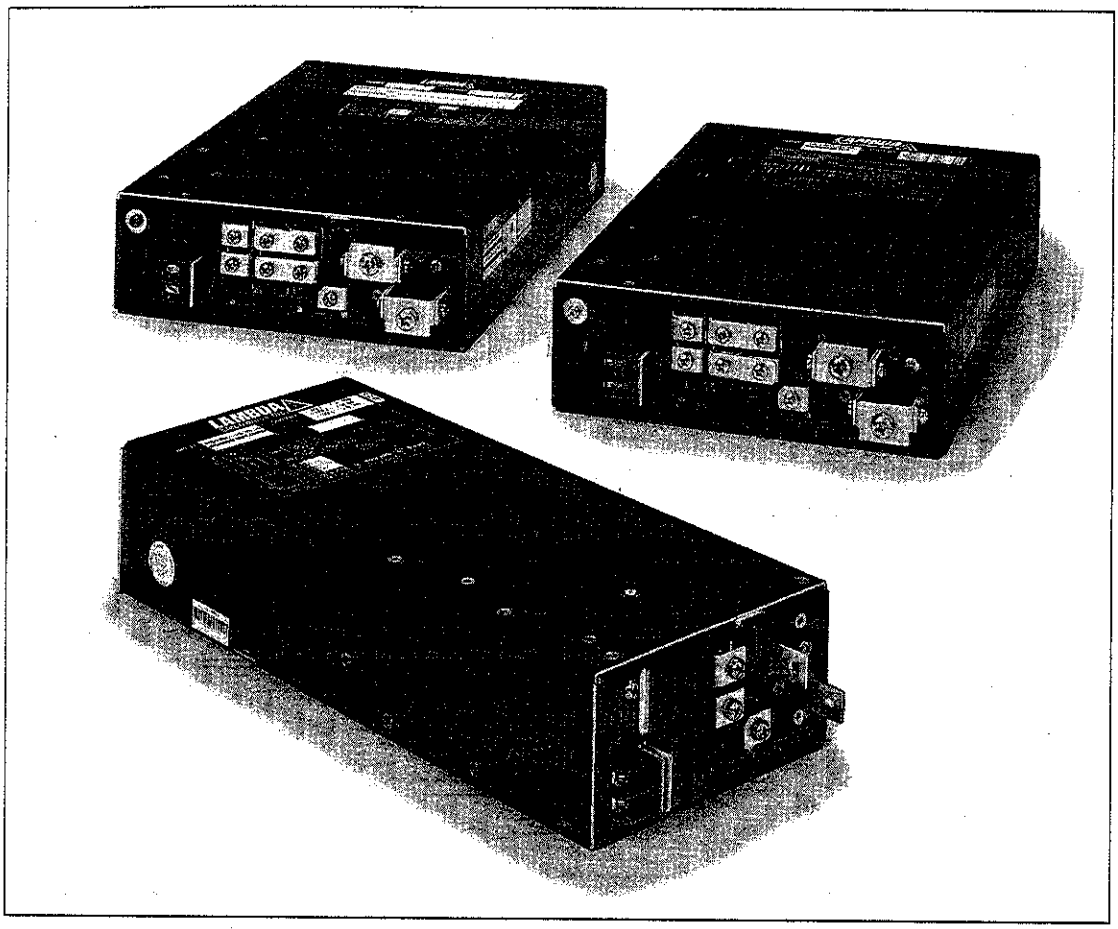
Lambda's PFC Series



Multiple Output, Power Factor Corrected Supplies, up to 1000W.

Lambda's PFC Series multiple output, power factor corrected power supplies are IEC 555-2 compliant. They are available in 500W, 750W, and 1000W packages, with configurable options for 3, 4, or 5 outputs.

To simplify the design engineer's task during program integration and qualification, the PFC Series incorporates independently regulated outputs with no preload requirements. In addition, most outputs have wide range output voltage adjustment with high current capability to allow for instantaneous adaptation to changes in system design parameters.

Utilizing proprietary and patented technology, the PFC Series achieves the performance and functionality required for the global marketplace at the lowest industry price.

AC-TO-DC POWER SUPPLIES

Commercial Ratings Table – Multiple Output

SW SERIES
- Lowest Cost Wide Range Input
- Industry Standard Footprint
- Meets FCC, VDE Class B EMI

ULTRAFLEX™ SERIES
- Compact Modular Power Supplies
- 1 to 10 Outputs
- 85-265VAC Wide Range Input
- Meets Level B EMI

PFC SERIES
- 3 to 5 Outputs
- Power Factor Corrected
- Meets Level B EMI
- 85-265VAC Wide Range Input

V AND Z SERIES
- Low Cost 110VAC and 110/220VAC Inputs
- PCB and Chassis Mount Construction
- Meets FCC and VDE Curve B

LW SERIES
- High Density, Low Profile
- 110/220 Universal Input
- Meets VDE Curve A

MAX POWER	OUTPUT 1	OUTPUT 2	OUTPUT 3	OUTPUT 4	COMPLETE ELEC. SPEC. PG.	MODEL
QUAD OUTPUT						
80W	5V @ 8A	+15V @ 2A	–15V @ 1A	24V @ 0.8A	84	**LWQ-80-5FF4**
130W	5V @ 15A	+12V @ 2.5A	–12V @ 1A	24V @ 0.8A	80	**SVPQ130-1**
130W	5V @ 15A	+12V @ 2.5A	–12V @ 1A	–5V @ 1.5A	80	**SVPQ130-2**
130W	5V @ 15A	+15V @ 2.5A	–15V @ 1A	24V @ 0.8A	80	**SVPQ130-3**
130W	5V @ 15A	+15V @ 2.5A	–15V @ 2A	–5V @ 1.5A	80	**SVPQ130-4**
130W	5V @ 15A	+12V @ 4A	–12V @ 1A	24V @ 2A	84	**LWQ-130-5224**
130W	5V @ 15A	+12V @ 2.5A	–12V @ 2A	–5V @ 1.5A	80	**SVQ130-2**
130W	5V @ 15A	+12V @ 2.5A	–12V @ 2A	24V @ 0.8A	80	**SVQ130-1**
130W	5V @ 15A	+15V @ 4A	–15V @ 2A	24V @ 0.8A	80	**SVQ130-3**
130W	5V @ 15A	+15V @ 4A	–15V @ 2A	–5V @ 1.5A	80	**SVQ130-4**
200W	5V @ 22A	+12V @ 5A	–12V @ 3A	24V @ 1.5A	80	**SVPQ200-1**
200W	5V @ 22A	+12V @ 5A	–12V @ 3A	–5V @ 5A	80	**SVPQ200-2**
200W	5V @ 22A	+15V @ 5A	–15V @ 3A	24V @ 1.5A	80	**SVPQ200-3**
200W	5V @ 22A	+15V @ 5A	–15V @ 3A	–5V @ 5A	80	**SVPQ200-4**
200W	5V @ 22A	+15V @ 5A	–15V @ 3A	24V @ 1.5A	80	**SVQ200-3**
200W	5V @ 22A	+15V @ 5A	–15V @ 3A	–5V @ 5A	80	**SVQ200-4**
200W	5V @ 22A	+12V @ 5A	–12V @ 3A	–5V @ 5A	80	**SVQ200-2**
200W	5V @ 22A	+12V @ 5A	–12V @ 3A	24V @ 1.5A	80	**SVQ200-1**
300W	5V @ 38A	+12V @ 6A	–12V @ 3A	24V @ 2A	80	**SVPQ300-1**
300W	5V @ 38A	+12V @ 6A	–12V @ 3A	–5V @ 8A	80	**SVPQ300-2**
300W	5V @ 38A	+15V @ 6A	–15V @ 3A	24V @ 2A	80	**SVPQ300-3**
300W	5V @ 38A	+15V @ 6A	–15V @ 3A	–5V @ 8A	80	**SVPQ300-4**
300W	5V @ 38A	+12V @ 8A	–12V @ 4A	12V @ 2A	80	**SVPQ300-5**
300W	5V @ 38A	+15V @ 8A	–15V @ 4A	24V @ 2A	80	**SVQ300-3**
300W	5V @ 38A	+15V @ 8A	–15V @ 4A	–5V @ 8A	80	**SVQ300-4**
300W	5V @ 38A	+12V @ 6A	–12V @ 3A	–5V @ 8A	80	**SVQ300-2**
300W	5V @ 38A	+12V @ 6A	–12V @ 3A	24V @ 2A	80	**SVQ300-1**
400W	5V @ 30A	12V @ 17A	12V @ 10A	5V @ 4A	68	**UAK1-GJV**
400W	5V @ 30A	12V @ 17A	12V @ 4A	5V @ 10A	68	**UAK1-GJW**
500W	5V @ 75A	12V @ 12A	–12V @ 4A	5V @ 20A	72	**PFC0500-4BH-Z**
500W	5V @ 75A	12V @ 12A	–12V @ 4A	12V @ 8A	72	**PFC0500-4CH-Z**
500W	5V @ 75A	12V @ 12A	–12V @ 4A	24V @ 4A	72	**PFC0500-4DH-Z**
500W	5V @ 75A	12V @ 12A	–12V @ 4A	48V @ 2A	72	**PFC0500-4EH-Z**
600W	5V @ 60A	12V @ 17A	12V @ 17A	5V @ 30A	68	**UBK1-GHJJ**
600W	5V @ 30A	12V @ 30A	12V @ 4A	12V @ 10A	68	**UBK1-GKY**
600W	5V @ 60A	12V @ 17A	12V @ 4A	12V @ 10A	68	**UBK1-HJY**
600W	5V @ 30A	24V @ 15A	12V @ 4A	12V @ 10A	68	**UBK1-GQY**
750W	5V @ 110A	12V @ 18A	–12V @ 7A	5V @ 20A	72	**PFC0750-4BH-Z**
750W	5V @ 110A	12V @ 18A	–12V @ 7A	12V @ 10A	72	**PFC0750-4CH-Z**
750W	5V @ 110A	12V @ 18A	–12V @ 7A	24V @ 6A	72	**PFC0750-4DH-Z**
750W	5V @ 110A	12V @ 18A	–12V @ 7A	48V @ 3A	72	**PFC0750-4EH-Z**
1000W	5V @ 150A	12V @ 24A	–12V @ 10A	5V @ 20A	72	**PFC1000-4BH-Z**
1000W	5V @ 150A	12V @ 24A	–12V @ 10A	12V @ 12A	72	**PFC1000-4CH-Z**
1000W	5V @ 150A	12V @ 24A	–12V @ 10A	24V @ 6A	72	**PFC1000-4DH-Z**
1000W	5V @ 150A	12V @ 24A	–12V @ 10A	48V @ 3A	72	**PFC1000-4EH-Z**

Commercial Ratings Table – Multiple Output

SW SERIES
- Lowest Cost Wide Range Input
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- Compact Modular Power Supplies
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- 85-265VAC Wide Range Input

V AND Z SERIES
- Low Cost 110VAC and 110/220VAC Inputs
- PCB and Chassis Mount Construction
- Meets FCC and VDE Curve B

LW SERIES
- High Density, Low Profile
- 110/220 Universal Input
- Meets VDE Curve A

MAX POWER	OUTPUT 1	OUTPUT 2	OUTPUT 3	OUTPUT 4	OUTPUT 5	COMPLETE ELEC. SPEC. PG.	MODEL
PENT OUTPUT							
400W	5V @ 30A	12V @ 17A	12V @ 4A	5V @ 10A	48V @ 4A	68	**UAK1-GJSW**
500W	5V @75A	12V @ 12A	–12V @ 4A	5V @ 20A	5V @ 5A	72	**PFC0500-5BJ-Z**
500W	5V @75A	12V @ 12A	–12V @ 4A	12V @ 8A	5V @ 5A	72	**PFC0500-5CJ-Z**
500W	5V @75A	12V @ 12A	–12V @ 4A	24V @ 4A	5V @ 5A	72	**PFC0500-5DJ-Z**
500W	5V @75A	12V @ 12A	–12V @ 4A	48V @ 2A	5V @ 5A	72	**PFC0500-5EJ-Z**
600W	5V @ 60A	12V @ 17A	12V @ 4A	5V @ 10A	24V @ 8.5A	68	**UBK1-HJPW**
600W	5V @ 60A	12V @ 17A	12V @ 4A	5V @ 10A	48V @ 4A	68	**UBK1-HJSW**
650W	5V @ 100A	12V @ 20A	12V @ 5A	5V @ 10A	5V @ 0.75A	76	**2D4WC1G-0895**
650W	5V @ 100A	12V @ 20A	12V @ 5A	12V @ 10A	5V @ 0.75A	76	**2D4WC1G-1078**
750W	5V @ 110A	12V @ 18A	–12V @ 7A	5V @ 20A	5V @ 7A	72	**PFC0750-5BJ-Z**
750W	5V @ 110A	12V @ 18A	–12V @ 7A	12V @ 10A	5V @ 7A	72	**PFC0750-5CJ-Z**
750W	5V @ 110A	12V @ 18A	–12V @ 7A	12V @ 10A	12V @ 2A	72	**PFC0750-5CK-Z**
750W	5V @ 110A	12V @ 18A	–12V @ 7A	24V @ 6A	5V @ 7A	72	**PFC0750-5DJ-Z**
750W	5V @ 110A	12V @ 18A	–12V @ 7A	24V @ 6A	12V @ 2A	72	**PFC0750-5DK-Z**
750W	5V @ 110A	12V @ 18A	–12V @ 7A	48V @ 3A	5V @ 7A	72	**PFC0750-5EJ-Z**
1000W	5V @ 150A	12V @ 24A	–12V @ 10A	5V @ 20A	5V @ 7A	72	**PFC1000-5BJ-Z**
1000W	5V @ 150A	12V @ 24A	–12V @ 10A	12V @ 12A	5V @ 7A	72	**PFC1000-5CJ-Z**
1000W	5V @ 150A	12V @ 24A	–12V @ 10A	24V @ 6A	5V @ 7A	72	**PFC1000-5DJ-Z**
1000W	5V @ 150A	12V @ 24A	–12V @ 10A	48V @ 3A	5V @ 7A	72	**PFC1000-5EJ-Z**
1500W	5V @ 150A	12V @ 20A	12V @ 20A	12V @ 10A	12V @ 10A	76	**315WA5F-0600**

PFC Series Features

Power Factor Correction	Active power factor correction circuitry ensures compliance to IEC 555-2 while improving input power quality, line regulation, AC noise immunity and holdup time. These key features ensure greater system performance and reliability worldwide.
No Preload	All outputs operate from no load to full load, without degradation to output cross regulation.
Output Surge Current Capability	Ensures reliable operation for applications with highly capacitive or inductive loads.
Performance Flexibility	Wide range adjustable output voltages, each with high current capability, reduce qualification cost and design cycle time, since a single unit can be used throughout the design verification process.
Lowest Cost	Proprietary technology allows for a fully featured design at the lowest industry cost.
VME Compliant	Integral circuitry meets the VME output ripple, system reset and system fail specifications.
Low Profile	2.65" height provides optimal space allocation, resulting in higher reliability and enhanced system performance.
85-265VAC Wide Range Input	Provides the ideal turn-key solution for worldwide use.
Worldwide Safety Agency Approvals	Safety agency approvals to UL1950, CSA 234M90, EN60950, BS6301, and EN41003 (BABT) ensure compliance throughout the world.
Meets Worldwide EMI Requirements	Conducted EMI to VDE 0871 Curve B and FCC Class B ensures reliable system performance.
Remote Sensing	All high-powered outputs have remote sensing capability to offset voltage drops in output due to isolation diodes or load lead losses.
System Interface Signals	AC Power Fail, Remote On/Off and DC Output Good signals provide system capability for real-time monitoring and response.
3.3V Outputs	These standard solutions will address the upcoming demand for 3.3V logic.

AC-TO-DC POWER SUPPLIES

PFC-0750-3AH-2

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PFC Series Specifications

AC Input

line . . . . . .85-265VAC, 47-63Hz on all models.

Input Power Model	Efficiency 110VAC	Efficiency 220VAC	Inrush Current 110VAC	Inrush Current 220VAC	Power Factor 110VAC	Power Factor 220VAC
PFC0500	67%	70%	40A	40A	0.98	0.96
PFC0750	67%	70%	40A	80A	0.98	0.96
PFC1000	67%	70%	40A	80A	0.98	0.96

(specified values are typical)

DC Input

150 VDC to 350 VDC. Consult the factory for operation to 120 VDC. 48 VDC input version available. See page 98 for the PFD Series.

EMI

Conducted EMI conforms to FCC Part 15, Subpart J, Class B; VDE 0871 Curve B.

Input Harmonic Current

All models are compliant with IEC 555-2 and EN60555-2.

Input Transient Protection

IEEE C62.41, Category A3. Consult Factory for Category B3. IEC-801-2, -3, -4, -5 (Level 3).

DC Output

Voltage ranges are shown in tables. Outputs are adjustable over the ranges shown.

Regulated Voltage

line regulation . . . . . .0.2% for line variations from 85-265VAC.

load regulation . . . . . .1.0% for load variations from no load to full load and full load to no load.

ripple and noise . . . . . .15mV RMS, 50mV pk-pk for 5V outputs.
20mV RMS, 150mV pk-pk for 12V, 15V outputs.
20mV RMS, 250mV pk-pk for 24V, 28V outputs.
35mV RMS, 500mV pk-pk for 48V outputs.

temperature coefficient . . . .0.03%/°C.

remote programming resistance . . . . . .1000Ω/volt on outputs 1, 2, and 4 only. Output 3 tracks output 2.

remote programming voltage . . . . . .Volt per volt on outputs 1, 2, and 4 only. Output 3 tracks output 2.

Thermal Protection

Internal circuitry protects the power supply against excessive temperature.

Overcurrent Protection

Internal circuitry limits all output currents to safe preset levels in the event of an overload or short-circuit condition. Upon removal of the overload condition, normal operation resumes automatically.

Overvoltage Protection

Internal circuitry latches off the power supply in the event of an overvoltage condition (except on the fifth output).

Preload

External preload is not required on any output.

Output Surge Current

Outputs 2 and 4 (24V models only) provide surge current capability equal to three times rated output current for up to one second, then derating exponentially to steady state value after ten seconds. Maximum total output power must not be exceeded.

Holdup Time

Output voltage will remain within regulation limits for 16msec upon loss of AC input on output 1 only, when operating over the entire AC line, full load and output voltage set at 5.25VDC. Consult the factory for other outputs.

Remote Sensing

Internal circuitry allows for remote sensing on all outputs.

Redundant Operation

Redundant operation achieved through external diodes on all outputs (except on the fifth output). Current share option is available. See options below.

Remote On/Off

TTL-compatible, active high.

Remote Monitoring Signals

(TTL-compatible – conductance)
Output Good signal and AC Fail signal are standard on all models.

Isolation Rating

Input to Output:	3000V RMS
Output to Chassis:	500V RMS
Input to Chassis:	1500V RMS

Overshoot

No overshoot at turn-on, turn-off or input power failure.

Cooling

All models are forced-air cooled via internal fans.

Operating Temperature Range

Operation from 0°C to +70°C. Current ratings in Tables apply up to 50°C. Derate current by 50% at 70°C.

Storage Temperature Range

–40°C to +85°C.

DC Output Controls

A single-turn potentiometer is provided for adjustment over the entire voltage range for outputs 1, 2 and 4. Output 3 tracks output 2.

Input, Output and Signal Connections

AC Input: heavy-duty barrier strip.
DC Output: heavy-duty buss bars.
Aux. Signals: plug-in connector.

Mounting

One mounting surface on all models.

Physical Data

Package Model	Lbs. Net	Lbs. Ship	Dimensions (inches) (L X H X W)
PFC0500	6.0	7.5	12.0 × 2.65 × 5.0
PFC0750	9.0	10.5	12.0 × 2.65 × 8.0
PFC1000	9.0	10.5	12.0 × 2.65 × 8.0

Options

Consult the factory for additional information on the following options:

Option	Description	Price Adder
N	VME Compatible Performance	—
X	UL544 Leakage Current and Curve A EMI	$30.00
T	Current Share	$50.00

Safety Agency Approvals

The PFC Series is approved to UL1950, CSA 234M90, IEC 950, EN60950, EN41003 (BABT), BS6301, and SELV on all models below 48VDC output.

Guarantee

One-year guarantee includes labor as well as parts. Guarantee applies to operation within published specifications and recommended application data at the end of one year.

PFC Series Mechanical Drawings

PFC-500

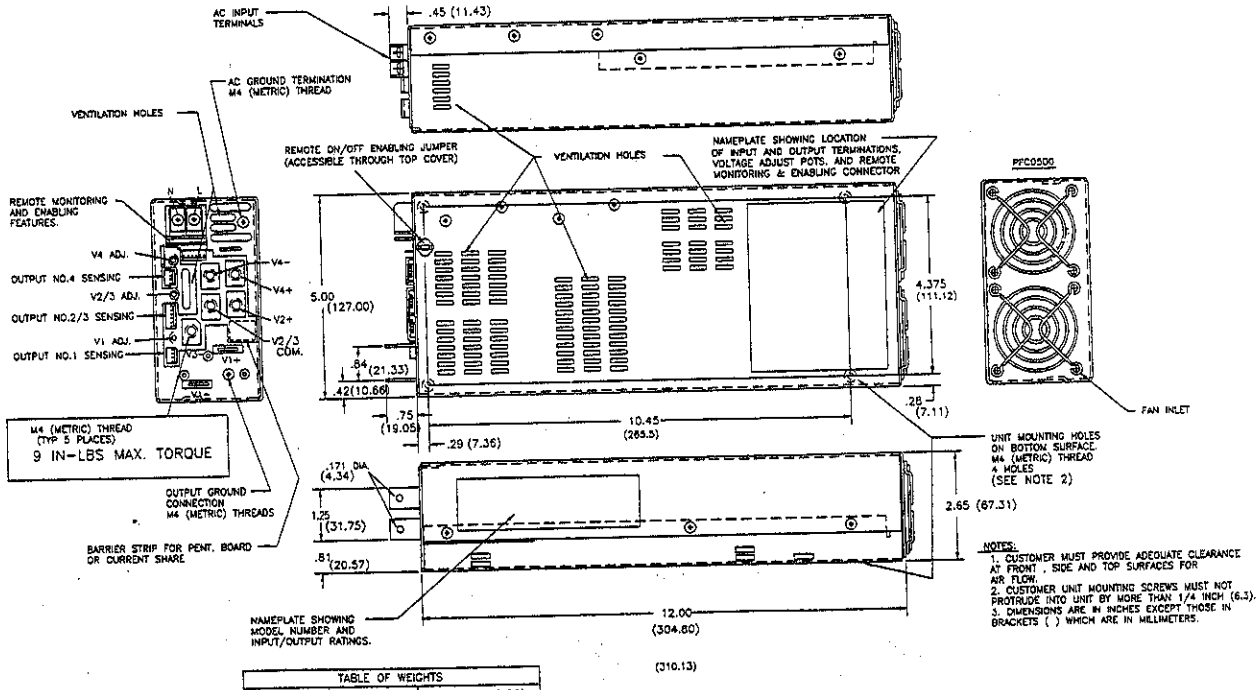

TABLE OF WEIGHTS		
MODEL	NET (LBS)	SHIPPING (LBS)
PFC0500	6	7.5

PFC750
PFC1000

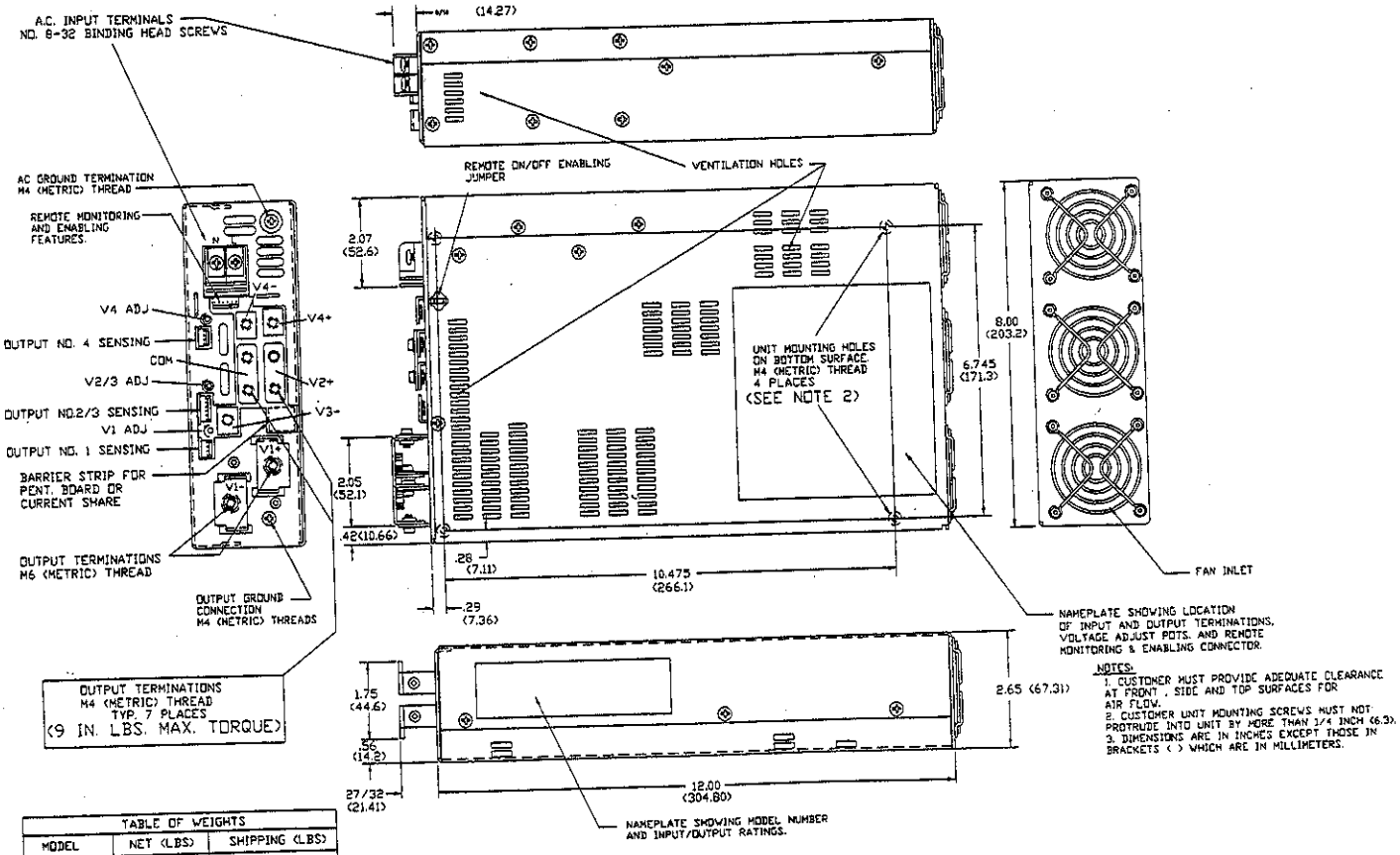

TABLE OF WEIGHTS		
MODEL	NET (LBS)	SHIPPING (LBS)
PFC1000	9.0	10.5
PFC0750	9.0	10.5