

# YSDH240 SERIES 240W



Our higher performance family of single phase din rail power supplies was designed with metal din rail 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 offers diverse solutions for demanding automation around the world.

## Features

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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
YSDH-240-24	24V	10A	240W	360W (3sec.)	24-28V
YSDH-240-48	48V	5A	240W	360W (3sec.)	48-55V

## Input

VOLTAGE RANGE	90 ~ 264VAC, 127 ~ 370VDC
FREQUENCY RANGE	47 ~ 63Hz
POWER FACTOR (Typ.)	0.94/230VAC at full load 0.99/115VAC at full load
EFFICIENCY (Typ.) (Note.6)	90%/115VAC 93%/230VAC
AC CURRENT (Typ.)	2.6A/115VAC 1.3A/230VAC
INRUSH CURRENT (Typ.)	33A/115VAC 55A/230VAC
LEAKAGE CURRENT	<1mA / 240VAC

## Output

RIPPLE & NOISE (max.) (Note.2)	100mVp-p 120mVp-p	YSDH-240-24 YSDH-240-48
VOLTAGE TOLERANCE	±2.0%	
LINE REGULATION	±0.5%	
LOAD REGULATION	±1.0%	
SETUP, RISE TIME	650ms, 60ms/230VAC at full load 1300ms, 60ms/115VAC at full load	
HOLD UP TIME (Typ.)	20ms/230VAC at full load 20ms/115VAC at full load	

## Protection

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### OVER LOAD

Normally works within 110 - 150% rated output power for more than 3 seconds and then shut down o/p voltage with auto-recovery

>150% rated power, constant current limiting with auto-recovery within 3 seconds and may cause to shut down if over 3 seconds

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### OVER VOLTAGE

29 ~ 33V YSDH-240-24

56 ~ 65V YSDH-240-48

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Protection type: Shut down o/p voltage, re-power onto recover

### OVER TEMPERATURE

95°C±5°C (TSW) detect on heat sink of power switch

Protection type: Shut down o/p voltage, recovers automatically after temperature goes down

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## Function

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### DC OK REALY CONTACT RATINGS (max.)

60Vdc/0.3A, 30Vdc/1A, 30Vac/0.5A resistive load

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## Environment

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### WORKING TEMP. (Note.3)

-25 ~ +70°C (Refer to "Derating Curve")

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### WORKING HUMIDITY

20 ~ 95% RH non-condensing

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### STORAGE TEMP., HUMIDITY

-40 ~ +85°C, 10 ~ 95% RH

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### MTBF

1160.3K hrs min. Telcordia SR-332 (Bellcore); 169.3K hrs min. MIL-HDBK-217F (25°C)

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### TEMP. COEFFICIENT

±0.03%/°C (0 ~ 50°C)

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### VIBRATION

Component: 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6

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## Safety and Electromagnetic Compatibility

SAFETY STANDARDS	UL508, BS/EN62368-1
WITHSTAND VOLTAGE	I/P-0/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC O/P-DC OK:0.5KVAC
ISOLATION RESISTANCE	I/P-0/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: op 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 (6500f ).

### Dimensions & Weight

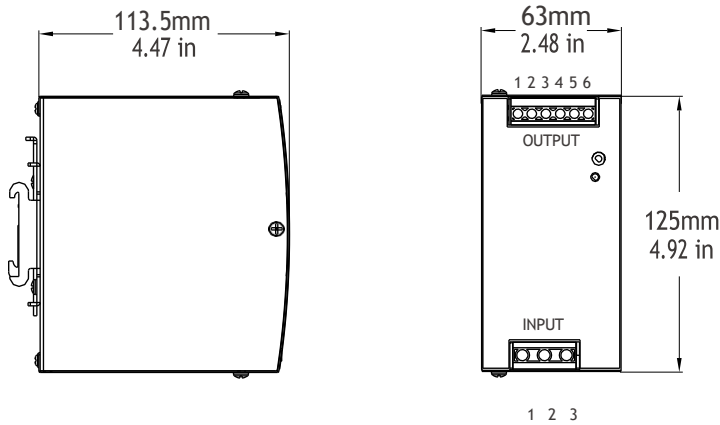
Length:	63mm / 2.48in
Width:	125.2mm / 4.93in
Height:	113.5mm / 4.47in
Weight:	1kg

# Packing

Carton Size: 52.5 x 33 x 17.5 CM  
20.67 x 12.99 x 6.89 in

Master Carton Quantities: 10pcs / Carton

# Mechanical Specification



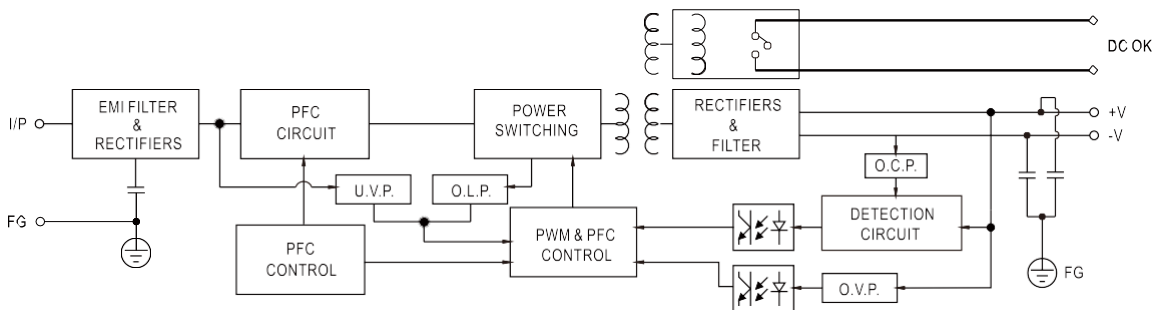
Input

No.	Description
1	FG ⊕
2	AC/N
3	AC/L

Output

No.	Description
1,2	Relay Contact
3,4	DC OUTPUT +V
5,6	DC OUTPUT -V

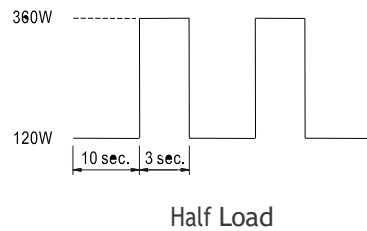
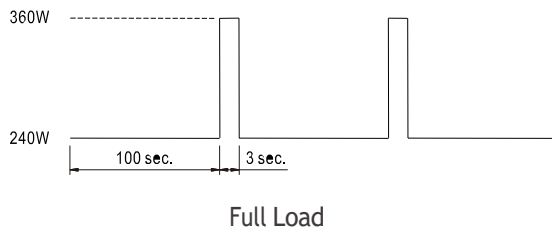
# Block Diagram



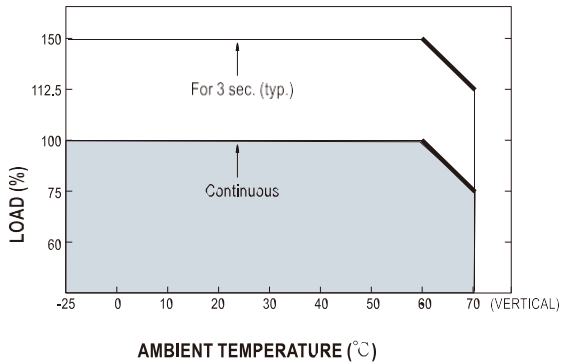
## DC OK Relay Contact

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

## Peak Loading



## Derating Curve



## Static Characteristics

