ADVANCED THERMOELECTRIC

Technical Data Sheet

PS-1000W-48V

Enclosed AC-to-DC Power Supply with PFC and Parallel Function

UNIT CODE	DESCRIPTION
PS-1000W-48V	1000W 48VDC Single Output with PFC Function **AC-to-DC Power Supply (Transformer)**

SPECIFICATIONS		
Input	Output	Agency approvals
Universal AC input 90~264VAC; 127~370VDC	+48VDC@0~19.0A	UL / CUL / TUV / CB / CE

Features at a Glance:

Universal AC input / Full range
AC input active surge current limiting
Built-in active current sharing and parallel function - Current sharing up to 2000W (1+1)
Built-in active PFC function
PF>0.98@115VAC; >0.95@230VAC
Built-in remote sense function
Built-in remote ON/OFF control
Protections: Short circuit / Overload / Over voltage / Over temp.
Forced air cooling by built-in DC fans
DC adjustment range: 10%
Overload protection: 115%~140% constant current limiting, auto-recovery
Over voltage protection: 115%~140% rated output voltage
Working temperature: -10~60°C (refer to output derating curve)
Safety standards: UL60950-1 and TUV EN60950-1 approved
EMC standards: EN55022 class B, EN61000-3 -2,3, EN61000-4-2,3,4,5,6,8,11, ENV50204

Efficiency: 86%
MTBF hours: 59.6K hrs min MIL-HDBK-217F (25)
Weight: 11.4 lbs. (5.2Kg;.)
Dimensions: 10.94"L X 5.0"W X 4.99"H (CASE: 924) 278 X 129 X 127mm (L*W*H)

The PS-1000 series are 1000Watt enclosed type switching power supplies with power factor correction (PFC) and parallel function that target at the growing demand of high wattage applications. Built-in active current sharing and parallel function allows current sharing up to 2 units or 2000W. Applications include front-end power system, factory automation, instrumentation, moving sign, telecom/datacom, laser-carving machine and the like.

Pricing: 1+ $ 784.50
10+ $ 723.00
100+ $ 689.00

electracool.com

ADVANCED THERMOELECTRIC

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1000W Single Output with PFC Function

PSP-1000 series

Features :

- Universal AC input / Full range
- AC input active surge current limiting
- Built-in active PFC function
- Protections:Short circuit/Over load/Over voltage/Over temperature
- Built-in constant current limiting circuit
- Current sharing up to 2 units or 2000W
- Built-in remote ON-OFF control
- Built-in remote sense function
- Built-in active current sharing and parallel function
- 3 years warranty

SPECIFICATION

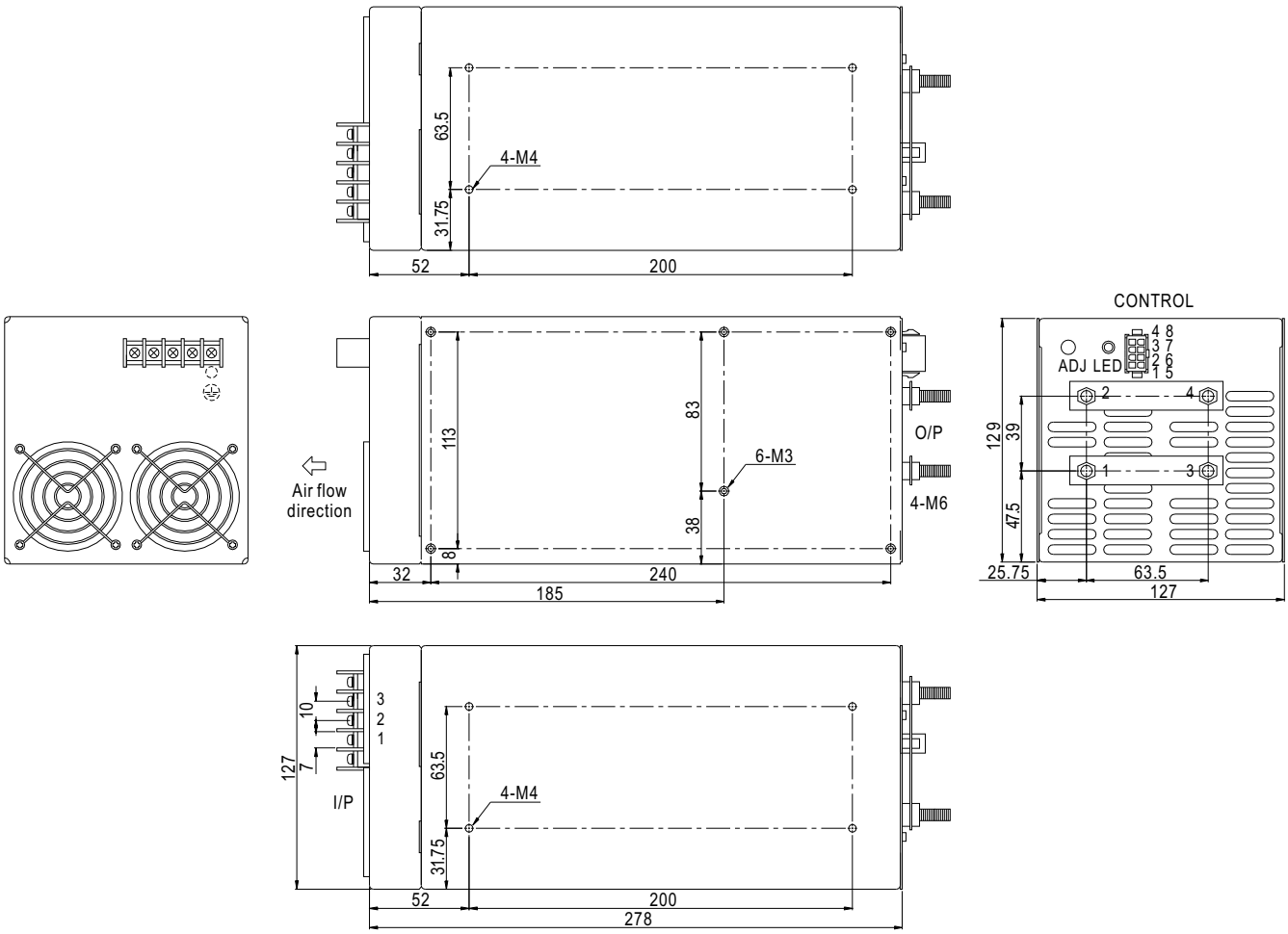
MODEL		PSP-1000-5	PSP-1000-12	PSP-1000-13.5	PSP-1000-15	PSP-1000-24	PSP-1000-27	PSP-1000-48
OUTPUT	DC VOLTAGE	5V	12V	13.5V	15V	24V	27V	48V
	RATED CURRENT	145A	75A	67A	60A	37.6A	33.6A	19A
	CURRENT RANGE	0 ~ 145A	0 ~ 75A	0 ~ 67A	0 ~ 60A	0 ~ 37.6A	0 ~ 33.6A	0 ~ 19A
	RATED POWER	725W	900W	904.5W	900W	902.4W	907.2W	912W
	PEAK LOAD Note.4	800W	1000W	1000W	1000W	1000W	1000W	1000W
	RIPPLE & NOISE (max.) Note.2	100mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE	4.75 ~ 5.5V	10 ~ 13.2V	12 ~ 15V	13.5 ~ 18V	20 ~ 26.4V	24 ~ 30V	41 ~ 56V
	VOLTAGE TOLERANCE Note.3	±6.0%	±3.0%	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.3%	±0.3%	±0.3%	±0.2%	±0.2%	±0.2%
	LOAD REGULATION	±2.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	1500ms, 50ms/230VAC 1500ms, 50ms/115VAC at full load						
	HOLD TIME (Typ.)	24ms/230VAC 24ms/115VAC at full load						
INPUT	VOLTAGE RANGE Note.6	90 ~ 264VAC 127 ~ 370VDC						
	FREQUENCY RANGE	47 ~ 63Hz						
	POWER FACTOR (Typ.)	0.96/230VAC 0.96/115VAC at full load						
	EFFICIENCY (Typ.)	77%	84%	84%	84%	86%	86%	86%
	AC CURRENT (Typ.)	11.2A/115AVC 5.6A/230VAC						
	INRUSH CURRENT (Typ.)	32A/115VAC 63A/230VAC						
	LEAKAGE CURRENT	<2mA / 240VAC						
PROTECTION	OVER LOAD	115 ~ 140% rated output power						
		Protection type : Constant current limiting, recovers automatically after fault condition is removed						
	OVER VOLTAGE	5.75 ~ 6.75V	13.8 ~ 16.2V	15.5 ~ 18.2V	18 ~ 21V	27.6 ~ 32.4V	31 ~ 36.5V	57.6 ~ 67.2V
		Protection type : Shut down o/p voltage, re-power on to recover						
	OVER TEMPERATURE	95℃ (TSW1) Detect on the heatsink of PFC MOSFET 90℃(TSW2) Detect the winding of output choke						
		Protection type : Shut down o/p voltage, recovers automatically after temperature goes down						
FUNCTION	REMOTE CONTROL	RC+/RC-: 0 ~ 0.8V=power on ; 4 ~ 10V=power off sink current <20mA						
ENVIRONMENT	WORKING TEMP.	-10 ~ +60℃ (Refer to output load derating curve)						
	WORKING HUMIDITY	20 ~ 90% RH non-condensing						
	STORAGE TEMP., HUMIDITY	-20 ~ +85℃, 10 ~ 95% RH						
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)						
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes						
SAFETY & EMC (Note 5)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 Approved						
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC						
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC						
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B						
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3						
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, Light industry level, criteria A						
OTHERS	MTBF	59.6K hrs min. MIL-HDBK-217F (25℃)						
	DIMENSION	278*129*127mm (L*W*H)						
	PACKING	5.2Kg; 3pcs/16.3Kg/1.42CUFT						

NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. 10% Duty cycle maximum within every 30 seconds(max.). Average output power should not exceed the rated power.
5. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.
6. Derating may be needed under low input voltages. Please check the derating curve for more details.

■ Mechanical Specification

Case No. 924A Unit:mm



AC Input Terminal Pin. No. Assignment

Pin No.	Assignment
1	AC/L
2	AC/N
3	FG ⏚

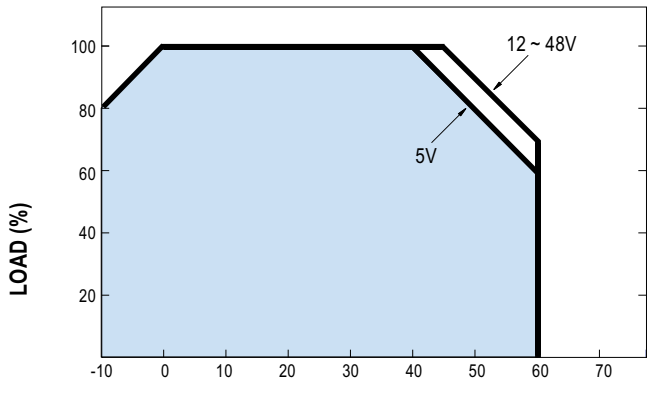
DC Output Terminal Pin. No Assignment

Pin No.	Assignment
1,3	DC OUTPUT +V
2,4	DC OUTPUT -V

Control Pin. No Assignment : MOLEX 5559-NP uses 5558male crimp terminal

Pin No.	Assignment	Pin No.	Assignment	Mating connector	Terminal
1	P(Current share)	5	NC	MOLEX 5557-NR	MOLEX 5556 Female crimp Terminal receptacle
2	-S	6	NC		
3	G	7	+S		
4	RC-	8	RC+		

■ Derating Curve



■ Output Derating VS Input Voltage