Sharkoon




# REBEL P20 SFX

SFX 12V V4.1 Power Supply Unit

## Manual

# Safety Instructions

This device is intended as a power supply unit (PSU) for supplying electrical power to PC components inside a PC case. The device is to be used within dry indoor areas. For your own safety, always follow the instructions below and make sure that the device is not damaged before use. In addition, only use compatible cables and authorized accessories. The manufacturer's warranty will be void if the product or any installed hardware components are damaged due to improper use or non-compliance with these safety instructions. Should any problems occur with the product, contact our technical customer support at support@sharkoon.com.

- WARNING! Choking hazard due to small parts. Danger of strangulation. Keep the device and its cabling away from children under the age of 6 years!
- WARNING! Risk of injury such as cuts or contusion. Be aware of any sharp edges, openings and moving parts.
- WARNING! Risk of burns. Only operate the device in an electrically isolated environment and do not touch the device during operation.
- WARNING! Risk of electric shock from electrical parts. Do not open the device and keep it away from liquids!

# Warranty Conditions

Within the EU and in selected non-EU countries, Sharkoon provides a limited manufacturer's warranty with a duration of 7 years on this product. This warranty is independent of the statutory guarantee and does not impair or limit any of the purchaser's rights which already exist under the statutory guarantee. A current overview of the non-EU countries where the warranty applies can be found on the official Sharkoon website at www.sharkoon.com under "Warranty Conditions". The limited manufacturer's warranty is provided according to the following conditions:

**1) Duration of Warranty**

The duration of the warranty begins at the time of purchase of the new product by the end user, but no later than 6 months after the production date. The duration of the warranty is not extended due to any replacement or repair which has been carried out under the conditions of the warranty. However, the warranty ends not earlier than 6 months after a replacement or repair.

**2) Scope of Warranty**

Sharkoon warrants that the product covered by the warranty is free from material and manufacturing defects within the warranty's specified duration. This is under the condition that the product is used as intended and in accordance with the safety instructions in this document. In particular, the following are not covered by the warranty:

- Damage due to improper use or installation
- Modified products, even if the modification is not the cause of the fault
- Damage caused by external influences such as power failures, overvoltage, improper power supply, contact with liquids, or physical impact
- Visual defects that do not impair the function

The warranty is limited to the actual product. Accessories that are not permanently connected to the product, such as plug-in cables, are not covered by the warranty. Liability for consequential loss and/or damage due to a product defect is also excluded, unless liability is specifically prescribed by law.

**3) Service Offered by the Warranty**

In the event of a warranty claim, Sharkoon may, at its own discretion, repair the product or replace it with a product of at least equal worth. If repair or replacement is not possible, Sharkoon will refund to a value which is either based on the manufacturer's recommend retail price at the time of purchase or on the actual purchase price (whichever is lower), less a usage fee of 10% of the applicable price for each complete year of use.

**4) Warranty Processing**

To make a warranty claim, please contact the Sharkoon technical support by e-mail at support@sharkoon.com. The following is required for any claim:

- Proof of purchase (invoice, bill) with date
- Serial number
- Detailed description of the defect

If, after an initial analysis, it is necessary for you to send the affected product to Sharkoon so that the fault can be rectified, you will receive a return label which can be used for dispatching within the EU. In the case of products purchased in non-EU countries, the further procedure will be arranged with you directly.

Please send the actual product including its accessories. There is no liability for damage or loss of any additional items. The product must be sent in suitable packing materials and in such a way that any further damage during normal transportation is excluded. After it has been received, the product is checked to determine whether or not there is a claim which is covered by the warranty.

If there is a valid claim, the service offered by the warranty will be provided as quickly as possible, but at the latest within 4 weeks after receiving the product. Dispatch within the EU is free of charge. In the event of shipment to a non-EU country, Sharkoon shall be entitled to invoice any additional costs incurred and to make shipment dependent on prior payment.

If no warranty claim can be determined, the product can, at your discretion, be returned to you for a fee, disposed of free of charge or, if possible, repaired for a fee. In the case of chargeable repairs, special conditions may apply, which will be discussed with you beforehand.

If you are sent a replacement product or a refund at the determined value, the product which you originally sent will be disposed of free of charge by Sharkoon.

# Specifications

| General: | 750W | 850W | 1000W |
|---|---|---|---|
| Certification | Cybenetics Platinum | Cybenetics Platinum | Cybenetics Platinum |
| Form Factor | SFX 12V V 4.1 | SFX 12V V 4.1 | SFX 12V V 4.1 |
| Continuous Power | 750 W | 850 W | 1,000 W |
| ErP Compliant | ✓ | ✓ | ✓ |
| Technology | DC/DC | DC/DC | DC/DC |
| All Japanese Capacitors | ✓ | ✓ | ✓ |
| Zero RPM | ✓ | ✓ | ✓ |
| Fan Delay Mode | ✓ | ✓ | ✓ |
| MTBF | Min. 100,000 Hours | Min. 100,000 Hours | Min. 100,000 Hours |
| Operating Temperature | 0 to +40 °C | 0 to +40 °C | 0 to +40 °C |
| Standby Power Consumption | Max. 0.25 W | Max. 0.25 W | Max. 0.25 W |
| Weight without Cables | 1.0 kg | 1.0 kg | 1.0 kg |
| Dimensions (L x W x H) | 100 x 125 x 63.5 mm | 100 x 125 x 63.5 mm | 100 x 125 x 63.5 mm |
| Housing Color | Black | Black | Black |
| **Input:** | | | |
| Voltage | 100 – 240 VAC | 100 – 240 VAC | 100 – 240 VAC |
| Frequency | 50 – 60 Hz | 50 – 60 Hz | 50 – 60 Hz |
| Input Current (110/230 V) | 10 / 6 A | 12 / 6 A | 12 / 6 A |
| **Output:** | | | |
| 12 V Rail(s) | 1 | 1 | 1 |
| Load 3.3 V | 20 A | 20 A | 20 A |
| Load 5 V | 20 A | 20 A | 20 A |
| Max. Combined Power 3.3 V + 5 V | 100 W | 100 W | 100 W |
| Load 12 V1 | 62.5 A | 70.8 A | 83.3 A |
| Max. Combined Power 12 V | 750 W | 850 W | 1,000 W |
| Load 5 $V_{SB}$ | 3.0 A | 3.0 A | 3.0 A |
| Load –12 V | 0.3 A | 0.3 A | 0.3 A |
| Load 12V-2x6 | 450 W | 450 W | 600 W |
| **Cable and Connectors:** | | | |
| Cable Configuration | Fully Modular | Fully Modular | Fully Modular |
| Flat Cables | ✓ | ✓ | ✓ |
| Maximum Cable Length | 78 cm | 78 cm | 78 cm |
| Length of Mainboard Cable | 30 cm | 30 cm | 30 cm |
| Length of CPU Cable | 42 cm | 42 cm | 42 cm |
| Length of 12V-2x6 Cable | 42 cm | 42 cm | 42 cm |
| Length of PCIe Cable | 42 cm + 15 cm | 42 cm + 15 cm | 42 cm + 15 cm |
| Cable Length to First Peripheral | 32 cm | 32 cm | 32 cm |
| 24-Pin Mainboard Connector | 1 | 1 | 1 |
| 4+4-Pin CPU Connector | 1 | 1 | 1 |
| 8-Pin CPU Connector | 1 | 1 | 1 |
| 6+2-Pin PCIe Connector | 2 | 2 | 2 |
| 12V-2x6 Connector | 1 | 1 | 1 |
| SATA Connector | 8 | 8 | 8 |
| IDE Connector | 1 | 1 | 1 |
| **Fan:** | | | |
| Fan Size | 92 mm | 92 mm | 92 mm |
| Bearing Type | Fluid Dynamic Bearing | Fluid Dynamic Bearing | Fluid Dynamic Bearing |
| **Safety Standards:** | | | |
| CE | ✓ | ✓ | ✓ |
| FCC | ✓ | ✓ | ✓ |
| CB | ✓ | ✓ | ✓ |
| **Package Contents:** | | | |
| Rebel P20 SFX 750/ 850/ 1000, Power Cord, Cable Bag, Set of Modular Cables, Mounting Screws, Cable Ties | | | |

# Safety Standards and Protections

This power supply unit is designed for a household power voltage of 100–200 volts. It complies with CE, FCC and CB safety standards and is equipped with protection features that are designed to protect the device itself as well as the components connected to it. The device will unexpectedly shut down in the event of a protection function. You should then check immediately if there is a specific cause for the shutdown.

**OPP (Over-Power Protection)**
If the system demands more power than the specifications allow, the power supply unit will switch itself off to protect the electronics from damage.

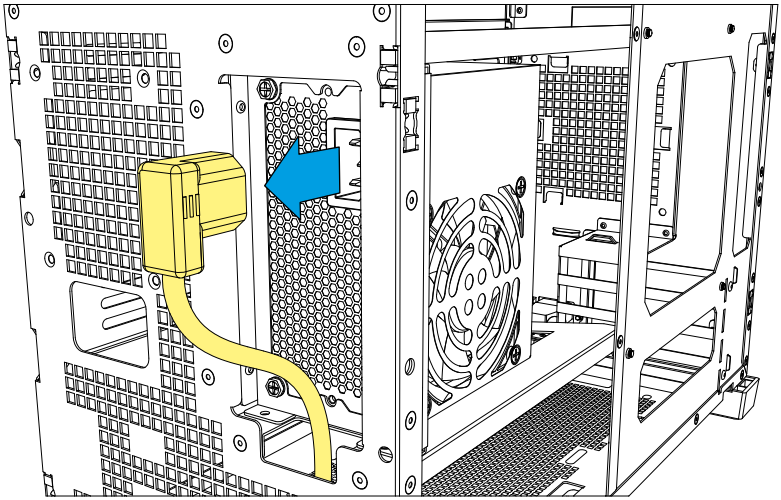
**OVP (Over-Voltage Protection) / UVP (Under-Voltage Protection)**
This function shuts off the power supply unit to protect the components as soon as the internal voltage exceeds or falls below the specified limits.

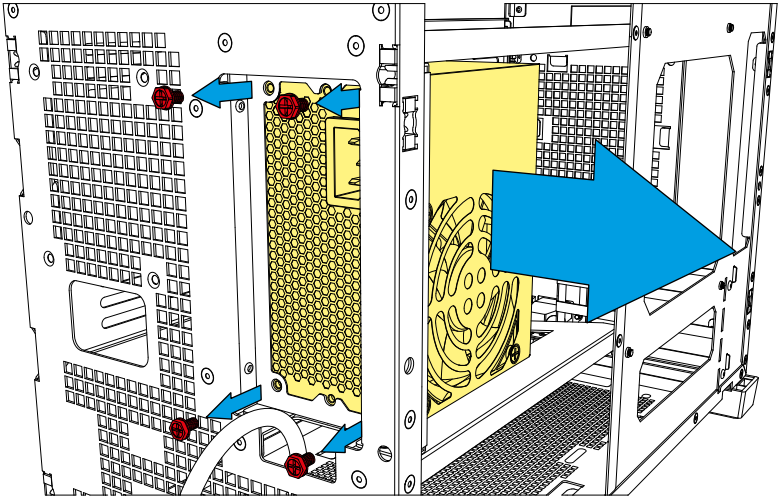
**SCP (Short-Circuit Protection)**
Should a short circuit occur, the SCP function switches off the power supply unit and protects the electronics from damage.

**OCP (Over-Current Protection)**
If the current measured on a rail exceeds a specified value, the OCP function switches off the power supply unit to prevent damage.

**OTP (Over-Temperature Protection)**
If the heat level inside the power supply unit reaches a critical point, the OTP function switches off the device to protect the electronics.

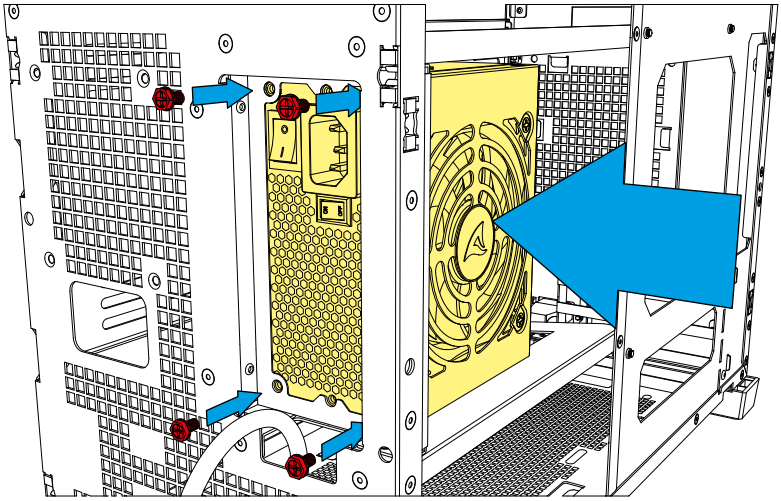
## Remove the old power supply unit from the PC case

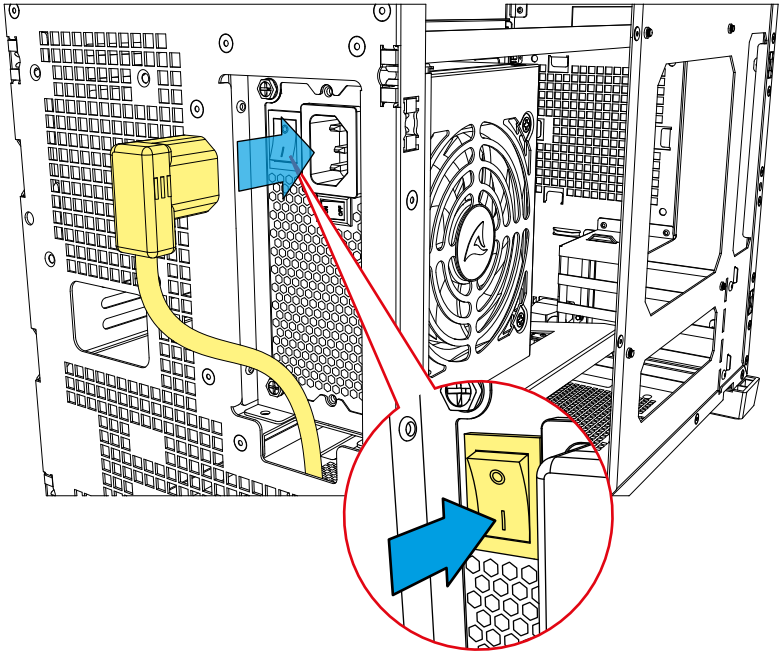




# Installation

## Install the power supply unit into the PC case

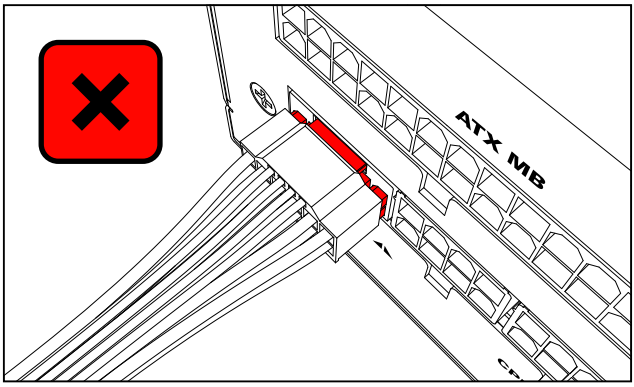


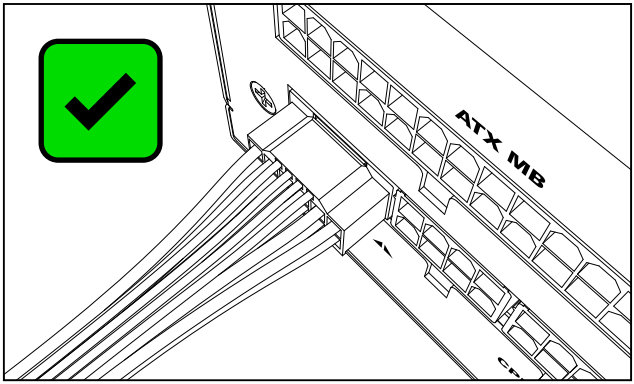


# Installation

**PLEASE NOTE!**

Make sure that only the supplied modular cables are used. The use of other cables (for example, cables from an older Sharkoon PSU series or cables from other manufacturers) can damage the device and the peripheral hardware. Make sure all cables are properly connected and fully inserted into the power supply unit and the peripheral hardware.

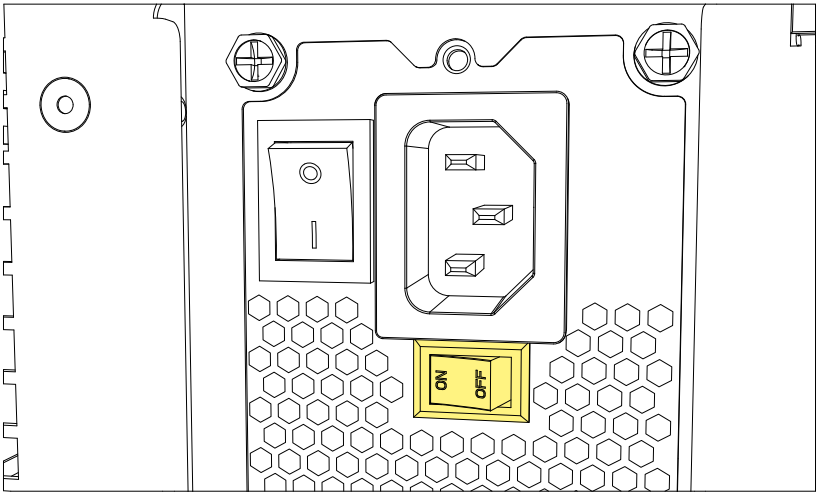


# Cooling Options

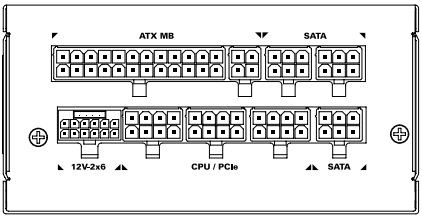
The Rebel P20 SFX is equipped with two functions for flexibly adjusting the cooling behavior, which are explained below.

**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 unit sufficiently. When the Zero RPM mode is off, the fan runs continuously at low speed to produce a constant airflow.



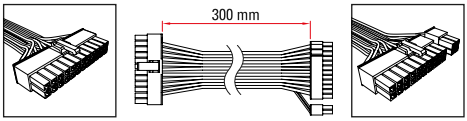
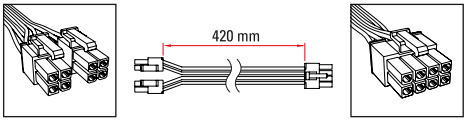
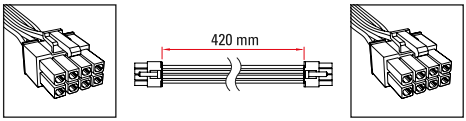
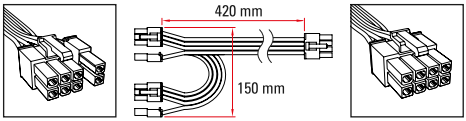
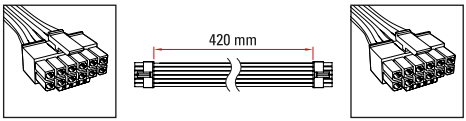
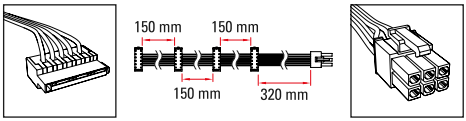
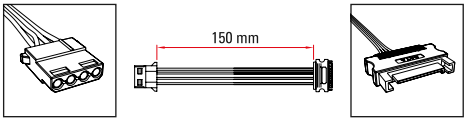

**Fan Delay Mode**
The power supply unit's fan continues to run for 120 seconds at constant speed after the system has been switched off. As a result, hot spots are avoided, and remaining waste heat is transported out of the system. In addition, this increases the service life of the installed components.

# Connection Options




1x 24-pin mainboard (2x ATX MB)
2x 4+4-pin/8-pin CPU (CPU / PCIe)
1x 6+2-pin PCIe (CPU / PCIe)
3x SATA (SATA)
1x 12V-2x6

## CABLE SET

| QTY | Type | Cable | Connectors per Cable | Total Connectors |
|---|---|---|---|---|
| 1 | 24-Pin Mainboard Connector |   | 1 | 1 |
| 1 | 4+4-Pin CPU Connector |   | 1 | 1 |
| 1 | 8-Pin CPU Connector |   | 1 | 1 |
| 1 | 6+2-Pin PCIe Connector |   | 2 | 2 |
| 1 | 12V-2x6 Connector |   | 1 | 1 |
| 2 | SATA Connector |   | 4 | 8 |
| 1 | IDE Connector |   | 1 | 1 |

# Troubleshooting

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

1. Is the power cord correctly inserted into your wall outlet and the power supply unit?
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 /8-pin CPU connector are correctly connected to the mainboard.
4. Check if the connectors of the cables are firmly plugged into the ports and headers of the peripheral hardware.
5. Pull the plug of the power cord out of your wall outlet and leave the power supply unit 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

# Note

**Legal Disclaimer**

For potential loss of data, especially due to inappropriate handling, Sharkoon assumes no liability.

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**Disposal of your old products**

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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