Precise And Reliable Fluid Transfer

Product Manual

Kamoer Fluid Tech (Shanghai) Co., Ltd.

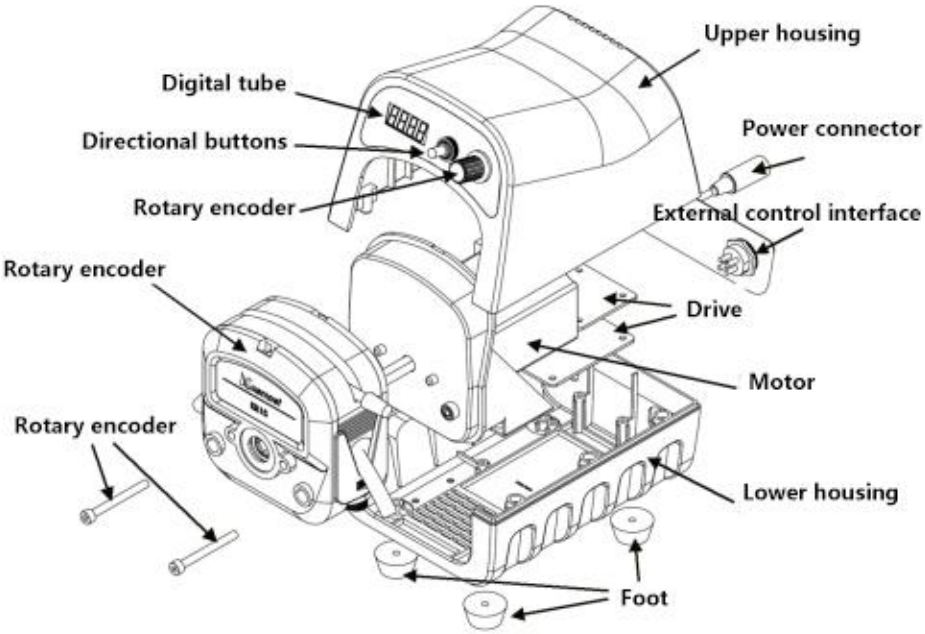
Version: A/0

Product name	Smart Peristaltic Pump
Product model	DIP 1500 V2
Execution date	2023.02.14
Company name	Kamoer Fluid Tech (Shanghai) Co.,Ltd.

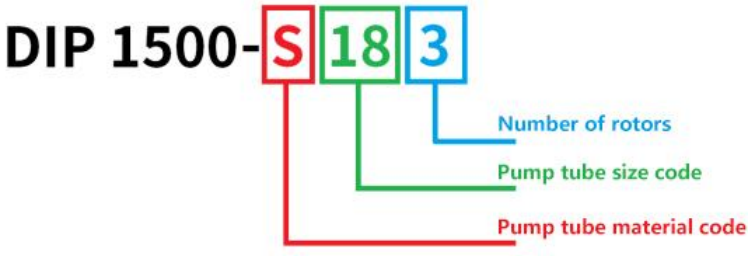
1. Product Overview

1.1 Product physical picture

1.2 Product assembly drawing



1.3 Model definition



1.4 Optional pump head

Pump head type	Pump tube wall thickness	Number of rotors	Picture
KKTS	1.6mm	3 rotors	

1.5 Optional pump tubing

Material	Code	Icon	Characteristic	Standards
Silicone tube	S		Low adsorption, good temperature resistance, not easy to age, low precipitates, etc., the chemical corrosion resistance decreases with the increase of temperature Working temperature: -60°C~200°C.	RoHS Comply with food grade certification (GB4806.11-2016)

1.6 Performance characteristics

- The digital tube displays the real-time speed and flow
- Stepper motor is precisely controlled, and the speed adjustment resolution is 0.1 rpm
- Support start and stop, reversing, speed regulation, calibration, reverse suction and other functions
- Rich control methods, support rotary encoder, foot switch, external analog (0-5V, 0-10V or 4-20mA), 485 communication (Modbus) control
- Support power-off memory function, which can automatically save the operating parameters of the last power-off
- Support automatic circulation, semi-automatic circulation, manual three working modes
- Support operation by speed and flow

1.7 Typical applications

- Laboratory: liquid transfer, reagent packing
- Industrial process: such as pumping hydraulic oil
- Fine chemicals: such as cosmetic packaging, slurry recovery and filtration
- Food Process: beverage filling

1.8 Product main material

Upper/lower shell	KKTS pump head				
	Front/rear shell	Sync disk	Rocker arm	Rotor shaft	Rotor
Plastic	Engineering plastics	Engineering plastics	304 stainless steel	304 stainless steel	Engineering plastics

1.9 Product Certification, Intellectual Property

Appearance patent

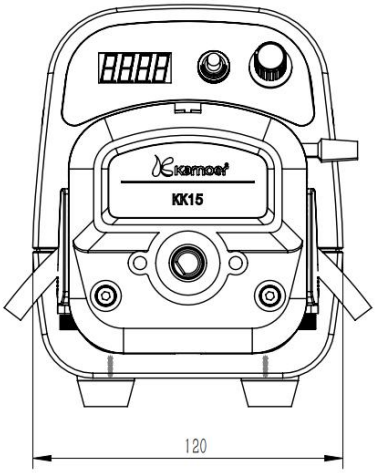
CN306907834S

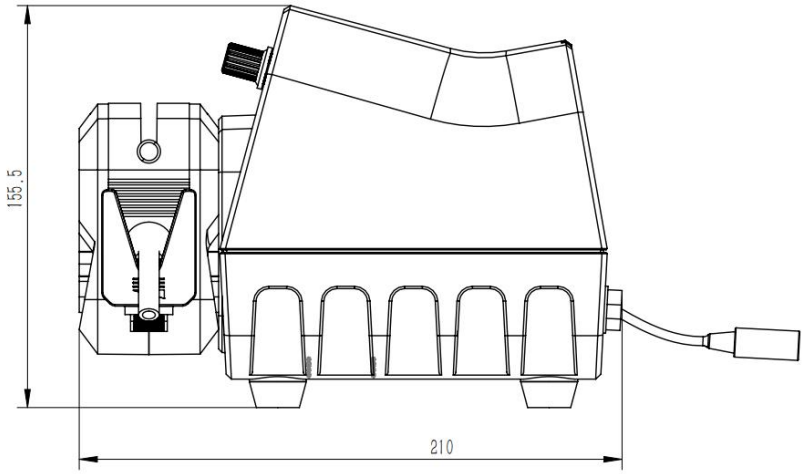
1.10 Product Risk Warning

- Hoses are resistant to liquid media Need to check chemical compatibility or conduct immersion tests, improper hose selection may cause hose damage quickly
- The working environment of the product should not exceed 60°C, and the humidity should not exceed 80% (no condensation). The harsh working environment will cause premature damage to the product
- Fluid leakage accidents due to hose ruptures depend on the fluid medium and your specific application conditions
- High overloading may result in premature failure of the product

2. Product specification

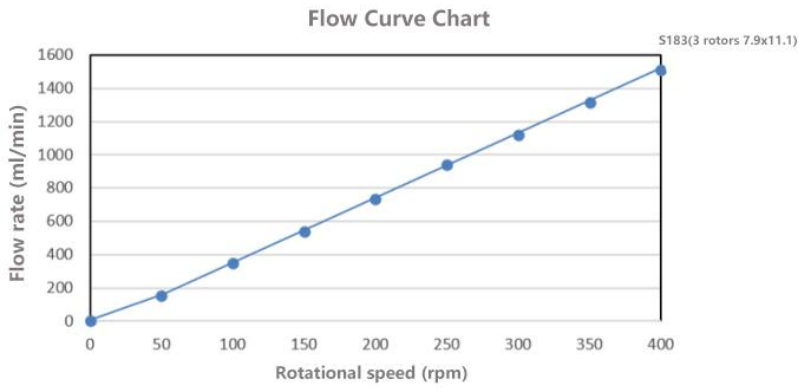
2.1 Product Size





2.2 Technical Parameters

Items		Technical Parameters
Basic parameters	Using electric	DC24V 2A power adapter
	Power	＜50W
	Motor type	Stepper motor
	Working environment	Temperature 0～60°C, relative humidity＜80%RH
	Total Weight	About 1.7Kg (including pump head)
	Reference noise value	⩽65dB (the horizontal distance between the product and the noise meter is 0.5 meters)
	Range of rotation	0.1-400 rpm
	Speed adjustment resolution	0.1 rev/min
	Flow range	⩽1500ml/min
	Display method	LED 4-digit digital tube
	Control method	Rotary encoder, foot switch, external analog (0-5V, 0-10V or 4-20mA), 485 communication control
	Operating mode	Speed Mode and Flow Mode
	Way of working	Fully automatic cycle, semi-automatic cycle, manual
	Support function	Start and stop, reversing, speed regulation, calibration, suck back, parameter memory, etc.
Pump flow	**Reference flow (unit: ml/min)**	
	Model code	S183
	Pump tube material	silicone tube
	ID x OD(mm)	7.9*11.1
	Number of rotors	3
	Max flow	1500



Note: The above maximum flow rate is obtained at room temperature (about 25°C), using a new pump tube that has been aged for 15 minutes and tested water at 400 rpm, for reference only. Ambient temperature, the material and elasticity of the pump tube, the viscosity of the test liquid and other factors will affect the actual flow rate. The thickness of the pump tubing will affect the actual maximum speed for stable operation.

2.3 Interface definition

The power interface is a waterproof connector, the integrated control port is a 9-pin aviation connector, including 485 communication, external start-stop control, analog signal control 0-5V/0-10V, analog signal control 4-20mA

The specific pins are defined as follows (refer to the diagram attached later):

Foot 1: leave blank

Foot 2: 485 B

Foot 3: 485 A

Foot 4: foot switch+

Foot 5: Foot Switch –

Pin 6: Analog signal 5V-/10V-

Pin 7: Analog signal 5V+/10V+

Pin 8: Analog Signal mA-

Pin 9: Analog Signal mA+

2.4 Accessories

Parts name	Type	Accessories picture	Function introduction
GX16-9 foot switch 10.09.0518	Standard		The foot switch is used to replace the start/stop button. In a suitable interface, step on the foot switch to control the start and stop of the pump. The foot switch is a standard accessory, and the line length is 2 meters.