

# YSDT240 SERIES 240W



YSDT series are designed with metal housing and for there phase system with wide range from 340V AC to 550 V 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 340~550VAC Wide 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<br>Part number | DC<br>VOLTAGE | RATED<br>CURRENT | RATED<br>POWER | VOLTAGE<br>ADJ. RANGE |
|-------------------------|---------------|------------------|----------------|-----------------------|
| YSDT240-24010000        | 24V           | 10A              | 240W           | 24 ~ 28V              |
| YSDT240-48005000        | 48V           | 5A               | 240W           | 48 ~ 55V              |

## Input

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

## Output

|                       |                                                                      |
|-----------------------|----------------------------------------------------------------------|
| RIPPLE & NOISE (max.) | 100mVp-p YSDT240-24010000<br>120mVp-p YSDT240-48005000               |
| VOLTAGE TOLERANCE     | $\pm$ 1.0%                                                           |
| LINE REGULATION       | $\pm$ 0.5%                                                           |
| LOAD REGULATION       | $\pm$ 1.0%                                                           |
| SETUP, RISE TIME      | 2000ms, 60ms/400VAC at full load<br>1500ms, 60ms/500VAC at full load |
| HOLD UP TIME (Typ.)   | 20ms / 400VAC at full load<br>40ms / 500VAC at full load             |

## Protection

|                  |                                                                                                             |                  |
|------------------|-------------------------------------------------------------------------------------------------------------|------------------|
| OVER LOAD        | 105 ~ 130% rated output power<br>Protection type : Constant current limiting, unit will hiccup after 3 sec. |                  |
| OVER VOLTAGE     | 30~36V                                                                                                      | YSDT240-24010000 |
|                  | 56~65V                                                                                                      | YSDT240-48005000 |
|                  | Protection type : Hiccup mode, recovers automatically after fault condition is removed.                     |                  |
| OVER TEMPERATURE | 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 |
|------------------------------------|-------------------------------------------------|

## Environment

|                         |                                                                                                              |
|-------------------------|--------------------------------------------------------------------------------------------------------------|
| WORKING TEMP.           | -30 ~ +70 °C (Refer to "Derating Curve")                                                                     |
| WORKING HUMIDITY        | 20 ~ 95% RH non-condensing                                                                                   |
| STORAGE TEMP., HUMIDITY | -40 ~ +85 °C, 10 ~ 95% RH non-condensing                                                                     |
| 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                                                                                                  |
| OVER VOLTAGE CATEGORY   | III ; According to EN61558, EN50178, EN60664-1, EN62477-1, EN60204-1; altitude up to 2000 meters             |
| MTBF                    | 1500K hrs min. Telcordia SR-332(Bellcore)                                                                    |

## SAFETY & EMC

|                             |                                                                  |
|-----------------------------|------------------------------------------------------------------|
| <b>SAFETY STANDARDS</b>     | UL61010-1, UL61010-2-201, BS EN/EN61558-1, BS EN/EN61558-2-16    |
| <b>WITHSTAND VOLTAGE</b>    | I/P-O/P:4.87KVAC I/P-FG:2.4KVAC 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>         | BS EN/EN55032(CISPR32)                                           |
| <b>EMC IMMUNITY</b>         | 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."

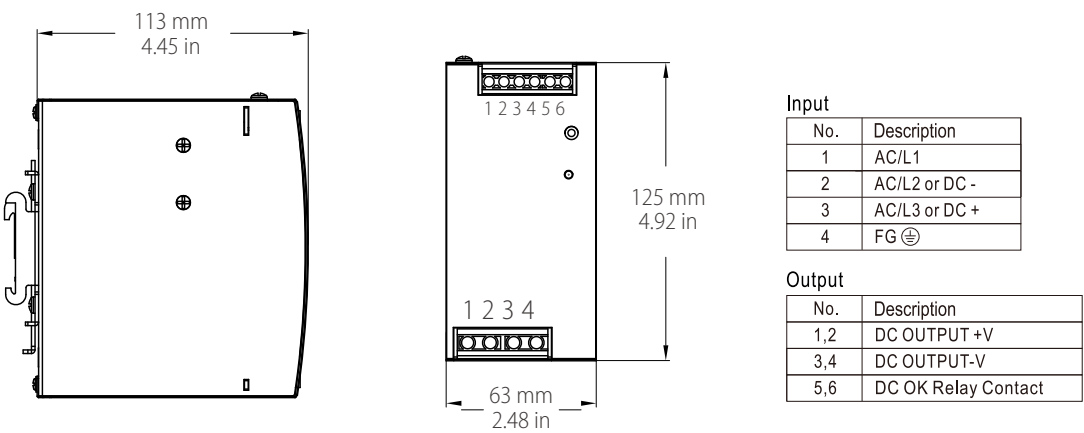
## Dimensions & Weight

|                |                |
|----------------|----------------|
| <b>Length:</b> | 63mm / 2.48in  |
| <b>Width:</b>  | 113mm / 4.45in |
| <b>Height:</b> | 125mm / 4.92in |
| <b>Weight:</b> | 1kg            |

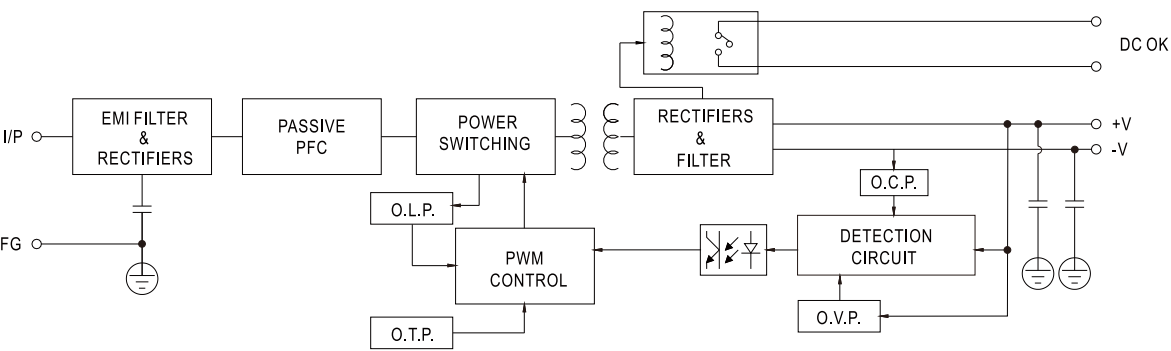
# Packing

|                           |                     |
|---------------------------|---------------------|
| Carton Size:              | 52.5 x 33 x 17.5 CM |
|                           | 20.7 x 13 x 6.9 in  |
| Master Carton Quantities: | 10pcs / Carton      |

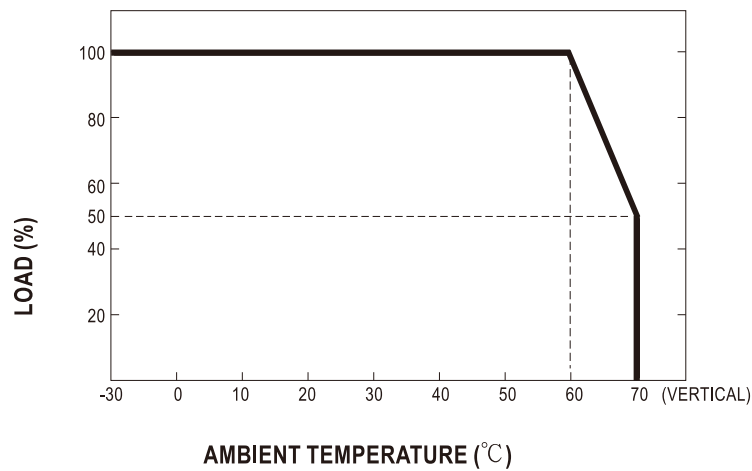
# Mechanical Specification



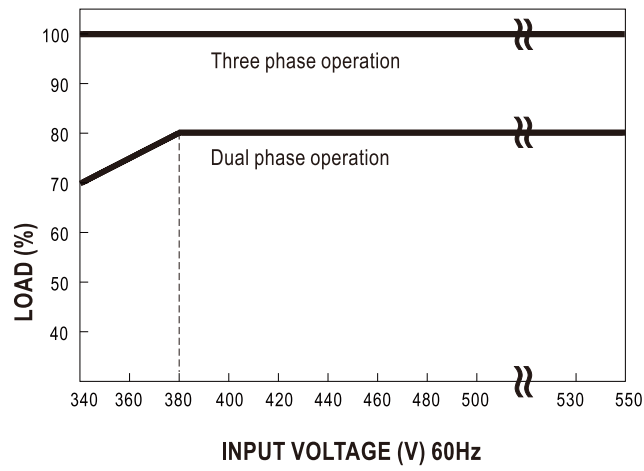
# Block Diagram



# DERATING CURVE



# OUTPUT DERATING VS INPUT VOLTAGE



# 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 |

