



APPLICATION NOTE – 01

Purpose: To prevent electrical shock, maintain required safety creepage and clearance between power supply and nearby components.

Scope: This application note is applicable for open-frame power supply.

Guidelines:

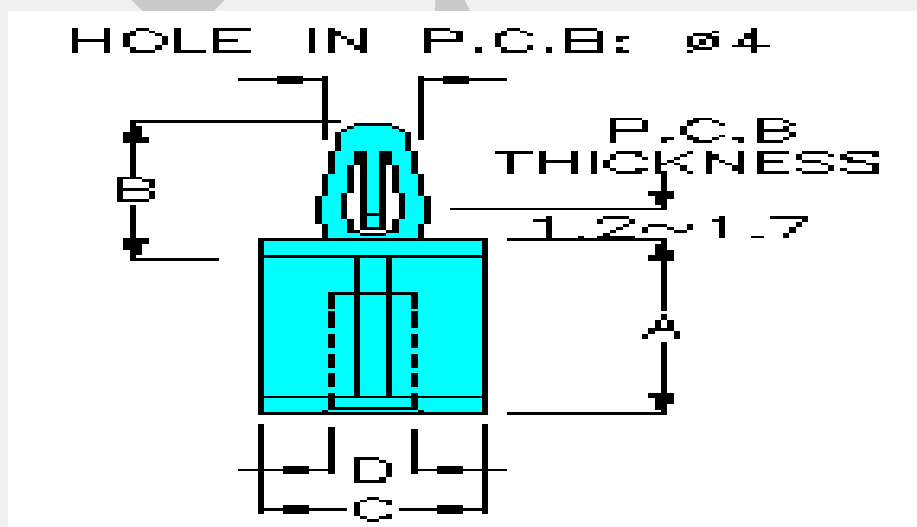
Mounting holes which are on primary or input side and not connected to earth should have non-metallic mounting stud or spacer for isolation.

Below is snapshot of Nylon spacer which can be mounted in end chassis with screw. This spacer has flexible locking mechanism on top, which can be inserted into PSU mounting hole by slight pressing.

Vendor and vendor part nos. are provided for reference only.

Vendor: Pingood enterprise co. ltd.

P/N: BCMS-6





APPLICATION NOTE – 02

Purpose: For reliable operation of power supply.

Scope: This application note is applicable for the countries where nominal AC supply voltage is 230vac. Doesn't applicable to countries where nominal AC supply voltage is 115vac.

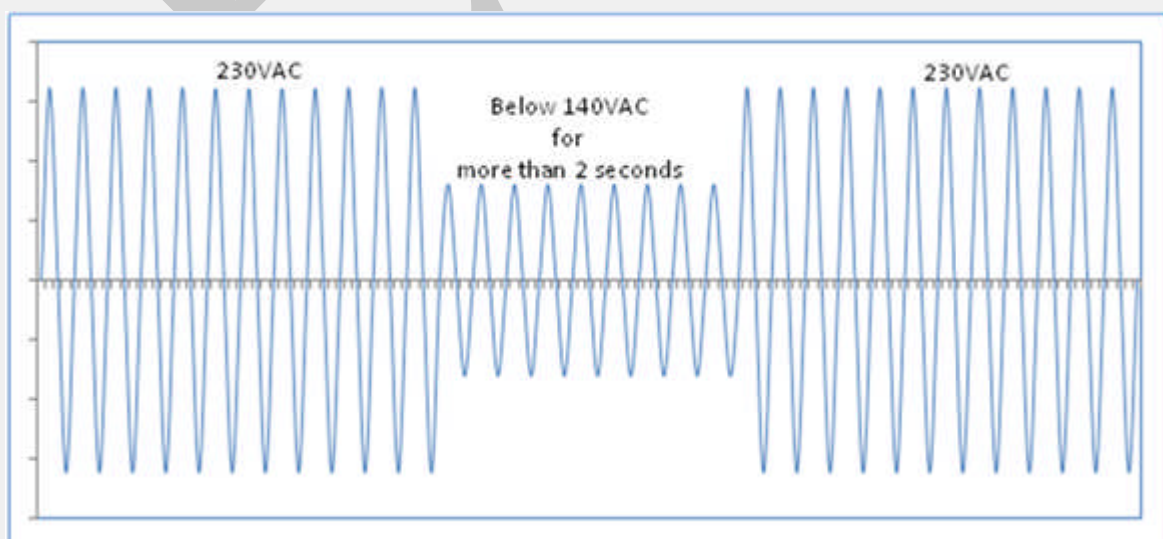
VLT130, (M) VLT60, (M) VLT40, ZVCxxFS, ZVCxxSG series.

Guidelines:

For the countries where line voltage is 230vac prefer to use “AC voltage stabilizer” or “UPS” to prevent any sag in input AC supply. AC supply is an input to power supply. If input voltage falls below 140vac for more than 2 second can cause power supply failure.

Above described condition is abnormal however can occur in actual field condition.

Below is pictorial representation of abnormal condition for AC supply.





APPLICATION NOTE – 03

Purpose: For proper operation of any electronic parts need to ensure that it doesn't exposed to high thermal and electrical stress.

Scope: Applicable to all power supply, general

Guidelines:

To reduce thermal stress proper air circulation to be maintained. For fan cooling power supply ensure that sufficient air flow is provided as per required direction of air-flow.

To reduce electrical stress input AC voltage should be within specification and no abrupt changes. Use of AC voltage stabilizer or UPS helps.

As applicable to any electronic parts power supply should be stored/handle in ESD safe area. It should not be touched by hand. It should not be dropped. Power supply should be stored in proper packaging. Any foreign particles should be cleaned or removed with care.



APPLICATIONNOTE – 04

Purpose: To address product End-of- Life and disposal issues.

Scope: Applicable to all power supply, general

Guidelines:

EOS product should be correctly disposed off at the end of life of product by handing it over to an authorized facility for separate collection and recycling.

By doing so, you will help to conserve natural and environmental resources and you will ensure that product is recycled in a manner that protects human health



APPLICATION NOTE-05

Purpose: To prevent failure due to wrong procedure followed for Hipot test.

Scope: Applicable to all end system user of power supply, General.

Testing is done to ensure the integrity of safety critical insulation. Between Primary and Secondary, reinforced insulation is required. Between Primary and Chassis Ground, basic insulation is required, Between Secondary and Chassis Ground, operational insulation is required,

Guidelines : Reinforced insulation cannot be tested without overstressing basic insulation on the end product, refer to UL60950-1,C5.2.2 or UL60601-1 2nded sec 20.4 or IEC 60601-1 3RDed section 8.8.3 , thus agencies permit test of components like power supply separately.

When testing on field in end system, special precautions need to be taken. For testing Basic Insulation 1500Vac between primary and chassis ground is applied. No special needs.

For testing Reinforced Insulation an attempt to apply 3000/4000 Vac directly from primary to secondary on the finished product will over stress the primary to chassis ground and secondary to chassis insulation resulting in failure.

To properly test reinforced insulation the power supply needs to be removed from the chassis , in addition all paths to chassis ground as far as practical needs to be removed , especially items like Y –capacitors , and EOS personnel must be notified .



In some instances when applying the primary to secondary hi-pot voltage some arcing will be observed on the pwb , in all cases this arcing is to be limited to the secondary and ground trace locations , in some cases this arcing can cause secondary component failure . This is breakdown of operation insulation (secondary to chassis); it does not indicate a failure of primary to secondary insulation that is the crux of the test. And when failing in safe manner, the test is considered successful for safety.

It is also not the correct practice to instantaneously apply the hi pot, the recommended method is that not more than half the voltage is to be applied, then the voltage is to be gradually raised over a period of 10 sec to the full value which shall be maintained for 1-3 sec after which it shall be gradually lowered over a period of 10sec to less than half the full value.

Agencies further permit the use of the equivalent DC voltage whilst performing hi-pot tests.

It is advised to contact EOS in regards to special hi pot tests being practiced by the end user of EOS power supply not as per above guidelines .