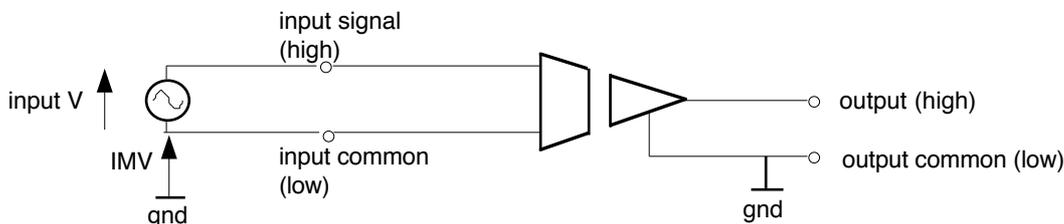


**FE-560-IA Isolation Mode Voltage IMV**

The FE-560-IA will withstand 1500V DC or pk on the isolated common with respect to mains earth. This is know as the Isolation Mode Voltage (IMV). Additionally, an input signal of up to 1000V DC or pk may be applied to the input.



In applications which may experience IMV transients in excess of 1500V pk (of either polarity) there is a risk of exceeding the isolated barrier capability and thus damaging the amplifier.

In some instances it is possible to protect the amplifier provided that :-

1. The transient energy is limited to within the capability of the protection device.
2. The protection device does not conduct in normal operation.

To satisfy 1 it is necessary to ensure that any overload is of short duration and that energy is limited. Typical protection device rating is 200 Joules (1ms). This is equivalent to the energy stored in a 220 Microfarad capacitor charged to 1350V, or in a 47 Microfarad capacitor charged to 3000V. If in doubt, it is advisable to fit fast acting fuses at 100mA or lower in series with both input connections to give additional protection to the equipment.

In order to satisfy criteria 2 it must be borne in mind that any protection device which is fast acting enough to conduct away a potentially damaging high frequency IMV transient before it is able to reach the 1500V limit of the amplifier must start to conduct at a considerably lower voltage for continuous voltages or longer duration surges.

**For protection devices which limit at 1500V pk the maximum continuous IMV is 825VDC or 625VRMS.**

