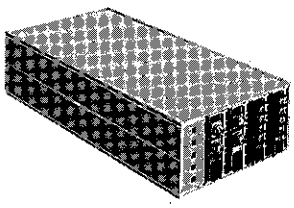
UltraFlex Series Modular power supplies



Customized Power Supplies Available in 1 Week

Compact Packages

Fully Regulated & Independent Outputs

Universal AC Input or 48VDC Input

Power Factor & Harmonic Correction

System Interface & Monitoring Signals

International Safety Agency Approvals

Meets Worldwide EMI Requirements

Input Transient Protection

Fixed Frequency Converters

Remote Sense

There's no need to panic just because you need a power supply that doesn't seem to be available from stock. In just one week or less, Lambda will ship a prototype 400W or 600W supply with any output voltages and signals you need. The UltraFlex Series provides high performance and high power density, with either a power factor corrected AC input or a 48VDC input.

With leading edge and proprietary circuit design 280 KHz fixed frequency converters, synchronized circuits, planar magnetics, advanced thermal management and surface mount technology, these power supplies offer state-of-the-art power densities, exceptional flexibility, reliability, and outstanding performance.

Lambda's UltraFlex Series gives you the flexibility you need to cope with today's fastpaced new product development cycles and relentless time-to-market schedules.

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AC Input ..... 85-265VAC, 47-63 Hz.(Case A & B).

DC Input ..... 36-75VDC on Case C.

Efficiency ..... 75% typical at nominal line voltage.

Power Factor Correction .... All models are compliant with EN60555-2 and EN61000-3-2, with up to 250VAC input. Power factor is 0.998 typical at full load.

Inrush Current Limiting ..... Less than 40 Amps peak.

EMI ..... Conducted EMI conforms to EN55022, Level B, and FCC Docket 20780 Part 15, Subpart J, Class B.

Output Voltage Adj Range .. ±10% of nominal output voltage on all.

Line Regulation ..... Less than 0.1% for line variations from 85-265VAC. Less than 0.2% for dual output modules.

Load Regulation ..... Less than 0.4% for load variations from no load to full load and full load to no load. Less than 0.8% for dual output modules.

Cross Regulation ..... Less than 0.1% between single output modules. Less than 3% between dual outputs with 25% load change on high current output.

Ripple and Noise ..... For outputs 12V or less, 50mV pk to pk or 15mV RMS. For outputs greater than 12V, 1% pk to pk or .33% V RMS. For dual outputs, 1% pk to pk or .33% V RMS 20mHz bandwidth.

Preload ..... External preload is not required on single output modules. Dual output modules require 1A minimum load on the highest current output (Output #1).

Hold-up Time ..... The output voltage will remain within regulation limits for 20msec at full load with nominal 115/230VAC line input.

Overvoltage Protection .... Internal circuitry will shut down the individual output module. Reset the OVP by recycling the input power.

Overload Protection ..... Overcurrent protection on single output modules limits the current. Upon removal of the overload condition, normal operation resumes automatically.

Cooling ..... Cooling is provided via an internal DC operated ball-bearing fan.

Operating Temperature Range Full operation from 0°C to +50°C with 100% rated power on most models. Derate linearly from +50°C to 50% power at +65°C.

Storage Temperature ..... -40°C to +85°C.

Temperature Coefficient .... 0.02%/ °C.

Isolation ..... Conforms to safety agency requirements.

Remote Sensing ..... Remote sense compensates for total cable drop of up to 0.5VDC. Available on all outputs.

Thermal Protection ..... The power supply will shut down in the event of an overtemperature condition (the fan will continue to operate). To restore operation, the supply must cool down and the AC input must be recycled.

Mounting ..... Two mounting surfaces on all models.

Military Specifications ..... SHOCK – MIL-STD-810E,
Method 516.4,Procedure 1.
VIBRATION – MIL-STD-810E,
Method 514.4,Category I, TP1.

Safety Agency ..... UL 1950, CSA 22.2 No.220 and/or 234 Bulletin 1902A, EN 60950, CE Low Voltage Directive.

Warranty ..... 3 years.

UltraFlex Series Model number configurator

U A K 1 - H J J P

- Output Module Codes
- Input Voltage & EMI Code
- Interface Signal Option Code
- Case Configuration & Output Power Code

Case Configuration & Output Codes

OUTPUT POWER (WATTS)	CASE SIZE (INCHES)	WEIGHT LBS.	CASE CODE	INPUT VOLTAGE
400W	2.5 x 5 x 10	5.5	A	85-265 VAC
600W	2.5 x 5 x 11	6.0	B	85-265 VAC
600W	2.5 x 5 x 12	6.5	C	36-75 VDC
1500W	5 x 5 x 12	TBA	E	85-265 VAC

(cases hold up to 5 module slots)

Interface Signal Option Code

J = NO OPTIONAL SIGNALS: The standard DC Output Module has Remote Sense, Overcurrent and Overvoltage Protection.

K = INPUT SIGNALS (Global): Input Power Fail, 5V Standby, Global Inhibit, Fan Stop/Thermal Alarm, Fan Inhibit.

T = OUTPUT MODULE SIGNALS: Module Inhibit, Margin, Remote Adjust, Output Good, Current Monitor & Current Share: Active Current Share & Module Inverter OK.

Z = INPUT SIGNALS (Global): Input Power Fail, 5V Standby, Global Inhibit, Global Output Good, Fan Stop/Thermal Alarm, Fan Inhibit & OUTPUT MODULE SIGNALS: Module Inhibit, Margin, Remote Adjust, Output Good, Current Monitor & Current Share: Active Current Share & Module Inverter OK.

Notes:

1. Output Module Signals and Current Share options only available on single output modules.
2. Global Output Good Signal is provided with Input Signals option when individual modules.
3. Signals are valid with outputs loaded.

Input Voltage & EMI Codes

1 = PFC, 85-265 VAC, 50/60 Hz, Class B EMI

4 = DC INPUT, 36-75 VDC, Class B EMI

Output Module Codes

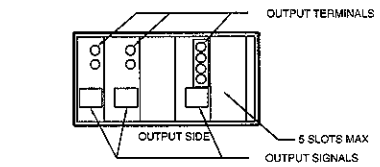
400 & 600 watt cases (A, B, or C Cases) can hold up to five module slot widths.

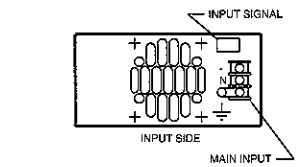
OUTPUT VOLTAGE	MAX CURRENT AMPS @ 50°C	MAX POWER WATTS @ 50°C	VOUT ADJUST RANGE	SLOT WIDTH	MODULE CODE
Single Output Modules					
2V	30.0	66	1.8–2.2	1	A
2V	60.0	132	1.8–2.2	2	B
2V	100.0	200	1.8–2.2	3	C
3.3V	30.0	108	3.0–3.6	1	D
3.3V	60.0	216	3.0–3.6	2	E
3.3V	100.0	330	3.0–3.6	3	F
5V	30.0	150	4.5–6.0	1	G
5V[2]	60.0	300	4.5–6.0	2	H
5V	100.0	500	4.5–6.0	3	I
12V	17.0	204	10.8–13.2	1	J
12V	30.0	360	10.8–13.2	2	K
12V	50.0	600	10.8–13.2	3	L
15V	14.0	210	13.5–16.5	1	M
15V	24.0	360	13.5–16.5	2	N
24V	8.5	204	21.6–26.4	1	P
24V	15.0	360	21.6–26.4	2	Q
24V	24.0	576	21.6–28.0	3	R
28V	12.0	336	25.2–30.8	2	8
36V	11.0	396	32.4–39.6	2	3
48V	4.0	192	43.2–52.8	1	S
48V	8.0	384	43.2–52.8	2	T
48V	12.0	576	43.2–52.8	3	U
Dual Output Modules					
12V & 5V[3]	10.0 & 4.0	150	±10%	1	V
5V & 12V[3]	10.0 & 4.0	150	±10%	1	W
12V & 12V[3]	10.0 & 4.0	150	±10%	1	Y
15V & 15V	8.0 & 3.0[1]	150	±10%	1	Z

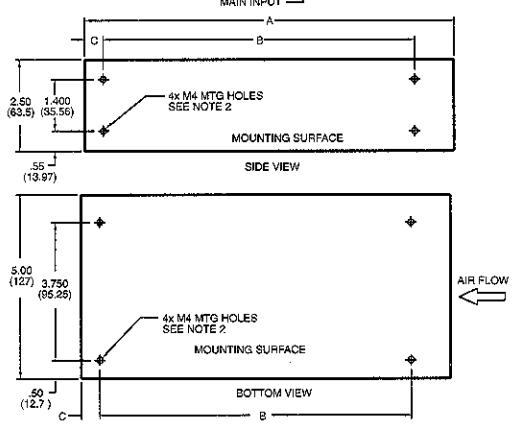
NOTES:

1. Peak Rating 10A and 4A for up to 1 minute.
2. Other output voltages are available. Contact the factory with your specific needs.
3. When using the 600W AC Case B, derate as follows:
   H Module: 5V@55A
   W Module: 5V@8A, 12V@4A
   V Module: 12V@8A, 5V@3A
   Y Module: 12V@8A, 12V@3A
   These modules have no derating up to 40°C for the 600W case.
4. On dual output modules, output 1 has the highest current rating.

UA







DIMENSIONS:

MODEL	A	B	C
UA	9.96 (252.98)	8.400 (213.36)	.50 (12.7)
UB	10.96 (278.38)	9.630 (244.6)	.50 (12.7)

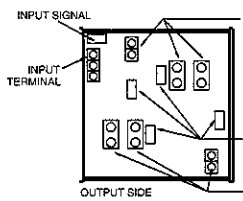
APPROX. WEIGHT:

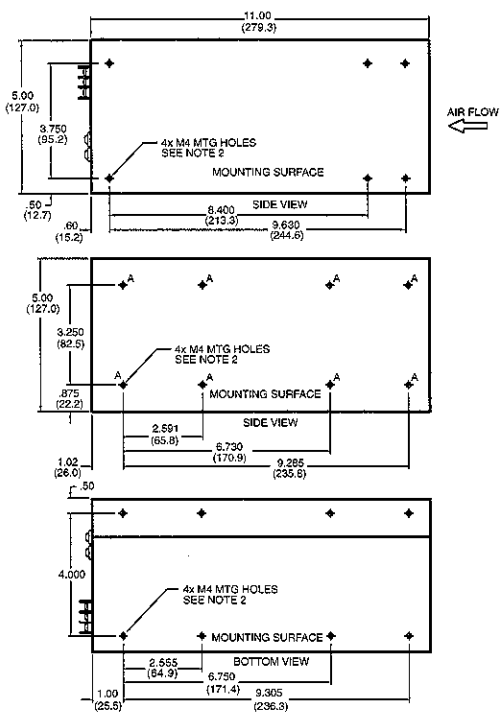
MODEL	NET LBS	SHIP LBS
UA	5.5	7.5
UB	6.0	8.0

(WEIGHT DEPENDENT ON MODULE CONFIG.)

NOTE:
1. DIMENSIONS ARE IN INCHES EXCEPT DIMENSIONS ( ) ARE IN MM.
2. 8x M4 TAPPED HOLES FOR CUSTOMER MTG. SCREWS MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN .25 (6.3).
3. CUSTOMER MUST PROVIDE CLEARANCE AROUND VENT HOLES TO ALLOW FOR AIR FLOW.

UE





APPROX. WEIGHT:

MODEL	NET LBS	SHIP LBS
UE	6.5	8.5

(WEIGHT DEPENDENT ON MODULE CONFIG.)

NOTE:
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