

# RAM Technologies

## PFC175SFX 175 WATT MEDICAL GRADE POWER SUPPLY



The PFC175SFX is a 175 Watt SFX micro ATX power supply. Specifically designed for powering micro ATX medical applications. The PFC175SFX is available with our optional patented Ultra capacitor based UPS.

MADE IN THE USA

## Specifications

### Input

Input Voltage Range: 100 to 250 VAC +/-10%  
Supply overvoltage: Cat Two <300V  
Input current: 2.5 A MAX  
Frequency: 50/60 HZ  
Inrush Current: 45A Cold @ 264 VAC  
Efficiency: 75% to 80% TYP.  
PFC Correction: Active > .95  
Leakage Current: < 250uA @ 264 VAC 60HZ  
Input Fuses: 2X 5A 250V Line & Neutral

### Output

Max output power: 175 Watts cont.  
Hold-up Time: >40ms @ full load  
Overvoltage Protection: +15% of set voltage  
Thermal Protection: Auto Recovery/ cycle pwr. on  
Minimum Loading: None  
Cross regulation: <0.5%  
Line Regulation: <0.05%  
Load Regulation: <1% +/- cable factor  
AC turn on time: < 2 sec

Output Voltage	+12V	+5V	+3.3V	-12	-5V	+5Vsb
Output current max.	10A	15A	15A	1.0A	0.5A	2.0A
Ripple mV P-P	100	50	50	50	50	50

1. Max output from +5V & +3.3V= 125 Watts. When loading the +5 & +3.3V, multiply total load by 1.2 and subtract from 175 Watts.
2. Output derates from 100 VAC to 85VAC 3.5W/Volts.
3. Total output from all outputs shall not exceed 175 Watt.
4. Initial voltage tolerance +/-3%

## Environmental

Operational Temperature: 0 to 50°C  
Storage Temperature: -40 to 80°C  
Operational Humidity: 0 to 95%NC  
Storage Humidity: 0 to 95%NC  
Operational Altitude: -500 to 9840 FT  
Storage Altitude: -500 to 40.000 FT  
Pollution Degree Class: Two

## Reliability

MTBF (demonstrated): > 500,000 hours  
Expected Life: >8 years when use as specified

## EMC Compliance

EN61000-4-2 ESD level3  
EN61000-4-3 RF susceptibility 3v/m  
EN61000-4-4 EFT level3  
EN61000-4-5 Surge Level3  
EN61000-3-2 Harmonics  
EN61000-3-3 Flicker  
EN61000-4-11 Voltage Dips, Short Interruptions  
EN55011 Conducted and radiated emissions

## STANDARDS Compliance

Desktop Platform Form Factors: REV 1.1 March 07  
IEC60601-1 2<sup>nd</sup> & 3<sup>rd</sup> edition  
RoHS compliant UL file E191947 ISO9001:2008  
Lead free ROHS and REACH compliant


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# PFC175SFX MEDICAL GRADE POWER SUPPLY

**Safety** Approved to the following standards  
 ANSI/AAMI ES 60601-1:2005 ME-Part 1 and CSA C22.2  
 No. 60601-1:08( ME-Part 1: General Requirements for  
 Basic Safety and Essential Performance)  
 IEC 60601-1:2005 (ME Part 1: General Requirements for  
 Basic Safety and Essential Performance – Edition 3)

 For Continued protection equipment must be grounded at all times in accordance with the requirements of class 1 devices.

 RAM TECHNOLOGIES LLC declares that the PC and PCX power supplies are in conformity with the provisions of the low voltage directive.

See website [DOWNLOADS](#) for enclosure CAD files

## Symbols Used



Attention, consult accompanying documents



Protective earth ground



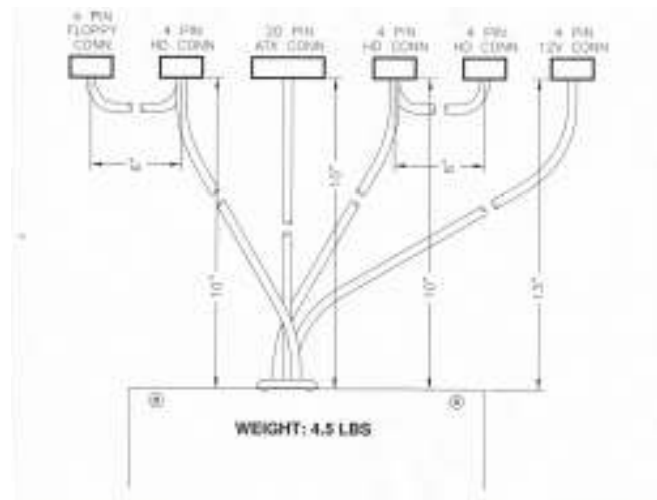
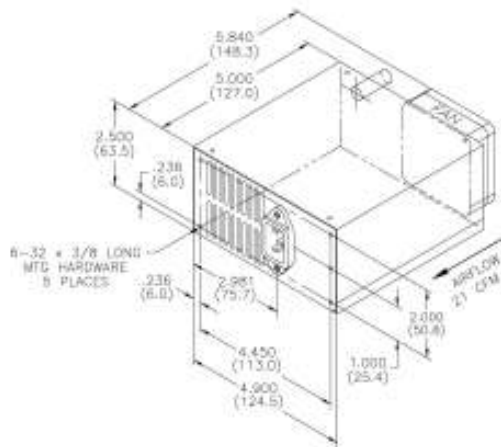
Caution

## Power Good Signal

The Power Good Signal asserts itself high 200ms after all outputs have reached their operational values. Power Good Signal will go low when input stored energy can no longer support the outputs.

**Intended Use:** The PFC175SFX is intended to power imbedded ATX style motherboards in mission critical medical applications.

# Mechanical Specifications



WE OFFER A WIDE VARIETY OF OUTPUT CABLES PLEASE CONTACT FACTORY FOR DETAILS

RAM P/N  
 #620012  
 Order #  
 0012

GND) Black	1 3	White (+12V)
GND) Black	2 4	White (+12V)
GND) Black	3 7	White (+12V)
GND) Black	4 8	White (+12V)

(GND) Black	1 3	Yellow (+12V)
(GND) Black	2 4	Yellow (+12V)

ATX12V Connector

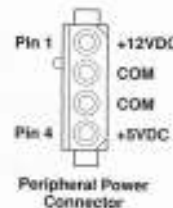
(+3.3V) Orange	1 11	Orange (+3.3V)
(+3.3V) Orange	2 12	Blue (-12V)
(GND) Black	3 13	Black (GND)
(+5V) Red	4 14	Green (PS-ON)
(GND) Black	5 15	Black (GND)
(+5V) Red	6 16	Black (GND)
(GND) Black	7 17	Black (GND)
(PG) Gray	8 18	White (-5V)
(+5VSB) Violet	9 19	Red (+5V)
(+12V) Yellow	10 20	Red (+5V)

20 Pin ATX Connector

RAM P/N  
 #620002  
 +  
 #620031

(+3.3V) Orange	1 13	Orange (+3.3V)
(+3.3V) Orange	2 14	Blue (-12V)
(GND) Black	3 15	Black (GND)
(+5V) Red	4 16	Green (PS-ON)
(GND) Black	5 17	Black (GND)
(+5V) Red	6 18	Black (GND)
(GND) Black	7 19	Black (GND)
(PG) Gray	8 20	White (-5V)
(+5VSB) Violet	9 21	Red (+5V)
(+12V) Yellow	10 22	Red (+5V)
(+12V) Yellow	11 23	Red (+5V)
(+3.3V) Orange	12 24	Black (GND)

24 PIN Optional  
 PCI-X Connector



Example:  
 PFC400PCX-0016

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