

Application Note 125 – Input Protection



In the event that your product needs to be compliant with IEC 61000-4-5, IEC 61000-4-4, EN 55014-2, EN 61000-6-1 or EN 61000-6-2, Bias has a solution. Input protection can prevent damage from surges. The diagram below shows how a basic input protection circuit would be configured.

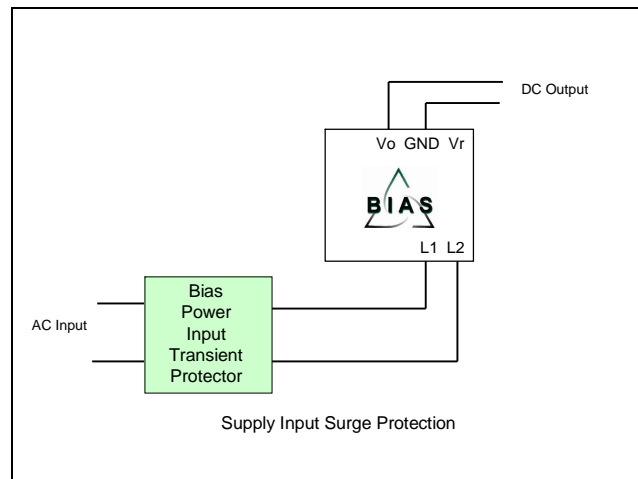
Input current (I) limiting and voltage (V) limiting devices are needed to ensure that the power supply will meet the system compliance requirements (i.e. IEC 61000-4-5, IEC 61000-4-4, EN 55014-2, EN 61000-6-1, EN 61000-6-2). Different devices can be used for both limiting current and voltage.

Current limiting can be as simple as an input resistor or fuse. When using

a fuse, it must have the correct fuse rating to ensure proper protection. The fuse must be fast acting, 250V rated, UL recognized. When protecting just the Bias Power supply, the fuse should have a nominal fuse rating of 1A and maximum rating of 2A. Other current limiting devices such as PTC devices can also be used.

Voltage limiting devices are typically gas tubes, MOVs, diodes or other such devices depending on the compliance requirement.

For applications where a particular standard for input compliance is needed, Bias Power can provide a design module that will exceed the standard with reduced size and complexity.



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