

**Model: BPA-R850 Series**

Total Power	850 Watts
Input Voltages	90-264 VAC
Outputs	Single plus 5VSB

**SPECIAL FEATURES**

- Active Power Factor Correction
- Wide Range Input
- POE/Isolated Output (Optional)
- Redundant operation
- Single wire current sharing
- Diode isolation
- PS On
- Power Okay
- Inhibit
- I<sup>2</sup>C interface
- UL, CUL, and DEMKO Approvals
- CE compliant
- **Custom modifications available**

**ENVIRONMENTAL SPECIFICATIONS**

Humidity: Up to 95% non-condensing

Storage Temperature: -20° to +85°C

Temperature coefficient: ±0.01% / °C

Ambient Operating Temperature: 0 to +50°C continuous duty, full rating. Derates linearly to 70% of full rating at +70°C.

Cooling: Self contained fan cooling.

**SAFETY APPROVALS**

UL	60950-1 Second Edition
CUL	60950-1 Second Edition
DEMKO	EN60950-1 Second Edition

\* Isolation on POE option only



**OVERALL MECHANICAL DIMENSIONS**

10.48" L x 3.23" W x 1.55" H  
(266.3mm x 82mm x 39.4mm)

**ELECTRICAL SPECIFICATIONS**

**Input Specifications**

Input Range.....	90-264 VAC
Frequency.....	47-63 Hz
EMI filter.....	EN55022 Class A, FCC Part 15
Inrush Current.....	≤32A @ 230 VAC
Input Current.....	11.8A – 3.8A
Isolation (Input to Output).....	4242 VDC
Isolation (VO1 to Gnd)*.....	2200 VDC
Isolation (VO1 to Logic Gnd)*...	2200 VDC
Efficiency.....	88%
Active PFC.....	0.99
Switching Frequency.....	134KHz.
Leakage.....	< 1mA

**Output Specifications**

DC Output.....	Maximum continuous output power 850 Watts with self-contained fan cooling.
Line Regulation.....	±0.05%
Load Regulation.....	±1%
Ripple and Noise.....	1% Pk to Pk
Transient Response.....	2% Maximum deviation; returns to initial condition in 1 msec max.
Long Term Stability.....	0.01% after 20 minute warm-up.

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## Model: BPA-R850 Series

### ELECTRICAL SPECIFICATIONS (CONT')

#### Output Specifications

Hold-Up Time..... 20msec minimum

OVP.....115% to 135% on VO1 output only.

Short-circuit Protection.....Constant current with delayed latching method on VO1 output. The 5VSB utilizes the hiccup method.

Overload Protection.....Constant current with delayed latching method on VO1 output. The 5VSB utilizes the hiccup method. The constant current method allows for a 5-second delay before the power supply shuts down if the output current rating exceeds 110% to 130% of maximum rated output current. The AC must be recycled or the PS ON reset to restart the unit.

Diode Isolation..... Internal FET isolation provided for N+1 redundant operation.

Current Sharing.....VO1 Output will current share within 5% when interconnected by a single wire.

PS ON.....The secondary outputs are enabled only upon mating pin P1-7 to output common on the customer's backplane.

Over Temperature Protection .... The power supply will shut down if temperature is greater than 100°C internal temperature. The power supply is self recovering once the internal temperature falls below 60°C.

Power Okay..... A TTL high logic signal is provided on pin P1-10 when the input and output voltages are within normal operating conditions.

Inhibit .....A TTL low logic signal sent to pin P1-11 inhibits all outputs except the 5VSB. Upon release of the signal, outputs are restored.

I<sup>2</sup>C ..... Monitors: Power Good, Voltage, Current, Temperature, and Fan

#### PIN ASSIGNMENTS

See attached In/Output Rating and Pin Assignment Sheet

#### CONNECTOR

Input/Output – Positronic PCIM30W15M400A1 or Input/Output (POE) – Positronic PCIB24W9M400A1/AA

#### NOTES

- Specifications subject to change without notice.
- All dimensions in inches/mm
- Warranty: 2 years
- Weight: 3 lbs

### VOLTAGE/CURRENT RATING CHART

Sample Part Number	Assignment	Voltage	Minimum	Maximum
BPA-R850-120A	VO1	12V	0A	70.8A
	5VSB	+5V	0A	2.0A
BPA-R850-240A	VO1	24V	0A	35.4A
	5VSB	+5V	0A	2.0A
BPA-R850-360A	VO1	36V	0A	23.6A
	5VSB	+5V	0A	2.0A
BPA-R850-480A	VO1	48V*	0A	17.7A
	5VSB	+5V	0A	2.0A

\* Isolated Output

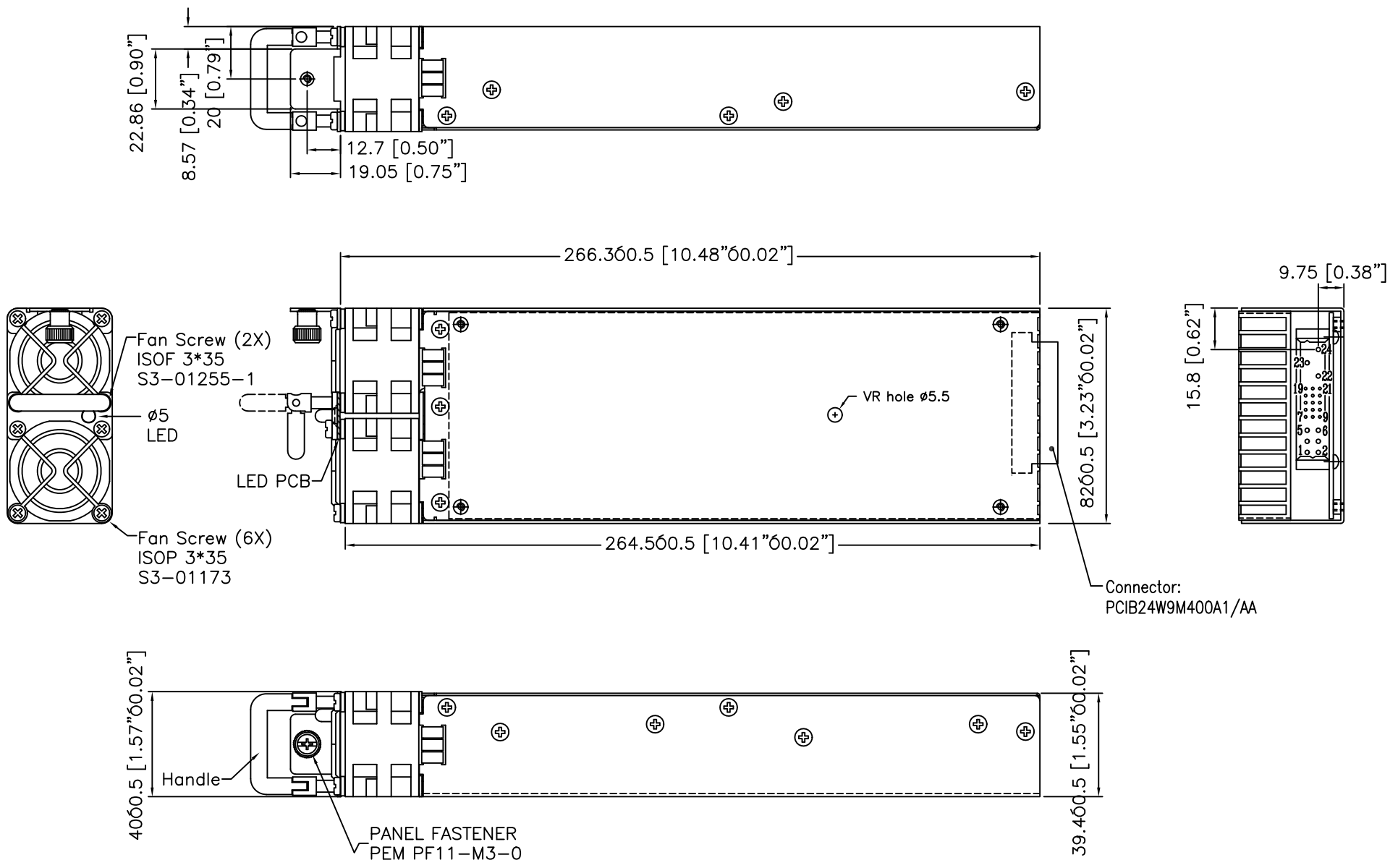
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BPA-R850 Series Spec – 071210



<b>BluTek Power</b>											
<b>Outline drawing (POE)</b>											
TITLE		DRAWN		H. L. LIN		DRG. NO.		BLU-264			
THIRD		CHECKED		DATE		MODEL NO.		BPA-R850 Series			

UNIT	mm[inches]	REV. NO.	C	SCALE	0.48 : 1	MAT'L	t=
THIRD	⊕	⏏		TOL.	± 0.5	DATE	06. 02. 2008



## IN/OUTPUT RATING & PIN ASSIGNMENT

SIZE : A4	FM-4000-34/REV.A-080502'
UNIT : mm[inches]	FILENAME: PPSC0494
REV. NO.: A	DATE : 02. 15. 2008
DRAWN: 洪麗珍 L. J. Hun	CHECKED:

MODEL NO. : BPA-R850-480A LF

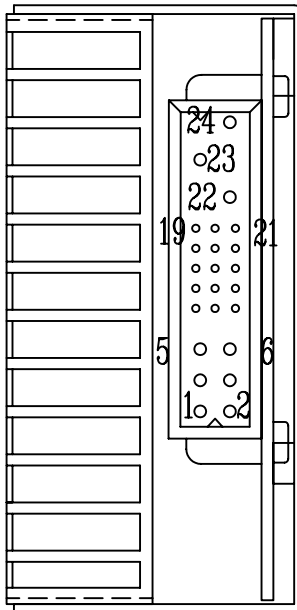
### INPUTS :

ASSIGNMENT	A.C. VOLTAGE	CURRENT	PIN NBR
L:	100-240V~	11.8A	P1-24
N:			P1-23
GND:		50-60Hz	P1-22

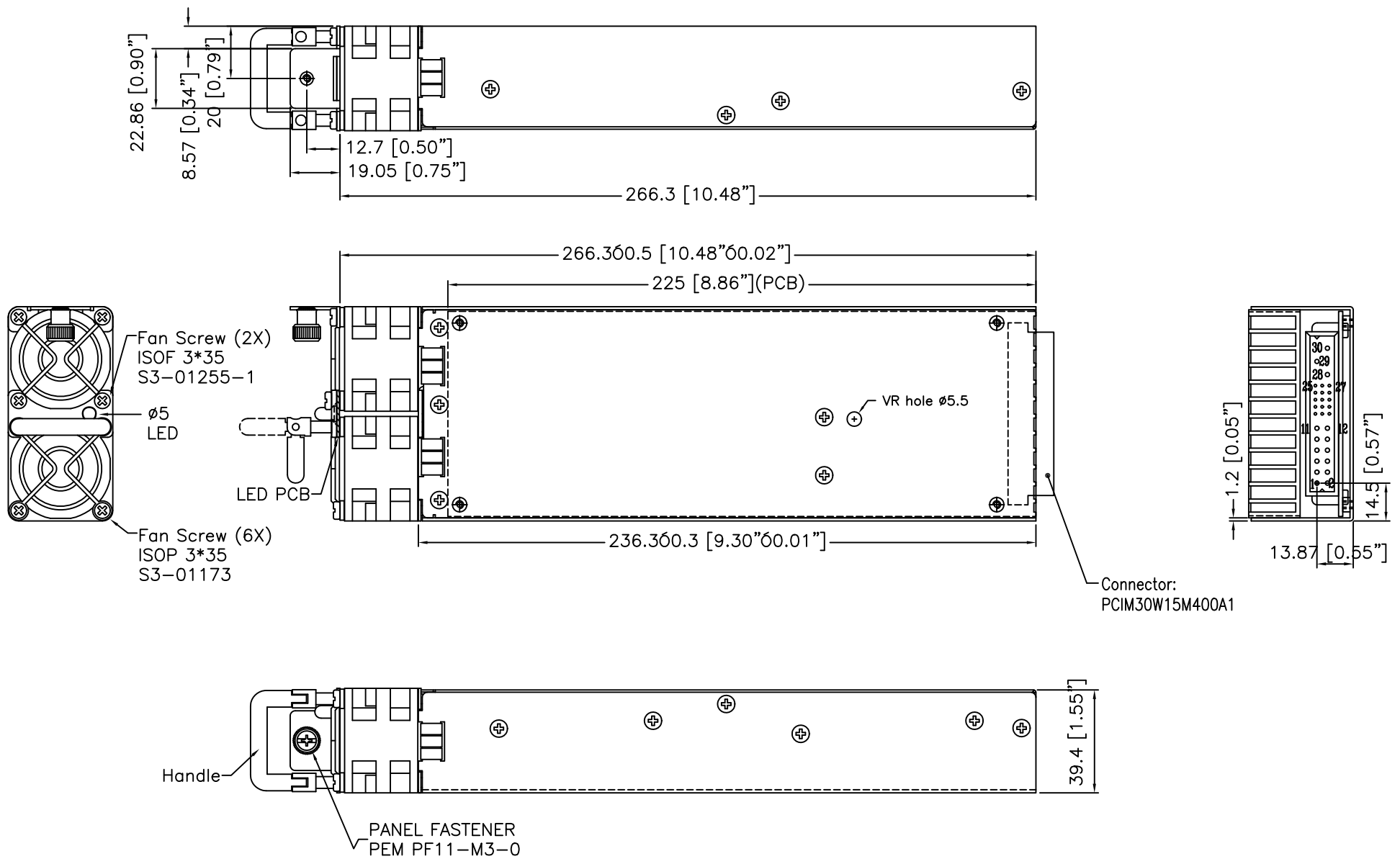
### OUTPUTS :

ASSIGNMENT	D.C. VOLTAGE	CURRENT	PIN NBR
VO1:	-48V ---	17.7A	P1-1,2
48V RET:	(Ret of -48V, Pos power rail)		P1-3,4
Not Connected:			P1-5
5VSB:	+5V ---	2A	P1-18
48VCS:			P1-6
PS ON:			P1-7
NC.:			P1-8,9
INH:			P1-11
P. OK:			P1-10
FAN_OK:			P1-12
TEMP:			P1-13
PSU_PRESENT:			P1-14
Digital GND:			P1-15
SDA:			P1-16
SDL:			P1-17
A2:			P1-19
A1:			P1-20
A0:			P1-21

**MAXIMUM OUTPUT POWER: 850W**



P1 = POSITRONIC PCIB24W9M400A1/AA



<i>BluTek Power</i>			
Outline drawing			
TITLE			
DRAWN	H. L. LIN	DRG. NO.	BLU-120
CHECKED		MODEL NO.	BPA-R850

UNIT	mm[inches]	REV. NO.	E	SCALE	0.48 : 1	MAT'L	t=
THIRD	⊕	⚡		TOL.	± 0.2	DATE	05. 04. 2006



## IN/OUTPUT RATING & PIN ASSIGNMENT

SIZE : A4	FM-4000-34/REV.A-080502'
UNIT : mm[inches]	FILENAME: JWI082708
REV. NO.: A	DATE : 10. 21. 2006
DRAWN: 林惠蘭 H. L. LIN	CHECKED:

MODEL NO. : BPA-R850 Series LF

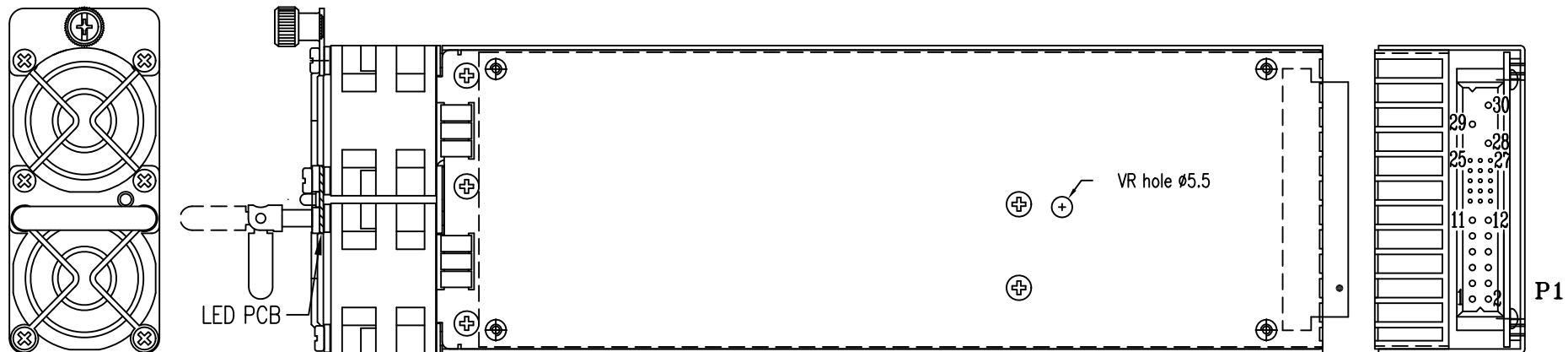
### INPUTS :

ASSIGNMENT	A.C. VOLTAGE	CURRENT	PIN NBR
L:	100-240V~	11.8A	P1-30
N:			P1-29
GND:		50-60Hz	P1-28

### OUTPUTS :

ASSIGNMENT	D.C. VOLTAGE	CURRENT	PIN NBR
V01:	See Voltage/Current Rating Chart		P1-1,2,3,4,5,6
DC COM:			P1-7,8,9,10,11,12
+12VS:			P1-19
5VSB:	+5V ---	2A	P1-13,14
INH:			P1-24
TEMP:			P1-20
PS ON:			P1-21
SDL:			P1-17
SDA:			P1-16
DC COM:			P1-18
P. OK:			P1-15
-V01VS:			P1-22
+V01VCS:			P1-23
A0:			P1-27
A1:			P1-26
A2:			P1-25

MAXIMUM OUTPUT POWER: 850W



P1 = POSITRONIC PCIM30W15M400A1