YINGJIAO®

YSDT960 SERIES 960W

UL61010 Pending

CE Pending

UKCA Pending

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, active PFC function, current sharing up to 3840W(3+1), and operating in wide temperature range.

They are suitable for industrial-related applications such as industrial control, semiconductor fabric.-tion equipment, and factory automation and Elec-tro-mechanical apparatus etc.

Features

- 3-Phase 340~550VAC Wide Range Input (2-phase operation possible)
- Protection:Short Circuit/Overload /Over Voltage/Over Temperature
- Bulit-in Constant Current Limiting Circuit
- Current Sharing up to 3840W (3+1)
- Built-in Active PFC Function
- DC OK Relay Contact
- Higher Efficiency and Low Power Dissipation
- Three Years Warranty

Model Information

Yingjiao Part number	DC VOLTAGE	RATED CURRENT	RATED POWER	VOLTAGE ADJ. RANGE
YSDT960-24040000	24V	40A	960W	24 ~ 28V
YSDT960-48020000	48V	20A	960W	48 ~ 55V

Input

VOLTAGE RANGE	Three-Phase 340 ~ 550VAC (Dual phase operation possible) 480 ~ 780VDC
FREQUENCY RANGE	47~63Hz
POWER FACTOR (Typ.)	PF≧0.88/400VAC at full load PF≧0.86/500VAC at full load
EFFICIENCY (Typ.)	94% YSDT960-24040000 94.5% YSDT960-48020000
AC CURRENT (Typ.)	2.0A/400VAC 1.4A/500VAC
INRUSH CURRENT (Typ.)	COLD START 60A
LEAKAGE CURRENT	<3.5mA / 530VAC

Output

RIPPLE & NOISE (max.)	180mVp-p YSDT960-24040000 250mVp-p YSDT960-48020000
VOLTAGE TOLERANCE	±2.0%
LINE REGULATION	±0.5%
LOAD REGULATION	±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 shut down after 3 sec., re-power on to recover.
OVER VOLTAGE	29~33V YSDT960-24040000 56~65V YSDT960-48020000 Protection type: Shut down o/p voltage, re-power on to recover.
OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down.

Environment

WORKING TEMP.	-30 ~ +70℃ (Refer to "Derating Curve")
WORKING HUMIDITY	20 ~ 95% RH non-condensing
STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH non-condensing
TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)
VIBRATION	Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6
MTBF	550.04K hrs min. Telcordia SR-332(Bellcore)

SAFETY & EMC

SAFETY STANDARDS	UL61010-1, UL61010-2-201, BS EN/EN62368-1
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, 8,11

Note

1.All parameters NOT specially mentioned are measured at 400VAC input, rated load and 25℃ 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℃ ambient temperature).

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 ℃/1000m for operating altitude higher than 2000m(6500ft).

5.Dual phase operation is allowed under certain derating to output load. Please refer to derating curves for details.

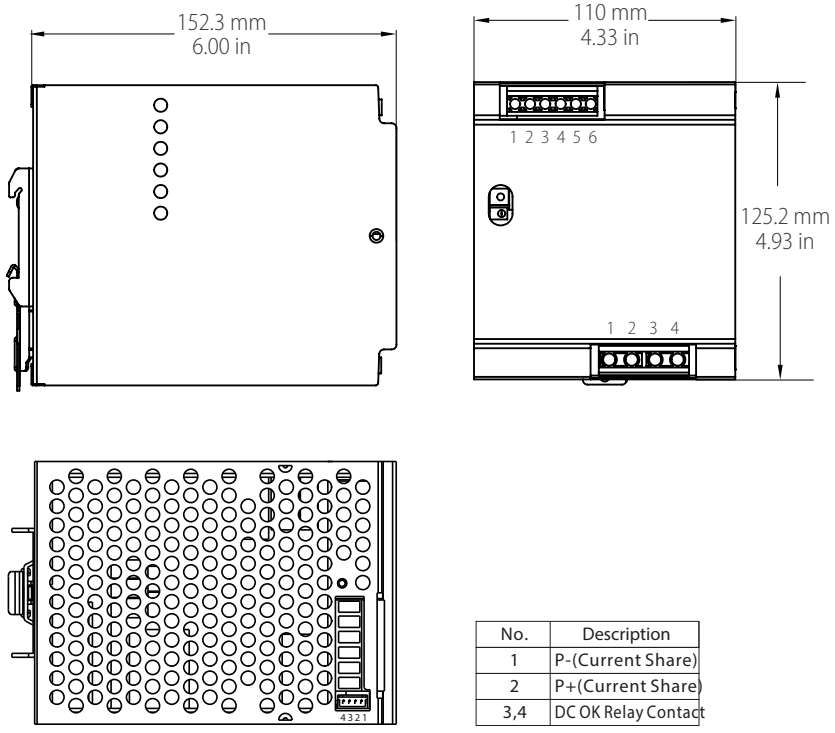
Dimensions & Weight

Width:	110mm / 4.33in
Height:	125.2mm / 4.93in
Depth:	152.3mm / 6.00in
Weight:	2.47kg

Packing

Carton Size:	49 x 34.5 x 16.5 CM 19.3 x 13.6 x 6.5 in
Master Carton Quantities:	6pcs / Carton

Mechanical Specification



Output

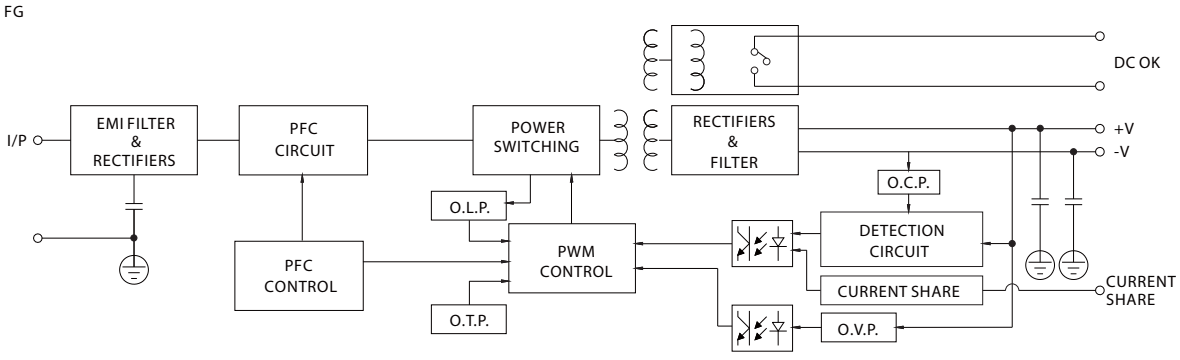
No.	Description
1,2,3	DC OUTPUT +V
4,5,6	DC OUTPUT -V

Input

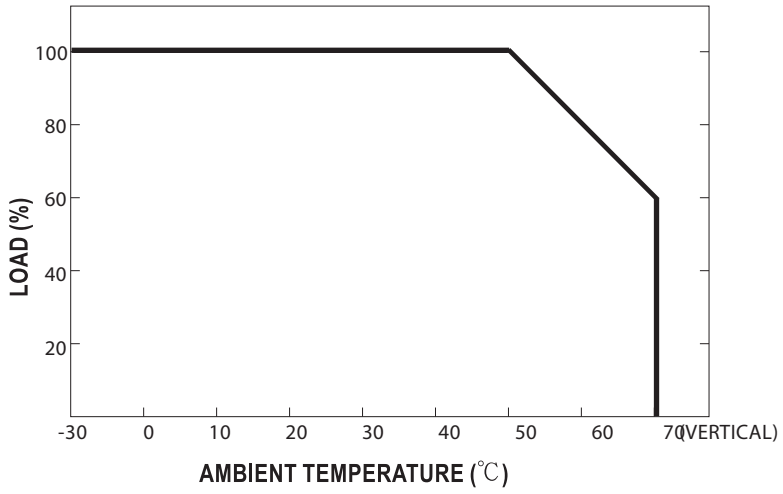
No.	Description
1	FG ⏚
2	AC/L3
3	AC/L2
4	AC/L1

No.	Description
1	P-(Current Share)
2	P+(Current Share)
3,4	DC OK Relay Contact

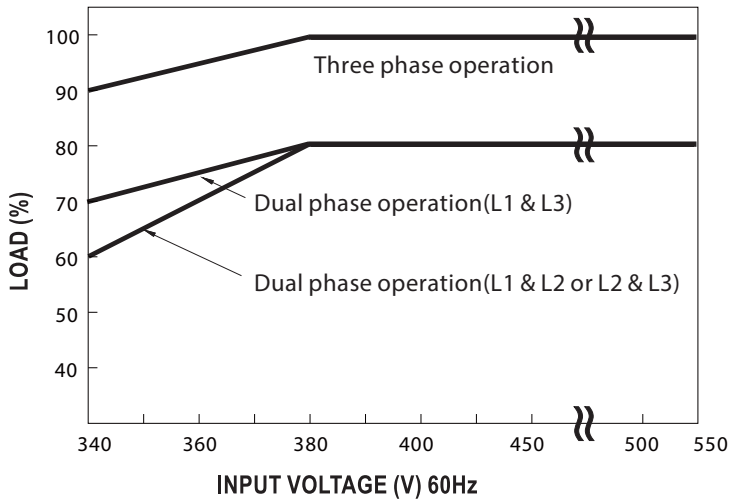
Block Diagram



Deduction Curve and Temperature



Minus Output and Input Voltage Curves



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.

Note

Current Sharing

1. Connection type of parallel operation is as follows (P+,P- parallel connection)
2. The output voltage difference between the parallel units should be less than 0.2V
3. The total output current must not exceed the value calculated of the following equation

   (Output current at parallel operation)=(The rated current per unit)* (Number of unit) x 0.9
4. The maximum quantity of parallel operation is four units, If need more quantity of parallel operation, please contact the manufacture.
5. In parallel connection, the minimum output load should be more than 3% of total output load

   (Min. load > 5% rated current per unit x number of unit).
6. The power supplies should be paralleled using short and large diameter wiring and then connected to the load.
7. In parallel connection, maybe only one unit(master) operate if total output LEDs & relays will not turn on.
8. Some minor noise may be heard at light load condition under parallel operation.

   This is a normal phenomenon and the performance of the PSU will not be influenced.