

PCB Mount Power Supply

AC To DC

multicompPRO

**RoHS
Compliant**

Description

This series is a 60W Smaller (87 × 52 × 30mm) AC-DC module power supply adopting the full range : 90-264V AC input

The series has extremely low no-load power consumption below 0.1W.High efficiency up to 90.5% to reduce power loss

The series cost-effective, high reliability,operates from-30°C ~ 70°C. A variety of appearance sizes are available for easy installation and use.

These converters offer excellent EMC performance and meet internation standards, ready to be soldered onto the PCB boards of Industrial design,household appliances, communication equipment, testing instruments and other electronic instruments



Features

- Universal Input: 90~264V AC
- Low no-load power consumption
- Protection:Short Circuit/Over Current/Over Voltage
- Compact Size Design
- Low Ripple & Noise, high efficiency

Model Information

Part Number	DC Voltage	Rated Current	Rated Power	Max.Capacitive Load
MP60-12005000	12V	5A	60W	8000uF
MP60-15004000	15V	4A		5000uF
MP60-24002500	24V	2.5A		4200uF

Input

Voltage Range	90-264V AC
Frequency Range	47-63Hz
No Load Power Consumption	0.15W MAX
Average Efficiency(Typ.)	87.5% - MP60-12005000 89% - MP60-15004000 89.5% - MP60-24002500
AC Current(Typ.)	1.8A/115V AC , 1A/230V AC
Inrush Current (Typ.)	Cold Start 30A/115V AC, Cold Start 65A/230V AC
Leakage Current	<0.25mA/264V AC, 50Hz

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Output

Ripple & Noise	120mVp-p - MP60-12005000 120mVp-p - MP60-15004000 150mVp-p - MP60-24002500
Voltage Tolerance	±2.5%
Line Regulation	±0.5%
Load Regulation	±0.1% MP60-12005000 ±0.5% MP60-15004000 ±0.5% MP60-24002500
Setup, Rise Time	200ms, 35ms/230V AC at full load, 300ms, 35ms/115V AC at full load
Hold Up Time (Typ.)	50ms/230V AC at full load, 5ms/115V AC at full load

Protection

Over Current	115%-160% Rated Output current Protection type: Hiccup mode, recovers automatically after current goes down
Short Circuit	Protection type: Hiccup mode, recovers automatically after fault condition is removed
Over Voltage	12.6 ~ 16.5V - MP60-12005000 15.75 ~ 24V - MP60-15004000 25.2 ~ 34V - MP60-24002500 Protection type : Shut off o/p clamping by zener diode

Environment

Working Temp.	-30°C to +70°C (Refer to "Derating Curve")
Working Humidity	20 ~ 90% RH Non-Condensing
Storage Temp, Humidity	-40°C~+85°C, 10 ~ 95% RH non-condensing
Temp. Coefficient	+0.03%/°C (0 ~ 50°C)
Vibration	PCB mounting: 10~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes
Soldering Temperature	Wave soldering: 265°C, 5s (max.); Manual soldering: 390°C, 3s(max.)
Over Voltage Category	III, According to EN62368-1 altitude up to 2000 meters
Safety Protection	CLASS II
Altitude Application	2000m
MTBF	>800K hrs min. MIL-HDBK-217F (25°C)

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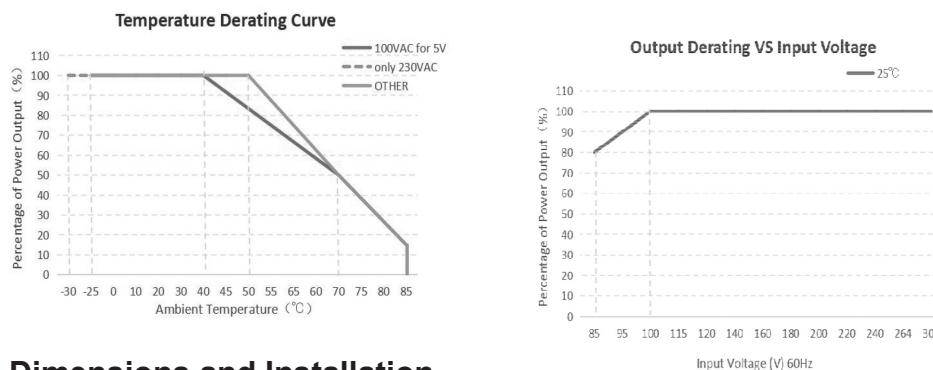
Note

1. All parameters NOT specially mentioned are measured at 230V AC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μF & 47μF parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. The ambient temperature derating of 3.5°C /1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m (6500ft).
5. The power supply is considered as an independent unit ,but the final equipment still need to re-confirm that the whole system complies with the EMC directives.

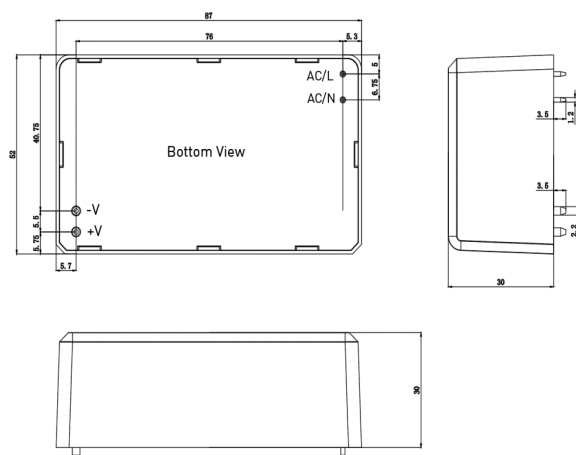
Physical Property

Length × Width × Height	87 × 52 × 30mm × 3.43in × 2.05in × 1.18; PCB Mounting Style
Weight	195g (PCB Mounting Style)
Cooling Method	Natural Air Cooling
Texture	Black flame retardant and heat resistant plastic

Curve



Dimensions and Installation



annotation:
unit of size:mm
Pin diameter tolerances:+0.1
General tolerances:+0.5

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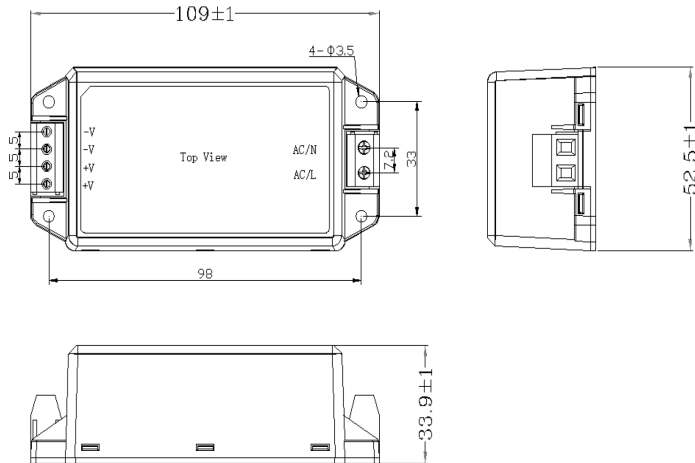
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External dimension



annotation:

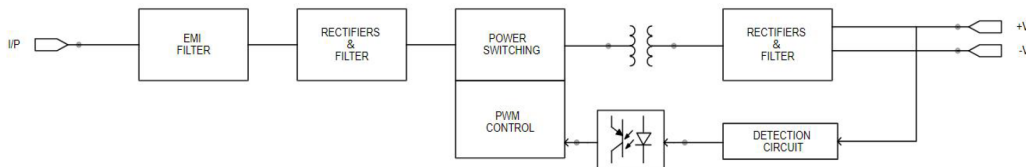
unit of size:mm

Connection Wire diameter :24-12AWG

Screw clamp unit: M2.5 Max 0.4 N*m

Unmarked tolerance:±1

Functional Diagram



Part Number Table

Description	Part Number
PCB Mount Power Supply, 12V, 5A	MP60-12005000
PCB Mount Power Supply, 15V, 4A	MP60-15004000
PCB Mount Power Supply, 24V, 2.5A	MP60-24002500

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