

Product Manual

Kamoer Fluid Tech(Shanghai) Co., Ltd.

Version: A/4

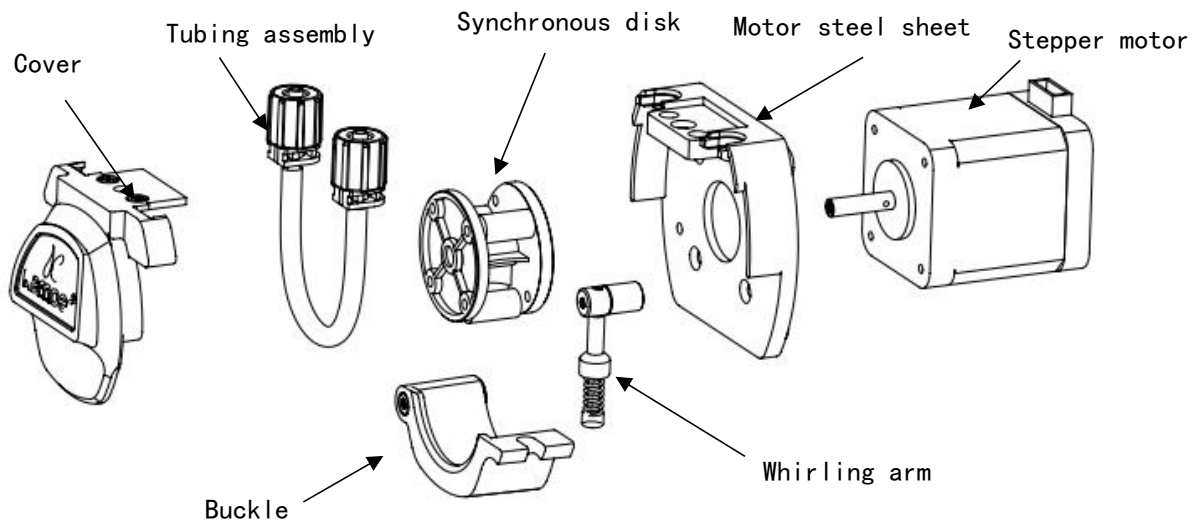
Product name	Micro peristaltic pump
Product number	KCM
Execution date	2022. 12. 07
Manufacturing unit	Kamoer Fluid Tech(Shanghai) Co., Ltd.

一、Product Overview

1. Product physical map



2. Product assembly drawing



3. Model definition

KCM	B	14	3	Null
Model	Cast	Tube number	Rotor	Installation method

3.1 Tube type

B: BPT pump tube



3.2 Pipe number

14# (inner diameter×outer diameter): Metric 1.6mm×4.8mm

19# (inner diameter×outer diameter): Metric 2.4mm×5.6mm

16# (inner diameter×outer diameter): Metric 3.2mm×6.4mm

3.3 Rotor

3 rotors

3.4 Installation method

Empty: standard installation

3.5 Product material

Pump head model	Front cover	Base	Sync disk	Buckle	Rotor	Connector
KCM	PC	PA	POM	PA	PET	PP

4. Performance characteristics, typical applications

4.1 Performance characteristics

◆ KCM series peristaltic pump is a peristaltic pump driven by a stepping motor, and the imported motor has superior performance

◆ Pump tube is imported BPT(B) with a wall thickness of 1.6mm , and other pump tubes can be customized for different transmission liquid requirements

◆ Compatible with pump tubes of various specifications to meet different liquid transmission needs

◆ Simple structure, low noise, quick replacement of pump tube

◆ Installation method is plate-through fixing or optional L-shaped fixing, with shock absorption or without (see attached picture for details)

◆ Structural parts of the pump body are made of high-strength synthetic engineering plastics, and all metal parts are made of high-corrosion-resistant stainless steel to ensure long-term reliable operation of the pump

4.2 Typical applications

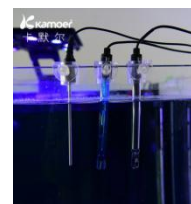
Analytical instruments: water quality analyzer, nutrient solution ratio, aquarium water change, etc.



Water quality analyzer



Nutrient solution ratio



The aquarium changes the water



5. Product Certification, Intellectual Property

CN304421058S



CE certification



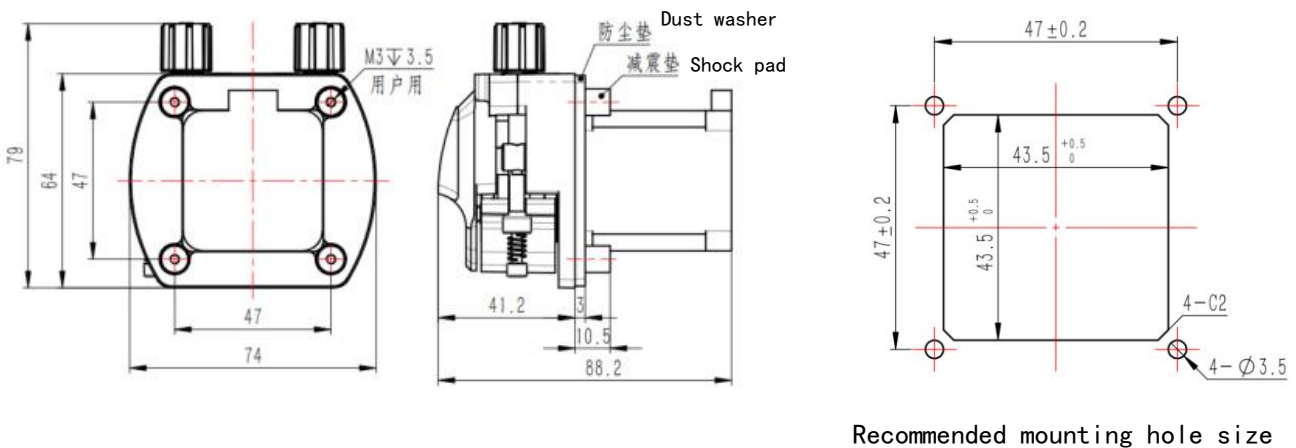
RoHS certification



- ◆ 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 45° C, and the humidity should not exceed 70% (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

二、Product specification

1. Product Size



Recommended mounting hole size



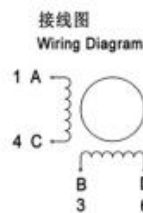
2. Technical parameters

Item		Technical parameter		
Basic parameters	Motor type	Stepper motor		
	Flow range	0-200ml/min; accuracy $\pm 10\%$		
	Noise	$\leq 60\text{dB}$		
	Power	36W		
	Control method	Switch control		
	Weight	About 450g		
	Rated voltage	24V		
	Pump tube life	BPT: 1000h		
	Motor life	6000h		
	Reference noise value	In a quiet room with an ambient noise of 35dB, the product is 50cm away from the noise tester, and the noise is 52dB		
Pump flow	Reference flow rate (unit: ml/min)			
	Pump tube code	14#	19#	16#
	ID × OD	Metric: 1.6mm×4.8mm Inch: 1/16in×3/16in	Metric: 2.4mm×5.6mm Inch: 3/32in×7/32in	Metric: 3.2mm×6.4mm Inch: 1/8in×1/4in
	Pump tube material	BPT		
	300rpm (3 rotors)	$\geq 38\text{ml/min}$	$\geq 90\text{ml/min}$	$\geq 160\text{ml/min}$
Supplementary Note	The above parameters are measured with pure water without pressure at room temperature and standard atmospheric pressure at 20° C. Actually, there will be certain errors in the flow rate due to different media, different outlet pressures, and DC motor speed errors. The data are for reference only. In addition, it can be customized according to customer needs.			

3. Motor parameters and line color diagram

Step angle: 1.8° Two phases and four lines The wiring length is 400mm

步距角 1.8° 两相四线 配线长 400mm



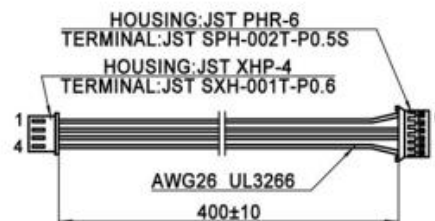
连接器针位vs.引线颜色
Pin No. vs. Lead Wire Colour

PHR-6 PIN No.	XHP-4 PIN No.	颜色 Colour
1	1	黑 BLK
3	3	红 RED
4	2	绿 GRN
6	4	蓝 BLU

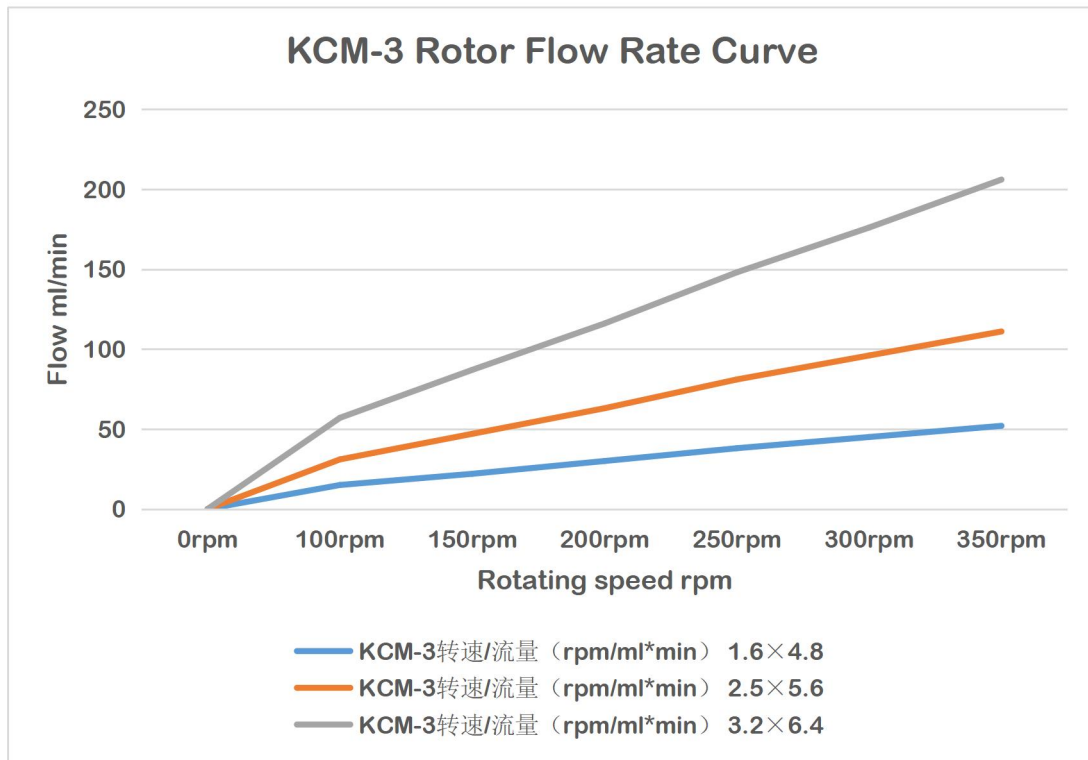
励磁顺序vs.旋转方向
Exciting Sequence vs. Direction of Rotation

STEP	A	B	C	D	
1	+	+	-	-	↑ CCW ↓ CW
2	-	+	+	-	
3	-	-	+	+	
4	+	-	-	+	

从安装面看为顺时针方向
Clockwise view from mounting side

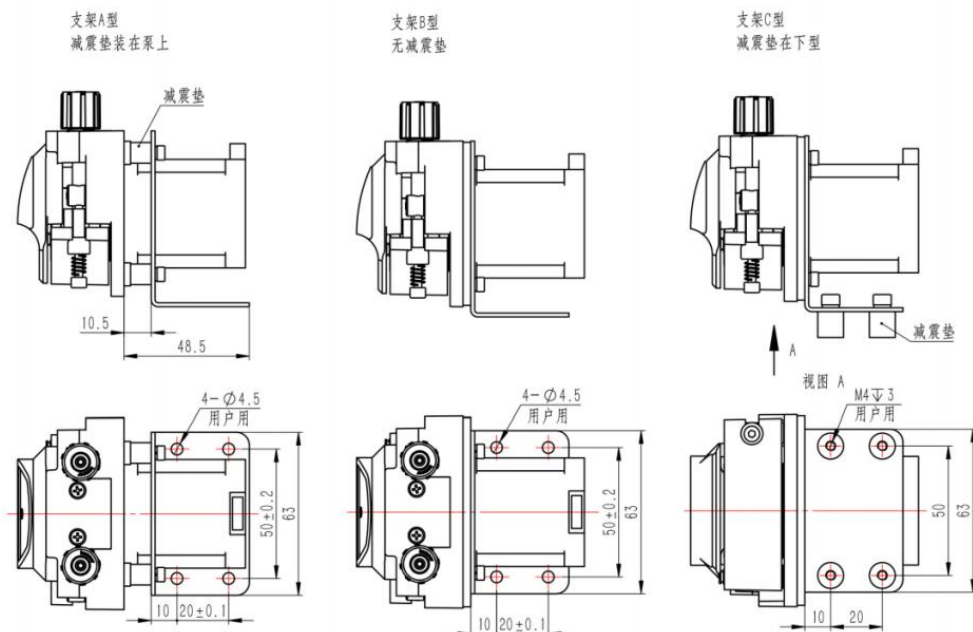


4. Flow curve




5. L type installation

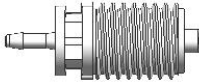
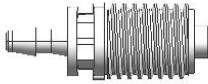

- A: The shock pad is attached to the pump.
- B: No shock pads
- C: The shock pad is underneath.



三、Adapter hose

Pump tube material	Characteristic	Standards compliant	Tube number
BPT tube (B) 	Resistance to common chemicals, acid and alkali, and oxidation, with a lifespan of more than 1000h	RoHS FDA	14#, 19#, 16#

四、Optional accessories

Name	Specifications		Function introduction
Threaded joint	KCM special connector 1		Inner 0.6mm-2.0mm hose 1.8mm-2.4mm hose can be connected externally
Threaded joint	KCM special connector 2		Inner 2.0mm-3.2mm hose 2.5mm-3.2mm hose can be connected externally
Peristaltic pump stepper drive	MODBUS - RTU		Can realize built-in and external potentiometer speed regulation, can realize MODBUS RS485 communication and 0-10V analog speed regulation, realize electric and trigger two start and stop modes, subdivision maximum 32, drive current can be set (0.7A, 1.2A, 1.7A, 2.2A, 2.7A, 2.9A, 3.2A, 4.0A)

