



1000W Multiple Output Modular Power Supply

- ◆ Customized Power Supplies
- ◆ Universal AC Input
- ◆ Power factor Corrected
- ◆ Capable of up to 14 fully regulated and independent outputs
- ◆ Output Voltages from 1.8V - 48V
- ◆ Low Leakage Options
- ◆ Input Transient Protection
- ◆ Compact Package
- ◆ International Safety Agency Approvals

Alpha Features and Benefits

Feature	Benefit
◆ PFC compliant to EN61000-3-2	◆ Supports global use
◆ Fast-on Tab Connections	◆ Quick installation
◆ No Minimum Load	◆ Eliminates the need for external components
◆ Wide Range Output Modules	◆ Capable of providing non-standard voltages, eliminates customs

Specifications

ITEMS		MODELS
AC Input Volt. range & Freq.	-	85-264VAC, 47-63Hz
DC Input Voltage Range	-	120 - 360VDC (800W maximum output to 45C)
Input Current	A	16A maximum
Inrush Current	A	Less than 50A
Leakage Current	-	1.1mA @ 260VAC, 50Hz (see input filter options in detailed product datasheet)
Efficiency	%	75% typical (configuration and input dependent)
Power Factor Correction	-	Compliant to EN61000-3-2 (> 0.95 typical, reduced PFC > 255VAC)
Conducted EMI	-	EN55022 level A
Output Power	W	800W@85VAC (50°C max); 1000W@100VAC (50°C max); 1000W@90VAC (45°C max); 1000W for 30 seconds maximum @ 85VAC followed by 800W for 60 seconds minimum.
Output Load Regulation	-	0.2% maximum.
Output Line Regulation	-	0.5% maximum.
Ripple & Noise	-	2% pk-pk
No Load Operation	-	No preload is required on any output module.
Hold Up Time	ms	Output voltages will remain within specified regulation for a minimum of 15mS after loss of applied power on the AC input at full rated output
Remote Sense	-	Available on single output modules only, refer to the module table.
Options (see option codes)	-	AC Fail, Global Inhibit, Module Inhibit, 5V@50mA aux., Parallel, Low Leakage.
Operating Temperature	°C	-20°C to +50°C full load, derate each output at 3.3% /°C from 50°C to 65°C.
Thermal Protection	-	Converter protected against over-temperature conditions. Recycle I/P power to restore output.
Storage Temperature	°C	-40°C to +85°C
Temperature Coefficient	-	0.02% per °C
Humidity	% RH	5% - 95% Non-condensing
Altitude	-	0 - 10,000 feet Operating (3,300 metres)
Cooling	-	Internal fan provides forced-air cooling. Airflow intake on I/P end, exhaust on O/P end of unit.
Isolation	-	Input - Output 3000VAC, Input - Ground 1500VAC, Output - Ground 500VDC
Switching Frequency	-	100kHz on PFC, 200kHz on forward converter.
Vibration	-	1.5G, 10 - 200Hz
Shock	-	3,000 bumps, 10G, 16ms half-sine pulses.
Safety Agency Approvals	-	UL60950-1, EN/IEC60950-1, UL60601-1, EN/IEC60601-1, IEC61010-1, EN61010-1, CE Mark
Module Slots	-	7
Size (WxHxD)	in.	7" x 2.5" x 11"
Warranty	-	Three Years

Notes: (Consult datasheet for additional specifications)

1 Case Codes

Choose the converter which best fits your total power needs:

Code	Wattage	Max Slots	Size (H x W x L)	Input Voltage
CA1000	1000*	7	2.5" x 7" x 11"	85 - 265VAC

* Note: CA1000 derates to 800W for 85-100VAC input with a peak of 1000W for 30 seconds maximum.

2 Output Module Codes

From the table below match the available modules to your voltage and current requirements.

Format = Desired Voltage + Module Code Letter

(5V@20A="5B" or (5.1V@5A) & 12.7@2A="5.1/12.7E")

	Code	V1 nom	Amps ³	V2 nom	Amps	V1 adjust	V2 adjust	Slot(s) ¹
Single Outputs	L	2.0	25	-	-	1.8 - 2.7	-	1
	T	2.0	60	-	-	1.8 - 2.7	-	2
	Q	3.3	25	-	-	2.7 - 3.9	-	1
	R	3.3	60	-	-	2.7 - 3.9	-	2
	B	5	25	-	-	4.5 - 5.5	-	1
	A	5	60	-	-	4.5 - 5.5	-	2
	S	5	85	-	-	2.5 - 5.7	-	2
	M	12	8	-	-	5.0 - 15.0	-	1
	C	12	16 ³	-	-	5.0 - 15.0	-	1
	F	12	33	-	-	10.0 - 15.0	-	2
	N	24	5	-	-	18.0 - 28.0	-	1
	D	24	8	-	-	18.0 - 28.0	-	1
	G	24	25	-	-	18.0 - 28.0	-	2
	J	36	10	-	-	36.0 - 48.0	-	2
J	48	7.5	-	-	36.0 - 48.0	-	2	
Dual ⁴	E	12	8 ³	12	8 ³	5.0 - 15.0	5.0 - 15.0	1
	P	24	5	12	8 ³	18.0 - 28.0	5.0 - 15.0	1
	H	24	5 ³	24	5 ³	18.0 - 28.0	18.0 - 28.0	1

- Notes: 1) The total # of slots must not exceed 7 for CA1000.
 2) The written order determines the slot position. (This may change upon order placement.)
 3) Module Deratings: C derates linearly to 12A from 12.1V-15V
 E & P: 8A rating derates to 6A in slots 4 & 5.
 H derates from 5A to 4A in slots 4 & 5.
 4) Remote Sensing: Dual output modules do not have remote sensing. Modules (A, B, Q, R, S) have 0.5V total line drop, 1V for all others.
 5) Format for module code = desired voltage + module code letter. Refer to the following examples: (26V @ 24A = "26G") or (5.1V @ 8A & 12V @ 8A = "5.1/12E").

Sample Configurations

	Output 1	Output 2	Output 3	Output 4	Output 5
	V A	V A	V A	V A	V A
CA1000-24G	24 16.5	- -	- -	- -	- -
CA1000-5APP-5APP *	5 120	- -	- -	- -	- -
CA1000-5A-12.7C	5 60	12.7 16	- -	- -	- -
CA1000-24G-5/12E	24 25	5 8	12 8	- -	- -
CA1000-5A-24G-12C	5 60	24 25	12 16	12 16	- -
CA1000-5BMF-24D-6/12E	5 25	24 8	6 8	12 8	- -
CA1000-5B-5CIN-12C-12/12E	5 25	5 16	12 16	12 8	12 8
CA1000-5S-12F-12C-5/24P	5 85	12 33	12 16	5 8	24 5

Note: Total output power must not exceed 1000W converter limits.
 * Modules in parallel.

Other Lambda Modular Products

SC150	150W up to 4 outputs
Sirius	250W to 350W up to 6 outputs
NV350	350W up to 6 outputs
Vega	450W to 900W up to 10 outputs
Alpha1500	1500W up to 16 outputs

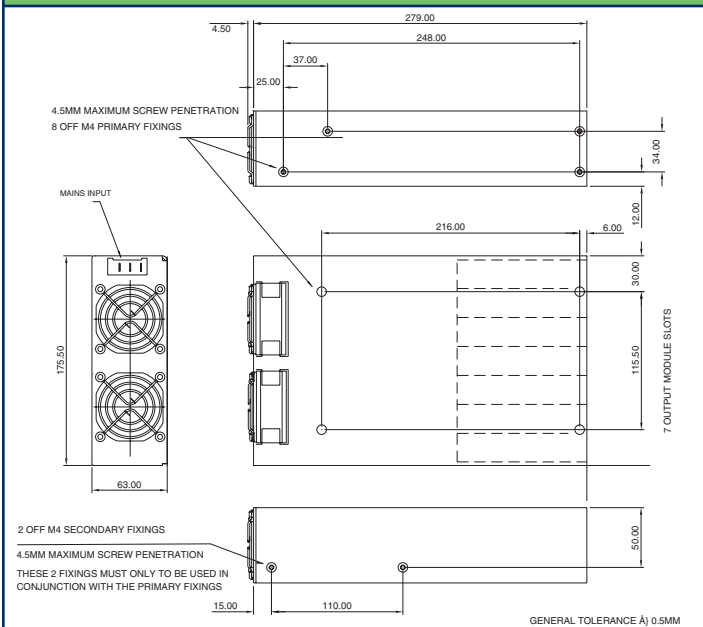
3 Option Codes

If required the following options may be added to the configuration by placing the code after the module. (i.e. Inhibiting a 5V @ 25A = 5B + Inhibit code = "5BIN")

Code	Description	Available On
MF ²	Mains Fail This option provides an AC fail signal, power supply inhibit, and 5V@50mA auxiliary supply. This is only placed in the first module slot. (TTL compatible reference to 0 volts of Aux. Supply)	All modules except Dual output (E, H, P)
PP	Parallel for Power This option allows 2 adjacent modules to be paralleled together for increased output power. Bus bars provided.	Modules: A, B, C, D, F, G, M, N, Q, R
PA	Parallel for Redundancy This option allows modules to be connected for N+1 redundancy. A DC good signal is also offered (electrically similar to AC fail.) No bus bars provided.	Modules: A, B, C, D, F, G, M, N, Q, R, S
IN ³	Inhibit Module inhibit and DC good signal. (TTL compatible referenced to (-V) of the module)	Modules A, B, C, D, F, G, J, M, N, Q, R
Low Leakage Options		All converters
LL	Max. Leakage Current 212 μ A	Conducted RFI Curve A
RL	100 μ A	Above Curve A
TL	50 μ A	Above Curve A

- Notes: 1) Only one option per module may be used.
 2) Mains Fail: AC Fail "AC On" = $\leq 0.8V$, 50mA max.
 "AC Off" = open circuit, 50V abs max.
 PS Inhibit "PS On" = $\geq 2.0V$ or open circuit.
 "PS Off" = $\leq 0.8V @ 5mA$.
 (TTL compatible, Referenced to 0 volts of Aux. Supply.)
 3) Inhibit: DC Good Electrically similar to AC fail module.
 Inhibit Electrically similar to PS inhibit.

Outline Drawing



For Additional Information, please visit
www.lambdapower.com/products/alpha-series.htm