Shenzhen Alrightpower Technology Co., Ltd.

The Glossary of Power Adapters

Power Adapter -Power Adapter, also called ac dc adapter, is a type of external switching power supply .Power adapters are widely used to all kinds of electrical devices that require power but do not contain internal components to derive the required voltage and power from itself.

AC Input Voltage- Our Power adapter range of input voltage is from AC 90Vac to 264Vac .Nominal input voltage range is 100Vac ~240Vac .Different countries are with different voltage system . For example , In the United States the voltage for household use usually is AC 110V ,but European countries Voltage standards is AC 220V or 230V .

AC Input Frequency- Usually frequency's value is 50Hz or 60Hz ,this value can accept ±2% tolerance within this range . Our power adapter AC Input Frequency is 47Hz~ 63Hz which can meet requirement all round the world

AC Inrush current - It is also called input surge current .It is the maximal input current of the power adapter when the electrical device first turned on. When design a power adapter ,the engineer should make sure the short current protection should react to short-circuit faults quickly but must not interrupt when the Inrush current.

Burn -in Burn-in test is simulating the real environment that the power adapters are under working in a full load and to check if there are any quality problem may occur.The power supply shall be burn-in 4 hours. Doing burn-in test it is one of the most effective way to make sure the power adapter are with stable quality.

Energy Efficiency ： It is regard to requirements of no-load condition electric power consumption and average active efficiency of external power adapters. USA need meet DOE VI, Europe need meet the ERP Test report . Australia need meet Australian GEMS.

ESD That is electrostatic Discharge of the power adapter. It is a sudden flow of electricity between two electrically charged objects caused by contact. Usually our power adapter's Air discharge standard is 8 KV and Contact discharge is 4KV

Hipot (Dielectric Withstand) – It is an electrical test of the power adapter to check the effectiveness of insulation. It is one of main method of test power adapters function .Usually our products test standard is 3000Vac / 10mAMax / 60 second ,and 3300Vac / 5mAMax /3S

Over current Protection – Over current is a larger electric current in power adapter . It can cause high temperatures or lead to fire which will damage the device . Fuses is widely used to protect the circuit from damage which cause by over current .

Over voltage Protection – When the voltage in power adapters more than the power adapter needed , it will be easily to be damaged and cause safety problems .Filters are used in power adapters to prevent such situation happen.

Operating Temperature – It is the temperature which they power adapter can operate.Power adapters can operate effectively within the temperature range .our power adapters operating temperate is 0℃ to +40℃ .If using the power adapter outside the range of the temperature , it maybe can not function well .

Short circuit protection : A short circuit is the power adapter' load exceeding a power adapter's capability . Under a short circuit condition , power adapters will shut down immediately if with the short circuit protection and can recover to normal operation when the short is removed.

Ripple is the residual periodic variation of the voltage within a power adapter which has been derived from alternating current . Ripple is a waste of power . It will bring a lot of bad influence . it may heat components ,cause noise . Usually,we will try to make sure the power adapter with a low ripple. Usually our power adapter Measurement is done by 20MHz bandwidth oscilloscope and the output is paralleled a 0.1Uf/50V ceramic capacitor and a 47Uf/50V electrolysis capacitor. (test under the condition of rated input and rated output)

Safety Standards ： Safety standards is the different standards of various countries . For example, United states requires UL FCC，Europe requires CE，Japan require PSE , China require CCC,Korea market need KC . When you choose a power adapter, make sure it meet related safety standards. It is the guarantee of the quality .