

# YEP150 SERIES 150W



YEP series are designed with lower profile housing and for wide range AC input from 90 VAC to 305V AC.

The series have build-in active function and operate for the temperature up to 70 °C .

The good performance can be used for industrial automation & control systems, varied equipments etc.



## Features



Universal AC Input/ Full Range



Built-in Active PFC Function



Built-in Remote ON-OFF Control



High Efficiency Up To 90%



Protection: Short Circuit/Overload/  
Over Voltage/Over Temperature



Three Years Warranty

## Model Information

Yingjiao Part number	DC VOLTAGE	RATED CURRENT	RATED POWER	VOLTAGE ADJ. RANGE	Max.Capacitive Load
YEP150-5	5V	30A	150W	4.75~5.5V	10000uF
YEP150-7.5	7.5V	20A	150W	6.75~8.25V	8000uF
YEP150-12	12V	12.5A	150W	11.4~13.2V	5000uF
YEP150-15	15V	10A	150W	14.3~16.5V	5000uF
YEP150-24	24V	6.3A	151.2W	22.8~26.4V	5000uF
YEP150-27	27V	5.6A	151.2W	25.7~29.7V	4000uF
YEP150-48	48V	3.2A	153.6W	45.6~52.8V	3000uF

## Input

VOLTAGE RANGE	90-305VAC/127-430VDC
FREQUENCY RANGE	47-63Hz
POWER FACTOR(Typ.)	PF>0.93/230VAC at full load PF>0.98/115VAC at full load
AVERAGE EFFICIENCY	87% YEP150-5 88% YEP150-7.5 89% YEP150-12 88.5% YEP150-15 89% YEP150-24 89.5% YEP150-27 90% YEP150-48
AC CURRENT(Typ.)	1.6A/115VAC 0.8A/230VAC
INRUSH CURRENT(Typ.)	COLD START 45A/230VAC
LEAKAGE CURRENT	<2mA/240VAC

## Output

<b>RIPPLE &amp; NOISE(max.)</b>	100mVp-p	YEP150-5
	100mVp-p	YEP150-7.5
	100mVp-p	YEP150-12
	100mVp-p	YEP150-15
	150mVp-p	YEP150-24
	150mVp-p	YEP150-27
	250mVp-p	YEP150-48
<b>VOLTAGE TOLERANCE</b>	$\pm 2.0\%$	
<b>LINE REGULATION</b>	$\pm 0.5\%$	
<b>LOAD REGULATION</b>	$\pm 1.0\%$	YEP150-5
	$\pm 0.5\%$	YEP150-7.5
	$\pm 0.5\%$	YEP150-12
	$\pm 0.5\%$	YEP150-15
	$\pm 0.5\%$	YEP150-24
	$\pm 0.5\%$	YEP150-27
	$\pm 0.5\%$	YEP150-48
<b>SETUP, RISE TIME</b>	600ms, 30ms at full load	
<b>HOLD UP TIME(Typ.)</b>	16ms at full load	

## Protection

<b>SHORT CIRCUIT</b>	Protection type: Hiccup mode, recovers automatically after fault condition is removed
<b>OVER LOAD</b>	105%-135% Rated Output Power Protection type: Constant current limiting, recovers automatically after fault condition is removed.
<b>OVER VOLTAGE</b>	5V:5.75~ 6.75V 7.5V:8.6~ 10.2V 12V:13.2 ~ 16.2V 15V:16.5 ~ 20.25V 24V:26.4 ~ 32.4V 27V:29.7 ~ 36.45V 48V:52.8~ 64.8V Protection type : Shut down o/p voltage, re-power on to recover.
<b>OVER TEMPERATURE</b>	Protection type : Shut down o/p voltage, recovers automatically after temperature goes down.

## Environment

<b>WORKING TEMP.</b>	-30 °C to +70 °C (Refer to "Derating Curve")
<b>WORKING HUMIDITY</b>	20 ~ 90% RH non-condensing
<b>STORAGE TEMP, HUMIDITY</b>	-40 °C to +85 °C , 10 ~ 95% RH non-condensing
<b>TEMP. COEFFICIENT</b>	± 0.05%/°C (0~50 °C)
<b>VIBRATION</b>	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes
<b>OVER VOLTAGE CATEGORY</b>	III ; According to EN61558, EN50178, EN60664-1, EN62477-1; altitude up to 2000 meters
<b>MTBF</b>	280K hrs min. MIL-HDBK-217F(25 °C)
<b>SAFETY PROTECTION</b>	CLASS I

## Safety & EMC

<b>SAFETY STANDARDS</b>	BS EN/EN62368-1, BS EN/EN61558-1,BS EN/EN61558-2-16
<b>WITHSTAND VOLTAGE</b>	I/P-O/P:4KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC
<b>ISOLATION RESISTANCE</b>	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25 °C / 70% RH
<b>EMC EMISSION</b>	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2 Class A,BS EN/EN61000-3-3
<b>EMC IMMUNITY</b>	Compliance to BS EN/EN61000-4-3,11 Criteria B BS EN/EN61000-4-2,4,5,6,8 Criteria A

## Function

<b>REMOTE CONTROL</b>	CN1: < 0~0.8VDC POWER ON , 4~10VDC POWER OFF
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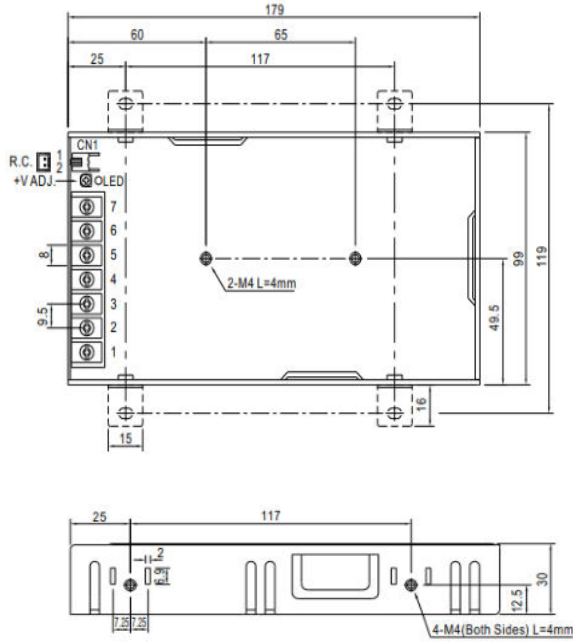
## Note

1. All parameters NOT specially mentioned are measured at 115/230VAC input, rated load and 25 °C 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. 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."
4. Derating may be needed under low input voltages. Please check the derating curve for more details.
5. Strongly recommended that external output capacitance should not exceed 10000uF (Only for the models with output voltage 5/12V)
6. The ambient temperature derating of 3.5 °C/1000m with fanless models and of 5 °C/1000m with fan models for operating altitude higher than 2000m(6500ft).

## Dimensions & Weight

<b>Length:</b>	179mm / 7.05in
<b>Width:</b>	99mm / 3.9in
<b>Height:</b>	30mm / 1.18in
<b>Weight:</b>	550g

# Mechanical Specification



## Input

No.	Description
1	AC/L
2	AC/N
3	FG $\perp$

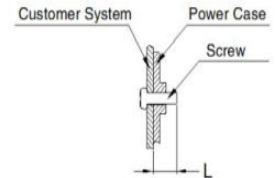
## Output

No.	Description
4,5	DC OUTPUT -V
6,7	DC OUTPUT +V

Remote ON/OFF (CN): JST S2B-XH or equivalent(optional)

No.	Description	Mating Housing	Terminal
1	RC+	JST XHP or equivalent	JST SXH-001T-P0.6 or equivalent
2	RC-		

Screw Spec.	L(max)	Torque(max)
M4	4mm	0.9N·m



## Note:

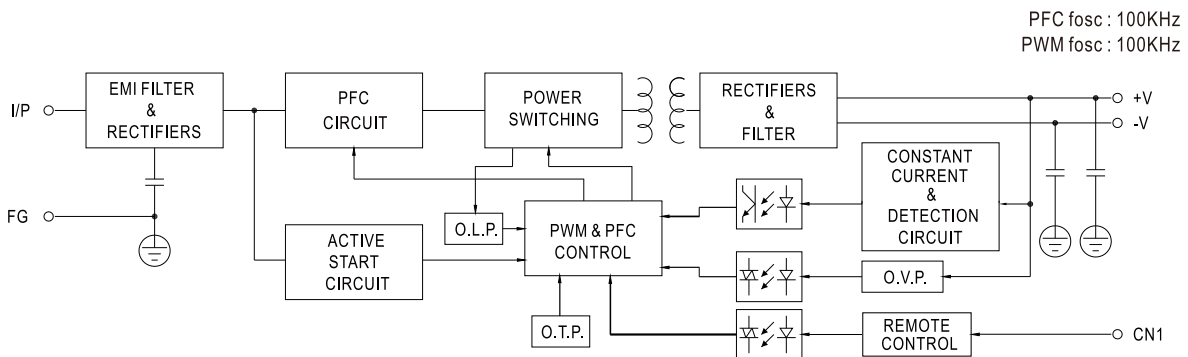
Unit: mm[inch]

Wire range: 22-12AWG

Connector tightening torque: M3.5, 0.8N·m

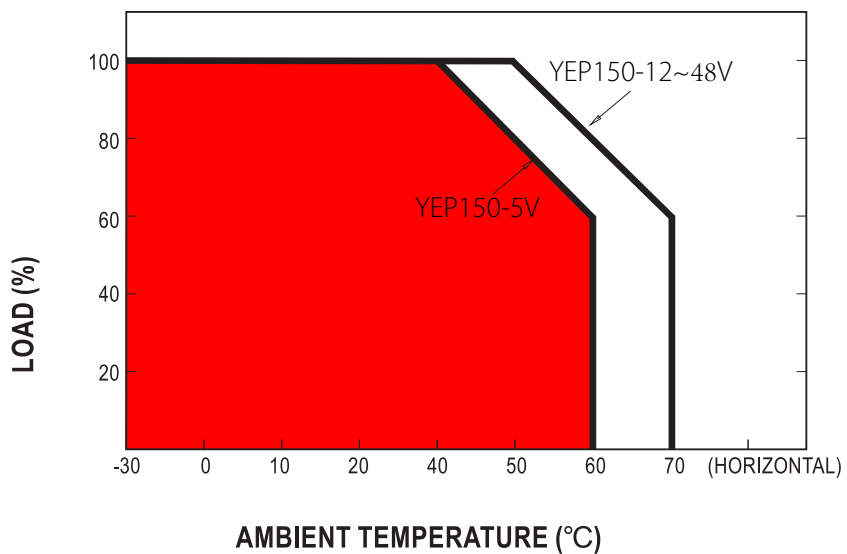
General tolerances:  $\pm 1.00[\pm 0.039]$

# Block Diagram



## Deduction curve and temperature

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## Minus output and input voltage curves

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