

# Datasheet

## YSDT240 SERIES 240W

**FORTEC**  
UNITED STATES

**FORTEC**  
INTEGRATED

**FORTEC**  
UNITED KINGDOM

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# YSDT240 SERIES 240W



YSDT series are designed with metal housing and for there phase system with wide range from 340V AC to 550V AC..

The series offer built-in constant current limiting circuit and active PFC function, 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



3-phase 340~550VAcwide Range Input  
(2-phase operation possible)



Built-in passive pFc Function



protection:short circuit/overload  
/over Voltage/over Temperature



Dc oK Relay contact



Built-in constant current Limiting circuit



High Efficiency 92% and  
Low power Dissipation



Full power Between -30~+60 °C



Three years warranty

## Model Information

yingjiao Part number	DC VOLTAGE	RATED CURRENT	RATED POWER	VOLTAGE ADJ. RANGE
YSDT240-24	24V	10A	240W	24 ~ 28V
YSDT240-48	48V	5A	240W	48 ~ 55V

## Input

RATED INPUT	Three-Phase 380~ 480VAC (Dual phase operation possible in connecting L1,L3,FG or L2,L3,FG) or 480 ~ 780VDC
INPUTVOLTAGE RANGE	340 ~ 550VAC/480 ~ 780VDC
FREQUENCY RANGE	47~63Hz
POWER FACTOR (TYP.)	PF $\geq$ 0.53/400VAC at full load PF $\geq$ 0.52/500VAC at full load
EFFICIENCY (TYP.)	92%
AC CURRENT (TYP.)	0.69A/400VAC 0.6A/500VAC
INRUSH CURRENT (TYP.)	COLD START 50A
LEAKAGE CURRENT	<2mA / 530VAC

## Output

RIPPLE & NOISE (max.)	100mVp-p YSDT240-24 120mVp-p YSDT240-48
VOLTAGETOLERANCE	$\pm$ 1.0%
LINE REGULATION	$\pm$ 0.5%
LOAD REGULATION	$\pm$ 1.0%
SETUP, RISETIME	2000ms, 60ms/400VAC at full load 1500ms, 60ms/500VAC at full load
HOLD UPTIME (TYP.)	20ms / 400VAC at full load 40ms / 500VAC at full load

## protection

OVER LOAD	105 ~ 130% rated output power protection tYpe : Constant current limiting, unit will hiccup after 3 sec.
OVERVOLTAGE	30~36V YSDT240-24 56~65V YSDT240-48 protection tYpe : Hiccup mode, recovers automaticallY after fault condition is removed.
OVERTEMPERATURE	Shutdown 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

WORKINGTEMP.	-30 ~ +70 °C (Refer to "Derating Curve")
WORKING HUMIDITY	20 ~ 95% RH non-condensing
STORAGETEMP., HUMIDITY	-40 ~ +85 °C, 10 ~ 95% RH non-condensing
COLD START	-40 °C
TEMP. COEFFICIENT	±0.05%/ °C (0 ~ 60 °C)
VIBRATION	Component:10 ~ 500Hz, 2G 10min./1cYcle, 60min. each along X,Y, Z axes; Mounting: Compliance to IEC60068-2-6
OPERATING ALTITUDE	5000 meters
OVERVOLTAGE CATEGORY	III; According to EN61558, EN50178, EN60664-1, EN62477-1, EN60204-1; altitude up to 2000 meters
MTBF	1500k hrs min.TelcordiaSR-332(Bellcore)

## SAFETY & EMC

SAFETY STANDARDS	UL61010-1, UL61010-2-201, BS EN/EN61010-1
WITHSTANDVOLTAGE	I/P-O/P:4.87KVAC I/P-FG:2.4KVAC 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	BS EN/EN55032(CISPR32)
EMC IMMUNITY	BS EN/EN61000-4-2, 3, 4, 5, 6, 8

## Note

1.All parameters NOT specially mentioned 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.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.The ambient temperature derating of 3.5 °C/1000m for operating altitude higher than 2000m(6500ft).

5.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.”

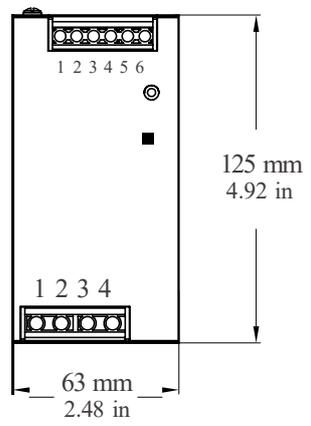
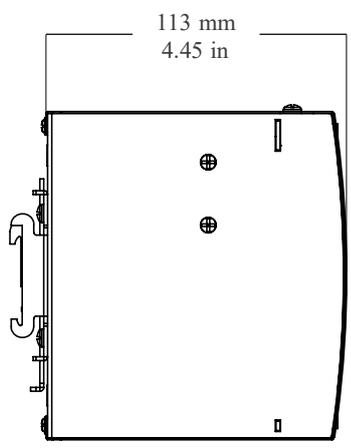
## Dimensions & weight

Length:	63mm / 2.48in
width:	113mm / 4.45in
Height:	125mm / 4.92in
weight:	1kg

# packiNg

carton size:	52.5 X 33 X 17.5 CM
	20.7 X 13 X 6.9 in
Master carton Quantities:	10pcs / Carton

# Mechanical Specification



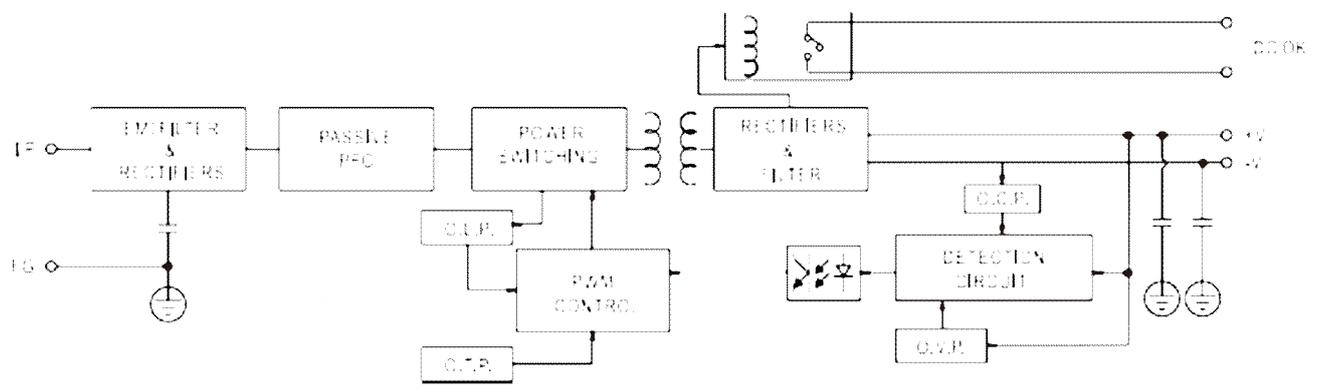
**Input**

No.	Description
1	AC/L1
2	AC/L2 or DC -
3	AC/L3 or DC +
4	FG ⊕

**Output**

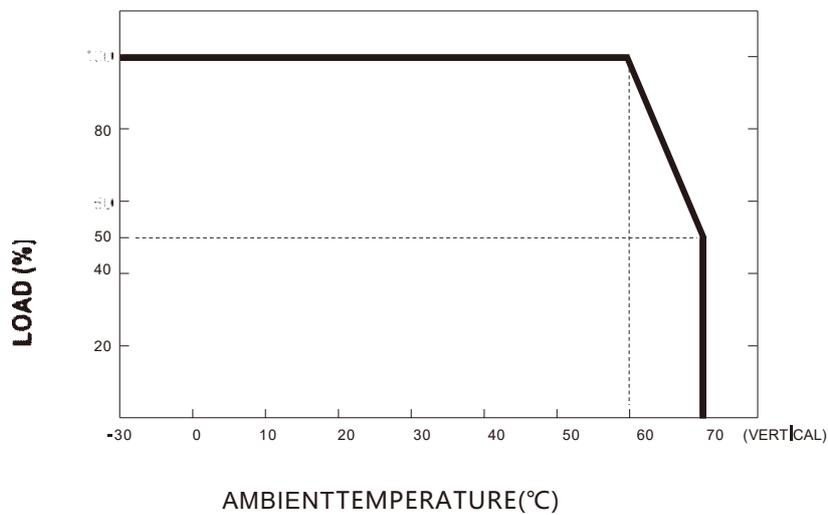
No.	Description
1.2	DC OUTPUT +V
3.4	DC OUTPUT -V
5.6	DC OK Relay Contact

# BIOcK Diagram



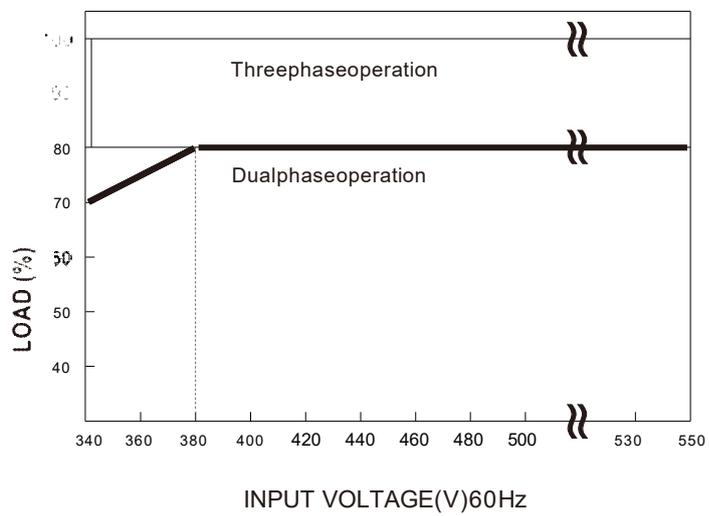
## Deduction curve and Temperature

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## Minus output and Input voltage curves

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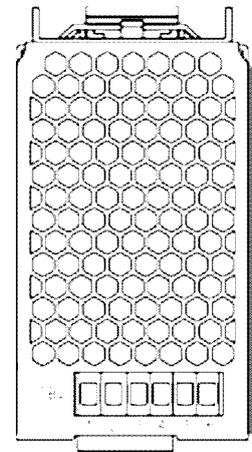
## DC OK RELAY CONTACT

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Contact Close	PSU turns on (DC OK).
Contact Open	PSU turns off (DC Fail).
Contact Ratings (max.)	30VDC 1A, 30VAC 0,5A resistive load.

### Output:

No.	Description
5.6	DC OK Relay Contact



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