Podazz 12V DC Peristaltic Dosing Pump

Podazz 12V DC Peristaltic Dosing Pump Instruction Manual

Model: 12V DC Peristaltic Dosing Pump (ASIN: B0DB5P97HT)

1. Introduction

This manual provides essential information for the safe and efficient operation of your Podazz 12V DC Peristaltic Dosing Pump. This pump is designed for precise liquid transfer in various applications, including aquariums, laboratories, and DIY projects with platforms like Arduino. Please read these instructions thoroughly before installation and use.

2. Product Features

- **Snap-Type Design:** Allows for easy removal of the pump head for quick tube replacement and cleaning.
- **Versatile Liquid Transfer:** Suitable for both viscous and non-viscous liquids.
- **Adjustable Flow Direction:** Liquid flow direction can be reversed by changing the polarity of the power connection.
- **Compact and Efficient:** Designed to prevent hose walking issues common with pressure piece type pumps.
- **Wide Application Range:** Ideal for plant watering, precise laboratory dispensing, and transferring various chemical liquids.
- **Pulsation:** Features a 3-rolling wheel design for consistent operation.

Figure 1: Front view of the Podazz 12V DC Peristaltic Dosing Pump, showing the pump head and tubing connections.

3. Specifications

Specification	Value
Voltage	DC 12V
Motor Speed	5000 RPM
Flow Rate (Overall)	0-100 mL/min (up to 100 mL/min without connectors)
Flow Rate (1mm ID x 3mm OD tube)	2-17 mL/min
Flow Rate (2mm ID x 4mm OD tube)	5-50 mL/min
Flow Rate (3mm ID x 5mm OD tube)	19-100 mL/min

Specification	Value
Working Temperature	0~40 ℃ (32~104 ℉)
Relative Humidity	<80%
Pulsation	3 rolling wheel
Item Weight	0.09 Kilograms
Included Components	Engineering Plastics

Note: While some product listings may refer to a "DC 24V" model number, this specific product operates at 12V DC as detailed in the product title and features.

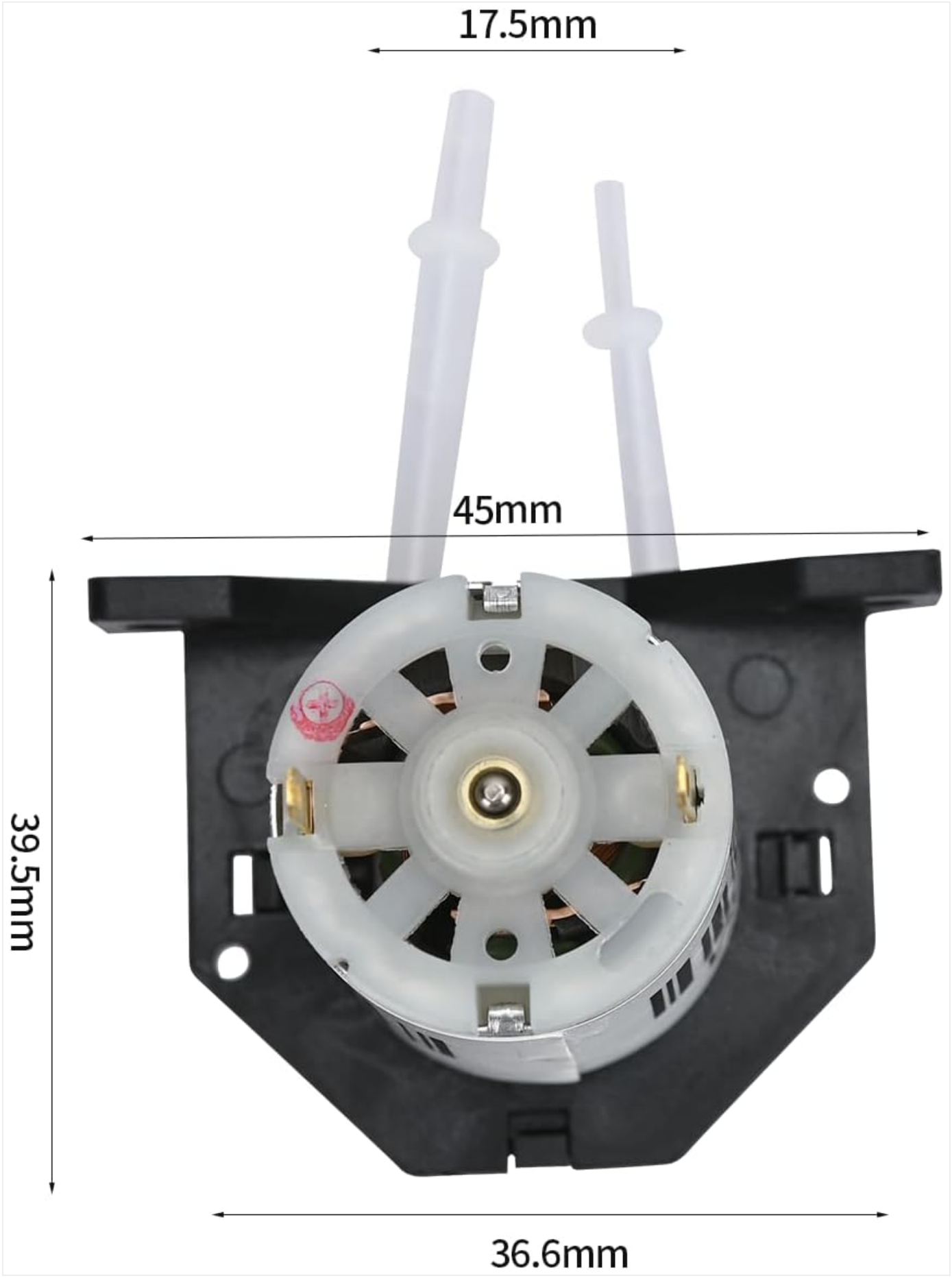

Figure 2: Dimensions of the Podazz 12V DC Peristaltic Dosing Pump.

4. Setup

1. **Prepare Tubing:** Connect appropriate tubing (e.g., 3mm ID x 5mm OD) to the inlet and outlet ports of the pump

head. Ensure connections are secure to prevent leaks.

2. **Mounting:** Secure the pump in a stable position using the integrated mounting points.
3. **Power Connection:** Connect the pump to a stable DC 12V power source.
    - Connect the positive (+) terminal of the power supply to the positive wire of the pump.
    - Connect the negative (-) terminal of the power supply to the negative wire of the pump.
    - *Note: Reversing the polarity will reverse the direction of liquid flow.*
4. **Initial Test:** Before connecting to your main system, perform a brief test with water to ensure proper operation and check for any leaks.

Figure 3: Example of connecting the pump to a 12V DC power source.

5. Operating Instructions

Once the pump is properly set up and connected to a 12V DC power source, it will begin to operate. The flow rate is determined by the internal motor speed and the dimensions of the pump tube used.

- **Starting the Pump:** Apply 12V DC power to the pump.
- **Stopping the Pump:** Disconnect the 12V DC power supply.
- **Changing Flow Direction:** Reverse the polarity of the 12V DC power connection to change the direction of liquid flow through the pump.
- **Flow Rate Control:** The pump operates at a fixed motor speed. To adjust flow rate, you may need to use a variable voltage power supply (within the 12V DC limit) or select different tubing sizes as indicated in the specifications.

6. Maintenance

Regular maintenance ensures optimal performance and extends the lifespan of your peristaltic pump. The snap-type design facilitates easy access for cleaning and tube replacement.

1. **Pump Tube Replacement:**
    - Disconnect power from the pump.
    - Gently press the pump head to release the snap mechanism.
    - Carefully remove the old pump tube.
    - Insert a new, compatible pump tube, ensuring it is correctly seated within the pump head.
    - Snap the pump head back into place until it is secure.
2. **Cleaning:**
    - For general cleaning, wipe the exterior of the pump with a damp cloth.
    - If the pump head or rollers require cleaning, disassemble the pump head as described above and clean components with a mild detergent and water. Ensure all parts are dry before reassembly.
    - Avoid using harsh chemicals or abrasive materials that could damage the pump.

Figure 4: Exploded view of the pump head, showing components for easy maintenance and tube replacement.

7. Troubleshooting

Problem	Possible Cause	Solution
Pump does not start	No power or incorrect voltage.	Verify the 12V DC power supply is connected correctly and is active. Check wiring for loose connections.
No liquid flow	Blocked tubing, air in the line, or incorrect tube installation.	Check tubing for kinks or blockages. Ensure tubing is properly seated in the pump head. Prime the pump if necessary by manually drawing liquid through the inlet.
Inconsistent flow rate	Air bubbles, worn pump tube, or external pressure variations.	Check for air leaks in the tubing system. Replace the pump tube if it appears worn or damaged. Ensure consistent liquid supply.
Liquid leaks from pump head	Improperly installed pump tube or damaged tube.	Ensure the pump tube is correctly installed and the pump head is securely snapped into place. Replace the pump tube if it is damaged.

8. Warranty and Support

Your Podazz 12V DC Peristaltic Dosing Pump comes with a**24-month warranty** from the date of purchase, covering manufacturing defects. Additionally, Podazz provides **lifetime after-sales and technical support**
For warranty claims, technical assistance, or any questions regarding your product, please contact Podazz customer service through the retailer's platform or visit the official Podazz website for contact information.