

Grounding in AC power supply is significant for the following reasons:

- Protects people from electric shock. When an electrical appliance is properly grounded, any current that leaks from the appliance will flow through the ground wire and into the ground. This prevents the current from passing through a person, which could potentially cause a fatal electric shock.
- Protects electrical devices from damage. When a fault occurs, the current can arc through the air and create a spark. This spark can ignite flammable materials, causing a fire. By grounding the device, the current is safely diverted to the ground, preventing the spark from forming.
- Meets electrical code requirements. In most countries, there are electrical codes that require electrical appliances to be grounded. By grounding your appliances, you are helping to ensure that they are safe and meet the requirements of the electrical code.
- Reduces the risk of fires. As mentioned above, grounding can help to prevent fires by preventing sparks from forming. This is especially important in areas where there are flammable materials, such as in kitchens and workshops.

Overall, grounding is an important safety measure that can help to protect people and property from electrical hazards. If you are installing a new AC power supply, it is important to ground it properly. This will help to keep you and your family safe and protect your property from damage.

Here are some additional things to keep in mind about grounding:

- The ground wire should be connected to a metal rod that is driven into the ground near the electrical outlet.
- The ground wire should be connected to the metal casing of the electrical appliance.
- The ground wire should not be connected to a water pipe or other metal object that is not connected to the ground.

If you are not comfortable grounding an electrical appliance yourself, it is best to consult with an electrician.