme cold or heat
- direct sunlight
- Dust or combustible gases, vapours or solvents
- Strong vibrations
- strong magnetic fields such as those found in the vicinity of machinery or loudspeakers

Make sure there is sufficient ventilation of the computer/power supply unit on the installation site. The computer has to be set up/placed in a way so that there can be air circulation. Never cover up the air slots or the computer when it is in operation.

Do not insert any object, e.g. paper clip, ballpoint pen, pin, needle or knitting needle etc. into the ventilation slots or openings of the devices.

Children may try to insert objects (e.g. toys) into the ventilation slots, openings of the housing of the ATX power supply unit or of the computer.

This would damage the ATX power supply unit and the computer in which it is installed. There is furthermore the risk of a life-threatening electric shock if you touch electrical lines and terminals!

If you bring the power supply unit (or the computer into which the power supply unit is installed) from a cold to a warm room, condensation water may form.

Allow the power supply unit, (and the computer into which the power supply unit is installed), to reach room temperature first, before connecting it to the mains voltage and switching it on. This may take several hours. Otherwise this may not only destroy the power supply unit or the computer, but there is also the risk of a life-threatening electric shock!

When installing the computer, make sure that none of the cables are pinched or caught.

Check the ATX power supply unit (and the computer) for damage before each use. If you detect any damage, the ATX power supply unit or the computer must NOT be connected to the mains voltage! This presents a danger to life.

It can be assumed that safe operation is no longer possible if:

- the device is visibly damaged,
- - the device is no longer functional and
- the unit was stored under unfavourable conditions for a long period of time or
- if it has been subjected to considerable stress in transit.

Do not pull the cable of the power unit to unplug it from the mains socket. It may get damaged. Risk of an electric shock!

The ATX power supply unit must not be opened! There are no serviceable parts inside the ATX power supply unit.

If the ATX power supply unit (or the computer in which it is installed) is not used for a longer period of time (e.g. if it is in storage) then switch it off via the mains switch and additionally pull the mains plug of the power cord from the mains socket.

If you only switch off the computer via the power button on the front of the computer housing, then the computer or the power supply unit is in „standby“ mode (similar to a television). This is why the computer must be separated from the mains voltage before retro-fitting work is done on your computer (e.g. when inserting a plug-in card). Switch the ATX power supply unit off via the mains switch and separate it from the mains voltage; pull the mains plug.

The ATX power supply unit has (although it is low) a power input in „standby“ mode. This is why a slight warming is normal. In the „standby“ mode, some kWh (kilowatt hours) can be accumulated per month. Depending on the price of electricity this means costs of maybe about 1-2 Euro per month that can be easily saved. Simply switch off the ATX power unit via the mains power switch.

Maintenance

None of the components inside the ATX power unit is to be serviced by the user. Therefore never open it.

Service or repair works and any associated opening of the ATX power unit may only be carried out by a specialist or a specialist workshop.

The fuse which is installed in the ATX power supply unit must be replaced with a special tool only. This is why you should not try to replace the fuse yourself, leave this to an expert or a specialized workshop.

Disposal



Electric and electronic devices must not be disposed of in the domestic waste.

Please dispose of the device when it is no longer in use, according to the current statutory requirements.

Technical data

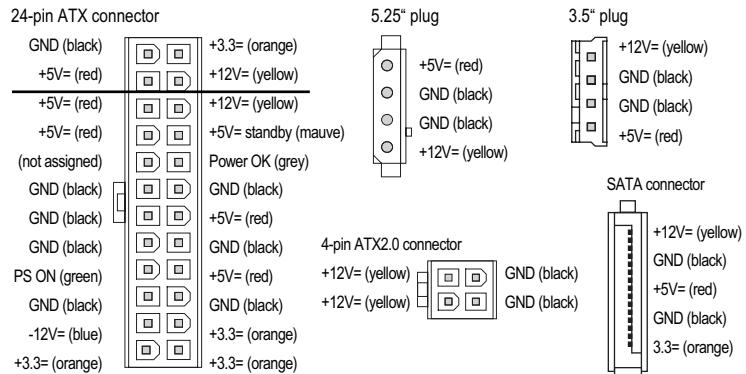
- Operating voltage: 230V~/50Hz
- Power output max. 350W (at 3.3V= & +5V= max. 130W)
- Output voltages and output currents (also see imprint on power supply unit):

+3.3V=	max. 20A
+5V=	max. 13A
+12V1=	max. 10A
+12V2=	max. 13A
-12V=	max. 0.3A
+5V= (stand-by)	max. 2.5A

- Voltage connections (The number of connections may be different on later versions of the power supply unit).
 - 1 x 24 pins ATX connector (seperable to 20 pins ATX connector and 4 pins connector for older motherboards)
 - 5 x 5.25" power plug
 - 1 x 3.5" current plug
 - 1 x ATX plug (for the motherboard)
 - 1 x 4-pin ATX2.0 12V plug (for motherboard with corresponding connection)
 - 2 x S-ATA current plug (e.g. for S-ATA hard disks)

- Mains switch on the back of the device
- Fan 120mm
- Passive PFC (Power Factor Correction)

Terminal Assignments of Plugs



The 24-pin ATX connector is separable into a 20-pin and 4-pin plug. The 20-pin plug can be connected to older motherboards. The 4-pin plug may not be used for other connections (Do not confuse with 4-pin ATX2.0 connector!).

Tips & Notes

- The power unit is in „standby“ mode after it had been switched off with the power button on the ATX housing (similar to a television).
The ATX power unit has a certain power input in „standby“ mode. This is why you should also switch off the ATX power supply unit via the mains switch in order to save energy, if you don't need your computer.
- If your motherboard has the 4-pin ATX2.0 connection for the +12-V voltage (e.g. to be found on almost all motherboards for Intel P4 or AMD64 CPU), connect it to the corresponding connection (4-pins ATX2.0 connector) of the ATX power unit.
The port is usually used to provide a better supply to the switch-mode controls on the motherboard (which generate the current/voltage for the CPU) and to reduce the load of the +12V wire of the ATX current connector. If the plug is not connected the mainboard may not start.
- If the computer does not start when you press the button on the front of the computer housing, check if the mains switch of the ATX power unit is switched on (position „I“).
If you have just assembled the computer, check if all cables are connected correctly (e.g. IDE and FDD cables). Are the boards plugged in correctly, is the CPU fan connected? If the graphics board has a separate bus bar, it has to be connected with an appropriate connector of a power unit!
- Lay all the cables in the computer in such a way that they cannot get into a fan.

