

Manual and instruction

Product Name: Intelligent flow meter for Quantitative/quantitative control instrument

Item No.: ZJ-LCD-M

Doc. No.: HiHuiLai

1. Usage and performance characteristics

This system takes use of advanced single-chip micro-computer technology, and DC24V 8V wide range power supply, is the new device that LCD screen display the new flow measurement and control. This system takes use of advanced single-chip microcomputer technology. Its power supply ranges from DC24V±8V. It is a new kind of instrument for flow measurement and control with LCD dynamic screen display.

Advantage: Ultra thin design, elegant and beautiful, Small size, light weight, shown reading directly, clear, high reliability. It can be paired with pulse output flow sensor, solenoid valves and the like to form into a flow measurement control system. It can be used for gas or liquid flow control for industries such as petroleum, chemical, pharmaceutical, food and pure water machine.

Details as below :

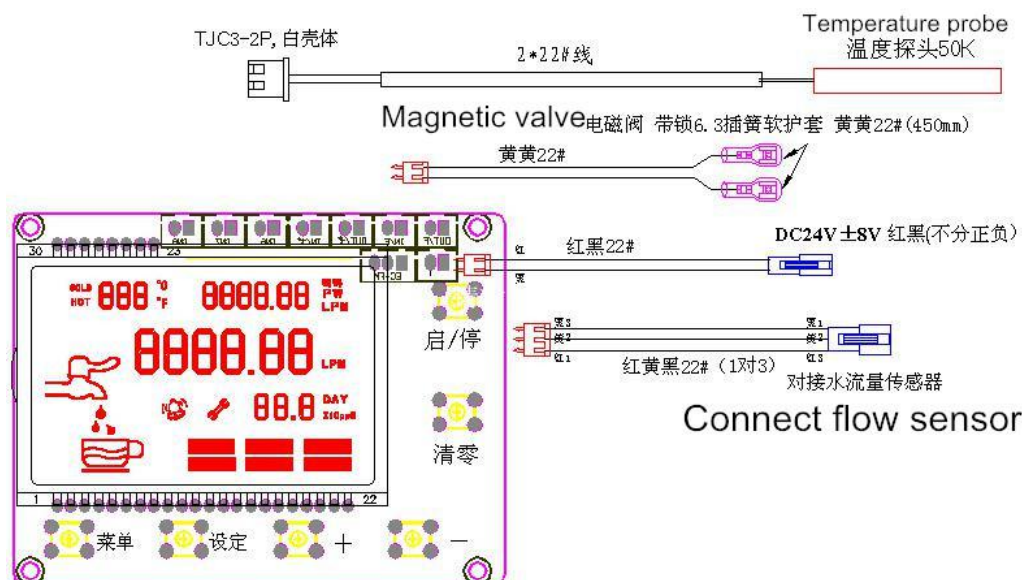
- 1). Ultra slim design and flexible installation: suitable for all model Assembly, easy to use
- 2). Large white back-light LCD screen: beautiful, generous, turning digital display into reality
- 3). A wide range of outside power supply: enlarged its usage range; can be connected to a variety of models;
- 4). Equipped with sensors, magnetic valve: can be used for gas and liquid flow control and display for various industries.
- 5). Temperature detection: detects and display the temperature of various kinds of liquid

2. Electrical parameters

- 1). working Voltage : **DC24V±8V** / 1A
- 2). Magnetic valve working voltage: DC12V / 0.3A-0.5A (Normally closed magnetic valve)
- 3). Flow probe voltage :DC5V (Flow probe input pulse signal)
- 4). Measurement range :0.1-9999 Litter , data K can be set Max data 1-9999 L/min in Screen.

3 .Electrical connection instructions

The system has "power", "flow meter signal", "electromagnetic valve control", "temperature probe", and other terminal connectors shown as Below :



4 . Button

The system has six buttons: "Menu", "SET", "+", "-", and "Run/Stop" and "Clean".

A) Menu : Press the "menu button" to switch for query: quantitative real-time setting values, total value, flow measurement parameters and parameter confirmation of the k value. (The corresponding status display appears);

B) SET : data setting

C) + : set digital +

D) - : set digital -

E) Run / Stop : start or stop

F) Clean : reset to zero .

5 . Function and data setting instruction :

1). Quantitative setting and actual values

As picture1 shows, the quantitative setting value or real-time value would be the system default interface

A .**Connect power**, fluid temperature would be displayed on upper left corner of the LCD panel; the user setting would be displayed on top right corner; the real-time flow value would be displayed on the center and the latest operation values be saved automatically; water current status would be displayed on the lower left corner, real-time setting status would be displayed on lower right corner(can be displayed in Chinese or English)

Remarks : Back-light will be always on when starts up and cannot enter any settings at that time. Wait until the light dies out to enter settings.

B . User's setting :

1.Connect power, In the standby mode, press "CLEAN" for 3 seconds to clean current settings and real-time flow value. Press "SET" to set the new data based on previous data.

2 . Press "SET", the last digit on the very right side flashes, then press "+" or "-" to add or subtract. Press "CLEAN" to clean current digit to zero. Press "SET" to jump into next digit to the left. When finished, press "MENU" to finish and exit. (If no any operation in 10 seconds, or user presses "RUN/STOP", the system will automatically exit the setting mode, complete setting values, and start electronic magnetic valve at once.)

Note:when no setting, which equals to "000000" value, "Normally open" status would be displayed on the lower right corner of the LCD screen. Then it can be used as ordinary water meters. Each time the user presses the "Run/Stop" button, magnetic valve will start immediately, and next press will close the magnetic valve. The latest operation value would be saved as real time value. The total flow value would be added automatically-----to check the corresponding total value, press "Menu" button to switch to the total value interface.)



Picture1

6.Quantitative setting process :

(1)Shown as picture 1 ,

When user doesn't set any value,(showing 000000),the status bar displays "normally open".

At this time, press " RUN/STOP" button, system will open the magnetic valve, and the setting data will keep the same while the real time value shown in the center will display the current flow rate detected by probe automatically.(note :Under normally open status, the real time value of flow will automatically clean to Zero each time the user opens the magnetic valve.) Then press "RUN/STOP" button to closed the magnetic valve, and keep the current flow data. When press " RUN/STOP" button again, the magnetic valve will start to work again.

(Note : after pressing "RUN/STOP" button and switched into Running status, the system won't take in any other operation. Unless press "RUN/STOP" to stop, then you can press other buttons.) When it is under Stop **status**, you can press "CLEAN" for 3 seconds to clean the value into Zero.

(2). As picture 2 shows, when the user sets a value into user's setting value, the status will switch into Quantitative status.

At this time press "RUN/STOP" button,the system will open the magnetic valve. The setting value will not be changed. The real time value will be cleaned to zero automatically. The current flow value detected from the probe will be accumulated from 0 to the user's setting value. Then the magnetic valve will closed and the buzzer will sound for three times to remind the user. When the valve is working, press " RUN/STOP" button to suspend operation; press the button again to continue.

(Note: The user change the setting data one time, press "RUN/STOP",the real-time value will clean to zero. Press "RUN/STOP" to start,when it is not finished,press "RUN/STOP"again,the system will keep the current data,when start again, then system will not clean to zero but to be added, added until reach to the user's setting .

When finish the setting,can press "CLEAN"for 3 seconds to set and clean Instantaneous value. Then can be setting again. Also can press "RUN/STOP" again, and operate the setting ; when press "RUN/STOP" again, Instantaneous value will be cleaned, and start from 0 to calculate the user's setting value.

If you want to cancel this setting, but under working. Can press "RUN/STOP"to pause,and press "CLEAN" for 3seconds to set and clean.after CLEAN the last digital Flash, auto-enter the setting State. If not operate for 10 seconds automatically exit to set free (that is "normally open").

(Note: Each time after the user modifies "user's setting value," the real time value will be cleaned to Zero when pressing the "Run/Stop" button. When the operation is not done yet, press the "Run/Stop" button, and the system will stop and save the current value. Press the button again, and the real time value will not be cleaned to Zero and will continue accumulating to the user's setting value)

After the operation of a user's quantitative setting value is finished, press the "Clean" button for 3 seconds to clean the setting value and real-time value to Zero to set another value. Press the "Run/Stop" button to rerun the current user setting value. However, the real-time value will be cleaned to Zero when you press the "Run/Stop" button to rerun and will accumulate from 0 to the user's setting value again.

If you want to cancel the setting during operation, press the "Run/Stop" button to stop running first, then press "Clean" button for 3 seconds to clean the user's setting value and real-time value. After you clean the value, the system will enter into setting mode and the last digit of the user's setting value will flash. It will switch into "Normally Open" mode if no operation within 10 seconds.



Picture 2

2 . Accumulative total value:

Connect power and in standby mode, press "MENU" button to go to the display interface of accumulative total value shown as picture 3.

B. The setting of total flow quantity :press "SET"for 3 seconds into setting, when the last digital flashes,press "+" or "-" to set.press "CLEAN"can reset this digital,press "SET"can be confirmed and go into next digital setting. When all the digital finished ,Press "MENU"finish and exit setting.(10 seconds without action or user directly by pressing the "RUN/stop" button, the system automatically exit the setting State to complete the set, directly press the "RUN/stop", then immediately returns the default interface, start the Magnetic valve)

(Note: Under cumulative total quantity, press "CLEAN"for 3 seconds, clean the total flow quantity.)

Accumulated total volume value full or when user set point is reached, buzzer sound 10 beep , the system change to the corresponding interface, flashing alarm and volume values are displayed. (User-defined value is the total 0 digital, defaults to maximum, only filled with 6 digital total will start the alarm)

A. Fluid temperature would be displayed on upper left corner of the LCD panel; the user's setting total value would be displayed on top right corner; the real-time accumulative total value would be displayed on the center; patterns of cup and water tap would be displayed on the lower left corner, current setting status and corresponding working days would be displayed on lower right corner (can be displayed in Chinese or English)

B.How to set the total value: Press "SET" button for 3 seconds to enter into setting mode. The last digit on the very right side will flash. Then press "+"or "-" to add or subtract value. Press "CLEAN" to clean current digit to zero. Press " SET" button again to confirm the digit and jump into next digit to the left. When-finished, press "MENU" button to finish and exit. (If no any operation in 10 seconds, or user presses " RUN/STOP" button, the system will automatically exit the setting mode, complete setting values, go back to the default interface and start electronic magnetic valve at once.)

(Note: Under the total value setting menu, press “Clean” for 3 seconds to clean the real-time accumulative total value into zero.)

When the accumulative total value reaches the maximum or the user’s setting value, the buzzer will ring 10 times and the system jumps to corresponding interface, flashes and display alert and total value. (When the user’s setting is 0, it is treated as maximum in default. The buzzer will only alert when the total value accumulates to maximum in all 6 digits.)



Picture3

3 . K value setting

Connect power and in the standby mode, Press “MENU” go to K value setting, please see picture 4.

A. Left corner of the LCD displays fluid temperature; right corner 4 "----" the password appropriate; k value is displayed in the middle left corner tap and the Cup pattern.

B. K Value setting: press “SET” for 3 seconds go into setting. The top right corner “password” flash, and the top right corner 4 digital “----”the last “-”flash,then user can set the passwords. Press “+” or “-”,press “SET”to confirm and go into next digital, after press “SET” the digital will change to “-” (Note: After reset the passwords, “password”will stop flash.



Picture4



Picture5

C . Please see picture 5, Reset 4th digital passwords,system inspect itself the passwords is correct or not. If it is wrong, (that is when finish 4th passwords,and press “SET” to Confirm), alarm 3 beep,and then go back to inset passwords, require user to write the password again.

When the passwords are correct, last digital of K value flash, can reset K value.

The Modifications may refer to the total value of the modified.

Note:K-value cannot be 0, or buzzer Flash three times, and the changes could not be successful, return to the default interface.

When there is no password or password entered is incorrect, stopped 10 seconds automatically exit.

4 . Password reset:

Under the K value , press “ CLEAN” for 3 seconds , as picture 6

In the middle of LCD , the 1st digital show 1, means this is first time to write the new password, if it is 2, means second time, behind 4 digital “----” stand by New passwords, Top right corner old “ password” reminds flash, and 4 “----” , the last “-” flash at the same time, then require user to write old passwords. Press “+” or “-”, press “SET” confirm and go to next digital, after confirm by press “SET”,the digital change to “-” (Note: After modify the password, "password" prompt stop flashing.) After reset 4th old password,and press “SET”,system automatically detect the old password is incorrect. When you enter the old password is not correct, the buzzer alarm three time, return to the State before the password change, requires that the user enter the old and new passwords. Only after you enter your old password correctly, 4 new password the last flickering, you can modify the new password value.

Modified after you complete the new password for the first time, press the “SET” return system 4 “----” and first appears in the middle of 2, requires the user to enter the new password a second time. After you modify the new password a second time by pressing “SET”, the system will automatically detect the new password are identical, if the same interface returns the K value of the new password was successfully modified. If they are not returned before the new password changes for the first time. After the new password was successfully changed, amendment values of K in the future will be subject to the new password.

(Note: New passwords change, press “SET” ,after confirm ,will also show “-”.)

(6)



Picture6

Note: The maximum precision of the decimal point to two, when k value changes and password changes, other not using key are invalid. In Other interfaces, not operate 20 seconds will automatically exit the system default interface or user press the "RUN/STOP", the system starts the magnetic valve immediately ,and return to the default interface.