X4 Dosing Pump
User's Manual For Android (V: 1.0)

Kamoer Fluid Tech (Shanghai) Co., Ltd.
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Contents

Warranty

We warrant your product against any defect in material and workmanship, under normal use. In the event a product is found to be defective within the warranty period of **one year**, we will, at our option, repair or replace the defective product. The warranty period starts at the day of purchase. For warranty validation, a proof of purchase must be furnished.

The followings are excluded from the warranty:

1．Improper use of the device causing malfunction;

2．The device is repaired or modified by an unauthorized person;

3．Use of non-produced material by our company i.e. pump tube;

4．Damage by disaster;

5．Improper maintenance causing damage;

6．Use of reagent or sample causing corrosion;

7．Damage by accident or over load;

8．Consumables, such as silicone tube and fuse etc.

To obtain warranty support, you may contact our local technical support. Our technical support will attempt to diagnose and correct the problem. If the problem cannot be rectified, our technical support will ask you to return the product. You will be asked to furnish proof of purchase to confirm that the product is still under warranty.

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Notice

We have considered user safety in the design process. Please read this manual carefully. Any improper operation may cause damage or danger.

1. Safety

The product belongs to Active Products. To avoid danger, you should observe the following rules.
- If you find any visible damage, please do not switch on;
- Be sure not to add any acid, alkali, or volatile solvents;
- Be sure not to use in humid environment, avoid damage by short circuit;
- Temperature change or mechanical wear may increase the volume error.

2. Defect and anomalous situation

You must stop any operation immediately if the equipment is damaged. The equipment may be damaged when the following situations occur:

1) There is visual damage.

2) The product suddenly does not work.

3) The product is located in an inappropriate position.

1.About

1.1 Product Introduction

X4 dosing pump is an intelligent pump which has a micro computer with four miniature peristaltic pump head. It is mainly used for aquarium tank to add a variety of elements, such as calcium, magnesium, kh improver, trace ealements, etc. Customs using this product can not only reduce the work of manual adding but also avoid leakage increases, add the amount of excessive or inadequate mistakes.

Features

Compact, elegant appearance;

Machine interface friendly, powerful;

Support for Windows PC, Android terminal via WIFI control titration pump, set the operating parameters;

Third gear flow rate can be set;

Support scaling function;

Embedded real-time clock, support scheduled start;

One day titration times 1-24 times can be set to support the next day, every two days, titration, supported by a few drops of a given week;

Support for external RS485 expansion;

With 4 level detection function;

Support temperature detection, and alarm thresholds.

Applications

Aquarium tank dosing;

Aquarium tank temperature monitoring;

Laboratory timing dosing liquid.

Other timing, dosing liquid applications.

1.2 Unboxing

● Before opening the box, check whether the package is damaged during transport.

● After opening the box, check the reference packing list, make sure that you have all parts and there are no damages.

  If you find any shortage or damage, please contact your retailer.

1.3 Structure

X4 Details

Up key: up switch to select items and increase the number
Down key: down switch to select items, and reduce the digital
Set key: go to the next page and confirm your selection
Esc key: returns to the previous page and deselect selection

LCD screen 2.6inch

Control box

Pump head 4pcs

PharMed®BPT tubing
Straight connectors 4*2pcs

out in

The placement should always be higher than the tank

Input tube should be as short as possible in order to avoid reflux, output tube should be above the containe. Please check carefully after connecting you tubes, make sure they are not backwards.

1.4 Accessories

1.4.1 Pumping heads (including tube)

Standard tubing is PharMed BPT which can continuous work for 2000 hours, it can meet most occasions.

1.4.2 Connecting tube

PVC transparent tube, pump import and export connection tube.

1.4.3 Tube Bracket

1.4.4 Power Transformers

Support GB, European standard, American Standard, Australian Standard.

1.5 Related Product

Product ID	Order number	Description
X4		X4 host.4 KPP heads and supporting 12V DC motor (2x4mm PharMed BPT tube).Button control, wifi control.

Pharmed BPT Features:

• Low particulate spallation

• Autoclavable and sterilizable

• Temperature resistant from -60°F to 275°F

• Withstands repeated CIP and SIP cleaning and sterilization

• Meets USP Class VI and FDA criteria

1.6 Specification:

Model: X4

Power adapter parameters
Input: See Power Adapter tab

Output: DC12V 1000mA

Work environment
Working Temperature: 0 - 70 ℃
Humidity: 10% - 90% (non-condensing)

Storage environment
Storage temperature: -20 ℃ - 85 ℃
Storage Humidity: 10% - 90% (non-condensing)

Dosing
Dosing Channel: 4
Dosing times: 24 times / day -- once / 7 days
Fluid volume: 1 ml - 1000 ml
Fluid volume accuracy: <± 2%
Pump tube life:> 2000 hours

Configuration
Pumping head: 4 KPP
Display: 132x32 dot matrix LCD screen
Backlight mode: Standby off automatically
Control Interface: WIFI interfaces, PC software settings, Android settings
Extended Interface: RS485
Liquid level detection: 4 liquid level sensor
Temperature detection: with a temperature sensor, with temperature alarm thresholds (alarm values   can be set)

Shape
Dimensions (length × width × height): 250 × 150 × 75
Weight (without power adapter): 900 g

2 How to use

2.1 Download Software

Scan QR code to download.

2.2 Connection Settings
1> Direct connection

Preparations
1, An iPhone and install the X4 **control software;**
2, X4 power on.

Step 1: Search the network: "KAMOER-X4-(The X4 SN No.)"
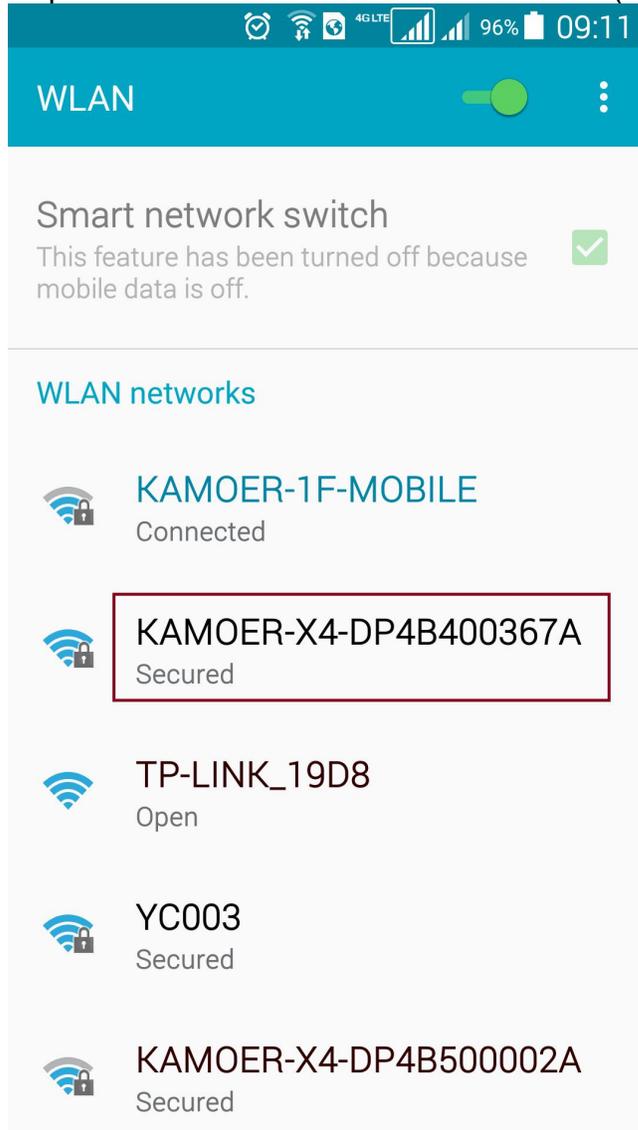
Step 2: Connect the network with the password: 12345678
Step 3: Open X4 software, Android software enter password: 345678;
Step 4: Login.

Tips:
1.If you cannot find the network "KAMOER-X4-(The X4 SN No.)", reset the wifi on the X4
How to reset wifi:
Press ESC to the X4 starting screen,
press the "SET " button
select 4 "Options"
select "Reset WiFi"
Press set to select "Yes" (wait 3-5 seconds.)
Back to the starting interface and power reset.
2. If the phone says connect failed or network error when you login, set the configuration to default and reconnect;
Steps:
Open login software
select "Network" on the software
Change the network to default: 10.10.100.254
select "Reconnect"
It will say "Connect successfully"
Press "Okay"
Enter password:345678 , click "login";

2>Auto connect

Note: Software requirements:
X4 IOS Version: 1.3 (or higher)
X4 firmware version: 1.1.1 (or higher)
Preparation：
1 Install the latest control software of X4 on the phone；
2 Phone connected to your home router；

Step 1: Take out the pump, power on, wait for X4 shows the main interface

```
Auto    12:24:50
P1  16:20
```

Step 2: Press the "SET" button to enter the menu.

```
      Settings
1 Manual Dose
```
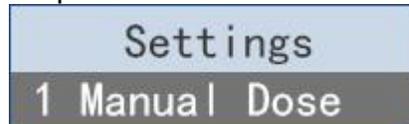
Step 3: Press "UP" key to select "Options" and press the "SET" key to enter the options menu.

```
4 Option              Option
                 1 SN:A100000
```
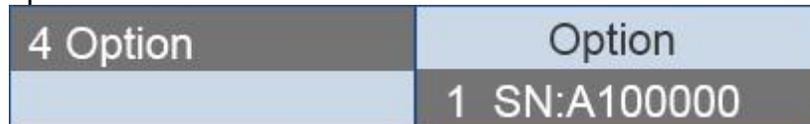
Step 4: Press the "UP" key to select "Auto Connect" and press the "SET" key to enter the confirmation screen.

```
8 Auto Connect

```

Step 5: Press the "UP" or "DOWN" button to select "Yes" and press the "SET" button.

```
  Are you sure?
  Yes   No
```

```
8 Auto Connect
   Ready...
```
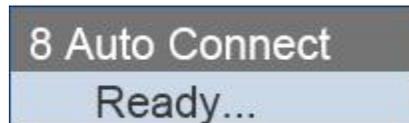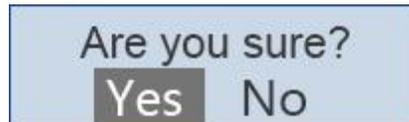
Step 6: Change to your mobile phone operation
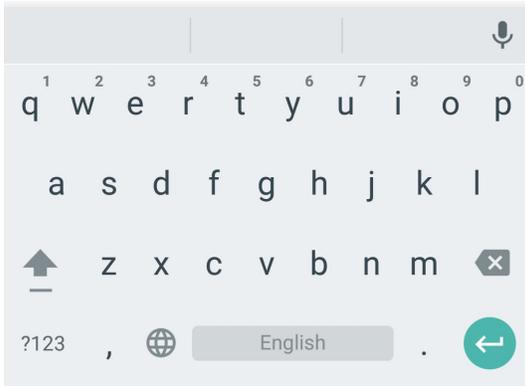
Step 7:
Open X4 control app, click "More", click "Auto connect."

Step 8:
1 In the password input box, enter the password of the family router;
2 Click the "Start" button to start "Auto connect".

Step 9:

1 When "Auto connect" is complete, X4 pump will make a beep, the screen returns to the main screen;

Note: If failed, power off the X4. Start again from the first step.

☑ Saving screenshot…

← Login   NETWORK ⋮

X4 Dosing Pump
Version 1.1.4

☑ ⋮······

| Login |

| Connect successfully! |

Step 10：

After your login, it will auto turn to the main control page.

Note: 1. You only need to set Auto Connect for once, it will save the settings and you can login to X4 by your own wifi.

2. If you want to login by a computer, change the IP address of the software to the same as the phone.

2.3 Software Interface
The initial interface (time / temperature interface)
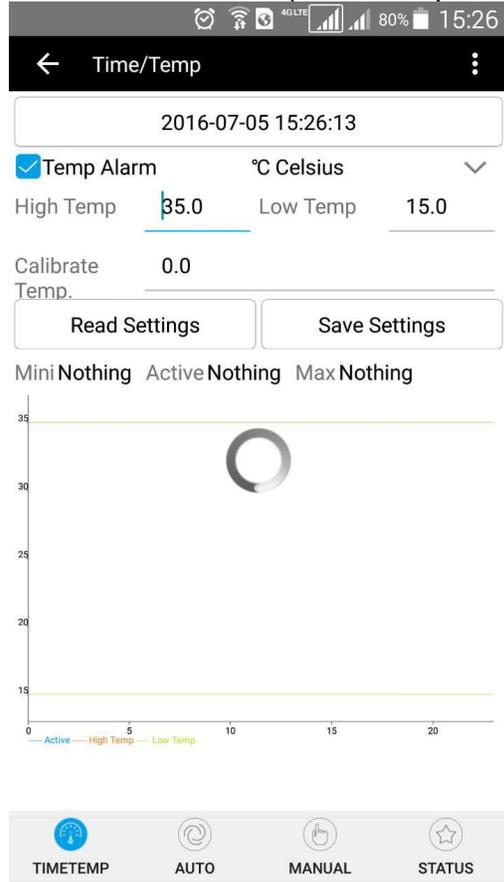
Time: displays the current time and date;

Temperature alarm: select whether temperature alarm;

Unit: Celsius or Fahrenheit

Read settings: Read the last saved settings;

Save settings: Save the current settings;

Temperature trends: record the last 24 hours the temperature profile;

Automatic Interface

Channel On/Off: Channel switch can turn off / on the pump;

Operational Mode: "every day", "every other day", "every three days", "weekly" optional;

Pump Gears: Fast/Moderate/Slow

Start time: 00: 00-23: 59 Optional (Note: you can set the hours, minutes can not be set);

End Time: 00: 00-23: 59 Optional (Note: you can set the hours, minutes can not be set);

Dose Times: the number must be divisible by period;

Dose volume: total liquid per day;

Per dose: Equal the total amount divided by the number of dose times;

Read settings: Read the last saved settings;

Save settings: Save the current settings;

Manual interface

Pump1: Pump 1

Volume: Manually dosing the total amount (plus stops automatically after);

Start: Start / stop switch;

Pump2, Pump3, Pump4 are the same as Pump1;

Calibration Interface

Pump: Optional pump1, pump2, pump3, pump4;

Running Time: time of the pump head to run calibration;

Flow :the pump head's flow rate;

Start: Start / Stop;

Get Volume: During the calibration time,the volume of liquid you get;

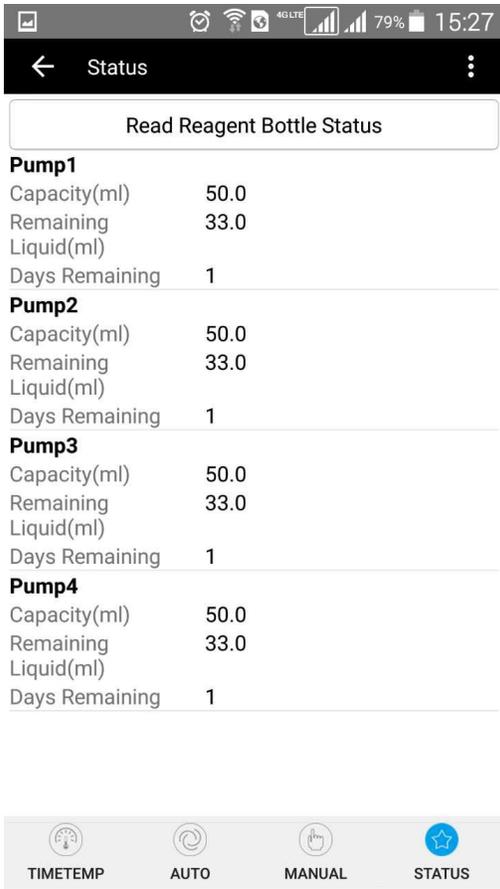Save calibrate result: Save parameters;

Calibrate test

Test Volume: Enter the volume to be tested;

Test Start: Start / Stop;

Note: 1, before the calibration, empty the air inside the tube;

2, the test function can test the accuracy of the calibration;
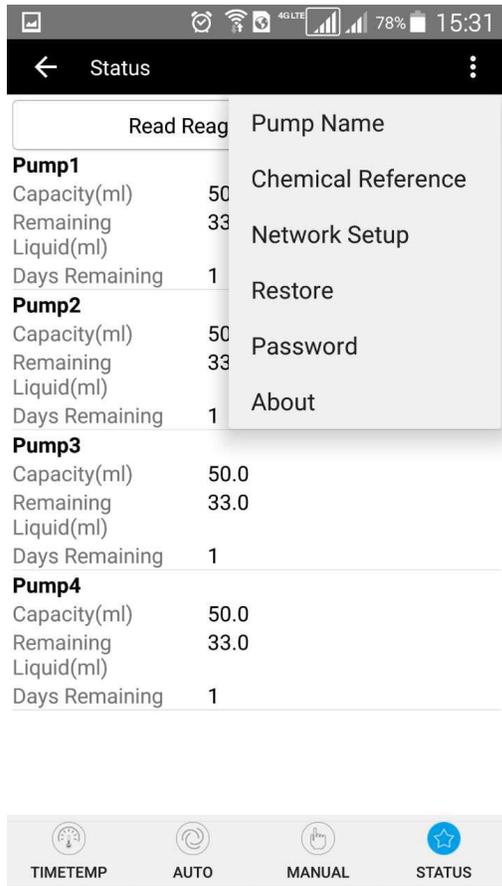

Status Screen

Pump1: Pump 1

Capacity: Volume of dosing bucket;

Remaining: current remaining amount of dosing;

Days remaining: Number of days that can dose under the dosing amount per day;

Pump2, Pump3, Pump4 same as Pump1;

More interface

Pump Name: Change the pump name.

Chemical reference: Set the delay time of each pump head to prevent chemical interference at the same time start.

Network setup: Default connection ip address: 10.10.100.254 Port:8899

Restore: Factory data reset.

Password: Change the login password

3.Maintenance

3.1 Chemical compatibility

X4 standard pump tubing is Pharmed BPT tube, it is suitable for most occasions.If you are transferring a specific liquid, please contact the manufacturer to get help.

3.2 Storage

● When the pump is stored for a long time that does not run, you should take out the tube from the pump head to avoid deformation.
● The pump head rollers should be kept clean and dry, otherwise it will shorten the life of the tube.

4.Technical Support

If you have any problems during using X4 pump, please contact us by the following information.
In order to give you a better and faster service, please inform us your instrument model and serial number.
If there are any special applications of information (such as using an unnormal liquid) please inform us in advance.

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