

The ATX - PC Supply

Using PC ATX Power Supplies for Stanley Meyer's Technology

PC ATX power supplies are versatile and reliable sources of power, making them well-suited for use in various experimental setups, including those inspired by Stanley Meyer's technology. These power supplies offer multiple regulated voltage taps, flexibility for different AC input levels, and robust current capacity, making them a convenient option for powering different components of a water fuel cell system or other similar applications.

Overview of ATX Power Supplies

ATX power supplies are typically used to provide power to desktop computers, but their capabilities extend beyond computing. A standard ATX power supply is designed to output multiple regulated voltages, usually including 3.3V, 5V, 12V, -5V, and -12V. This range of voltages can support a wide variety of electronics, making it a great choice for DIY projects. Most ATX power supplies can operate from either 120V or 240V AC mains, providing flexibility for international use.

Voltage Taps and Current Capacities

A typical 300W ATX power supply is capable of providing sufficient power for most DIY applications:

- **+5V Rail:** The 5V rail is often capable of delivering between 20A to 30A of current. This makes it well-suited for powering control circuitry, microcontrollers, and other low-voltage electronics in a Stanley Meyer-inspired system. The high current availability ensures stable operation, even for relatively power-hungry components.
- **+12V Rail:** The 12V rail usually provides 15A to 20A, and in some cases even more. This rail is ideal for driving power-hungry components, such as transformers, relays, or high-power MOSFETs used in Meyer's resonance circuit designs. The consistent, high-current 12V supply can be leveraged to drive both primary coils and switching components effectively.
- **Negative Voltage Rails:** ATX power supplies also include -5V and -12V rails. These rails have much lower current capacities compared to their positive counterparts. Typically, the -5V rail is rated for around 0.5A, while the -12V rail might support up to 1A. Despite the limited current, these negative taps can be used for biasing circuits or other small-signal applications where a negative voltage is required.

Advantages for Stanley Meyer's Applications

One of the primary benefits of using an ATX power supply for Stanley Meyer-inspired work is the convenience of having multiple regulated voltages in one unit. The +5V and +12V rails are particularly useful for powering different stages of Meyer's water fuel cell circuit, including control electronics, pulse-generating circuits, and power switching elements.

Furthermore, ATX power supplies are designed to handle varying AC input voltages, making them adaptable to both 120V and 240V mains. This flexibility is particularly advantageous if you need a portable setup that can be used in different regions. The inclusion of overcurrent and overvoltage protection also ensures the safety of both the components and the operator, making ATX power supplies a reliable choice for experimental work.

Practical Considerations

While ATX power supplies offer many advantages, there are some practical considerations to keep in mind. Firstly, ATX power supplies need a load to operate correctly. Many ATX supplies will not turn on unless they sense a minimum load on one or more of the rails, typically the 5V rail. Adding a power resistor as a dummy load can help ensure stable operation.

Another consideration is the need to properly start the power supply. ATX power supplies are designed to be turned on and off via a signal from the motherboard. To use an ATX power supply independently, you'll need to short the PS_ON pin (usually green) to a ground pin, which will enable the power supply to turn on.

To make using an ATX power supply even more convenient, you can use an **ATX breakout board** such as the [GeekPi ATX Breakout Adapter Board](#). This breakout board provides screw terminal connectors for each voltage rail, making it easy to connect to your components without needing to modify the original ATX wiring. The breakout board can be mounted inside a project box, and external switches can be added to control the power supply. This setup allows for a clean and organized power distribution system, complete with easy on/off control for different experimental stages.

Conclusion

PC ATX power supplies are well-suited for projects involving Stanley Meyer's technology due to their regulated voltage outputs, current capacities, and flexibility in AC input voltage. The +5V and +12V rails provide ample current for various experimental components, while the negative voltage rails offer versatility for small-signal applications. By leveraging the features of an ATX power supply, hobbyists and researchers can create efficient, reliable setups to explore water fuel cell

technologies and other innovative energy systems.

If you're planning to incorporate an ATX power supply into your own experimental work, make sure to account for proper load requirements and activation procedures to ensure consistent and safe performance.

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