

# RAM Technologies

## PFC600PCX 600-WATT MEDICAL GRADE POWER SUPPLY



The PFC600PCX is the latest generation ATX/EPS12V power supply and is designed to meet both the ATX12V and EPS12V server standard.

The high efficiency design is an affordable solution for powering the most critical medical applications. Standard features include low noise dual Smart Fan Technology and optional interface to our Ultra capacitor UPS modules.

MADE IN THE USA

## Specifications

### Input

|                      |                           |
|----------------------|---------------------------|
| Input Voltage Range: | 100 to 250 VAC +/-10%     |
| Supply overvoltage:  | Cat Two <300V             |
| Input current:       | 7.5 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 8A 250V Line & Neutral |

### Output

|                         |                              |
|-------------------------|------------------------------|
| Max output power:       | 550W cont. 600WP see note 5  |
| 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 (+/-3%) | +12V       | +5V | +3.3V | -12  | +5Vsb     |
| Output current max.    | 45.8A/ 50A | 24A | 24A   | 0.5A | 3.0A/3.5A |
| Ripple mV P-P          | 100        | 50  | 50    | 100  | 50        |

1. Max output from +5V & +3.3V= 140 Watts. When loading the +5 & +3.3V, multiply total load by 1.2 and subtract from 550/600W.
2. Over current for +12V reset is accomplished by cycling power on signal
3. Over current for +5V, +3.3V, -12V, & +5Vsb auto resetting
4. Derate output 5W/volt input from 100 vac to 90 vac
5. 12s every 10 min.

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www.ramtechno.com

## 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: 2018 Rev 002              |
| EPS12V: REV 2.92   |
| IEC/ ES60601-1 2 <sup>nd</sup> & 3 <sup>rd</sup> edition |
| RoHS compliant UL file E191947 ISO9001:2015              |
| Lead free RoHS and REACH compliant                       |
| Patient Protection: Two MOPP                             |
| ECCN# EAR99  |

# PFC600PCX 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)



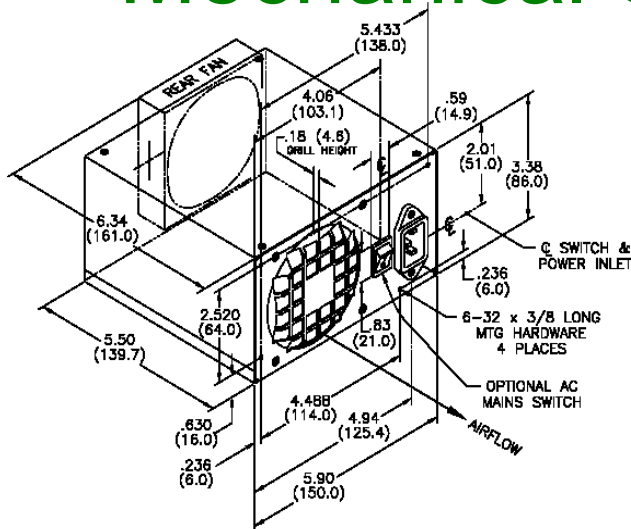
For Continued protection equipment must be grounded at all times in accordance with the requirements of class 1 devices.



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

# Mechanical Specifications



## Symbols Used



Attention, consult accompanying documents



Protective earth ground

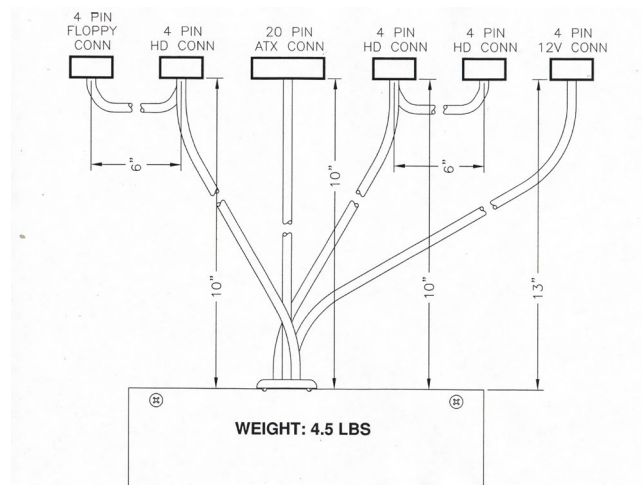


Caution

## 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 PFC600PCX is intended to power imbedded ATX/EPS style motherboards in mission critical medical applications.



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

RAM P/N  
#620012  
Order #  
0012

|           |     |              |
|-----------|-----|--------------|
| 3ND Black | 1 5 | White (+12V) |
| 3ND Black | 2 6 | White (+12V) |
| 3ND Black | 3 7 | White (+12V) |
| 3ND Black | 4 8 | White (+12V) |

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

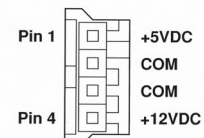
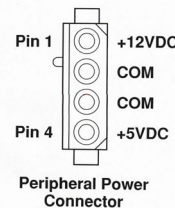
ATX12V Connector

|                |       |                |
|----------------|-------|----------------|
| (+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)    |



Floppy Drive Power Connector

24 PIN Optional  
PCI-X Connector

Note: -5V eliminated on this model

Example:  
PFC400PCX-  
0016

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