1500W Multiple Output Modular Power Supply

Features

- Power factor Corrected
- Capable of up to 16 fully regulated and independent outputs
- Output Voltages from 1.8V - 48V
- Low Leakage Options
- Low Profile Package
- International Safety Agency Certification
- Fast-on Tab Connections
- No Minimum Load
- Wide Range Output Modules

Key Market Segments & Applications

Industrial Test COMM

RoHS

Specifications

Model		
AC Input Volt. range & Freq.	-	150 - 264VAC, 47 - 63Hz (1500W). See power limitations for lower input ranges.
Input Current	A	16A maximum
Inrush Current	A	Less than 50A
Leakage Current	-	1.1mA @ 264VAC, 63Hz (low leakage current options available)
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); 1500W @ 150VAC (50°C max)
Output Load Regulation	-	2% max. without remote sensing. 0.5% max. remote sense connected
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
Options (see option codes)	-	AC Fail, Global Inhibit, Module Inhibit, 5V@50mA aux., Parallel, Low Leakage
Operating Temperature	°C	0°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	-	3000m 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	-	UL60950-1, IEC60950-1, CSA22.2 No.60950-1, EN60950-1, IEC61010-1, EN61010-1, CE Mark
Size (WxHxD)	in.	8” x 2.5” x 11”
Weight	lbs.	8 (3.6kg) typical dependent on configuration
Warranty	-	Three Years

1 Case Codes

Code	Wattage	Max Slots	Size (H x W x L)	Input Voltage
CA1500	1500	8	2.5" x 8" x 11"	150 - 264VAC

*Input Voltage/Power Limitations

Input Voltage Power Rating	Intermittent Output Power Rating	Continuous Output Temperature	Max. Ambient
85 - 99.9VAC	-	800W	50°C
100 - 149.9VAC	-	1000W	50°C
150 - 164.9VAC	-	1500W	50°C
165 - 179.9VAC	-	1595W	50°C
180 - 264VAC	-	1690W	50°C
90 - 264VAC	-	1000W	45°C
85 - 264VAC	1000W*	-	50°C

* - 1000W for 30 seconds maximum followed by 800W for 60 seconds min.
Note: Ratings are not affected by the use of input or output connector housings

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	-	-	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	-	-	2
J	30.0 - 48.0	10	-	-	2
E	5.0 - 16.0	8	5.0 - 16.0	8	1
P	18.0 - 29.0	5	5.0 - 16.0	8	1
H	18.0 - 32.0	5	18.0 - 32.0	5	1

Notes: 1) The total # of slots must not exceed 8 for CA1500.
2) Slot position may change upon order placement.

Max. Output Current Limitations

All modules can be used at their full rated current in all slot positions unless otherwise stated below

A module:	Limited to 51A in slot 7/8
B module:	Limited to 20A in slot 8
C module:	Limited to 12A if output exceeds 12V
L module:	Limited to 20A in slot 8
Q module:	Limted to 20A in slot 8
R module:	Limited to 51A in slot 7/8
S module:	Limited to 65A in slot 7/8, 66A in slot 6/7, 80A in slot 5/6, 85A in slot 4/5, 66A in slot 3/4, 68A in slot 2/3, 73A in slot 1/2
T module:	Limited to 51A in slot 7/8

Other Modular Products

NV	350W to 700W up to 8 outputs
Vega	450W to 900W up to 10 outputs
Alpha1000	1000W up to 14 outputs

Sample Configurations

Description	O/P 1	O/P 2	O/P 3	O/P 4	O/P 5
CA1500 24G_PP* 24G_PP*	24V 50A	-	-	-	-
CA1500 5S_MF 12F_PP* 12F_PP*	5V 80A	12V 60A	-	-	-
CA1500 LL 5A 28G 36J_IN	5V 60A	28V 25A	36V 10A	-	-
CA1500 5A_PP* 5A_PP* 3.3R 12C 12C	5V 120A	3.3V 60A	12V 16A	12V 16A	-
CA1500 24G_PP* 24D_PP* 3.3S 5S 12/12E	24V 33A	3.3V 85A	5V 66A	12V 8A	12V 8A

Actual part number (format CA1500Hxxxxx) assigned on quotation.
* Outputs paralleled via bus bars. (O/P = Output)

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")

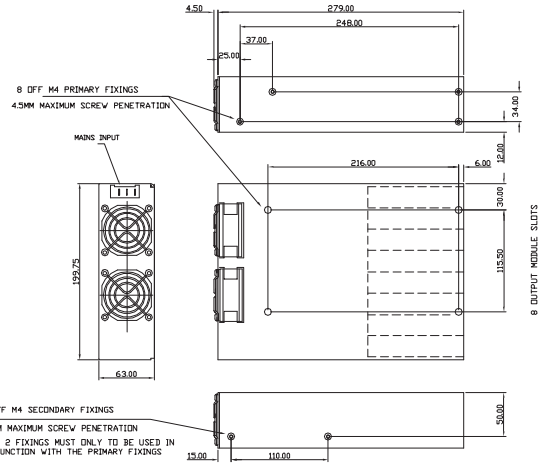
Code	Description	Available On
MF[2]	Mains Fail This option provides an AC fail signal, power supply inhibit, and 5V@50mA auxiliary supply. This is only placed in the first module slot. (TTL compatible reference to 0 volts of Aux. Supply)	All modules except Dual output (E, H, P)
PP	Parallel for Power 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]	Conducted EMI
LL	88 µA	197 µA	233 µA	Curve A
RL	50 µA	112 µA	132 µA	>Curve A
TL	24 µA	53 µA	63 µA	>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



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