

1000W Multiple Output Modular Power Supply

Features

- ◆ 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
- ◆ International Safety Agency Certification
- ◆ Fast-on Tab Connections
- ◆ No Minimum Load
- ◆ Wide Range Output Modules



Key Market Segments & Applications



Specifications

Model		
AC Input Volt. range & Freq.	-	85-264VAC, 47-63Hz
DC Input Voltage Range	-	120 - 360VDC (800W maximum output to 45°C)
Input Current	A	16A maximum
Inrush Current	A	Less than 50A
Leakage Current	-	1.1mA @ 264VAC, 63Hz (see input filter options in detailed product datasheet)
Efficiency	%	75% typical (configuration and input dependent)
Power Factor Correction	-	Compliant to EN61000-3-2 (> 0.99 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 or 100mV (Whichever is greater)
No Load Operation	-	No preload is required on any output module.
Hold Up Time	ms	>15ms
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 2.5% /°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	-	3,000m operating
Cooling	-	Internal fan provides forced-air cooling. Airflow intake on I/P end, exhaust on O/P end of unit.
Isolation	-	Input - Output 4.3kVDC, Input - Ground 2.3kVDC, 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 Certification	-	UL/CSA/IEC/EN60950-1, UL/CSA/IEC/EN60601-1 ⁽¹⁾ , IEC/EN61010-1 ⁽²⁾ , CE Mark
Size (WxHxD)	in	7" x 2.5" x 11"
Warranty	yrs	Three Years

Notes: Consult detailed product datasheet for additional specifications

- (1) With low leakage filter options only.
- (2) Designed to meet IEC/EN61010-1.

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 max.

2 Output Module Codes

Code	V1 Adjust	V1 Amps	V2 Adjust	V2 Amps	Slot(s) ⁽¹⁾
L	1.8 - 3.2	25	-	-	1
T	1.8 - 3.2	60	-	-	2
Q	2.7 - 3.9	25	-	-	1
R	2.7 - 3.9	60	-	-	2
B	4.5 - 5.5	25	-	-	1
A	4.5 - 5.5	60	-	-	2
BB	4.5 - 6.5	25	-	-	1
AA	4.5 - 6.5	60	-	-	2
S	2.5 - 5.7	85	-	-	2
M	5.0 - 16.0	8	-	-	1
C	5.0 - 16.0	16(3)	-	-	1
F	9.0 - 16.0	33	-	-	2
U	10.0 - 21.0	16	-	-	1
N	18.0 - 29.0	5	-	-	1
D	18.0 - 29.0	8	-	-	1
K	18.0 - 29.0	15	-	-	2
G	17.5 - 29.0	25(3)	-	-	2
J	30.0 - 48.0	10(3)	-	-	2
E	5.0 - 16.0	8(3)	5.0 - 16.0	8(3)	1
P	18.0 - 29.0	5	5.0 - 16.0	8(3)	1
H	18.0 - 32.0	5(3)	18.0 - 32.0	5(3)	1

Notes: 1) The total # of slots must not exceed 7 for CA1000.
 2) Slot position 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
 G derates to 21A above 24.5V
 J derates 0.25A/V above 40V

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-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

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

Other Modular Products

NV	350W to 700W up to 8 outputs
Vega	450W to 900W up to 10 outputs
Alpha1500	1500W up to 16 outputs

For Additional Information, please visit
us.tdk-lambda.com/lp/products/alpha-series.htm



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
IN3	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 (Max values stated)		
	120VAC, 60Hz	240VAC, 60Hz
		264VAC, 63Hz ⁽⁴⁾
LL	88 µA	197 µA
RL	50 µA	112 µA
TL	24 µA	53 µA
		63 µA
		Conducted EMI
		Curve A
		>Curve A
		>Curve A

Notes: 1) Only one option per module may be used.
 2) Mains Fail: AC Fail "AC On" = ≤ 0.8V, 50mA max.
 "AC Off" = open circuit, 50V abs max.
 PS Inhibit "PS On" = ≥ 2.0V or open circuit.
 "PS Off" = ≤ 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.
 4) Type testing result

Outline Drawing

