MEGMEET

100W Enclosed Power Supply



*The picture is for reference only

Key Features

- Wide input range：85~264Vac/120~370Vdc
- Operating Temp. range：-30~70℃(-40℃ can start)
- Complete protection functions: OVP,OCP,SCP
- Compliance to IEC/BS EN/EN 62368-1(PD3)
- Operating altitude up to 5000m
- Over voltage category Ⅲ
- With conformal coating and terminal cover
- LED indicator for power on

Product Overview

MPT100 series is an industrial control enclosed power supply. With a 30mm height design, with high efficiency, high reliability, and high power density advantages. The product has outstanding performance, reliable EMC performance. It is complied with the international safety regulations such as IEC/EN/UL 62368-1. Standard version with conformal coating and terminal covers, suitable for a variety of complex conditions, is widely used in security, industrial control, power, renewable energy, and other industries.

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Model Information

Model	Output Power	Input voltage range	Output voltage	Output adjustable range	Efficiency
MPT100-12V	102W	85~264Vac	12V	10.2~13.8V	Typ. 86.5%
MPT100-15V	104W	85~264Vac	15V	13.5~18V	Typ. 86.5%
MPT100-24V	108W	85~264Vac	24V	21.6~28.8V	Typ. 89.5%
MPT100-48V	110W	85~264Vac	48V	43.2~52.8V	Typ. 90.5%

Input Characteristic

Input Voltage Range*	85~264Vac/120~370Vdc
Input Frequency Range	47-63 Hz
Input Current	MAX. 1.8A @115Vac, MAX. 1.0A @230Vac
Inrush Current(Typ.)	45A @ 230Vac, Cold Start
Note: The positive pole of DC needs to be connected to "L", and the negative pole of DC needs to be connected to "N" when DC input.	

Output Characteristic

Model Number	MPT100-12V	MPT100-15V	MPT100-24V	MPT100-48V
Rated Voltage	12V	15V	24V	48V
Voltage ADJ. range	10.2~13.8V	13.5~18V	21.6~28.8V	43.2~52.8V
Rated Current	8.5A	7A	4.5A	2.3A
Voltage Tolerance	±1.0%	±1.0%	±1.0%	±1.0%
Line Regulation	±0.5%	±0.5%	±0.5%	±0.5%
Load Regulation	±0.5%	±0.5%	±0.5%	±0.5%
Ripple& Noise (20MHz)	≤100mVp-p	≤120mVp-p	≤150mVp-p	≤200mVp-p
Start-up Time	≤1s@230Vac			
Rise Time	30ms Typ.			
Hold-up Time	≥55ms@230Vac			
Note：This model is under development and not yet available for sale.				

Protection Function

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Over Current	110%-180% of rated output power, Hiccup mode			
Short Circuit	Hiccup mode, Auto-Recovery when the fault is removed			
Over Voltage	Latch mode, restart to recovery when the fault is removed			
	≤16.2V	≤35.0V	≤50.0V	≤60.0V

Environment

Operating Temperature	-30℃ to +70℃(Refer to "Derating Curve")
Working Humidity	20% to 90% RH (Non-Condensing)
Storage Temp. & humidity	-40℃ to +85℃，10% to 95% RH (Non-Condensing)
Shock Test	30G, 3 directions, each direction duration of 11 ms
Vibration	10 ~ 500Hz, 5G; 10 min per cycle, 60min for each axis (X, Y, Z)
Operating Altitude	5,000m
Safety Class	CLASS I
Temp. Coefficient	±0.03 Typ.

Safety Regulation

Safety Standards	Design to meet IEC/EN/UL62368-1、IEC/EN61558-1、IEC/EN 60335-1、GB4943.1 ect.	
MTBF	MIL-HDBK-217F@25℃ > 300,000 hrs	
Insulation Resistance	Input to Output	≥100MΩ (500VDC /70% RH/Non-Condensing)
	Input to Ground	≥100MΩ (500VDC /70% RH/Non-Condensing)
	Output to Ground	≥100MΩ (500VDC /70% RH/Non-Condensing)
Withstand Test Voltage	Input to Output	4.0KVac
	Input to Ground	2.0KVac
	Output to Ground	1.25KVac

EMC

CE	EN55032 150K-30MHZ	Class B

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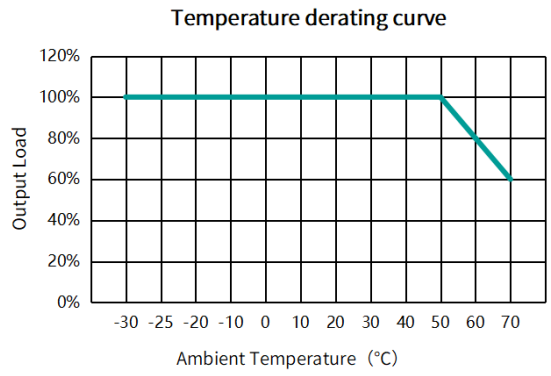
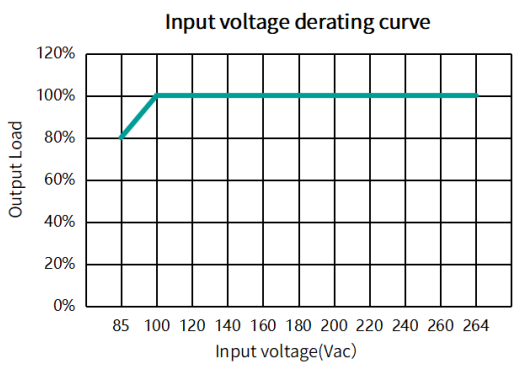
RE	EN55032 30M-1GHZ	Class B
Harmonic	IEC/EN61000-3-2 Class A	
ESD	IEC/EN61000-4-2 Contact 6KV/Air 8KV	Criterion A
RS	IEC/EN61000-4-3 10V/m	Criterion A
EFT	IEC/EN61000-4-4 ±2KV	Criterion A
Surge	IEC/EN61000-4-5 Com±4KV/Dif±2KV	Criterion A
CS	IEC/EN61000-4-6 10 V	Criterion A
PFMF	IEC/EN61000-4-8 30 A/m	Criterion A
DIP	IEC/EN61000-4-11	

Mechanical

Dimensions (L*W*H)	99*82*30mm
Cooling Method	Convection

Derating Curve



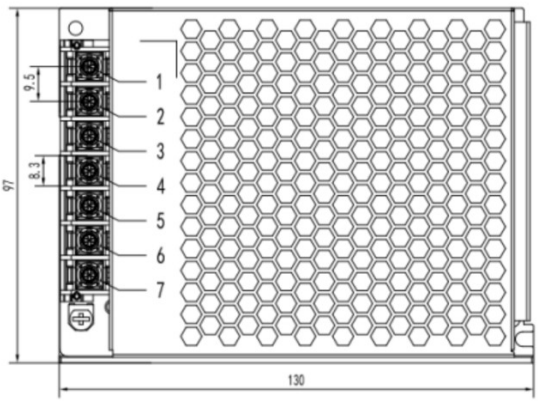


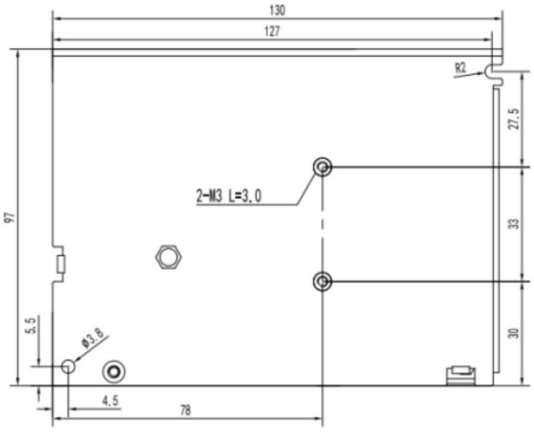
Note:

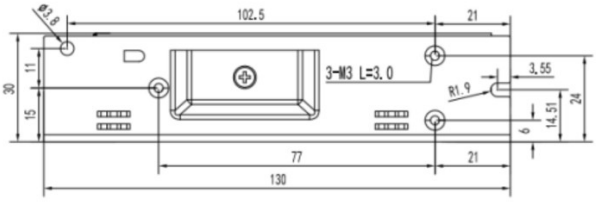
1. When the product operates at an input voltage of 85-100VAC, temperature derating should be performed on input voltage derating and temperature derating curve show above;

2. This product is suitable for use in natural air cooling environment, when the product is used in a closed environment, please consult our FAE.

Dimensions







Terminal Pin No. Assignment	
Pin No.	Assignment
1	AC(L)
2	AC(N)
3	Ground ⏚
4	-V
5	+V

Note:

Unit：mm

General tolerances:±1.00

Statement

1. Unless otherwise specified, the above parameters are tested under the conditions of ambient temperature of 25℃, humidity of 50%, 100% load, and input voltage of 230Vac;

2.When working at an altitude of over 2000 meters, please derate 5% per KM;

3. Ripple&Noise measurement method: Use a twisted pair cable with 0.1uf and 47uf capacitors connected in parallel at the terminal, and measure at a bandwidth of 20MHz;

4. The power supply should be considered as a part of the system components, and electromagnetic compatibility needs to be checked in conjunction with the terminal equipment;

5. The power supply must be mounted by metal screws onto a grounded metal surface;

6. All indicators in this guidebook are tested according to our company's standards;

7. The right of final interpretation of the documents and the product belongs to Shenzhen Megmeet Electric Co.,

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