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Cooler Master V850 SFX Gold

Cooler Master V850 SFX Gold 850W Modular Power Supply User Manual

Model: V850 SFX Gold (MPY-8501-SFHAGV-3U1)

INTRODUCTION

The Cooler Master V850 SFX Gold is an 850-watt modular power supply designed for small form factor (SFX) systems. It features 80 Plus Gold efficiency, a fluid dynamic bearing (FDB) fan, and full-modular cabling, including a 90° 12VHPWR PCIe 5.1 connector. This manual provides essential information for the proper installation, operation, and maintenance of your power supply unit.

SAFETY INFORMATION

Please read and understand the following safety precautions before installing or operating the power supply:

- Ensure the power supply is disconnected from the AC power outlet before installation or maintenance.
- Do not open the power supply unit. High voltages are present inside, and opening the unit will void the warranty.
- Install the power supply in a well-ventilated area, away from heat sources and moisture.
- Use only the modular cables provided with the power supply. Using incompatible cables can cause damage to the PSU and connected components.
- Ensure all connectors are securely seated before powering on the system.
- This product is designed for use in computer systems only. Do not use it for any other purpose.

PACKAGE CONTENTS

Verify that all items are present in your package:

- Cooler Master V850 SFX Gold Power Supply Unit
- Modular Cable Set (MB 24-pin, CPU 4+4-pin, CPU 8-pin, PCI-e 6+2-pin, Peripheral 4-pin, SATA 15-pin, 12V-2x6)
- SFX to ATX Bracket
- Mounting Screws
- AC Power Cord
- User Manual (this document)

SETUP AND INSTALLATION

1. Physical Installation

The V850 SFX Gold is designed for small form factor (SFX) cases. An included SFX to ATX bracket allows installation into standard ATX cases if desired.



Image: Comparison of ATX and SFX power supply dimensions. The SFX unit measures 125mm (4.9 in) x 100mm (3.9 in).

1. Ensure your computer case is compatible with SFX power supplies. If installing in an ATX case, attach the SFX to ATX bracket to the power supply using the provided screws.
2. Slide the power supply into the designated PSU bay in your computer case.
3. Secure the power supply to the case using the mounting screws.

2. Modular Cable Connection

The V850 SFX Gold is fully modular, allowing you to connect only the cables necessary for your system, reducing clutter and improving airflow.



Image: Top view of the Cooler Master V850 SFX Gold power supply, highlighting the modular cable connection ports.

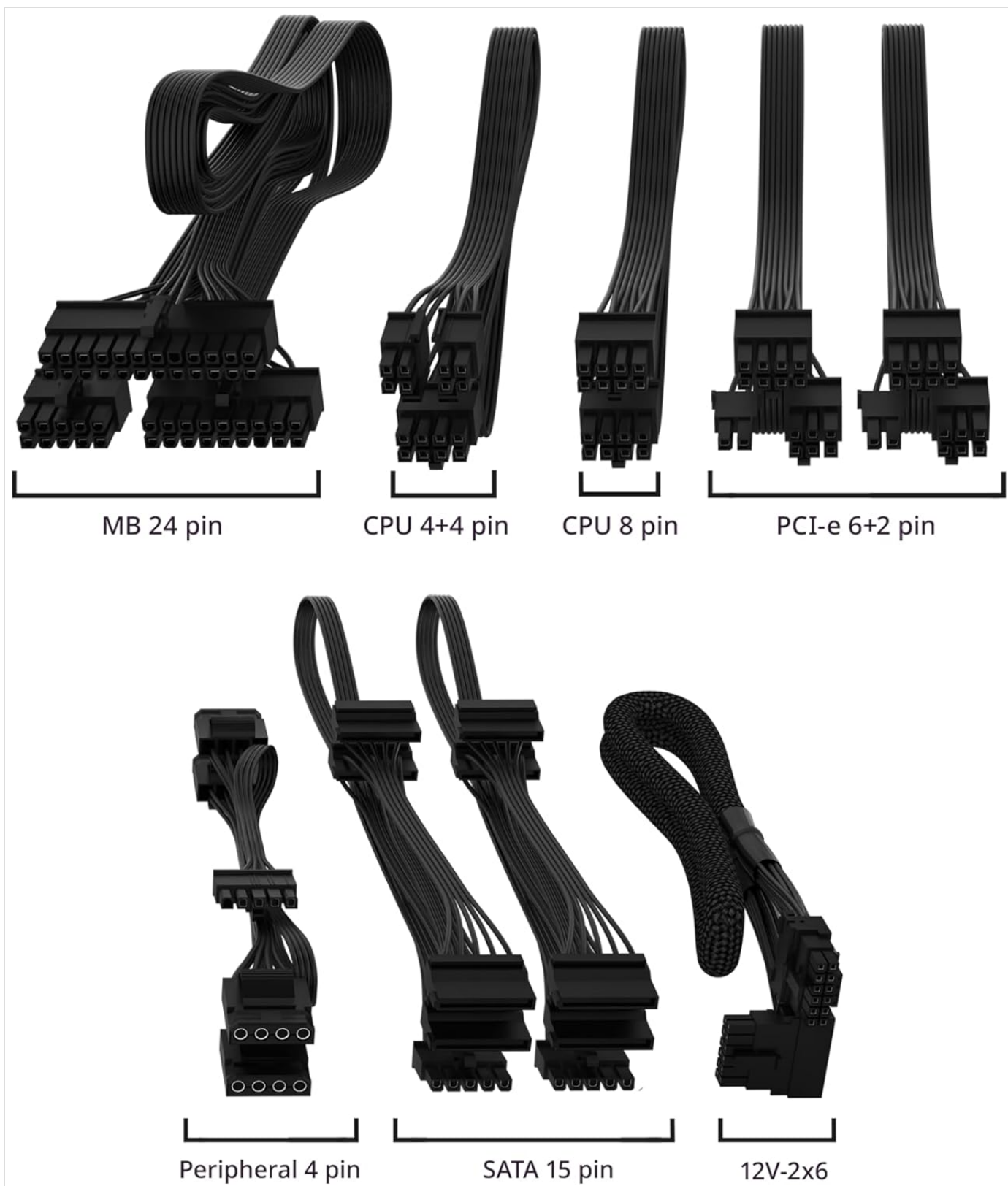


Image: Illustration of the various modular cables and their lengths provided with the V850 SFX Gold power supply.

1. Identify the necessary cables for your motherboard, CPU, graphics card(s), and storage devices.
2. Connect the appropriate cables to the labeled ports on the power supply. Ensure a firm connection.
3. Route the cables neatly within your case to their respective components.
4. Connect the cables to your motherboard (24-pin ATX, 4+4-pin/8-pin EPS), graphics card(s) (PCI-e 6+2-pin or 12V-2x6), and storage devices (SATA, Peripheral).

3. 12VHPWR PCIe 5.1 Connector

The V850 SFX Gold includes a 90° 12VHPWR PCIe 5.1 connector, designed for improved electrical durability and safety with

modern high-power graphics cards.

ENHANCED DISSIPATION

The integrated design of the **transformer, rectifier, full-bridge LLC, and EMI-inhibited amorphous metal** ensures top performance and cooling.

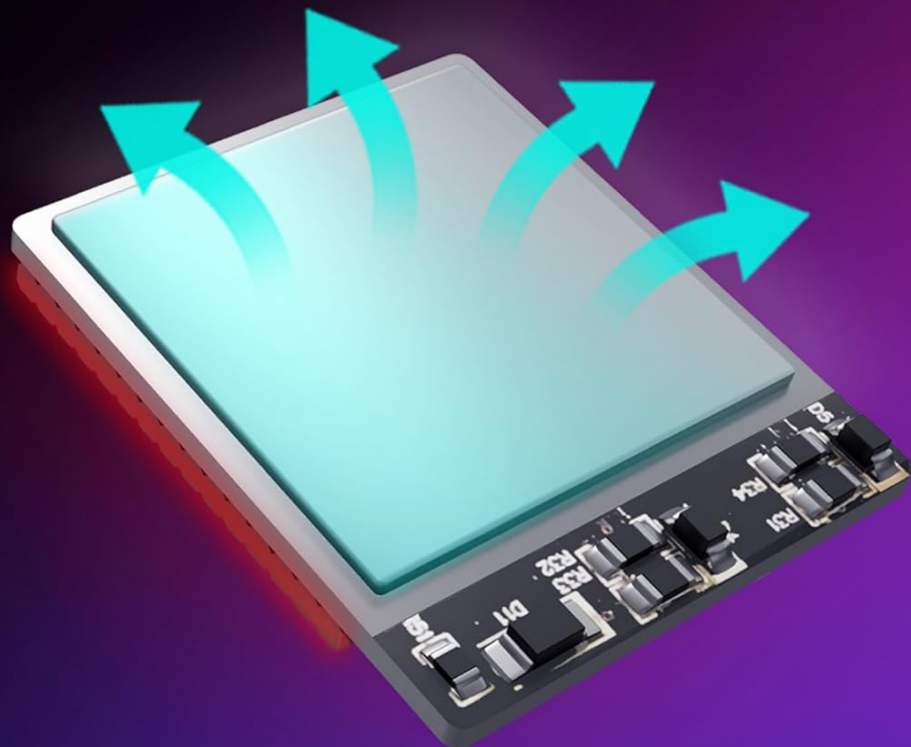


Image: Detailed view of the 90° 12VHPWR PCIe 5.1 connector, emphasizing its design for enhanced durability.

When connecting the 12VHPWR cable to your graphics card, ensure it is fully seated and there is no bending or strain near the connector. The 90° design helps manage cable routing in compact spaces.

4. Power Connection

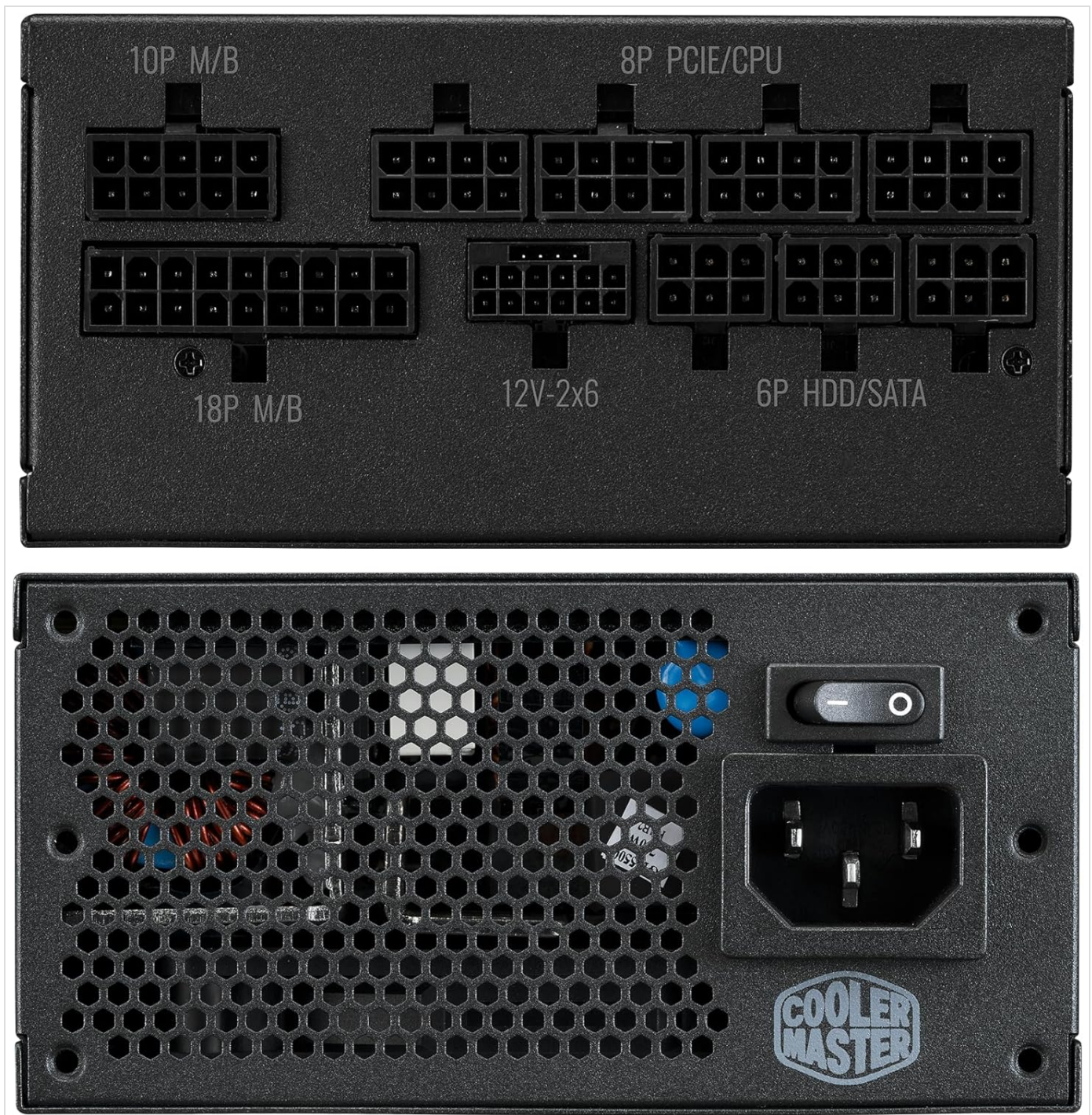


Image: Rear panel of the power supply, showing the AC power input and the main power switch.

1. After all internal connections are made, connect the AC power cord to the power supply's inlet.
2. Plug the other end of the AC power cord into a grounded wall outlet.
3. Ensure the power switch on the back of the power supply is in the "OFF" (O) position before plugging into the wall.
4. Once all connections are secure, flip the power switch to the "ON" (I) position.

OPERATING INSTRUCTIONS

The Cooler Master V850 SFX Gold is designed for reliable and efficient operation.

Powering On/Off

- To power on your system, ensure the PSU switch is in the "ON" (I) position, then press the power button on your computer case.

- To power off, shut down your operating system normally. For complete power disconnection, flip the PSU switch to the "OFF" (O) position and unplug the AC cord.

Efficiency and Cooling

This power supply features 80 Plus Gold efficiency, meaning it operates at 90% efficiency at typical loads (50% load at 230V). This reduces wasted heat and lowers operating costs.

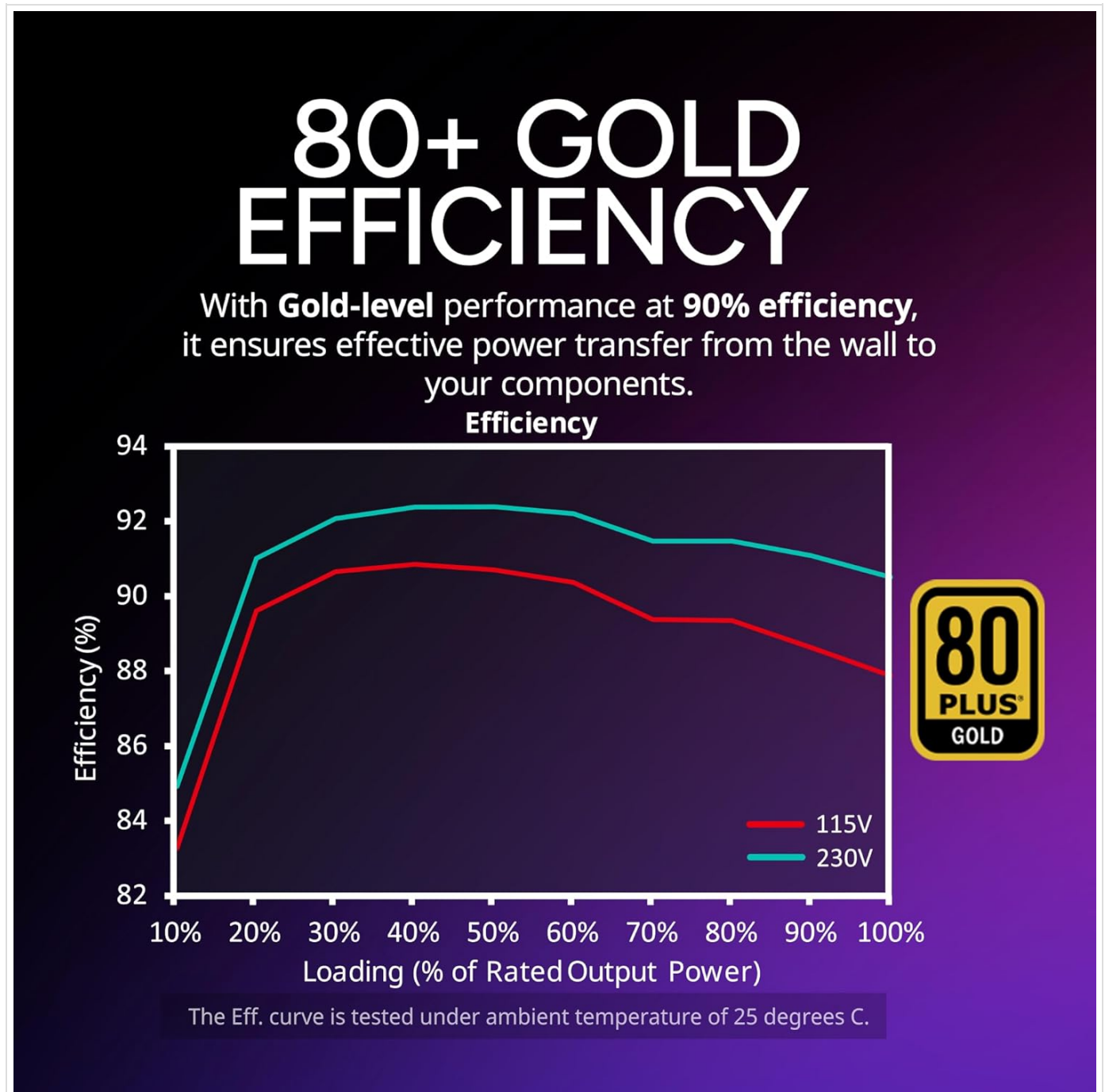


Image: Efficiency curve demonstrating the 80 Plus Gold performance of the power supply.

The integrated 92mm Fluid Dynamic Bearing (FDB) fan provides efficient and quiet cooling. FDB fans are known for their longevity and low noise output.

FLUID DYNAMIC BEARING (FDB) FAN

The 92mm fan offers reliable, efficient cooling with a self-lubricating, low-maintenance design.



Image: Details of the Fluid Dynamic Bearing (FDB) fan, including its specifications.

MAINTENANCE

Minimal maintenance is required for the V850 SFX Gold power supply.

- **Cleaning:** Periodically inspect the power supply's fan and vents for dust accumulation. Use compressed air to gently clear any dust, ensuring the system is powered off and unplugged before cleaning. Do not use liquid cleaners.
- **Fan:** The Fluid Dynamic Bearing fan is designed for long-term, low-maintenance operation. No lubrication or disassembly is required.

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 wall outlet and the power supply.
- Verify the power switch on the back of the PSU is in the "ON" (I) position.
- Check all modular cable connections to the PSU and components (motherboard, CPU, GPU) for secure seating.
- Test the wall outlet with another device to confirm it has power.

- **System Instability/Crashes:**

- Ensure your system's power requirements do not exceed the 850W capacity of the PSU.
- Verify all power connectors are correctly and firmly attached. Loose connections can cause instability.
- Check for proper ventilation within your computer case to prevent overheating of components, including the PSU.

- **Unusual Noises:**

- A slight fan noise is normal under load. Excessive or grinding noises may indicate a fan issue.
- "Coil whine" can sometimes occur in power supplies, often due to specific load conditions or electrical interference. While generally harmless, if persistent and bothersome, contact support.

If problems persist after following these steps, please contact Cooler Master customer support for further assistance.

SPECIFICATIONS

Detailed specifications for the Cooler Master V850 SFX Gold power supply:

Feature	Specification
Model Name	V850 SFX Gold
Model Number	MPY-8501-SFHAGV-3U1
Output Wattage	850 Watts
Efficiency Rating	80 Plus Gold
Form Factor	SFX (with ATX bracket included)
Dimensions (L x W x H)	100 x 125 x 63.5 mm (3.94 x 4.92 x 2.5 inches)
Fan Type	92mm Fluid Dynamic Bearing (FDB) Fan
Modular	Fully Modular
PFC	Active PFC
Protections	OVP, OPP, SCP, OCP, UVP, OTP
Operating Temperature	0-50°C
MTBF	>100,000 Hours
Input Voltage	100-240V
Input Frequency	50-60Hz
Input Current	12-6A



Image: Product label displaying electrical specifications and certifications.

WARRANTY AND SUPPORT

The Cooler Master V850 SFX Gold power supply comes with a **10-year limited warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use.

For warranty claims, technical support, or further inquiries, please visit the official Cooler Master support website:

[Cooler Master Support](#)

Please retain your proof of purchase for warranty validation.