F102A-5K

Automatic quantitative unit

User's manual

531701020023 Ver A0

Contents

Due to the continuous improvement and update of our products, we reserve the right to modify this manual at any time without prior notice.For this purpose, please visit our website frequently for timely information.

The company's Web address http://www.gmweighing.com

1. Overview

F102A-5K is an automatic quantitative unit suitable for quantitative packaging of granular materials, the feeding mechanism adopts the "vibration feeder" way to achieve multi-stage feeding, unloading for cylinder drive way to achieve fast unloading.The product has the characteristics of high speed, high precision and wide range, and can be widely used in food, feed, chemical, rubber and plastic industries of quantitative packaging machinery.

1.1 Product parameters, functions and characteristics

1.1.1 Product parameters

Model specifications	F102A-5K
Electrical source	AC220V ±10%, 50/60Hz, 120W
Quantitative range	0.25 to 5kg
Weighing accuracy	±2 ~ 5g
Weighing speed	900 PCS/hour or less
Measuring bucket volume	8L
Operating temperature	0 to 40 ℃
Maximum humidity	90% R.H non-dew forming
Air source	0.4 ~ 0.6MPa 2m ³/h

Note 1: Packaging accuracy and speed may fluctuate depending on materials, feedstock and other environmental factors. These accuracy and speed are the test data of round grain rice used in our test line.

Note 2: When placing the order, please note whether the operating environment is 50Hz or 60Hz. The factory default is 50Hz. 60Hz can be customized as required.

1.1.2 Product function

1. Weighing type automatic quantitative function.
2. Two speed (vibratory feed) feeding control.
3. Automatic zeroclearing function.
4. Process control parameter automatic correction function.
5. Cumulative and statistical functions.

1.1.3 Product features

1. Intelligent: only set the target value, under the condition of ensuring accuracy, automatically adjust the optimal quantitative speed.
2. Simple installation: standard external interface flange, fast installation.
3. Data export: comes with USB interface, data record export more convenient.
4. Simple operation: 7 "touch screen, Chinese and English display.
5. Material: 304 stainless steel is used for contact material.
6. High speed and high precision: double vibrating plate is used for feeding, which is fast and accurate.

1.2 Working principle

The equipment starts the two speed feeding process, namely: fast, slow feeding, each speed feeding switch to the corresponding advance in the formula as the control cut-off point, in order to avoid the impact of overimpact on the measurement, set the corresponding prohibited discrimination time;After the end of feeding, enter the setting process, the setting time can be set, after the end of the setting, the equipment through the switching quantity output "feeding complete" signal;The equipment receives the external "allow unloading" effective switching quantity signal, the device will drive the cylinder to open the unloading door of the metering bucket, when the weight of the material in the metering bucket is lower than the previous setting of the zero zone value, the device drive cylinder to close the unloading door, complete a quantitative process;Before starting the next quantitative process, the equipment first carries out a period of feeding before the delay, and then the next feeding, so the cycle runs reciprocating.

1.3 Main uses and application scope

F102A-5K automatic quantitative unit is mainly suitable for quantitative packaging of granular materials, weighing range of 0.25~5kg.

2. Precautions for safe use

2.1 Safe operation

Before installing and using the product, you should read the product manual carefully and let the professional debug the equipment

2.1.1 Basic safety instructions

1. The power supply used meets the requirements of this manual, and the grounding of the equipment meets the requirements.
2. Power and air sources should be turned off before starting cleaning, maintenance and repair.
3. Only use cleaners that are not damaging to mechanical and electrical equipment.
4. The mounting rack connected with this product should be firm and secure.
5. Please cut off the power and air supply when installing the metering bucket.
6. The components and sensors connected to the metering bucket and sensor are not allowed to knock, overload and other damage to the sensor behavior.
7. No part of the body is allowed to extend into the equipment during the use of the equipment, and the scale body door has been installed firmly before use.
8. Machines packing materials harmful to human body should be cleaned after using special protective tools according to the existing regulations of the country where the machine is operated.For specific details, please contact the relevant local authorities.

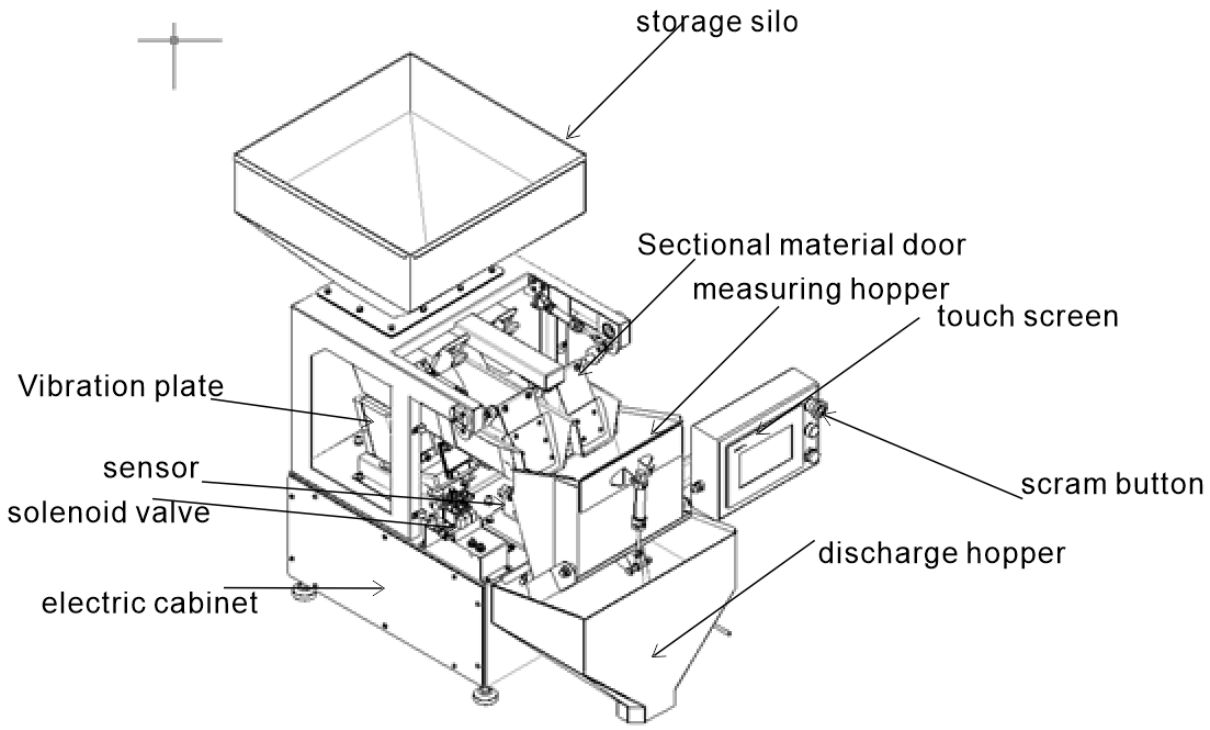
2.1.2 Operating safety Instructions

1. In order to avoid dangerous accidents, only one person is allowed to operate the machine, not many people at the same time.
2. Only properly trained personnel can operate the machine.
3. Before running the machine, the operator (or anyone responsible for operating the machine) must read and fully understand the operating instructions, especially the safety instructions and safety regulations.
4. Before running the machine, the operator must check that the scale is working properly and that the machine is fixed and looks properly.

5. In case of danger, please click the "emergency Stop" button on the main interface immediately or disconnect the main power supply immediately.
6. For electrical and electronic systems, unauthorized modification, replacement or any other non-standard operations are not allowed;Any updates or alterations must be made by Germain.
7. When maintaining the equipment, especially when entering the packaging area for maintenance, you must wear safety helmet and other protective devices.
8. When getting on and off the maintenance platform, pay attention to your feet.

3. Product installation and transportation protection

3.1 Product overall appearance and organization introduction



Overall appearance drawing

Storage hopper: Store materials to be weighed.

Cutting door: when the vibration plate stops, the door will be closed immediately to prevent materials from continuing to fall into the measuring bucket and affecting the accuracy.

Vibration plate: the main function of weighing is to control the feeding amount.

Measuring hopper: temporarily store the material to be weighed, weigh the material and discharge the material.

Discharge port: The material completed quantitative weighing is discharged from this and transferred to the next process.

Electric control box: built-in circuit board and external signal connection, I/O control connection and power connection.

Sensor: Obtain the weight of the material.

Touch screen: Used to operate the device.

Emergency stop button: Stop the device in case of emergency.

Solenoid valve: control discharge door, cutting door cylinder action.

3.2 Installation conditions

3.2.1 Equipment installation basis, installation conditions

1. Temperature: -10~40℃.

Humidity: not more than 90%R.H.

Power supply: AC110~260V, 50Hz/60Hz, about 120W.

4. Air source: 0.4~0.5MPa 1.2m³/h.

5. Installation plane: horizontal strong steel support frame.

6. Static electricity: Ensure the equipment is grounded reliably.

7 harmful radio waves: should be far away from wireless equipment and other powerful harmful radio waves source.

8. Electric and gas technical parameters meet and in place

3.3 Unpack and check

3.3.1 Open the box for inspection

Please read this operation manual carefully before opening the box

1. Pay attention to the words and warning signs on the box before opening it.

2. Before opening the box, check whether the box is seriously squeezed and deformed during transportation. If the damage is serious, it is necessary to consider whether the equipment is damaged.

3. Read the packing list before unpacking, and proofread it after unpacking to avoid omissions.

4. After unpacking, check whether the connecting screws of the equipment are loose.

5. Before assembling the whole machine, check whether the metal hose is in good condition.

6. After unpacking the whole machine assembly, check whether the scale is normal and whether the movement of the moving parts is normal.

7. When debugging the whole machine after assembly, pay attention to whether the sealing of the part through which the material passes under the predetermined pressure is reliable. This check must be made before starting the machine.

3.3.2 Spare parts

1. Accessories: equipment side panel opening key, packing list, invoice, product specification and quality inspection certificate.

2. Unpack the box to check whether the accessories are matched and whether the equipment packaging is in good condition.

3. The original of Germain Technology Company must be used.

4. The company is not responsible for any loss caused by the use of other accessories.

If you have any questions, please contact us in time.

3.4 5. Product packaging and transportation protection

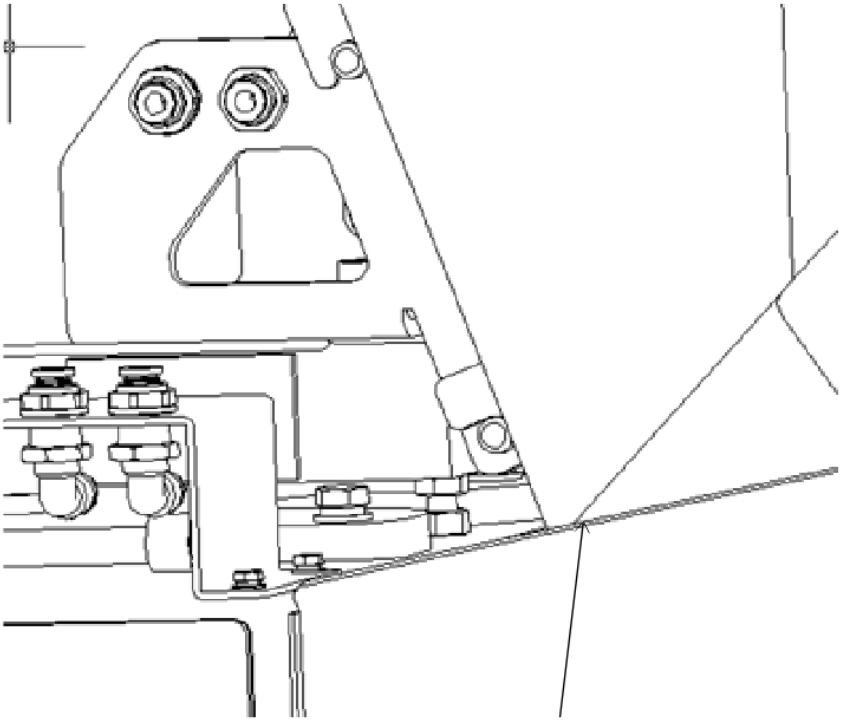
3.4.1 Packaging requirements

1 Single machine and double machine two kinds of packing cases.

2 Using wooden box packing, can be stacked in two layers, GB/T4857.3 transport packaging basic test, static load stacking test method.

3 To meet the anti-vibration requirements of long-distance road transportation, GB/T4857.7 transport package basic test, sine vibration (fixed frequency) test method.

3.4.2 Transport protection



limit protection

1. Before transportation, screw the limit bolt on the figure to stick the sensor, and take down the measuring bucket at the same time.
2. Wrap the film around the surface of the equipment.

3.4.3 Remove the transport limit protection

1. After the equipment is unpacked and checked, screw the limit bolt down to about 0.5mm-1.0mm away from the sensor, and lock the nut under the bolt.

2. Hang the measuring bucket back to the supporting seat of the measuring bucket

3.4.4 Requirements for equipment installation and maintenance

1.The operator must accept the company's skills training and safety education, and hold a job certificate.

2.The person responsible for operating the machine must read and fully understand this operating manual.

3.Operators must have short hair or long hair up, and clothing, shoes and hats should be easy to work with.Wear a safety helmet and insulated shoes when conducting testing or maintenance.

4.Operators must strictly follow the operating procedures and steps specified in the user manual.

5.Before lubrication, mechanical adjustment, maintenance and repair of the equipment, it is necessary to cut off the power supply, shut off the air source, release the residual pressure in the pneumatic pipeline, and put up warning signs at the electric control cabinet, power switch and air source valve.

6.The maintenance and repair of the air pressure system must be carried out under the condition of cut off the power and complete pressure relief.

7.The production line shall not be operated until all safety protection facilities are in place.

8.Do not touch the moving parts of the device after it has been energized.

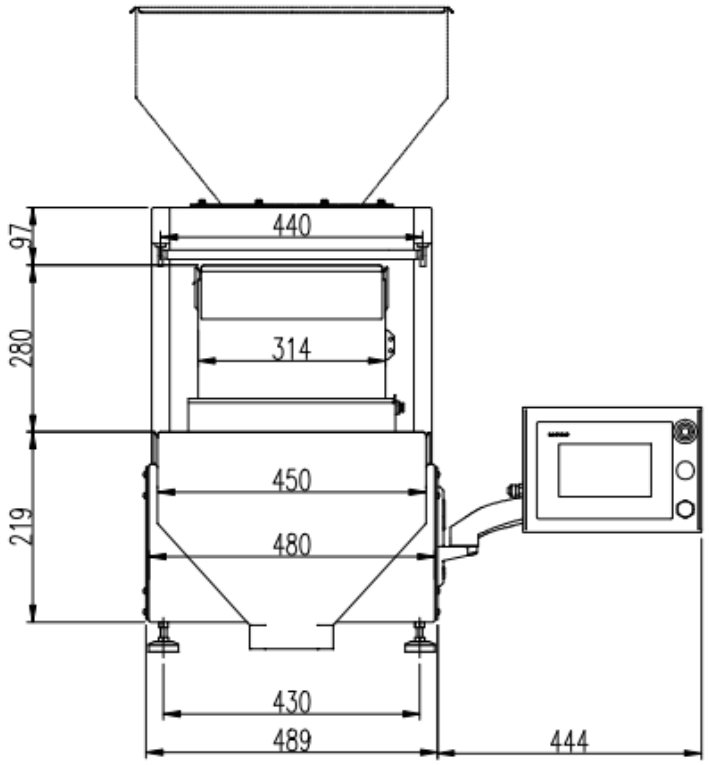
9.Do not enter dangerous areas or cross the production line while it is running.

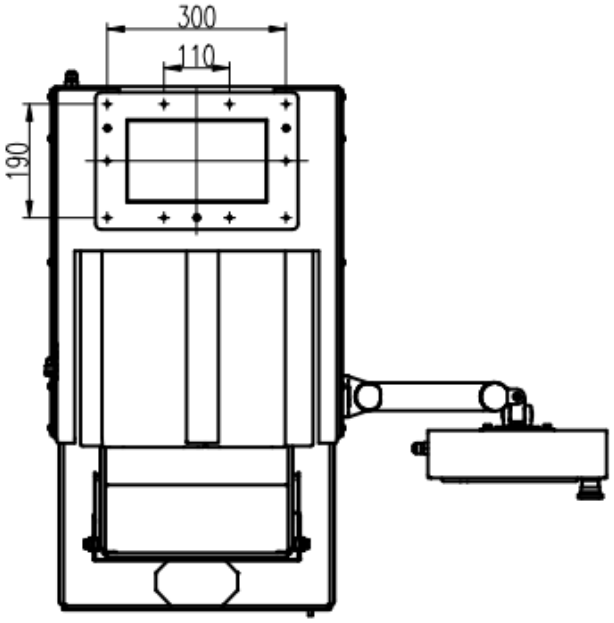
10.Prohibit irrelevant personnel to modify the wiring in the control cabinet, motherboard program, drive setting parameters.

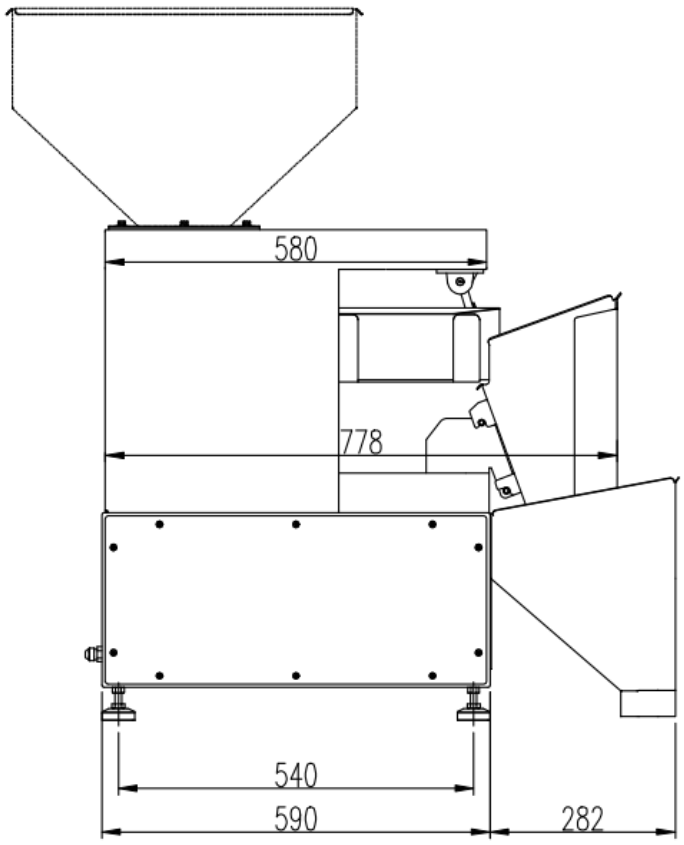
11.The installation tool is reliable and safe, and the person operating the tool understands and appreciates the full safety requirements of the tool

4. Product Dimensions

Unit of product size: mm

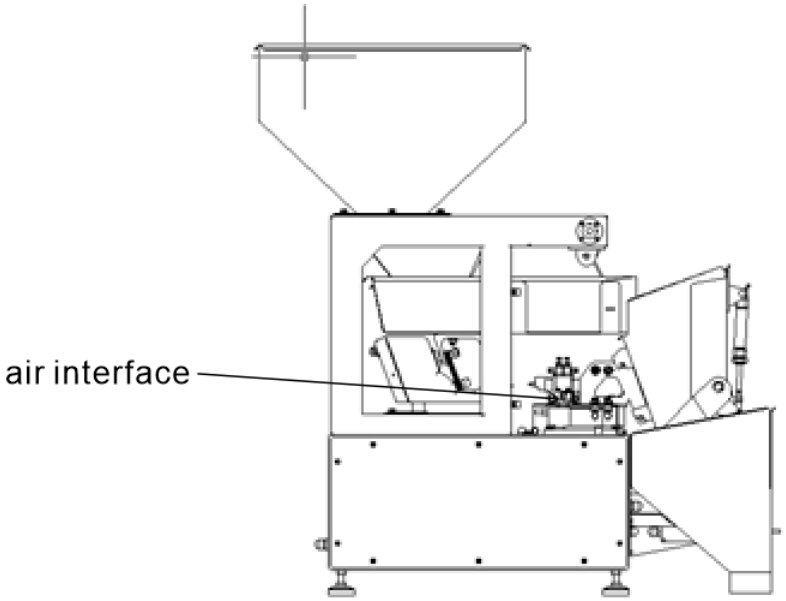





580
778
540
590
282

5. Electrical connection

5.1 Air source connection

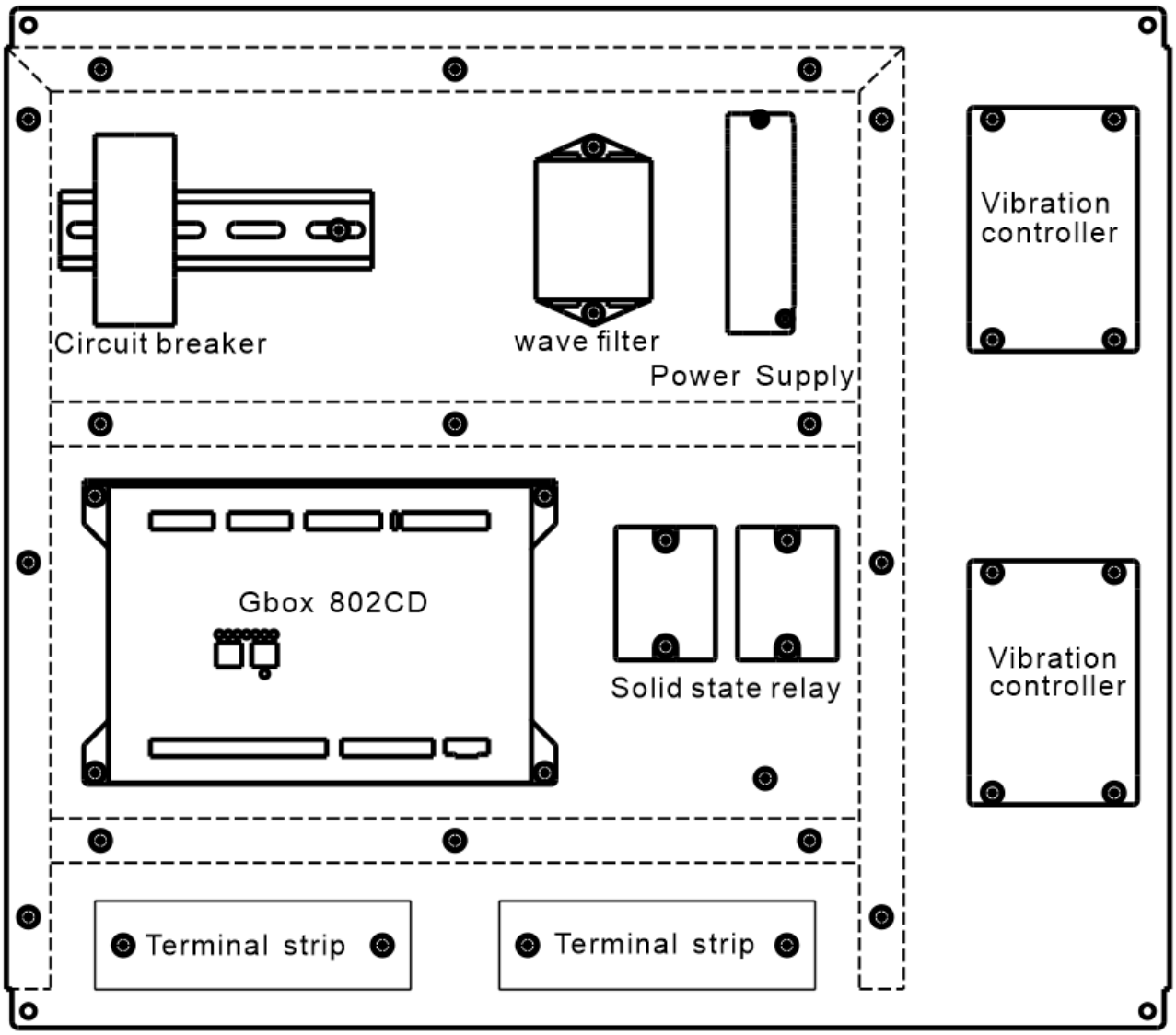


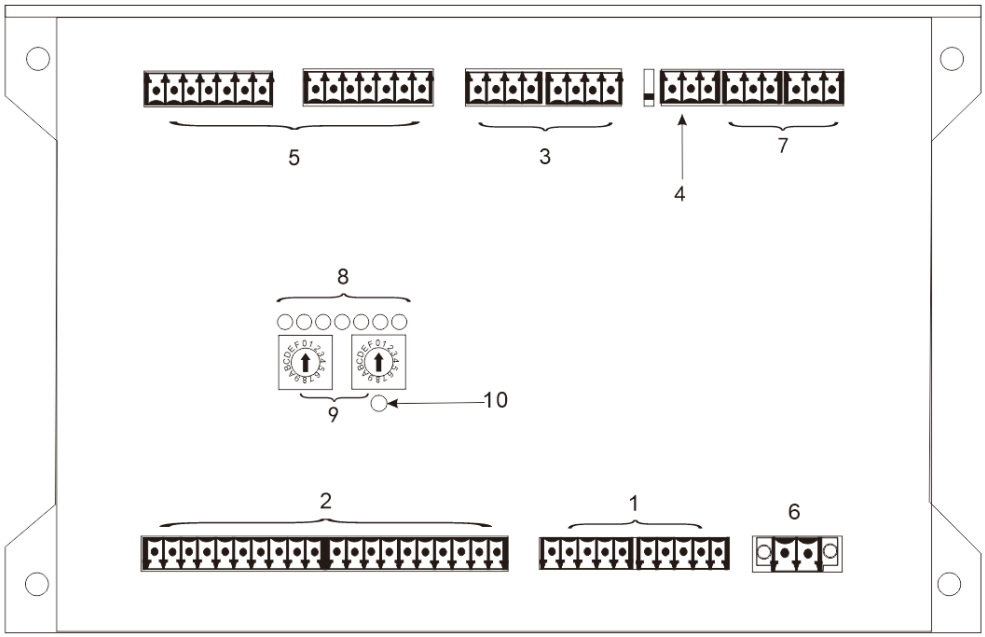
Air source inlet φ6 gas pipe, air source standard: 0.4~0.6MPa 2m³/h

5.2 Electrical connection

Plug the unit's single-wire 220V power supply into the field power outlet.

The internal layout of the electric control box is shown in the figure below:


Circuit breaker
wave filter
Power Supply
Vibration controller
Gbox 802CD
Solid state relay
Vibration controller
Terminal strip
Terminal strip



5.2.1 External interface definition

The controller interface for external connection is defined as follows:

1: Input port, 10 custom switch quantity input interfaces (IN1~IN10), are valid for low level, the definition of each port can be selected.

2: Output port, 20 custom switch quantity output interface (OUT1~OUT20), the definition of each port can be selected by oneself.

3: Vibration plate voltage output outlet. The two vibration plate voltage output outlets are SV1+, SV1-, LV1+, LV1-, and SV2+, SV2-, LV2+, and LV2- respectively.SV1+ and SV1- : are the analog signals of the small vibration plate controller, and LV1+ and LV1- : are the analog signals of the large vibration plate controller;SV2+ and SV2- : are the analog signals of the controller of the small pitching panel, and LV2+ and LV2- : are the analog signals of the controller of the large pitching panel.

4: Retain the function, CAN communicate.

5: sensor wire port, 2-way sensor wiring port (EX1+, EX1-, SN1+, SN1-, SG1+, SG1-,

SHILD, EX2+, EX2-, SN2+, SN2-, SG2+, SG2-, SHILD).

6: Power cord port, 24V power port of meter (24V+, 24V-).

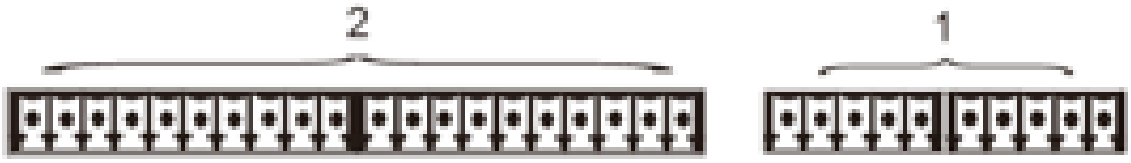
7: two RS485 serial communication ports, serial port one (A1, B1, GND) is generally used for local HMI;(A2,B2,GND), can be used for upper computer communication. All support Modbus communication.

8, status indicator, 7 status indicators are POWER, WORK, COM1, COM2, N/A, RUN, ALARM.

9, communication ID number, two dip switches can be set corresponding to the COM1, COM2 communication ID number.

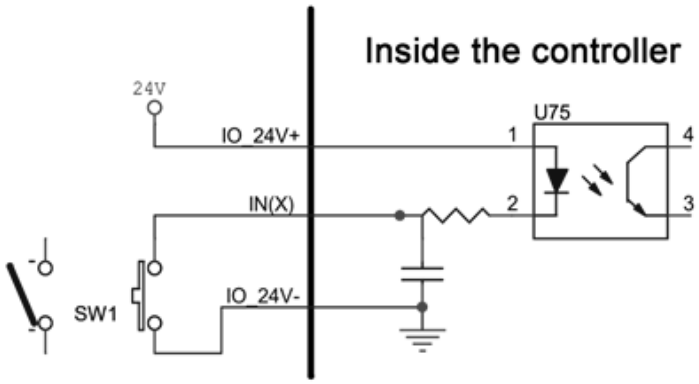
10、 Reset button, reset the controller.

5.2.2 Wiring instructions for the switch port

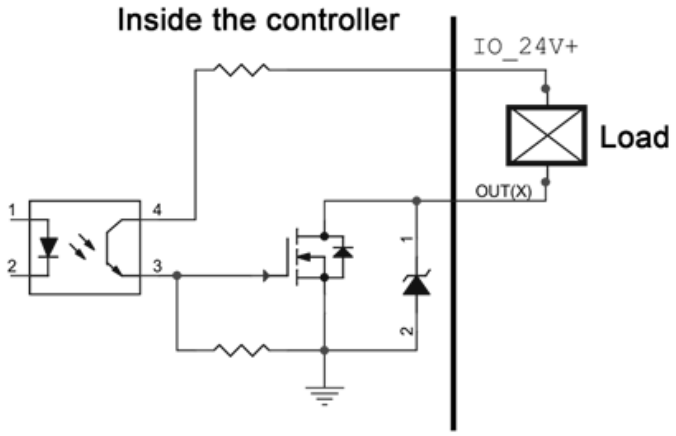


Switch quantity interface diagram

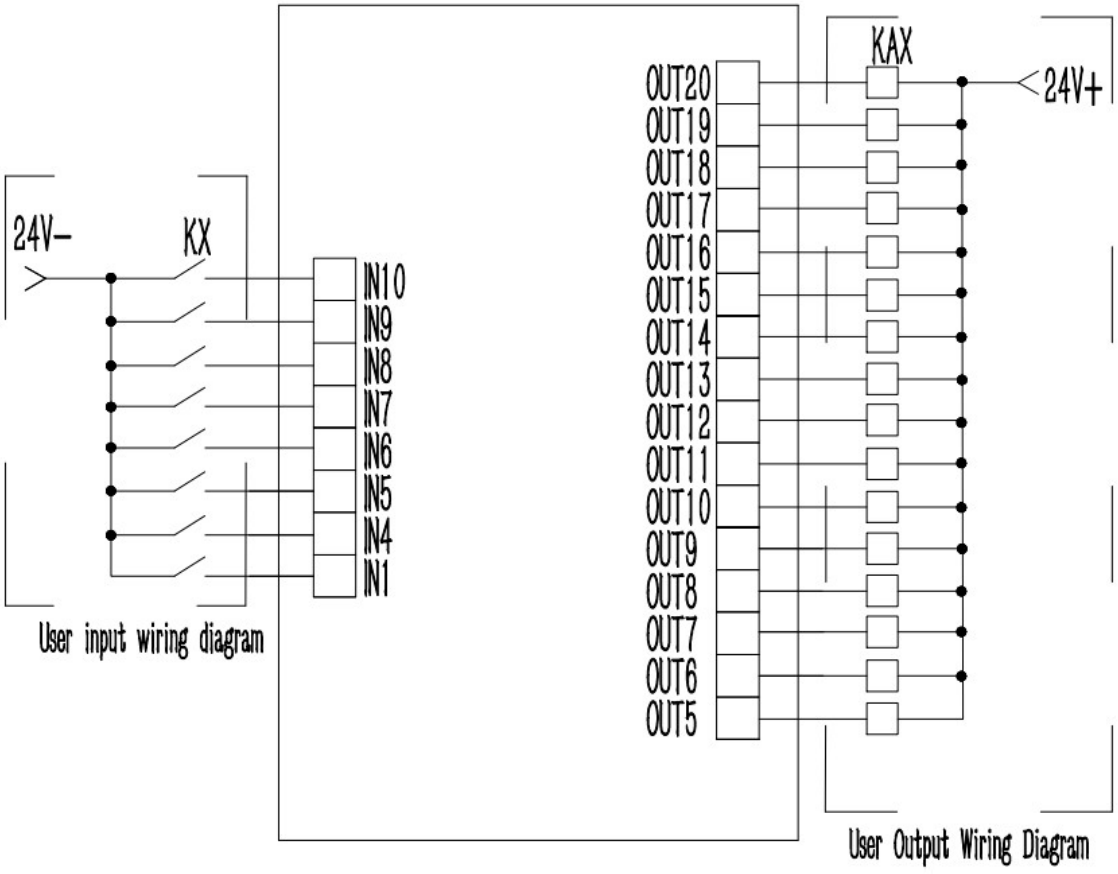
Switching quantity adopts photoelectric isolation mode.If the user needs to use the switching quantity interface, it needs to provide and access the DC24V power supply by itself.The switching quantity input is active at low level;Output takes transistor collector open output mode, each drive current up to 500mA.



Schematic diagram of input interface



Output interface schematic



Schematic diagram of user input and output connection

6. Serial port communication

6.1 Serial port communication parameter Settings

The device is configured with two serial ports, COM1 as the factory default HMI communication port, COM2 as the external serial port.Refer to the following table for specific communication parameter Settings.

Name	Instructions
COM1 Slave number	COM port ID External hardware dip decision, read as the current slave number.(Read only)
COM1 Baud rate	Initial value: 2-38400, range: 0-4 Corresponding to: 0-9600, 1-19200, 2-38400, 3-57600, 4-115200 respectively;
COM1 communication protocol	Initial value: 0-Modbus RTU, range: 0-Modbus RTU, 1-Modbus Ascii, 2- continuous send, 3- result send
COM1 Data format	Initial value: 1 (8E1); Range: 0-8N1, 1-8E1, 2-8O1, 3-7E1, 4-7O1
COM1 Double word mode	Initial value :0 (AB-CD) Range: 0-ab-cd, 1-CD-AB.
COM1 Continuous send interval	Initial value: 5ms, range 0-1000ms
COM2 Slave number	COM port ID External hardware dip decision, read as the current slave number.(Read only)
COM2 Baud rate	Initial value: 2-38400, range: 0-4 Corresponding to: 0-9600, 1-19200, 2-38400, 3-57600, 4-115200 respectively;
COM2 communication protocol	Initial value: 0-Modbus RTU, range: 0-Modbus RTU, 1-Modbus Ascii, 2- continuous send, 3- result send
COM2 Data format	Initial value: 1 (8E1); Range: 0-8N1, 1-8E1, 2-8O1, 3-7E1, 4-7O1

COM2 Double word mode	Initial value :0 (AB-CD) Range: 0-ab-cd, 1-CD-AB.
COM2 Send consecutively Spacing	Initial value: 5ms, range 0-1000ms
Reset key	The serial port communication parameters can be reset by using the reset button on the controller.

6.2 Continuous Sending Mode

Continuous Send protocol

Data Frame Format Description:

Starting character	A Scale weight status	A Scale charging status	A scale weight	B Weigh the weight status	B balance charging status	B scale weight	Checksum	Terminator

◆ Start character - 1 bit, 40H

◆ Weight status -- 1 bit, A balance /B balance weight status

D7	D6	D5	D4	D3	D2	D1	D0
	For 0 (unchanged)	1-AD bad 0- Normal	1- out of range 0- Normal	1- Negative overflow 0- Normal	1- Positive overflow 0- Normal	1-zero 0- non-zero	1- Stable 0- Unstable

◆ Feeding state - 2, A balance /B balance feeding state: state 0;State 1

State 0:

D7	D6	D5	D4	D3	D2	D1	D0
	For 0 (unchanged)	1- Weigh well 0- Normal	1- Medium filling 0- Non	1- End of feeding 0- Non	01: Slow add 10: China-Canada 11: Add fast		1- Before adding 0- Non

Status 1:

D7	D6	D5	D4	D3	D2	D1	D0
	For 0 (unchanged)	00: Stop 01: Run 10: Clear material 11: vibration plate test		1-IO test 0- Non	1- owe difference 0- Not	1- Out of tolerance 0- Non	1- Unload 0- Non

◆ Weight -- 8 positions, A balance /B balance weight;Contains symbol and decimal point, blank supplement for 20H

◆ Checksum - 2 bits, standard CRC

◆ Terminator - 2 bits: 0D 0A

If sending data:

40 01 00 00 20 20 20 20 2B 31 36 32 01 00 00 20 20 20 20 2B 33 31 32 02 C7 0D 0A

Then, it means the steady and stopped state of scale A, and the weight is +1632;Balance B is in stable and stopped state with weight of +312.

6.3 Results sending mode

Result sending mode

When the serial communication protocol is selected as "result sending" (that is, when the address of 48003 and 48023 is selected as "3"), each balance will be sent once once (said to be in good condition). If another balance is completed during the sending process of one balance, the results of another balance will be sent after the end of the sending interval "continuous sending time interval".

Data frame format description:

Starting character	A scale status	A Scale result Serial number	A Scale weight	B Scale status	B Scale result number	B Balance weight	Checksum	Terminator

◆ Start character - 1 bit, 40H

◆ Status -- 1 bit, A balance /B balance weight result status

O: out of tolerance;U: undererror;Q: qualified;F: adding

◆ The result number is -1, +1 for each completion, 1 will be added only after the feeding of this channel is completed, which is only related to the completion of the quantitative process of this channel.

◆ Weight -- 8 digits, A balance /B balance weight;Contains symbol and decimal point, blank supplement for 20H

6.4 MODBUS Protocol

6.4.1 Description of MODBUS

Function codes supported by the meter:

Function code	Name	Instructions
03	Read register	Up to 125 registers can be read at a time.
06	Write a single register	Use this function code to write a single hold register.
10	Write multiple registers	This meter this command only supports writing to double registers, the address must be aligned when writing, only part of the double register is not allowed to be written, and read only part is allowed when reading.
01	Read coil	Note that this length is in bits.
05	Write coil	

Note: This meter only supports the above MODBUS function codes, the meter will not respond when doing other function codes to the meter.

MODBUS Exception code responds

Code	Name	Meaning
02	Illegal data address	For the purposes of this meter, this error code means that the received data address is not allowed.
03	Illegal data values	The portion of data written and the allowable range.
04	Slave machine failure	An unrecoverable error occurs when the meter is attempting to perform the requested operation.

07	Unsuccessful programming request	For the meter, the command received cannot be executed under the current conditions.

Modbus transfer mode

RTU mode

When communicating in RTU mode, each 8-bit byte in a message is transmitted as two 4-bit hexadecimal characters.

Data format: 8-bit data bit, 1-bit stop bit, parity check (8-E-1)

8-bit data bit, 1-bit stop bit, odd check (8-O-1)

8 data bits, 1 stop bit, no parity (8-N-1)

8 data bits, 2 stop bits, no check (8-N-2)

Wave rate: 9600/19200/115200/38400/57600 (choose one)

Proxy code: binary

ASCII mode

When communicating in ASCII mode, each 8-bit byte in a message is transmitted as two ASCII characters.

Data format: 8-bit data bit, 1-bit stop bit, parity check (8-E-1)

8-bit data bit, 1-bit stop bit, odd check (8-O-1)

8 data bits, 1 stop bit, no parity (8-N-1)

8 data bits, 2 stop bits, no check (8-N-2)

7 data bits, 1 stop bit, Parity check (7-E-1)

7 data bits, 1 stop bit, odd check (7-O-1)

7 data bits, 2 stop bits, no parity (7-N-2)

Wave rate: 9600/19200/115200/38400/57600 (choose one)

Surrogate code: ASCII

6.4.2 MODBUS Address Table

PLC addresses	Functional address	Meaning	Instructions

The following is a read-only register (function code 0x03)				
Meter status parameters				
40001-40002.	**0000-0001.**	Scale weight value	4 bytes of signed integer number	
40005	**0004**	Scale weight status	position	Instructions
			.00:	Stable
			.01:	Zero point
			.02:	Display weight minus sign
			.03:	Overflow condition
			.04:	Weight positive overflow
			.05:	Weight negative overflow
			.06:	Positive sensor overflow
			.07:	Sensor negative overflow
			.08:	Millivolts stable
			.09:	Display current net weight
			.10:	ADC failure
			.11:	Calculate the weight using theoretical values
			.12:	Bipolar
			.13~.15:	Reserved
40006	00005	Error code 1 (mark Classing error)	.00	Zero point calibration is unstable
			.01	Sensor negative overflow during zero calibration
			.02	Sensor overflow at zero calibration

			.03	Weight calibration is unstable
			.04	Weight calibration sensor negative overflow
			.05	Weight calibration sensor positive overflow
			.06	Reservations
			.07	The weight input cannot be zero
			.08	Weight input exceeds maximum range
			.09	Exceeding minimum resolution
			.10	The previous weight point is not calibrated (Special for multi-point calibration)
			.11	In hardware protection at calibration time (Used when there is a hardware calibration switch)
			.12	Remote calibration when prohibited (Used when there is a serial port calibration switch)
			.13~.15:	Reserved
40007	00006	Error code 2 (Clear the tare weight exercise	.00:	Power-on reset out of range
			.01:	Unstable on power-on reset
			.02:	Clear out of range
			.03:	Unstable when zeroing

		Make an error code -- Corresponding status valid Is read as 1)	.04	Sensor negative overflow when zeroing
			.05:	The sensor is overflowing when clearing
			.06:	The remote reset switch is not enabled during remote reset (Used when serial port reset switch is available)
			.07:	Net weight status does not allow zero clearance (Used when there is tare operation)
			.08:	No peeling allowed in net weight status (For tare operation)
			.09:	Remote tare not enabled for remote tare operation Operate allow switch (Used when there is tare operation)
			.10~.15:	Reserved
40011	00010	Process status flag Bit 1 (corresponds to state When valid, read as 1)	.00:	Reserved, return to 0b
			.01:	Run (includes simulated run)
			.02:	IO test mode
			.03:	Clearing pattern
			.04	Small vibration plate test
			.05:	Large vibration plate test
			.08:	Interlock host mode
			.09:	Interlock slave mode

			.10:	Bag status: bag effective after clamping, from the machine mold Invalid under type
			.11:	Code status: code when valid, from the mold Invalid under type
			.12:	Out of stock condition, effective when out of stock
			.13:	Feeding condition, effective when feeding
			.14~.15:	Reserved
40012	00011	Process status flag Bit 2 (corresponds to state When valid, read out Is 1)	.00:	Run
			.01:	Prepare before feeding
			.02:	Quickadd
			.03:	China Canada
			.04	Slow add
			.05:	Feeding stop
			.06:	Weigh well
			.07:	Results out of whack
			.08:	underresult
			.09:	Refill
			.10:	Discharge status
			.11:	Slow stop
			.12:	Suspension state of overgap
			.13:	Voltage self search

			.14~.15:	Reserved
40014	00013	Reservations	Reservations	
40015	00014	Workflow error Code area 1 (yes Should state when valid , read as 1)	.00:	Failure to clear before feeding alarm
			.01:	Alarm for overshoot and undershoot
			.02:	When started, the discharge door is not closed
			.03:	The discharge door is not closed when powering on
			.04	Feeding timeout alarm
			.05:	Discharge timeout alarm
			.12:	Software error cannot boot
			.13:	Vibrator test status does not allow operation
			.14:	IO test status does not allow operation
			.15:	Clearing condition does not allow operation
40016	00015	Workflow error Code area 2 (yes Valid for state When, read as 1)	.00:	Target value 0 at startup
			.02:	Unreasonable vibration plate voltage parameter when starting
			.04	Unreasonable lead-up parameters at startup
			.06:	Overflow at startup
			.08~.15:	Reserved
40017-40018.	**0016-0017.**	Reserved	Reservations	

40019-40020.	**0018-0019.**	Gross weight value	4 bytes of signed integer
40021-40022.	**0020-0021.**	Net weight value	4 bytes of signed integer
40023-40024.	**0022-0023.**	Tare value	4 bytes of signed integer number
40025-40026.	**0024-0025.**	Reserved	Reservations
40027-40028.	**0026-0027.**	Show Values	4 bytes of signed floating point type number
40029-40030.	**0028-0029.**	Gross weight value	4 bytes signed floating-point number
40031-40032.	**0030-0031.**	Net weight value	4 bytes signed floating-point number
40033-40034.	**0032-0033.**	Reserved	Reservations
40035-40036.	**0034-0035.**	Reserved	Reservations
40037-40038.	**0036-0037.**	AD inside code after filtering	
40039-40040.	**0038-0039.**	Sensor voltage value	
40041-40042.	**0040-0041.**	Relative zero voltage value	
40049-40050.	**0048-0049.**	Reserved	Reservations
40057-40060.	**0056-0059.**	Reserved	Reservations
40067-40082.	**0066-0081.**	Reserved	Reservations
40083-40084.	**0082-0083.**	Total cumulative system weight	Range 0 to 999,999

		Volume high data	
40085-40086.	**0084-0085.**	Total cumulative system weight Volume low data	Range 0 to 999,999,999
40087-40088.	**0086-0087.**	System total cumulative times Number of high data	Range 0 to 999,999
40089-40090.	**0088-0089.**	Total system cumulative times Count low data	Range 0 to 99,99,999
40091	00090	Reservations	1: Valid 0: invalid
40092	00091	Enter the status area (IN1-IN10)	1: valid 0: invalid
40093	00092	Output status area (OUT17-OUT20)	1: Valid 0: invalid
40094	00093	Output status area (OUT1- OUT16)	1: valid 0: invalid

40095-40100.	**0094-0099.**	Reserved	Reservations
Basic transmitter parameter area (read-write)			
40101-40102.	**0100-0101.**	Power on clear range	0%-99% of the maximum range, initial value: 0 (off)
40103-40104.	**0102-0103.**	Reserved	Reservations
40105-40106.	**0104-0105.**	Clear range	1%-99% of the maximum range, initial value: 20%
40107-40114.	**0106-0113.**	Reservations	Reservations
40115-40116.	**0114-0115.**	Call range	Range: 0-99d, initial value: 1
40117-40118.	**0116-0117.**	Holding time	Range: 1-5000 milliseconds, initial value: 1000
40119-40120.	**0118-0119.**	Zero chasing range	Range: 0-99d, initial value: 1
40121-40122.	**0120-0121.**	Zero chasing time	Range: 1-5000 milliseconds, initial value: 1000
40123-40124.	**0122-0123.**	Digital filtering	Range: 0-9, initial value: 4
40125-40126.	**0124-0125.**	Reserved	Reservations
40127-40128.	**0126-0127.**	AD sampling speed	Range: 0-9 (corresponds to 0-50;1-60;2-100;3 - 120;4-200;5-240;6-400;7-480;8-800; 9-960) Initial value: 200Hz
40129-40130.	**0128-0129.**	Signal range	Range: 0-2 (corresponds to 0:0-5mV;1:0-10mV;2: 0-15mV,) Initial value: 1 (0-10mV)
40131-40200.	**0130-0199.**	Reserved	Reservations
Demarcate parameter area (read-write)			

40201-40202.	**0200-0201.**	Units	Range: 0 to 3;0-t, 1-kg, 2-g, 3-lb Initial value: 1
40203-40204.	**0202-0203.**	Decimal point	Range: 0 to 4;0-0, 1-0.0, 2-0.00, 3-0.000, 4-0.0000;Initial value: 0
40205-40206.	**0204-0205.**	Index value	Range :0~8:0-1, 1-2, 2-5, 3-5, 4-20, 5-50, 6-100, 7-200, 8-500;Initial value: 0
40207-40208.	**0206-0207.**	Maximum range	Range: 0- indexing value *100000;Initial value: 10000
40209-40210.	**0208-0209.**	Reserved	Reservations
Weight calibration area (read-write)			
40211-40212.	**0210-0211.**	Zero point calibration	Write non-zero data for zero calibration of the current state Read: Current millivolts of the sensor.Fix 4 decimal points.
40213-40214.	**0212-0213.**	Zero millivolts	Read the zero millivolt number from the last calibration
40215-40216.	**0214-0215.**	Gain calibration	Write weight value to complete weight point calibration Read: relative millivolts
40217-40224.	**0216-0223.**	Reserved	Reservations
40225-40226.	**0224-0225.**	Sensor sensitivity	Write using the actual sensitivity of the sensor for the theoretical value label Set and fix 4 decimal points
40227-40228.	**0226-0227.**	Total sensor range	Write the total sensor range for theoretical calibration
40229-40230.	**0228-0229.**	Theoretical value effective switch	Write 1 to enable theoretical calibration, write 0 to use calibration data

40231-40232.	**0230-0231.**	Weight correction factor	Write coefficient to correct the calibration, write data integral type, system System default data write data with 5 decimal points;Initial value: 100000;Parameter range: 1 to 1000000
40233-40238.	**0232-0237.**	Reserved	Reservations
40239-40240.	**0238-0239.**	Calibration results	1- Successful calibration; 2-zero calibration is unstable; 3-zero calibration sensor negative overflow; 4- zero calibration sensor positive overflow; 5- Weight calibration is unstable; 6- weight calibration sensor negative overflow; 7- Positive sensor overflow during weight calibration; 8- weight calibration is less than zero; 9- Weight input cannot be 0; 10- The weight input exceeds the maximum range 11- Exceeds minimum resolution (<1 AD code)
40241 ~ 40250	**0240 ~ 0249**	Reserved	Reservations
Apply parameter area (read-write)			
40301-40302.	**0300-0301.**	Working mode	Different modes, for discharging part of the control is different, master The machine mode manages the unloading parameters of the slave machine mode.Range: 0-

			3;Default: 0 0- Standard mode;1- Host mode;2- Slave mode;3- Single 1- Bucket Independent mode
40303-40304.	**0302-0303.**	Feeding vibrator mode	Parameter range: 0-1;Default value: 1 0- Single vibrator mode, 1- Double vibrator mode
40305-40306.	**0304-0305.**	Discharge mechanism model	Parameter range: 0-6;Default: 0 0- pneumatic discharge;1- motor rotary unloading;2- The motor rotates forward and backward (double photoelectric);3- motor positive and negative rotation (single photoelectric);4- electric Machine positive and negative rotation (no photoelectric);5- stepper motor rotation;6-step Forward and reverse the motor
40307-40308.	**0306-0307.**	Discharge decision mode	Determine discharge completion control conditions for closing the discharge door.Parameter model Girth: 0-1;Default: 0;0- Time mode, 1-zero zone mode
40309-40310.	**0308-0309.**	Time between discharge	After the discharge execution is completed, the discharge interval time is not detected No new discharge requirements. Range: 0-1000ms, default: 100ms.
40311-40312.	**0310-0311.**	Unloading status from machine	Used to wait for complete withdrawal of unloading status signal from the machine to prevent withdrawal

		Confirm delay	Pin delay caused by unloading abnormal parameters. Range: 0-1000ms, default: 100ms.
40313-40314.	**0312-0313.**	Feeding timeout	Parameter range: 0-30000ms. Default value: 0.0- Turn off Add Material timeout detection
40315-40316.	**0314-0315.**	Unloading timeout	Parameter range: 0-30000ms. Default value: 0.0- Turn off Add Material timeout detection
40317-40318.	**0316-0317.**	Dynamic filter switch	Parameter range: 0-1, Default: 0 (off),
40319-40320.	**0318-0319.**	Feed filter grade	Parameter range: 0-9, default: 4
40321-40322.	**0320-0321.**	Set filtering level	Parameter range: 0-9, default: 7
40323-40324.	**0322-0323.**	Discharge filter grade	Parameter range: 0-9, default: 3
40325-40326.	**0324-0325.**	Next feed start Conditions	Parameters range: 0-1, default: 0 0- Start immediately after unloading, 1- Return to zero after unloading Zone post start
40327-40328.	**0326-0327.**	Setting mode	Parameter range: 0-2. Default value: 0 Stable value, 1- time fixed value, 2- time fixed value Value (stable and then go through the fixed time)
40329-40330.	**0328-0329.**	Initiate Additional Clear Zero	When it is 0, start the first packet of zeroclearing;If it is not 0, the first packet is not clear

		Times	Zero, the subsequent zero clear. Parameter range: 0 to 99, default value: 0
40331-40332.	**0330-0331.**	Clear additional delay	Feeding before delay after if you need to zero into this delay, time After the zero clearing;Range: 0ms-5000ms, default: 500ms
40333-40334.	**0332-0333.**	Feed clearance timeout Time	Parameter range: 1000ms to 5000ms, default: 3000ms If it reaches (the time + the stabilization time) and is not stable, clear is skipped Zero direct feeding
40335-40336.	**0334-0335.**	Zeroing failure treatment Ways	Parameters range: 0-3, default: 1 Alarm only;1- alarm, the next package and then clear;2- Alarm for three consecutive times Automatic stop after one failure: 3- Alarm and stop immediately
40337-40338.	**0336-0337.**	Feed progression	Parameter range: 0-1, default: 0.0: two-stage feeding, Only fast and slow, 1: three level feeding, there are fast, medium and slow.
40339-40340.	**0338-0339.**	A Scale: Small vibration pan clear Material voltage	Parameter range: 0-5000mV, default: 3500

40341-40342.	**0340-0341.**	A Scale: The big vibration is clear Material voltage	Parameter range: 0-5000mV, default: 3500
40343-40344.	**0342-0343.**	B scale: small vibration plate clear Material voltage	Parameter range: 0-5000mV, default: 3500
40345-40346.	**0344-0345.**	B Scale: The big vibration is clear Material voltage	Parameter range: 0-5000mV, default: 3500
40347-40348.	**0346-0347.**	Clearing and feeding time	When cleaning the material, feed the material at the same time before unloading.Parameter norm Circumference: 0ms-10000ms, default: 2000ms
40349-40350.	**0348-0349.**	Lead-up adaptive Switch	Parameter range 0-1, default 0.0: Do not fix the recipe, strictly Run according to recipe parameters.1: Add time according to add and slow Fine-tune the lead-up
40351-40352.	**0350-0351.**	Adaptive rating	Parameters range 1-5, default 2."The smaller the value, adapt the out of the lift The smaller the value, the faster."
40353-40354.	**0352-0353.**	Feeding voltage working	Parameters range: 0-1, default: 1

		Mode	Standard mode, slow add end voltage back to 0,1 - Pre-boost die Formula, the end voltage of slow adding does not return to 0, maintain the original value, until the voltage rises back to the first speed voltage when unloading (with fast adding voltage back to fast adding voltage, without fast adding voltage back to the voltage)
40355-40356.	**0353-0354.**	Delay after pinch bag	Parameter range: 0ms-10000ms, default: 500ms
40357-40358.	**0355-0356.**	Delay before loose bag	Parameter range: 0ms to 10000ms, default: 500ms
40359-40360.	**0357-0358.**	Coding delay	Parameter range: 0ms to 10000ms, default: 500ms
40361-40362.	**0359-0360.**	Coded output is valid Time	Parameter range: 0ms-10000ms, default: 500ms
40363-40368.	**0361-0367.**	Reservations	Reservations
40369-40370.	**0368-0369.**	Stepper motor door opening Pulse count	Parameter range: 1-100000, Default: 1000, unloader The structure is the number of pulse for opening the door when the stepper motor is turning positive or negative
40371-40372.	**0370-0371.**	Open the door to Shake time	Motor/stepper motor rotary discharge control is used after opening the door no Judge the time of the origin position signal;Parameter range: 0ms- 3000ms;Default: 100ms

40373-40374.	**0372-0373.**	When the discharge door opens between	Discharge mechanism mode 0 pneumatic discharge or 3 motor positive and negative rotation (single Photoelectric) or 4 (motor positive and negative rotation without photoelectric), is effective The length of time given by the discharge door opening signal.Parameter range: 0-3000ms;Default: 1000ms
40375-40376.	**0374-0375.**	When the discharge door is closed between	Discharge mode 4 (motor positive and negative rotation without photoelectric) is valid, is The length of time given by the unloading door closing signal;Parameter range: 0-3000ms;Default: 1000ms
40377-40378.	**0376-0377.**	Discharge motor running Frequency	Frequency at which the motor runs normally;Parameter range: 100-100000HZ;Default value: 2000HZ
40379-40380.	**0378-0379.**	Discharge motor starts Frequency	Frequency when the motor starts;Parameter range: 100-100000HZ;Default value: 200HZ
40381-40382.	**0380-0381.**	Discharge motor accelerates Time	When the motor is accelerating from the starting frequency to the running frequency while running Interval;Parameter range: 0-10000ms, default: 100ms
40383-40384.	**0382-0383.**	Set weight hold Switch	Parameter range: 0-1, Default: 1 (Weight during unloading Leave the fixed weight unchanged)

40385-40386.	**0384-0385.**	The voltage turns on by itself guan	Parameter range: 0-1, Default: 0 Off, on if If the two poles are fed (fast and slow), when the voltage is 0, The voltage will be found when starting
40387-40388.	**0386-0387.**	Voltage increase frequency	Parameter range: 2-120, Default: 60, voltage search hour power Voltage rise frequency, the higher the voltage rise faster
40389-40390.	**0388-0389.**	Slow add weight cutoff point	Parameter range: 0-10000, default: 120
40391-40400.	**0390-0399.**	Reserved	Reservations
IO define function address			
40401-40402.	**0400-0401.**	IN1 Features	Write to modify the corresponding port function, read as a function code.Default value 1
40403-40404.	**0402-0403.**	IN2 Features	Write to modify the corresponding port function, read as function code.Default value 3
40405-40406.	**0404-0405.**	IN3 features	Write to modify the corresponding port function, read as function code.Default value 4
40407-40408.	**0406-0407.**	IN4 Features	Write to modify the corresponding port function, read as function code.Default value 5
40409-40410.	**0408-0409.**	IN5 Features	Write to modify the corresponding port function, read as function code.Default value 6

40411-40412.	**0410-0411.**	IN6 Features	Write to modify the corresponding port function, read as function code.Default value 9
40413-40414.	**0412-0413.**	IN7 Features	Write to modify the corresponding port function, read as function code.Default value 19
40415-40416.	**0414-0415.**	IN8 Features	Write to modify the corresponding port function, read as function code.Default value 20
40417-40418.	**0416-0417.**	IN9 Features	Write to modify the corresponding port function, read as function code.Default value 21
40419-40420.	**0418-0419.**	IN10 Features	Write to modify the corresponding port function, read as a function code.Default value 22
40421-40422.	**0420-0421.**	OUT1 feature	Write modify corresponding port function, read as function code.Default value 1
40423-40424.	**0422-0423.**	OUT2 Features	Write modify corresponding port function, read as function code.Default value 2
40425-40426.	**0424-0425.**	OUT3 Features	Write modify corresponding port function, read as function code.Default value 3
40427-40428.	**0426-0427.**	OUT4 Features	Write modify corresponding port function, read as function code.Default value 4
40429-40430.	**0428-0429.**	OUT5 Features	Write modify corresponding port function, read as function code.Default value 9
40431-40432.	**0430-0431.**	OUT6 Features	Write modify corresponding port function, read as function code.Default value 10
40433-40434.	**0432-0433.**	OUT7 Features	Write modify corresponding port function, read as function code.Default value 11
40435-40436.	**0434-0435.**	OUT8 Features	Write modify corresponding port function, read as function code.Default value 12

40437-40438.	**0436-0437.**	OUT9 Features	Write modify corresponding port function, read as function code.Default value 13
40439-40440.	**0438-0439.**	OUT10 Features	Write modify corresponding port function, read as function code.Default value 14
40441-40442.	**0440-0441.**	OUT11 Features	Write modify corresponding port function, read as function code.Default value 17
40443-40444.	**0442-0443.**	OUT12 Features	Write modify corresponding port function, read as function code.Default value 18
40445-40446.	**0444-0445.**	OUT13 Features	Write modify corresponding port function, read as function code.Default value 23
40447-40448.	**0446-0447.**	OUT14 Features	Write modify corresponding port function, read as function code.Default value 24
40449-40450.	**0448-0449.**	OUT15 Features	High speed pulse outlet (PWM);Write to modify the corresponding port function, read Out for the function code.The default is 25.
40451-40452.	**0450-0451.**	OUT16 Features	High speed pulse outlet (PWM);Write to modify the corresponding port function, read Out for the function code.Default 26
40453-40454.	**0452-0453.**	OUT17 Features	High speed pulse outlet (PWM);Write to modify the corresponding port function, read Out for the function code.Default 27
40455-40456.	**0454-0455.**	OUT18 Features	High speed pulse outlet (PWM);Write to modify the corresponding port function, read Out for the function code.Default 28
40457-40458.	**0456-0457.**	OUT19 Features	High speed pulse outlet (PWM);Write to modify the corresponding port function, read

			Out for the function code.Default 29
40459-40460.	**0458-0459.**	OUT20 Features	Write modify corresponding port function, read as function code.Default value 30
40461-41000.	**0460-0999.**	Reserved	Reservations
Formula and feed control parameter area (41001~41310)			
41001-41002.	**1000-1001.**	Current recipe number	Parameter range: 1-20, default: 1. After local modification, the parameters that follow the recipe number need to be refreshed synchronously
41003-41004.	**1002-1003.**	Target value	Range: < maximum range
41007-41008.	**1006-1007.**	Small vibrating plate quick power up pressure	Parameter range: 0-5000mv, default: 0
41009-41010.	**1008-1009.**	Power up small vibrator plate pressure	Parameter range: 0-5000mv, default: 0
41011-41012.	**1010-1011.**	Slow power up with small vibrator pressure	Parameter range: 0-5000mv, default: 0
41013-41014.	**1012-1013.**	Power up fast on big shake plate pressure	Parameter range: 0-5000mv, default: 0
41015-41016.	**1014-1015.**	Power up on large vibration plate	Parameter range: 0-5000mv, default: 0

		pressure	
41017-41018.	**1016-1017.**	Slow power up on large oscillator panel pressure	Parameter range: 0-5000mv, default: 0
41019-41020.	**1018-1019.**	Speed up the lead-up	Weight = target value - Stop fast feeding when fast leading;Initial value: 0
41021-41022.	**1020-1021.**	Plus advance	Weight = target value - stop medium feeding when adding lead;Initial value: 0
41023-41024.	**1022-1023.**	Drop value	Weight = target value - Stop slow feeding at drop value;Initial value: 0
41025-41026.	**1024-1025.**	Fast up the ban time	Range: 0-5000ms, default 500ms
41027-41028.	**1026-1027.**	CBC ban time	Range: 0-5000ms, default 500ms
41029-41030.	**1028-1029.**	Slow plus ban time	Range: 0-5000ms, default 500ms
41055-41056.	**1054-1055.**	Reservations	Reservations
41057-41058.	**1056-1057.**	Delay before feeding	Range: 0-5000ms, default is 0ms
41059-41060.	**1058-1059.**	Zero out room before feeding every	Range: 0-99, default 0
41061-41062.	**1060-1061.**	Set time delay	Range: 0-5000ms, default 700ms
41063-41064.	**1062-1063.**	Over and under error detection	0- Off;1: On
41065-41066.	**1064-1065.**	out-of-tolerance	If the weighing value is greater than or equal to the target value + out-of-

			tolerance, it is judged to be out-of-tolerance.Initial value: 0.
41067-41068.	**1066-1067.**	underdifferen ce	Weighing value ≥ target value - underweight value, then judged as underweight.Initial value: 0.
41069-41070.	**1068-1069.**	Reservations	Reservations
41071-41072.	**1070-1071.**	The overgap is suspended guan	Initial value: 0;0- Off;1: On;To open, there is an overowe Bad, the module pauses waiting for the user to process
41073-41074.	**1072-1073.**	Over and under alarm stop Stop time	When there is no manual clearing alarm, when the overgap alarm turns off the alarm itself Between;Range: 0-9000ms, default 1000ms
41075-41076.	**1074-1075.**	Drop correction magnitude	Range: 0-3;Default: 1 0-25%;1-50%;2-75%;3-100%
41077-41078.	**1076-1077.**	Drop correction reference Times	Range: 0-99, Default: 0 (off)
41079-41080.	**1078-1079.**	Drop correction range	Range: 0-100%, Default: 0 (target value percentage)
41081-41082.	**1080-1081.**	Maximum refill time	When feeding, if the feeding time exceeds the value, the feeding is still not finished If yes, stop feeding;Range: 0-10000ms, default value 3000ms

41083-41084.	**1082-1083.**	Minimum refill time	Range: 0-3000ms, default: 0ms
41085-41086.	**1084-1085.**	Click the feed switch	After the switch is opened, the minimum feeding time is carried out until it reaches Stop feeding after reaching the target value;Range: 0: off, 1: On, Mo Recognize value 0
41087-41088.	**1086-1087.**	Unloading delay	Discharge structure motor positive and negative mode (including double photoelectric, single light Electric, photoelectric, stepper motor positive and negative rotation) : if zero zone judgment Set, then reach the zero zone after the delay time after the output motor reversal letter , if the time decision mode, then the unloading door open signal closed After the delay of the time, the output motor reversal signal (off Door). When the unloading structure mode is pneumatic unloading: if it is zero zone judgment, The door is effective after reaching the zero zone, delay the time to open the door is invalid, If it is a time decision mode, the effective time delay after opening the door again Open the door is invalid;Range: 0-5000ms, default 300ms

41089-41090.	**1088-1089.**	Zero zone value	Range: 0- Target value, default: 0
41091-41092.	**1090-1091.**	Discharge times	Control how many times the motor rotates in the rotation mode to complete the discharge (Note: Unloading structure mode is motor rotation mode stepper motor rotation mode Valid) Range: 1-9, default: 1
41093-41094.	**1092-1093.**	First start automatic Clear zero threshold	If it is 0, the first startup does not clear zero;When it is not 0, the weight in the bucket is small In the target value * the percentage, meet the start zero clearance condition. Range: 0-100%, target value %
41095-41096.	**1094-1095.**	Multi-bucket combination scale bucket The number	When the value is greater than 1, it means multi-bucket combination scale, multi-bucket can be the same When unloading;Parameter range: 1-99, default: 1.
41097-41300.	**1094-1299.**	Reservations	Reservations
41331-41400.	**1330-1399.**	Reserved	Reservations
Target values and cumulative values for each recipe (Read only)			
41401-41402.	**1400-1401.**	Recipe 1 Target value	
41403-41404.	**1402-1403.**	Recipe 2 Target value	
41405-41406.	**1404-1405.**	Recipe 3 Target value	
41407-41408.	**1406-1407.**	Recipe 4 Target value	

41409-41410.	**1408-1409.**	Recipe 5 Target value	
41411-41412.	**1410-1411.**	Recipe 6 Target value	
41413-41414.	**1412-1413.**	Recipe 7 Target value	
41415-41416.	**1414-1415.**	Recipe 8 Target value	
41417-41418.	**1416-1417.**	Recipe 9 Target value	
41419-41420.	**1418-1419.**	Recipe 10 Target value	
41421-41422.	**1420-1421.**	Recipe 11 Target value	
41423-41424.	**1422-1423.**	Recipe 12 Target value	
41425-41426.	**1424-1425.**	Recipe 13 Target value	
41427-41428.	**1426-1427.**	Recipe 14 Target value	
41429-41430.	**1428-1429.**	Recipe 15 Target value	
41431-41432.	**1430-1431.**	Recipe 16 Target value	
41433-41434.	**1432-1433.**	Recipe 17 Target value	
41435-41436.	**1434-1435.**	Recipe 18 Target value	
41437-41438.	**1436-1437.**	Recipe 19 Target value	

41439-41440.	**1438-1439.**	Recipe 20 Target value	
41441-41442.	**1440-1441.**	Recipe 1 Add up the weight The amount	
41443-41444.	**1442-1443.**	Recipe 1 Add up The number	
41449-41450.	**1448-1449.**	Recipe 2 A Weigh tired Weigh	
41451-41452.	**1450-1451.**	Recipe 2 Add up The number	
41457-41458.	**1456-1457.**	Recipe 3 Add up the weights The amount	
41459-41460.	**1458-1459.**	Recipe 3 Add up The number	
41465-41466.	**1464-1465.**	Recipe 4 Add up the weights The amount	
41467-41468.	**1466-1467.**	Recipe 4 Add up The number	
41473-41474.	**1472-1473.**	Recipe 5 Add up weight	

		The amount	
41475-41476.	**1474-1475.**	Recipe 5 Add up The number	
41481-41482.	**1480-1481.**	Recipe 6 Add up weight The amount	
41483-41484.	**1482-1483.**	Recipe 6 Add up The number	
41489-41490.	**1488-1489.**	Recipe 7 Add up weight The amount	
41491-41492.	**1490-1491.**	Recipe 7 Add up The number	
41497-41498.	**1496-1497.**	Recipe 8 Add up weight The amount	
41499-41500.	**1498-1499.**	Recipe 8 Add up The number	
41505-41506.	**1504-1505.**	Recipe 9 Add up weight The amount	
41507-41508.	**1506-1507.**	Recipe 9 Add up The number	

41513-41514.	**1512-1513.**	Recipe 10 Cumulative weight The amount	
41515-41516.	**1514-1515.**	Recipe 10 Cumulative reps The number	
41521-41522.	**1520-1521.**	Recipe 11 Add up weight The amount	
41523-41524.	**1522-1523.**	Recipe 11 times in total The number	
41529-41530.	**1528-1529.**	Recipe 12 Cumulative weight The amount	
41531-41532.	**1530-1531.**	Recipe 12 cumulative reps The number	
41537-41538.	**1536-1537.**	Recipe 13 Cumulative weight The amount	
41539-41540.	**1538-1539.**	Recipe 13 times in total The number	

41545-41546.	**1544-1545.**	Recipe 14 Cumulative weight The amount	
41547-41548.	**1546-1547.**	Recipe 14 times in total The number	
41553-41554.	**1552-1553.**	Recipe 15 Cumulative weight The amount	
41555-41556.	**1554-1555.**	Recipe 15 times in total The number	
41561-41562.	**1560-1561.**	Recipe 16 Cumulative weight The amount	
41563-41564.	**1562-1563.**	Recipe 16 times in total The number	
41569-41570.	**1568-1569.**	Recipe 17 Cumulative weight The amount	
41571-41572.	**1570-1571.**	Recipe 17 times in total The number	

41577-41578.	**1576-1577.**	Recipe 18 Cumulative weight The amount	
41579-41580.	**1578-1579.**	Recipe 18 times in total The number	
41585-41586.	**1584-1585.**	Recipe 19 Cumulative weight The amount	
41587-41588.	**1586-1587.**	Recipe 19 times accumulated The number	
41593-41594.	**1592-1593.**	Recipe 20 accumulates weight The amount	
41595-41596.	**1594-1595.**	Recipe 20 A cumulative Times	
41609-41610.	**1608-1609.**	High total cumulative weight	
41611-41612.	**1610-1611.**	Low total cumulative weight position	
41613-41614.	**1612-1613.**	High total cumulative count	

		position	
41615-41616.	**1614-1615.**	Total cumulative times low	
41665-42000.	**1664-1999.**		
42001-42002.	**2000-2001.**	Quickadd time	
42003-42004.	**2002-2003.**	Add time	
42005-42006.	**2004-2005.**	Slow add time	
42007-42008.	**2006-2007.**	Set time	
42009-42010.	**2008-2009.**	Total packaging time	
42011-42012.	**2010-2011.**	Weight of top pack	
42013-42014.	**2012-2013.**	Top pack recipe number	
42015-42016.	**2014-2015.**	Target value on packet	
42017-42018.	**2016-2017.**	Upper packet deviation value	
42019-42020.	**2018-2019.**	Packaging result collection Identification	
42021-42022.	**2020-2021.**	Cumulative overshoot this time Times	

42023-42024.	**2022-2023.**	Accumulated deficit this time Times	
42025-42026.	**2024-2025.**	Accumulated weight for this time	
42027-42028.	**2026-2027.**	Total number of times this time	
42029-42040.	**2028-2039.**		
42081-42082.	**2080-2081.**	Packaging result Collection identification (total);The power-on and abnormal status is 3, and the weight of the package jumps between 0 and 1 when it is generated	
42083-42084.	**2082-2083.**	Upper packet channel number;1-A scale;2-B scale	
42085-42086.	**2084-2085.**	Pack the recipe number	
42087-42088.	**2086-2087.**	Pack the target value	
42089-48000.	**2088-7999.**	Reservations	

Communication parameter setting area (48001~48026) (readable except annotated)			
48001	**8000**	COM1 Slave number	COM port ID External hardware dip decision, read as the current slave number.(Read only)
48002	**8001**	COM1 baud rate	Initial value: 2-38400, range: 0-4 Each corresponds to: 0-9600, 1-19200, 2-38400, 3-57600, 4-115200;
48003	**8002**	COM1 Communication protocol	Initial value: 0-Modbus RTU, range: 0-Modbus RTU, 1-Modbus Ascii, 2- continuous send, 3- result send
48004	**8003**	COM1 data format	Initial value: 1 (8E1); Range: 0-8N1, 1-8E1, 2-8O1, 3-7E1, 4-7O1
48005	**8004**	COM1 Double word mode	Initial value :0 (AB-CD) Range: 0-ab-cd, 1-CD-AB.
48006	**8005**	COM1 Continuous send interval	Initial value: 5ms, range 0-1000ms
48007 ~ 48020	**8006 ~ 48019**	Reserved	Reservations
48021	**8020**	COM2 Slave number	COM port ID External hardware dip decision, read as the current slave number.(Read only)
48022	**8021**	COM2 baud rate	Initial value: 2-38400, range: 0-4 Corresponding to: 0-9600, 1-19200, 2-38400, 3-57600, 4-115200 respectively;
48023	**8022**	COM2 communication protocol	Initial value: 0-Modbus RTU, range: 0-Modbus RTU, 1-Modbus Ascii, 2- continuous transmission, 3- Result transmission
48024	**8023**	COM2 data format	Initial value: 1 (8E1); Range: 0-8N1, 1-8E1, 2-8O1, 3-7E1, 4-7O1

48025	**8024**	COM2 Double word mode	Initial value :0 (AB-CD) Range: 0-ab-cd, 1-CD-AB.
48026	**8025**	COM2 Send consecutively Spacing	Initial value: 5ms, range 0-1000ms
48027 ~ 48160	**8026 ~ 8059**	Reserved	Reservations
48161	**8060**	Communication status	Used for synchronous communication, 0 immediately after successful communication, 1 seconds after successful communication.(Read only)
48162	**8061**	Serial port number	Used to identify serial port numbers, serial port 1 reads out as 1 and serial port 2 reads out as 2.(Read only)
48163 ~ 48100	**8164 ~ 8099**	Reserved	Reservations
I/O test parameters			
48301	**8300**	I/O test mode	Parameters range: 0-1. 0: Exits I/O test mode;1: Enter the serial port I/O test mode. After the test is finished, the module must be closed to enter the normal state. Read 0 indicates no input, read 1 indicates there is input.Writing any value is invalid and only works in IO test mode
48302	**8301**	Enter 1 Test	
48303	**8302**	Enter 2 Test	
48304	**8303**	Enter 3 Test	
48305	**8304**	Enter 4 Test	
48306	**8305**	Enter 5 Test	
48307	**8306**	Enter 6 Test	
48308	**8307**	Enter 7 Test	
48309	**8308**	Enter 8 Test	
48310	**8309**	Enter 9 Test	
48311	**8310**	Enter 10 Test	

48312 ~ 48350	8311 ~ 8349	Reserve address	
48351	**8350**	Output 1 Test	Range: 0-1, write: 0: off output, 1: On output (valid only in IO test mode), read: current IO port status, 0: off, 1: on
48352	**8351**	Output 2 Test	
48353	**8352**	Output 3 Tests	
48354	**8353**	Output 4 Tests	
48355	**8354**	Output 5 Tests	
48356	**8355**	Output 6 Tests	
48357	**8356**	Output 7 Tests	
48358	**8357**	Output 8 Tests	
48359	**8358**	Output 9 Tests	
48360	**8359**	Output 10 Tests	
48361	**8360**	Output 11 Tests	
48362	**8361**	Output 12 Tests	
48363	**8362**	Output 13 Tests	
48364	**8363**	Output 14 Tests	

48365	**8364**	Output 15 Tests	
48366	**8365**	Output 16 Tests	
48367	**8366**	Output 17 Tests	
48368	**8367**	Output 18 Tests	
48369	**8368**	Output 19 Tests	
48370	**8369**	Output 20 Tests	
48371 ~ 48400	**8370 ~ 8399**	Reserved	
Function operation class address area (corresponding coil function), read-write			
48601	**8600**	Starting	Write: 1- Start both channels Read: 0- Stop;1- Run;2- Slow stop
48602	**8601**	Stop	Write: 1- Stop after two channels finish unloading Read: 0- Stop;1- Run;2- Slow stop
48603	**8602**	Emergency stop	Write: 1- Two channels immediately stop the process Read: 0- Stop;1- Run;2- Slow stop
48604	**8603**	Clearing	Write: 1- Two channels to start clearing;0- Exit cleaning Read: 1- Clearing medium
48605	**8604**	Clear alarm	Write: 1- Clear alarm Read: 1- Alarm output;0- No alarm

48606	**8605**	Simulation run	Write: 1- Two channels to start the simulation run Read: 1- Simulation run
48607	**8606**	Single run	Write: 1- Two channels to start a single run Read: 1- Running status
48608	**8607**	Save the optimal parameters	Write: 1- Save the current parameter as optimal Read: 0
48609	**8608**	Restore optimal parameters	Write: 1- Restore to optimal parameters Read: 0
48610	**8609**	Clear accumulations	Write: 1 to 20- Clear the accumulations for the corresponding recipe 0- Clears the current recipe cumulative 21- Clear all recipe accumulations Read: 0
48611	**8610**	Zeroing	Write: 1- Perform zeroclearing Read: 1- at zero
48613	**8612**	Starting	Write: 1- Boot Read: 0- Stop;1- Run;2- Slow stop
48615	**8614**	Stop	Write: 1- Stop after unloading Read: 0- Stop;1- Run;2- Slow stop
48617	**8616**	Emergency stop	Write: 1- Stop immediately Read: 0- Stop;1- Run;2- Slow stop
48619	**8618**	Clearing	Write: 1- Clear material Read: 1- Clear material;0- Other

48621	**8620**	Manual quick-add	Write: 1- Fast add Read: 1- Fast add;0- Other
48623	**8622**	Add manually	Write: 1- Add Read: 1- add;0- Other
48625	**8624**	Manual slow add	Write: 1- Slow Add Read: 1- Slow add;0- Other
48627	**8626**	Manual discharge	Write: 1- Manual unloading Read: 1- Unloading in;0- Other
48629	**8628**	Simulation run	Write: 1- Start the simulation run Read: 1- Simulation run;0- Other
48631	**8630**	Clear alarm	Write: 1- Clear alarm Read: 1- Alarm;0- Other
48633	**8632**	Small vibration plate test	Write: 0~5000mV- Small vibrator output Read: 0
48635	**8634**	Large vibration plate test	Write: 0~5000mV - Large vibrator plate output Read: 0
48637	**8636**	Save the optimal parameters	Write: 1- Do Save parameters Read: 0
48639	**8638**	Restore optimal parameters	Write: 1-A scale restores optimal parameters Read: 0
48641	**8640**	Single run	Write: 1-A scale to start a single run Read: 0
48643	**8642**	Filling test	Write: 1-A scale to start refill Read: 1- Fill medium;0- Other

48645	**8644**	Clear accumulations	Write: 1 to 20- Clear the accumulations for the corresponding recipe 0- Clears the current recipe cumulative 21- Clear all recipe accumulations Read: 0
48647	**8646**	Manual feeding	Write: 1- Feed effective 0- Feed is invalid Read: Return feed status
48648	**8647**	Clip loose bag	Write: 1- Perform pinch loose bag Read: Return to pinch bag state
48649	**8648**	Clear total cumulative	Write: 1- Clear total system cumulative Read: 0
48650	**8649**	Clear the current recipe voltage	Write: 1- Square vibrator voltage set to 0 Read: 0
48651	**8650**	Material level function disabled	Write: 1- Disable material level function Read: Return to material level disabled state
48653 ~ 48699	**8652 ~ 8698**	Reserved	Reservations
48700	**8699**	Soft restart (program restart)	Write: 1- Restart Read: 0
48701 ~ 48900	**8700 ~ 8899**	Reserved	Reservations
Reset parameters			
48901	**8900**	Reset all parameters	

48902	**8901**	Uncalibrated parameter reset	1 Perform the corresponding reset operation (reset does not involve communication parameters) Read out are all zeros
48903	**8902**	Calibration parameter reset	
48904	**8903**	Apply parameter reset	
48905	**8904**	Recipe parameter reset	
48906	**8905**	Transfer parameter reset	
48907	**8906**	I/O function reset	
48908	**8907**	Calibration parameter reset	
48910	**8909**	Formula feeding parameter reset	
48912 ~ 48920	**8911 ~ 8919**	Reserved	Reservations
48921	**8920**	Reset results	When the reset is successful, the read is not 0 for 2S.(Read only) 1- All parameters reset; 2- uncalibrated content reset; 3- Calibration parameter reset; 4- Application parameter reset except IO function;

			5- All application parameters are reset; 6- Current recipe parameters reset; 7- A formula parameter is reset; 8- All recipe parameters are reset; 9- Transfer parameters reset; 10- switch quantity input definition reset 11- Switching quantity output defines reset 12- Switch quantity all defined reset 13- Calibration parameter reset 15- Current recipe feeding parameters reset 17- Current recipe feeding parameters reset 18- All recipe feeding parameters are reset
48922-48980.	**8922-8979.**	Reservations	
Module system information area, read-only area			
410001	**10000**	Software version (high word)	
410002	**10001**	Software version (low word)	If read 10000, it is 01.00.00 version
410003	**10002**	Compile time (years)	
410004	**10003**	Compile time (month day)	
410005-410017.	**10004-10016.**	Meter serial number 13 characters	
410018-410029.	**10017-10028.**	Meter code 12 characters	
410030	**10029**	Reservations	

410031-410040.	**10030-10039.**	Meter model number 10 characters	
410041 ~ 41 02 00	**10040 ~ 10199**	Reserve	
Coil address (contents are readable and writable coils)			
0x0001	**0000**	Start 1	Write: FF00H = Start;0000H = off Read: 0001H = Start;0000H = Shut down
0x0002	**0001**	Startup 2	
0x0003	**0002**	Stop	Write: FF00H = Stop Read: 0001H = Run;0000H = stop
0x0004	**0003**	Emergency stop	
0x0005	**0004**	Clearing	Write: FF00H = clearing;0000H= stop clearing Read: 0001H = cleaning;0000H = others
0x0006	**0005**	Clear alarm	Write: FF00H = Clear alarm;Read: 0000H
0x0007	**0006**	Simulation run	Write: FF00H = Start Read: 0001H = Run;0000H = stop
0x0008	**0007**	Single run	
0x0009	**0008**	Save the optimal parameters	Write: FF00H = execute Read: 0000H
0x0010	**0009**	Restore optimal parameters	
0x0011	**0010**	Clear accumulations	

0x0012	**0011**	Clear all recipe accumulations	
0x0013	**0012**	Zeroing	
0x0015	**0014**	Starting 1	Write: FF00H = Start;0000H = off Read: 0001H = Start;0000H = Shut down
0x0017	**0016**	Startup 2	
0x0019	**0018**	Stop	Write: FF00H = Stop Read: 0001H = Run;0000H = stop
0x0021	**0020**	Emergency stop	
0x0023	**0022**	Clearing	Write: FF00H = Execute Read: 0001H= Executing 0000H= Others
0x0025	**0024**	Manual quick-add	
0x0027	**0026**	Add manually	
0x0029	**0028**	Manual slow Add	
0x0027	**0026**	Add manually	
0x0029	**0028**	Manual slow Add	
0x0031	**0030**	Manual discharge	
0x0033	**0032**	Simulation run	
0x0035	**0034**	Clear alarm	
0x0037	**0036**	Save the optimal parameters	

0x0039	**0038**	Restore optimal parameters	
0x0041	**0040**	Single run	
0x0043	**0042**	Filling test	
0x0045	**0044**	Clear the current recipe cumulative	
0x0047	**0046**	Clear all recipe accumulations	
0x0049	**0048**	Manual feeding	
0x0050	**0049**	Clip loose bag	
0x0051	**0050**	Clear Total cumulative	
0x0052	**0051**	Clear the current recipe voltage	
0x0053	**0052**	Material level function disabled	
0x0055~0x0300	**0054 ~ 0299**	Reserved	Reservations
0x0301	**0300**	Reset all parameters	This area is written only Write: FF00H = Perform reset Read: 0000H
0x0302	**0301**	Unlabeled content reset	

0x0303	**0302**	Calibration reset	Write: FF00H = Execute Read: 0000H
0x0304	**0303**	Apply parameter reset	
0x0305	**0304**	Non-i /O functions define reset	
0x0306	**0305**	I/O function reset	
0x0307	**0306**	Input port function reset	
0x0308	**0307**	Output port function reset	
0x0309	**0308**	Current recipe feeding parameter reset	
0x0310	**0309**	Current recipe parameters reset	
0x0311	**0310**	Reset all recipe parameters	
0x0312	**0311**	Transfer parameter reset	

0x0313	**0312**	Calibration parameter reset	
0x0315	**0314**	Current recipe feeding parameter reset	
0x0317	**0316**	All recipe feeding parameters reset	
0x0319~0x0329	**0318-0328.**	Reservations	
0x0330	**0329**	Reset result: Read out returns 1 when the above reset is successful for 2S	
0x0331~0x0400	**0330-0399.**	Reservations	
0x0401	**0400**	Enter IN1 status	Read only area 0: invalid;1 valid
0x0402	**0401**	Enter IN2 status	
0x0403	**0402**	Enter IN3 status	
0x0404	**0403**	Enter IN4 status	
0x0405	**0404**	Enter IN5 status	

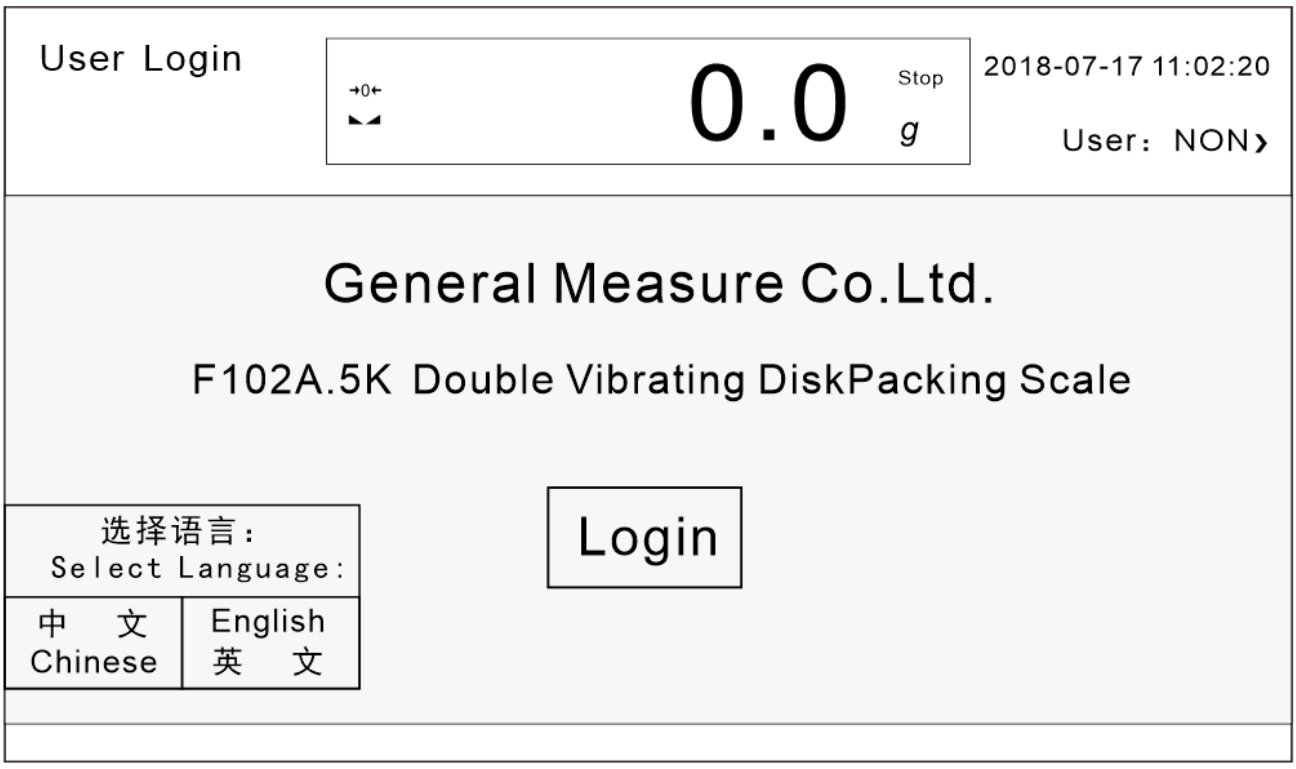
0x0406	**0405**	Enter IN6 status	
0x0407	**0406**	Enter IN7 status	
0x0408	**0407**	Enter IN8 status	
0x0409	**0408**	Enter IN9 status	
0x0410	**0409**	Enter IN10 status	
0x0411~0x0450	**0410 ~ 0449**	Reserved	
0x0451	**0450**	Output OUT1 status	Read only area Read out Returns each outlet status bit 0: invalid;1 valid
0x0452	**0451**	Output OUT2 status	
0x0453	**0452**	Output OUT3 status	
0x0454	**0453**	Output OUT4 status	
0x0455	**0454**	Output OUT5 status	
0x0456	**0455**	Output OUT6 status	
0x0457	**0456**	Output OUT7 status	
0x0458	**0457**	Output OUT8 status	
0x0459	**0458**	Output OUT9 status	

0x0460	**0459**	Output OUT10 status	
0x0461	**0460**	Output OUT11 status	
0x0462	**0461**	Output OUT12 status	
0x0463	**0462**	Output OUT13 status	
0x0464	**0463**	Output OUT14 status	
0x0465	**0464**	Output OUT15 status	
0x0466	**0465**	Output OUT16 status	
0x0467	**0466**	Output OUT17 status	
0x0468	**0467**	Output OUT18 status	
0x0469	**0468**	Output OUT19 status	
0x0470	**0469**	Output OUT20 status	
0x0471~0x0800	**0470 ~ 0799**	Reserved	

Description: This device is equipped with a 7 "touch screen and requires detailed reading of the whole of Chapter 7.

7. Touch screen operation Instructions

7.1 Login interface



Sample interface

Parameter Description: The interface after power-on and before login.

Button and operation frame operation instructions (applicable to all operation interfaces of the device) :

1. Setting Click this button to enter the parameter setting interface.

2. Auto Setting Click this button to enter the interface of automatic scale adjustment.

3. Histroy Data Click this button to enter the historical data interface to view relevant data.

4. Zeroing Click this button to clear zero.

5. Stop Click this button to make the device stop in an emergency.

6. Stop Click this button to start and stop the device.

7. 0 Click this type of action box to modify the value of this item.

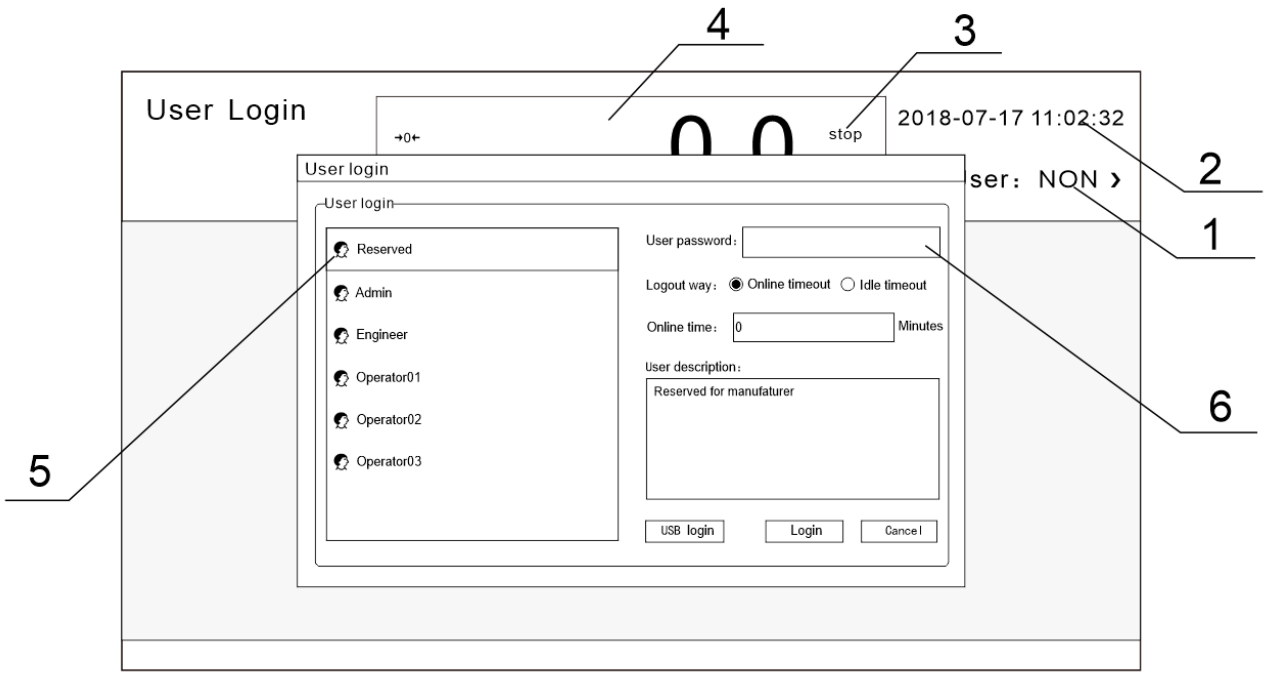
8. Run Click this type of action box to select and set this definition.

9. Start Click this type of action box to perform the corresponding operation.

10. Click this type of action box to open and close the corresponding function Settings.

11. ❮Previous Page Click this type of action box to switch pages.

7.2 Touch screen login permission description



Sample interface

Parameter description:

1: Login information, showing the level of the current logged-in user.

2: system date time, the date and time of the current system.

3: Device working status, current device status indication.

4: Weight display area, display the current weight and weight unit, if the weight overflow or sensor overflow, there will be text prompts in this area, such as: "positive weight overflow", "negative weight overflow" and so on.

5: Login user selection area, display all users currently available for selection.

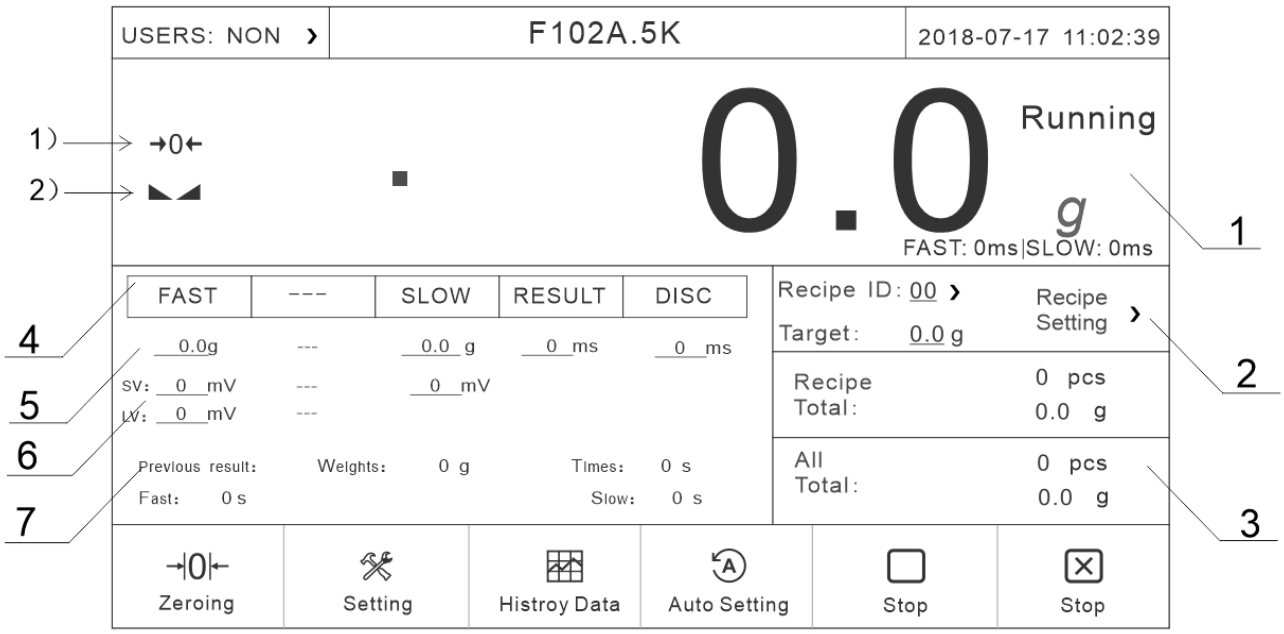
6: User password input box, select the user account and enter the corresponding user password

User name and Password instructions:

User name	User	Password	Permissions
Admin	Admin	0	Cannot proceed: calibrating scale/switching quantity/motor parameters, etc
Operator01	Operator 01	1	Do not: calibrating scale/switching volume/motor parameters/system information, etc.
Operator02	Operator 02	2	
Operator03	Operator 03	3	
Engineer	Engineer	Obtain the password from the manufacturer	Unlimited operation
Reserved	Reserved	No action required by user	User no action

For details, please refer to section 7.1 "Operation Instructions for Buttons and Operation Frames".

7.3 Description of the Home Screen



Sample interface

Parameter description:

1. Current weight and equipment status, where:

1) Zero mark. When the current weight is zero, the icon is green.

2) Weight stabilization sign, when the current weight is stable, the indicating icon is green.

In addition, there are fast add time, slow add time, running or stop state display.

2. The current formula number can be set to replace the formula. Click the "Formula" button in the lower left corner to modify the current formula parameters.

3. The accumulation of the current formula and the total accumulation, click the right button can be recorded data clearing.

4. Each state of the device when it is running, when the device is stopped, the corresponding manual operation can be carried out (operation is invalid when it is running).

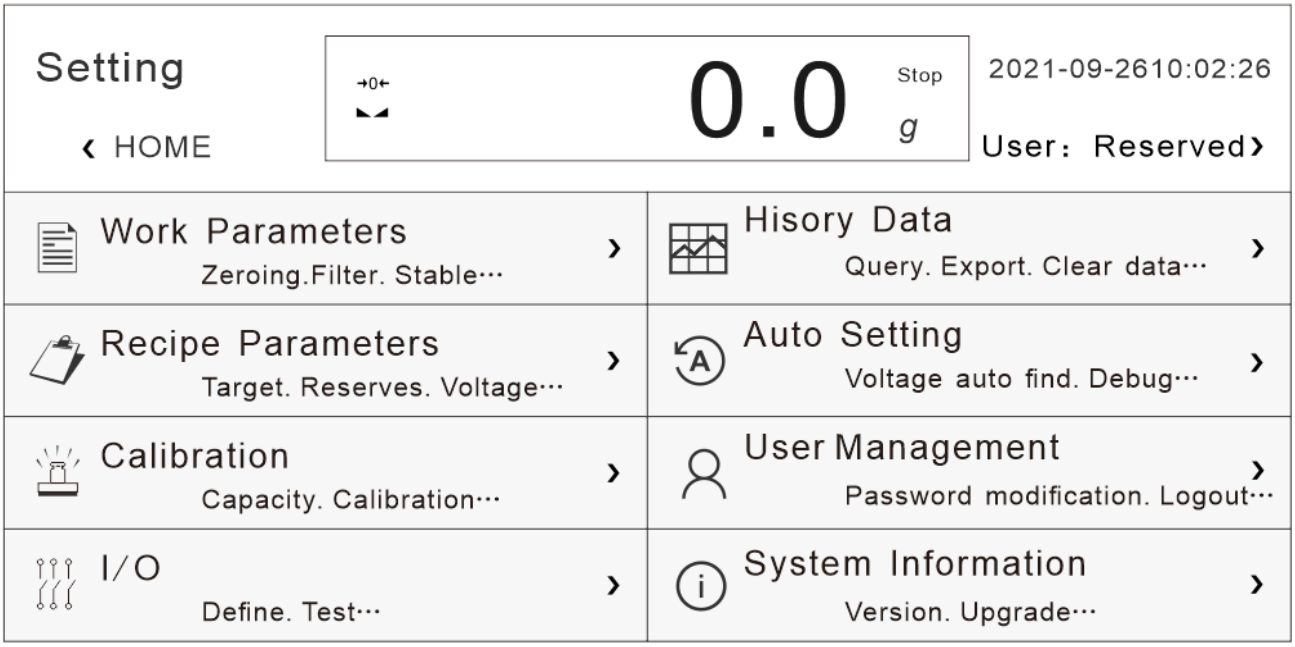
5. The setting of feeding cut-off advance value, target value, weighing time and unloading time under the current formula.

6. Setting of the voltage value of the vibrator plate under the current formula.

7. The result of the last quantification process.

For details, please refer to section 7.1 "Operation Instructions for Buttons and Operation Frames".

7.4 Parameter setting interface description



Sample interface

Parameter description:

Working parameters: The basic parameters of this product can be set, such as zero clearing range, zero clearing time and so on.

Formula parameters: the current formula number can be modified, as well as the parameter values of the current formula can be modified, such as modifying the target value, leading amount, vibration plate voltage value, unloading time, etc.

Calibration scale: zero calibration, weight calibration can be carried out.

Opening and closing quantity: the user can define and set the input quantity and output quantity according to their own needs. The control board has 10 inputs and 20 outputs.

Historical data: The interface of historical data can query the previous packaging record, and export the packaging record data to the USB flash drive.

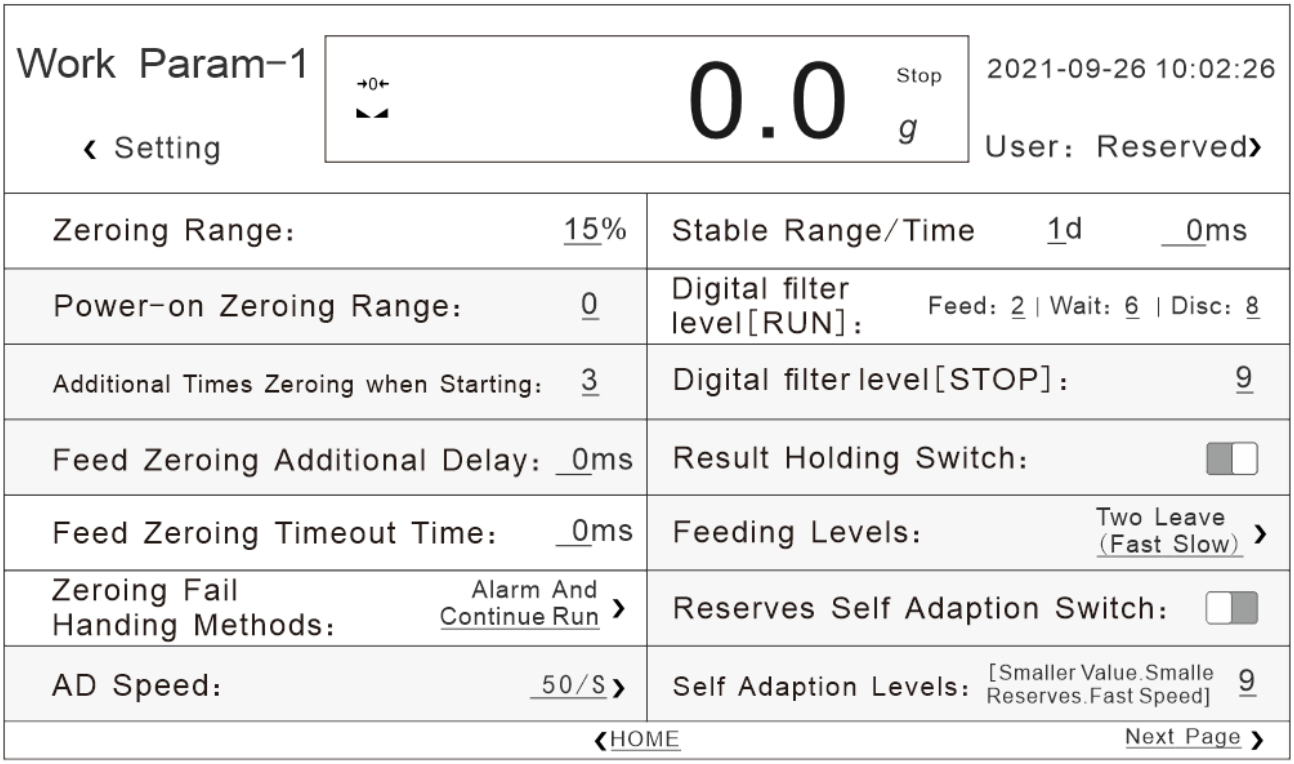
Automatic scale adjustment: You can only set the target value and the number of scale adjustment, click the button to start the scale adjustment, the device starts to operate, and adjust the value of each advance quantity within the set number of times. After the completion of the scale adjustment, if the user's demand is met, the user can press the save button, that is, the data after automatic adjustment will be used as the advance quantity data of the current formula value. If you give up, The value before the automatic adjustment of the scale is still used.

User management: User rights can be switched.

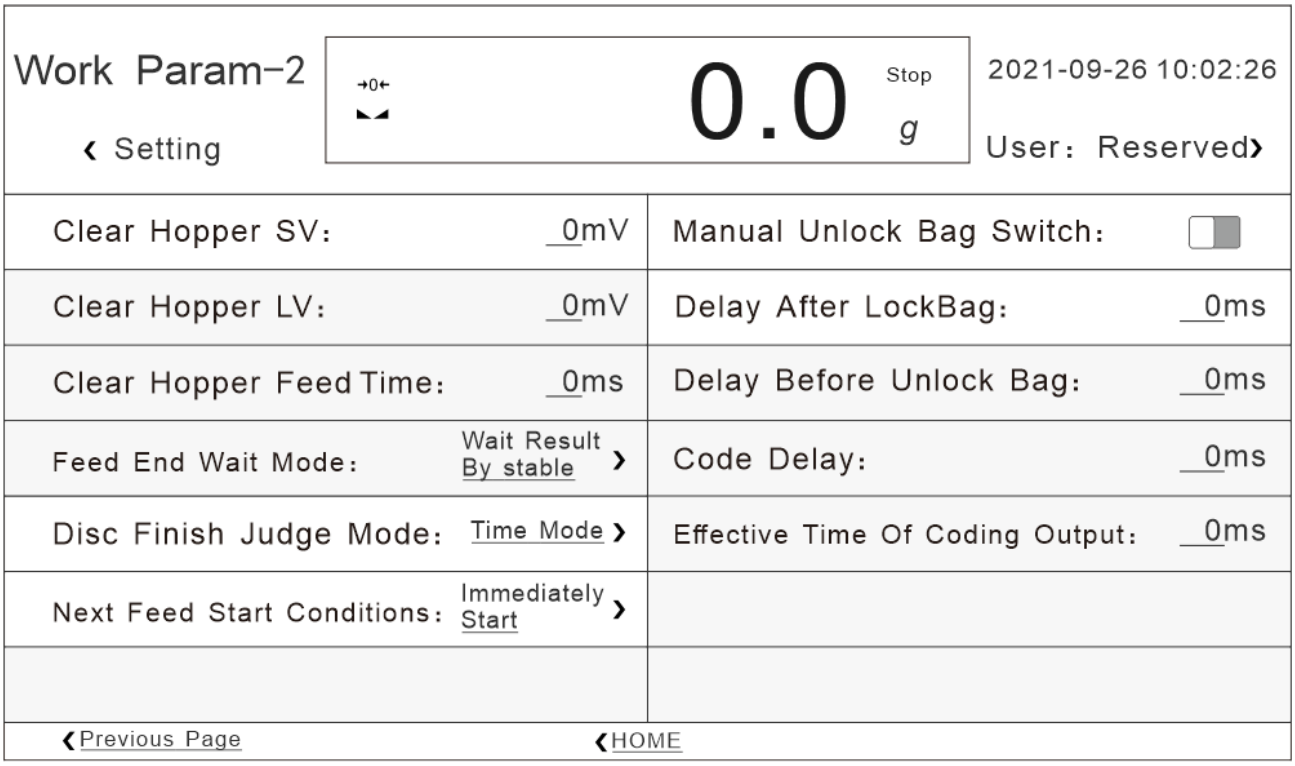
System information: Display the current software version of the touch screen and the software version of the control board. You can also update the program of the control board with a USB disk.

For details, refer to section 7.1 "Operation Instructions on Buttons and Operation Frames".

7.5 Basic parameter interface description



Example Working Parameter Interface 1



Example Work Parameters Interface 2

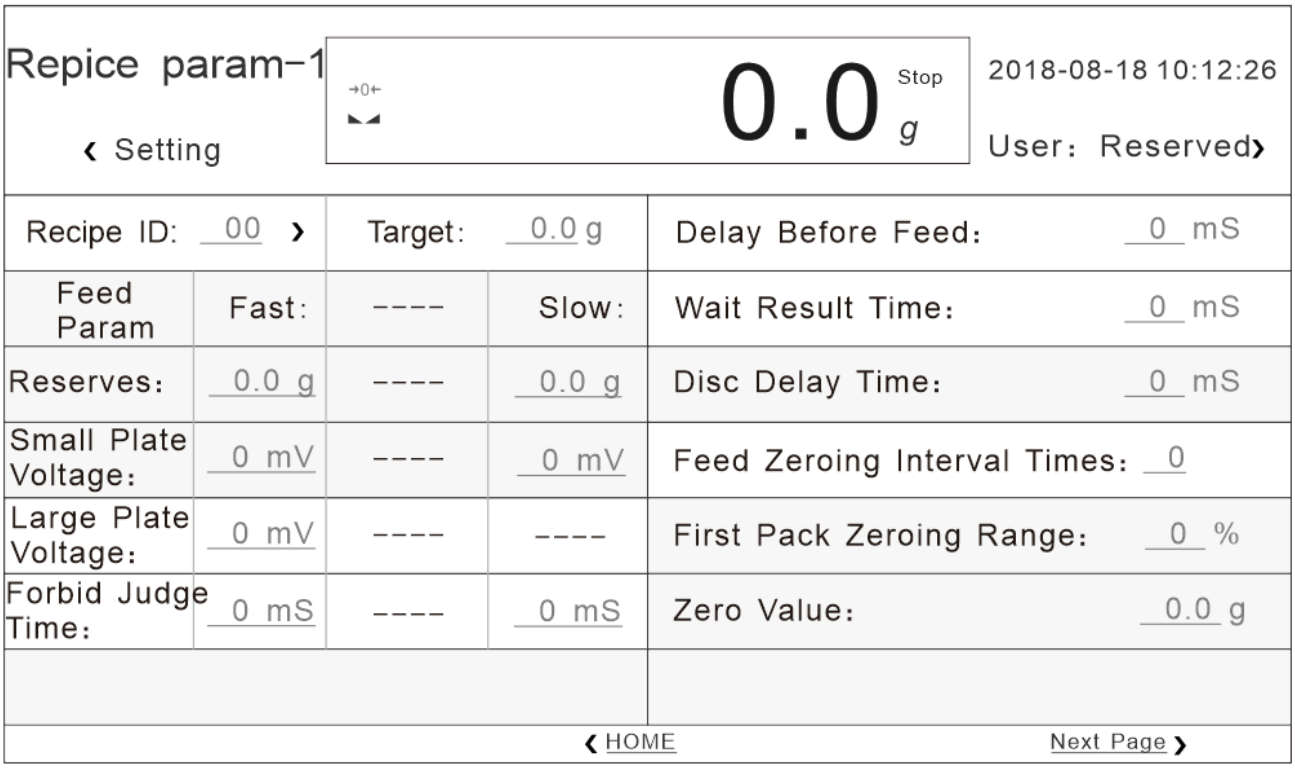
Parameter description:

（1）Zero clearing range: zero clearing range (1% to 20% of full scale).
（2）Reset range: Automatically reset the device when it is powered on.
（3）Start additional zeroclearing times: initial value 0, range 0-99.
（4）Additional time delay of charging zeroing: initial value 0, range 0-5000, unit: ms.
（5）Charging clearance timeout time: initial value 1000, range 1000-5000, unit: ms.
（6）Handling method of zero clearing failure: four options are alarm and continue to run, alarm and reclear the next package, three times in a row
After automatic stop and alarm and stop immediately.
（7）AD speed: 50/S, 60/S, 100/S, 120/S, 200/S, 240/S, 400/S, 480/S, 800/S, 960/S.
（8）Stability range/time: Stability range 0~99d is optional. If the change of weight within the stability time does not exceed the stability range, it is stable; otherwise, it is unstable.
（9）Feeding filter grade: initial value 0, range 0-9
（10）Feeding filter grade: initial value 0, range 0-9
（11）Unloading filter grade: initial value 0, range 0-9
（12）Stop filtering level: Initial value 0, range 0-9
（13）Fixed weight Hold switch: Turn on the switch to turn on the fixed weight hold function.
（14）Feeding level: Two (fast and slow) and three (fast, medium and slow) optional, the default is two levels.
（15）Lead-in adaptive switch: On switch Enables the lead-in adaptive switch function.
（16）Adaptive level: Initial value 1, range 1-5.

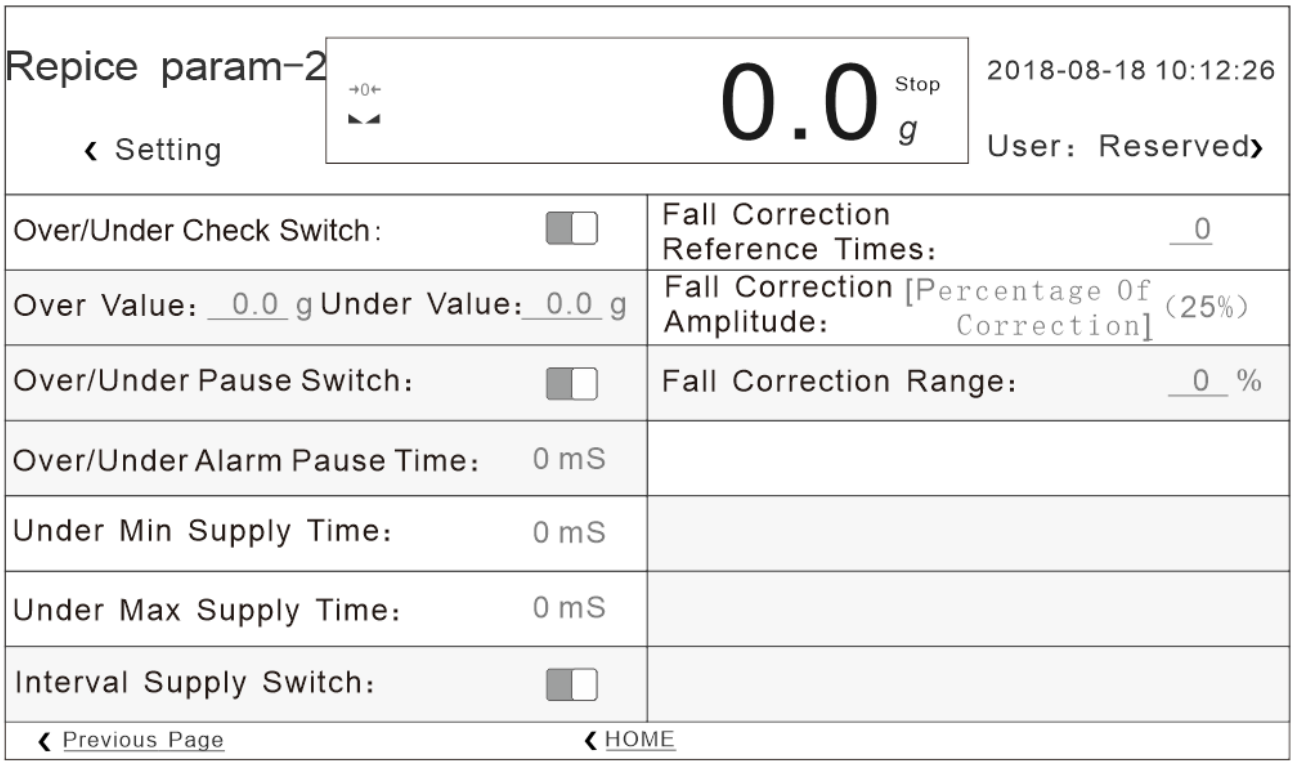
（17）Voltage of small vibration plate during cleaning: initial value 0, range 0-5000, unit: mv.
（18）Voltage of large vibrating plate during cleaning: initial value 0, range 0-5000, unit: mv.
（19）Feeding time during cleaning: initial value 0, range 0-10000, unit: ms
（20）Setting method: There are three ways to choose, which are time setting value, judging stable value, judging stable + time.
（21）Unloading judgment mode: time mode and zero zone mode are optional.
（22）Next feeding start condition: two options are immediate start and return to zero zone.
（23）Manual bag loosening switch: When the switch is on, it is in manual bag loosening mode.
（24）Delay after bag clamping: initial value 0, range 0-10000, unit: ms.
（25）Delay before loosening bag: initial value 0, range 0-10000, unit: ms.
（26）Delay before coding: initial value 0, range 0-10000, unit: ms.
（27）Output validity time of typing: initial value 0, range 0-10000, unit: ms.

For specific operation methods, refer to section 7.1 "Operation Instructions on Buttons and Operation Frames".

7.6 Recipe parameter interface description



Example Recipe Parameter Interface 1



Example Recipe Parameter Interface 2

Parameter description:

（1）Recipe Number: The number of the current recipe.
（2）Target value: The amount of weight to be quantified.
（3）Fast adding leading quantity: in the process of quantification, if the weighing value is not less than the target value - fast adding leading quantity, then close the fast adding.
（4）Slow increase leading quantity: in the quantitative process, if the weighing value is more than or equal to the target value - slow increase leading quantity, the slow increase will be closed.
（5）Formula number: The number of the current formula.
（6）Large vibration plate voltage: large vibration plate voltage value, control fast acceleration.
（7）Small vibration plate voltage: small vibration plate voltage value, control slow acceleration.
（8）Forbidden time: at the beginning of quantitative, in order to avoid overrush at this time without weight judgment, fast add, slow add has been effective.
（9）Time delay before feeding: quantitative process at the beginning, delay T1 time before the feeding process;
（10）Fixed time: the time to determine the weight after the completion of feeding.
（11）Unloading delay: unloading begins after such time is delayed.
（12）Feeding clearance interval number: the number of feeding clearance interval, ranging from 0 to 99.
（13）Automatic zero clearing range of the first package: 1%~20% of the full range
（14）Zero zone value: in the process of quantification, if the weighing value is less than or equal to zero zone value, then start the unloading delay timer.
（15）Over and under error detection switch: turn on the switch to enable the over and under error

detection function.

（16）Out of tolerance: in the process of quantification, if the weighing value is > the target value + the excess value, it will be judged as out of tolerance.

（17）Underweight value: in the quantification process, if the weighing value < the target value - underweight value, it will be judged as underweight.

（18）Pause switch over and under difference: when the switch is on, if there is over and under difference, the equipment will be suspended and wait for the user to deal with it. At this time, it can continue to run after "clearing the alarm";It can also return to the stop state after "emergency stop".

（19）Pause time of alarm over and under error: initial value 0, range 0-9000, unit: ms.

（20）Minimum time for underweight filling: the weight can only be judged after this time.

（21）Maximum time of undergap filling: stop filling after this time.

（22）Point feeding switch: After opening the switch, it can point feeding in the quantitative process.

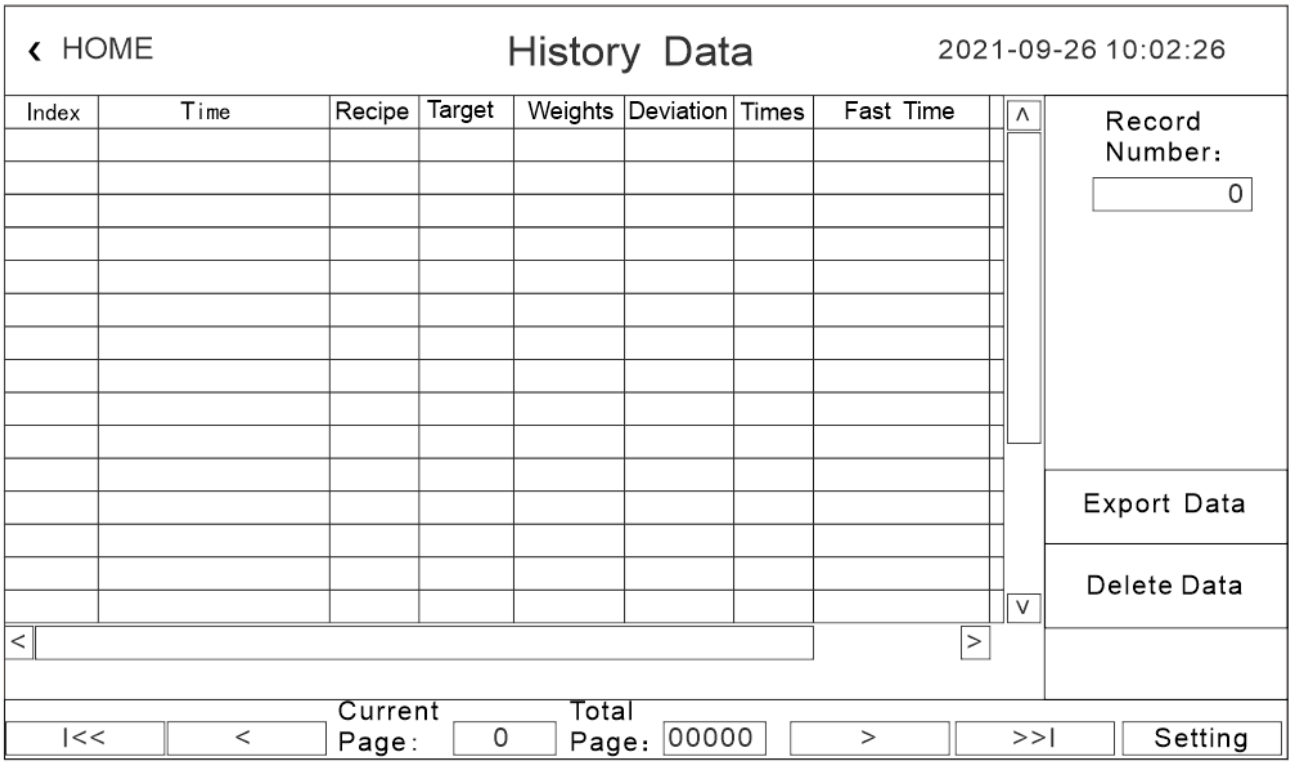
（23）Reference times for correction of drop value: initial value 0, range 0~99.

（24）Drop correction range: four modes are available: weak correction [25%], standard correction [50%], strong correction [75%] and full correction [100%].

（25）Drop correction range: This value is the percentage of the target value.

For details, see section 7.1 ″Operation Instructions on Buttons and Operation Frames″.

7.7 Historical data interface description



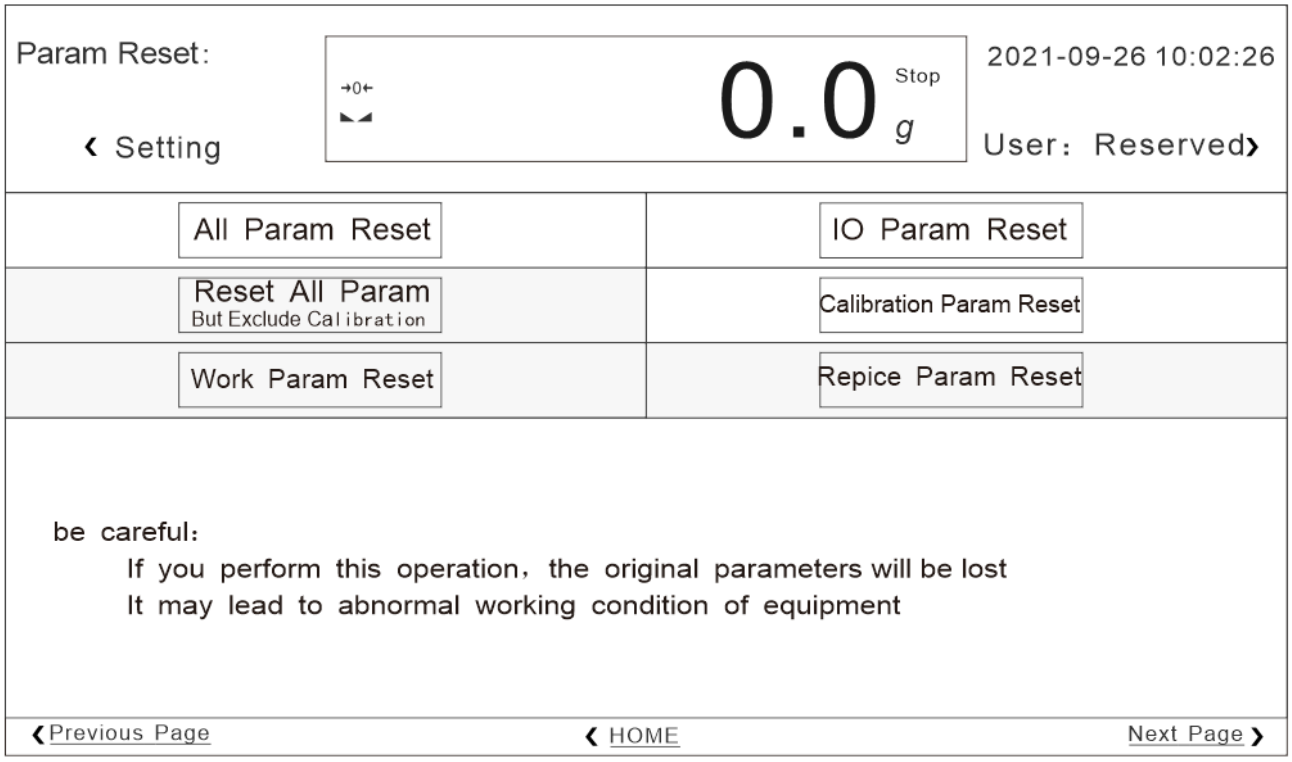
Sample interface

Parameter description:

(1) Export data: Historical data can be exported.
(2) Delete data: Delete historical data.

For details, see section 7.1 "Buttons and Operation Frame Instructions".

7.8 Parameter reset interface description



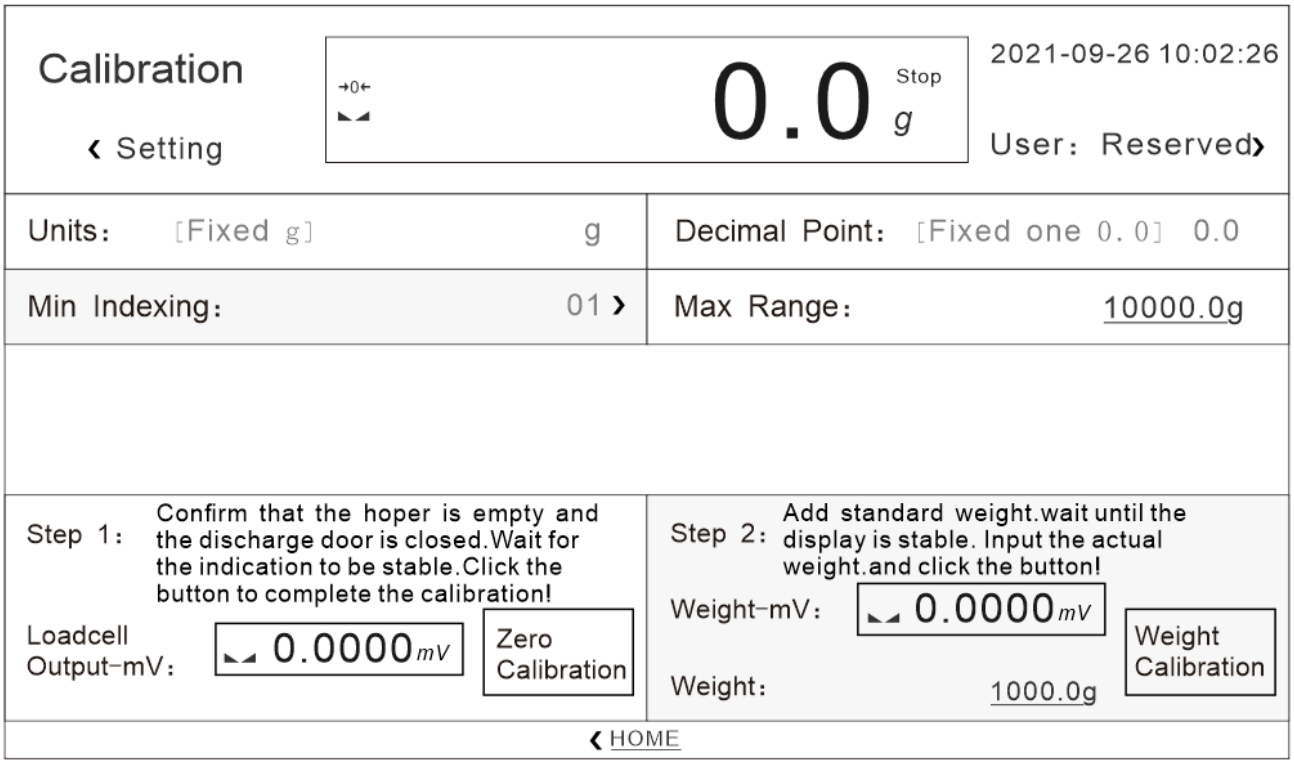
Example interface

Parameter description:

Reset All Parameters - Reset all parameters to default Settings.
Reset All except Calibration Scale -- Reset non-calibration scale parameters to default Settings.
Working parameter reset -- Reset working parameters to default Settings.
Switch quantity reset -- Reset switch quantity defined to default configuration.
Scale parameter reset -- Reset the scale parameter to the default configuration.
Recipe parameter reset -- Reset recipe parameters to default Settings.

For details, refer to section 7.1 "Operation Instructions for Buttons and Operation Frames".

7.9 Calibration scale interface description



Sample interface

Parameter Description

（1）Unit: Fixed in g.
（2）Minimum grading: 1, 2, 5, 10, 20, 50 Optional.
（3）Overrange display mode: There are three options, that is, when the current weight is greater than: maximum range +9d, maximum range *120%, maximum range *150%, the device will prompt weight overflow.
（4）Decimal place: Fixed at 0.0, that is, 1 decimal place.
（5）Maximum range: The maximum range of the device (it is recommended not to set more than 10000g).

Calibration steps:

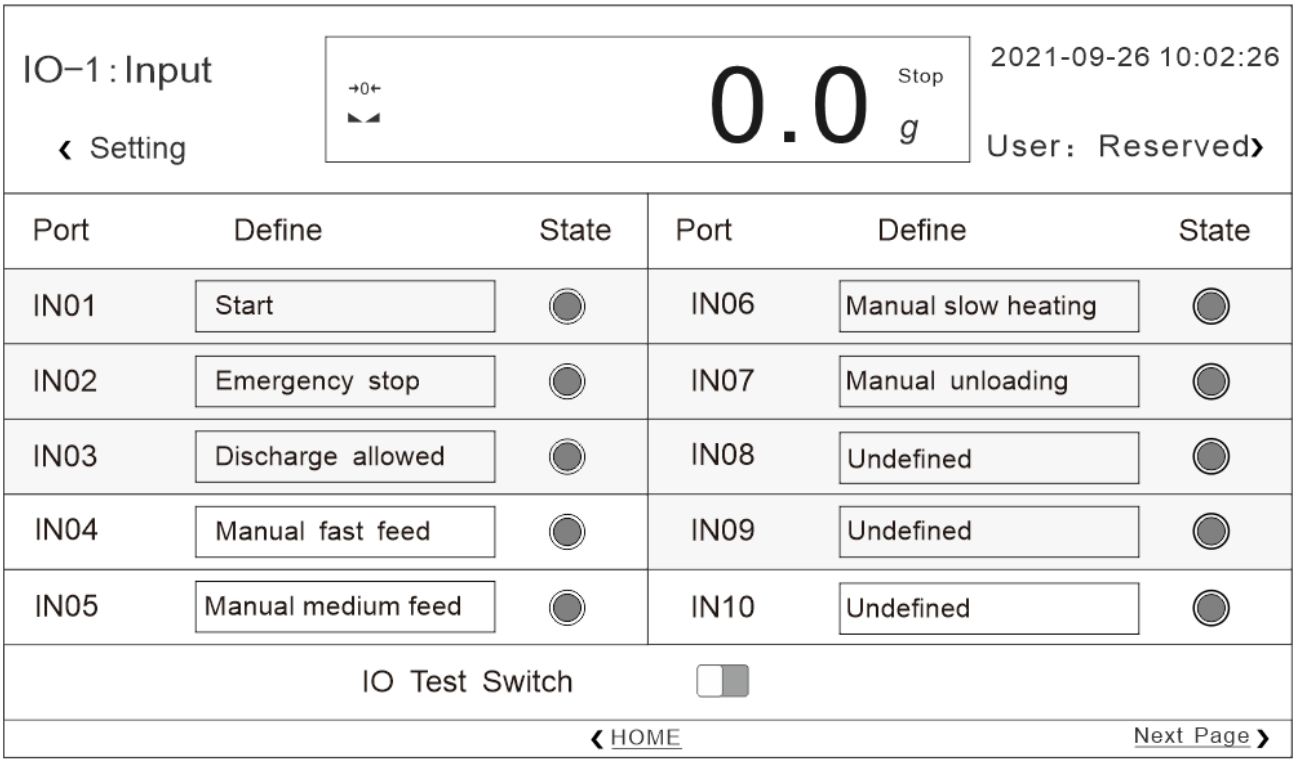
1. Zero point calibration: empty the hopper and close the discharge door.Click "Zero point Calibration" when the weight is stabilized. During the calibration process, the weight display area above will display the calibration result. After successful calibration, it will show stability.

2, weight calibration: Add the weight on the weighing mechanism, after the weight is stable, click the weight weight input box, enter the weight of the weight, click "weight calibration", the upper weight display area in the calibration process will also display the

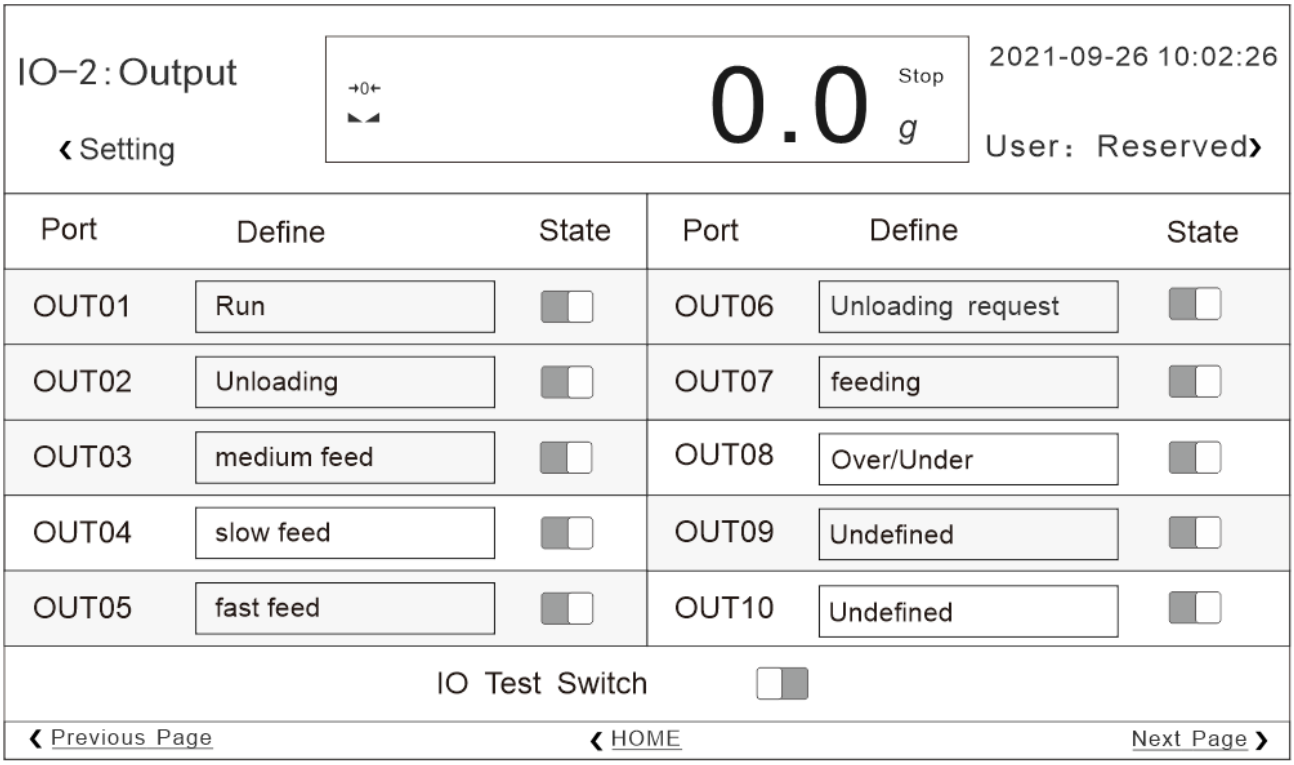
calibration result.After successful calibration, the weight displayed in the weight display area is the weight of the input weight.Otherwise, weight calibration fails, try again.

Refer to section 7.1 "Buttons and Operation Frame Instructions" for specific operation methods.

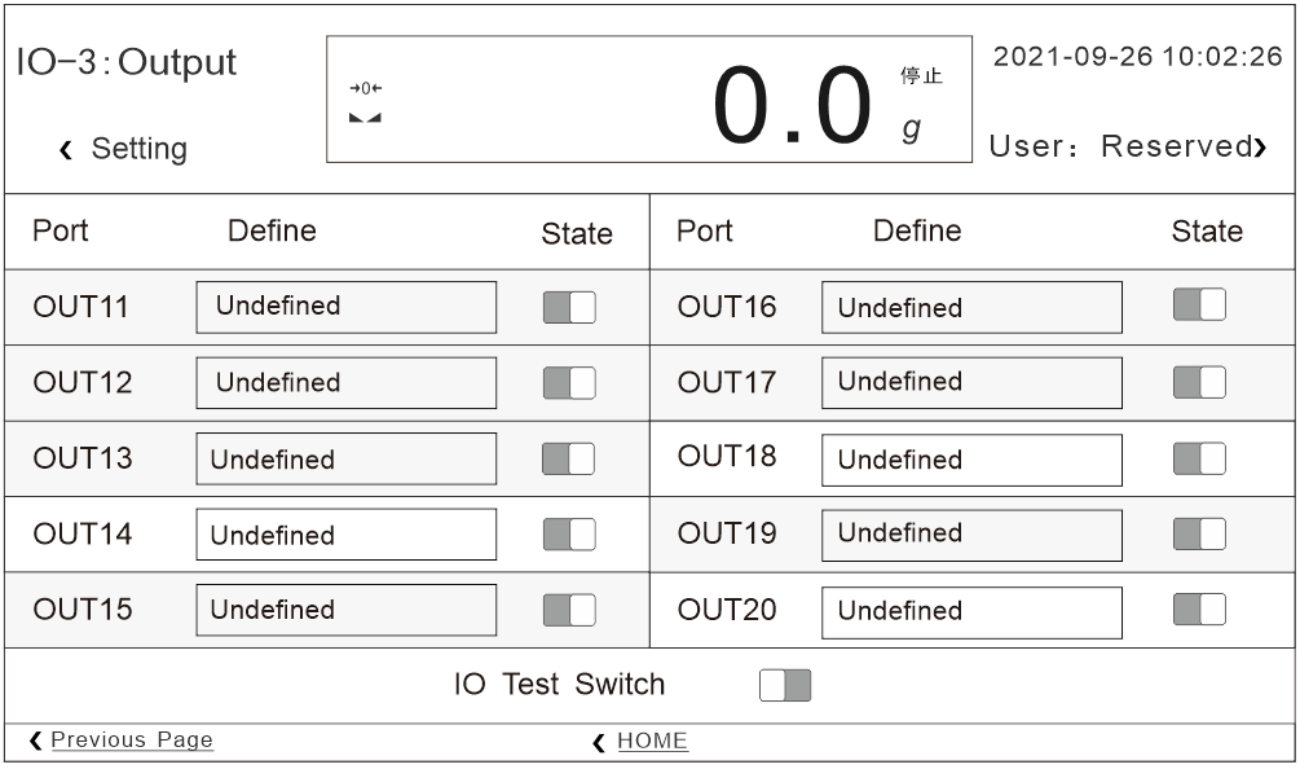
7.10 Switch quantity interface description



Example Switching Quantity interface 1



Example Switching Quantity Interface 2



Example Switching Quantity Interface 3

Parameter description:

（1）Input port (IN01~IN10) Customizable by customers:
（2）Output ports (OUT01 to OUT20) customers can customize:
（3）Switch quantity test: After opening, you can test whether the signal of the corresponding switch quantity is normal
（4）The address range of IO test area is 8300~8369(PLC address 48301~48371). Users check whether the input and output ports are connected properly through the operation of the address in this area.
（5）Input port test:
（6）First of all, write "1" to 8300 (PLC address 48301) to enter IO test mode. When the input port is valid (effective input can be realized through short-connecting GND port and input signal port), the corresponding input port address register value should be "1". When the input becomes invalid, the data read out should be "0", otherwise it indicates that the input port is faulty.
（7）Output port test:
（8）First of all, write "1" to 8300 (PLC address 48301) to enter IO test mode, write "1" to the address of the output port, measure the voltage between the voltage and 24V, if the voltage is far less than 24V, it indicates the coil failure;If the voltage is equal to or close to 24V, then write "0" to the coil address, the output port voltage is no longer close to or equal to 24V, it means that the output port works normally.

For details, refer to section 7.1 ″Operation Instructions on Buttons and Operation Frames″.

The default on-off quantity is defined as follows:

Enter the port number	Definition	Output port number	Definition
IN1	Run	OUT1	Run
IN2	Emergency stop	OUT2	out2
IN3	Discharge allowed	OUT3	China-Canada
IN4	Manual quick-add	OUT4	Slow add
IN5	Add manually	OUT5	Quickadd
IN6	Manual slow Add	OUT6	Discharge request
IN7	Manual discharge	OUT7	Topping up

IN8	Undefined	OUT8	out8
IN9	Undefined	OUT9	Undefined
IN10	Undefined	OUT10	Undefined
		OUT11	Undefined
		OUT12	Undefined
		OUT13	Undefined
		OUT14	Undefined
		OUT15 (PWM)	Undefined
		OUT16 (PWM)	Undefined
		OUT17 (PWM)	Undefined
		OUT18 (PWM)	Undefined
		OUT19 (PWM)	Undefined
		OUT20	Undefined

List of definable switching quantities:

Enter switch quantity:

Number	Name	Function description
I00	Undefined	No function when this item is selected.
I01	Run	Receive signal both channels to start feeding at the same time
I02	Slow stop	Stop after completing this feeding and unloading
I03	Emergency stop	Immediate stop

I04	Discharge allowed	When the signal is valid, it indicates that external conditions have been achieved and unloading is permitted
I10	Switching recipes	Each time you receive a pulse, switch to the next recipe with a target value
I11	Clear zero	Channel zeroing when valid
I23	Manual Quickadd	In the stop state, open the manual fast feeding when effective, to stop or emergency stop signal to stop feeding
I25	Add manually	Stop state, open manual feeding when effective, to stop or emergency stop signal to stop feeding
I27	Manual slow Add	In the stop state, open manual slow feeding when effective, to stop or emergency stop signal to stop feeding
I29	Manual discharge	Stop state, when effective, perform a complete discharge process
I31	Single run	In the stop state, when effective, perform a full feeding action
I33	Simulation run	Run the entire process on time, regardless of weight, as long as it is used for equipment action testing
I35	Clear stock	Signal effective start cleaning, give stop or emergency stop signal to stop cleaning
I37	Clear alarm	When valid, clear all alarms currently in the corresponding channel
I39	Clip loose bag	Receive the signal to perform the bag pinching motion.
I41	Feeding level	Feeding level for connecting to the stocking hopper,
I42	Cut level	The discharging level device used to connect the hopper. The discharging level input is invalid or suspended to indicate the lack of material.Effective level input means no shortage of material.

Output switching quantity:

Number	Name	Function description
O00	Undefined	No function
O05	Run	Channel is valid when running
O07	Stop	Valid when the channel stops
O09	Quick Plus	Channel fast plus works
O11	China Canada	Channel is valid when added
O13	Slow Add	Channel slow plus works
O17	Over and under	When the channel has an over or under error, the output time is: over or under error alarm pause time
O19	Filling medium	Effective when the channel is replenished
O21	Weigh well	Valid after the channel setting is complete
O31	Unloading	Host mode valid
O32	Discharge request	Valid upon discharge, not upon receipt of discharge permit
O33	Clip bag	Effective when clipping the bag
O34	O34	Effective when typing
O38	Feeding	A feeding mechanism used to control the front end of the packaging scale, this output is effective when the hopper level input (level input is defined) is invalid;The meter invalidates this output when the stocking hopper loading level (where the stocking level input is defined) is valid
O39	Missing material	The cut level input is defined and the defined outlet is valid when the input is invalid;When the hopper level (where the level input is defined) is valid, the meter invalidates this output

7.11 User management interface instructions

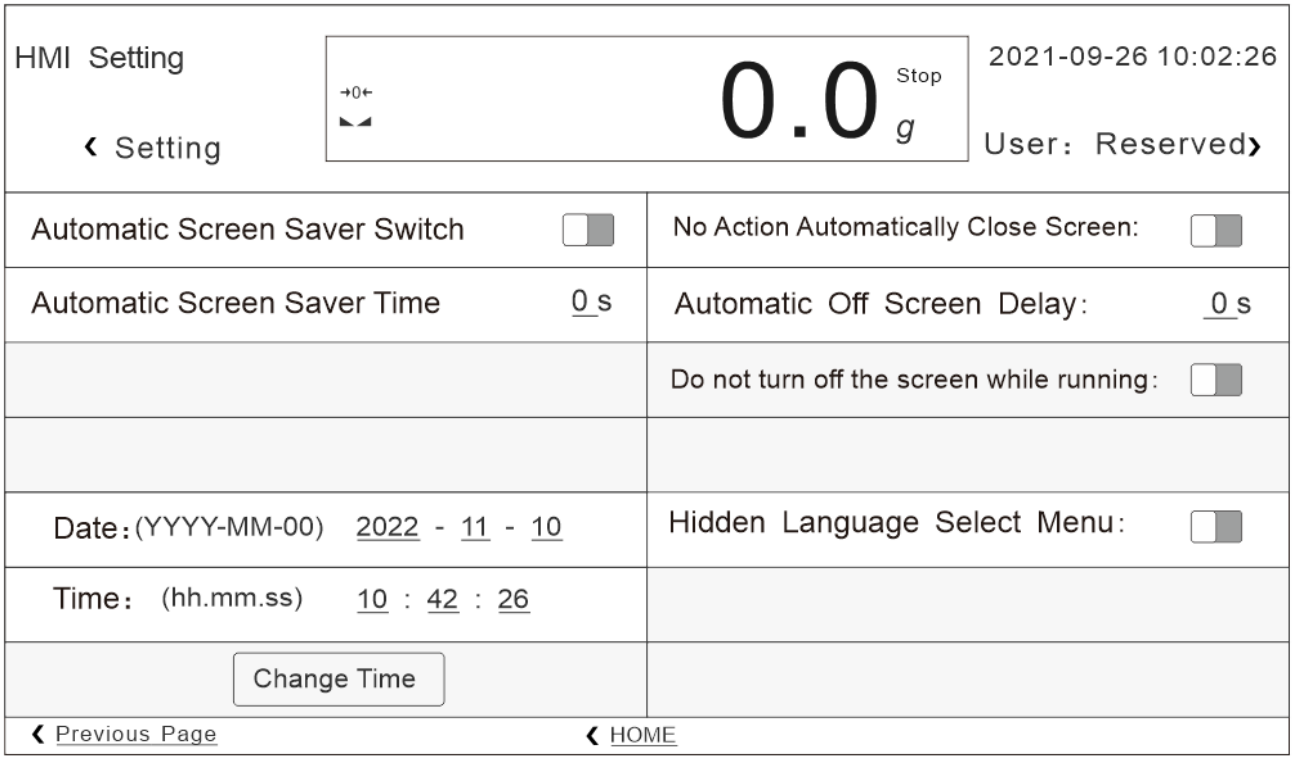
Sample interface

Parameter description:

Parameter Settings User Management Change Password Click the password input box and follow the prompts→→→→

For details, refer to "Button and Operation Box Instructions" in section 7.1.

7.12 HMI setting interface description



Sample interface

Parameter description:

No operation automatic screen off switch: turn on the switch touch screen delay automatic screen off after the delay time.

Automatic screen off delay: After the delay time, the touch screen will automatically turn off the screen. Initial value: 15.Range: 15 to 1800 (seconds).

Mandatory screen shutdown during running: Turn on the switch, mandatory screen shutdown during running.

Automatic screen saver switch: open the switch touch screen to start the automatic screen off.

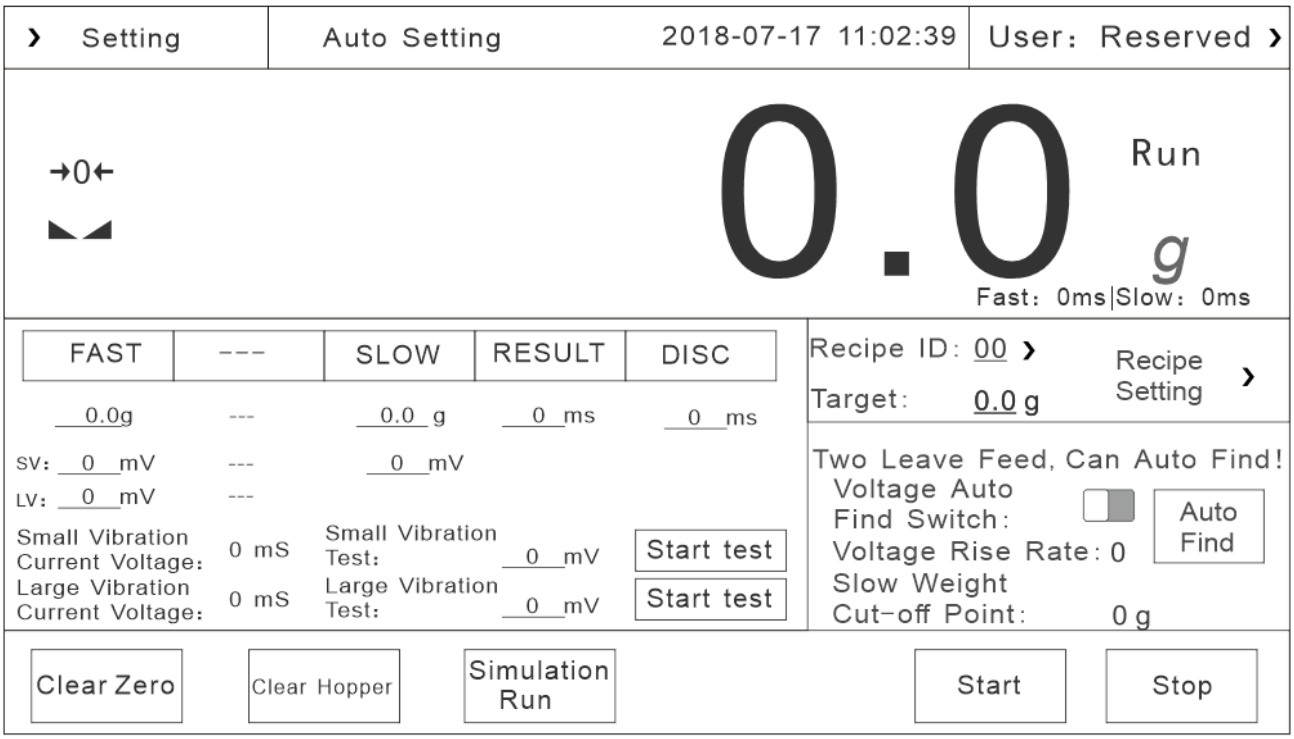
Automatic screen saver time: After this time is delayed, the initial value of the screen saver is 15.Range: 15~1800 (seconds)

Hide login screen Language menu switch: Turn on the switch to hide the login screen language menu.

HMI Time Setting: Set the time and date of the touch screen.

For details, please refer to section 7.1 "Operation Instructions for Buttons and Operation Frames".

7.13 Description of the interface of automatic scale adjustment



Sample interface

Parameter Description

（1）Weigh well: Set the time.

（2）Discharge: discharge time.

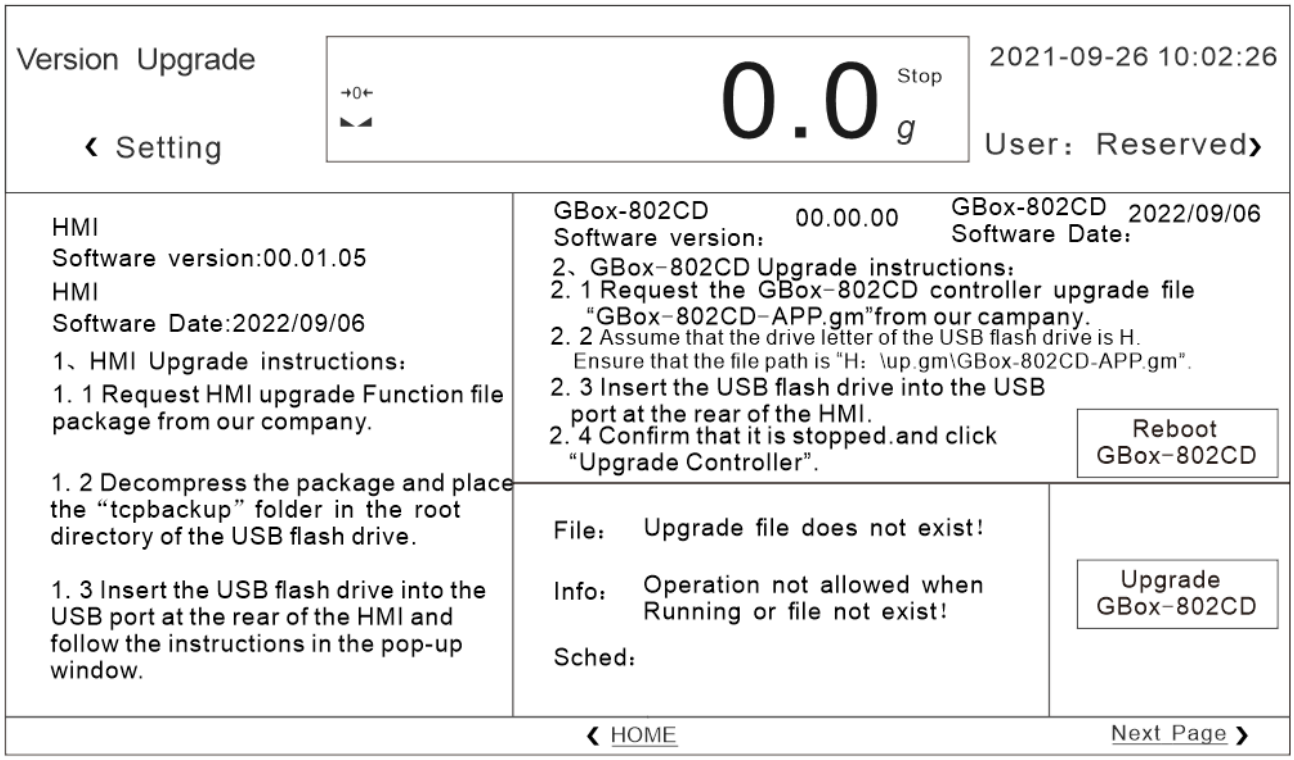
（3）Fast leading quantity: in the quantitative process, if the weighing value is more than or equal to the target value - fast leading quantity, then close the fast adding.

（4）Slow increase leading quantity: in the quantitative process, if the weighing value is more than or equal to the target value - slow increase leading quantity, the slow increase will be closed.

（5）Fast add small vibration plate voltage: initial value 0, range 0-5000, unit: mv.
（6）Fast increase large vibration plate voltage: initial value 0, range 0-5000, unit: mv.
（7）Slowly add small vibration plate voltage: initial value 0, range 0-5000, unit: mv.
（8）Real-time voltage of small vibration plate: initial value 0, range 0-5000, unit: mv.
（9）Test voltage of small vibration plate: initial value 0, range 0-5000, unit: mv.
（10）Small vibration plate start test switch: switch on, then open the small vibration plate test.
（11）Real-time voltage of large vibration plate: initial value 0, range 0-5000, unit: mv.
（12）Test voltage of large vibration plate: initial value 0, range 0-5000, unit: mv.
（13）Large vibration plate start test switch: open the switch, then open the large vibration plate test.
（14）Recipe number: Initial value 0, range 0-20.
（15）Target value: Weight to be quantified.
（16）Automatic voltage lookup switch: Turn on the switch to automatically find the appropriate voltage value.

For specific operation methods, refer to section 7.1 "Operation Instructions for Buttons and Operation Frames".

7.14 Description of the system information interface



Sample interface

Parameter description:

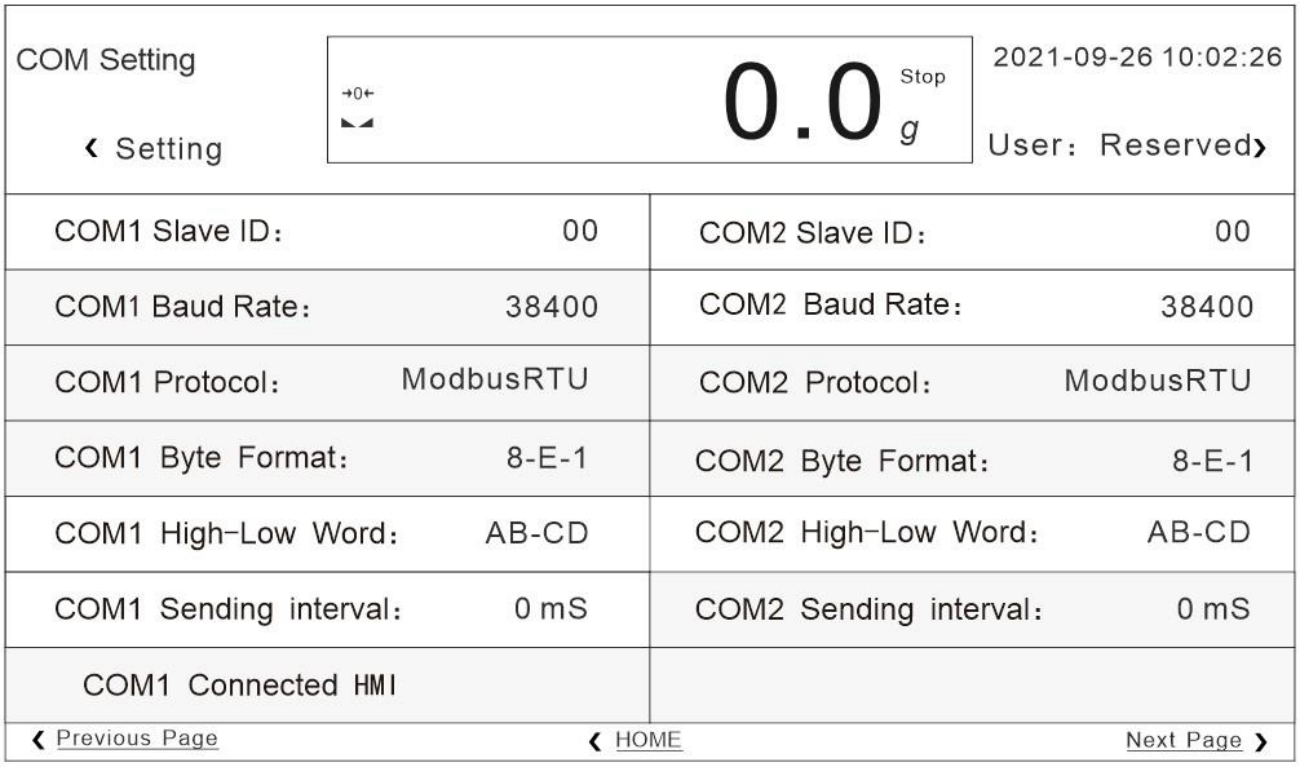
This screen allows you to see information such as motherboard and touch screen software version.

To upgrade the system with a USB flash drive:

This operation is very important, not necessary operation. If it is necessary to operate, please contact the company and complete under the guidance of professional personnel.

For specific operation methods, refer to section 7.1 "Operation Instructions on Buttons and Operation Frames".

7.15 Communication parameters interface description



（1）COM1 Slave number: COM port ID Determined by the DIP switch of the external hardware, read as the current slave number (read only).

（2）COM1 baud rate: Initial value: 2-38400, range: 0-4 Corresponding to: 0-9600, 1-19200, 2-38400, 3-57600, 4-115200;.

（3）COM1 communication protocol: Initial value: 0-Modbus RTU, range: 0-Modbus RTU, 1-Modbus Ascii, 2- continuous send, 3- result send.

（4）COM1 data format: Initial value: 1 (8-E-1);Range: 0-8N1, 1-8E1, 2-8O1, 3-7E1, 4-7O1.

（5）COM1 Double-word mode: Initial value :0 (AB-CD) Range: 0-AB-cd, 1-CD-AB.

（6）COM1 Continuous transmission interval: Initial value: 5ms, range 0-1000ms.

（7）COM2 Slave number: COM port ID External hardware dip decision, read as the current slave number.(Read only).

（8）COM2 baud rate: Initial value: 2-38400, range: 0-4 Corresponding to: 0-9600, 1-19200, 2-38400, 3-57600, 4-115200;.

（9）COM2 communication protocol: Initial value: 0-Modbus RTU, range: 0-Modbus RTU, 1-Modbus Ascii, 2- continuous send, 3- result send.

（10）COM2 data format: Initial value: 1 (8-E-1);Range: 0-8N1, 1-8E1, 2-8O1, 3-7E1, 4-7O1.

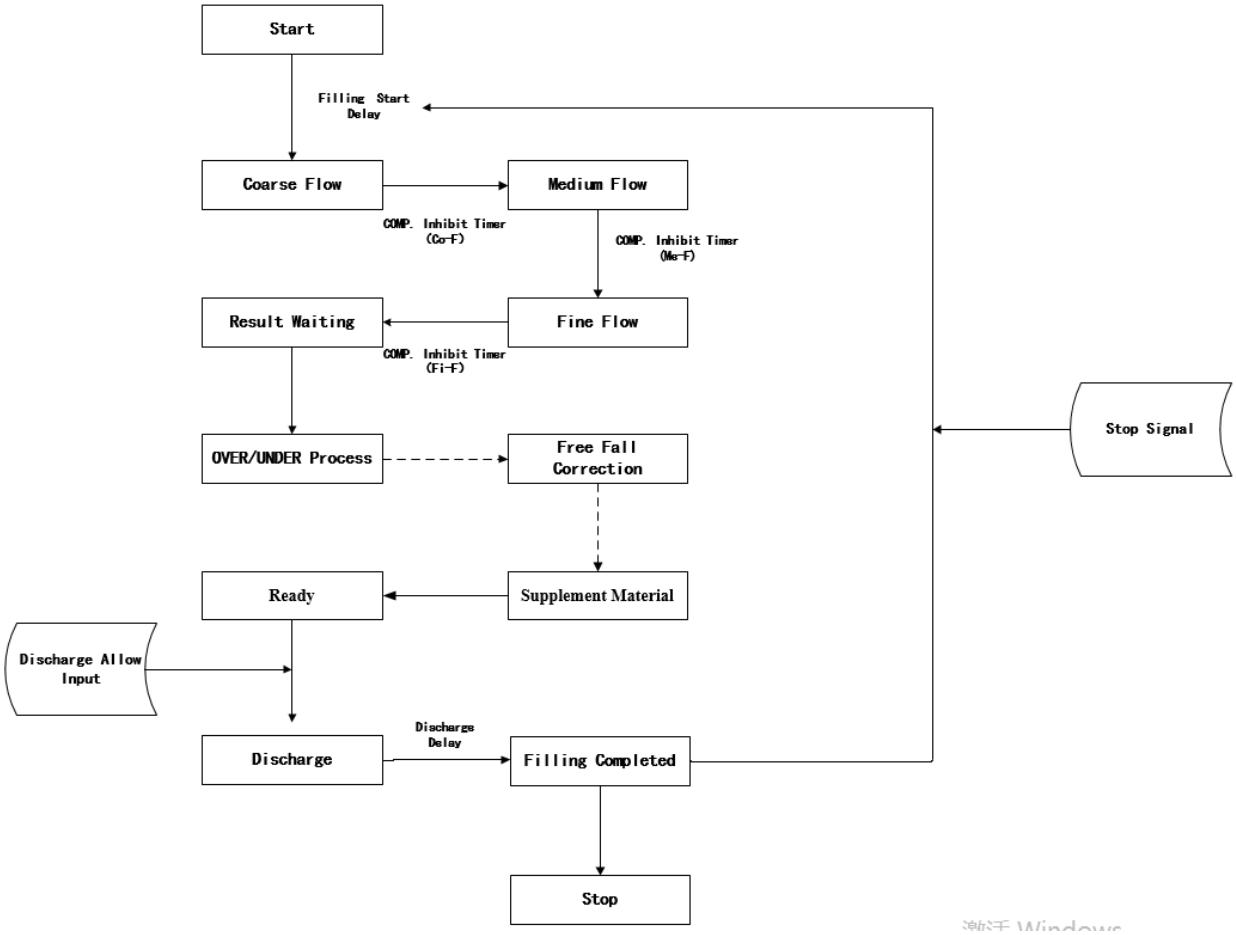
（11）COM2 Double-word mode: Initial value :0 (AB-CD) Range: 0-AB-cd, 1-CD-AB.

（12）COM2 Continuous sending interval: Initial value: 5ms, range 0-1000ms.

Press the reset button on the controller to reset all communication parameters.

8. Description of Basic functions

8.1 Basic operation procedure



1) Start: In the stop state, the "start" signal is effective, the module enters the running state, will run according to the formula parameters, first into the feeding time delay.

2) Delay before feeding: the module is used to wait for the balance platform to stabilize or clear the zero operation, and enter the feeding process after the time is up.

3) Fast adding: large and small vibration plate in accordance with the set of fast adding voltage output, at this time fast adding, adding, slow adding three signals are effective, in order to avoid overrush, in the "fast adding ban time" do not judge the weight.The current weight is greater than the fast adding stop weight (target value - fast adding advance), then enter to add.

4) Add: large and small vibration plate according to the voltage output set, add and slow add two signals are effective at this time, in order to avoid overrush, do not judge the weight in the "add forbidden time".If the current weight is greater

than the weight of adding stop (target value - add the advance), then enter the slow adding.

5) Slow add: large and small vibration plate in accordance with the set of slow add voltage output, at this time only slow add signal is effective, in order to avoid overrush, in the "slow add forbidden time" do not judge the weight.If the current weight is greater than the slow add stop weight (target value - drop value), then enter the fixed value.

6) Set value: At this point the feeding signal is invalid and the feeding stop signal starts to be effective.There are three ways to set the value, which are time, stability and time + stability.After meeting the corresponding requirements, enter the weighing.

7) Overgap detection, drop correction and point feeding: auxiliary functions of packaging, if the function switch is not opened, packaging does not go through the corresponding process, directly into the next process.

Note: The over and under error detection switch is closed, and the point feeding switch is opened, and no feeding is carried out.

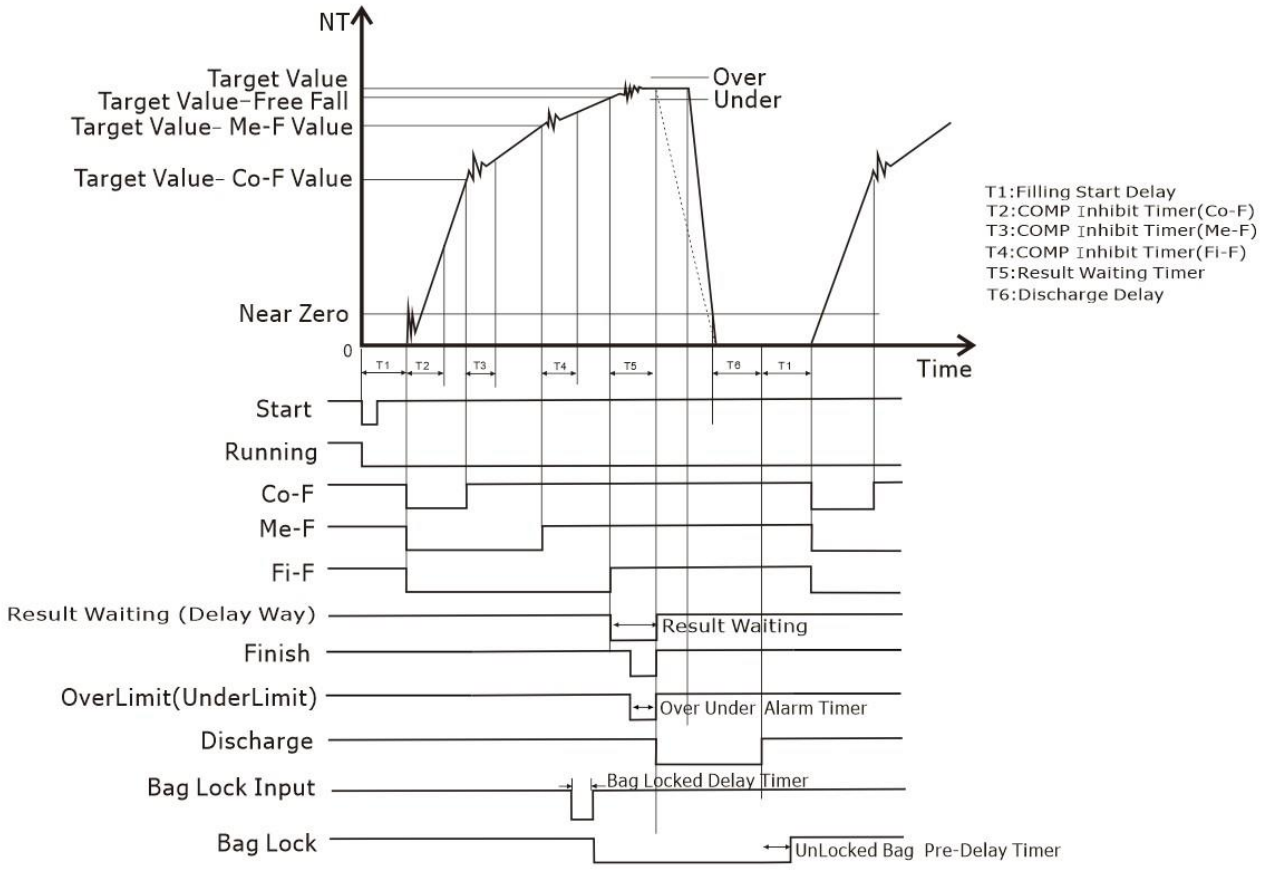
8) Weighing well: at this time, the weighing signal is effective, the unloading request signal is effective, waiting for the input of the external equipment to allow the unloading signal, after receiving the unloading signal, the weighing signal, the unloading request signal, the feeding stop signal are invalid, the module into the unloading.

9) Unloading: At this time, the unloading status signal is effective, and the unloading mode of the module is pneumatic unloading.When the corresponding discharge is completed, the feeding is completed.

10) Completion of unloading: After completing one pack, the accumulation and other processing is carried out.

11) Total slow stop: If the "total slow stop" signal is effective during operation, it will enter the stop; otherwise, the packaging process of the next package will continue.

12) Emergency stop: When the module is in operation or cleaning, the input of the "emergency stop" signal is effective, and the stop will be executed immediately



Note: The MODBUS addresses of formula parameters and formula cumulative parameters in the feeding process are 41001~48000.

9. Analysis and elimination of common faults

The common faults in the process of use, causes and treatment methods.

Serial number	Fault symptoms	Cause	Handling
1	Equipment starts without blanking	1. There is no material in the storage bin 2. The closure door of the storage bin is not open 3. Air source leakage 4. The air source pressure is too low or no pressure	1. Feed the storage bin 2. Open the storage bin closure door 3. Connect the air source 4. Increase the air pressure or turn on the pressure switch
2	Do not unload after weighing	1. The equipment cannot receive the pinch bag signal 2. Single scale combination times are not set to 0	1. Check and exclude 2. Set the number of combinations according to specific needs
3	The actual weighing has been out of whack	1.Equipment not calibrated 2. Fast increase the ban time setting is too large	1. reweighing 2. Speed up the ban time to appropriate reduction
4	The indication value is not stable	1.Strong wind or strong vibration in the surrounding environment 2.Weight sensor failure	1.Check and rule out 2.Check the sensor and replace it if necessary

5	Weigh the wrong weight	1.Weight sensor failure 2.Not zeroed out before use 3.Equipment not calibrated 4.Discharge is not complete	1.Check the sensor and replace it if necessary 2.Shutdown to clear 3.Recalibration 4.Increase discharge time appropriately
6	Data cannot be exported	1.Usb flash drive damaged 2.The USB flash drive interface of the electric cabinet is damaged	1.Replace the USB flash drive 2.Check the port

10. Maintenance, warranty

In order to ensure the weighing accuracy of the equipment, do not place the equipment in a cold and humid environment. Clean the dust caused by materials inside the equipment regularly according to the use situation. Remember to close the electric cabinet door after daily use or maintenance.

● Warranty principle

In principle, the first installation and debugging should be carried out by our company's professional and technical personnel or the company entrusted by our company.

5. Equipment failure caused by the following circumstances is not covered by our warranty:

- Failure to operate according to the instructions
- Install without professional instruction
- Make structural changes to the equipment
- Unauthorized damage to equipment
- Faulty programming and operation
- Natural damage to equipment