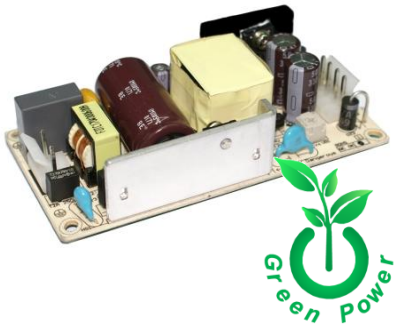
SPECIFICATION

For

SWITCHING POWER SUPPLY

M/N: MPE-T065

REV.	May 12th 2014	Established
REV.	Sep5th 2014	a) Add 7CFM at 70°C environment temperature b) Add mechanical drawing and packing drawing c) Remove TBD at derating curves d) Start up from -10 to -20 degree C
REV	Apr. 8th 2015	Added UL and CE logo



FEATURES

- 60W convection-cooled @ 50°C ambient
- Ultra-power with low profile 25mm
- Compact size 2 x 4 inches
- -20°C can start up
- High efficiency of up to 91%(MPE-T065 and MPE-T066)
- No-load power consumption < 0.3W
- Class II, also Class I with optional functional ground connected
- Design to meet ITE standard IEC, EN, UL 60950-1 2nd Edition
- Meets EMI CISPR 22 / FCC Part 15 class B
- Optional enclosure is available

1. Description

Model No.	Output Voltage	Mini. Output Current	Rated Output Current	Line Regulation (Note 1)	Load Regulation (Note 1)	Ripple & Noise p-p (Note 1)	Initial Setting Accuracy (Note 2)
MPE-T065	**+24V**	0 A	2.5 A	±1%	±1%	±1%	±1%

Total Output Power: Max. 60W with convection cooled at 50°C environment temperature. Max. 60W with 7 CFM at 70°C environment temperature (Note 3).

Note: 1) Please refer to paragraph 3 for detail notes & conditions.
2) Initial setting accuracy is at Input 115VAC and output at 60% rated load.
3) Air flow from transformer to the body of PSU with distance 20 mm maximum.

2. Input Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Input Voltage	Continuous input range.	85	115 / 230	264	VAC
		130		370	VDC
Input Frequency	At AC input.	47	50 / 60	63	Hz
Input Current	Nominal AC Input Voltage (115/230VAC), rated load.			1.5 / 0.8	A
Inrush Current	Nominal AC Input Voltage (115/230VAC), one cycle at 25°C cold start.			30 / 60	A
Input Protect	Non-user serviceable internally located AC input line fuse (T3.15A / 250V).				
No-load Power Consumption	Nominal AC Input Voltage (240VAC)			0.3	W
Earth Leakage Current	At input 264VAC, 63Hz, rated load			0.25	mA

3. Output Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Output Voltage			See Chart of Description		
Output Power	Nominal AC Input Voltage (115/230VAC).			60	W
Initial Setting Accuracy			See Chart of Description		
Turn-on Delay	Time required for initial output voltage stabilization.		1	3.5	Sec
Hold Up Time	Nominal AC Input Voltage (115/230VAC), rated load.	16			ms
Efficiency	Nominal AC Input Voltage (115/230VAC), rated load. (Note 1)	88 / 90		91	%
Minimum load			See Chart of Description		
Ripple & Noise	Rated load, measured by a 20MHz bandwidth limited oscilloscope and the each output is connected with a 10μF Electrolytic Capacitor and a 0.1μF Ceramic Capacitor.		See Chart of Description		
Line Regulation	Less than ±1% at rated load with ±10% changing in input voltage 115VAC.		See Chart of Description		
Load Regulation	Measured from 60% to 100% rated load and from 60% to 20% rated load (60% ±40% rated load).		See Chart of Description		
Over / Under Shoot	Nominal AC Input Voltage (230VAC), rated load.			10	%

Note: 1) Measured after warm-up above 1 hr.

4. Interface Signals and Internal Protection

Parameter	Conditions/Description
Short Circuit 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 auto recovery the outputs to prevent damaging external circuits, the trigger point is around 110%~140% of output voltage.

5. Model no. coding

MPE–T06 X – Y

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X =	Output (V)
3	+12
5	+24
6	+48

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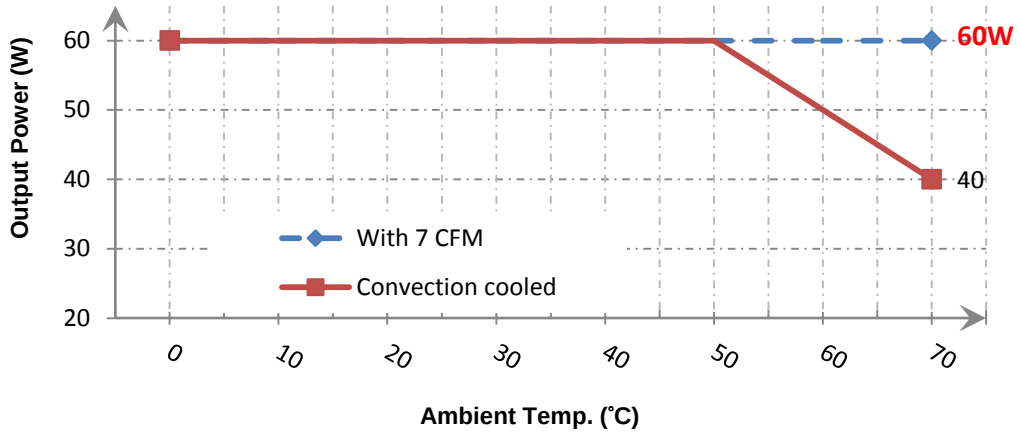
Y=	Optional Enclosure
blank	Board Type
C	With an Optional Enclosure
Please see paragraph 8 for mechanical outline.	

6. Environment Specification

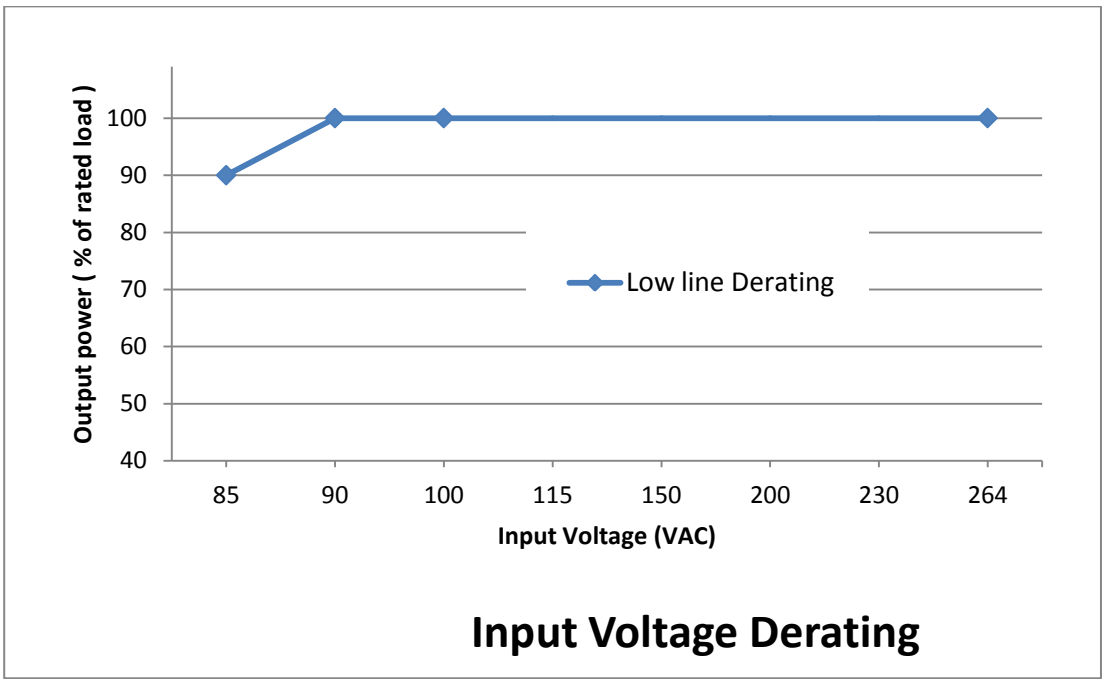
Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Operating Temperature	Please refer to the performance curves as following.	0		+70	˚C
Start-up Temperature	Without specification stabled (Note 1).	-20			˚C
Storage Temperature		-40		+85	˚C
Relative Humidity	Non-condensing.	5		95	%RH
Altitude	Operating Non-operating			3K 4K	Meter

Note: 1) Specification stabilized within 20 minutes.

Performance curves



Performance Curves of MPE-T065



7. Safety Approvals, EMI and EMS Specification

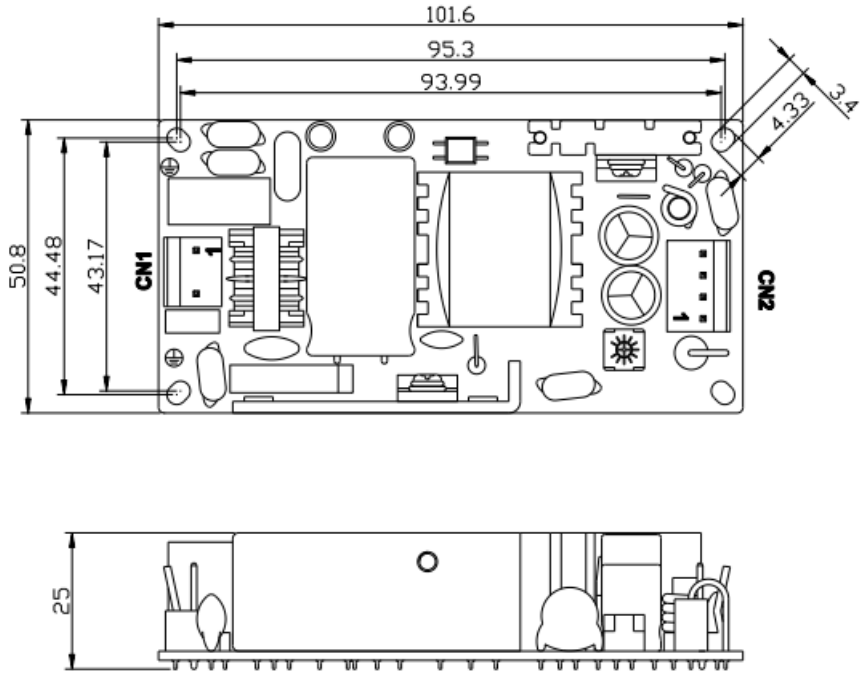
Parameter	Conditions/Description		Min.	Nom.	Max.	Units
Approvals	CB: IEC 60950-1,2nd edition UL: UL 60950-1, 2nd Edition cUL: CSA C22.2 No. 60950-1-07, 2nd Edition			Approved		
Dielectric Withstand	Input to Output		3000			VAC
	Input to FG		1500			
EMI (Note 1., 3)	EN 55022 / CISPR 22 & FCC Part 15		B			Class
	EN 61000-3-2		A			
	EN 61000-3-3					
	EN 61204-3		B			
EMS (Note 1., 3)	IEC 61000-4-2	±8KV air discharge, ±6KV contact discharge	A			Criteria
	IEC 61000-4-3	10V/m	A			
	IEC 61000-4-4	±2KV Line & PE	A			
	IEC 61000-4-5	L-N:±1KV, L/N-PE:±2KV	A			
	IEC 61000-4-6	10Vrms	A			
	IEC 61000-4-8	10A/m	A			
	IEC 61000-4-11	Voltage dips >95%, 0.5 cycle	A			
		Voltage dips 30%, 25 cycles	A			
		Voltage dips 60%, 5 cycles	A / B (Note. 2)			
		Voltage interruptions >95%, 250 cycles	C			

Note: 1) As a build-in type power supply, the power supply needs to be installed in a suitable enclosure to pass the EMI/EMC tests. The final assembly has to comply with the valid EMI/EMC and safety.
2) The test result of input 240Vac / 100Vac is criteria A / B.
3) The EMC test conditions are at AC input voltage. It is not been verified at DC input voltage.

8. Mechanical Specification

Parameter	Conditions/Description				
Dimension	101.6 (L) x 50.8 (W) x 25 (H) mm, Tolerance +/- 0.5mm.				
Connector & Pin Assignment	Location	Pin	Assignment	Proposed Housing	Proposed Terminals
	CN1 (Input)	3	AC in (L)	MOLEX: 09-05-1031 (5195-05) or 09-52-4034 (5239-05);	MOLEX: 5194 or 5225 2478, 2578,5176 or 5168;
		2	N / A		
		1	AC in (N)		
	CN2 (Output)	4	+ V	MOLEX: 09-05-1061 (5195-06) or 09-52-4064 (5239-06);	MOLEX: 5194 or 5225 2478, 2578,5176 or 5168;
		3	+ V		
		2	0 V		
		1	0 V		

Mechanical drawing



9. Packing Info.