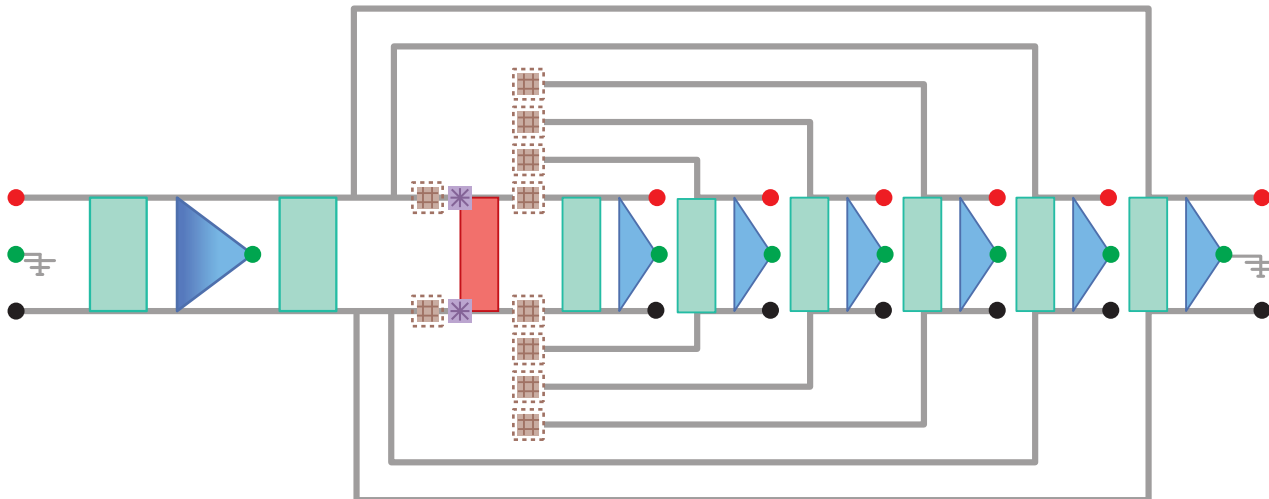


# PRODUCT FACT FILE



## SIGMAS



ABILITY OF AC CURRENT TO FLOW AT VARIOUS FREQUENCIES FROZEN IN TIME



### SHUNT FILTER

These represents the simplest form of filter, which is placed between the live and neutral poles of the mains supply. Most electrical equipment, which is capable of generating noise will have some variation of a shunt filter.



### SERIES FILTER

A type of inductor, which is placed 'in-line' rather than across, as would a shunt filter. These are very specialised in design as they must have minimal loss at mains frequency. IsoTek have found that 'off the shelf' series filters are not able to offer sufficient bandwidth and flexibility that is required; it is for these reasons why we design and produce our own specification. These specialised components are made to the same standards as those used for British Aero Space applications.



### DELTA FILTERS

A sophisticated type of Shunt filter which is connected across the three poles of the mains supply. The Delta filter is the most often described by text books as a practical solution for the worst effects of mains noise. One unexpected benefit is its superiority at radio frequencies. It could be said that a Delta is three different types of shunt filter in one.



### MULTI LAYER DELTA FILTER

For the ideal Delta filter you would use the perfect capacitor. The perfect delta arrangement for capacitors does not exist as all capacitors suffer from some inductance. The 'Multi Layer Delta Filters' work something like a loudspeaker crossover unit one section dealing with low (20KHz - 1MHz), the next medium and the final high radio frequencies.



### PROTECTION (FILTER)

The protection circuitry will be understood by most people to offer valuable protection to their hi-fi equipment due to transient mains over voltage. IsoTek protection circuits offer a two fold operation, additional filtering, helping the shunt filters deal with high energy overload as well as component protection. This is achieved without destroying musical enjoyment.



### POLARIS-X

It is not realised that source impedance of the mains supply is very low, in fact it is a dream of the electricity industry to one-day use super conductivity (0 Ohms).

Therefore carefully designed circuits, which respect this are capable of causing the electrons to take the easiest route. The analogy would be that water does not run up stream. The IsoTek Polaris-X principle is based upon Kirchhoff's two current laws.



### GATING

The 'Gating' principles in IsoTek circuits force balance between the various outputs on the medium current side of Mini Sub, Vision and Orion, allowing for an optimum filtering environment. Regrettably this is not possible with high current devices, hence the development of 'Adaptive Gating'.



### ADAPTIVE GATING

'Adaptive Gating' auto senses the requirements of the load in a similar way to an iris of an eye adjusting to light. This system offers a universal system for both high current and low current devices and thus enables a continually fluid ultimate filtering environment.