



# SPECIFICATION

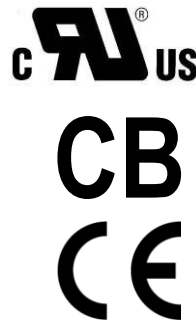
For

SWITCHING POWER SUPPLY

**M/N: MPI-P10H-A**

## Revision Index

REV.	May 30 <sup>th</sup> 2007	Adding index page and OVP description
REV.	Jun. 25 <sup>th</sup> 2007	Adding safety logo of UL, CB, and TUV as approved
REV.	Oct. 17 <sup>th</sup> 2007	Adding safety logo of CCC and BSMI as approved; Correcting the description from L channel chassis to U channel chassis.
REV.	Jan. 24 <sup>th</sup> 2008	Enlarge the OVP trigger point min. value from 6.2V to 5.8V at 5V output.
REV.	Oct. 31 <sup>st</sup> 2008	Revise switch drawing of the mechanical from I/O to dot.
REV.	Apr. 8 <sup>th</sup> 2009	Define the time of the peak output power.
REV.	Aug. 21 <sup>st</sup> 2009	Updating description of note 4 at section 1 and adding derating curve in section 6.
REV.	Sep. 28 <sup>th</sup> 2010	Updating the safety approval status.
REV.	Mar. 28 <sup>th</sup> 2011	Updating the safety approval status; revised the hi-pot withstand.
REV.	Jan. 3 <sup>rd</sup> 2013	Revised safety approvals status.



FEATURES

- 100W with 10.2 CFM forced air-cooling, 80W convection cooled
• Active PFC with ATX output
• PG/PF Signal
• +5V Stand by & Remote On/Off
• MTBF>130,000 hr. MIL-217F.

1. Description

MPI-P10H-A is a 100W open frame ATX output power supply with active PFC for industrial and embedded system application. The device utilizes a thermally efficient U channel chassis design.

Table with 8 columns: Output Voltage, Mini. Output Current, Rated Output Current, Max output Current (Note 1), Line Regulation, Load Regulation, Ripple & Noise p-p (Note 2), Initial Setting Accuracy (Note 3). Rows include +5V, +12V, -12V, +3.3V, and +5Vsb.

Total Output Power: Maximum 100W continuously and peak 120W (Note 4).

Note: 1) The maximum total combined output power on the +3.3V and +5V rails is 50W.

2) Measured by a 20MHz bandwidth limited oscilloscope and the each output is connected with a 10µF Electrolytic Capacitor and a 0.1µF Ceramic Capacitor.

3) The +5V output is set between 5.08V to 5.13V by variable resistor and all output at 60% rated load and the other outputs are checked to be within the accuracy range.

4) Maximum 100W at 25°C and 80W at 50°C convection cooled. Maximum 100W and peak 120W for max. 10 seconds at 50°C with 10.2 CFM forced air-cooling.

2. Input Specification

Table with 5 columns: Parameter, Conditions/Description, Min., Nom., Max., Units. Rows include Input Voltage, Input Frequency, Hold Up Time, Input Current, Inrush Current, and Input Protect.

3. Output Specification

Table with 5 columns: Parameter, Conditions/Description, Min., Nom., Max., Units. Rows include Efficiency, Minimum load, Ripple & Noise, Output Power, Line Regulation, Load Regulation, and Turn-on Delay.



### 4. Interface Signals and Internal Protection

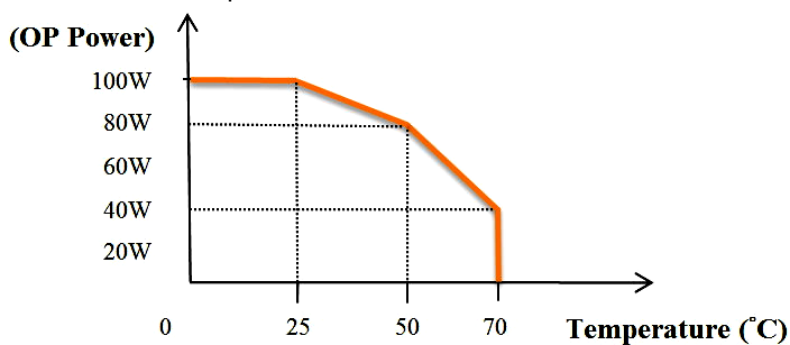
Parameter	Conditions/Description
Power On/Off	The power supply will be turned on when the power On/Off pin is connected to secondary GND.
Power Good Signal	When power is turned on, the power good signal will go high 100ms to 500ms after all output DC voltages are within regulation limits.
Power Fail Signal	The power fail signal will go low at least 1 mS before any of the output voltages fall below the regulation limits.
Over Load Protection	Fully protected against output overload and short circuit. Automatic recovery upon of overload condition.
Over Voltage 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 damaging external circuits. The trigger point is about 5.8V ~6.8V at +5V. If the OVP occur, PSU cannot be recovered.

### 5. Safety Approvals, EMI and EMS Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Safety Approvals	UL 60950-1, 2 <sup>nd</sup> Edition				UL approved
	CSA C22.2 No. 60950-1-07, 2 <sup>nd</sup> Edition				
	IEC 60950-1, 2 <sup>nd</sup> edition				CE (LVD) declaration
	EN 60950-1, 2 <sup>nd</sup> edition				
Hi-Pot	Input to output	3000			VAC
Radiation	EN 55022 / CISPR 22 & FCC Part 15	B			
Conduction	EN 55022 / CISPR 22 & FCC Part 15	B			Class
PFC	EN 61000-3-2 & EN 61000-3-3	D			
EMS	IEC 61000-4-2, 8KV air discharge and 6KV contact discharge	3			Level
	IEC 61000-4-3, 3V/M	2			
	IEC 61000-4-4, 2KV line & PE	3			
	IEC 61000-4-5, 2KV	3			
	IEC 61000-4-6, 10V	3			
	IEC 61000-4-8, 10A/M	3			
	IEC 61000-4-11				

### 6. Environment Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Operating Temperature	Derate linearly above 50°C by 2.5% per °C At 100% load: to a maximum temperature of 70°C At 50% load:	0		50 70	°C



Storage Temperature		-40		+70	°C
Relative Humidity	Non-condensing.	5		95	%RH
Altitude	Operating			10K	Feet
	Non-operating			40K	



### 7. Mechanical Specification

Parameter	Conditions/Description									
Dimension	As Dimension drawing, Tolerance +/- 0.4mm.									
Connector	AC input:		IEC 320/C14							
	CN2 --- DC output:		Molex 5273-12A or equivalent.							
	CN3 --- DC output:		Molex 5045-03A.							
	CN4 --- Fan output:		Molex 5045-02A.							
Pin Assignment	CN2	Pin	1.	3.3V	4.	GND	7.	+5V	10.	PG/PF
			2.	3.3V	5.	GND	8.	+5V	11.	+12V
			3.	GND	6.	GND	9.	+5V	12.	-12V
	CN3	Pin	1.	+5Vsb	2.	GND	3.	PS on/off		
CN4	Pin	1.	+12V	2.	GND					

### ◆ Dimension

Unit: mm; tolerance +/- 0.4mm

