

YB6406B

Setting Control Instrument

User Manual



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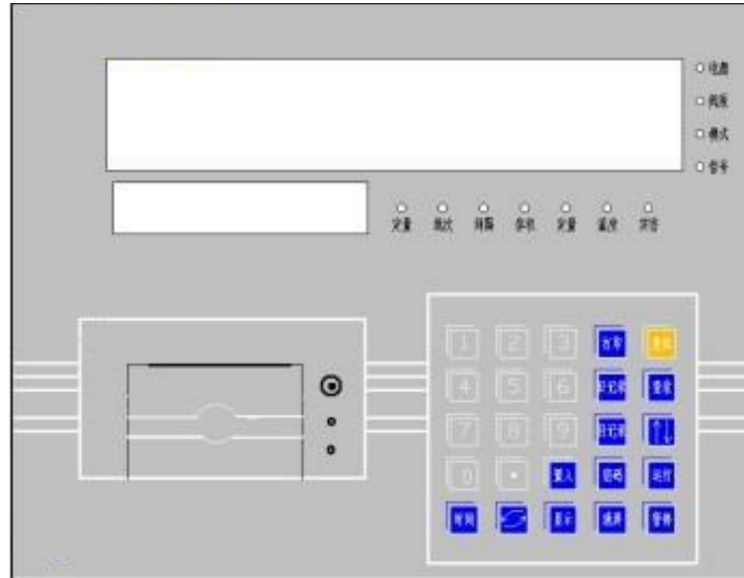
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1.Introduction

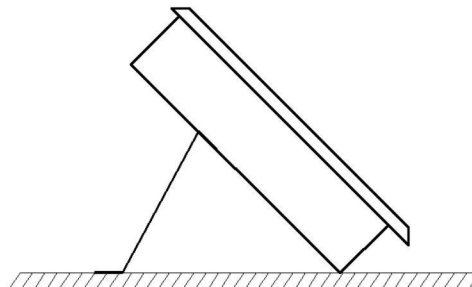
First of all, we sincerely thank your company for choosing our YB6406B desktop preset control instrument. The YB6406B is an upgraded version of our original YZ6406, addressing the shortcomings of the previous model. It features an ATMEL ATMEGA64L advanced microcontroller and internationally popular membrane keys, significantly enhancing the instrument's reliability. This is an instrument with exceptional cost-performance ratio. The instrument's surface panel diagram is included.



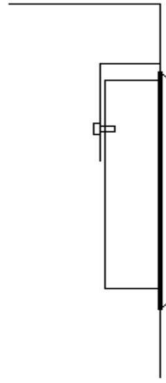
2. Instrument installation

2.1 The YB6406B comes with three installation methods

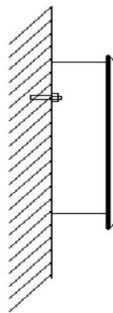
1. Secure the fixed bracket of the random band to the back of the instrument with screws, and it is ready for use. (See figure)



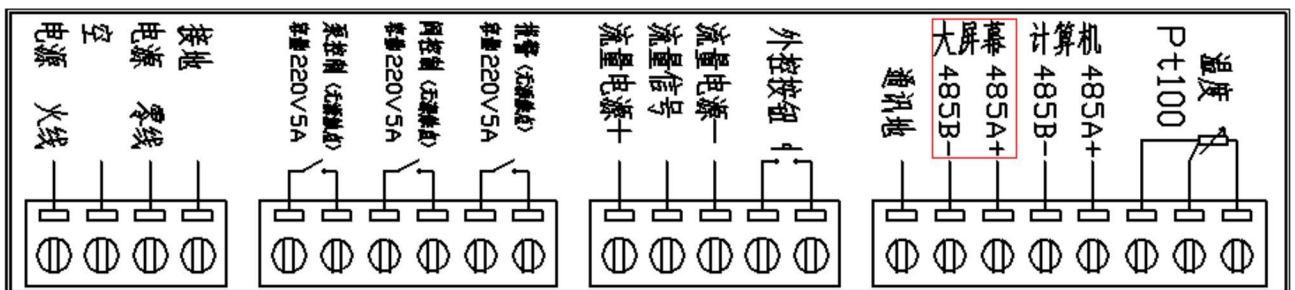
2. Installation on the cabinet: First, drill a square hole matching the instrument's dimensions. Insert the instrument and secure it with a screw fastener from the back. (See figure)



3. For wall installation, first turn on the instrument (note: remove the four screws on both sides). Disconnect the panel from the instrument box, secure the box with expansion screws, then reassemble. (See figure)



2.2 External wiring of the instrument



3. How to operate

3.1 Login

If login is enabled, follow these steps; otherwise, skip and display P.

1. After completing the wiring, turn on the instrument's power switch to power it on. The screen will display "LOAD" after self-check, prompting the user to log in.

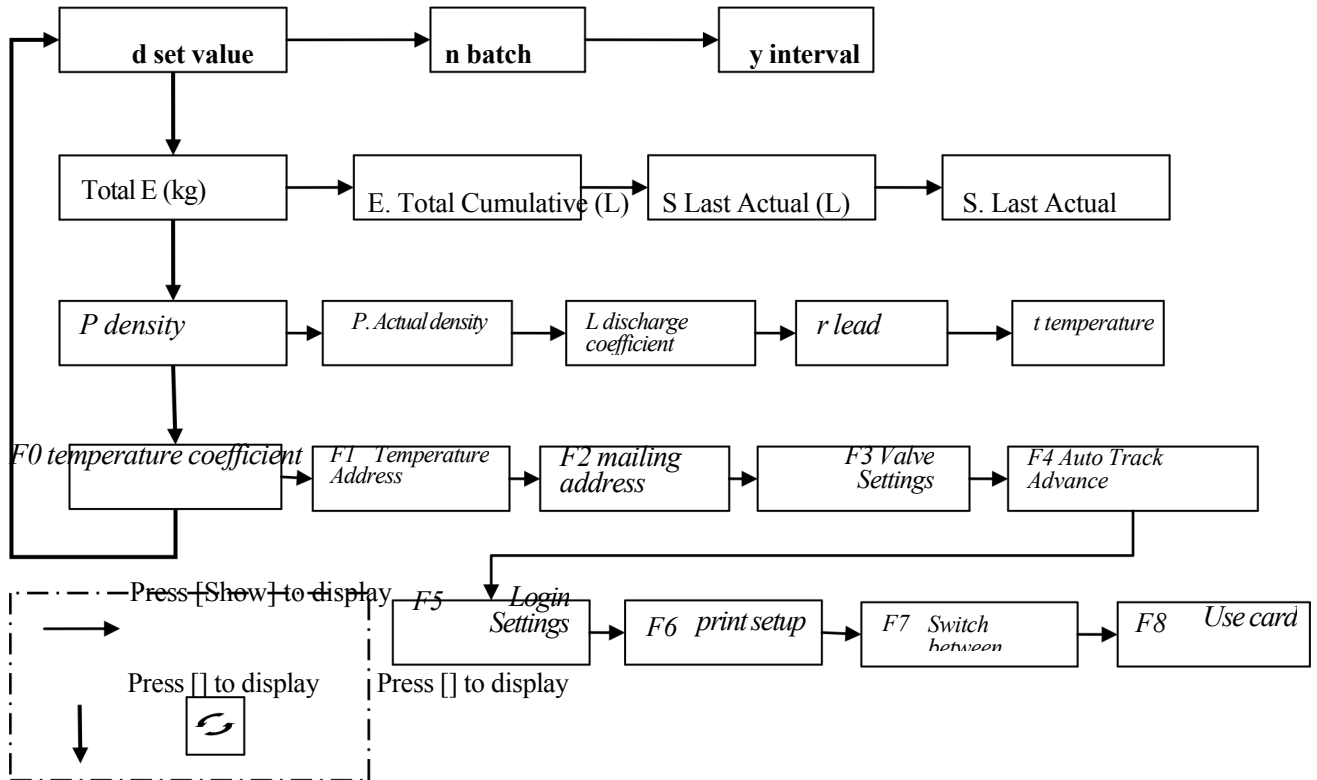
2. Press the "Login" button to clear the screen, enter the factory password 1234, then press "Insert" to display the screen P. Login is complete.

3.2 Parameter Meaning

The YZ2406B has four parameter groups

1. d-fixed value, n-batch, y-interval
2. E-Total Cumulative (kg) E.-Total Cumulative (L) S-Actual Fire (kg) S.-Actual Fire (L)
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3. P: Standard Density, P: Actual Density, L: Flowmeter Coefficient, r: Pre-dimensioning Factor, t: Temperature
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4. F0-Temperature correction coefficient
F1-Temperature chip address (manufacturer setting, do not modify)
F2-Instrument Communication Address
F3-Select single confirmation or double confirmation for valve pump activation (Set to 0: Press 'Run' once to activate the pump; Set to 1: Press 'Run' once to display 'End', then press again to activate the pump).
F4-Automatic advance tracking (Set to 0: Advance r uses user-defined values, parameters remain unchanged after each oil delivery; set to 1: Advance automatically tracks and corrects).
F5-Login function switch (set to 0: login automatically upon device startup; set to 1: requires login password before proceeding).
F6-Printer switch settings: 0 (no printer operation), 1 (automatically prints after each oil delivery), 2 (manual 'Print' key required after each oil delivery).
F7-Switch between Chinese and English printing (set to 0 for Chinese, 1 for English).
F8-Card feeding switch (Set to 0: IC card not used; Set to 1: Card required for each oil dispensing, requiring communication between instrument and computer).

The first group of parameters can be modified directly. The second group is for display only. The third and fourth groups require decryption before modification. For decryption, see Chapter 4 on password operations.



3.3 Parameter Settings

1. After logging in, all four parameter groups can be switched  by pressing the [Display] key. The procedure is as follows: Press the "Display" key once, and window 2 will show "d="; the value in window 1 will then be the d value. Press the "Display" key again, and the n value and y value will be displayed in sequence.

2. Press  the button, then press the "Display" button. The instrument will sequentially display the second set of parameters. Similarly, the third and fourth sets of parameters can be displayed in the same manner.

3. Modify parameters

I. The first group of parameters are operational parameters that can be modified directly. To adjust the d value, press the 'Display' key to open window 2 and set d=, then press 'Clear Screen' to enter the desired value. Press 'Insert' to complete the setting, after which window 1 will flash briefly.

II. The second set of parameters is cumulative and does not require modification

For parameters in groups III, 3, and 4, first decrypt the password, then proceed with the same operation as in Group I.

① 、put a seal on

I. First, refer to parameter F6 and set it to the required value.

II. In standby mode, press the "Daily Record" button, then press the "Print" button to print the daily record.

III. Monthly records follow the same principle

IV. In standby mode, press the 'Print' button to immediately print the last sent record.

② 、hair oil

I. Single-cycle oil dispensing: Set the d value and press the "RUN" button to initiate dispensing. The system will automatically stop when the preset quantity is reached. Dispensing is complete. II. Continuous oil dispensing: Set the d, n, and y values, then press "RUN" to start. Upon reaching the first preset quantity, the system will automatically pause. The instrument will display the remaining cycles, triggering a delay period (in seconds). Once the delay completes, the system will resume operation until the batch reaches zero, concluding the process and printing records.

III. Semi-Continuous Oil Dispensing: Set the values of d and n, and set y to 0. Press the 'Run' button to initiate oil dispensing. The system will automatically stop when the preset quantity is reached, displaying the remaining dispensing cycles on the instrument. Press the 'Run' button again to start the second dispensing cycle until the batch reaches zero, then terminate the process and print the record.

③. External control oil

After setting the corresponding working parameters, the two terminals of the outer space will be closed and opened once or twice, and the instrument will start to send oil according to the set number.

④. temperature

The YZ2406B features built-in temperature compensation with optional sensor configuration. When using a field temperature sensor, follow these steps: 1. Disable parameter password protection; 2. Press the window 1 button to display the temperature value (t); 3. Press the 'clear screen' button; 4. Enter 999.9 and press 'set'; 5. Verify the temperature reading is accurate.

If there is no temperature sensor on site, enter a temperature manually after decoding. In this case, the instrument does not collect the medium temperature and always converts the temperature manually.

⑤. Volume oil

When the standard density P is set to 1 and the temperature coefficient t is 20°C, the volume of oil can be calculated using d as the unit.

3.4 Password Operations

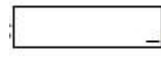
This device has two sets of passwords: login password and parameter password.

Login password: The password used by users to log in after the meter is turned on.

Parameter password: To modify the instrument's internal parameters (groups 3 and 4), you must first remove the password.

I. Decode

After logging in to the instrument, press the 'Password' key once in standby mode. Window 1 will display



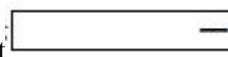
, then enter 1234 (Factory Settings can be modified by users), Then press the "Insert" button. "PASS" appears in Window 1, Then "OH" will be displayed, The password for the instrument parameters is enabled. At this point, the 3 or 4 groups of parameters protected by the password can be modified. Note: When the instrument is not turned off or the oiling operation is not performed, the parameter password of the instrument remains open.

II. Password Change

(1). Change login password,

Press the "Password" key three times, and Window 1 will display it  , Enter the original password and press the "Insert" key to display that the PASS verification is successful. After the password verification is passed, press the "Password" key three times. At this point, enter the new password you need to set. Window 1 will display "PASS", indicating that the login password has been modified successfully

(2). Modify parameter passwords

Press the "Password" key twice. and Window 1 will display it  . Follow the same steps as in (1).

3.5 Instrumentation Commissioning

1. First, secure the instrument, then connect the corresponding signal lines. The instrument will display normally when powered on.
2. Check whether the flow signal can enter the instrument. When the flowmeter is working, the instrument signal light flashes, indicating that the flow signal debugging is finished.
3. Check whether the temperature is correct.
4. Start and check whether the valve pump is normal.

5. Set d to 50 or any value, define the corresponding standard density P and flow meter coefficient L. Set the advance quantity r to 1 and F4 to 1. Start the instrument. After the oil delivery is completed, check the value of r. Repeat the process to verify if r remains consistent with the previous measurement, indicating constant valve closure time. Weigh an empty drum to obtain the fixed value, then restart the system. After completion, perform weighing verification, calculate the error, and make fine adjustments to the L value until achieving precise measurement.

4. Technical Parameters

1. Input

- ①. Flow signal: DC12V-24V (P-P) voltage pulse /0-1KHz
- ②. Temperature signal: 3-wire Pt100, with a resolution of 0.1°C
- ③. External control contacts: passive contacts

output

- ①. Switching outputs: 3 groups (passive switches) DC24V/5A, AC220V/1A, and AC380V/1A
- ②. Communication: RS485 and MODBUS (2 groups)

2. Display

- ①. Two sets of digital tubes for size display
- ②. Maximum set value 1-999999.9
- ③. Batch 1-99
- ④. interval 1-99 seconds

3 、 accuracy

- ①. Cumulative error of ± 1 pulse
- ②. Instrument accuracy <0.2%

4. Normal working conditions

- ①. ambient temperature: -10°C-50°C
- ②. Relative humidity: not more than 85%
- ③. the surrounding air does not contain corrosive gas

5. Work power supply: AC220V/50Hz

6. Hole size: 240mm x 305mm x 55mm

