

# YSDT480 SERIES 480W











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

The series offer built-in constant current limiting circuit, active PFC function and operating over a 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 Active pF<sub>c</sub> 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

Part number	DC VOLTAGE	RATED CURRENT	RATED POWER	VOLTAGE ADJ. RANGE
YSDT480-24	24V	20A	480W	24 ~ 28V
YSDT480-48	48V	10A	480W	48 ~ 55V

## Input

RATED INPUT	Three-Phase 380~ 480VAC (Dual phase operation possible) 480 ~ 780VDC
INPUT VOLTAGE RANGE	340 ~ 550VAC/480 ~ 780VDC
FREQUENCY RANGE	47~63Hz
POWER FACTOR (TYP.)	PF $\geq$ 0.9/400VAC at full load PF $\geq$ 0.88/500VAC at full load
EFFICIENCY (TYP.)	92.5% YSDT480-24 93.0% YSDT480-48
AC CURRENT (TYP.)	0.85A/400VAC 0.7A/500VAC
INRUSH CURRENT (TYP.)	COLD START 50A
LEAKAGE CURRENT	<3.5mA / 530VAC

## Output

RIPPLE & NOISE (max.)	150mVp-p
VOLTAGE TOLERANCE	$\pm$ 1.0%
LINE REGULATION	$\pm$ 0.5%
LOAD REGULATION	$\pm$ 1.0%
SETUP, RISE TIME	1200ms, 60ms/400VAC at full load 800ms, 60ms/500VAC at full load
HOLD UP TIME (TYP.)	20ms / 400VAC at full load 20ms / 500VAC at full load

## Protection

OVER LOAD	105 ~ 130% rated output power. Protection tYpe: Constant current limiting, unit will hiccup after 3 sec., re-power on to recover.
OVER VOLTAGE	29~33V YSDT480-24 56~65V YSDT480-48 Protection type: Shutdown o/p voltage, re-power on to recover.
OVER TEMPERATURE	Shutdown o/p voltage, recovers automatically after temperature goes down.

## 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
COLD START	-40 °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
MTBF	1000K hrs min.Telcordia SR-332(Bellcore)

## 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 / 70% RH
EMC EMISSION	BS EN/EN55032(CISPR32)
EMC IMMUNITY	BS EN/EN61000-4-2, 3, 4, 5, 6, 8

## Note

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- 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."
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## Dimensions & Weight

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Length:	85.5mm / 3.37in
Width:	129mm / 5.08in
Height:	125mm / 4.92in
Weight:	1.51kg

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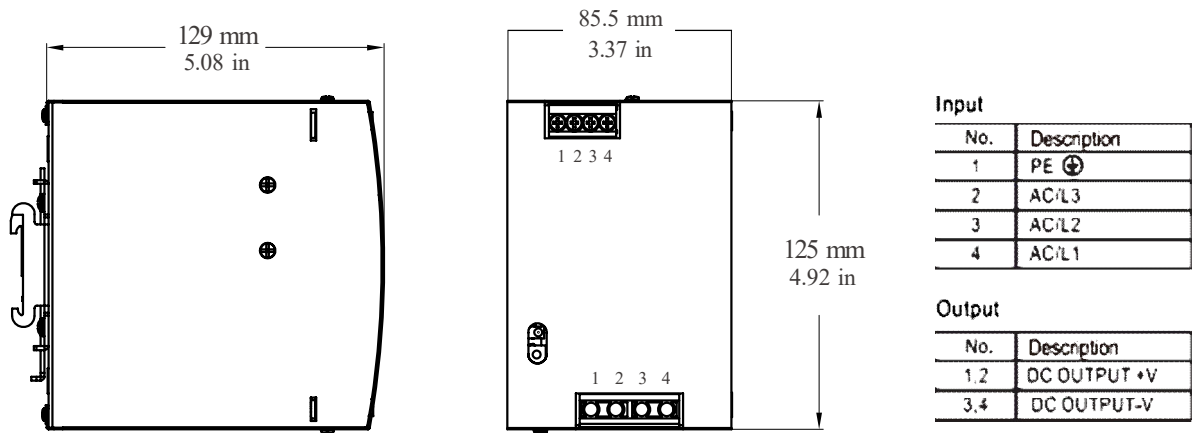
## Packing

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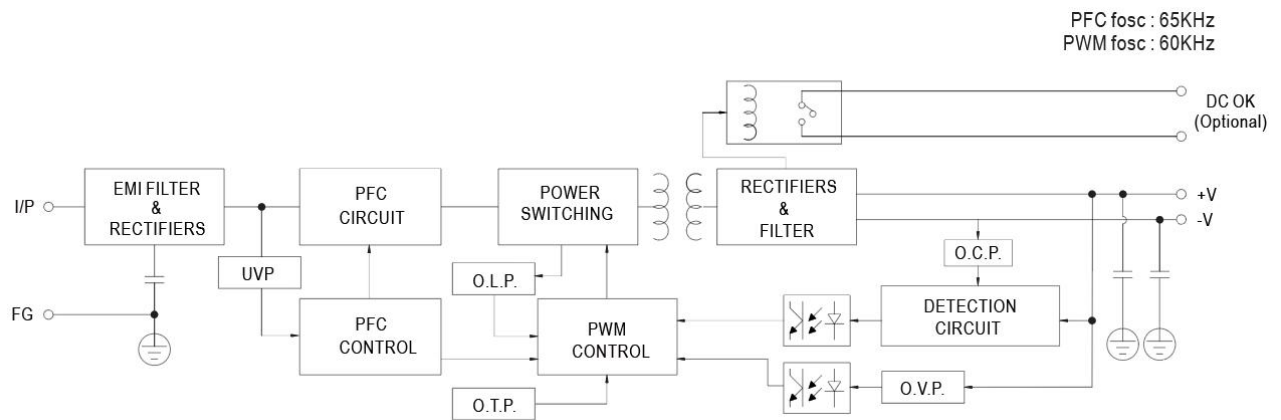
Carton size:	49 X 34.5 X 16.5 cm 19.3 X 13.6 X 6.5 in
Master carton Quantities:	8pcs / carton

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## Mechanical Specification

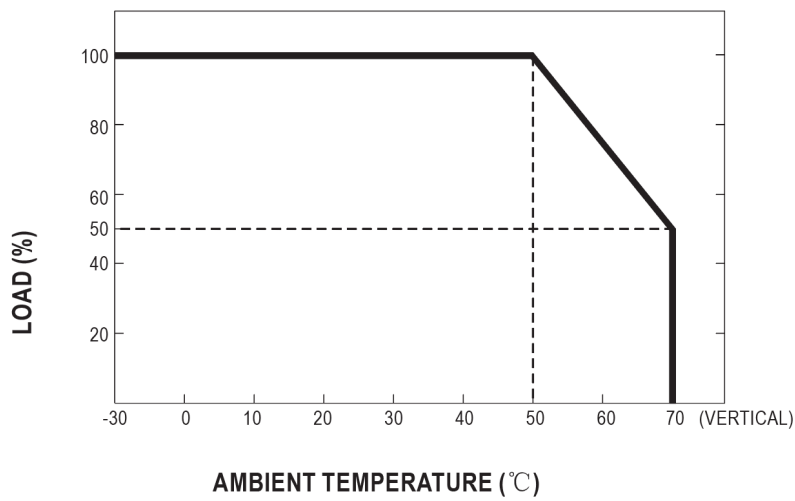


## Block Diagram



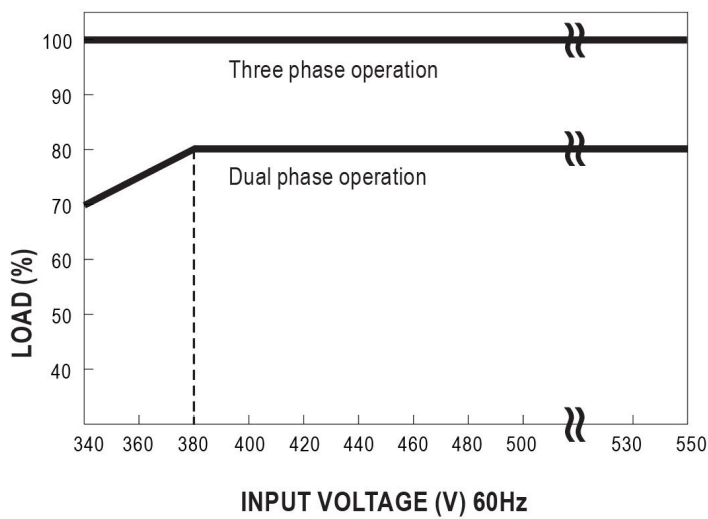
## Deduction curve and Temperature

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## Minus output and Input voltage curves

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## DC OK Relay Contact

<b>Contact Close</b>	PSU turns on/DC OK
<b>Contact Ope</b>	PSU turns off/DC Fail
<b>Contact Rating(max.)</b>	60VDC/0.3A, 30VDC/1A, 30VAC/0.5A resistive load.

Control Pin(Optional): XH-2WAP ~ 20WAP-02P or equivalent			
Pin No.	Assignment	Mating Housing	Wire Diameter
1,2	DC OK Relay Contact	XH-2WAP ~ 20WAP-02P or equivalent (Including in the single package)	0.128~0.404mm <sup>2</sup> (26~24AWG)

