AC/DC Power

Medical

PDAM500 Series
500W Power Supply

- **UL / IEC / EN 60601 3.1 Edition & UL / IEC / EN 60950 AM2 Safety Approvals**
- **High power density: 500W in 3” x 5” footprint**
- **Open Frame or Enclosed Versions Available**
- **Remote ON/OFF Function**
- **Built-in 12V/0.3A Auxiliary Output**
- **Standby 5V @ 1A with Fan, @ 0.4A without Fan**
- **High Efficiency up to 93%**
- **P.F.C. Function >0.95**

Electrical Specifications

Input

Input Voltage	90-264 VAC or 120-370 VDC
Input Frequency	47-63 Hz
Input Current (RMS)	<6.0A @ 115 VAC; <3.00A @ 230 VAC
Power Factor	>0.95 @ full load (230 VAC)
Inrush Current (<2ms)	<40A @ 115 VAC; <80A @ 230 VAC
Earth Leakage Current	< 0.1 mA max. (Input-Output)

Output

Total Output	500W max. See table for details
Output Voltage	See table
Hold Up Time	8ms typical at full load and 115VAC nominal line. (Note 4)
Efficiency	Up to 93%. See table for details
Minimum Load	0%

Protection

Overvoltage	110-132%, Auto recovery
Overload	145-170%, Auto recovery
Short Circuit	Auto recovery

Environmental & Operating

Operating Temperature	-40ºC to +70ºC (with derating)
Storage Temperature	-40ºC to +85ºC
Humidity	95% RH
Operating altitude	<3000m for medical use
MTBF:	>160K hours per MIL-HDBK-217F at full load and 25ºC ambient

Compliance

Safety Approvals

USA/Canada	UL60601-1 3rd Edition , UL/cUL60950-1 UL62368-1 (Pending)
Europe	IEC/EN60601-1 3rd edition, TUV EN60950-1 CB Report EN62368-1 (Pending)
Isolation:	4000VAC input to output, 2 x MOPP 1500VAC input to ground,1 x MOPP 1500VAC output to ground,1 x MOPP
EMC (IEC60601-1-2:2014) :	FCC Class B Radiated & Conducted EN55011/55022 Class B Radiated & Conducted
Harmonic Currents	IEC 61000-3-2:
Voltage Flicker	IEC 61000-3-3
Electrostatic Discharge	IEC 61000-4-2: 15kV Air, 8kV contact
Radiated Immunity	IEC 61000-4-3: 10V/m
EFT/Burst	IEC 61000-4-4: +/-2kV
Surge Immunity	IEC 61000-4-5: 2005 1kV diff, 2kV com
Conducted Immunity	IEC 61000-4-6: 10Vrms
Magnetic Field	IEC 61000-4-8: 30A/m
Dips / Interruptions	IEC 61000-4-11: 30% reduction for 500ms, 100% reduction for 10ms.

General

Dimensions	3.0”W x 5.03”L x 1.38”H
Weight	1.058 pounds (480 g)

Power Partners

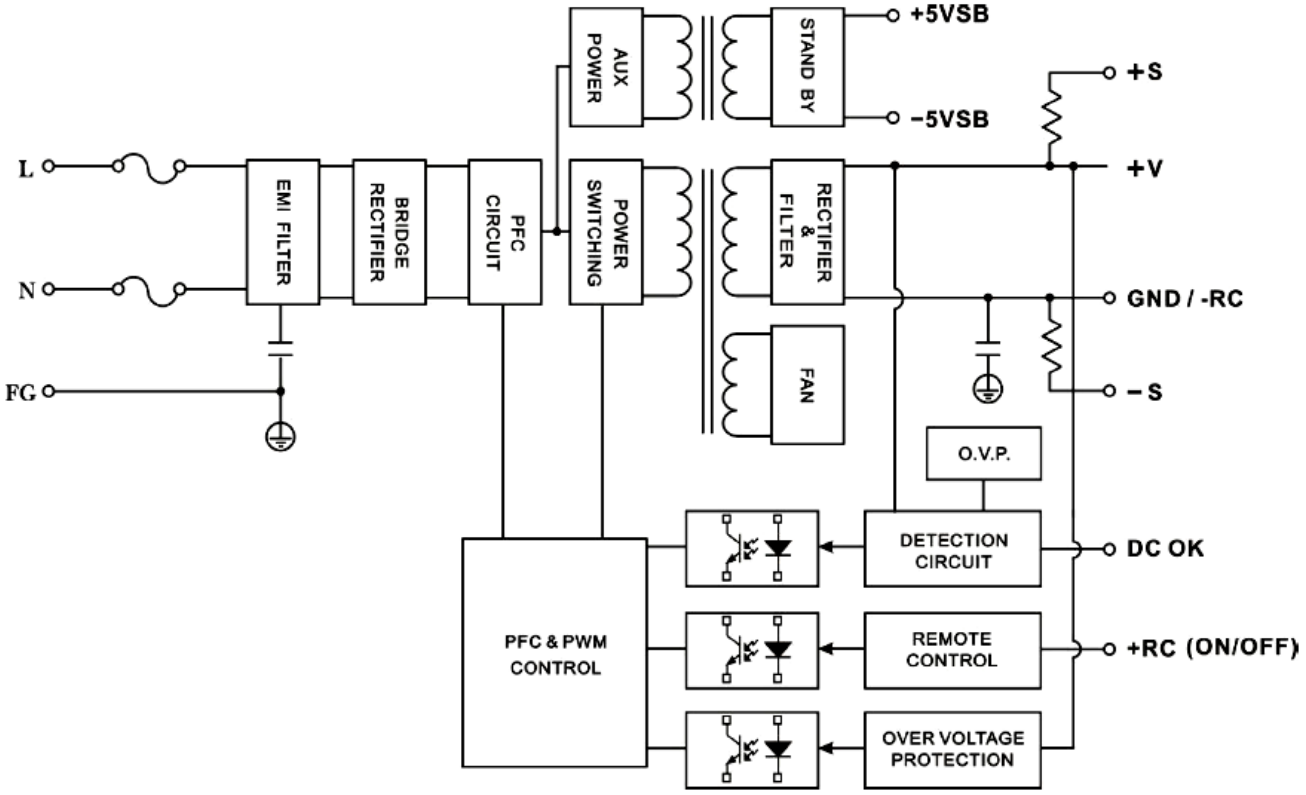
PDAM500 Series
500W Power Supply

Models and Ratings

Model[1]	Output Voltage	Max Load Convection[2]	Max Load 30CFM Forced Air	Output Regulation	Ripple & Noise[6]	Efficiency (230 VAC)	Fan Output	+5VSB Output[7]
PDAM500-12A	12V	20A	41.5A	±1.2%	160mV	90.5%	12V/0.3A	5V/1A
PDAM500-13A	15V	14.66A	33.3A	±1.0%	160mV	90.5%	12V/0.3A	5V/1A
PDAM500-14A	24V	10A	20.8A	±1.0%	240mV	92%	12V/0.3A	5V/1A
PDAM500-18A	48V	5A	10.41A	±1.0%	480mV	93%	12V/0.3A	5V/1A

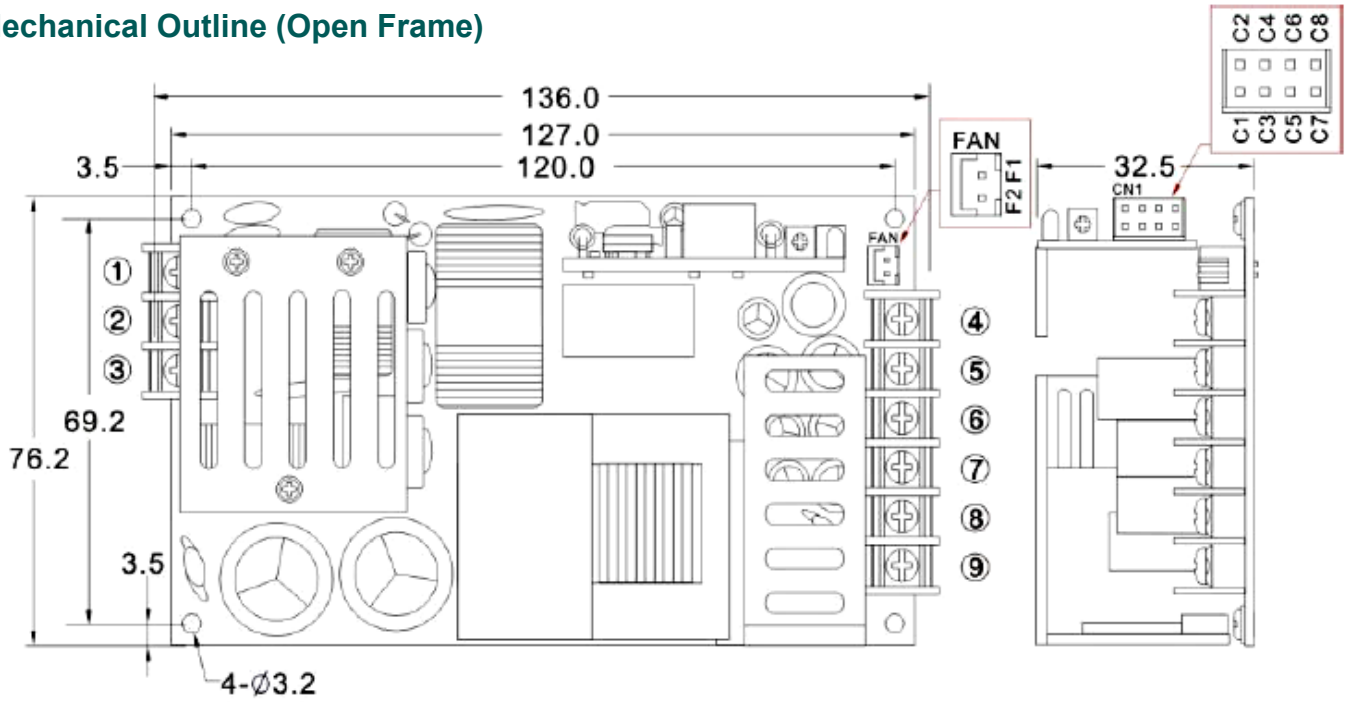
Note:
1. All models are available in an enclosed version (e.g. PDAM500-12A would be PDAM500-12C)
2. Listed values are taken at 230VAC. At 115VAC, 19.16A, 9.58A, and 4.8A for the models listed as shown.
3. Recommended to add Varistor 14S471K at L/N input side in parallel.
4. Hold-up Time measured at 90% Vout
5. Main Vout >3% Load, 12V (Aux) / 0.3A.
6. Measured at 20MHz bandwidth with a 47uF electrolytic capacitor and 0.1uF ceramic capacitor in parallel at the output connector.
7. 400mA convection rated.

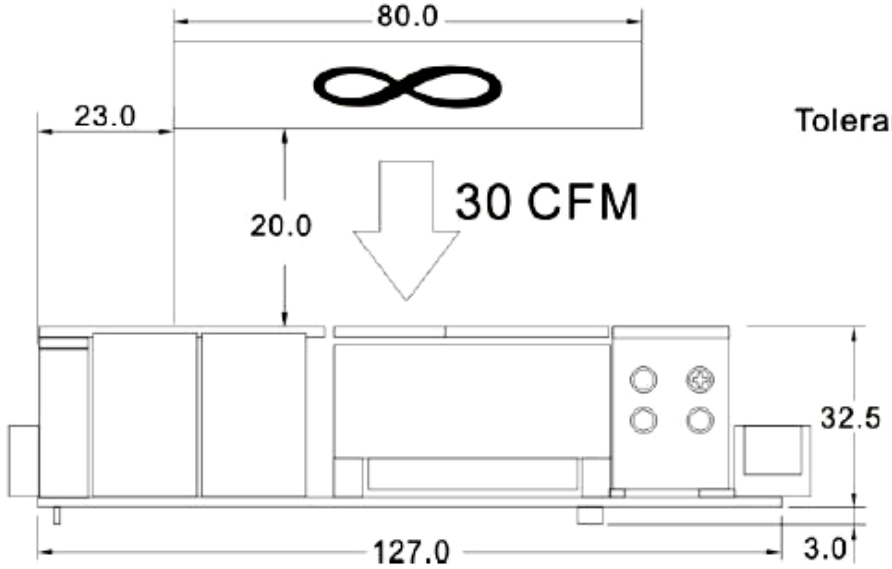
Block Diagram



PDAM500 Series
500W Power Supply

Mechanical Outline (Open Frame)





Tolerance ± 0.5 mm

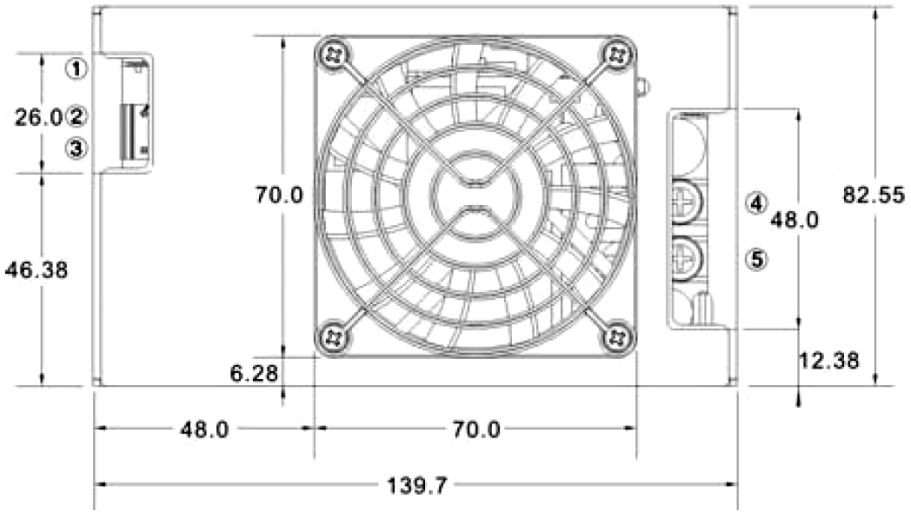
PIN #	Single
1	FG
2	AC IN (N)
3	AC IN (L)
4-6	+DC OUT
7-9	-DC OUT

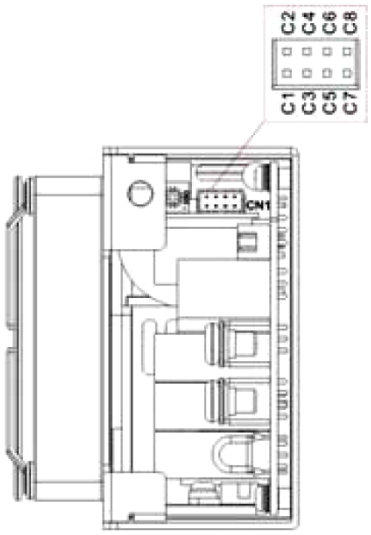
Connector Pin (FAN)

PIN #	Single
F1	+12V
F2	GND

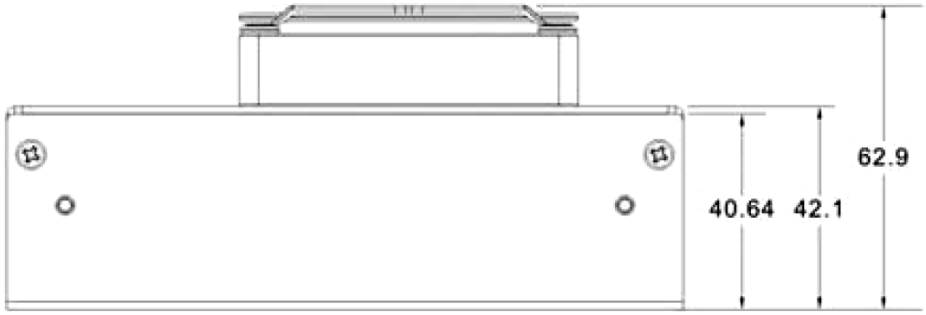
PDAM500 Series
500W Power Supply

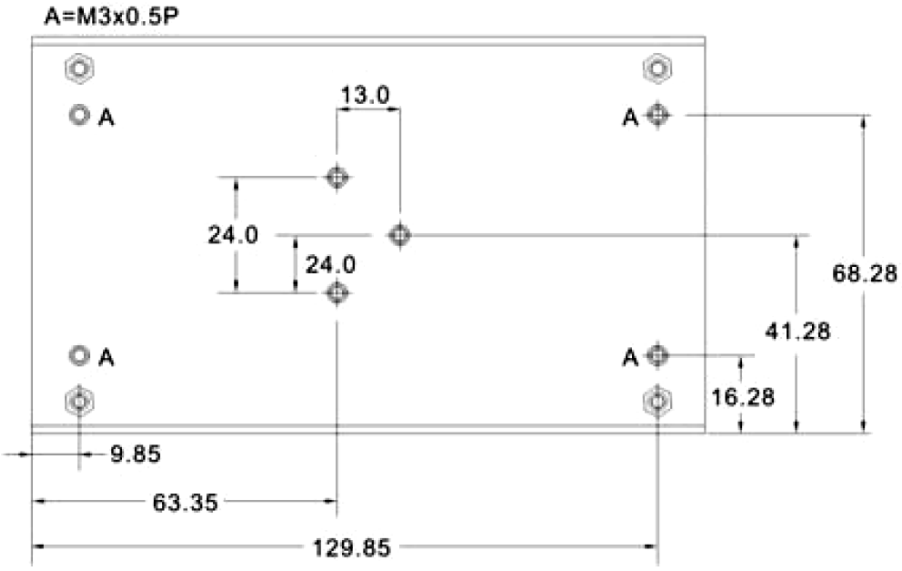
Mechanical Outline (Enclosed)





Tolerance ±0.5 mm





Connector Pin (CN1)

PIN #	Single
C1	-5VSB
C2	+5VSB
C3	GND
C4	DC OK
C5	-RC
C6	+RC
C7	-S
C8	+S

Power Partners

PDAM500 Series 500W Power Supply

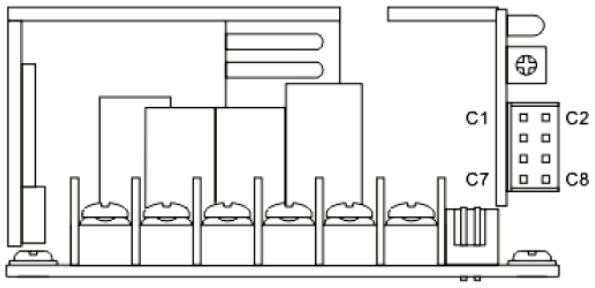
Function Description of CN1

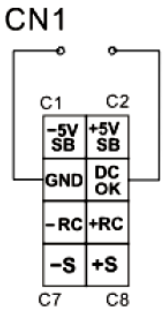
Pin No.	Function	Description
C1	-5VSB	This pin connects to the negative terminal (-V). Return for DC-OK and –RC signal output.
C2	+5VSB	Stand by voltage output ground 3.7~6V, referenced to pin C8 (+5VSB). The maximum load current is 0.6A.
C3	GND	This pin connects to the negative terminal (-V). Return for DC-OK and –RC signal output.
C4	DC OK	DC-OK signal is a DC output, referenced to pin C6 (DC-OK GND).
C5	-RC	This pin connects to the negative terminal (-V). Return for DC-OK and –RC signal output.
C6	+RC	Turns the output on and off by electrical or dry contact between pin C4 (-RC), Short: Power OFF, Open: Power ON.
C7	-S	Negative sensing. The –S Signal should be connected to the negative terminal of the load. The –S and +S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.3V.
C8	+S	Positive sensing. The +S Signal should be connected to the negative terminal of the load. The +S and –S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.3V.

Function Manual & Application

1. DC-OK Signal

Between DC-OK and GND	Output Status
3.7~6V	ON
0~1V	OFF

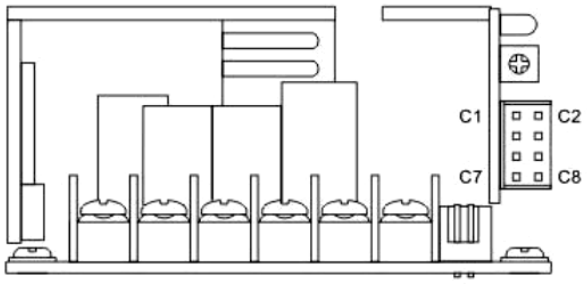


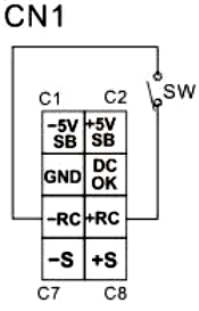


2. Remote Control

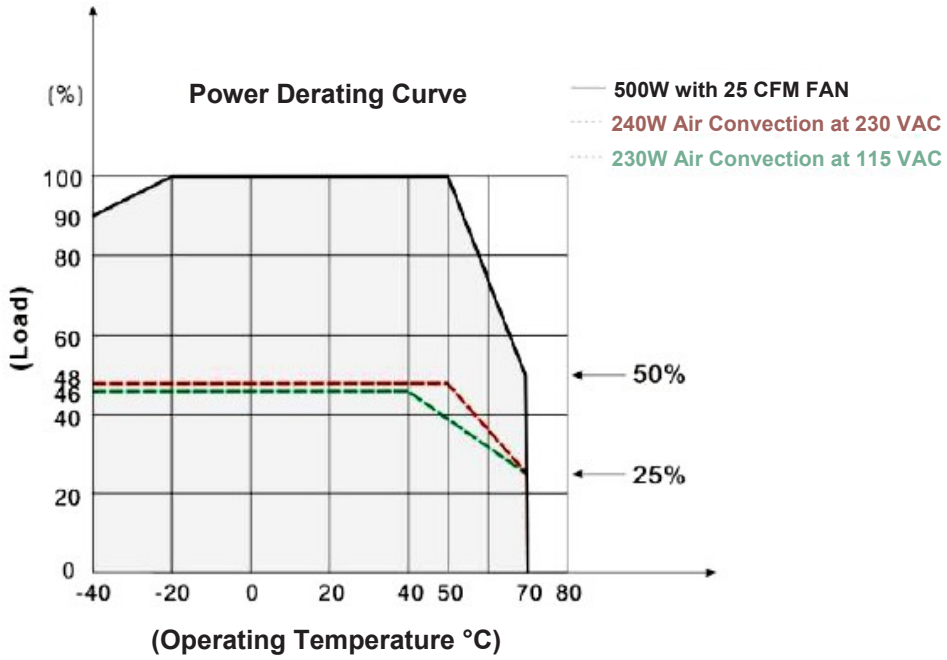
The unit can be turned ON/OFF by using the “Remote Control” function.

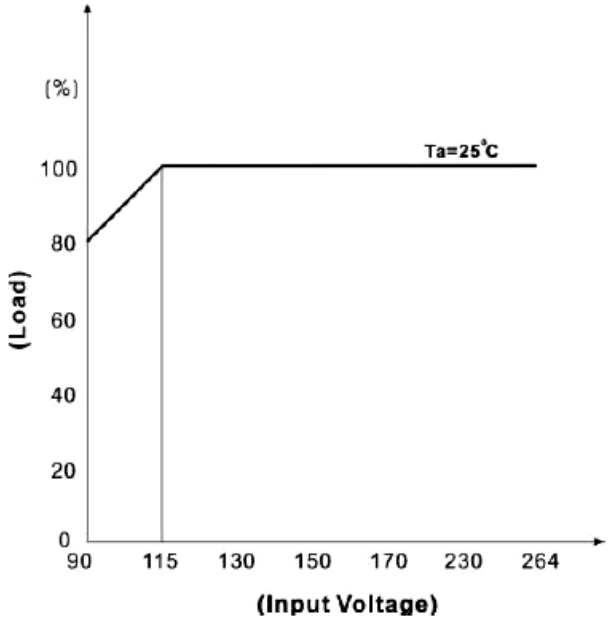
Between +RC and -RC	Output Status
SW ON (Short)	OFF
SW OFF (Open)	ON





Power Derating



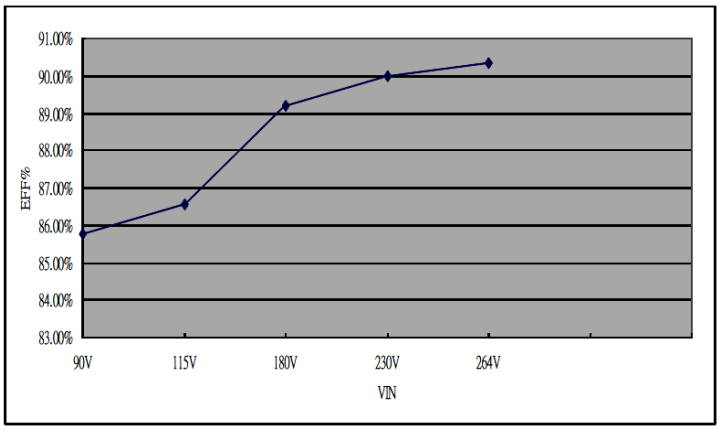


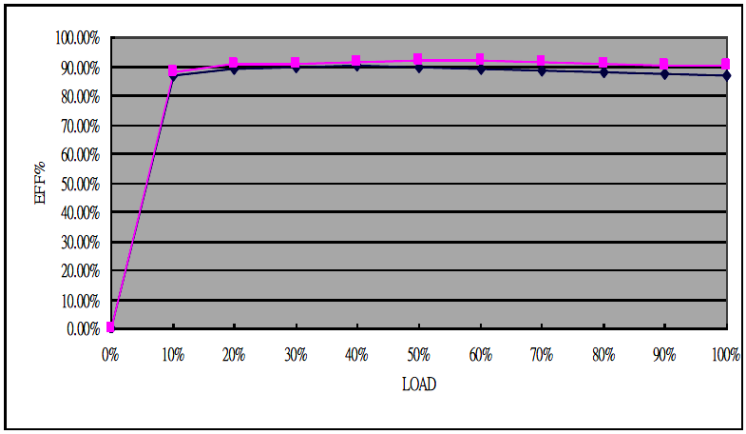
Efficiency Versus Load

PDAM500-12

VIN VS Efficiency					
Input Voltage (V)	90	115	180	230	264
Efficiency (%)	85.78	86.58	89.21	90.01	90.34

LOAD VS Efficiency					
Load (%)	10	20	30	40	50
115V (%)	86.67	89.20	89.80	90.06	89.87
230V (%)	88.19	90.82	91.00	91.71	91.86
Load (%)	60	70	80	90	100
115V (%)	89.30	88.77	88.18	87.27	86.58
230V (%)	91.77	91.40	90.79	90.44	90.01





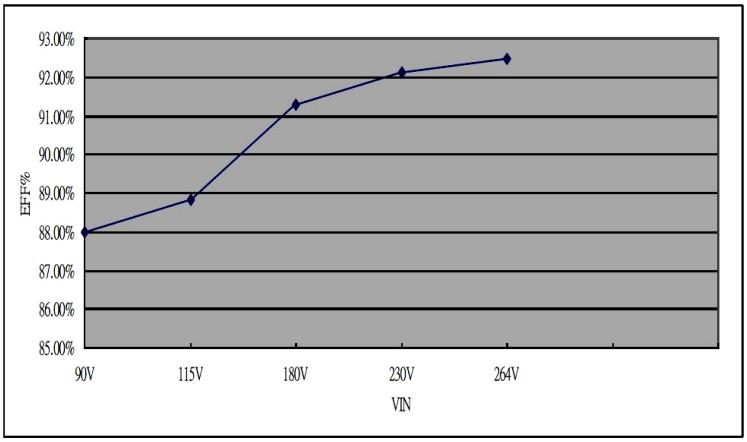
PDAM500-14

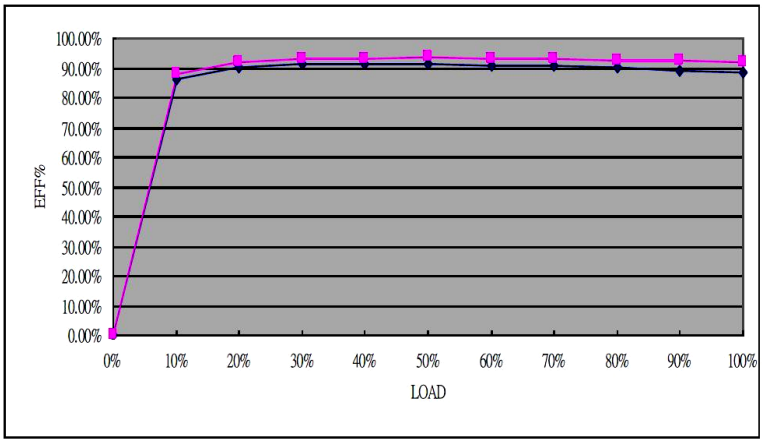
VIN VS Efficiency					
Input Voltage (V)	90	115	180	230	264
Efficiency (%)	87.99	88.84	91.29	92.13	92.48

LOAD VS Efficiency					
Load (%)	10	20	30	40	50
115V (%)	86.38	90.14	91.42	91.48	91.52
230V (%)	87.90	91.79	93.12	93.40	93.58
Load (%)	60	70	80	90	100
115V (%)	91.12	90.61	90.20	89.35	88.84
230V (%)	93.39	93.27	92.72	92.47	92.13

Power Partners

PDAM500 Series
500W Power Supply



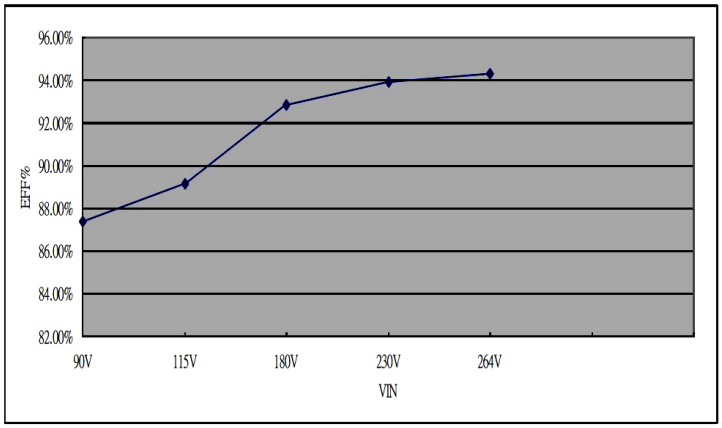


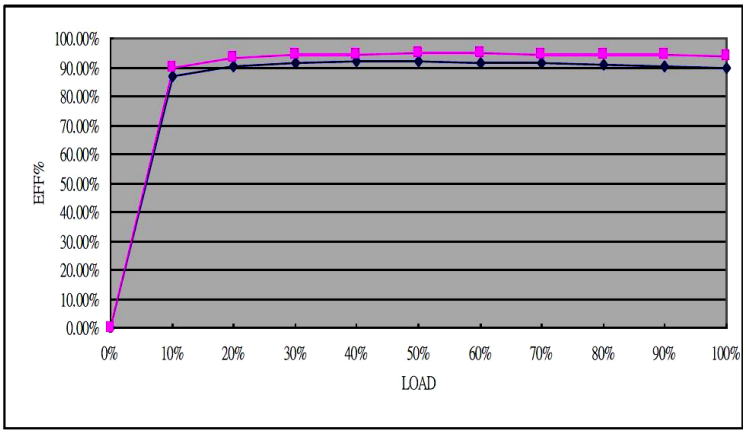
Efficiency Versus Load

PDAM500-18

VIN VS Efficiency					
Input Voltage (V)	90	115	180	230	264
Efficiency (%)	87.36	89.18	92.88	93.89	94.33

LOAD VS Efficiency					
Load (%)	10	20	30	40	50
115V (%)	86.60	90.27	91.54	91.83	91.84
230V (%)	89.45	93.31	94.10	94.45	94.66
Load (%)	60	70	80	90	100
115V (%)	91.67	91.33	90.72	90.14	89.47
230V (%)	94.65	94.47	94.22	94.29	93.96





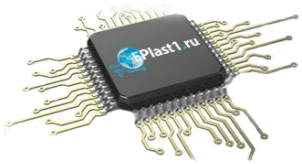
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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