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› Thermaltake Toughpower GT 850W ATX 3.1 Power Supply Instruction Manual

Thermaltake PS-TPT-0850FNFAGU-3

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Model: PS-TPT-0850FNFAGU-3

1. INTRODUCTION

Thank you for choosing the Thermaltake Toughpower GT 850W ATX 3.1 Standard Power Supply. This manual provides essential information for the proper installation, operation, and maintenance of your power supply unit (PSU). Please read this manual thoroughly before installation and retain it for future reference.



The Thermaltake Toughpower GT 850W power supply shown with its retail packaging, highlighting its key features.

2. SAFETY PRECAUTIONS

- Ensure the power supply is disconnected from the main power outlet before installation or maintenance.
- Do not open the PSU casing. High voltages are present inside, and opening it will void the warranty.
- Install the PSU in a well-ventilated area, away from heat sources and moisture.
- Use only the modular cables provided with this power supply. Using incompatible cables may damage the PSU or connected components.
- Ensure all connectors are securely attached before powering on the system.

3. SETUP AND INSTALLATION

The Thermaltake Toughpower GT 850W features a fully modular design, allowing you to connect only the necessary cables for a cleaner build and improved airflow.

1. **Mounting the PSU:** Secure the power supply unit into the designated PSU bay of your PC case using the provided screws. Ensure the fan is oriented correctly for optimal airflow (typically facing downwards or towards the interior of the case, depending on case design).
2. **Connecting Modular Cables:** Identify the required cables for your motherboard, CPU, graphics card, and other peripherals. This PSU is ATX 3.1 and PCIe 5.1 ready, featuring a native 12V-2x6 (12+4 pin) connector for modern GPUs.
 - Connect the 24-pin ATX cable to your motherboard.
 - Connect the 4+4 pin CPU power cable(s) to your motherboard.
 - Connect the 12V-2x6 (12+4 pin) PCIe 5.1 connector or 6+2 pin PCIe cables to your graphics card(s).
 - Connect SATA power cables to your storage drives (SSDs/HDDs) and peripheral cables to other components as needed.
3. **Cable Management:** Utilize the low-profile flat black cables to route them efficiently behind the motherboard tray or in designated cable management channels to maintain good airflow and a tidy build.
4. **AC Power Connection:** Once all internal connections are secure, connect the AC power cord to the PSU's power inlet and then to a wall outlet or surge protector.



Connector Type	Connector Quantity		Cable Quantity	Cable Length
Main Power (24Pin)	X 1		X 1	550mm
ATX 12V (4+4Pin)	X 2		X 2	700mm
PCIe (6+2Pin)	X 4		X 2	600mm+150mm
PCIe (12+4Pin) 300W	X 1		X 1	600mm
SATA (5Pin)	X 6		X 2	450mm+150mm+150mm
Peripheral(4Pin)	X 4		X 1	400mm+150mm +150mm+150mm

FULLY MODULAR LOW-PROFILE CABLES

Offers cable selection for users while powering the system at an advantageous voltage. Low-profile cables make cable management easier, reduces clutter and increases airflow inside the chassis.

A detailed view of the power supply's modular interface and a table listing the quantity and length of included low-profile flat black cables for easy cable management.

4. OPERATING INSTRUCTIONS

The Thermaltake Toughpower GT 850W is designed for efficient and stable power delivery.

- **Power On/Off:** Use the main power switch located on the back of the PSU to turn the unit on or off. Ensure the switch is in the 'ON' position before attempting to power on your computer.
- **Smart Zero Fan Technology:** This PSU features Smart Zero Fan technology, which optimizes fan speed based on the system's load.
 - When enabled (via the switch on the back of the PSU), the fan will remain off at low loads to minimize noise.
 - The fan will automatically activate and adjust its speed as the load increases to maintain optimal cooling.
 - If you prefer the fan to always be active, you can disable the Smart Zero Fan feature using the dedicated switch.



ULTRA QUIET 120MM HYDRAULIC BEARING FAN WITH SMART ZERO FAN

Featuring an 120mm Hydraulic Bearing Fan to keep friction at really low level. Designed with our Smart Zero Fan to adjust the fan speed and minimizes undesired noise.

The power supply's 120mm hydraulic bearing fan and the Smart Zero Fan switch, which controls fan operation for quiet performance at low loads.

5. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your PSU.

- **Cleaning:** Periodically clean the PSU's fan and ventilation grilles to prevent dust buildup, which can impede airflow and lead to overheating. Use compressed air to gently remove dust. Ensure the PSU is powered off and unplugged before cleaning.
- **Airflow:** Ensure your PC case has adequate airflow. Avoid obstructing the PSU's intake or exhaust vents.
- **Cable Inspection:** Occasionally check all modular cable connections to ensure they are secure and free from damage.

6. TROUBLESHOOTING

If you encounter issues with your Thermaltake Toughpower GT 850W, try the following steps:

- **No Power:**
 - Verify the AC power cord is securely connected to both the PSU and the wall outlet.
 - Ensure the main power switch on the PSU is in the 'ON' position.
 - Test the wall outlet with another device to confirm it has power.
 - Check all modular cable connections, especially the 24-pin ATX and CPU power cables.
- **System Instability/Random Shutdowns:**
 - Ensure your system's total power draw does not exceed the PSU's 850W capacity.
 - Verify all power connectors to components (motherboard, GPU, drives) are firmly seated.
 - Check for any signs of overheating within the PC case.
- **Excessive Fan Noise:**
 - If Smart Zero Fan is enabled, the fan will spin up under load. This is normal operation.
 - If the fan is constantly loud even at low loads, ensure the Smart Zero Fan switch is in the desired position.
 - Check for any obstructions (e.g., loose cables) that might be hitting the fan blades.

If issues persist after performing these checks, please contact Thermaltake customer support.

7. SPECIFICATIONS

Feature	Specification
Watts	850W
Max Output Capacity	850W
Color	Black
Dimensions (WxHxD)	150mm x 86mm x 140mm (5.9 x 3.4 x 5.5 inches)
PFC (Power Factor Correction)	Active PFC
Power Good Signal	100-250 msec
Hold Up Time	17msec at 80% load
Input Current	10A Max.
Input Frequency Range	50Hz-60Hz
Input Voltage	100-240V~
Operating Temperature	0°C to +40°C
Operating Humidity	5% to 85%
Storage Temperature	-40°C to +70°C
Storage Humidity	5% to 95%
Cooling System	12cm Hydraulic bearing fan

Efficiency	80 PLUS® Gold at 115Vac input
MTBF	100,000 hours
Safety Approval	CE/UKCA/ICES/TUV/LVD/RCM/CB/FCC/cTUVus/BSMI/CCC/BIS/S-MARK
PCI-E 6+2PIN	4
PCI-E 12+4PIN	1 (450W)
Protection	OVP/UVP/OCP/OPP/OTP/SCP

8. WARRANTY AND SUPPORT

The Thermaltake Toughpower GT 850W Power Supply is backed by a **5-year warranty**, ensuring reliable performance and peace of mind.

For technical support, warranty claims, or further assistance, please visit the official Thermaltake website or contact their customer service department. Keep your purchase receipt as proof of purchase for warranty purposes.

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