

## INSTALLATION AND OPERATING INSTRUCTIONS FOR THE PFC175SFX AND UPS8000

### INTRODUCTION:

The PFC175SFX is a 175 Watt ATX style medical grade power supply certified to EN60601-1.

The power supply is intended to energize the most demanding motherboard applications. The UPS8000 is an Ultra capacitor (UC) based UPS which is intended to interface with the PFC175SFX and provide short term energy back up during main voltage interruptions. The UPS8000 with four UC's contains about 5000 Joules (Watt/seconds) of energy. The amount of back up time is dependent on the DC load.

Approximate operating time may be estimated by dividing the DC load in watts into 5000 Joules, the resultant will be operating time in seconds. If the load were 100 Watts one should expect about 50 seconds of operation. UC expansion models are available to enhance the available energy.

### PFC175SFX INSTALLATION:

The PS should be mounted in such a way as to not block the vent holes or obstruct the incoming air flow.

The motherboard requires power from both the 20 pin ATX harness and the 4 pin (620011B) processor power harness. Failure to plug in the processor power connect may result in permanent damage to the CPU.

The other harnesses are for the hard, optical drives as well as power for the graphic cards. The power supply is turned on by a Power On signal from the motherboard.

The UPS8000 may be mounted in any position providing it is close enough to connect to the PFC175SFX. Because of the potential for voltage drops it is not recommended to lengthen the UPS interconnect wire harness.

### OPERATION OF THE UPS8000:

The UPS8000 is continuously charging from the PFC175SFX as long as AC power is applied. The PS does not have to be turned on for charging. When the UPS8000 is full charged the green LED located near the top of the circuit board will illuminate, which take about 4 minutes. The UPS8000 will self discharge in about 30 minutes so back up energy is only available after the unit is plugged and the green Led is illuminated.

### AUTO OFF FEATURE:

There is an auto off feature built into the UPS8000. The feature triggers a safe shut down on the motherboard by applying a .08 second short between the power on/off pins on the motherboard.

In normal operation the on/off button, typically located on the front panel of the PC device, is plugged directly into the motherboard (usually the wires are blue and white). To use the auto off feature of the

UPS8000 plug the front panel switch into the two pin header located near the heat sink labeled "on/off switch". Be sure to observe the polarity of the connections. The white wire is ground and the blue wire is the on/off signal. The 5" 620029 harness plugs into the motherboard. The UPS8000 acts as a pass through for the on/off signal.

#### OPERATION OF THE UPS8000:

When the system is operational and the green LED is illuminated the system is ready to test for back up.

When the AC mains is first removed a beeper will sound for about 8 seconds, during this time if the power is restored the UPS is reset but if the power is not restored the UPS will send a .08 second signal to the on/off function which will cause the system to start an orderly shutdown which typically takes less than 30 seconds. If this feature is not desired do not install the 620029 harness and connect the on/off switch directly to the motherboard and to disable the beeper remove the "beeper volume" shorting block. Once the power down sequence has started reinstating the AC power will have no effect.

A word of caution about UC's. UC's have very low internal impedance and therefore can deliver extremely high currents which can cause physical harm be careful when installing or removing the UPS8000. A 40 amp fuse is provided for protection but a direct short across the UC terminals should be avoided.