Cooler Master MWE 600 White 230V V2

Cooler Master MWE 600 White 230V V2 Power Supply Unit User Manual

Model: MWE 600 White 230V V2 (MPE-6001-ACABW-EU)

1. Introduction

The Cooler Master MWE 600 White 230V V2 power supply unit (PSU) provides a reliable and efficient power solution for your computer system. Designed with 80 PLUS White 230V EU efficiency, a DC-to-DC + LLC circuit design, a single +12V rail, active PFC, and a temperature-sensitive HDB fan, this PSU delivers stable and consistent power. This manual will guide you through the installation, operation, maintenance, and troubleshooting of your MWE 600 White 230V V2 PSU.

2. Safety Information

Please read and understand all safety instructions before installing or operating this product. Failure to do so may result in personal injury or damage to the product and connected components.

- **Hazardous Voltage:** Do not open the power supply cover. There are no user-serviceable parts inside. Opening the unit will void the warranty.
- **Power Source:** Ensure the power supply is disconnected from the AC outlet before installation or maintenance.
- **Ventilation:** Do not block any ventilation openings of the power supply. Ensure adequate airflow around the unit.
- **Environment:** Install the power supply in a dry, well-ventilated area, away from heat sources, moisture, and direct sunlight.
- **Grounding:** Ensure the power supply and your computer system are properly grounded.
- **Compatibility:** Use only the cables provided with this power supply. Ensure all connections are secure and correctly oriented.

3. Package Contents

Verify that all items are present in your package:

- Cooler Master MWE 600 White 230V V2 Power Supply Unit
- AC Power Cord
- Mounting Screws

- User Manual (this document)

4. Product Overview

The MWE 600 White 230V V2 is designed for optimal performance and reliability. Key features include:

- **600 Watts Exceptional Efficiency:** Exceeds 80 PLUS 230V EU energy efficiency standards, outperforming generic 80 PLUS Bronze competitors at medium load.
- **Silent HDB Fan:** The integrated 120mm fan utilizes superior hydro-dynamic bearings (HDB) to minimize noise levels (below 35.5 dBA at 1500 RPM max).
- **Stable Power Delivery:** Supports Intel's low power states for motherboard protection and features a DC-DC with LLC circuit for efficient 12V to 3V and 5V conversion without energy loss.
- **Single +12V Rail:** Ensures all system components receive consistent power from a single, stable source.
- **Compact Cabling:** Non-modular flat black cables save space and offer flexibility, ideal for smaller cases and maintaining internal airflow.

Figure 4.1: Overall view of the Cooler Master MWE 600 White 230V V2 Power Supply Unit.

Figure 4.2: Close-up of the quiet Hydro-Dynamic Bearing (HDB) fan, designed for minimal noise.

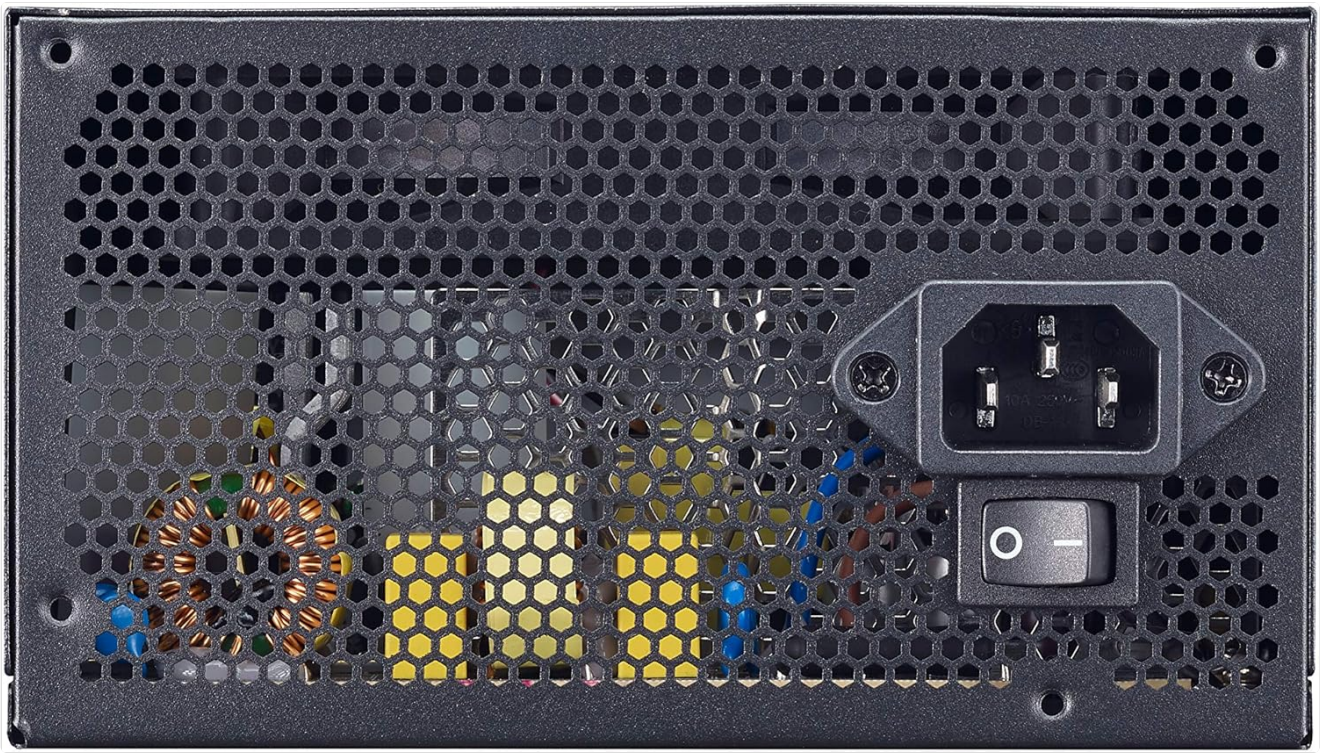

Figure 4.3: Rear panel showing the AC power input and the main power switch.

Figure 4.4: Exploded view illustrating the internal layout and components of the power supply unit.

5. Setup and Installation

Follow these steps to properly install your Cooler Master MWE 600 White 230V V2 power supply:

1. **Prepare Your System:** Ensure your computer is completely powered off and unplugged from the wall outlet. Open your computer case.
2. **Remove Old PSU (if applicable):** Disconnect all cables from your old power supply and remove it from the case.
3. **Install New PSU:** Carefully place the MWE 600 White 230V V2 into the PSU mounting bay of your computer case. Ensure the fan is oriented correctly (usually facing downwards or upwards, depending on your case design, for optimal

airflow). Secure the PSU with the provided mounting screws.

4. **Connect Motherboard Power:** Connect the 24-pin ATX power cable to your motherboard's 24-pin connector. Ensure it clicks into place.
5. **Connect CPU Power:** Connect the 4+4-pin EPS/ATX 12V cable to your motherboard's CPU power connector.
6. **Connect Graphics Card Power (PCI-e):** If your graphics card requires additional power, connect the appropriate 6+2-pin PCI-e power cables from the PSU to your graphics card.
7. **Connect SATA/Peripheral Power:** Connect SATA power cables to your storage drives (HDDs, SSDs) and other peripherals as needed.
8. **Cable Management:** Utilize the flat black cables to manage and route them efficiently within your case to improve airflow and aesthetics.
9. **Close Case and Connect AC Power:** Close your computer case. Connect the AC power cord to the PSU's AC inlet and then plug the other end into a wall outlet.

6. Operating Instructions

After successful installation, operating your power supply is straightforward:

- **Power On:** Ensure the main power switch on the back of the PSU (Figure 4.3) is in the "I" (On) position. Then, press the power button on your computer case.
- **Power Off:** To turn off your computer, use the operating system's shutdown procedure. For a complete power cycle, switch the PSU's main power switch to the "O" (Off) position after shutting down the system.
- **Normal Operation:** The PSU will automatically regulate power delivery to your components. The HDB fan will operate as needed to maintain optimal temperatures, adjusting its speed based on load and temperature.

7. Maintenance

Regular maintenance helps ensure the longevity and optimal performance of your power supply.

- **Dust Cleaning:** Periodically (e.g., every 3-6 months), power off and unplug your computer. Use compressed air to gently clean dust from the PSU's fan grille and ventilation openings. Hold the fan blades to prevent them from spinning rapidly during cleaning, which can damage the bearings.
- **Cable Inspection:** Occasionally check all power cable connections to ensure they are secure and free from damage.
- **Environmental Check:** Ensure the computer's environment remains clean, cool, and dry to prevent dust buildup and overheating.

8. Troubleshooting

If you encounter issues with your power supply, refer to the following common troubleshooting steps:

- **No Power:**
  - Ensure the AC power cord is securely plugged into both the PSU and the wall outlet.
  - Verify the main power switch on the PSU is in the "I" (On) position.
  - Test the wall outlet with another device to confirm it has power.
  - Check all internal power connections (24-pin, CPU, PCI-e, SATA) to ensure they are firmly seated.
- **System Instability/Random Shutdowns:**
  - This could indicate insufficient power or a faulty component. Ensure your system's power requirements do not exceed the PSU's 600W capacity.
  - Check for overheating. Ensure the PSU fan and case fans are operating correctly and are free of dust.

- If possible, test the PSU with a different system or a PSU tester.

- **Loud Fan Noise:**
  - While the HDB fan is designed for quiet operation, excessive noise might indicate dust buildup. Clean the fan as described in the Maintenance section.
  - Ensure the PSU is not under extreme load, which can cause the fan to spin faster.

If problems persist after trying these steps, please contact Cooler Master support.

9. Specifications

Detailed technical specifications for the Cooler Master MWE 600 White 230V V2 power supply:

Feature	Value
Brand	Cooler Master
Model Name	MWE White-v2
Model Number	MPE-6001-ACABW-EU
Color	WHITE V2
Form Factor	ATX
Output Power	600 Watts
Cooling Method	Air (120mm HDB Fan)
Efficiency Certification	80 PLUS 230V EU White
Dimensions (L x W x H)	14 x 15 x 8.6 cm
Item Weight	1.5 Kilograms
Compatible Devices	Personal Computer
Connector Type	SATA (and other standard ATX connectors)

DC Output Table

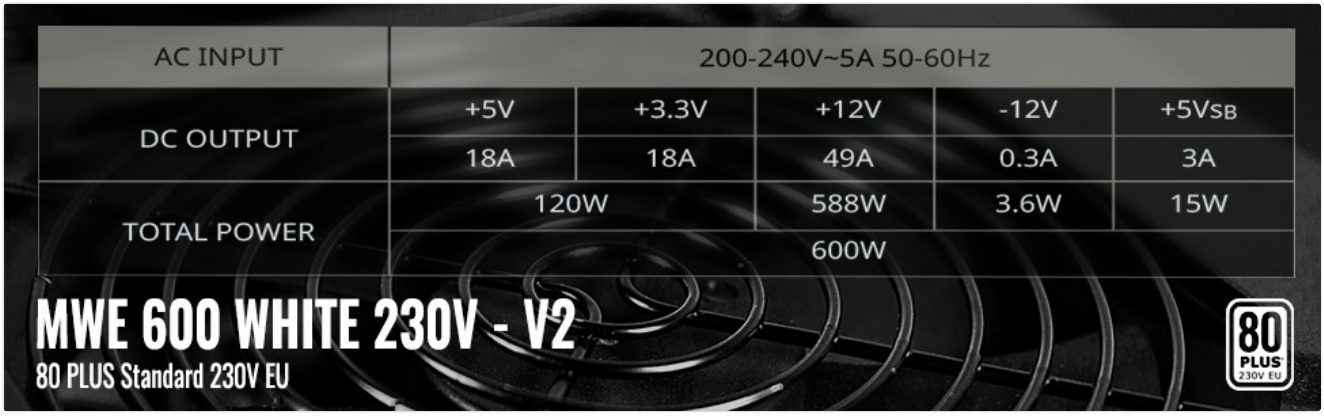

Figure 9.1: Detailed DC output specifications for the MWE 600 White 230V V2.

DC Output	+5V	+3.3V	+12V	-12V	+5Vsb

DC Output	+5V	+3.3V	+12V	-12V	+5Vsb
Current (A)	18A	18A	49A	0.3A	3A
Power (W)	120W	120W	588W	3.6W	15W
Total Power					600W

10. Warranty and Support

The Cooler Master MWE 600 White 230V V2 power supply comes with a standard limited manufacturer's warranty.

- **Warranty Period:** 3 years from the date of purchase.
- **Warranty Coverage:** This warranty covers defects in materials and workmanship under normal use. It does not cover damage resulting from accident, misuse, abuse, improper installation, unauthorized repairs, or modifications.
- **Technical Support:** For technical assistance, warranty claims, or further information, please visit the official Cooler Master website or contact their customer support.

Cooler Master Official Website: www.coolermaster.com