



# SPECIFICATION

FOR

SWITCHING POWER SUPPLY

M/N: MPD-8071-S



## Revision History

REV.	DATE	DESCRIPTION
	Mar. 28 <sup>th</sup> 2011	Updated safety approvals status.



## 1.0 INTRODUCTIONS

The MPD-8071-S is a 72Watts triple outputs switching power supply, specially designed for microprocessor-based applications. DC input from 10V to 30V.

## 2.0 INPUT SPECIFICATIONS

### 2.1 Input Voltage

This power supply can operate continuously from +10VDC to +30VDC, normal line is +24VDC.

### 2.2 Input current

The maximum input current is 13A at 10VDC.

### 2.3 Inrush current

The maximum inrush current will not exceed 25A at 12VDC input from a cold start, with exclusion of EMI capacitors.

## 3.0 OUTPUT SPECIFICATIONS

### 3.1 The load range

Output	Min. load	Rated load	Peak load	Voltage accuracy
+5V	0A	10A	14A	5.00V to 5.10V
+12V	0A	1.5 A	3A	11.20V to 13.0V
- 12V	0A	0.3 A		-10.8V to -13.0V

At factory, all outputs in 60% rated load conditions; the +5V output is set to between 5.00V and 5.10V, and the other outputs are checked to be within the specified voltage accuracy range. When input is 24V at ambient temperature 25°C, peak load can keep 10 sec. but only for one of the output. As for the other outputs, they will be at rated load.

### 3.2 Ripple & Noise

The peak-to-peak ripple and noise for +5V is less than 50mV, for the other are less than 100mV. Measuring is done by 15MHz band- width limited oscilloscope and terminated each output with a 0.47uF capacitor at rated loading, nominal line.

### 3.3 Line regulation

The line regulation for each output is less than +-2% while measuring at rated loading and +-10% of input +12V and +24V changing.

### 3.4 Load regulation

The load regulation for +5V is less than +/-3% for -12V is less than +8% / -3%, for +12V is less than + /- 5%, measuring is done by changing the measured output loading +/-40% from 60% rated load, and keep other outputs at 60% rated load and normal line.



## 4.0 General features

### 4.1 Efficiency

The efficiency is higher than 70% while measuring at DC 24V and rated load.

### 4.2 Protection

For some reason the power supply fails to control itself, the build-in over voltage protection circuit will shut down the outputs to prevent damage to external circuits. The trip point of crowbar circuit is around 5.7V to 7.0V. The power supply will go into hiccup mode against short circuit or over load conditions, and will auto-recovery while fault conditions moved. The O.C.P. of +5V is 20A max.

## 5.0 ENVIRONMENT SPECIFICATIONS

### 5.1 Operating temperature

0°C to 50°C

The continuously output is 70W with 42CFM forced air required.

The continuously output is 50W with no fan.

### 5.2 Storage temperature

-40°C to 85°C

### 5.3 Altitude

Will operate properly at any altitude between 0 to 10000ft.

### 5.4 Humidity

10% to 90% Non-condensing.

## 6.0 INTERNATIONAL STANDARDS

### 6.1 Safety standards

Designed to meet the following standards:

UL 1950

CAN/CSA C22.2 No. 950-95

EN 60950-1: 2006+A11

### 6.2 EMI standards

Designed to meet the following radiated limits:

FCC docket 20780 curve "B"

EN 55022 class "B"

### 6.3 EMS standards

Designed to meet the following standards:

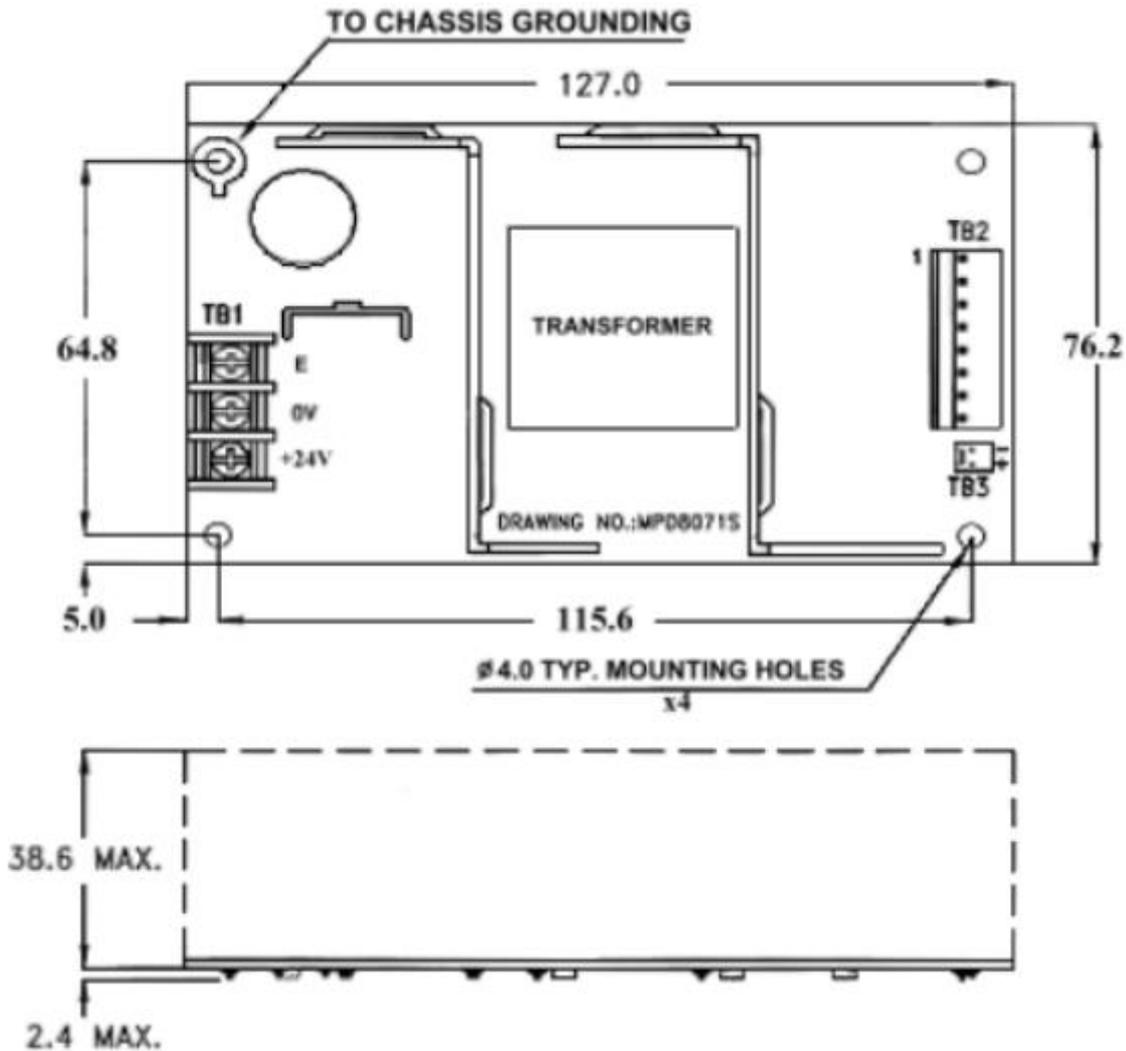
IEC-801-2 8KV air discharge

IEC-801-3 3V/M

IEC-801-4 2KV



## 7.0 MECHANICAL SPECIFICATION



### 7.1 Dimensions

Dimensions shown in mm as above; Tolerance specified is  $\pm 0.4$ mm.

### 7.2 Connectors

TB1—DC input : 3 positions terminal block

TB2—DC output : Molex 5273-08A or equivalent.

TB3—for FAN use only : Molex 5045-02A or equivalent.

### 7.3 DC output pin assignment

Pin	1.	+5V	5.	GND
	2.	+5V	6.	GND
	3.	+5V	7.	+12V
	4.	GND	8.	-12V