

35W Enclosed Power Supply



GB 4943.1



UL62368-1



IEC62368-1



RoHS

*The picture is for reference only

Key Features

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

Product Overview

MPT35 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.

Model Information					
Model	Output Power	Input voltage range	Output voltage	Output adjustable range	Efficiency
MPT35-5V	35W	85~264Vac	5V	4.5~5.5V	Typ. 82.0%
MPT35-12V	36W	85~264Vac	12V	10.2~13.8V	Typ. 86.0%
MPT35-15V	36W	85~264Vac	15V	13.5~18V	Typ. 86.0%
MPT35-24V	36W	85~264Vac	24V	21.6~28.8V	Typ. 88.0%
MPT35-48V	38.4W	85~264Vac	48V	43.2~52.8V	Typ. 89.0%

Input Characteristic	
Input Voltage Range*	85~264Vac/120~370Vdc
Input Frequency	47-63 Hz
Input Current	MAX. 0.8A @115Vac, MAX. 0.6A @230Vac
Inrush Current(Typ.)	50A @ 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	

Output Characteristic					
Model Number	MPT35-5V	MPT35-12V	MPT35-15V*	MPT35-24V	MPT35-48V
Rated Voltage	5V	12V	15V	24V	48V
Voltage ADJ. Range	4.5~5.5V	10.2~13.8V	12.5~18V	21.6~28.8V	43.2~52.8V
Rated Current	7.0A	3.0A	2.4A	1.5A	0.8A
Voltage Tolerance	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%
Line Regulation	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
Load Regulation	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%
Ripple& Noise (20MHz)	≤80mVp-p	≤120mVp-p	≤120mVp-p	≤150mVp-p	≤200mVp-p
Start-up Time	≤1s@230Vac				
Rise Time	30ms Typ.				
Hold-up Time	≥30ms@230Vac				
Note : This model is under development and not vet available for sale.					

Protection Function

Over Current	110%-200% 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				
	≤6.9V	≤16.2V	≤21.8V	≤33.6V	≤64.8V

Environment

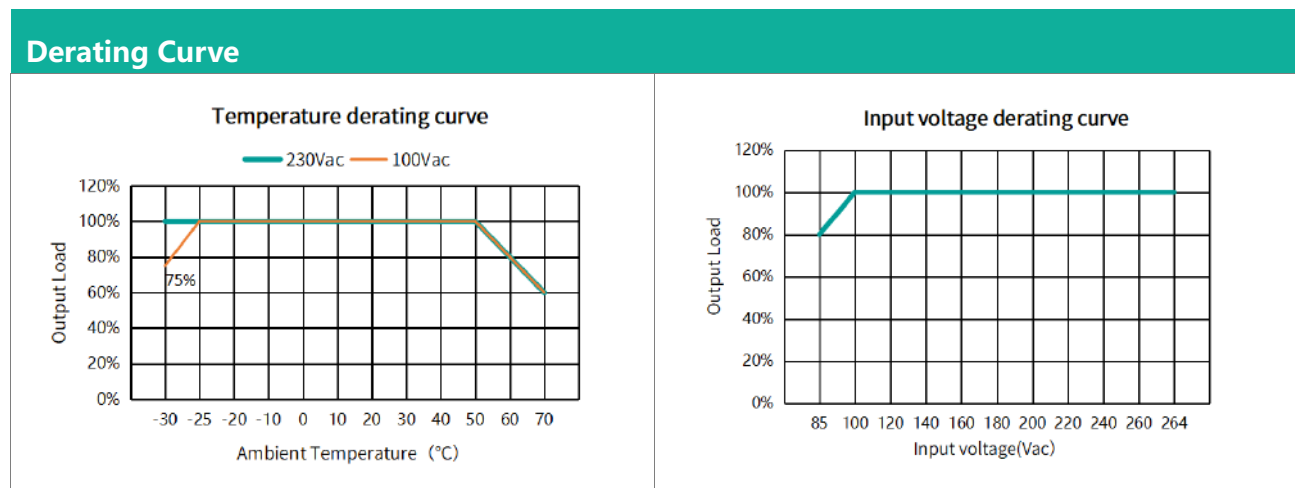
Operating Temperature	-30°C to +70°C(Refer to "Derating Curve")
Working Humidity	20% to 90% RH (Non-Condensing)
Storage Temp. & humidity	-40°C to +85°C , 10% to 95% RH (Non-Condensing)
Shock Test	30G, 3 directions, each direction duration of 11 ms
Vibration	10 ~ 500Hz, 5G; 10 min per cycle, 60min for 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	
MTBF	MIL-HDBK-217F@25°C > 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
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



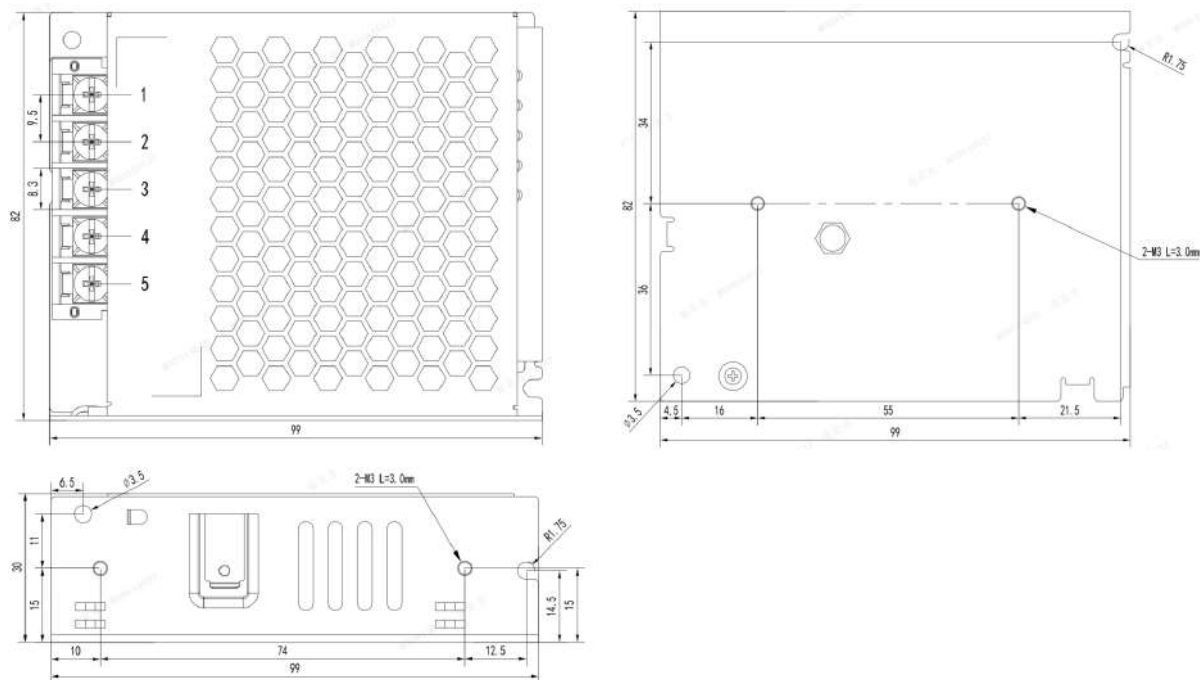
Note:

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.

Shenzhen Megmeet Electrical Co., Ltd.

Address: 34th floor, Joint Headquarters Building, Ronggao New District, No. 63 Xuefu Road, Nanshan District, Shenzhen
Tel: (0755) - 86600666 Web: www.megmeet.com

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

Connector tightening torque: M3 screw 0.4N·m, M4 screw 0.9N·m

Statement

1. Unless otherwise specified, the above parameters are tested under the conditions of ambient temperature of 25°C, 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 0.1μf and 47μf 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;

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