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› [MEAN WELL PLP-60-24 24V 2.5A 60W Single Output LED Switching Power Supply User Manual](#)

## MEAN WELL PLP-60-24

# MEAN WELL PLP-60-24 Series

24V 2.5A 60W SINGLE OUTPUT LED SWITCHING POWER SUPPLY USER MANUAL



### 1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the MEAN WELL PLP-60-24 24V 2.5A 60W Single Output LED Switching Power Supply. This power supply is designed for various LED lighting applications, offering reliable and efficient power conversion.

### 2. Safety Instructions

**WARNING: Improper installation or use can lead to electric shock, fire, or other hazards. Please read all instructions carefully before installation and operation.**

- Ensure all power is disconnected before installation or maintenance.
- This unit should be installed by a qualified electrician in accordance with all local and national electrical codes.
- Do not operate the power supply in environments exceeding its specified temperature and humidity ratings.
- Ensure proper ventilation around the unit to prevent overheating.
- Do not open the power supply casing; there are no user-serviceable parts inside.
- Verify input voltage and output load are within the specified ranges.

### 3. Product Overview and Features

The MEAN WELL PLP-60-24 is a high-efficiency switching power supply specifically designed for LED applications. It features a constant current mode output, ensuring stable performance for LED loads. Its compact design makes it suitable for built-in LED lighting systems.

#### Key Features:

- Constant current mode operation.
- Universal AC input / Full range (90-264VAC).

- Class 2 power unit / Pass LPS (Limited Power Source).
- Suitable for built-in LED lighting systems.
- Protections: Short circuit, Over current, Over voltage.



Figure 1: Top-down view of the MEAN WELL PLP-60-24 LED Switching Power Supply, showing its compact form factor and internal components.

## 4. Technical Specifications

Parameter	Value
Model Number	PLP-60-24
Brand	MEAN WELL
Output Voltage	24V DC
Output Current	2.5A
Output Power	60W
Input Voltage	Universal AC input / Full range
Current Rating	2.5 Amps
Protection Features	Short circuit, Over current, Over voltage

<b>Parameter</b>	<b>Value</b>
Compliance	Class 2 power unit / Pass LPS

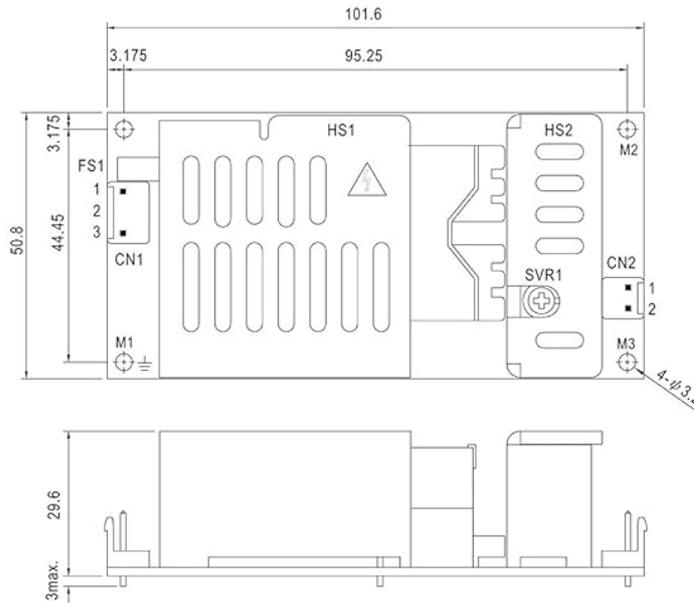


60W Single Output LED Power Supply

**PLP-60 series**

**Mechanical Specification**

Unit:mm



- 1.HS1,HS2 cannot be shorted.
- 2.HS1 must have safety isolation distance with system case.
- 3.M1 is safety ground. For better EMC performance,Please secure an electrical connection between M1,M2,M3,and chassis grounding.

AC Input Connector (CN1) : JST B3P-VH or equivalent

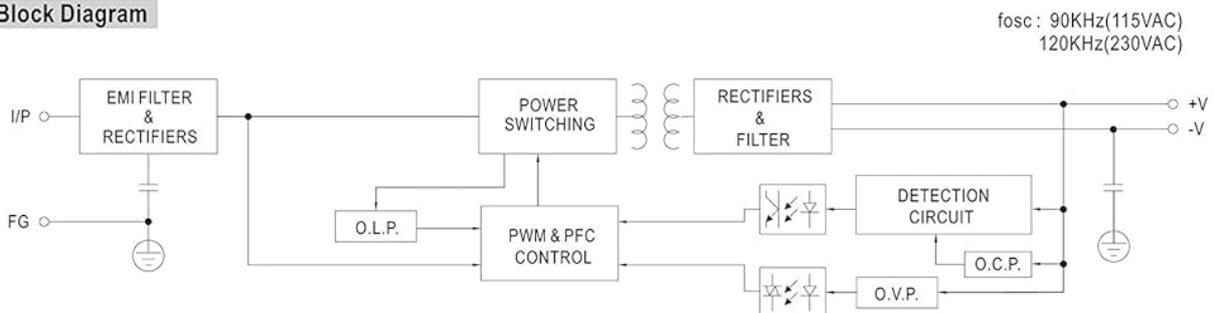
Pin No.	Assignment	Mating Housing	Terminal
1	AC/L	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2	No Pin		
3	AC/N		

DC Output Connector (CN2) : JST B2P-VH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	+V	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2	-V		

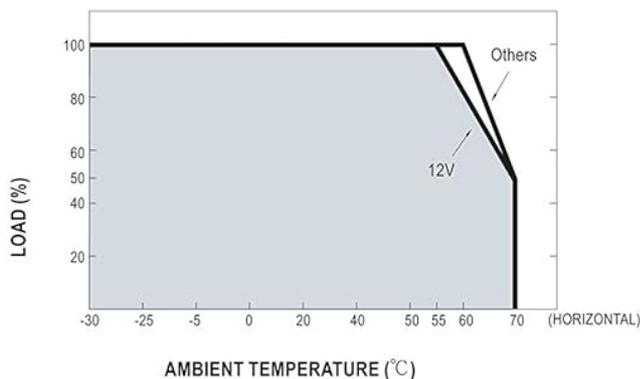
⊕ : Grounding Required

**Block Diagram**



fosc : 90KHz(115VAC)  
120KHz(230VAC)

**Derating Curve**



**Static Characteristics**

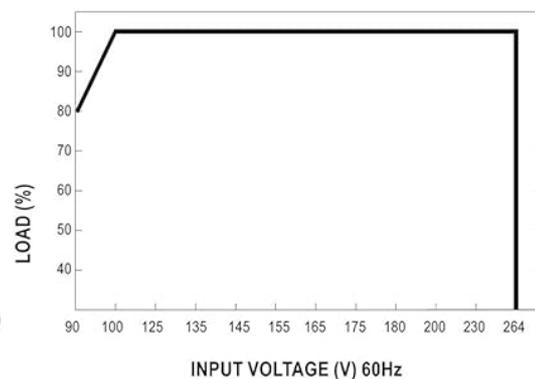


Figure 2: Mechanical specifications, AC/DC input/output connector pin assignments, internal block diagram, derating curve, and static characteristics for the PLP-60 series.

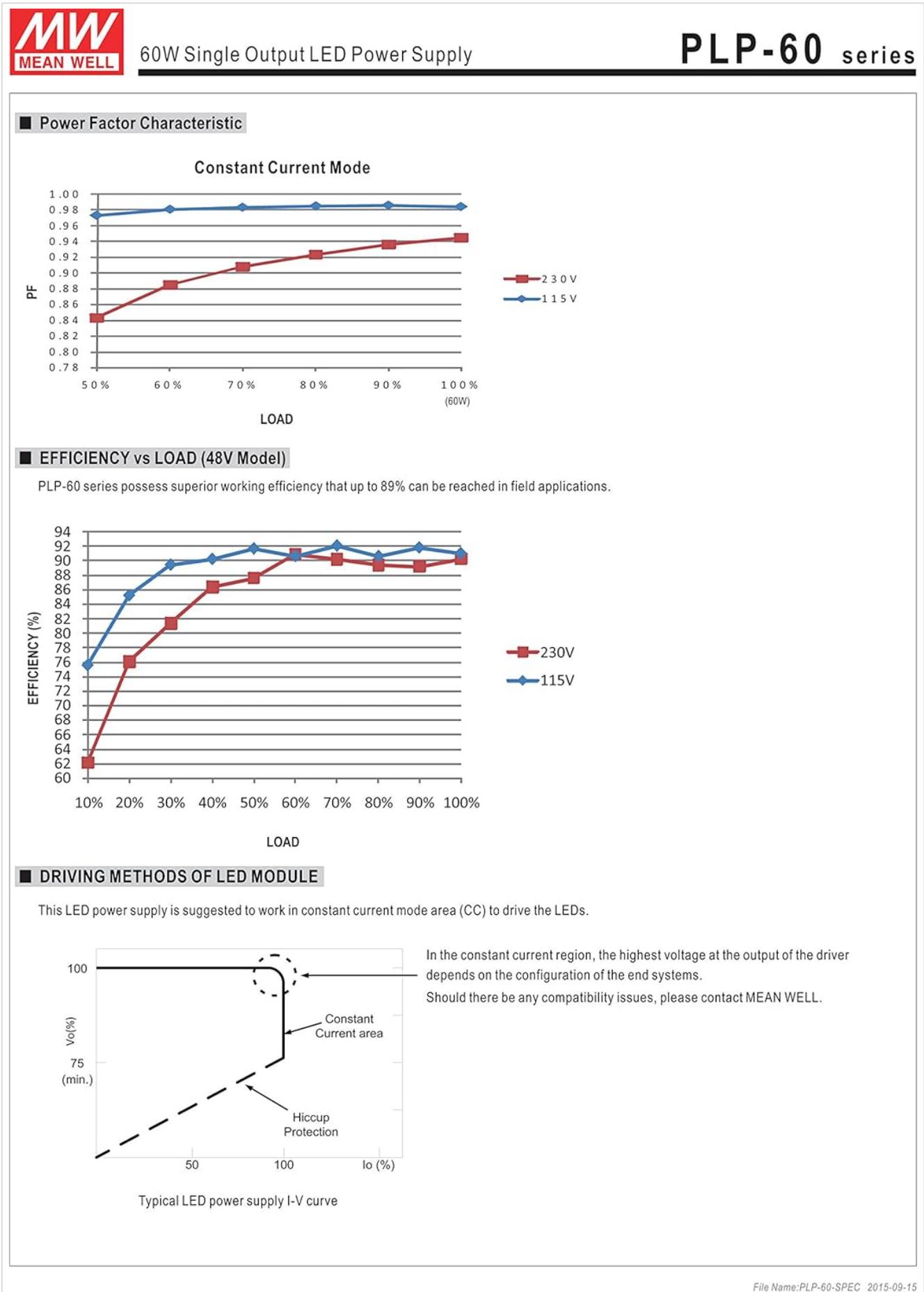


Figure 3: Power factor characteristics, efficiency curves (for 48V model, indicative for 24V), and typical driving methods for LED modules in constant current area for the PLP-60 series.

## 5. Setup and Installation

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Follow these steps for proper installation of the PLP-60-24 power supply:

1. **Mounting:** Securely mount the power supply in a well-ventilated area, ensuring adequate clearance for heat dissipation. Refer to the mechanical specification diagram (Figure 2) for dimensions and mounting points.
2. **Input Connection (AC):** Connect the AC input wires to the designated terminals (CN1) as shown in Figure 2. Ensure correct polarity (AC/L, AC/N) and proper grounding if required by your application (though this model is Isolation Class II, no F.G. for PLP-20, check specific model requirements).
3. **Output Connection (DC):** Connect the LED load to the DC output terminals (CN2) as shown in Figure 2. Observe correct polarity (+V, -V).
4. **Verify Connections:** Double-check all wiring connections to ensure they are secure and correctly polarized.
5. **Power On:** Once all connections are verified, apply AC power to the unit. The power supply should begin operating, providing stable DC output to the LED load.

## 6. Operating Instructions

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The PLP-60-24 operates in constant current mode, which is ideal for driving LED modules. Once installed and powered, the unit will automatically regulate the output current to the specified 2.5A, provided the input voltage is within the universal AC range and the load is within the 60W power limit.

- **Input Voltage:** The power supply accepts a universal AC input, allowing for flexible use across different regions without manual voltage selection.
- **Output Load:** Ensure the connected LED load's voltage requirements are compatible with the 24V output. The power supply will deliver up to 2.5A.
- **Thermal Management:** Maintain good airflow around the unit to ensure optimal performance and longevity, especially when operating at higher ambient temperatures or near maximum load. Refer to the derating curve in Figure 2 for guidance on load reduction at elevated temperatures.

## 7. Maintenance

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The MEAN WELL PLP-60-24 power supply is designed for long-term, reliable operation with minimal maintenance. However, periodic checks can help ensure optimal performance and safety:

- **Cleaning:** Periodically inspect the unit for dust accumulation. If necessary, gently clean the exterior with a soft, dry cloth. Ensure power is disconnected before cleaning. Do not use liquid cleaners.
- **Connection Checks:** Occasionally verify that all input and output connections remain secure and free from corrosion.
- **Environmental Conditions:** Ensure the operating environment continues to meet the specified temperature and humidity ranges.
- **Ventilation:** Confirm that ventilation openings are not obstructed.

## 8. Troubleshooting

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If the power supply is not functioning as expected, consider the following troubleshooting steps:

- **No Output Power:**
  - Check if the AC input power is present and correctly connected.

- Verify that the input voltage is within the specified range (90-264VAC).
  - Ensure the output connections to the LED load are correct and secure.
  - Check for any short circuits in the LED load or wiring. The unit has short-circuit protection, which may cause it to shut down.
- **Intermittent Operation:**
    - Check for loose connections on both input and output sides.
    - Ensure the ambient temperature is not exceeding the maximum operating temperature, which could trigger over-temperature protection.
    - Verify the load is not exceeding the maximum 60W output power. Overload protection may cause intermittent operation.
- **Incorrect Output Voltage/Current:**
    - Confirm the LED load is compatible with a 24V constant current supply.
    - If the issue persists after checking these points, disconnect power and contact technical support. Do not attempt to repair the unit yourself.

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## 9. Warranty Information

The MEAN WELL PLP-60-24 LED Switching Power Supply comes with a **2-year warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage resulting from improper installation, misuse, unauthorized modifications, or external factors such as power surges or natural disasters. Please retain your proof of purchase for warranty claims.

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## 10. Technical Support

For technical assistance, questions regarding installation, or troubleshooting issues not covered in this manual, please contact your authorized MEAN WELL distributor or the manufacturer directly. Provide your product model number (PLP-60-24) and a detailed description of the issue when seeking support.

