

YSDH120 SERIES 120W



The 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

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

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

Output

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

Protection

OVER LOAD	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
OVER VOLTAGE	14~17V YSDH120-12 29~33V YSDH120-24 56~65V YSDH120-48 Protection type : Shut down o/p voltage, re-power on to recover
OVER TEMPERATURE	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

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

WORKING TEMP.	-25 ~ +70 °C (Refer to "Derating Curve")
WORKING HUMIDITY	20 ~ 95% RH non-condensing
STORAGE TEMP., HUMIDITY	-40 ~ +85 °C, 10 ~ 95% RH
COLD START	-40 °C
MTBF	280K hrs min. MIL-HDBK-217F (25 °C)
TEMP. COEFFICIENT	± 0.03%/°C (0 ~ 50 °C)
VIBRATION	Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6

SAFETY & EMC

SAFETY STANDARDS	UL61010-1, UL61010-2-201, BS EN/EN61010-1
WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC O/P-DC OK: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 , BS EN/EN61000-3-2,-3
EMC IMMUNITY	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).

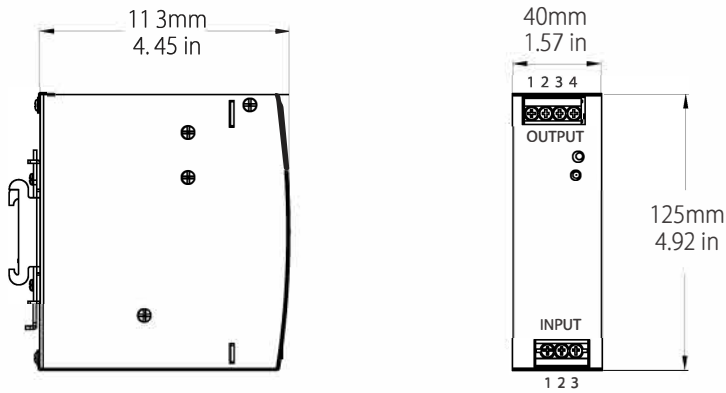
Dimensions & Weight

Width:	40mm / 1.57in
Height:	125mm / 4.92in
Depth:	113mm / 4.45in
Weight:	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



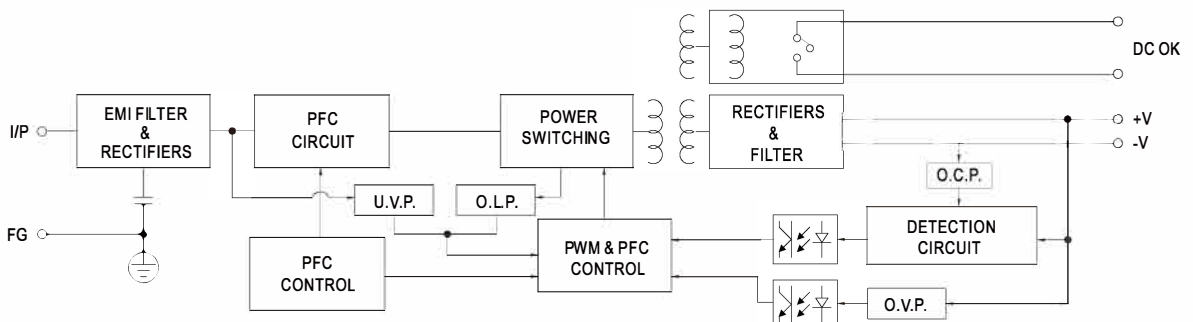
Input

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

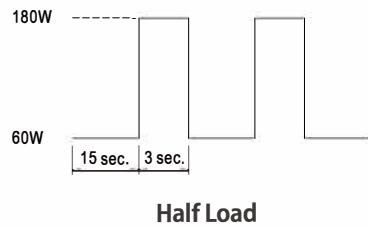
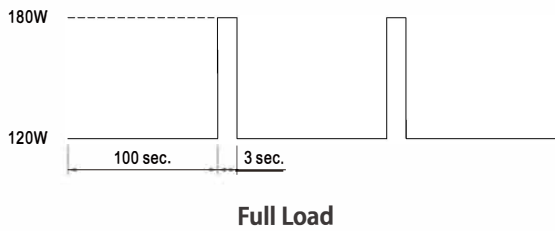
Block Diagram



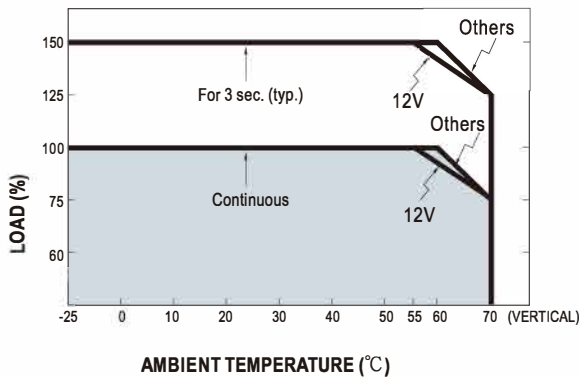
DC OK Relay Contact

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

Peak Loading



Deduction Curve and Temperature



Minus Output and Input Voltage Curves

