





# SILENT STORM COOL ZERO

Manual



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# 1. Specifications

## 1.1 General

Power	650, 750 or 850 Watt
Warranty	3 Years
PCIe Connector	4x 6+2-Pin.
Fan	135 mm Fan with Fluid Dynamic Bearing
Efficiency	20% Load: min. 87% 50% Load: min. 90% 100% Load: min. 87%
80 PLUS Certification	Gold

## 1.2 Package Contents

- SilentStorm Cool Zero
- Power Cord
- Cable Bag
- Set with Modular Cables\*
- Manual

\* All cables shown in the cable chart are included in the packaging (see page 8).



# 1. Specifications

## 1.2 Model-Specific

Model	SilentStorm Cool Zero 650				
Input (AC)	Voltage		Current	Frequency	
	100 - 240 V		10 A	50 - 60 Hz	
Output Voltage (DC)	+3.3 V	+5 V	+12 V	-12 V	+5 Vsb
Max. Output Current	22 A	22 A	54.2 A	0.3 A	3 A
Max. Combined Power	120 W		650 W	3.6 W	15 W
Total Power	650 W				

Model	SilentStorm Cool Zero 750				
Input (AC)	Voltage		Current	Frequency	
	100 - 240 V		10 A	50 - 60 Hz	
Output Voltage (DC)	+3.3 V	+5 V	+12 V	-12 V	+5 Vsb
Max. Output Current	22 A	22 A	62.5 A	0.3 A	3 A
Max. Combined Power	120 W		750 W	3.6 W	15 W
Total Power	750 W				

Model	SilentStorm Cool Zero 850				
Input (AC)	Voltage		Current	Frequency	
	100 - 240 V		10 A	50 - 60 Hz	
Output Voltage (DC)	+3.3 V	+5 V	+12 V	-12 V	+5 Vsb
Max. Output Current	22 A	22 A	70.9 A	0.3 A	3 A
Max. Combined Power	120 W		850 W	3.6 W	15 W
Total Power	850 W				



## 2. Safety Standards and Protections

This power supply is designed for a mains voltage of 100 - 240 volts. It complies with CE, FCC and CB safety standards and has the following protection features:

### **Over Power Protection (OPP)**

If the system demands more power than the specifications allow, the power supply will switch off to protect the electronics from damage.

### **Over Voltage Protection (OVP)/ Under Voltage Protection (UVP)**

This function shuts off the power supply to protect the components as soon as the internal voltage exceeds or falls below specified limits.

### **Short Circuit Protection (SCP)**

Should a short circuit occur, the SCP function switches off the power supply and protects the electronics from damage.

### **Over Current Protection (OCP)**

If the current on a rail exceeds an allowed limit, the OCP function will switch off the power supply, ensuring that no damage occurs.

### **Over Temperature Protection (OTP)**

If the heat level inside the power supply reaches a critical point, it is turned off by the OTP function to protect the electronics.



### 3.1 Removal of Existing Power Supply from PC Case

If installing into an empty PC case, continue with the section "Installing the Power Supply into a PC Case". For a PC case with an already installed power supply, first remove this from the case. Proceed as follows:

1. First shut down your PC. Then disconnect the power cord from the wall outlet and the power supply (PSU).
2. Now open the PC case (for additional information, refer to the manual of your PC case).
3. Disconnect all cables between the power supply and the other PC components (e.g. mainboard, drives, fans, etc.).
4. Remove the mounting screws connecting the power supply to the PC case and then carefully remove the power supply from the case.

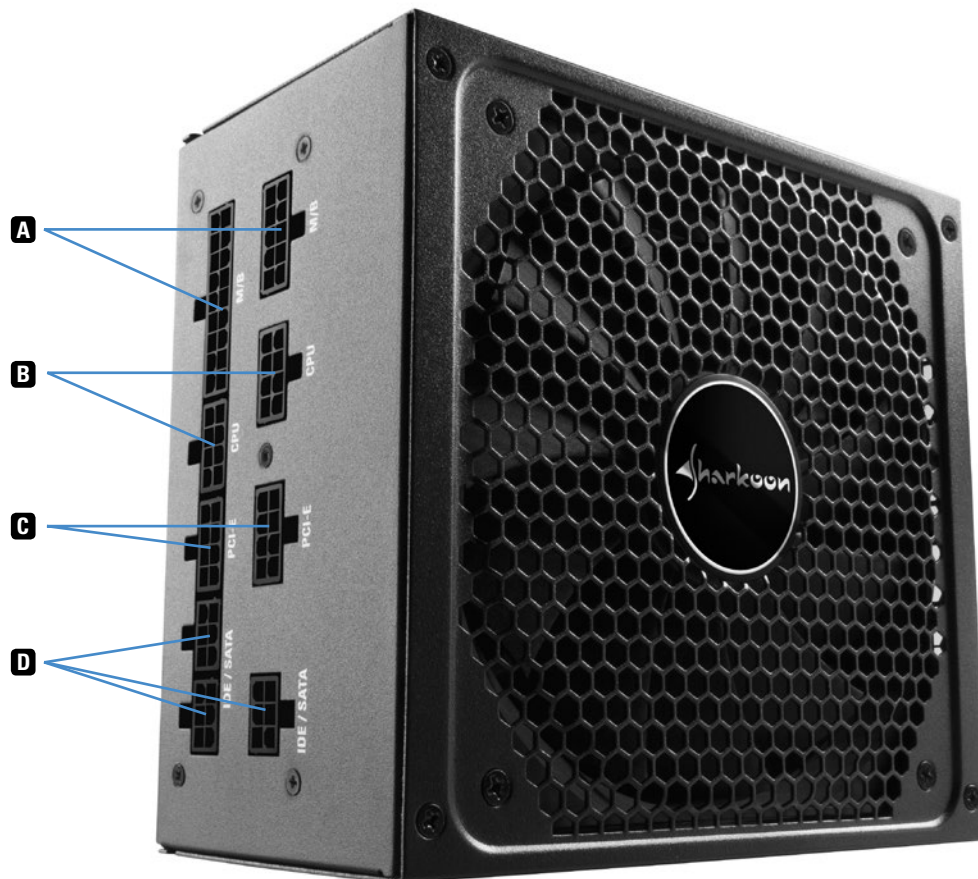
### 3.2 Installing the Power Supply into a PC Case

1. Insert the power supply into the PC case and place it against the power supply mounting on the rear panel. For additional information, see the manual for your PC case.
2. Attach the power supply from the outside of the case using the provided screws. Ensure that the fan and air vents of the installed power supply are not covered.
3. Use the supplied cables to connect the power supply to the components. The connectors are coded to avoid connecting incorrectly. Please pay attention to the labeling of the connections on the power supply.



## 4. Connection Options

Because of the fully modular cable system, only the cables are used on the power supply which are actually needed when connecting hardware and peripherals. The complete wiring and the inside of the case thus remain tidy and the air flow is not unnecessarily obstructed. The SilentStorm Cool Zero has the following connection options:



**A** 2x Sockets for 24-Pin. Mainboard Connector (M/B)

**B** 2x Sockets for 4+4-Pin. CPU Connector\* (CPU)

**C** 2x Sockets for 6+2-Pin PCIe Connector (PCI-E)

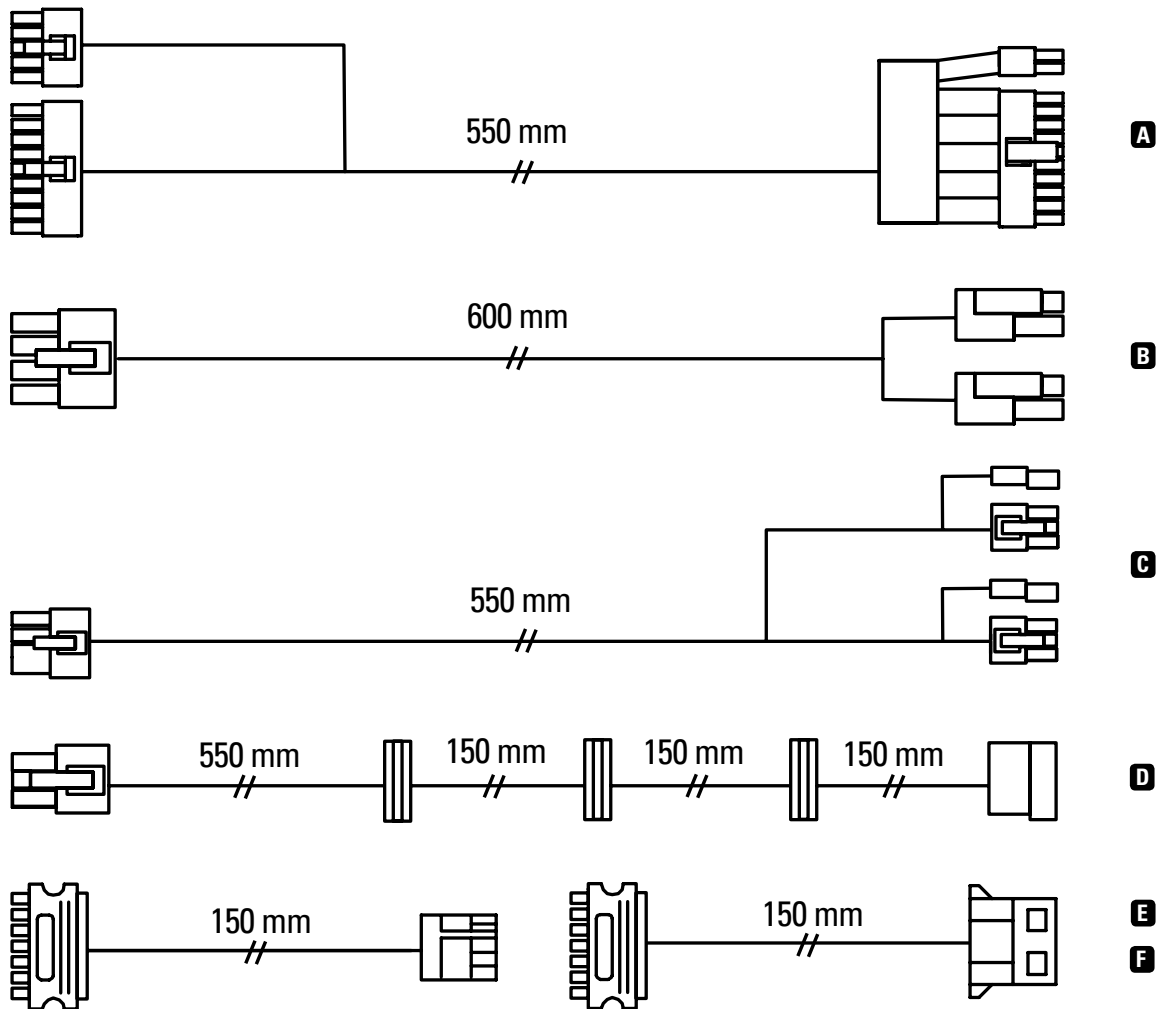
**D** 3x Sockets for SATA Connector (IDE/SATA)

*\* The two sockets for two 4+4-pin CPU connectors guarantee 100% compatibility with AMD RYZEN processors.*



## 5. Cable Diagram

The SilentStorm Cool Zero comes with a range of modular ribbon cables with the following connectors:



- A** 1x Cable with 24-Pin Mainboard Connector
- B** 2x Cables with 1x 4+4-Pin CPU Connector
- C** 2x Cables each with 2x 6+2-Pin PCIe Connectors
- D** 3x Cables each with 4x SATA Connectors
- E** 1x Adapter Cables (SATA to Floppy)
- F** 2x Adapter Cable (SATA to IDE)

*Please note: Make sure that only the supplied set of modular cables is used! The use of other cables (e.g., older power supply cables from Sharkoon or cables from other manufacturers) can result in damage to the device.*



### 6.1 Connection for Mainboard and Graphics Card

1. Connect the cable with the 24-pin mainboard connector to the appropriate sockets on the power supply and to the corresponding sockets on the motherboard.
2. If your mainboard has an additional 4-pin / 4+4-pin CPU connection, plug the connector into the socket on the motherboard and the power supply.

*Please note: The type of connection on the mainboard depends on the manufacturer and may therefore vary. For additional information, see the manual for your mainboard.*

3. If your PCIe graphics card requires additional power, connect the 6-pin or 6+2-pin PCIe connector to the power supply to ensure a stable electrical current to your graphics card.

### 6.2 Connecting Drives and Other Peripheral Devices

Connect drives and peripherals to the power supply. For devices with IDE or floppy connections, use the corresponding supplied adapters. Thus, an IDE power connection can be provided from any of the 12 SATA connectors.

*Please note: For additional assistance, refer to the manuals for your drives and peripherals.*

### 6.3 Checking all Connections

First, make sure all devices have been connected properly. Close the PC case. Then connect the power cord to the power supply and to a wall outlet. Then switch on the power supply using the on/off switch on the back of the device. This completes the installation.

*Please note: The cable connectors are designed to prevent improper connection. If the connector does not fit into the sockets of mainboard, drive or peripheral device, please check if the connector and socket are being connected in the correct orientation. Do not try to force a connector into a socket using the incorrect alignment, nor modify the components, otherwise the power supply and your hardware will be damaged. The SHARKOON warranty does not cover any damage that has been caused by improper handling.*



## 7. Flexible Cooling Options



The SilentStorm Cool Zero is equipped with two functions for flexibly adjusting the cooling behavior, which are explained below. At the back of the power supply, both functions can be switched on or off via two separate switches.

### 7.1 Zero RPM Mode

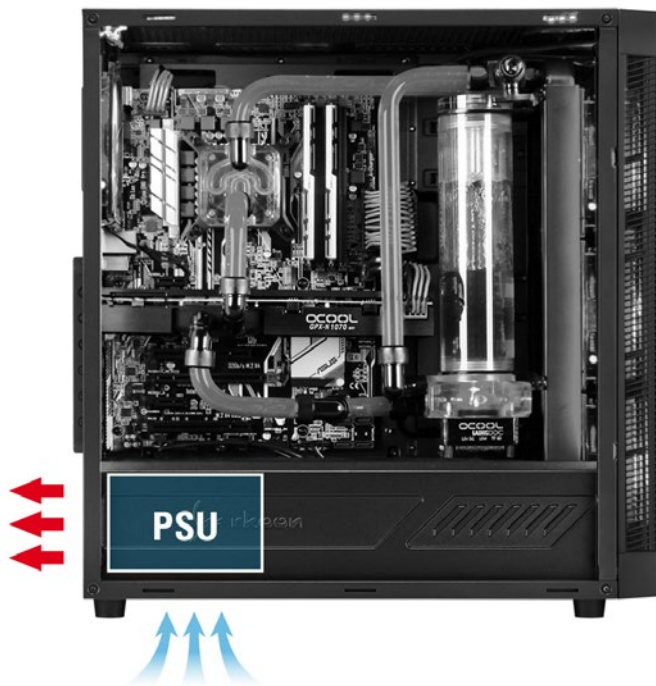
When the Zero RPM mode is on, the fan rotation is stopped at low and medium loads to enable silent operation. When the load on the system increases, the fan will automatically turn on again to cool the power supply sufficiently. When the Zero RPM mode is off, the fan runs continuously at low speed to produce a constant airflow.

### 7.2 Fan Delay Mode

When the Fan Delay mode is activated, the power supply fan continues to run for 60 seconds at constant speed after the system has been switched off. As a result, hot spots are avoided, and remaining waste heat is transported out of the system. In addition, this increases the service life of the installed components.

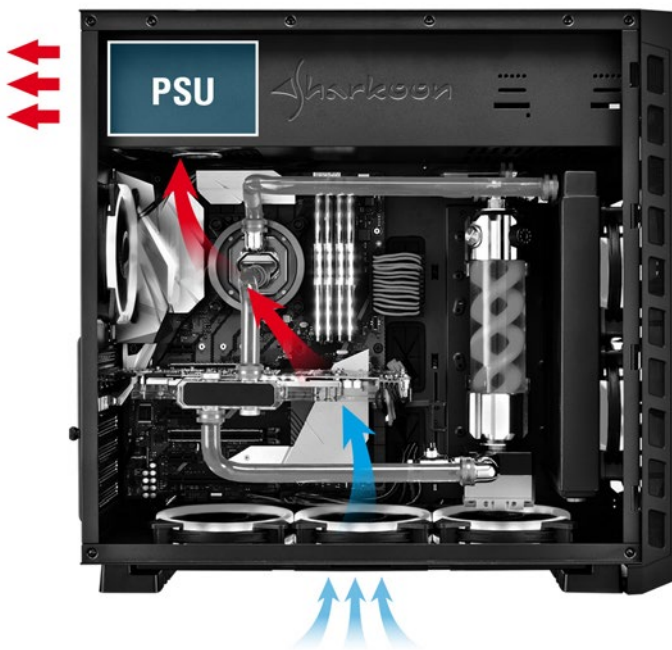


## 8. Various Installation Positions



### 8.1 Power Supply on the Case Bottom

Cool air is drawn from underneath the case and transported to the rear out of the housing as waste heat. The air circulation of the power supply is largely separated from the air circulation in the rest of the case. Here, the use of the Zero RPM mode is particularly recommended as the air intake is only needed for cooling the power supply, and the fan rotation can be stopped for noiseless operation over longer periods. When necessary, the fan delay mode provides additional dissipation of warmth from the power supply when the system is turned off.



### 8.2 Power Supply Underneath Top Panel

Warm air is drawn in from the inside of the casing and transported to the rear out of the case. The air circulation of the power supply is combined with the air circulation in the rest of the case. When the Zero RPM mode is off, air circulation in the upper part of the case is provided, effectively cooling voltage regulators of water cooling systems, for example. Since the heat level in the entire housing is constantly raised, the use of the fan delay mode is particularly recommended. This helps to protect all installed components and increase their service life.



### **If the power supply is not functioning correctly, check the following points:**

1. Is the power cord correctly connected to the wall outlet and the socket of the power supply?
2. Make sure the on/off switch is in the "I" position!
3. Check that the 24-pin mainboard connector and the 4+4-pin CPU connector are correctly connected to the mainboard!
4. Check if the connectors of the cables are firmly plugged into the sockets of the peripherals!
5. Pull the power plug out of the wall outlet and leave the power supply without power for approximately 10 minutes! This will cause a reset of the protective circuits.

*If the system still fails to function, please contact [support@sharkoon.com](mailto:support@sharkoon.com).*



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Your product is designed and manufactured with high quality materials and components, which can be recycled and reused.



When this crossed-out wheeled bin symbol is attached to a product, it means the product is covered by the European Directive 2012/19/EU.

Please be informed about the local separate collection system for electrical and electronic products. Please act according to your local rules and do not dispose of your old products with your normal household waste.

The correct disposal of your old product will help prevent potential negative consequences to the environment and human health.

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