

# YSDH120 SERIES 120W



Yingjiao's higher performance family of single phase din rail power supplies were designed with metal housing and for full range AC input from 90VAC to 264V AC. With higher efficiency, the entire series have built-in DC OK relay contact and higher peak power, they also operate in wide temperature range. The series offer diverse solutions for demanding automation around the world.



## Features



Higher Peak Power



Built-in Active PFC Function



Built-in DC Ok Relay Contact



DC Output Voltage Adjustable



100% Full Load Burn-in Test



Three Years Warranty

## Model Information

Yingjiao Part number	DC VOLTAGE	RATED CURRENT (Max.)	RATED POWER	PEAK POWER (Note.4)	VOLTAGE ADJ. RANGE
YSDH120-12	12V	10A	120W	180W (3sec.)	12-14V
YSDH120-24	24V	5A	120W	180W (3sec.)	24-28V
YSDH120-48	48V	2.5A	120W	180W (3sec.)	48-55V

## Input

<b>RATED INPUT (Certified Voltage)</b>	100 ~ 240VAC
<b>NOMINAL INPUT VOLTAGE RANGE</b>	90~264VAC or 124-370VDC
<b>FREQUENCY RANGE</b>	47 ~ 63Hz
<b>POWER FACTOR (Typ.)</b>	0.93/230VAC at full load 0.96/115VAC at full load
<b>EFFICIENCY (Typ.)</b>	89% YSDH120-12 91% YSDH120-24 91% YSDH120-48
<b>AC CURRENT (Typ.)</b>	1.4A/115VAC 0.7A/230VAC
<b>INRUSH CURRENT (Typ.)</b>	35A/115VAC 70A/230VAC
<b>LEAKAGE CURRENT</b>	<1mA / 240VAC

## Output

<b>RIPPLE &amp; NOISE (max.)</b>	100mVp-p	YSDH120-12
	100mVp-p	YSDH120-24
	120mVp-p	YSDH120-48
<b>VOLTAGE TOLERANCE</b>	$\pm 2.0\%$	
<b>LINE REGULATION</b>	$\pm 0.5\%$	
<b>LOAD REGULATION</b>	$\pm 1.0\%$	
<b>SETUP, RISE TIME</b>	1500ms, 60ms/230VAC at full load 3000ms, 60ms/115VAC at full load	
<b>HOLD UP TIME (Typ.)</b>	20ms/230VAC at full load 20ms/115VAC at full load	

## Protection

<b>OVER LOAD</b>	Normally works within 110 ~ 150% rated output power for more than 5 seconds and then shut down o/p voltage with auto-recovery >150% rated power, constant current limiting with auto-recovery within 5 seconds and may cause to shut down if over 3 seconds
<b>OVER VOLTAGE</b>	14~17V      YSDH120-12 29~33V      YSDH120-24 56~65V      YSDH120-48 Protection type : Shut down o/p voltage, re-power on to recover
<b>OVER TEMPERATURE</b>	95 °C ± 5 °C (TSW) detect on heatsink of power switch Protection type : Shut down o/p voltage, recovers automatically after temperature goes down

## Function

<b>DC OK REALY CONTACT RATINGS (max.)</b>	60Vdc/0.3A, 30Vdc/1A, 30Vac/0.5A resistive load
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## Environment

<b>WORKING TEMP.</b>	-25 ~ +70 °C (Refer to "Derating Curve")
<b>WORKING HUMIDITY</b>	20 ~ 95% RH non-condensing
<b>STORAGE TEMP., HUMIDITY</b>	-40 ~ +85 °C, 10 ~ 95% RH
<b>COLD START</b>	-40 °C
<b>MTBF</b>	1500K hrs min. Telcordia SR-332 (Bellcore)
<b>TEMP. COEFFICIENT</b>	±0.03%/°C (0 ~ 50 °C)
<b>VIBRATION</b>	Component: 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6

## SAFETY & EMC

<b>SAFETY STANDARDS</b>	UL61010-1, UL61010-2-201, BS EN/EN61010-1
<b>WITHSTAND VOLTAGE</b>	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC O/P-DC OK: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 , BS EN/EN61000-3-2,-3
<b>EMC IMMUNITY</b>	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55024, BS EN/EN61000-6-2 (BS EN/EN50082-2), BS EN/EN61204-3, heavy industry level

## Note

1. All parameters NOT specially mentioned 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. Installation clearances: top with 40mm, bottom with 20mm, left and right with 5mm. Increase the space to 10-15mm when the adjacent device is heat source.
4. It could hold up 3 seconds max when reached peak power 180W, please refer to peak loading curves.
5. Derating may be needed under low input voltage. Please check the derating curve for more details.
6. After 30 minutes of burn-in.
7. The ambient temperature derating of 3.5 °C/1000m for operating altitude higher than 2000m(6500ft).

## Dimensions & Weight

<b>Width:</b>	40mm / 1.57in
<b>Height:</b>	125mm / 4.92in
<b>Depth:</b>	113mm / 4.45in
<b>Weight:</b>	0.67kg

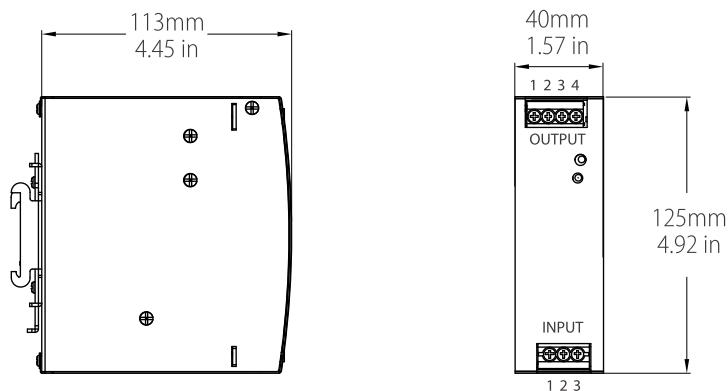
## Packing

Carton Size: 31.5 x 30 x 30 CM

12.4 x 11.81 x 11.81 in

Master Carton Quantities: 20pcs / Carton

## Mechanical Specification



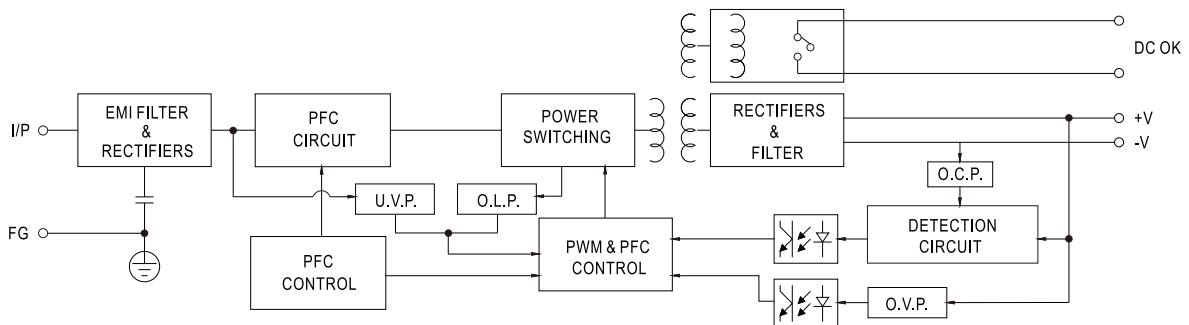
### Input

No.	Description
1	FG
2	AC/N
3	AC/L

### Output

No.	Description
1,2	Relay Contact
3	DC OUTPUT-V
4	DC OUTPUT+V

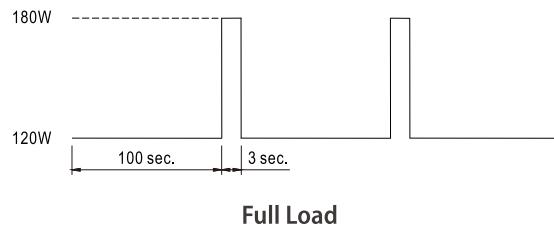
## Block Diagram



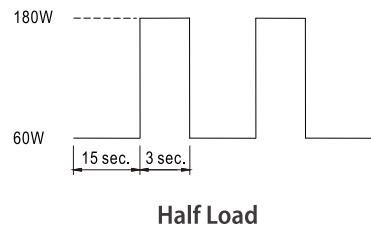
## DC OK Relay Contact

Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	30V/1A resistive load.

## Peak Loading

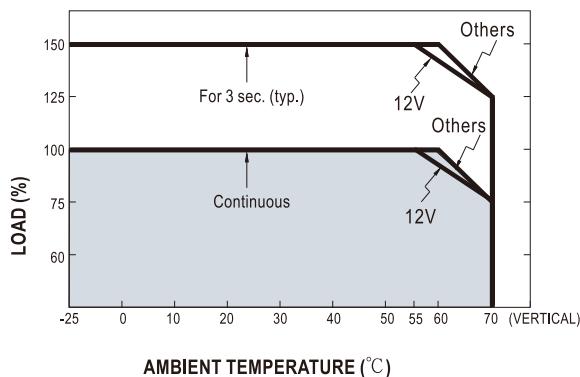


Full Load



Half Load

## Deduction Curve and Temperature



## Minus Output and Input Voltage Curves

