

## K KAMOER UIP WIFI V2-KK1800-S183-2-US

# Kamoer UIP V2 Peristaltic Pump User Manual

Model: UIP WIFI V2-KK1800-S183-2-US

## 1. INTRODUCTION

The Kamoer UIP V2 is an intelligent, high-flow peristaltic pump designed for precise liquid transfer in various applications. This manual provides essential information for the safe and efficient installation, operation, and maintenance of your UIP V2 pump. Please read this manual thoroughly before using the device.

This double-head model offers a single-channel flow rate of 0.1 to 1500 ml/min and can simultaneously pump two liquids. It features a high-precision closed-loop stepper motor and a user-friendly touch screen control interface.

## 2. PRODUCT FEATURES

- **Compact Design:** Dimensions of 140mm × 231mm × 180mm and a weight of 4.8kg.
- **Wide Flow Regulation:** Achieves a flow rate from 0.1 to 1500 ml/min per single channel.
- **Enhanced User Interface:** Features a 4.3-inch color touchscreen for responsive operation.
- **KK1800 Pump Head:** Supports rapid tubing replacement and comes standard with S18# silicone tubing (7.9mm ID × 11.1mm OD). The 1.6mm inner wall thickness is suitable for both viscous and non-viscous liquids.
- **High Precision & Durability:** Integrates a stainless steel 3-roller mechanism and a closed-loop stepper motor, ensuring high flow control accuracy and over 6,000 hours of lifespan for rollers and motor.
- **Dual Working Modes:** Offers continuous and volumetric dispensing modes.
- **Efficient Performance:** High speed of 350 RPM with a low-noise design (less than 65dB).
- **Multi-dimensional External Control:** Supports foot pedal switches, RS485 communication, and analog input control (0-5V/10V voltage, 4-20mA current) for automation.
- **Tubing Compatibility:** Supports five tubing sizes with 1.6mm wall thickness: 19# (2.4×5.6mm), 16# (3.2×6.4mm), 25# (4.8×8.0mm), 17# (6.4×9.6mm), and 18# (7.9×11.1mm standard).
- **Power & Applications:** Operates at 100-240V AC with 75W power consumption, suitable for automated packaging, reagent dispensing, liquid transfer, and distribution systems.

- **Dual Pump Head Configuration:** The device supports a dual pump head setup, effectively doubling the flow rate. Note that independent control of each pump head is not available.

### 3. PACKAGE CONTENTS

---

Upon unpacking, verify that all items are present and undamaged:

- 1 x Kamoer UIP WIFI V2-KK1800-S183-2-US Peristaltic Pump
- 1 x Power Cord
- 1 x User Manual (this document)
- Additional accessories as specified by the manufacturer

### 4. SAFETY INFORMATION

---

Observe the following safety precautions to prevent injury or damage to the device:

- Read and understand this entire manual before operation.
- Ensure the power supply matches the rated voltage (AC100-240V).
- Do not operate the pump in wet or hazardous environments.
- Avoid direct contact with moving parts during operation.
- Only qualified personnel should perform maintenance or repairs.
- Disconnect power before performing any maintenance or tubing changes.

### 5. SETUP

---

#### 5.1 Unpacking and Placement

Carefully remove the pump from its packaging. Place the pump on a stable, level surface, ensuring adequate ventilation around the unit.

#### 5.2 Power Connection

Connect the provided power cord to the power interface on the rear panel of the pump. Plug the other end into a suitable AC100-240V power outlet. Use the main switch to control power to the unit.



Figure 5.1: Rear panel connections of the Kamoer UIP V2 pump. (1) Power Switch, (2) Power Interface, (3) Interface A, (4) Interface B.

### 5.3 Tubing Installation

The pump comes with a KK1800 pump head. To install or replace tubing:

1. Open the pump head cover.
2. Carefully insert the tubing (e.g., S18# silicone tubing) into the pump head, ensuring it sits correctly within the rollers and guides.
3. Close the pump head cover securely.

### 5.4 External Control Connections (Optional)

The pump supports various external control methods via Interface A and Interface B on the rear panel. Refer to the pinout diagram for correct wiring.

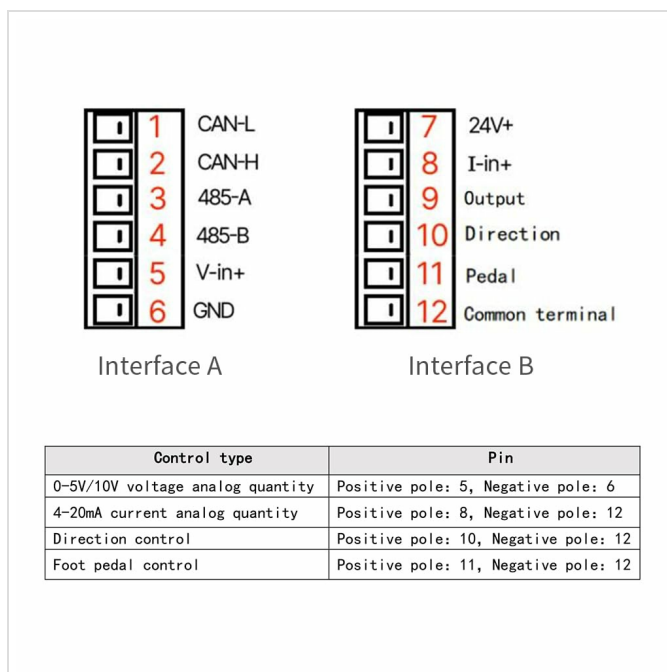


Figure 5.2: Pinout details for Interface A and Interface B.

**Table 5.1: External Control Pin Assignments**

Control Type	Pin Assignment
0-5V/10V Voltage Analog Quantity	Positive pole: 5, Negative pole: 6
4-20mA Current Analog Quantity	Positive pole: 8, Negative pole: 12
Direction Control	Positive pole: 10, Negative pole: 12
Foot Pedal Control	Positive pole: 11, Negative pole: 12

## 6. OPERATING INSTRUCTIONS

### 6.1 Powering On/Off

Flip the main power switch on the rear panel to the 'ON' position to power on the pump. The touchscreen display will illuminate. To power off, flip the switch to 'OFF'.

### 6.2 Touchscreen Interface Overview

The 4.3-inch color touchscreen provides access to all pump functions and settings.

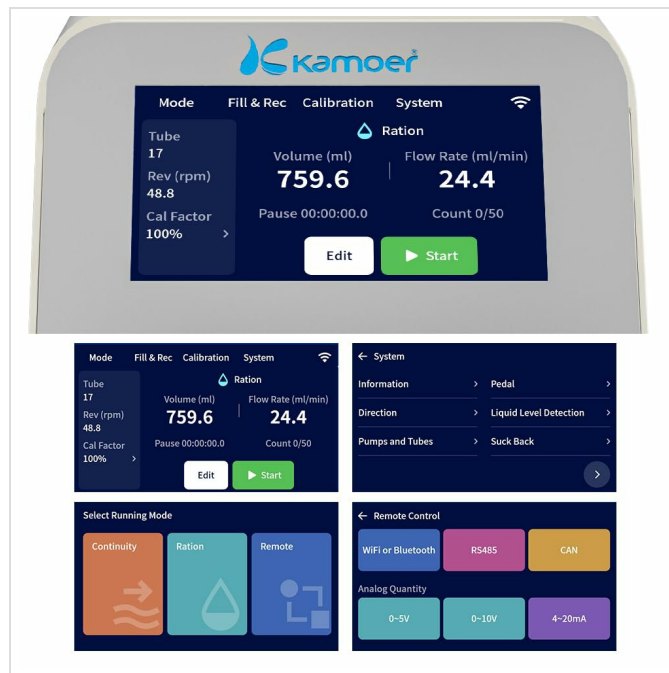


Figure 6.1: Detailed view of the touchscreen interface, displaying operational parameters and menu options.

### 6.3 Mode Selection

From the main screen, you can select different operating modes:

- **Continuity Mode:** For continuous liquid transfer at a set flow rate.
- **Ration Mode (Volumetric):** For dispensing specific volumes of liquid.
- **Remote Mode:** For controlling the pump via external signals (e.g., RS485, analog input, foot switch).



Figure 6.2: Touchscreen displaying mode selection options and the dual pump head design.

## 6.4 Setting Flow Rate and Volume

Navigate to the desired operating mode (e.g., Continuity or Ration) on the touchscreen. Use the 'Edit' function to adjust parameters such as flow rate (ml/min) or dispensing volume (ml). Confirm your settings and press 'Start' to begin operation.

## 6.5 Calibration

Regular calibration ensures accurate flow rates. Access the 'Calibration' tab on the touchscreen to perform calibration procedures according to the on-screen instructions. This typically involves dispensing a known volume and adjusting the calibration factor.

## 6.6 System Settings

The 'System' tab allows configuration of various pump parameters, including:

- **Information:** View device details.
- **Pedal:** Configure foot pedal functionality.
- **Liquid Level Detection:** Set up external liquid level sensors.
- **Direction:** Adjust pump rotation direction.
- **Pumps and Tubes:** Manage tubing types and pump head configurations.
- **Suck Back:** Configure suck-back function to prevent dripping.

# 7. MAINTENANCE

## 7.1 Tubing Replacement

Peristaltic tubing is a consumable item and requires periodic replacement. The lifespan of the tubing depends on the liquid being pumped, flow rate, and operating duration. Replace tubing when signs of wear, such as flattening or cracking, become apparent to maintain accuracy and prevent leaks.

## 7.2 Cleaning

Wipe the exterior of the pump with a soft, damp cloth. Do not use abrasive cleaners or immerse the unit in

water. Ensure no liquid enters the internal components.

### 7.3 General Care

Keep the pump free from dust and debris. Store in a dry, temperate environment when not in use. Avoid dropping or subjecting the pump to strong impacts.

## 8. TROUBLESHOOTING

---

This section addresses common issues you may encounter with your Kamoer UIP V2 pump.

- **Pump Not Starting:**

- Check if the power cord is securely connected.
- Ensure the main power switch is in the 'ON' position.
- Verify the power outlet is functional.

- **Inaccurate Flow Rate:**

- Perform a calibration procedure (Section 6.5).
- Check the tubing for wear or damage; replace if necessary.
- Ensure the correct tubing size is selected in the system settings.

- **Unusual Noise During Operation:**

- Inspect the pump head for any obstructions or misaligned tubing.
- Ensure the pump is placed on a stable surface.
- If the noise persists and is excessive, contact technical support.

- **Touchscreen Unresponsive:**

- Restart the pump by cycling the power switch.
- Ensure the screen is clean and free of moisture.

If the issue persists after attempting these troubleshooting steps, please contact Kamoer technical support.

## 9. SPECIFICATIONS

---

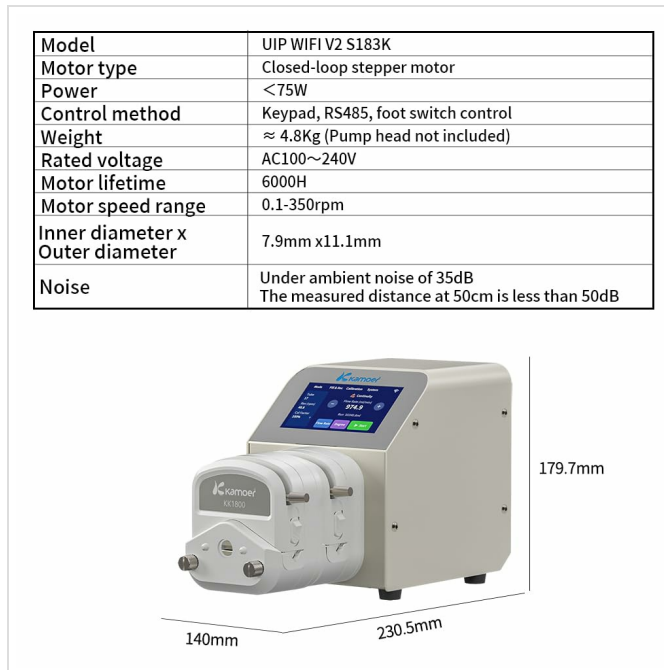


Figure 9.1: Kamoer UIP V2 pump with key specifications and dimensions.

**Table 9.1: Kamoer UIP V2 Peristaltic Pump Specifications**

Parameter	Value
Model	UIP WIFI V2-KK1800-S183-2-US
Motor Type	Closed-loop stepper motor
Power Consumption	<75W
Control Method	Keypad, RS485, Foot Switch Control
Weight	~4.8 kg (Pump head not included)
Rated Voltage	AC100~240V
Motor Lifetime	6000H
Motor Speed Range	0.1-350 rpm
Standard Tubing (ID x OD)	7.9mm x 11.1mm (S18#)
Noise Level	Under ambient noise of 35dB, measured at 50cm is less than 50dB
Dimensions (L x W x H)	230.5mm x 140mm x 179.7mm
Package Dimensions	14.48 x 11.85 x 8.82 inches
Manufacturer	Kamoer Fluid Tech (Shanghai) Co., Ltd.

## 10. WARRANTY AND SUPPORT

For warranty information, technical assistance, or service inquiries regarding your Kamoer UIP V2 peristaltic pump, please contact Kamoer customer service directly or visit the official Kamoer website. Please have your model number (UIP WIFI V2-KK1800-S183-2-US) and purchase details available when contacting support.

