

# YSDW480 SERIES 480W



YSDW series are designed with metal housing and for single or two phase system with wide range from 180V AC to 550 V AC.

The series offer DC OK relay contact, built-in constant current limiting circuit and active PFC function (except YSDW120), and operating in wide temperature range.

They are suitable for industrial-related applications such as industrial control, semiconductor fabrication equipment, and factory automation etc.

## Features

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Single and Two Phase Ultra Wide Input Range 180-550VAC



Over Voltage Category III



Built-in DC OK Relay Contact



DC Output Voltage Adjustable



Built-in Constant Current Limiting Circuit



Three Years Warranty

## Model Information

Part number	DC VOLTAGE	RATED CURRENT	RATED POWER	VOLTAGE ADJ. RANGE
YSDW-480-24	24V	20A	480W	24 ~ 48V
YSDW-480-48	48V	10A	480W	48 ~ 55V

## Input

VOLTAGE RANGE(Note.6)	180 ~ 550VAC 254 ~ 780VDC
FREQUENCY RANGE	47~63Hz
POWER FACTOR(Typ.)	PF $\geq$ 0.84/400VAC PF $\geq$ 0.84/230VAC
EFFICIENCY(Typ.)	91% YSDW-480-24 93% YSDW-480-48
AC CURRENT(Typ.)	1.6A/400Vac 4A/230Vac
INRUSH CURRENT(Typ.)	COLD START 50A
LEAKAGE CURRENT	<3.5mA / 530Vac

## Output

RIPPLE & NOISE (max)(Note.2)	100mVp-p YSDW-480-24 150mVp-p YSDW-480-48
VOLTAGE TOLERANCE(Note.3)	$\pm$ 1.0%
LINE REGULATION	$\pm$ 0.5%
LOAD REGULATION	$\pm$ 1.0%
SETUP, RISE TIME	800ms, 150ms/400Vac at full load 2000ms, 150ms/230Vac at full load
HOLD UP TIME(Typ.)	18ms/400Vac at full load 16ms/400Vac at full load

## Protection

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OVER LOAD	105 ~ 135% rated output power. Protection type: Constan current limiting, unit will shut down after 3 sec., auto-recovery after 1 minute if the fault condition is removed.
OVER VOLTAGE	29 ~ 33V YSDW - 480 - 24 56 ~ 65V YSDW - 480 - 48  Protection type: Shut down o/p voltage, auto-recovery after 1 minute if the fault condition is removed.
OVER TEMPERATURE	90°C±5°C (TSW) detect on heatsink of power switch. Protection type: Shut down o/p voltage, recovers automatically after temperature goes down.

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## Environment

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WORKING TEMP. (Note.5)	-30 ~ +70°C (Refer o "Derating Curve") 20
WORKING HUMIDITY	~ 95% RH non-condensing
STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH
TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)
VIBRATION	Component: 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting clip: Compliance to IEC60068-2-6.
MTBF	1062.8K hrs min. Telcordia SR-332 (Bellcore); 141.1K hrs min. MIL- HDBK-217F (25°C).

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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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## SAFETY & EMC (Note 4)

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SAFETY STANDARDS	UL508,EAC TP TC 004 approved,IEC62368-1 CB approved by SIQ, design refer o BS EN/EN62368-1, AS/NZS 62368.1,GL; (mee BS EN/EN60204-1).
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 o BS EN/EN55032 (CISPR32), BS EN/EN61204-3 Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020.
EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, BS EN/EN61000-6-2 (BS EN/EN50082-2), BS EN/EN61204-3, heavy industry level, EAC TP TC 020 approved.

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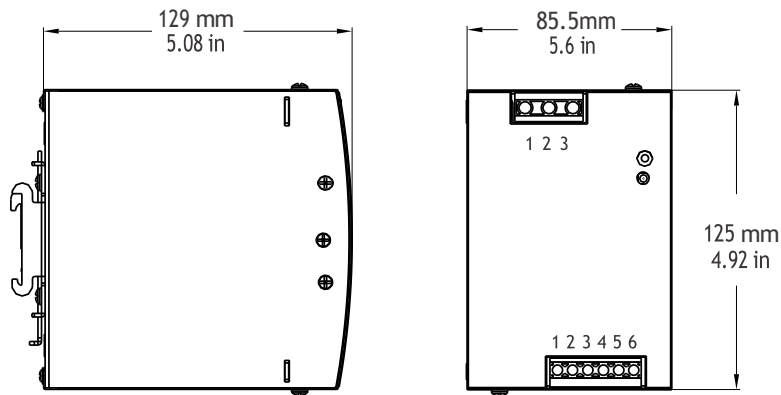
## Note

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1. All parameters NOT specially mentioned are measured at 400VAC 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. Tolerance: includes set up tolerance, line regulation and load regulation.
  4. 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.
  5. Installation clearances: 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended.
  6. Derating may be needed under low input voltage. Please check t he derating curves for more details.
  7. 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(6500f).
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## Dimensions & Weight

Length:	85.5mm / 3.37in
Width:	129mm / 5.08in
Height:	125mm / 4.92in
Weight:	1.7kg

## Mechanical Specification



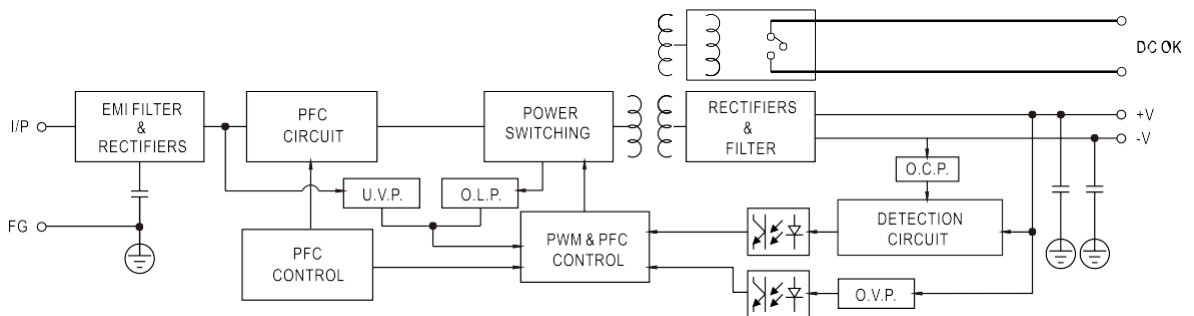
### Input

No.	Description
1	FG Ⓧ
2	AC/L2
3	AC/L1

### Output

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

## Block Diagram



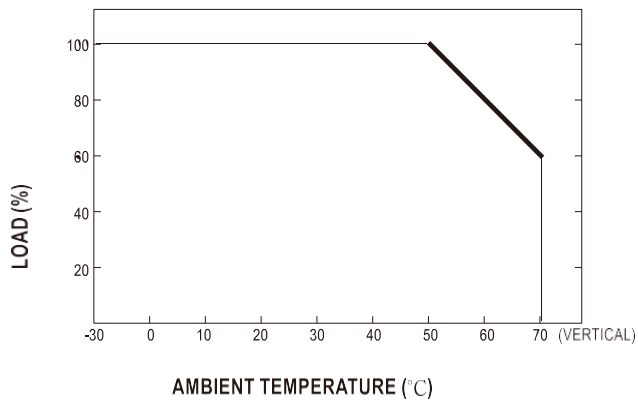
## DC OK Relay Contact

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

## Deduction Curve And Temperature

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## Minus Output And Input Voltage Curves

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