

# **TC-750PD1**

## **Switching Power Supply**

( 750W PS2 ATX12V )

# **SPECIFICATION**

Revision: 1.0

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## 1.0 INPUT:

### 1.1 VOLTAGE

MINIMUM	NOMINAL	MAXIMUM	UNITS
90	100~240	264	Vrms

### 1.2 FREQUENCY

47Hz ~ 63Hz

### 1.3 CURRENT

115Vac / 10.0A max. 230Vac / 5A max.

### 1.4 INRUSH CURRENT

55A max. when AC input 115Vac at 25<sup>0</sup>C cold start.

110A max. when AC input 230Vac at 25<sup>0</sup>C cold start.

### 1.5 POWER EFFICIENCY

80% (min.) at full load(typical) and 115Vac input.

### 1.6 LEAKAGE CURRENT

3.5mA max.

### 1.7 POWER FACTOR

PF > 0.9

## 2.0 OUTPUT:

Voltage	+5V	+3.3V	+12V1	+12V2	+12V3	+12V4	-12V	+5Vsb
* Max load	28.0A	30.0A	18.0A	18.0A	18.0A	18.0A	0.8A	3.0A
Min load	2.0A	0.5A	1.0A	1.0A	1.0A	1.0A	0.0A	0.0A
Peak load	--	--	--	--	--	--	--	3.5A
* * Regulation	+5,-4%	+5,-3%	+5,-4%	+5,-4%	+5,-4%	+5,-4%	+9,-5%	+5,-3%
* * * Ripple&Noise	50mV	50mV	120mV	120mV	120mV	120mV	120mV	50mV

- \* The continuous total output power is 750W max.
  - The combined power of +5V and +3.3V is 180W max.
  - Peak currents may last up to 12 seconds with not more than one occurrence per minute.
  - Total combined +12V output load not exceed 60A
- \* \* \* Add 0.1uF and 10uF capacitors across output terminal during ripple & noise test.

**\*\* LOAD REGULATION TEST TABLE:**

	+5V	+3.3V	+12V1	+12V2	+12V3	+12V4	-12V	+5Vsb
LOAD1	2.0A	0.5A	1.0A	1.0A	1.0A	1.0A	0.0A	0.0A
LOAD2	6.0A	4.0A	1.0A	1.0A	1.0A	1.0A	0.0A	0.5A
LOAD3	16.0A	30.0A	2.5A	2.5A	3.0A	3.0A	0.3A	1.0A
LOAD4	28.0A	13.0A	8.5A	9.0A	10.0A	10.0A	0.3A	1.0A
LOAD5	7.0A	6.0A	13.0A	13.0A	14.0A	14.0A	0.5A	1.5A
LOAD6	28.0A	0.5A	11.0A	12.0A	13.0A	13.0A	0.5A	2.0A
LOAD7	4.0A	3.0A	14.0A	14.0A	13.0A	13.0A	0.8A	2.5A
LOAD8	2.0A	30.0A	11.5A	13.0A	13.0A	14.0A	0.8A	3.0A

**2.1 REMOTE ON/OFF**

TTL High/PS-OFF; TTL Low/PS-ON

$V_{IL}=0.8V_{max}$ ,  $I_{IL}=-1.6mA_{max}$

@ $V_{in}=0.4V$

$V_{IH}=2.0V_{min}$  @ $I_{in}=-200\mu A$ ,  $V_{IH}=5.25V_{max}$  @open ckt.

**2.2 HOLD-UP TIME**

16msec (minimum) at 80% of full load at 230Vac input.

**2.3 POWER GOOD DELAY**

100-500 msec.

**2.4 POWER FAIL DELAY**

>1 msec.

**2.5 TURN-ON DELAY TIME**

2000 msec max at Nominal Line Full Load.

**2.6 TRANSIENT OVERTHOOT**

+/- 10% max with 20% load change on all outputs are 50% of the rated. Load slew rated 0.5A/ $\mu S$  and capacitive load as below:

+5V	+3.3V	+12V1	+12V2	+12V3	+12V4	-12V	+5Vsb
1000uF	1000uF	2200uF	2200uF	2200uF	2200uF	NA	1uF

## 2.7 RISE TIME

20ms max at full load.

## 3.0 PROTECTION:

When OCP, OVP or short protection is triggered, the main outputs will be latched off. The main outputs can be reset by cycling the DC remote on/off or AC power. +5Vsb output is auto recovery when fault condition removed.

### 3.1 OVER CURRENT PROTECTION

- +5V output: 55A max.
- +3.3V output: 55A max.
- +12V1~12V4 output: 35A max.

### 3.2 OVER VOLTAGE PROTECTION

- +3.3V output 4.5 Vmax.
- +5.0V output 7.0 Vmax.
- +12.0V output 15.6 Vmax.

### 3.3 SHORT PROTECTION

All output to GND.

## 4.0 ENVIRONMENT:

- 4.1 OPERATING TEMP. 10 °C to +50 °C
- 4.2 STORAGE TEMP. -20 °C to +70 °C
- 4.3 OPERATING HUMIDITY 20% to 90%, non-condensing
- 4.4 STORAGE HUMIDITY 5% to 95%, non-condensing
- 4.5 OPERATING ALTITUDE 0 to 10,000 feet
- 4.6 STORAGE ALTITUDE 0 to 50,000 feet

## **5.0 HI-POT:( Input/Output isolation)**

### **5.1 PRIMARY TO SECONDARY**

3535Vdc for 3 seconds

### **5.2 INSULATION RESISTANCE**

Primary to earth ground 500Vdc, 50M ohms Min.

## **6.0 CE REQUIREMENTS**

### **6.1 CONDUCTED EMI**

1. MEET FCC : Class B
2. MEET CISPR 22 : Class B
3. MEET BSMI : Class B

### **6.2 SAFETY STANDARDS**

1. MEET CUL (UL 60950)
2. MEET TUV EN60950
3. MEET CB (IEC 950)
4. MEET CE
5. MEET CCC

### **6.3 HARMONIC**

MEET IEC1000-3-2, Class D

## **7.0 MTBF at 25C (demonstrated)**

100K hrs minimum