



Dimension: 215\*115\*30mm

# ■ Features:

- AC input range selected by switch(115/230)
- · Miniature size and 1U low profile,low weight
- Protections: Short circuit/Overload/Over voltage Over temperature
- · Forced air cooling by built-in DC fan
- · Built-in cooling fan ON-OFF control
- No load power consumption < 0.75W
- Operating altitude up to 5000 meters ( Note6 )
- LED indicator for power on
- 100% full load burn-in test
- · High efficiency,long life and high reliability
- · 2 years warranty

# CE B SELV

## Applications:

- · LED lighting
- Industrial automation machinery
- · Industrial control system
- · Mechanical and electrical equipment
- Electronic instruments, equipments or apparatus

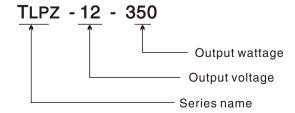
## Description:

TLPZ-350 series is a 350W single-output enclosed type power supply with 30mm of low profile design. Adopting the input of 115VAC or 230VAC(selectable by switch), the entire series provides an output voltage line of 5V,12V,15V,24V,36V and 48V.

In addition to the high efficiency up to 89%, with the built-in long life fan TLPZ-350 can work under -30°C $\sim$ 70°C with full load. Delivering an extremely low no load power consumption (less than 0.75W), it allows the end system to easily meet the worldwide energy requirement, TLPZ-350 has the complete protection functions and 3G anti-vibration capability; it is complied with the international safety regulations such as TUV EN 62368-1, UL 62368-1 and GB 4943, TUV EN 61347-1.

TLPZ-350 series serve as a high price-to-performance power supply solution for various industrial applications.

## Model Encoding





# TLPZ-350W Series Single Output Switching Power Supply

#### **SPECIFICATION**

|                         | Model                    | TLPZ-5-350   | TLPZ-12-350                          | TLPZ-15-350 | TLPZ-24-350 | TLPZ-36-350 | TLPZ-48-350 |  |  |
|-------------------------|--------------------------|--|--------------------------------------|-------------|-------------|-------------|-------------|--|--|
|                         | DC voltage               | 5V   | 12V                                  | 15V         | 24V         | 36V         | 48V         |  |  |
| Output                  | Rated current            | 50A  | 29A                                  | 23.2A       | 14.6A       | 9.7A        | 7.3A        |  |  |
|                         | Current range            | 0~50A  | 0~29A                                | 0~23.2A     | 0~14.6A     | 0~9.7A      | 0~7.3A      |  |  |
|                         | Rated power              | 250W   | 348W                                 | 348W        | 350.4W      | 349.2W      | 350.4W      |  |  |
|                         | Ripple&noise             | 150mVp-p   | 150mVp-p                             | 150mVp-p    | 150mVp-p    | 200mVp-p    | 200mVp-p    |  |  |
|                         | DC voltage ADJ. range    | ± 10%  | ± 10%                                | ± 10%       | ± 10%       | ± 10%       | ± 10%       |  |  |
|                         | Voltage tolerance Note.3 | ± 3%   | ± 2%                                 | ± 1%        | ± 1%        | ± 1%        | ± 1%        |  |  |
|                         | Line regulation Note.4   | ± 0.5%   | ± 0.5%                               | ± 0.5%      | ± 0.5%      | ± 0.5%      | ± 0.5%      |  |  |
|                         | Load regulation Note.5   | ± 2%   | ± 1%                                 | ± 0.5%      | ± 0.5%      | ± 0.5%      | ± 0.5%      |  |  |
|                         | Setup,rise,hold up time  | 800ms,50ms,16ms/230VAC(full load)  |                                      |             |             |             |             |  |  |
| Input                   | Voltage range            | 90~132VAC/180~264VAC(selected by switch) ,240~373VDC( Withstand 300VAC surge input for 5 second) |                                      |             |             |             |             |  |  |
|                         | Frequency range          | 47~63Hz  |                                      |             |             |             |             |  |  |
|                         | AC current               | 6.8A/115VAC 3.4/230VAC   |                                      |             |             |             |             |  |  |
|                         | Efficiency               | 81%  | 85%                                  | 86%         | 88%         | 88%         | 89%         |  |  |
|                         | Inrush current           | Cold start 55A/230VAC  |                                      |             |             |             |             |  |  |
|                         | leakage current          | <2mA/240VAC  |                                      |             |             |             |             |  |  |
| Protection              | Overload                 | Rated output power110% ~ 140%Start overload protection   |                                      |             |             |             |             |  |  |
|                         |                          | Protection type:hiccup mode,auto-recovery after fault condition is removed                       |                                      |             |             |             |             |  |  |
|                         | Overveltee               | Rated output voltage 115%~135% Start over voltage protection                                     |                                      |             |             |             |             |  |  |
|                         | Over voltage             | Protection type:cut off the output,auto-recovery after fault condition is removed                |                                      |             |             |             |             |  |  |
|                         | Over temperature         | 100°C±10°C(RTH3 detect beside magnetic core)   |                                      |             |             |             |             |  |  |
|                         |                          | Protection type:cut off the output,auto-recovery after the temperature become normal             |                                      |             |             |             |             |  |  |
| Function                | Fan ON-OFF control       | RTH3≥50°C Fan ON,≤40°C Fan OFF   |                                      |             |             |             |             |  |  |
| Environment             | Working temperature      | -30°C ~ +70°C(Please refer to"derating curve")   |                                      |             |             |             |             |  |  |
|                         | Working humidity         | 20%~90%RH Non-condensing   |                                      |             |             |             |             |  |  |
|                         | Storage temp& humidity   | -40°C ~ +85°C;10%~95%RH Non-condensing   |                                      |             |             |             |             |  |  |
|                         | Withstand vibration      | 10~500Hz,3G 10min./1Cycle, Period for 60min, Each axes   |                                      |             |             |             |             |  |  |
| Safety                  | Withstand voltage        | I/P-O/P: 1.5KVAC I/P-FG: 1.5KVAC O/P-FG: 0.5KVAC   |                                      |             |             |             |             |  |  |
|                         | Isolation resistance     | I/P-O/P,I/P-FG,O/P-FG: 100M Ohms/500VDC/25℃/70%RH  |                                      |             |             |             |             |  |  |
| Standards<br>compliance | Safety standards         | Compliance to UL 62368-1,TUV EN 62368-1,UL 61347-1,TUV EN 61347-1                                |                                      |             |             |             |             |  |  |
|                         | EMC emission             | Compliance to EN 55015(CISPR22)Class A, GB9254 Class A,EN 55014,EN 61000-3-2,3                   |                                      |             |             |             |             |  |  |
|                         | EMC immunity             | Compliance to EN 61000-4-2,3,4,5,6,8,11, EN 55024,EN 61000-6-1                                   |                                      |             |             |             |             |  |  |
| Others                  | Dimension                | 215*115*30 mm(L*W*H)   |                                      |             |             |             |             |  |  |
|                         | Weight                   | 0.76kg/24  | 0.76kg/24pcs/19.5kg/0.027m³/0.96CUFT |             |             |             |             |  |  |
|                         | MTBF                     | ≥295K hrs min. MIL-HDBK-217F(25°C)   |                                      |             |             |             |             |  |  |

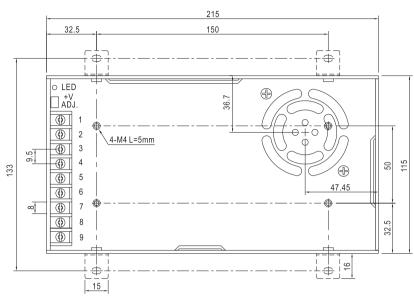
Note: 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25  $^{\circ}\!\!\mathrm{C}$  of ambient temperature.

- 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.Line regulation is measured from low line to high line at rated load.
- 5.Load regulation is measured from 0% to 100% rated load
- 6.The ambient temperature derating of 5°C/1000 m is needed for operating altitude greater than 2000m(6500ft)
- 7. The power supply is considered as a component which will be installed into a finalequipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests.



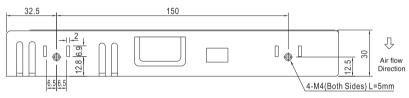
#### Mechanical specification

Unit:mm



#### Terminal Pin No.Assignment

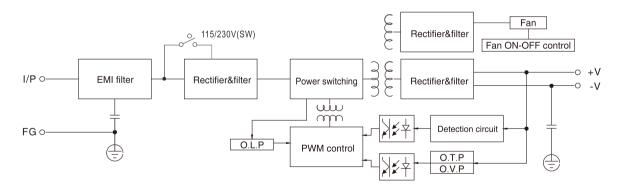
| Pin No. | Assignment   | Pin No. | Assignment |
|---------|--------------|---------|------------|
| 1~3     | DC OUTPUT +V | 7       | FG ±       |
| 4~6     | DC OUTPUT -V | 8       | AC/L       |
|         |              | 9       | AC/N       |



## Block diagram

PWM Frequency: 65KHz

Ta=25°C

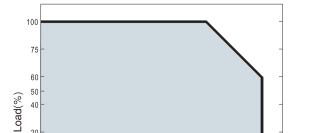


Static characteristic

### Derating curve

20

-20 -10 0



20 30 40 50 60

Ambient temperature(°C)

# 100 90 ■ 180 ~ 264VAC ■ 90 ~ 132VAC 80 70 60 Load(%) 50 40 (Horizontal) Input voltage(V)50Hz