

ENCLOSED AC-DC POWER SUPPLIES

DPYEF750 SERIES Product Specifications

DPYEF series is one of enclosed fanless semi-potted ultra narrow AC-DC switching power supply Adopting the full range 90~264VAC input.

The series cost-effective, high PF value, high efficiency, high reliability, operates from -30°C ~70°C under air convection without fan.

These converters offer excellent EMC performance and meet international standards, they are widely used in areas of industrial, lighting, electricity, security, telecommunications, smart home etc.



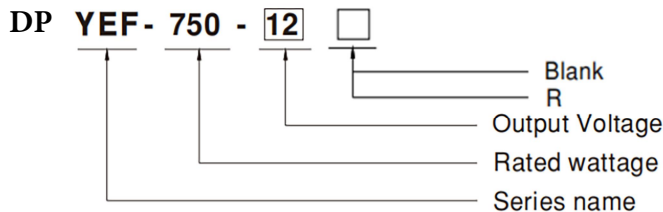
KEY FEATURES

- Universal AC Input/ Full Range
- Built-in active PFC function
- Protection: Short Circuit/Overload/ Over Voltage/Over Temperature
- Semi-Potted Process, Fanless Design
- Low Ripple & Noise, high efficiency

Model Information

Yingjiao Part Number	DC Voltage	Rated Current	Rated Power	VOLTAGE ADJ.RANGE	MAX.Capactive Load
DPYEF750-12□	12V	60A	720W	12~14.4V	12000uF
DPYEF750-24□	24V	31.3A	751.2W	24~28.8V	10000uF
DPYEF750-36□	36V	20.9A	752.4W	36~43.2V	8000uF
DPYEF750-48□	48V	15.7A	753.6W	48~57.6V	6000uF

Model Encoding



Type	Description
Blank	Enclosed
R	Built-in DC OK active signed and redundant function

For quotes and customization requests, please contact us at (877) 634-0982 or sales@digipwr.com



Learn more: www.digipwr.com

Input

VOLTAGE RANGE	90~264VAC 127~370VDC
FREQUENCY RANGE	47-63Hz
POWER FACTOR (Typ.)	PF \geq 0.95/230VAC, PF \geq 0.98/115VAC at full load
AVERAGE EFFICIENCY(Typ.)	93.5% DPYEF750-12 95% DPYEF750-24 95% DPYEF750-36 95% DPYEF750-48
AC CURRENT(Typ.)	7.5A/115VAC 3.8A/230VAC
INRUSH CURRENT(Typ.)	Cold start 20A/115VAC 40A/230VAC
LEAKAGE CURRENT	<0.75mA/240VAC

Output

RIPPLE & NOISE(max.)	150mVp-p DPYEL750-12 200mVp-p DPYEF750-24 250mVp-p DPYEF750-36 250mVp-p DPYEF750-48
VOLTAGE TOLERANCE	\pm 1.0%
LINE REGULATION	\pm 0.5%
LOAD REGULATION	\pm 0.5%
SETUP,RISE TIME	1000ms, 50ms/230VAC at full load 1000ms, 50ms/115VAC at full load
HOLD UP TIME (Typ.)	12ms/230VAC at full load 12ms/115VAC at full load

Protection

SHORT CIRCUIT	Protection type: Hiccup mode, recovers automatically after fault condition is removed
OVER LOAD	105%-150% Rated Output Power Protection type: Hiccup mode, recovers automatically after fault condition is removed
OVER VOLTAGE	12V:14.5~16V 24V:29~33V 36V:43.5~49V 48V:59~66V Protection type: Shut down O/P voltage, re-power on to recover
OVER TEMPERATURE	Protection type: Shut down O/P voltage, recovers automatically after temperature goes down

About Digital Power

Digital Power Corporation designs and manufactures full custom, value-added, and standard comprehensive power solutions for the most demanding applications in the defense, healthcare, telecom, and industrial markets.



Environment

WORKING TEMP.	-30 °C to +70 °C (Refer to "Derating Curve")
Working Humidity	20 ~ 90% RH Non-Condensing
STORAGE TEMP, HUMIDITY	-40°C ~ +85°C, 10 ~ 95% RH non-condensing
TEMP. COEFFICIENT	± 0.03%/°C(0~50°C)
VIBRATION	10~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y,Z axes
MTBF	100.9K hrs min. MIL-HDBK-217F (25°C)
OVER VOLTAGE CATEGORY	III;According to EN62368-1,altitude up to 2000 meters
SAFETY PROTECTION	CLASS I

SAFETY & EMC

SAFETY STANDARDS	BS EN/EN62368-1, EAC TP TC 004 approved
WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.25KVAC
ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/ 500VDC/25 °C/70% RH
EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2,-3,
EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11,BS EN/EN55035

Note

- 1.All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
- 2.Ripple&noise are measured from peak to peak with band width limit of 20MHz(0.1uf and 47uf /50V parallel capacitor under DC output full load, AC nominal input 25 °C ambient temperature).
- 3.Tolerance :includes set up tolerance, line regulation and load regulation.
- 4.Derating may be needed under low input voltages. Please check the derating curve for more details.
- 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. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."
- 6.The ambient temperature derating of 5°C/1000m is needed for operating altitude greater than 2000m(6500ft).

Dimensions & Weight

Length:	237mm/9.33in
Width:	100mm/3.94in
Height:	41mm/1.61in
Weight:	1.5kg

Packing

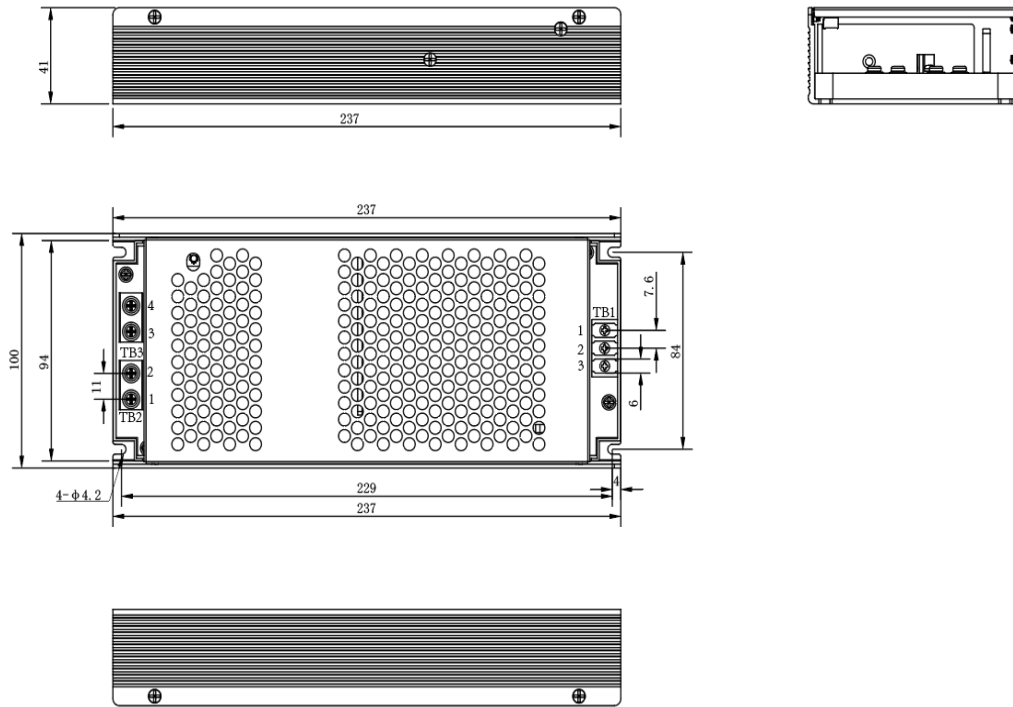
Carton Size:	54 × 30 × 24 CM
	21.26 x 11.81 x9.45 in
Master Carton Quantities:	15pcs/Carton

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Dimensions and Installation



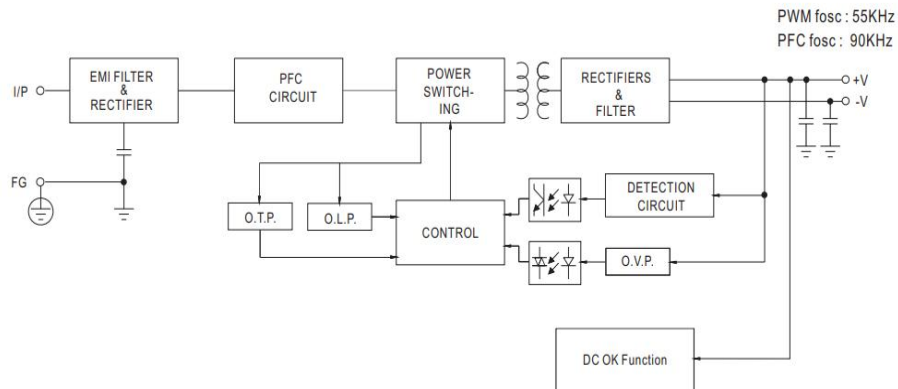
AC Input Terminal(TB1) pin NO. Assignment

Pin No.	Assignment
1	AC/L
2	AC/N
3	⊕

DC Output Terminal(TB2, TB3) pin NO. Assignment

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

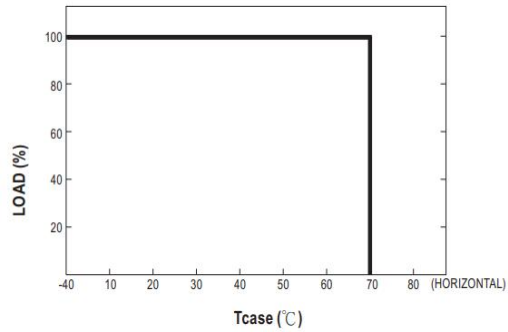
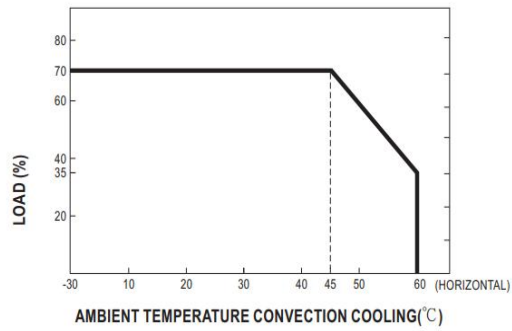
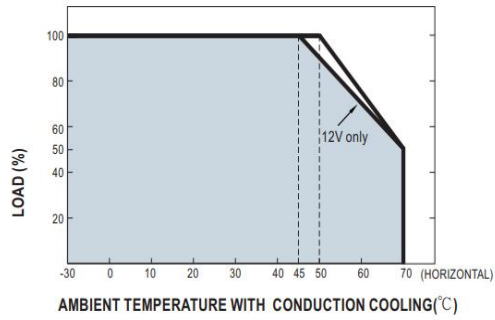
Block Diagram



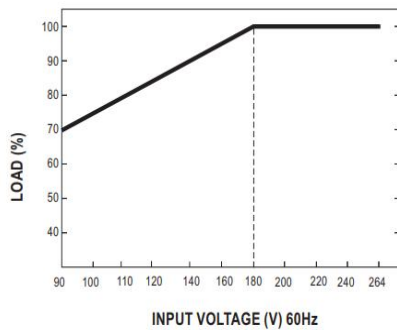
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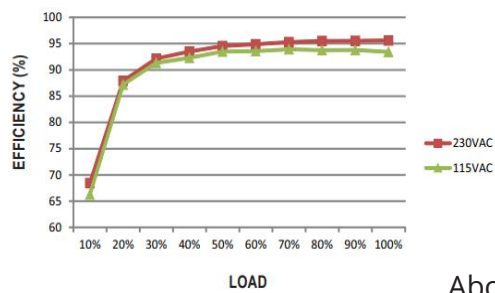
Deduction curve and temperature



Minus output and input voltage curves



Efficiency Vs Load



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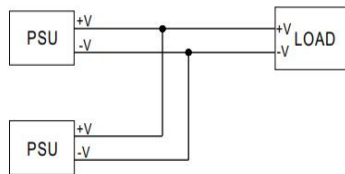
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DC OK Relay Contact

Contact Close	PSU turns on/DC ok
Contact Open	PSU turns off/DC fail
Contact Rating(max.)	30Vdc/1A resistive load

Redundant function

- (1) DPYEF Series is built-in redundant function and can be connected 2 units in parallel.
- (2) When in parallel operation the maximum load should not be greater than the rated power of any PSU.

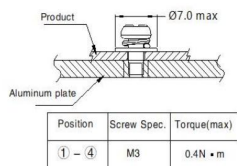
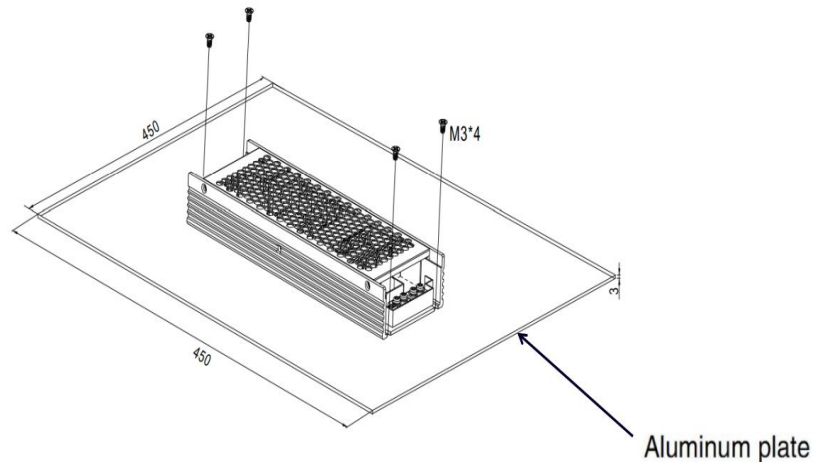


Installation Diagram

1. Operate with additional aluminum plate

In order to meet the "Derating Curve" and the "Static Characteristics", YEF series must be installed onto an aluminum plate (or the cabinet of the same size) on the bottom. The size of the suggested aluminum plate is shown as below. And for optimizing thermal performance, the aluminum plate must have an even and smooth surface (or coated with thermal grease), and YEF series must be firmly mounted at the center of the aluminum plate.

2. It is suggested to install the product with M3 combination screws, and the product must be firmly installed at the center of the aluminum plate.



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