

YEP320 SERIES 320W



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



Forced air cooling by build-in DC fan



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 |
|----------------------|------------|---------------|-------------|--------------------|---------------------|
| YEP320-5 | 5V | 60A | 300W | 4.5~5.5V | 4000uF |
| YEP320-7.5 | 7.5V | 40A | 300W | 6.75~8.25V | 3600uF |
| YEP320-12 | 12V | 26.7A | 320.4W | 10~13.2V | 3300uF |
| YEP320-13.5 | 13.5V | 23.8A | 321.3W | 12.15~14.85V | 2500uF |
| YEP320-15 | 15V | 21.4A | 321W | 13.5~18V | 1500uF |
| YEP320-24 | 24V | 13.4A | 321.6W | 20~26.4V | 1000uF |
| YEP320-27 | 27V | 11.9A | 321.3W | 26.1~29.7V | 900uF |
| YEP320-36 | 36V | 8.9A | 320.4W | 32.4~39.6V | 700uF |
| YEP320-48 | 48V | 6.66A | 319.68W | 43.2~52.8V | 470uF |
| YEP320-60 | 60V | 5.34A | 320.4W | 54~66V | 230uF |

Input

| | | | | |
|------------------------------|--|-------------|-------|-----------|
| VOLTAGE RANGE Note. 4 | 90-305VAC/127-430VDC | | | |
| FREQUENCY RANGE | 47-63Hz | | | |
| POWER FACTOR(Typ.) | PF>0.95/230VAC at full load PF>0.98/115VAC at full load | | | |
| AVERAGE EFFICIENCY | 83% | YEP320-5 | 89% | YEP320-24 |
| | 85% | YEP320-7.5 | 89% | YEP320-27 |
| | 88% | YEP320-12 | 89.5% | YEP320-36 |
| | 88% | YEP320-13.5 | 90% | YEP320-48 |
| | 88.5% | YEP320-15 | 91% | YEP320-60 |
| AC CURRENT(Typ.) | 4A/115VAC 2A/230VAC | | | |
| INRUSH CURRENT(Typ.) | 20A/115VAC 40A/230VAC | | | |
| LEAKAGE CURRENT | <1mA/240VAC | | | |

Output

| | | | | |
|---|----------------------------------|-------------|----------|-----------|
| RIPPLE & NOISE(max.) Note. 2 | 150mVp-p | YEP320-5 | 150mVp-p | YEP320-24 |
| | 150mVp-p | YEP320-7.5 | 150mVp-p | YEP320-27 |
| | 150mVp-p | YEP320-12 | 180mVp-p | YEP320-36 |
| | 150mVp-p | YEP320-13.5 | 240mVp-p | YEP320-48 |
| | 150mVp-p | YEP320-15 | 300mVp-p | YEP320-60 |
| VOLTAGE TOLERANCE Note. 3 | ± 2.0% | | | |
| LINE REGULATION | ± 0.5% | | | |
| LOAD REGULATION | ± 1.0% | YEP320-5 | ± 0.5% | YEP320-24 |
| | ± 1.0% | YEP320-7.5 | ± 0.5% | YEP320-27 |
| | ± 1.0% | YEP320-12 | ± 0.5% | YEP320-36 |
| | ± 1.0% | YEP320-13.5 | ± 0.5% | YEP320-48 |
| | ± 1.0% | YEP320-15 | ± 0.5% | YEP320-60 |
| SET UP TIME | 1500ms, 50ms/230VAC at full load | | | |
| RISE TIME | 3000ms, 50ms/115VAC at full load | | | |
| HOLD UP TIME(Typ.) | 8ms at full load, 230VAC /115VAC | | | |

Protection

| | | | | |
|-------------------------|--|---------------------|--|--|
| SHORT CIRCUIT | Protection type: Hiccup mode, recovers automatically after fault condition is removed | | | |
| OVER LOAD | 105%-135% Rated Output Power Protection type: Hiccup mode, recovers automatically after fault condition is removed. | | | |
| OVER VOLTAGE | 5V: 5.75 ~ 6.75V | 24V: 27.6 ~ 32.4V | | |
| | 7.5V: 8.625 ~ 10.125V | 27V: 31.05 ~ 36.45V | | |
| | 12V: 13.8 ~ 16.2V | 36V: 41.4 ~ 48.6V | | |
| | 13.5V: 15.525 ~ 18.225V | 48V: 58.4 ~ 68V | | |
| | 15V: 17.25 ~ 20.25V | 60V: 69 ~ 81V | | |
| | 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. | | | |

Environment

| | |
|--------------------------------|--|
| WORKING TEMP. | -30 °C to +70 °C (Refer to “Derating Curve”) |
| WORKING HUMIDITY | 20 ~ 90% RH non-condensing |
| STORAGE TEMP., HUMIDITY | -40 °C to +85 °C , 10 ~ 95% RH |
| TEMP. COEFFICIENT | ± 0.03%/°C (0~50 °C) |
| VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes |
| MTBF | 180K 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(Note 5)

| | |
|-----------------------------|---|
| SAFETY STANDARDS | BS EN/EN62368-1 |
| WITHSTAND VOLTAGE | I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC |
| 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 Class A-D,BS EN/EN61000-3-3 |
| EMC IMMUNITY | Compliance to BS EN/EN61000-4-11 Criteria B BS EN/EN61000-4-2,3,4,5,6,8 Criteria A |

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

Length: 215mm / 8.46in

Width: 115mm / 4.53in

Height: 30mm / 1.18in

Weight: 1000g

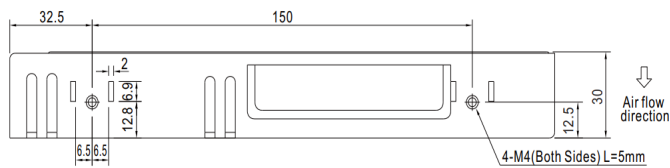
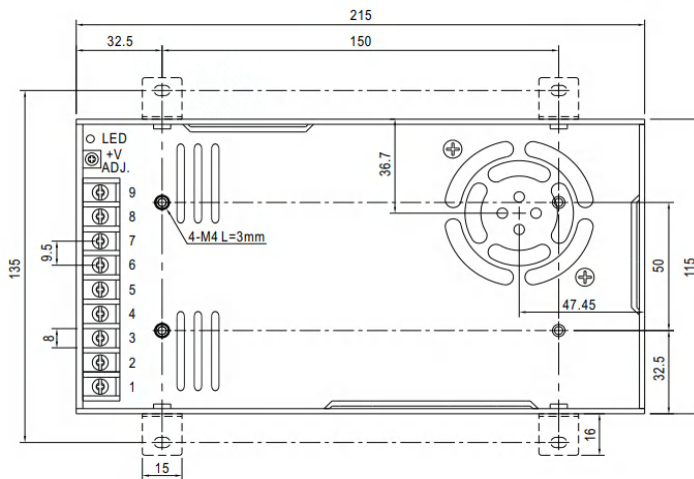
Packing

Carton Size(L x W x H): 38 x 19.5 x 26 CM

14.96 x 7.68 x 10.24 in

Master Carton Quantities: 15pcs / Carton

Mechanical Specification



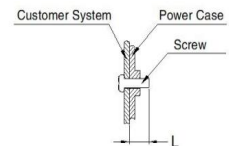
Input :

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

Output :

| No. | Description |
|-----|--------------|
| 4-6 | DC OUTPUT -V |
| 7-9 | DC OUTPUT +V |

| Screw Spec. | L(max) | Torque(max) |
|-------------|--------|-------------|
| M4 | 5mm | 0.9N · m |
| M4 | 3mm | 0.9N · m |



Note:

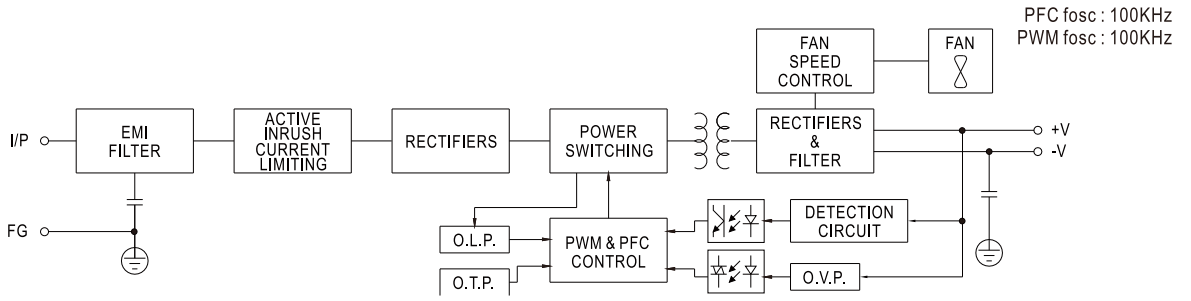
Unit: mm[inch]

Wire range: 22-12AWG

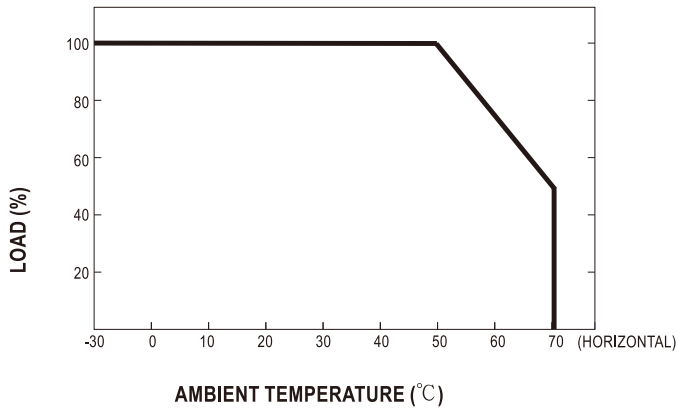
Connector tightening torque: M3.5 , 0.8N·m

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

Block Diagram



Derating Curve



Static Characteristics

