



ADD: NO.169, RUNXIN ROAD, SHANFU TOWN, WENZHOU, ZHEJIANG, CHINA. TEL.:0086-577-88630038, 88576512, 85956057 FAX:0086-577-88633258 E-MAIL: sales@run-xin.com http://www.run-xin.com

Rev. A. 1805



China Patent No.: ZL02220153.X,

ZL200920202172.1

# **Online Monitoring Instrument for Water Treatment Systems**

44710 (Old Model: F84)

# **Instruction Manual**



Please read this manual in details before using this valve and keep it properly in order to consult in the future 0WRX.466.520

# Catalogue

| Notice                                          |    |
|-------------------------------------------------|----|
| 1. Product Overview                             | 3  |
| 1.1. Main Application & Applicability           | 3  |
| 1.2. Product Characteristics                    | 3  |
| 1.3. Service Conditions                         | 5  |
| 1.4. Product Structure and Technical Parameters | 6  |
| 1.5. Installation.                              | 7  |
| 2. Basic Setting & Usage                        | 1  |
| 2.1. The Function of PC Board                   | 1  |
| 2.2. Basic Setting & Usage                      | 14 |
| 3. Application and Illustration.                | 15 |
| 3.1 Flow Chart and Principle                    | 15 |
| 3.2. The Function of PC Board                   | 17 |
| 3.3 Parameter Enquiry                           | 18 |
| 3.4. Trial Running                              | 2  |
| 3.5. Trouble-Shooting                           | 22 |
| 3.6. Assembly & Parts.                          | 24 |
| 4 Warranty Card                                 | 28 |

#### **Notice**

- To ensure normal operation of the valve, please consult with professional installation or repairing personnel before using it.
- If there are any of pipeline engineering and electric work, there must be finished by professional at the time of installation.
- Do not use the device with unsafe or unknown quality water.
- Do not put the device near heat sources, high humidity, corrosive, intense magnetic field or intense librations environment. And do not leave it outside.
- The device should be installed horizontally and fastened.
- Please use this product within water temperature 5~45°C, water pressure 0.05~0.4MPa. Failure to use this product under such conditions voids the warranty.
- Manual testing is needed for the whole system, so as to compare with the device testing result when necessary.
- Do not let children touch or play, because careless operating may cause the procedure changed.
- If the device is closing down for a long time, please disassemble the reagent from the device and keep it away from sunlight, put in the shady and cool place. Please put the reagent in the refrigerator if it is possible.
- The lubricant that used in the product is methyl silicone. When maintenance, other lubricant is forbidden to use.
- When the attached cables and transformer of this product needs to be changed, the replacements must come from our factory.

#### MODEL:44710(F84)

Attention! When the alarm of reagent shortage appears, after replacing the reagent, it must be in "Monitoring Waiting" position and press for 5 seconds, then alarm cleared, the system get back to work.

The testing mode of default setting is A-01. If you set A-02, then parameters' default value under A-01 mode will not be saved. Please record default settings on the below table before changing testing mode.

#### **Default Settings Table**

| Waiting Time | Reagent Lack Alarm | Hardness Alarm | Washing Time A |
|--------------|--------------------|----------------|----------------|
|              |                    |                |                |
| Empty Time B | Water Enter Time   | Testing Time   | Washing Time B |
|              |                    |                |                |

#### 1.Product Overview

#### 1.1. Main Application & Applicability

The online monitoring instrument is used for monitoring the outlet water hardness of softening water systems that have high requirement on the water hardness, such as steam generator, hot-water boiler, etc. If the outlet water hardness exceed standard, the instrument will give the sound-light alarm and send the signal to the softener control valve, controlling the system to start regeneration.

#### 1.2. Product Characteristics

#### **Simple Structure and High Integration**

The core part of the product is made of the high degree pottery. It combines with Empty A (Monitoring Waiting), Washing A, Empty B, Reagent Entering, Water Sample Entering, Testing, and Washing B. Realize automatic wash, automatic reagent refill, automatic water sample enter, automatic water mixing, automatic testing and automatic signal output.

#### Accurately Sampling

Feeding in reagent through the high-precision through-holes in the regent bottle and sampling in the mixing cavity makes the measurement more accurate.

#### **●**High Degree of Automation

The whole process is controlled by the micro-computer; each working status and working time is showed in the LCD display board.

- Press " to realize the forced monitoring
- There are two kinds of working mode: A-01 and A-02

A-01 mode: the monitoring waiting time is directly set by users

A-02 mode: by inputting the resin volume, water hardness, average water consumption per hour, the monitoring waiting time will be automatically calculated by the device. It is good for saving reagent by making the time short during the cycle of producing water and making the time long during the regeneration time.

#### **●** Reasonable, Economic and Effective

The device will control the softener valve start regeneration when the water hardness of outlet water exceed standards; the device will be in the waiting conditions when none of the water come from the outlet, so as to save the reagent, making the whole system operate more reasonably, economically and effectively.

#### • Less Maintenance

A bottle of reagent can be used for about three months.

#### **●** Intelligent Protection

- 1. After power off, the device will be in Empty A conditions (Monitoring waiting), avoiding the wrong alarm.
- 2. After starting monitoring, in any status, if the device finds there is no water for more than 5 seconds, the device will not tell the testing result, which means the display board will not show "This testing is qualified or unqualified" after monitoring is over.
- 3. During the monitoring period, if the device is out of reagent, it will not tell the testing result. And the display board will show "Reagent lack", reminding users to replace the reagent. If the reagent can't be replaced in time, the device will forcibly let the softener valve start regeneration after 10 hours.
- 4. When monitoring times reached 750, the buzzer and the screen will remind "Replace Reagent". When monitoring times reached 801, monitoring stops, screen shows "Reagent Lack". After changing the reagent, press for 5 seconds under monitoring waiting condition(Keyboard unlock), the screen will be cleared and times will be zero after hearing "DI" sound.

#### MODEL:44710(F84)

#### **●**Remote Handling Output

When the outlet water fails to meet the requirements, the device will send the signal to the softener valve and make the valve start regeneration forcibly, so as to make sure the outlet water is qualified.

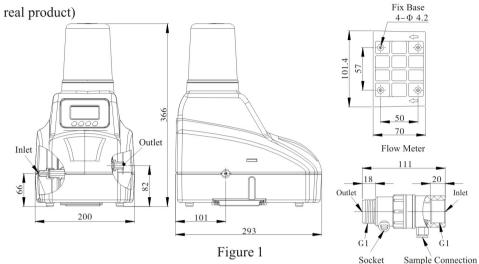
#### 1.3. Service Conditions

Monitoring instrument should be used under the below conditions:

| Items       |                            | Requirement                                                                                                                                         |  |
|-------------|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--|
|             | Water Pressure             | 0.05MPa∼0.4MPa                                                                                                                                      |  |
| Working     | Water<br>Temperature       | 5℃~45℃                                                                                                                                              |  |
| Conditions  | Water Turbidity            | <2FTU                                                                                                                                               |  |
|             | Water Quality              | No corrosive acid or alkali                                                                                                                         |  |
|             | Environment<br>Temperature | 5℃~50℃                                                                                                                                              |  |
| Working     | Relative Humidity          | $\leq$ 95% (When temperature is 25°C)                                                                                                               |  |
| Environment | Electrical Facility        | AC100~240V/50~60Hz                                                                                                                                  |  |
|             | corrosive, intense n       | Do not put the device near heat sources high humidity, corrosive, intense magnetic field or intense librations environment. And install it indoors. |  |

#### 1.4. Product Structure and Technical Parameters

A. Product dimensions (The appearance is just for reference. It is subject to the



#### B. Technical Parameters

| B. Teemilear I arameters         |                        |                                              |                             |
|----------------------------------|------------------------|----------------------------------------------|-----------------------------|
| Control mode                     | Online monitoring      | Water quality                                | No corrosive acid or alkali |
| Electrical facility              | AC100~240V/50~<br>60Hz | Inlet                                        | φ6 gas-type fitting         |
| Transformer output               | DC12V, 1.5A            | Outlet                                       | φ8 gas-type fitting         |
| Alarm output                     | DC5V active signal     | Flow meter inlet                             | 1" F                        |
| Alarm water<br>hardness<br>value | 0.03 mmol/L            | Flow-meter outlet                            | 1" M                        |
| Water pressure                   | 0.05~0.4MPa            | Sample connection                            | φ 6 gas-type fitting        |
| Water<br>temperature             | 5~45℃                  | Reagent volume                               | 450ml                       |
| Water turbidity                  | <2FTU                  | Quality<br>guarantee<br>period of<br>reagent | 12 months                   |

|      | A-01 mode: monitoring waiting time is directly set by users                                       |
|------|---------------------------------------------------------------------------------------------------|
|      | A-02 mode: by inputting the resin volume, water hardness, average water consumption per hour, the |
| Mode | monitoring waiting time will be automatically calculated                                          |
|      | by the device. It is good for saving reagent by making the                                        |
|      | time short during the cycle of producing water and                                                |
|      | making the time long during the regeneration time.                                                |

#### Remark:

- 1.M:Male;F:Female;
- 2. Alarm water hardness value can be customized if need.

#### 1.5. Installation

#### A. Installation notice

Before installation, please read all those instructions completely. Then prepare all materials and tools needed for installation.

The installation of product, pipes and circuits should be accomplished by professional to ensure the product can operate normally.

#### **B.** Device location

There are two kinds of installation: wall-mounted and table-mounted. Please make sure the device is installed horizontally and fixed.

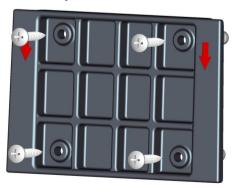


Figure 2

#### (1) Wall-mounted

a. Take out the dead plate from the supporting accessories and fix the plate on the wall with expansion screws as the Figure 2 shows. (Please pay attention to the directions of arrows on the plate and make sure the directions of arrows are pointing down when it's installed.) Be sure the vertical length of the drain pipeline is more than 1.2m. b. After fixing the plate, please stick the device into the plate as the Figure 3 shows

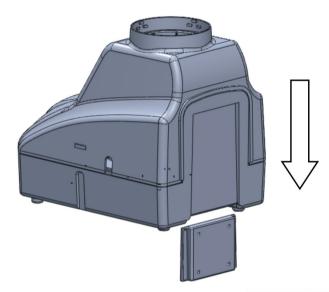
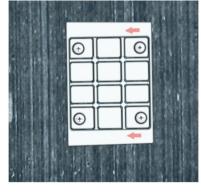


Figure 3

#### 2 Table-mounted

a. As the Figure 4 shows, fix the dead plate on the platform with the screw. The arrow on the plate is the direction for device sticking into the plate. Please note the vertical height between platform and drain should be more than 1.2m.



b. After fixing the dead plate, stick the device into the plate according to the direction of arrows.

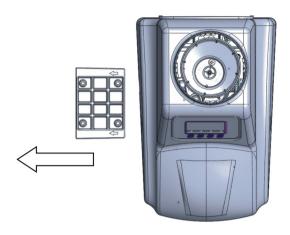


Figure 5

#### C. Installation of pipeline

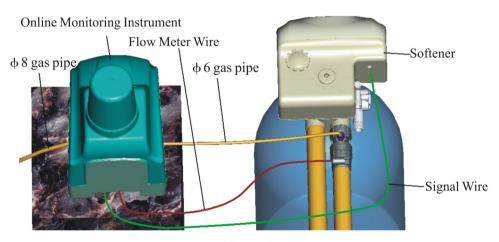


Figure 6

#### ① Flow meter installation

As the Figure 6 shows, below 1.5 inch pipeline, directly connect the flowmeter with the outlet of softener valve; Above 1.5 inch pipeline, as the Figure 7 shows, please install the flow meter through the way of bypass.

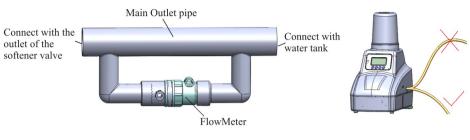


Figure 7 Figure 8

#### (2) Inlet and outlet installation

As the Figure 6 shows, take a certain distance of  $\varphi 6$  air pipeline, insert one side to sample connection port on flow meter, insert the other side on inlet of device; use  $\varphi 8$  air pipeline, insert one side to outlet of the device connect the other side with sewer. Please leave 20-40mm distance between the drain line and sewer. The drain pipeline must under the outlet, ensuring that water drains smoothly and will not form any water seal, to avoid warping and the length should not exceed 3 meters (as Figure 8 shows).

Remark: the inlet water pressure of the device should be controlled between 0.05 and 0.4 MPa

#### 3 Connection of flow meter

As the Figure 6 and Figure 9 shows, insert the flow meter probe into the probe fitting. The opposite end is connected with the control board of the monitoring device.



Flow Meter connector

Figure 9

#### MODEL:44710(F84)

#### 4 Connection of signal output

As the Figure 6 and Figure 10 shows, one end of the signal wire is connected with the control board of the monitoring device, and the opposite end is connected with the remote handling connector of the softener valve.

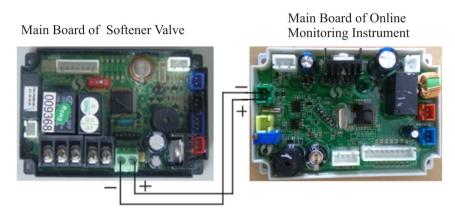


Figure 10

Connect the positive & negative terminals of the "Remote Handling Connector" of the softener valve with the positive & negative terminals of the "Siganl Output Connector" of the online monitoring instrument

#### D. Installation and replacement of reagent

①Firstly, twist off the sealed cap of reagent bottle when install the reagent. (Pay attention to the arrow direction on the bottle, as the Figure 11 shows). Then remove the sealed cap (As the Figure 12 shows).

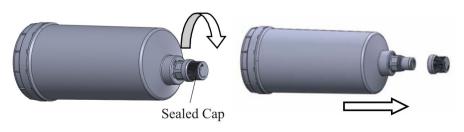
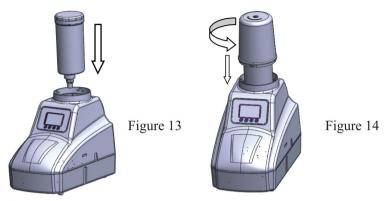


Figure 11

Figure 12

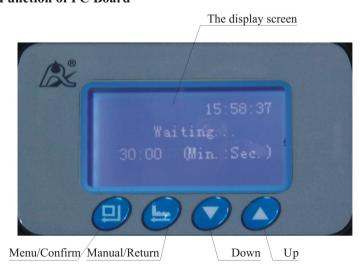
②As the Figure 13 shows, please insert the reagent bottle into the device (There is a check valve on the sealing surface of bottle, to avoid the reagent flowing out before inserting).



③As the Figure 14 shows, after inserting the reagent bottle in the device, please screw the bottle anticlockwise to fix it. (The arrow direction on the bottle is the direction to unscrew).

# 2. Basic Setting & Usage

#### 2.1. The Function of PC Board



#### MODEL:44710(F84)

- A. Button lock indicator
- ■ light on, indicate the buttons are locked. At this moment, pressing any single button will not work.
- Solution: Press and hold both ◆ and ▼ for 5 seconds until the light off.
- B. 

  Menu/Confirm button
- In menu mode, press and enter program display mode, viewe all values by pressing ∧ or ✓
- In program display mode, press 💷 and enter program set mode, adjust all values by pressing 🔼 or 💎
- Press ② after all programs are set, and hearing the voice "DI" means all setting are success and return program display mode.
- C. 📒 Manual/Return button
- Press 🕒 can proceed to next step in any status.
- Press in program display mode, and it will return in Service; Press in program set mode, and it will return program display mode.
- Press ♠ while adjusting the value, then it will return program display mode directly without saving value
- D. Down and Up
- In program display mode, press ∧ or to view all values
- In program set mode, press ∧ or to adjust values.
- lacktriangle Press and hold both lacktriangle or lacktriangle for 5 seconds to unlock the Button Lock.
- When the device gives alarm of reagent shortage, press for 5 seconds, the alarm will be canceled.

#### 2.2. Basic Setting & Usage

#### A. Parameter Specification

| Item                        | Factory Default Parameter Set Range                |                                      | Instruction                          |  |
|-----------------------------|----------------------------------------------------|--------------------------------------|--------------------------------------|--|
| Clock                       | Current Time 00:00~23:59                           |                                      | Current Time                         |  |
| Mode                        | A-01                                               | A-01/02                              | /                                    |  |
| Empty Time A (Waiting Time) | 30:00(Min.: Sec.)                                  | 0~999:59                             | Suitable for A-01<br>Working Mode.   |  |
| Reagent Lack Alarm          | 1.80V                                              | 0.00~5.00V                           | Default settings,                    |  |
| Hardness Alarm              | 0.28V                                              | 0.00 ~ 5.00V                         | needn't to reset                     |  |
| Resin Volume                | 500L                                               | 5 ~ 1000L                            |                                      |  |
| Water Hardness              | 1.2mmol/L 0.1 ~ 30.0 mmol/L                        |                                      | Suitable for<br>A-02<br>working mode |  |
| Average Water Use           | 6.0m³/h                                            | 1.0 ~ 100.0 m <sup>3</sup> /h        | working mode                         |  |
| Washing Time A              | 00:10(min.: sec.)                                  | min.: sec.) 0:00 ~ 59:59 ( min:sec ) |                                      |  |
| Empty Time B                | 00:15(min.: sec.) 0:00 ~ 59:59 ( min:sec )         |                                      |                                      |  |
| Reagent Enter Time          | Adjusted by system automatically, needn't to rest. |                                      | Default settings,                    |  |
| Water Enter Time            | 00:10(min.: sec.)                                  | 0:00 ~ 59:59 ( min:sec )             | needn't to reset.                    |  |
| Testing Time                | 00:50(min.: sec.)                                  | 0:00 ~ 59:59 ( min:sec )             |                                      |  |
| Washing Time B              | 00:10(min.: sec.)                                  | 0:00 ~ 59:59 ( min:sec )             |                                      |  |
| Testing Times               |                                                    | /                                    |                                      |  |

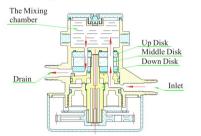
# 3. Application and Illustration

#### 3.1 Flow Chart and Principle

# A. Empty A (Waiting) The Mixing Chamber Up Disk Middle Disk Down Disk Drain Inlet

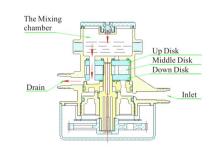
Drain out the residual water from the mixing chamber after Washing B. At the same time, the program is in the monitoring waiting status. the display screen shows the countdown, thus the rest of time before next monitoring (Only for the condition that water flowing out from the outlet of softener valve).

# B. Washing A



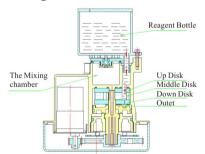
Under this status, the device will clean the pipeline firstly by new water. The new water flow into the mixing chamber from the inlet and flow out through the outlet. In this process, the mixing chamber will be cleaning.

#### C. Empty B



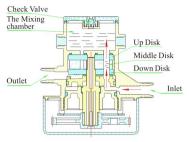
Drain out the residual water from the mixing chamber after Washing A.

#### D. Reagent Enter



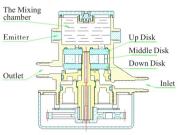
Under this status, the through-hole in the moving disk is opening to the reagent in the reagent bottle, making a certain amount of reagent and fed in.

#### E Water Enter



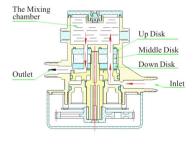
When feed in the water sample, the water sample from the outlet of softener follow into the inlet of the device, and mix the reagent in the mixing chamber. After the chamber being filled, the check valve will close automatically and stop water inflowing.

#### F, Testing



After mixing the water sample and reagent for 50 seconds, the light sensor of the receiver turns the optical signal into the voltage signal. When the voltage exceeds the alarm value, it will give an alarm and output DC5V active signal.

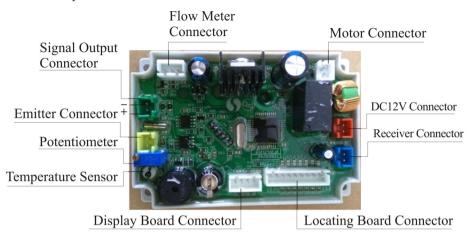
#### G, Washing B



The water flows into the mixing chamber from the inlet and flows out through the outlet, cleaning the mixing chamber and preparing for the next monitoring. After this status, the device will go to the Empty A (Monitoring Waiting), and drain out the water from the chamber avity for next monitoring.

# 3.2. The Function of PC Board

Open the front cover of device, you will see the main control board and connection port as below:



MODEL:44710(F84)

#### Functions of main connector

| Function                   | Application                             | Illustration                                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Signal output<br>Connector | Control the softener valve regeneration | It is used for online inspection system, PC connection, and realize automatically or remotely controlling valve.                                                                                                                       |
| Flow Meter<br>Connector    | Receive the signal from the flow meter  | In the pending monitoring status, when receives the signal, the display screen shows the countdown. If there is no signal, the countdown will not show. During the monitoring, if there is no signal, the testing will be ineffective. |

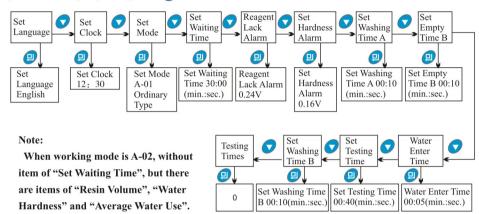
#### Note:

- 1. During the testing analysis, the voltage value can be adjusted by revolving potentiometer, it is default setting, needn't to reset.
- 2. When replacing receiver or emitter connector, it requires softener flowing water qualified and running the testing manually. While enter into testing analysis position, setting testing voltage value to 0.18V through adjusting the potentiometer.

#### 3.3 Parameter Enquiry

#### 3.3.1 Parameter Enquiry

In menu mode, press and enter program display mode; Select the item that you need inquiry and press



#### 3.3.2 Parameter Setting

In program display mode, press 
and enter into program set mode. Press
or 
to adjust the value:

| Item            | Process Steps                                                                                                                                                                                                                                                                                                                                        | Symbol                        |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Set<br>Language | <ol> <li>Press □ to enter program display mode, select "Set Language";</li> <li>Press □ , select language through △ or ♥;</li> <li>Press □ , language transformed successfully and back to Menu, press □ to returning to working condition.</li> </ol>                                                                                               | Set Language<br>English<br>中文 |
| Set Clock       | 1. Press  to enter into program display mode; The item of "Set Clock" will be selected by system automatically.  2. Press  , hour value flashing, adjust the hour value through  right or ; Press  again, minute value flashes, adjust the minute value through  or ;  3. Press  and finish the adjustment, press to turn back to working condition. | Set clock<br>12:10            |

| Set Mode                 | 1. Press and enter into program display mode, select the "Set Mode" item; 2. Press and the "01" value flashes, through or to adjust the hour value; 3. Press and finish the adjustment, press to turn back to working condition                                                                                        | Set Mode<br>A-01<br>Ordinary Type            |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| Set Waiting<br>Time      | 1. Press and enter into program display mode, select the "Waiting Time" item; 2. Press and the minute value flashes. Through or to adjust the minute; value; Press again, second value flashes, through or to adjust the second value; 3. Press and finish the adjustment, press to turn back to working condition.    | Set Waiting Time 30:00 (Min.:Sec.)           |
| Reagent<br>Lack Alarm    | <ol> <li>Press and enter into program display mode, select the "Reagent Lack Alarm" item;</li> <li>Press and the value flashes, through or to adjust the value;</li> <li>Press and finish the adjustment, press to turn back to working condition</li> </ol>                                                           | Reagent Lack Alarm 0.xxV                     |
| Set<br>Hardness<br>Alarm | <ol> <li>Press and enter into program display mode, select the "Set Hardness Alarm" item;</li> <li>Press and the value flashes, through or to adjust the value;</li> <li>Press and finish the adjustment, press to turn back to working condition</li> </ol>                                                           | Set Hardness<br>Alarm<br>0.xxV               |
| Set<br>Washing<br>Time A | 1. Press and enter into program display mode, select the "Set Washing Time A" item; 2. Press and the minute value flashes. Through or to adjust the minute value; Press again, second value flash, through or to adjust the second value; 3. Press and finish the adjustment, press to turn back to working condition. | Set Washing<br>Time A<br>00:10 (Min.: S ec.) |

| Set Empty Time B         | 1. Press ② and enter into program display mode, select the "Set Empty Time B" item; 2. Press ② and the minute value flashes. Through 	or 	or to adjust the minute value; Press ② again, second value flashes, through 	or 	or to adjust the second value; 3. Press ③ and finish the adjustment, press ⑤ to turn back to working condition. | Set Empty Time B 00:10 (Min.: Sec.)        |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Water<br>Enter Time      | 1. Press ② and enter into program display mode, select the "Water Enter Time" item; 2. Press ② and the minute value flashes. Through ② or ② to adjust the minute value; Press ② again, second value flashes, through ② or ③ to adjust the second value; 3. Press ③ and finish the adjustment, press ⑤ to turn back to working condition.   | Water Enter Time 00:05(Min.:Sec.)          |
| Set Testing<br>Time      | <ol> <li>Press □ and enter into program display mode, select the "Testing &amp; Analysis Time" item;</li> <li>Press □ and the "minute" flashes, adjust it through or ; Press □ again, "second" flashes, adjust it value through or ;</li> <li>Press □ and finish the adjustment, press □ to turn back to working condition.</li> </ol>     | Testing & Analysis Time 00:05 (min.: sec.) |
| Set<br>Washing<br>Time B | 1. Press and enter into program display mode, select the "Set Washing Time B" item; 2. Press and the minute value flashes. Through or to adjust the minute value; Press again, second value flash, through or to adjust the second value; 3. Press and finish the adjustment, press to turn back to working condition                      | Set Washing Time B 00:10 (Min.: Sec.)      |

| 1. Press 🗐 and enter into program display |                                                                             |
|-------------------------------------------|-----------------------------------------------------------------------------|
| mode, select the "Testing Time" item;     | Testing Times                                                               |
| 2. Press ( , check the testing times;     | 0                                                                           |
| 3. Press 😑 to return to working status.   |                                                                             |
|                                           | mode, select the "Testing Time" item; 2. Press   , check the testing times; |

#### 3.4. Trial running

A.Firstly, disconnect the signal wire from the control board of the monitoring device.

B.Switch on power and make sure the softener valve is in service status.

C.Press (and make the device start monitoring. Make the device forcibly monitoring four times through manual control, so as to clean the impurity in the device which may affect the result of testing.

D.Connect the signal wire to the control board of the monitoring device.

E.The device shows the countdown, thus the rest of time before next monitoring Remark:

- If the device is out of service chronically, the reagent should be kept in the refrigerator under the temperature  $2^{\circ}$ C to  $6^{\circ}$ C. The trial running is needed when the device restarts using again.
- As the device adopt periodic interval monitoring, so it is possible that the unqualified water flows into the water tank in one or more monitoring period.
- When the device give alarm of the reagent shortage, the reagent should be replaced in time. Or else, the device will send the signal and make the softener valve starting regeneration forcibly after 10 hours; After replacing the reagent, please press
- of for 5 seconds to turn alarm off.
- The guarantee date of reagent is one year. The volume of reagent is about 450ml and usually can be used for three months.
- When power off for a long time, please check the outlet of device whether any reagent flowing out. If it did, which indicates the position of reagent feeding is power off and the bottle of reagent should be taken down.

## 3.5. Trouble-Shooting

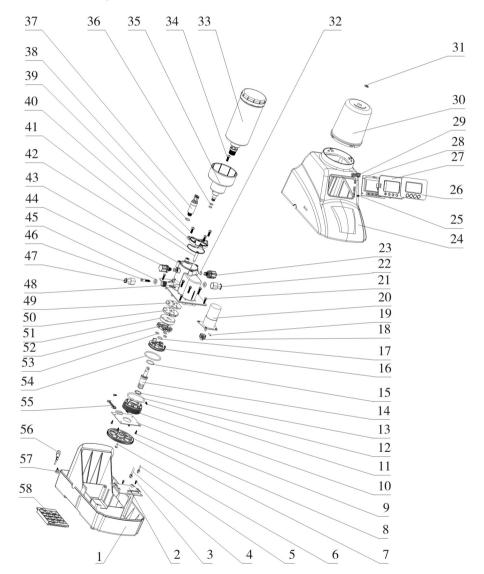
| Problem/Code                                                                                                                                                          | Canse                                                                                                                                                                                                      | Solution                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| E1 Flash                                                                                                                                                              | A. Wiring of locating board with controller fails to work. B. Locating board damaged C. Mechanical driven failure. D. Faulty control board. E. Wiring of motor with controller is fault. F. Motor damaged. | <ul><li>A. Replace wiring.</li><li>B. Replace locating board.</li><li>C. Check and repair mechanical part.</li><li>D. Replace control board.</li><li>E. Replace wiring.</li><li>F. Replace motor.</li></ul> |
| E2 Flash                                                                                                                                                              | A. Locating board damaged B. Wiring of locating board with controller fails to work C. Control board is faulty                                                                                             | <ul><li>A. Replace locating board.</li><li>B. Replace wiring.</li><li>C. Replace control board.</li></ul>                                                                                                   |
| E3/E4 Flash                                                                                                                                                           | Control board is faulty.                                                                                                                                                                                   | Replace control board.                                                                                                                                                                                      |
| No display on front panel.  A. Wiring of display board with controller fails to work.  B. The transformer damaged C. Control board damaged.  D. Display board damaged |                                                                                                                                                                                                            | <ul><li>A. Check and replace wiring.</li><li>B. Replace transformer.</li><li>C. Replace control board.</li><li>D. Replace display board.</li></ul>                                                          |
| E5 Flash                                                                                                                                                              | The water continuously fails to meet the requirement for two tims.                                                                                                                                         | Restart the power.                                                                                                                                                                                          |
| E6 Flash                                                                                                                                                              | <ul><li>A. Emitter is broken.</li><li>B. Receiver is broken.</li><li>C. Control board is broken.</li><li>D. There is no water flowing into chamber during the testing position</li></ul>                   | A. Replace the emitter B.Replace the receiver C. Replace the control board D. Reconnect the power                                                                                                           |

#### MODEL:44710(F84)

| E7 Flash                                                                                                                  | A. There is water in the plug of the acceptor which causes short circuit.  B. The lamp of the acceptor is short circuit.                                                                              | A. Clean and dry the plug and check the leakage.  B. Replace the lamp.                                                   |
|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Shortage of reagent                                                                                                       | A. the reagent is used up. B. There are foreign materials blocking the through-hole of upper disk C. Low inlet water pressure. D. There are foreign materials blocking the through-hole of lower disk | A. Replace the reagent. B. Clean the foreign materials. C. Increase inlet water pressure D. Clean the foreign materials. |
| There are water flowing out from the outlet in the pending monitoring status, feed in reagent status or monitoring status | The device is leaking.                                                                                                                                                                                | check and maintain the<br>device or replace the<br>body.                                                                 |

#### 3.6. Assembly & Parts

#### ① 44710 Assembly & Parts



#### MODEL:44710(F84)

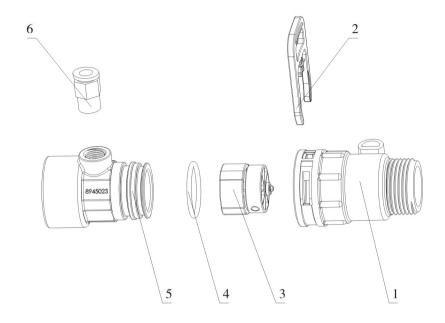
#### Explosive view: Parts and Components

| Item | Description            | Part No. | Quantity |
|------|------------------------|----------|----------|
| 1    | Dust Cover             | 8005021  | 1        |
| 2    | Control Board          | 6382052  | 1        |
| 3    | Screw, Cross           | 8909008  | 2        |
| 4    | Flow Meter Cable       | 6386008  | 1        |
| 5    | Interlock Wire         | 5515003  | 1        |
| 6    | Screw, Cross           | 8902025  | 1        |
| 7    | Gear                   | 5241005  | 1        |
| 8    | Screw, Cross           | 8909008  | 4        |
| 9    | Locating Board         | 6380026  | 1        |
| 10   | Fitting Nut            | 8092031  | 1        |
| 11   | Screw, Cross           | 8909008  | 3        |
| 12   | O-ring                 | 8378107  | 1        |
| 13   | Anti-friction Washer   | 8216020  | 2        |
| 14   | Shaft                  | 8258028  | 1        |
| 15   | O-ring                 | 8378168  | 1        |
| 16   | Cover                  | 8315024  | 1        |
| 17   | O-ring                 | 8378154  | 1        |
| 18   | Small Gear, Motor      | 8241015  | 1        |
| 19   | Pin                    | 8993003  | 1        |
| 20   | Motor                  | 6158011  | 1        |
| 21   | Screw, cross           | 8909003  | 4        |
| 22   | Gas-type Fitting       | 5455004  | 1        |
| 23   | Emitter                | 5404001  | 1        |
| 24   | Control Box            | 8300022  | 1        |
| 25   | Screw, Cross           | 8909008  | 1        |
| 26   | Label                  | 8865055  | 1        |
| 27   | Fixed Part             | 8109034  | 1        |
| 28   | Display Board          | 6381006  | 1        |
| 29   | Wire for Display Board | 5512002  | 1        |
| 30   | Shell                  | 8300023  | 1        |
| 31   | Label                  | 8860001  | 1        |
| 32   | O-ring                 | 8378004  | 2        |
| 33   | Reagent Bottle         | 5359001  | 1        |
| 34   | Screw, Cross           | 8902029  | 1        |

| 35 | Fixed Part              | 8109033   | 1 |
|----|-------------------------|-----------|---|
| 36 | O-ring                  | 8378016   | 2 |
| 37 | Air Release Valve       | 5467003   | 1 |
| 38 | O-ring                  | 8378169   | 1 |
| 39 | Screw, Cross            | 8902029   | 3 |
| 40 | Cover                   | 8315023   | 1 |
| 41 | Seal Ring               | 8371025   | 1 |
| 42 | Distributer             | 8339019   | 1 |
| 43 | Valve Body              | 5022045   | 1 |
| 44 | Acceptor                | 5404002   | 1 |
| 45 | Seal Ring               | 8371070   | 2 |
| 46 | Filter Screen           | 5336011   | 1 |
| 47 | Gas-type Fitting        | 5455003   | 1 |
| 48 | Screw, Cross            | 8902007   | 4 |
| 49 | Seal Ring               | 8370070   | 1 |
| 50 | Fixed Disk              | 8469008   | 1 |
| 51 | Moving Disk             | 8459046   | 1 |
| 52 | Fixed Disk              | 8469005   | 1 |
| 53 | O-ring                  | 8378147   |   |
| 54 | O-ring                  | 8378149 1 |   |
| 55 | Wire for Locating Board | 5511013   | 1 |
| 56 | Wire for Power          | 5513003   | 1 |
| 57 | Wire Clip               | 8126004   | 1 |
| 58 | Dead Plate              | 8109035   | 1 |

#### MODEL:44710(F84)

② Flow Meter Assembly & Parts Explosive view:



## Parts and Components

| Item | Description      | Part No. | Quantity |
|------|------------------|----------|----------|
| 1    | Shell            | 8002001  | 1        |
| 2    | Clip             | 8270004  | 1        |
| 3    | Impeller         | 5295011  | 1        |
| 4    | O-ring           | 8378081  | 1        |
| 5    | Animated Nut     | 8945023  | 1        |
| 6    | Gas-type Fitting | 5455002  | 1        |

# 4. Warranty Card

#### Dear client:

This warranty card is the guarantee proof of RUNXIN brand online monitoring instrument. It is kept by client self. You could get the after-sales services from the supplier which is appointed by RUNXIN manufacturer. Please keep it properly. It couldn't be retrieved if lost.

It couldn't be repaired free of charge under the below conditions:

- 1. Guarantee period expired. (One year).
- 2. Damage resulting from using, maintenance, and keeping that are not in accordance with the instruction.
- 3. Damage resulting from repairing not by the appointed maintenance personnel.
- 4. Content in guarantee proof is unconfirmed with the label on the real good or be altered.
- 5. Damage resulting from force majeure.

| Product              | 问新 Online Monitoring Instrument |            |             |  |
|----------------------|---------------------------------|------------|-------------|--|
| Name                 | for Water Treatment Systems     |            |             |  |
| Model                |                                 | Code of    |             |  |
|                      |                                 | Valve Body |             |  |
| Purchase             |                                 |            |             |  |
| Company              |                                 | Tel/Cel.   |             |  |
| Name                 |                                 |            |             |  |
| Problem              |                                 |            |             |  |
| Solution             |                                 |            |             |  |
| Date of<br>Repairing | Date of                         |            | Maintenance |  |
|                      |                                 | at         | Person      |  |
|                      | Accomplishmen                   | it         | Signature   |  |

#### MODEL:44710(F84)

When product need warranty service, please fill in the below content and sent this card together with the product to the appointed suppliers or Runxin company

| User        |    |             | Tel / Cel |  |
|-------------|----|-------------|-----------|--|
| Purchaser   |    |             | Tel / Cel |  |
| Product Mod | le | Code of val |           |  |
|             |    |             |           |  |
| Problem     |    |             |           |  |
| Description |    |             |           |  |
|             |    |             |           |  |
|             |    |             |           |  |