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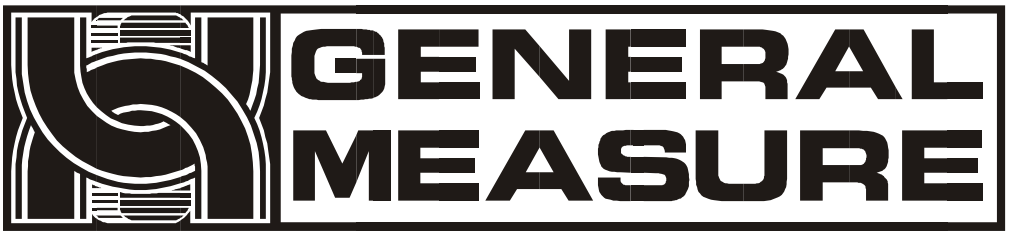


GM9907-L4

User's manual

GM9907-L4

V01.02.00

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

This product implementation standard: **GB/T 7724 -- 2008**

Contents

1. Overview

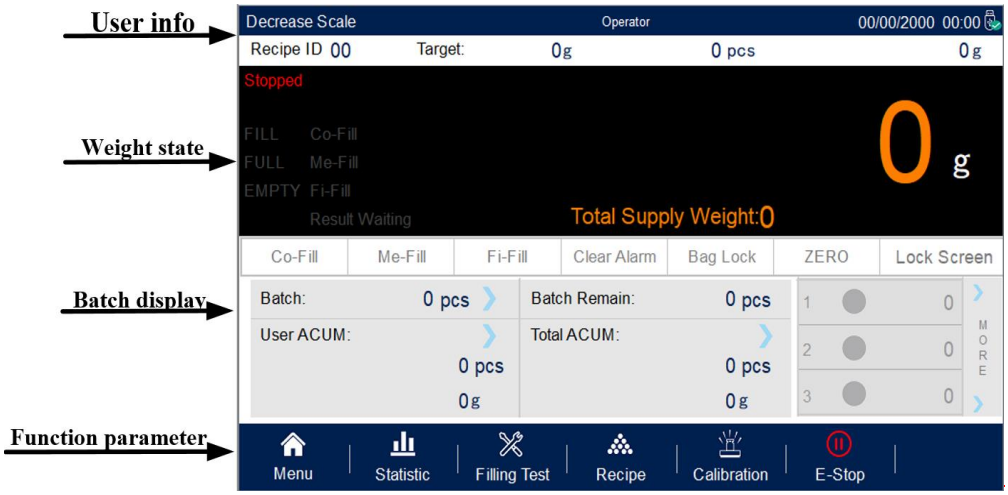
GM9907 - L4 bagging controller is aimed at reducing method of automatic quantitative packaging weighers specially developed a weighing control instrument. The controller using the touch screen display English interface, convenient operation; the new algorithm makes the weighing control faster and more accurate; USB interface and dual serial port make the device easier to system interconnection. It can be widely used in feed, chemical, food and other industries that need quantitative packaging equipment.

1.1 Functions and features

- All English touch screen display interface, so that the operation is more intuitive and simple.
- **28** switch input and output control **(12** in **/16** out), input and output port positions can be defined.
- Switch quantity test function, convenient packaging scale debugging.
- Automatic three speed feeding control.
- Can store 20 kinds of formula, convenient packaging of different range materials.
- USB interface is convenient for exporting history records.
- Feeding control function, convenient packaging scale and front feeding equipment control connection
- Automatic drop correction function
- Digital filtering function
- Batch times setting function
- Automatic zero tracking function
- Time/date feature
- Three level user permission Settings
- Dual serial port, external serial printer, computer or second monitor
- With a single network port communication function, easy to communicate with the upper computer

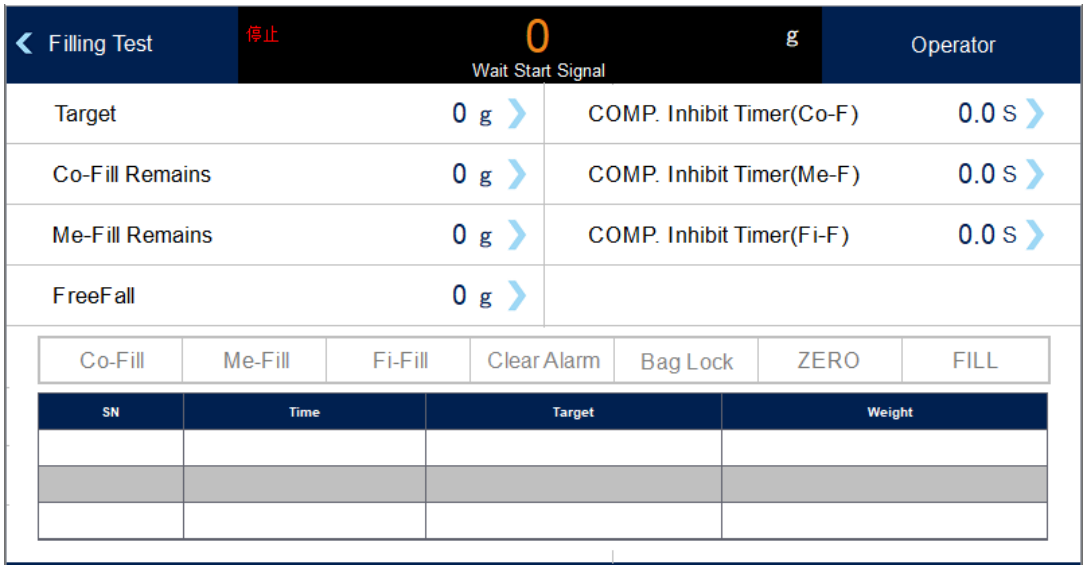
1.2 Front Panel description

Description of Screen **0** (main screen) :



- User Information area: Displays the current logged-in user **ID**, system time, recipe number, target value, cumulative batch, and total cumulative.
- Weight status area: including weight value display, weighing unit display, and status mark display.
- Packaging information area: set the number of batches, display the current user packaging accumulative and total accumulative information.
- Function key area: instrument menu parameter query Settings and corresponding operation keys.

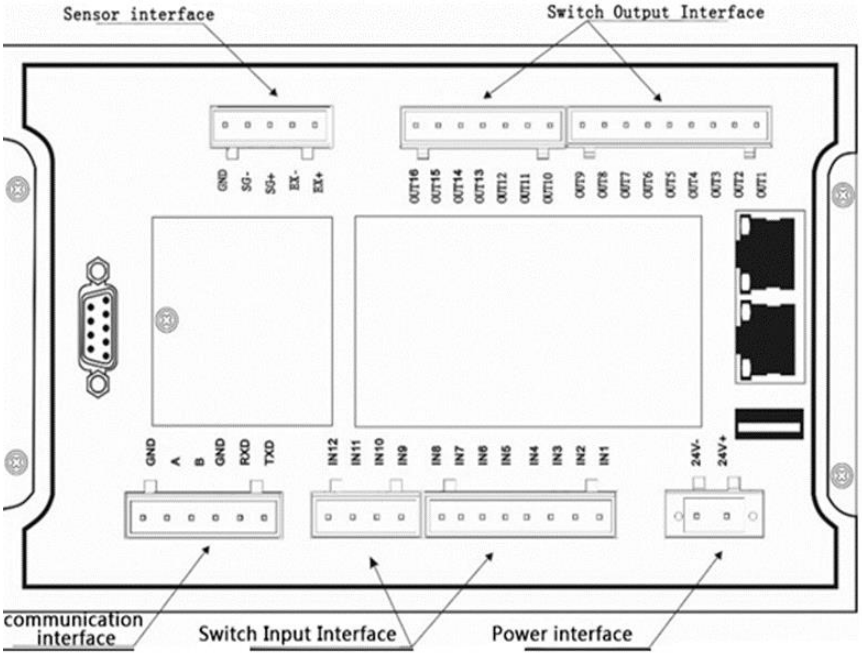
Description of Interface **1** (debugging interface) :



- Shortcut formula parameter setting area: can quickly set formula parameters, convenient debugging instrument.

- Packaging history area: you can visually view the current packaging history data, easy to compare.

1.3 Description of the Rear panel



1.4 Technical Specifications

1.4.1 General Specifications

Power source: **DC24V**
Power filter: Included
Operating temperature: **-10 ~ 40℃**
Maximum humidity: **90%R.H**. No condensation
Power consumption: about **15W**
Physical size: 190mm **×124mm ×48mm**

1.4.2 Simulation part

Sensor Power Supply: DC 5V **125mA (MAX)**
Input impedance: **10MΩ**
Zero adjustment range: 0.002 ~ **15.625mV (sensor sensitivity is fixed at 3mV/V)**
Input sensitivity: **0.02uV/d**
Input range: 0.002 ~ **15.625mV**

Change the square formula: **Sigma- Delta**

A/D conversion speed: **120, 240, 480, 960** times/second

Non-linear: **0.01% F.S**

Increment drift: **10PPM/℃**

Maximum display accuracy: **1/100000**

1.4.3 Digital part

Display: **7** "resistive touch screen

Negative number display: "**-**"

Overload display: Chinese "Weight over range/sensor signal is too small"

Decimal point position: **5** optional

2. Installation

2.1 General Principles

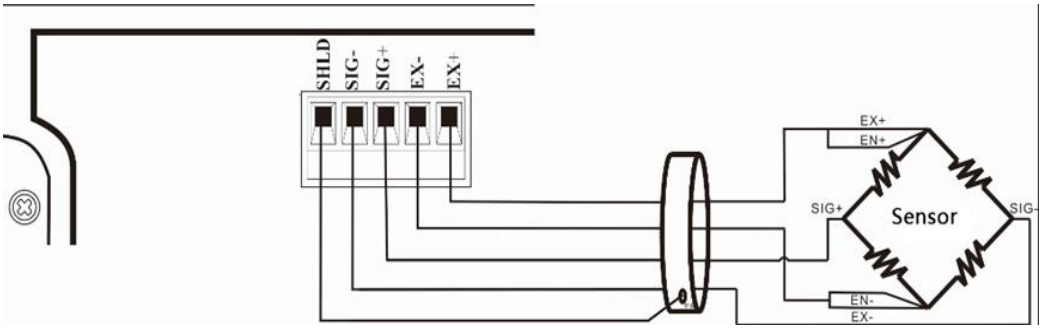
1) Make holes in the appropriate position of the control cabinet (opening size **179 (±1) mm ×113 (±1) mm**)

2) Load the instrument into the control cabinet.

3) Remove the side strips from the accessories that come with the table and fix them on both sides of the meter with **M3*10** screws.

2.2 Connection of sensor

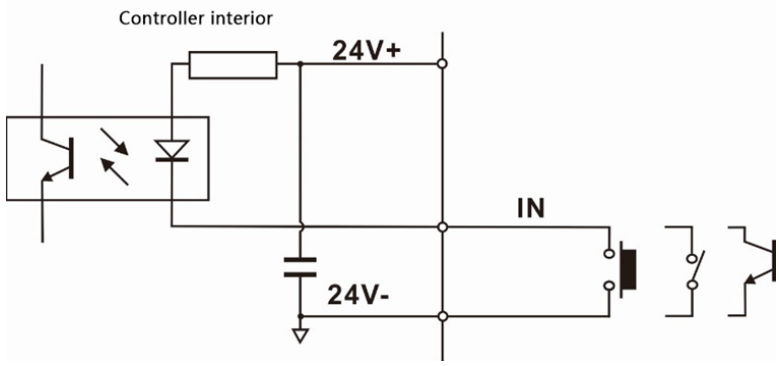
GM9907 - L4 reduced packaging controller can be connected resistance strain sensor bridge all the way. When a four-wire sensor is selected, **SN+** and **EX+** of the module must be short-connected, and **SN-** and **EX-** must be short-connected.



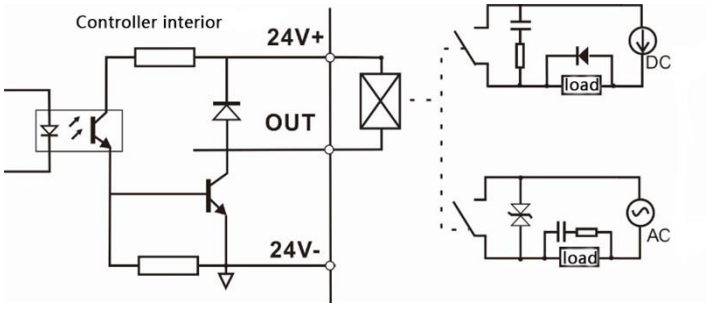
EX+: Power supply positive **EX-**: power supply negative **SN+**: induction positive **SN-**: induction negative **SIG+**: signal positive **SIG-**: signal negative

2.3 Connection of the switching quantity interface

GM9907 - L4 reduction controller contains 28 way **Input,Output** to control (12 to 16), photoelectric isolation, instrument internal power drive. Switch input is low level and effective instrument; Output transistor collector open output mode, each drive current up to **500mA**, **full** load current up to 3A.



Input interface diagram

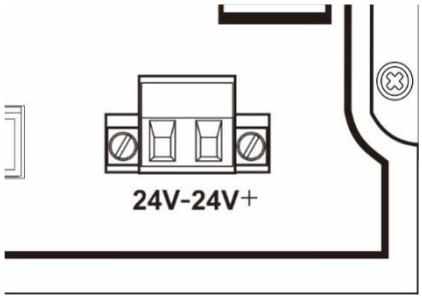


Output interface diagram

GM9907-L4 packaging controller switch quantity can be customized for the user, to facilitate the user wiring and some special applications, the switch quantity content refer to **section 4.5.**

2.4 the power connection

GM9907 packaging controller use **24V** DC power supply. Connection as shown in the figure below:



Power terminal diagram

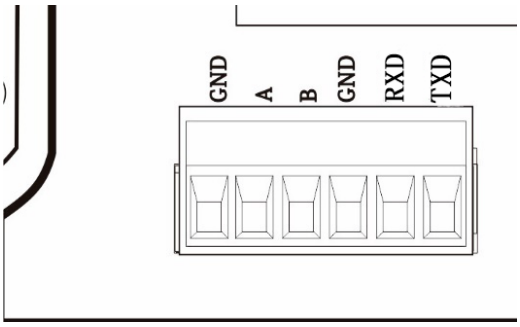
24V+ is connected to **DC** positive**, 24V- is** connected to **DC** negative.

Note: This product uses DC 24V power supply, the use of AC 220V power will permanently damage the instrument and danger!!

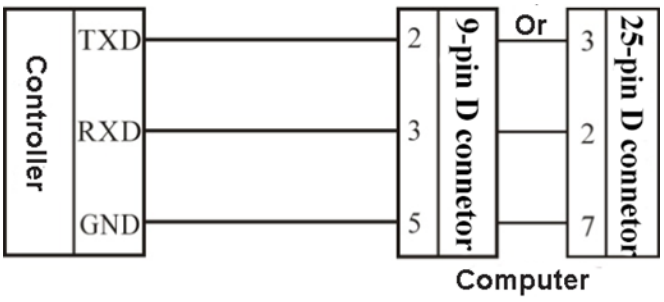
2.5 Serial port connection

GM9907 - L4 can provide two serial communication interface, the interface as shown

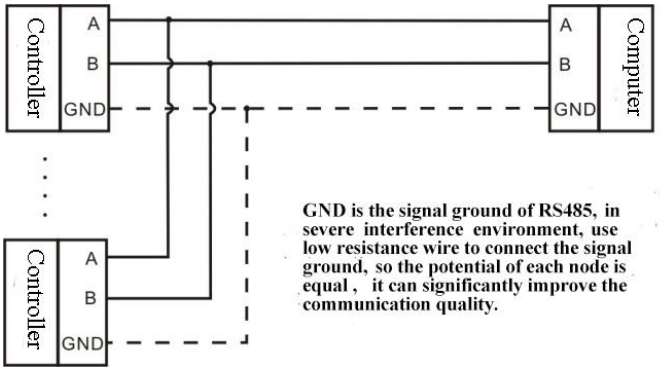
in the figure below. Which mode of **RS - 232** serial port (terminal mouth **TXD**, **RXD**, **GND**); The second serial port is **RS-485** (terminal **A**, **B**, **GND**), and the serial port supports **MOD-BUS** protocol, command mode, continuous mode, and print mode.



Meter and computer connection diagram:



Meter to computer connection diagram (**RS-232** mode)



Connection diagram between instrument and upper computer (**RS-485** mode)

2.6 Touch Screen Calibration

The touch screen needs to be calibrated when the new product is used for the first time or after a long time. The touch screen calibration method is as follows: **GM9907** on electricity, long press any point touch screen at the same time, by the touch of system parameter Settings button or press the blanks for **3** seconds to enter calibration touch screen interface, interface

display cross cursor, finger accurately placed in the center of the cross cursor, stay at least 1 second time, will automatically into the next calibration point. Follow the cross cursor position changes, in turn, according to the center of the cross cursor long, until five o 'clock calibration is completed, click confirm calibration, the calibration is complete. Return to the system setting interface and click "Enter Running Environment" to enter the startup and login interface.

3. Description of User rights

To prevent wrong operation personnel caused by operation of the instrument **GM9907** packaging controller provides **3** level authority (operators, administrators and system administrators) choice: the **system administrator to instrument for all operations** (it is not open to the user). Operators and administrator permissions are as follows:

Permissions	Operation content
Operator	All parameters can be viewed.
	You can set quantitative value parameters and perform switching quantity tests.
Administrator	Can do all operator permissions.
	You can calibrate scales, set overruns and underruns, correct falls, tap bags and monitor times, define switching quantities, print, clear accumulative, clear and export history records.

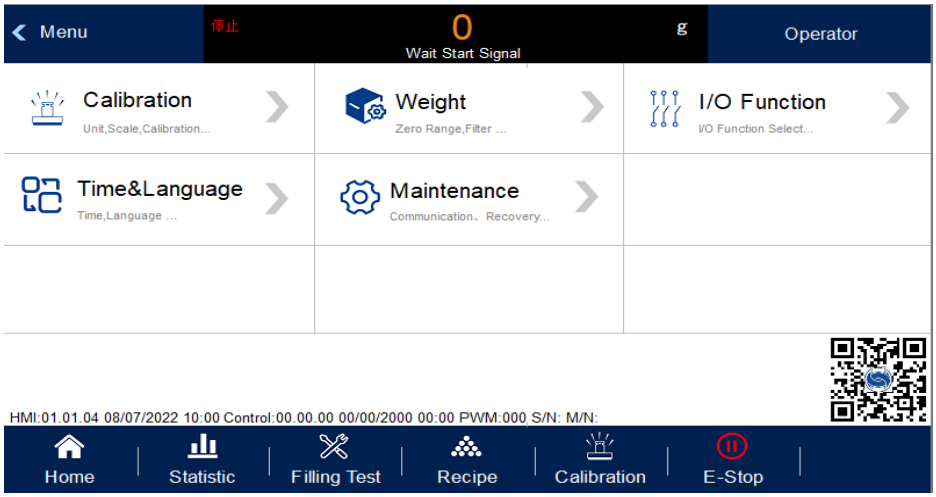
Permission description:

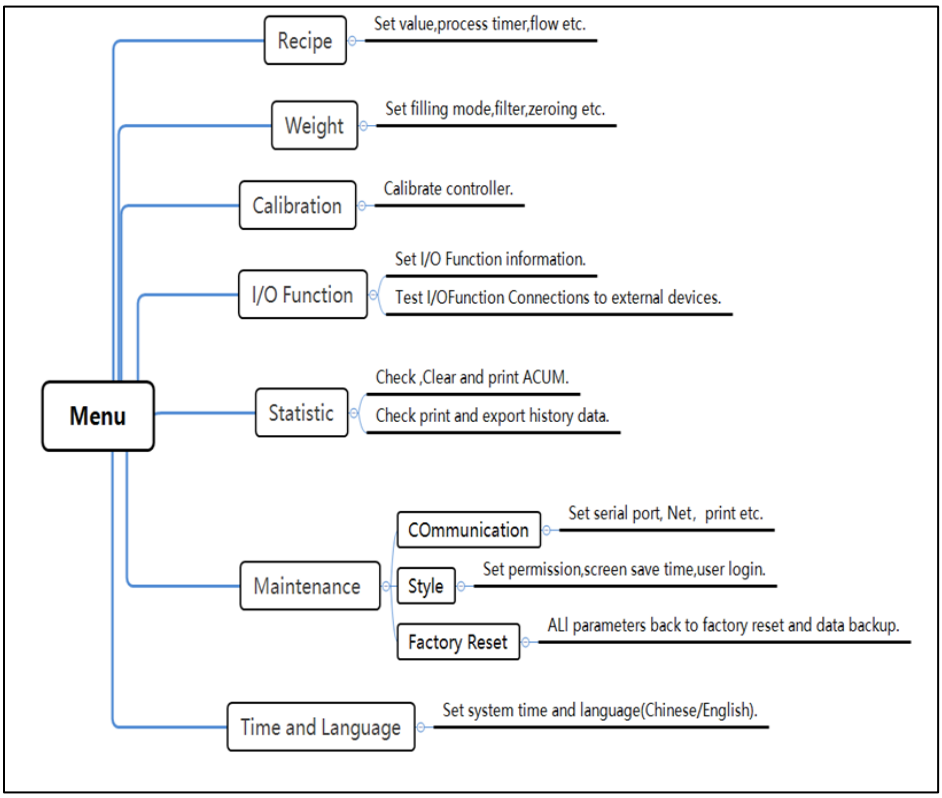
- Meter logs in as operator by default
- Switch permissions, you can click the parameter item that needs permissions, enter the password of the corresponding administrator (password: **0000**) or system administrator (password: **000000**) in the box to log in successfully.
- Click the parameter that requires permission. In the displayed box, you can change the password of the current user.
- In the [Style Settings] parameter of **[Maintenance]**, set the permission exit time, which is used to limit the login duration of administrators and system administrators. When the permission exit time reaches, the permission of the current administrator or system administrator will be returned to the operator permission.
- In the [Style Settings] parameter of **[Maintenance]**, you can open the multi-user login function, set the number of users to log in, and select users to log in when powering on

4. Menu

Click the menu, you can query and modify the parameters.

- The instrument software version information can be viewed at the bottom of the menu interface and the instrument manual can be downloaded by scanning the two-dimensional code on the right.
- Click the upper left corner to exit the current interface and return to the upper interface.





4.1 Recipe Parameters

Click the recipe parameters in the [main interface] to display the recipe interface:

- Click the suboption button on the right to enter the corresponding interface and set the home parameter information.
- Click on the left to switch the formula number
- Click on the upper left corner to exit the current screen and return to the superior screen.

Recipe parameter entry	Parameters	Instructions
Filling Values	Used to set parameters related to package weight value	
	Target	Quantitative target value. Initial value: **0.00**; Range: **0 to maximum range**.
	Co-Fill Remains	In the process of quantification, if the material released from the metering bucket is more than the target value - fast increase the advance quantity, then close the fast increase. Initial value: **0.00**; Range: **0** to **maximum range**.
	Me-Fill Remains	In the process of quantification, if the material released from the metering bucket is more than the target value - add the advance amount, then close and add. Initial value: **0.00**; Range: **0** to **maximum range**.
	FreeFall	Quantitative process, if the release of material from the metering bucket ≥ target value - drop value, then close the slow add. Initial value: **0.00**; Range: **0** to **maximum range**.
	Over Value	Over value. In the feeding process, the weight of the material (gross weight) in the measuring bucket is greater than or equal to this value, then stop feeding. Initial value: **0.00**; Range: **0** to **maximum range**.
	Under Value	Lower value. Before each quantitative start, if the weight of the material (gross weight) in the measuring bucket is less than or equal to this value, then start feeding, feeding end, only quantitative start. The value should be set larger than the target value. Initial value: **0.00**; Range: **0 to maximum range**.
Filling Timers	Used to set the parameters related to the delay time of the feeding process	
	Filling PreDelay Timer	The feeding delay time is t1. At the beginning of the quantitative process, after the delay time of t1, the instrument will conduct stable clearing (if it is not stable, it will wait until stable and then clear), and then start the feeding process. Initial value: **0.5**; Range: **0.0 to 99.9**. (Unit :**s**)
	COMP. Inhibit Timer(Co-	Inhibit comparing time t2. After the t1 delay is over, the fast addition remains in effect during the t2 time.

	F)	Initial value**: 0.5**; Range: **0.0 to 99.9**. (Unit :**s**)
	COMP. Inhibit Timer(Me-F)	Inhibit time comparison t3. After the end of fast add, add time is always valid during t3 time; Initial value: **0.5**; Range: **0.0 to 99.9**. (Unit :s)
	COMP. Inhibit Timer(Fi-F)	Inhibit comparing time t4. After the addition, the slow addition is always effective during t4 time. Initial value: **0.5**; Range: **0.0 to 99.9**. (Unit :s)
	Result Waiting Timer	Set the hold time t6, start t6 after the slow add is finished; If the overshoot and undershoot detection is on, start t6 after the end of the t5 delay. Initial value: **0.5**; Range: **0.0 to 99.9**. (Unit :s)
	Bag Lock Pre-Delay	Pre-clip bag delay t7. Bag input signal effectively start t7, t7 delay time, the instrument considers the bag action is completed. Initial value: **0.5**; Range: **0.0 to 99.9**. (Unit :**s**)
	Bag Unlock PreDelay	Delay t8 before loose bag. When the meter closes the clip bag output signal (loose bag), start t8. When the t8 delay time is up, the meter considers the loose bag action complete. Initial value: **0.5**; Range: **0.0 to 99.9**. (Unit :**s**)
	After Supply Delay For Stable	Eliminate the drop delay t9 after feeding When the meter reaches the upper limit, the drop delay is eliminated after starting the feed, and the delay time is switched to the weightlessness control after the end. Initial value: **3.0**; Range: **0.0 to 25.0**. (Unit :s)
Over/Under //Free Fall Correction	Used to set parameters related to overshoot and undershoot alarm reminders	
	OVER& UNDER Check	"On/Off" optional, initial value: Off. When this parameter is set to "on", the quantitative process carries out the overshoot and undershoot judgment. (Note: The following parameters are only available when it is on)
	OVER/ UNDER Pause	"On/Off" optional, initial value: Off. When it is set to "on", the meter will be suspended waiting for the user to deal with the overshoot and undershoot in the quantitative process. Press "Clear alarm" to clear the alarm to continue the quantitative process or input emergency stop signal to clear the alarm and return to the stop state.

	OVER/ UNDER Check Timer	The over and under error detection time is t5, the over and under error detection switch is opened, and after the material feeding is finished, t5 is started. After the t5 delay, the weighing bucket is stable and the over and under error detection is carried out. Initial value :**0.5**, **range** :0.0**~99.9.** (Unit :s)
	Over Limit Value	In the process of quantification, if the material released from the metering bucket is ≥ target value + over limit value, it will be judged as over limit value. Initial value: **0.00**, **range**: 0~ maximum **measurement range**.
	Under Limit Value	In the process of quantifying, if the material released from the measuring bucket is less than the target value-underdifference, it is judged as underdifference. Initial value: **0.00**, **range**: 0~ maximum **measurement range**.
	Used to set the drop automatic adjustment related parameters	
	FreeFall Corrent ON/OFF	The drop value is the weight value that does not fall into the measuring bucket after turning off the slow loading signal. After the switch is turned on, the drop is corrected according to the actual blanking value as required.
	Reference Samples PCS	Instrument will set the number of times of the average value of the average, as the basis for correction of the drop. Initial value: **1**. Range: **00** to **99** Note: When set to 0, meter turns off drop correction function.
	Correction Effective Range	When the value of this drop exceeds the set range, the drop will not be included in the arithmetic average range. Initial value: **2.0**. Range: **0.0 to 9.9** (percentage of target value)
	Correction Percentage	The amount of correction for each drop; 25%, 50%, 100% three kinds of amplitude can be selected. Initial value: **50%.**
Patting Pars. Overtime Monitor	Set timeout monitoring parameters	
	Supply vertime Monitor Timer	When the feeding time exceeds this setting, the feeding timeout alarm will be prompted. After the material is greater than the upper limit, the feeding output will be stopped and the alarm prompt will be cleared. Or the clearing alarm prompt can be input during the feeding period. The initial time of feeding monitoring is the end of the last feeding. Initial value: **0**. Set to 0 when the feed timeout monitoring function is off.
	Supply Overtime Pause	Stop feeding signal output switch when feeding timeout alarm, clear alarm, continue to feed. (Note: the monitoring time of feeding timeout is not 0, and the parameter can be set)
	Feed Overtime Monitor Timer	When the decrement time exceeds this setting, it will prompt the decrement timeout alarm. The decrement process does not stop. At this time, you can manually input the clear alarm.

		Initial value: **0**. Set to 0 when decrement timeout monitoring function is turned off.
	Feed Over-time Pause	Set to on, decrement timeout alarm stop decrement signal output and alarm prompt, clear alarm, can again to start the signal, continue to output decrement signal. (Note: The monitoring time of decrement timeout is not 0, the parameter can be set)
	It is used to set the parameters related to the bagging mechanism	
	Patting Mode	Bag mode selection; Initial value: no patting bag. No patting bag/filling medium patting bag is optional. (Note: The following parameters are available only when the patting bag mode is in the charging bag)
	Patting Times(Waiting)	Patting times in feeding Set the parameter, patting times. Initial value: **4**. Range: **0 to 99**.
	Patting Start Delay Timer	Patting Start Delay Timer t9. Start the bag delay when the feeding starts. When the delay time is up, the instrument starts to beat the bag. Initial value: **0.5**, range: **0.0~99.9**. (Unit :**s**)
	Patting ON Timer	Patting bag within a on - off cycle, patting bag output effective time. Initial value: **0.5**, range: **0.0~99.9**. (Unit :**s**)
	Patting OFF Timer	Within a patting off cycle, the patting off timer outputs invalid time. Initial value: **0.5**, range: **0.0~99.9**. (Unit :**s**)

4.2 Weighing Parameters

In the menu interface, click [weighing parameters] menu bar to enter the current parameter item to view and set the owning parameter information

Weighing parameter item	Parameters	Make clear
Basic Parameter	Power-ON Zero	Optional on/off. When it is "on", the instrument will automatically perform zero clearing operation when it is powered on (the weight in the scale bucket meets the zero clearing range). Initial value: Off.

	TrZero Range	Weight value within this range, the meter automatically clears to zero. When it is 0, zero tracking is not performed. Initial value: **1**; Range: **0 to 9(d).**
	TrZero Tme	Initial value: **2.0**; Range: **0.1 to 99.9.** (Unit :**s**)
	STAB Range	The range of weight variation within this setting value is judged by the meter to be stable on the scale table during the stability call time. Initial value: **2;** Range: **0** to **99(d)**.
	STAB Time	Initial value: **0.3**; Range: **0.1 to 9.9.** (Unit :**s**)
	Zero Range	Zeroable range. Initial value: **50**; Range: **1 to 99** (percentage of full scale).
	Digital Filter	**AD** digital filter parameters. **0**: no filtering; **9**: the filtering effect is strongest. Initial value: **7**. Range: **0** to **9.**
	Filling Filter	Filter parameters as you run. **9**: The strongest filtering effect. Initial value: **4**. Range: **1** to **9.**
	Sample Rate	**A/D** sampling rate**, 120** times/s**, 240** times/s**, 480** times/s**, 960** times/s optional**,** initial value: **480** times/s.
Advanced Parameter	Filling Ctrl Mode	Separate feeding/combination feeding optional; Initial value: combined feeding. Combined feeding: fast, medium and slow feeding port feed at the same time; When adding medium and slow feeding mouth at the same time; Slow feeding time slow feeding port. Separate feeding: fast feeding fast feeding port; Feed at the feeding port when adding; Slow feeding time slow feeding port.
	Add to Total When Manual Discharge	On/off optional, set to on, manual discharge counts to total. Initial value: Off**.**
	Power Loss Resume	On/off optional, set to on, decrement process power off, power on again after starting will continue the process before power off. Initial value: On.
	Bag Lock/Un-	On/off optional. Initial value: On; Open: there is a bag clamping mechanism, after starting, it is necessary to detect the effective signal of the bag and

	lock Function	start the reduction process; Off: no bag mechanism, no need to detect the effective signal of the bag after starting the reduction process.
	Auto Unlock Bag	On/off optional. Initial value: On; Open: automatic loosening bag after the reduction is completed; Close: after the reduction is completed, the external manual signal is required to loosen the bag before loosening the bag.

Manual feeding into the cumulative function description

When the advanced parameter (**Add to Total When Manual Discharge)** is opened, the weight cleared by manual fast adding, adding and slow adding operation is accounted into the cumulative value. The weight of cleaning is the weight of the material in the metering bucket before cleaning minus the weight of the material in the metering bucket after cleaning.
Note:

Use manual fast medium slow feeding

When the manual feeding accumulation switch is opened, the instrument will start the fast, medium and slow loading to start cleaning, when the cleaning signal is effective again, the instrument will immediately close the fast, medium and slow loading, the instrument will be before and after the weight of the weight of the accumulated, the cleaning accumulation process is complete.

If the weight after cleaning is greater than the weight before cleaning, the instrument considers the weight of the cleaning to be **0**, excluding the accumulation.

4.3 Calibration

School scale for instrument calibration, namely first use **GM9907** packaging controller or any part of the weighing system change and the current equipment calibration parameters can not meet the requirement of the user, all should make calibration for the controller. School scale parameters directly affect the instrument weighing results, in order to prevent wrong operation, require the administrator and system administrator login to the instrument calibration in click on the parameters of the need to access input the password for the administrator and system administrators can log on to the corresponding user).

National standard for weighing instrument calibration parameters require password line protection, so enter the correct administrator password when entering the calibration parameters (initial password: **0000**); Scale password Click the parameters to be modified on the scale interface, and change the Settings in the pop-up box.

Under the campus scale interface:

- Select weighing parameters, determine the unit, decimal point, minimum fraction

and maximum range

- Carry out weight calibration and weight free calibration
- Click the upper left corner to exit the current screen and return to the upper screen.

Calibration scale parameters	Instructions
Weight Unit	Initial value: **kg**; **g/kg/t**/lb Four options.
Decimal Point	Initial value: **0.00; 0 to** 0.0000 **five options.**
Divison	Initial value: **1**; **1/2/5/10/20/50** Six options
Full Scale	Initial value: **100.00**; ≤ min indexing ×**100000** can be set
Loadcell Voltage	Displays the current sensor output voltage value
Relative Gain Voltage	Display the load weight output voltage value

Check the scale as follows:

Calibration Zero
Zero calibration is the zero calibration of the scale platform. There are two ways to do zero calibration: automatic acquisition and manual input. When the new equipment or weighing structure is adjusted, the "automatic acquisition" method must be used for zero calibration. **Automatic acquisition**: Successful calibration conditions: empty **measuring bucket**, **balance table stable**. After the scale is emptied, the meter displays the current millivolt. Press **[Calibration Zero],** that is, to calibrate the current state to zero. **Manually enter**: Manually input the value of millivolt corresponding to zero, click **[Cal ZERO By Voltage]**, enter the recorded zero voltage value in the box and calibrate it as zero. This voltage value is the data recorded when the weight is calibrated. The value recorded is used for manual input.
Calibration Weight
The weight calibration function is the calibration method of the weight used in the field. The steps on the scale interface are as follows: The first step: according to the needs of the selection of units, decimal points, grading values and other weighing parameters. The second step: zero calibration, can refer to the zero calibration step. Step 3: Put the weight on the weighing table. After the weighing body is stable, input the weight of the weight in **[Input Weight**] and click [**Calibration Weight**]. At this time, it will show that the gain calibration is successful, and the weight calibration can be completed.

No weight calibration
No weight calibration function is not convenient to use the weight calibration scale, but have recorded the voltage value when using the weight calibration scale. The steps are as follows: Step 1: Click **[Cal ZERO By Voltage]** on the interface of calibration scale, enter the recorded voltage value of zero in the pop-up box, and click "Confirm". Step 2: Click **[Historical Weight Calibration]** on the scale interface, input the recorded relative gain millivolts and gain weight in the pop-up frame, and click "OK" to complete the weightless calibration.

4.4 Communication Parameters

GM9907 can provide two serial communication interface, serial port connection may refer to section **2.5**, set up joint parameters can communicate correctly. Through interface **Maintenance**］**,**choice [communication parameters］[Serial port 1 and serial port 2 can choose **Modbus-RTU**, **print**, **continuous mode**, **command mode and other four functions**. The first serial port of the meter is RS-232, and the second serial port is RS-485. The communication parameters of the serial port are correctly set to be consistent with those of the upper computer.

The communication parameters are described as follows:

Serial port parameters	**Serial port parameter subitem**	**Notes**
COM(COM-R S232; COM-RS485)	Slave COM ID	Initial value: **1**; **1 to 99 optional.**
	Protocol	Initial value: **Modbus-RTU. Modbus-RTU/ Print/Continuous mode/Command mode Optional.**
	Baudrate	Initial value: **38,400**; **9600/19200/38400/57600/115200 is** optional.
	Data Format	Initial value: **8-E-1(**8-bit data bit **-** parity **-** 1-bit stop bit); **8-e-1/8 - n-1/7 -E-1/7-N-1** optional (**Modbus-RTU** only supports **8** data bits).
	Dword Format	**MODBUS** communication display mode: Initial value: **AB-CD**; High word in front **(AB-CD)**/Low word in front **(CD-AB)** optional.
Ethernet	Protocol	**Modbus-TCP/IP,** address table see Section **4.4.4.3**
	Dword Format	**Modbus** communication display mode: Initial value: **AB-CD**(high word before);

		AB-CD(high character first)/**CD-AB**(low character first) optional.
	Socket	Initial value**: 502; 1 to 65535** Optional.
	IP Addr	Initial value**: 192.168.101.246; 0 to 255** Optional**.**
	MAC Addr	**Bc.66.41.9x.xxx.xxx.**
Print	Auto Print	On/off optional; When "On" is selected, the packaging result will be automatically printed out each time the packaging is completed (serial port communication mode is required to set "Print"). Initial value: Off.
	Printer Format	Initial value: **32** column print; **24** column print /**32** column print optional.
	Printing Language	Initial value: Chinese; Chinese /**English** optional.
	Printing Empty Line Nos.	Number of lines after printing, initial value: **3**; **0 to 9** Optional.

4.4.1 Command Mode

Command mode:

Read meter current status

STX	Scale number	**R**	**S**	**CRC**	**CR**	**LF**

Send the command: 02 30 31 52 53 36 34 0D 0A

Where:

STX -- start character**, 02H;**

Scale number -- **2** digits. If the scale number is **01**, that is: **30H 31H**;

R -- **52H,** function code, read command;

S -- **53H,** operating object, indicating instrument status;

CRC -- checksum, that is, all the preceding values are added and converted to decimal, then the last two digits are taken and converted to **ASCII**. (where the tens place is first and the ones place is last);

CR -- enter **0DH;**

LF -- line feed **0AH.**

Meter response

STX	Scale number	**R**	**S**	Status **1**	State **2**	**G/N**	**+/-**	Display value	**CRC**	**CR**	**LF**

Among them:

State **1** -- **30H:** Stop**, 31H**: before feeding**, 32H:** fast **adding, 33H**: add, 34H: slow **adding, 35H**: set value (**end of feeding**), **37H**: loose bag**, 38H**: batch completion**, 39H**: pause

State **2** -- **M**: Unstable **4DH**, **S**: Stable **53H**, **O**: Overflow **4FH**

G/N -- G: gross weight **47H, N**: net weight **4EH**

+/- -- symbol**,** + : **2BH, -** : **2DH**

Display value -- **7** digits, with decimal point

CRC - checksum**, 2** digits

For example: **02 30 31 52 53 30 53 47 2B 20 20 20 36 35 2E 39 31 35 0D 0A**

In the stopped, stable, gross state, the weight value is **65.9.**

Read the total accumulated value of the meter

STX	Scale number	**R**	**T**	**CRC**	**CR**	**LF**

Send the command: 02 30 31 52 54 36 35 0D 0A

Where:

T -- 54H, the operating object, represents the total accumulation of the instrument

Meter response

STX	Scale number	**R**	**T**	Cumulative times	**,**	Cumulative value	**CRC**	**CR**	**LF**

Among them:

Cumulative times - **9** digits, **0 to 999,999,999**

, -- 2CH

Cumulative value -- **16** digits, including decimal point

As returned: **02 30 31 52 54 20 20 20 20 20 20 20 34 2C 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 32 32 37 2E 36 32 34 0D 0A**

Then, the total accumulated times are: **4** times, and the total accumulated weight is **227.6**.

4.4.2 Continuous mode

When the communication parameter **serial port 1** or **serial port 2** is set to **continuous** mode, no command is sent to the instrument in this mode, and the instrument will automatically send the collected data to the supreme computer. The format of its data frame is as follows:

STX	Scale number	**C**	**S**	State **1**	State **2**	**G/N**	**+/-**	Display value	**CRC**	**CR**	**LF**

Among them:

C ——43H

State **1** -- **30H:** stop, **31H: before feeding**, **32H: fast** adding, **33H: add, 34H slow** adding, 35H**: fixed value** (finish feeding), 37H**: loose bag**, 38H**: batch completion**; 39H: Pause

State **2** -- **M**: unstable **4DH**, **S**: stable **53H**, **O**: overflow **4FH**

G/N -- G: gross weight **47H, N**: net weight **4EH**

+/- -- symbol**,** + : **2BH, -** : **2DH**

Display value -- **7** digits, with decimal point

CRC - **2** digits

4.4.3 Print function

The two serial communication interfaces of the instrument can be connected to the serial printer **(RS232/RS485)**, set the communication mode of the serial port of the communication parameters to print, then the corresponding serial port will have the printing function.

By setting the printing format to wide dozen (**32** columns) narrow dozen (**24** columns), by setting the printing language to Chinese or English.

Printing instructions:.

Under the **[Statistics - Recipe ACUM]** parameter, click "Print" to select the items to be printed in the pop-up box, including print total accumulation, print current recipe accumulation, print selected recipe and print all recipe accumulation.

Under the parameter **[Statistics - User ACUM]**, click "Print" to select the items to be printed in the pop-up box, including print total accumulation, print current user accumulation, print selected user accumulation and print all users accumulation.

※ Note: If the communication mode is not set to "print", when the external input printing, it will prompt "No serial port is set to print mode", which cannot be printed.

4.4.3.1 Automatically **print content**

Set the serial port communication mode of communication parameters to print, and set the automatic print switch of print parameters to "on". The following contents will be printed out automatically after each quantitative packaging is completed.

The Chinese 24 columns are printed in the following format:	**32 columns in Chinese will be printed in the following format:**
Packing details Unit: **kg** Recipe number: **1** User number: **9** Total cumulative times: Results ---------- **1**, **20.7**	Packing details Unit: **kg** Recipe number: **3** User number: **9** Total cumulative times target value results ---------- **1, 20.00, 20.69**

4.4.3.2 Total **cumulative print**

In the statistics interface under the recipe cumulative parameter, click Print in the pop-up box to optionally print the total cumulative.

The Chinese 24 columns are printed in the following format:	**32 Chinese print format is as follows:**
Aggregate statement **When**: 2021/06/08 **11:32** Unit: **kg** ---------- Result: **42** Weight: **858.43** ----------	Total cumulative statement **When**: 2021/06/08 **11:37** Unit: **kg** ---------- Result: **42** Weight: **858.43** ----------

4.4.3.3 formula **to print**

Under the statistics interface, you can enter the formula accumulation interface, click the formula number on the right to switch formula number, click Print to select the item to be printed in the pop-up box, print the total accumulation, print the current formula accumulation, select formula printing and print all formula accumulation. Do not print the recipe whose cumulative times are 0.

The Chinese 24 columns are printed in the following format:	**32 Chinese print format is as follows:**
Recipe cumulative report When: **2021/06/08 11:32** Unit: kg	Recipe cumulative report When: **2021/06/08 11:37** Unit: kg ----------

----------	Recipe number: **1**
Formula number: **1**	Target value: **20.00**
Target value: **20.00**	Times: **42**
Times: **42**	Weight: **858.43**
Weight: **858.43**	----------

4.4.3.4 users to **print**

Under the statistics interface, you can enter the user accumulative interface, click the user number on the right to switch the user number, click print to select items to be printed in the pop-up box, print total accumulative, print current user accumulative, select user printing and print all user accumulative. Do not print the user whose accumulative times are 0.

The Chinese 24 columns are printed in the following format:	**The format of the Chinese 32 columns is as follows:**
Cumulative user report	Cumulative user report
When: 2021/06/08 **11:32**	**When**: 2021/06/08 **11:37**
Unit: kg	
----------	----------
User id: **9**	User id: **9**
Number of times: **40**	Number of times: **40**
Weight: **842.10**	Weight: **842.10**
----------	----------

4.4.4 Modbus RTU protocol

The communication mode selected in serial **port 1 or serial port 2 is Modbus-RTU**.

4.4.4.1 Function **Code and Exception Code**

◆ Function codes supported by instrument:

Function code	Name	Instructions
03	Read register	Up to **125** registers can be read at a time
06	Write a single register	
16	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.

4.4.4.2 MODBUS Transfer Mode

This **MODBUS** transmission mode is **RTU** mode.

When communicating in **RTU** mode, each **8-bit** byte in the message is divided into 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** stop bit, no check (**8-N-1**)

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

Proxy code: **RTU**

4.4.4.3 MODBUS Address Assignment

<table>
<tr><th>PLC address</th><th>Functional address</th><th>Meaning</th><th colspan="2">Instructions</th></tr>
<tr><td colspan="5">The following is a read-only register (function code 0x03)</td></tr>
<tr><td colspan="5">Status flag bit parameter, the following is read only</td></tr>
<tr><td rowspan="9">40001</td><td rowspan="9">0000</td><td rowspan="9">Operating status</td><td>position</td><td>Instructions</td></tr>
<tr><td>0</td><td>run:1 stop:0</td></tr>
<tr><td>1</td><td>Before filling:1</td></tr>
<tr><td>2</td><td>Coarse Flow:1</td></tr>
<tr><td>3</td><td>Medium Flow:1</td></tr>
<tr><td>4</td><td>Fine Flow:1</td></tr>
<tr><td>5</td><td>Result Checking:1</td></tr>
<tr><td>6</td><td>Alarm:1</td></tr>
<tr><td>7</td><td>Over:1</td></tr>
<tr><td>8</td><td>Under:1</td></tr>
</table>

			9	Bag Lock:**1** Bag Unlock:**0**
			10	Batch Complete:**1**
			11	Bag Patting:**1**
			12	FILL Supplement:**1**
			13	STAB:**1**
			14	ZERO:**1**
			15	Minus sign:**1**, Positive sign:**0** (+/-Currently showing the weight of the symbol)
40002	**0001**	Contorl state	**0**	Pause
			1	Stop
			2	Upper limite
			3	Lower limite
			4	Have an accidental power loss sign
			5	**1**: Have tare memory
			6	Weight overflow
			7	Negative weight overflow
			8	Load cell is overflowing
			9	Load cell negative over-flow
			10	**0**: Millivolts unstable; **1**: Millivolts stable
			11	Lock machine state
40003	**0002**	General Alarm Infor-mation	**0 The** target value is incorrectly set	
			.1 Weight overflow and cannot start	
			.2 Out of range when zeroing	
			.3 Unstable when zeroing	
			.4 Weight overflow, unable to clear (valid via modbus or switch quantity input)	

			.5 Do not allow zero clearing during operation (valid through modbus or switch quantity input)
			.6 Overshoot and undershoot alarm
			.7 Over and under error pause alarm (always respond, must be manually cleared)
			.8 batch completed (always respond, must manually remove)
			.9 Feeding timeout (after feeding, it will be automatically cleared, or manually cleared)
			.10 decrement timeout (always respond, must be manually cleared)
			.11 There is a power failure to save data, not allowed to clear
40004-40005.	**0003-0004.**	Tare value	**4** bytes, signed number (to show weight). Note: When sensor overflow, weight value fixed returns **0xFFFFFFFF**. (Display the lower 9 digits**)**
40006-40007.	**0005-0006.**	NT value	
40008-40009.	**0007-0008.**	GS value	
40010-40011.	**0009-0010.**	ACUM Times	**4** bytes, an unsigned number, representing the cumulative number of wraps.
40012-40013.	**0011-0012.**	Total ACUM Weight is **6**digits high	**4** bytes, an unsigned number, representing the cumulative packing weight.
40014-40015.	**0013-0014.**	Total ACUM Weight is **9**digits lower	**4** bytes, an unsigned number, represents the cumulative packing weight.
40016-40017.	**0015-0016.**	This decrement value	**4** bytes, unsigned number
40018	**0017**	Batch Remain	Unsigned number
40019	**0018**	Number of batches completed	Unsigned number

40020	**0019**	Calibration alarm	**.0** Max scale set too small (write **1** less than minimum indexing **2** via modbus)
			.1 Max range set too small (write **200000** via modbus greater than Max range with minimum partition of **1**)
			.2 Excessive voltage during zero calibration (voltage value greater than **15.625**)
			.3 Too small voltage during zero calibration (less than **0.002mv** zero calibration)
			.4 Instability during zero calibration
			.5 Weight calibration voltage is too large (some weight gain voltage value is greater than **15.625**)
			.6 The voltage is too low when the weight is calibrated (the gain millivolt is negative to mark the gain)
			.7 Unstable weight calibration (weight unstable marking gain)
			.8 Unreasonable input weight (input gain weight exceeds maximum range via modbus)
			.9 Inadequate resolution (not enough accuracy) (relative **voltage 0.2mv input** weight 100000 mark gain)
40021-40094.	**0020-0093.**	Reserved	
40095-40096.	**0094-0095.**	Version	**4** bytes, unsigned number, or 01.01.00 if converted to a **decimal value of 10100**
40097-40098.	**0096-0097.**	Compile Date	**The value is an** unsigned number of 4 bytes. If the decimal

			value is 210125**, the value is** January **25,** 2021
40099-40100.	**0098-0099.**	Compile Time	**4** bytes, an unsigned number, or 09:03:02 if converted to **decimal value 090302**
The following is readable and writable			
(Write a single register function code 0x06, write multiple registers function code 0x10, read function code 0x03)			
Working parameter item			
40101	**0100**	Power-ON Zero	Initial value: Off, range: 0-1 (**0**: Off; **1**: On)
40102	**0101**	TrZero Range	Initial value: **1**, range: **0-9** (unit: d)
40103	**0102**	TrZero Time	Initial value: **2.0**, **range**: 0.1 to **99.9**
40104	**0103**	STAB Range	Initial value: **2**, unit: d Stability range (**0** to **99d** optional). Steady state is always valid after setting to **0**.
40105	**0104**	STAB Time	Initial value: **0.3,** range: **0.1 to 9.9**
40106	**0105**	Zero Range	Initial value: **50,** range: 1-99 Unit: %
40107	**0106**	Digital Filter	Initial value: **7,** range: 0-9
40108	**0107**	Filling Filter	Initial value: **4,** range: 1-9
40109	**0108**	Sample Rate	Initial value: **2**, **0:120 times/s**; **1:240** beats/**s;** 2:480bpm/s, **3:960bpm**/**s**.
40110-40120.	**0109-0119.**	Reserved	
Calibration parameter item			
40121	**0120**	unit	Initial value: **1**,0 -- g 1 -- kg 2 -- **t** 3: **lb(**lb)
40122	**0121**	Decimal point	Initial value :**2**, **0-0 bits**; **1-1 bits**; 2-2 **bits**; **2-3 bits**; 4-4 **bits**
40123	**0122**	Load cell sensitivity	Fixed: **3mV**/V

40124	**0123**	Division		Initial value: **1,** (**1/2/5/10/20/50**)
40125-40126.	**0124-0125.**	Full Scale		Initial value: **10000**, write range (maximum range <= minimum indexing value ***100000**, and not greater than **999999**)
40127-40128.	**0126-0127.**	Weight calibration	Calibration Zero	Write the current weight as zero when **1**, allow to write when the scale is stable;
40129-40130.	**0128-0129.**		Calibration Weight	Input standard weight weight (<= maximum range);
40131-40132.	**0130-0131.**	Weighless Gain Calibration	Cal ZERO By Valtage	Enter zero millivolts;
				Write range: 0.002-15.625mV**; 5V** for bridge
40133-40134.	**0132-0133.**		Historical Gain Voltage	Write range: **0.000** < **millivolt**<=**15.624mV;** After writing the instrument first temporary storage;
40135-40136.	**0134-0135.**		Key In Historical Test Weight	Enter gain weight value (<= maximum range); The gain millivolt number must be written before writing the value, and the two are used for gain calibration when writing the register; Read as the weight of the gain calibration
40137-40160.	**0136-0159.**	Reserved		
Restore factory parameter items				

40161	**0160**	Reset	Read :**0** Write: **8800**: Reset all parameters (including calibration scale parameters) **8801**: Reset all parameters (excluding calibration parameters) **8802**: Reset recipe parameters **8803**: Reset basic parameters **8804**: Reset advanced parameters **8805**: Reset scale parameters **8806**: Reset switch quantity definition **8807**: Reset communication parameters (including print parameters) Cannot write at run time
40162	**0161**	Backup	Read: **0**: **There are** currently no backup parameters **1**: Backup parameters are currently available
			Write: **8800**: Perform parameter backup (including recipe parameter, working parameter, switching quantity parameter, communication parameter) **8801**: Restore backup parameters **8802**: Delete backup parameters Cannot write at run time
40163-40164.	**0162-0163.**	Backup Date	**4** bytes, unsigned number, **February 8**, **2021** if converted to decimal value **210208** (Read only, no **backup** returns 0)

40165-40166.	**0164-0165.**	Backup Time	**4** bytes**, an** unsigned number. If the decimal value is **141112, the value is** 14:11:12
40167-40200.	**0166-0199.**	Reserved	
Product parameter item			
Recipe parameter item			
40201	**0200**	Repice ID	Range: 1-20
40202-40203.	**0201-0202.**	Target	Weight value write range:<= maximum range
40204-40205.	**0203-0204.**	Co-Fill Remains	
40206-40207.	**0205-0206.**	Me-Fill Remains	
40208-40209.	**0207-0208.**	FreeFall	
40210-40211.	**0209-0210.**	Over Value	
40212-40213.	**0211-0212.**	Under Value	
40214	**0213**	Filling PreDelay Timer t**1**	Initial value: **0.5** seconds**,** range: 0.0 **to** 99.9 seconds
40215	**0214**	COMP. Inhibit Timer(Co-F) t**2**	Initial value: **0.5** s**,** range: 0.0 ~ 99.9 s
40216	**0215**	COMP. Inhibit Timer(Me-F)t**3**	Initial value: **0.5** s**,** range: 0.0 ~ 99.9 s
40217	**0216**	COMP. Inhibit Timer(Fi-F) t**4**	Initial value: **0.5** seconds**,** range: 0.0 ~ 99.9 seconds
40218	**0217**	OVER/UNDER Check Timer t**5**	Initial value: **0.5** s**,** range: 0.0 ~ 99.9 s
40219	**0218**	Result Waiting Timer **t6** (delay setting)	Initial value: **0.5** seconds, range: 0.0 ~ **99.9** seconds
40220	**0219**	Bag Lock PreDelay t**7**	Initial value: **0.5** s**,** range: 0.0 **to** 99.9 s
40221	**0220**	Bag Unlock PreDelay t**8**	Initial value: **0.5** seconds**,** range: 0.0 ~ 99.9 seconds
40222	**0221**	Supply Overtime Monitor Timer	Initial value: **0** seconds, range: **0** to **999** seconds
40223	**0222**	Supply Overtime Pause	Initial value: **0,** range: 0-1 (**0**: off; **1**: On)
40224	**0223**	Feed Overtime Monitor Timer	Initial value: **0** seconds, range: **0** ~ **999** seconds

40225	**0224**	Feed Overtime Pause	Initial value: **0,** range: 0-1 (**0**: off; **1**: On)
40226	**0225**	OVER&UNDER Check	Initial value: **0,** range: 0-1 (**0**: Off; **1**: On)
40227-40228.	**0226-0227.**	Over Limit Value	Weight value write range: ≤ maximum range
40229-40230.	**0228-0229.**	Under Limit Value	
40231	**0230**	OVER/UNDER Pause	Initial value: **0,** range: 0-1 (**0**: Off; **1**: On)
40232	**0231**	FreeFall Correction ON/OFF	Initial value: **0**, range: **0-1** (**0**: Off; **1**: On)
40233	**0232**	Reference Samples PSC	Initial value: **1**, range: **00** ~ **99**
40234	**0233**	Correction Effective Range	Range: **2.0, range**: 0.0 ~ 9.9**,** unit**:** %
40235	**0234**	Correction Percentage	Initial value: **1,**2 --100% **correction;** 1--50% **correction**; 0--25% correction;
40236	**0235**	Patting Mode	Initial value :**0**, **0**: no patting bag **1**: charging medium patting bag
40237	**0236**	Patting ON Timer	Initial value: **0.5** s**,** range: 0.0 ~ 99.9 s**,** Output valid time for each shot during the shot bag
40238	**0237**	Patting OFF Timer	Initial value: **0.5** s**,** range: 0.0 ~ 99.9 s**,** Invalid output time for each shot during the shot bag
40239	**0238**	Patting Times(Waiting)	Initial value: **4,** range: **00** ~ **9 9**
40240	**0239**	Patting Start Delay Timer	Initial value: **0.5** seconds**,** range: 0.0 **to** 99.9 seconds
40241	**0240**	After Supply Delay For Stable	Initial value: 3.0 seconds, range: 0.0 to 25.0 seconds
40241-40300.	**0240-0299.**	Reserved	
Advanced parameter entry			

40301	**0300**	Batch	Initial value: **0,** range: **0~50000** (unsigned number)
40302	**0301**	Filling Ctrl Mode	Initial value: **0**,0**:** combination charging, 1**:** individual charging
40303	**0302**	Add to Total When Manual Discharge	Initial value: **0**,0**:** Off, 1**:** on. Stop state, input manual fast add, add, slow add execution response feeding
40304	**0303**	Power Loss Resume	Initial values: **1**,0**:** Off, 1**:** On
40305	**0304**	Bag Lock/Unlock Function	Initial value :**1**; Range: 0-1 (**0**: Off; **1**: On)
40306	**0305**	Auto Unlock Bag	Initial value :**1**; Range: 0-1 (**0**: Off; **1**: On)
40307	**0306**	User ID	**0-9**(Read only, foreground touch screen write)
40308-40500.	**0307-0499.**	Reserved	
Recipe Target Value Parameter entry (Read only)			
40501-40502.	**0500-0501.**	Recipe **1** target	Initial value: 0.0
40503-40504.	**0502-0503.**	Recipe **2** target	
40505-40506.	**0504-0505.**	Recipe **3** target	
40507-40508.	**0506-0507.**	Recipe **4** target	
40509-40510.	**0508-0509.**	Recipe **5** target	
40511-40512.	**0510-0511.**	Recipe **6** target	
40513-40514.	**0512-0513.**	Recipe **7** target	
40515-40516.	**0514-0515.**	Recipe **8** target	
40517-40518.	**0516-0517.**	Recipe **9** target	
40519-40520.	**0518-0519.**	Recipe **10** target	
40521-40522.	**0520-0521.**	Recipe **11** target	
40523-40524.	**0522-0523.**	Recipe **12** target	
40525-40526.	**0524-0525.**	Recipe **13** target	
40527-40528.	**0526-0527.**	Recipe **14** target	
40529-40530.	**0528-0529.**	Recipe **15** target	
40531-40532.	**0530-0531.**	Recipe **16** target	
40533-40534.	**0532-0533.**	Recipe **17** target	
40535-40536.	**0534-0535.**	Recipe **18** target	

40537-40538.	**0536-0537.**	Recipe **19** target	
40539-40540.	**0538-0539.**	Recipe **20** target	
40541-40600.	**0540-0599.**	Reserved	
Recipe history cumulative parameter entry			
40601-40602.	**0600-0601.**	Formula **1cumulative** count; Read only	
40603-40604.	**0602-0603.**	Formula **1cumulative** weight is **6digits** high; Read only	
40605-40606.	**0604-0605.**	Formulation **1cumulative** weight low **9**; Read only	
40607-40608.	**0606-0607.**	Formula **2cumulative** count; Read only	
40609-40610.	**0608-0609.**	Formula **2cumulative** weight is **6digits** high; Read only	
40611-40612.	**0610-0611.**	Formulation **2cumulative** weight low **9**; Read only	
40613-40614.	**0612-0613.**	Formula **3cumulative** count; Read only	
40615-40616.	**0614-0615.**	Formula **3cumulative** weight is **6digits** high; Read only	
40617-40618.	**0616-0617.**	Formulation **3cumulative** weight low **9**; Read only	
..... .	**..... .**	**..... .**	
40715-40716.	**0714-0715.**	Formula **20cumulative** count; Read only	
40717-40718.	**0716-0717.**	Formula **20cumulative** weight is **6digits** high; Read only	
40719-40720.	**0718-0719.**	Formulation **20cumulative** weight low **9**; Read only	
User history Cumulative Parameter Items (10 items each)			
40721-40722.	**0720-0721.**	User **0cumulative** times; Read only	
40723-40724.	**0722-0723.**	User **0cumulative** weight is **6digits** high; Read only	
40725-40726.	**0724-0725.**	User **0cumulative** weight is **9digits** lower; Read only	
40727-40728.	**0726-0727.**	User **1cumulative** times; Read only	
40729-40730.	**0728-0729.**	User **1cumulative** weight is **6digits** high; Read only	
40731-40732.	**0730-0731.**	User **1cumulative** weight is **9digits** lower; Read only	
.....	**.....**	**.....**	
40775-40776.	**0774-0775.**	User **9cumulative** times; Read only	
40777-40778.	**0776-0777.**	User **9cumulative** weight is **6digits** high; Read only	
40779-40780.	**0778-0779.**	User **9cumulative** weight is 9digits lower; User **9cumulative weight is 9digits** lower; Read only	
40781	**0780**	Clear Total ACUM	Read as **0** Write **0** Clear all accumulated data Write **1** Clear total acum only

40782	**0781**	Clear Recipe ACUM	Read as **0** Write **1-20** Clear corresponding cumulative data Write **100** Clear current recipe cumulative Write **101** Clear all recipe cumulative
40783	**0782**	Clear Present User ACUM	Read as **0** write **0-9** Clear the accumulated write of the corresponding user **100** Clear the accumulated data of the current user write **101** Clear the accumulated data of all users
40784 ~ 40823	**0783 ~ 0822**	Reserved	
40824	**0823**	Running	Read: **1**: Run; **0**: stop. Write: **1**: Start
4082	**0824**	Stopped	Read: **1**: Stop; **0**: Run. Write: **1**: Stop
40826	**0825**	Pause	Read: **1**: Pause; **0**: non-pause. Write: **1**: Pause
40827	**0826**	To Stop	Read: **1**: Slow stop; **0**: non-slow stop. Write: **1**: Slow stop
40828	**0827**	ZERO	Read: **1**: non-zero points; **0:0** point. Write: **1**: Clear zero
40829	**0828**	Clear Alarm	Read: **1**: There is an alarm; **0**: no alarm. Write: **1**: Clear alarm
40830	**0829**	Change Recipe	Read: **0**. Write: **1**: Switch recipes
40831	**0830**	Bag Lock/Unlock	Read: **1**: Clip bag; **0**: loose bag. Write: **1**: Clip loose bag
40832	**0831**	Manual Co-Fill	Read/Write: **1**: Quick Plus works. **0**: Fast add is invalid

40833	**0832**	Manual Me-Fill	Read/Write: **1**: Add valid. **0**: Add invalid
40834	**0833**	Manual Fi-Fill	Read/Write: **1**: Slow plus works. **0**: Slow addition is invalid
40835 ~ 40850	**0834 ~ 0849**	Reserved	
Switch Quantity Custom parameter entry			
40851	**0850**	IO test ON/OFF	Enter **ON/off test when writing on**; Writing **OFF** exits. Not writable at run time
40852	**0851**	Output test	Note: The output test can be written only when the output test switch is on: the output test switch can be written when the output test switch is on. From low to high, the corresponding ports **OUT1~OUT12** output respectively. **1** means the output is valid, **0** means the output is invalid. Read: Returns the status of the current output switch quantity port.
40853	**0852**	Input test	Write: Write is not allowed. Read: Input from low to high corresponding ports **IN1 to IN8, 1** for valid input**, 0** for invalid input. (Enable switch quantity test status)
40854	**0853**	Input **1** definition	**I0**: None **I1**: Start **I2**: E-Stop **I3:** Pause **I4:** To Stop **I5**: ZERO **I6**: Clear Alarm **I7**: Change Recipe
40855	**0854**	Input **2** definition	
40856	**0855**	Input **3**definition	
40857	**0856**	Input **4** definition	
40858	**0857**	Input **5** definition	
40859	**0858**	Input **6** definition	
40860	**0859**	Input **7**definition	

40861	**0860**	Input **8**definition	**I8:** Bag Lock/Unlock **I9:** Manual Co-Fill **I10:** Manual Me-Fill **I11:** Manual Fi-Fill **I12:** Print Total ACUM **I13:** Clear Total ACUM (including all recipe accumulations) **I14**: Clear Present Recipe ACUM **I15**: Start/E-Stop(LS) **I16:** Start/Pause(LS) **I17**: Start/Stop(LS) **I18**: Manual Fi-Fill(LS) **I19**: Manual Me-Fill(LS) **I20**: Manual Co-Fill(LS) **I21**: Manual Full
40862	**0861**	Input **9**definition	
40863	**0862**	Input **10**definition	
40864	**0863**	Input **11**definition	
40865	**0864**	Input **12** definition	
40866	**0865**	Output **1** definition	**O0:** None **O1**: Running **O2**: Stopped **O3**: Co-Fill **O4**: Me-Fill **O5**: Fi-Fill **O6**: Result Waiting **O7**: Over/Under **O8**: Alarm **O9**: Bag Lock **O10**: Bag Patting **O11**: FILL Supplement **O12:** Batch Complete **O13**: Supply Full **O14**: Suply NotEmpty **O15**: Pause **O16**: To Stop
40867	**0866**	Output **2** definition	
40868	**0867**	Output **3** definition	
40869	**0868**	Output **4** definition	
40870	**0869**	Output **5** definition	
40871	Output	Output **6** definition	
40872	**0871**	Output **7** definition	
40873	**0872**	Output **8** definition	
40874	**0873**	Output **9** definition	
40875	**0874**	Output **10** definition	
40876	**0875**	Output **11** definition	
40877	**0876**	Output **12** definition	
40878	**0877**	Output **13** definition	
40879	**0878**	Output **14** definition	
40880	**0879**	Output **15** definition	
40881	**0880**	Output **16** definition	
408882 ~ 40900	**0881 ~ 0899**	Reserved	
Communication parameter items			

40901	**0900**	**COM 2/RS485**	ID	Scale number, current meter number. Initial value: **1**; **1 to 99** optional
40902	**0901**		Protocol	Initial value: Modbus-RTU Modbus-RTU/Print/continuous mode/command mode
40903	**0902**		Baudrate	Range: 0-4 (**0**: **9600**; **1**: **19200**; **2**: **38400**; **3**: **57600**; 4:1**15,200)**
				Default: **2 (38400)**
40904	**0903**		Data Format	Initial value: **8-E-1(8-bit** data bit - parity - **1-bit** stop bit); **8-N-1/8-E-1/7-N-1/7-E-1** Optional.
40905	**0904**		Dword Format	Modbus double-word registers store sequential selections. Default: **0** (high word before low word after) Range: **0-1** (**0**: high word before low word after; **1**: Low word before high word after)
40906	**0905**	**COM 1/RS232**	ID	Scale number, current meter number. Initial value: **1**; **1 to 99** optional
40907	**0906**		Protocol	Initial value: Modbus-RTU Modbus-RTU/Print/continuous mode/command mode
40908	**0907**		Baudrate	Range: 0-4 (**0**: **9600**; **1**: **19200**; **2**: **38400**; **3**: **57600**; 4:1**15,200)**
				Default: **2 (38400)**
40909	**0908**		Data Format	Initial value: **8-E-1(8-bit** data bit - parity - **1-bit** stop bit); **8-N-1/8-E-1/7-N-1/7-E-1** Optional.
40910	**0909**		Dword Format	Modbus double-word registers store sequential selections. Default: **0** (high word before low word after)

				Range: **0-1** (**0**: high word before low word after; **1**: Low word before high word after)
40911 ~ 40915	**0910 ~ 0914**	Reserved		
40916	**0915**	Ethernet address	Dword Format	Initial value: **0:** high word before low word after; Range: **0-1.** **0:** High word before low word after; **1:** low character in front of high character after.
40917	**0916**		Socket	Initial value: **502;** Range: **1 to 65535**
40918	**0917**		IP1	Initial value: **192.168.101.246.** **The** value ranges **from 0 to 255**
40919	**0918**		IP2	
40920	**0919**		IP3	
40921	**0920**		IP4	
40922 ~ 40923	**0921 ~ 0922**	Reserved		
40924	**0923**	MAC	MAC address 1	Read Only
40925	**0924**		MAC address 2	
40926	**0925**		MAC address 3	
40927	**0926**		MAC address 4	
40928 ~ 40940	**0927 ~ 0939**	Reserved		
40941	**0940**	Print	Auto Print	Initial value: **0**,0**: Off**, 1**: On**
40942	**0941**		Printer Format	Initial value: **1**, **0:24** columns, **1:32** columns
40943	**0942**		Printing Language	Initial value: **0,**0**: Chinese**; 1: **English**
40944	**0943**		Printing Empty Line Nos	Initial value: **3,** range: **0~9**

Statistical parameter items				
40945	**0944**	Print content	Print Total ACUM	Read: **0** Write: **1** Print the total cumulative data
40946	**0945**		Print Recipe ACUM	Read: **0** Write :**1 to 20** Print recipe accumulations corresponding to recipe number **1 to 20.** **100** Print the current recipe cumulative. **101** Print all recipe accumulations (do not print recipes with cumulative data **of 0).**
40947	**0946**		Print User ACUM	Read: **0** Write: **0**~**9** Print the cumulative report corresponding to user numbers **0**~**9**. **100** Prints the cumulative report for the current user. **101** Print all User cumulative reports (do not print users whose cumulative data is **0**).
40948 ~ 41200	**0947 ~ 1199**	Reserved		
(Coil) The following is bit read only content (function code: 0x01) **Read: 0001H = ON; 0000H = OFF**				
1	**0**	**OFF**: to stop; **ON**: to run		
2	**1**	**OFF**: unsteady; **ON**: stable		
3	**2**	**OFF**: normal; **ON**: overflow		
4	**3**	**OFF**: plus sign; **ON**: negative sign (the symbol that currently shows weight)		
5 to 16	**4 ~ 15**	Reserved		
The following is bit readable and writable (read function code: 0x01, write function code: 0x05) (coil) **Write: FF00H = ON; 0000H = OFF**				
17	**16**	Power-ON Zero		

18	**17**	OVER&UNDER Check	Read: For the respective switch status **0001H** = **ON (valid)** **0000H** = **OFF (invalid)**
19	**18**	OVER/UNDER Pause	
20	**19**	Auto Unlock Bag	
21	**20**	Auto Print	
22	**21**	Bag Lock/Unlock Function	
23	**22**	Add to Total When Manual Discharge	
24	**23**	Power Loss Resume	
25 to 30	**24 to 29**	Reserved	
31	**30**	Clear Total ACUM (including user and recipe)	Read: **0000H** Run time can write but does not take effect, need to stop running write effective
32	**31**	Clear Present Recipe ACUM	
33	**32**	Clear All Recipe ACUM	
34	**33**	Clear Present User ACUM	
35	**34**	Clear All user ACUM	
36 ~ 40	**35 to 39**	Reserved	
41	**40**	Running	Read: **0001H** = **ON** (valid) **0000H** = **OFF** (invalid)
42	**41**	E-Stop	
43	**42**	Pause	
44	**43**	To Stop	
45	**44**	ZERO	
46	**45**	Clear Alarm	
47	**46**	Change Recipe	
48	**47**	Bag Lock/Unlock	
49	**48**	Manual Co-Fill (Write does not take effect at run time)	
50	**49**	Manual Me-Fill	

		(Write at run time does not take effect)	
51	**50**	Manual Fi-Fill (Write at run time does not take effect)	
52-101	**51-100**	Reserved	
102	**101**	IO test ON/OFF: Enter the switch quantity test when writing **ON (FF00H); Write OFF(0000H)** and exit. Cannot be written at run time	
103	**102**	Input **1**	Does not take effect when written. Read: **0001H**= valid; **0000H**= invalid
104	**103**	Input **2**	
105	**104**	Input **3**	
106	**105**	Input **4**	
107	**106**	Input **5**	
108	**107**	Input **6**	
109	**108**	Input **7**	
110	**109**	Input **8**	
111	**110**	Input **9**	
112	**111**	Input **10**	
113	**112**	Input **11**	
114	**113**	Input **12**	
115	**114**	Output **1**	Write: **FF00H** = **ON** (valid) **0000H** = **OFF** (invalid) Read: **0001H** = **ON** (valid) **0000H** = **OFF** (invalid)
116	**115**	Output **2**	
117	**116**	Output **3**	
118	**117**	Output **4**	
119	**118**	Output **5**	
120	**119**	Output **6**	
121	**120**	Output **7**	
122	**121**	Output **8**	
123	**122**	Output **9**	
124	**123**	Output **10**	
125	**124**	Output **11**	
126	**125**	Output **12**	
127	**126**	Output **13**	

128	**127**	Output **14**	
129	**128**	Output **15**	
130	**129**	Output **16**	

4.4.5 Network Port Communication

GM9907 configure a network communication interface, with **RJ - 45** crystal head connection, communication with PC or **PLC**. The **Modbus - TCP** communication protocols, so the **IP** address and port number should be written in the parameters of front-end ports **[Communication]**. After the network cable is inserted, if the green indicator on the network port slot is steady on, the network cable is connected properly. If the orange indicator is blinking, the network adapter is receiving network data. Refer to 4.4.4.3 **modbus** Address Assignment for Modbus-TCP addresses.

4.5 IO Function

GM9907 - L4 provide **12 16** input output **interface, for the connection of instrument and the external devices.**

Input, output, the factory definition content is as follows (**1-16** output corresponding instrument **OUT1** ~ **OUT16** interface, input **1-12** corresponding instrument **IN1** ~ **12** interface), the default are defined as follows:

Output		Input	
OUT-1	Running	**IN-1**	Start
OUT-2	Stopped	**IN-2**	E-Stop
OUT-3	Co-Fill	**IN-3**	Pause
OUT-4	Me-Fill	**IN-4**	ZERO
OUT-5	Fi-Fill	**IN-5**	Clear Alarm
OUT-6	Result Waiting	**IN-6**	Change Recipe
OUT-7	Over/Under	**IN-7**	Bag Lock/Unlock
OUT-8	Alarm	**IN-8**	Manual Co-Fill
OUT-9	Bag Lock	**IN-9**	None
OUT-10	Bag Patting	**IN-10**	None
OUT-11	FILL Supplement	**IN-11**	None
OUT-12	Batch Complete	**IN-12**	None
OUT-13	None	**The input and outlet contents can be defined according to the actual application**	
OUT-14	None		
OUT-15	None		
OUT-16	None		

4.5.1 Output and input port definitions

The contents of output and input ports can be defined according to the actual application. Modify the definition of the input/output switch quantity through the switch quantity parameter in the menu interface. Each switch quantity corresponds to a code, as follows:

IO Description

Output quantity		
Code	**Content**	**Description**
O0	None	Indicates that this output port is undefined.
O1	Running	This signal is effective when the meter is in the running state.
O2	Stopped	This signal is effective when the meter is in the stopped state.
O3	Co-Fill	Large discharge port for metering bucket to put material into packaging bag. In the process of feeding, if the weight of the material released from the metering bucket < the target value - fast advance, this signal is effective.
O4	Me-Fill	Middle discharge port for metering bucket to put material into packaging bag. In the process of feeding, if the weight of the material released from the metering bucket is < the target value - add the advance amount, this signal is effective.
O5	Fi-Fill	Small discharge port for metering bucket to put material into packaging bag. In the process of feeding, if the weight of the material released from the metering bucket < the target value - the drop value, the signal is effective.
O6	Result Waiting	Used to indicate the end of the discharge process. This signal is effective until the end of the slow feeding process is loosened.
O7	Over/Under	The signal is effective when the quantitative result is out of line or under line.
O8	Alarm	This output is valid when an alarm prompt appears on the meter.
O9	Bag Lock	Used to control the bag mechanism, the signal effectively realizes the bag; The signal is invalid that loose bag.
O10	Bag Patting	Used to control the bag patting mechanism.
O11	FILL Supplement	Used to control the feeding mechanism at the front end of the packaging scale, when the weight of the measuring hopper material is lower than the lower limit, the output is effective after the completion of the quantification; When the weight of the measuring bucket material is higher than the upper limit, the instrument makes the output invalid.

O12	Batch Complete	This output is valid when the meter has completed the number of batches set.
O13	Supply Full	The signal is effective when the weight of the material in the measuring bucket (gross weight, that is, the real-time display weight of the instrument) is greater than or equal to the upper limit.
O14	Suply NotEmpty	This signal is effective when the weight of the material in the measuring bucket (gross weight, that is, the real-time display weight of the instrument) is less than or equal to the lower limit value.
O15	Pause	The signal output is effective when the instrument is in the paused state.
O16	To Stop	This signal output is effective when the meter is in the slow stop state
Input quantity		
I0	None	Indicates that this input port is undefined.
I1	Start	The signal effective meter will go into operation. This input is the pulse input signal.
I2	E-Stop	The signal effective meter will return to the stopped state. This input is the pulse input signal.
I3	Pause	In the running state, the signal is effective during the decrement process, and the instrument will enter the pause state. This input is the pulse input signal.
I4	To Stop	When the signal is effective during operation, the instrument will enter the state of slow stop, but the decrement process will not stop immediately. After the decrement process is finished, the instrument will enter the state of stop.
I5	ZERO	The signal effective meter will achieve gross weight clear zero. This input is a pulse input signal.
I6	Clear Alarm	Use to clear the alarm output of the meter. This input is the pulse input signal.
I7	Change Recipe	This input is valid once, the recipe number changes to the next recipe with a non-zero target value, skipping the recipe number with a zero target value. Return **1** again when the recipe number is greater than **20**.
I8	Bag	Used to control the action of the bag clamping mechanism, this input is valid once the bag output is valid, and again the bag output

	Lock/Un-lock	is invalid (i.e. : loose bag).
I9	Manual Co-Fill	Used to manually remove materials from the metering bucket. Combined feeding mode, the input is effective once the instrument fast, medium, slow add output is effective; If the input is effective again, the output of the instrument fast, medium and slow is invalid. When the feeding mode is separate, the input is effective once the instrument fast adding output is effective; If the input is effective again, the output of the instrument is invalid.
I10	Manual Me-Fill	When combined feeding mode, the input is effective once the meter add, slow add output is effective; If the input is effective again, the output of the instrument adding and slow adding is invalid. When the feeding mode is separate, the input is valid and the output is valid once the instrument is added. If the input is effective again, the output of the instrument is invalid.
I11	Manual Fi-Fill	This input is valid once the meter slowly adds output is valid; If it is valid again, the meter slow add output is invalid.
I12	Print Total ACUM	In the stopped state, this input valid meter can be printed.
I13	Clear Total ACUM	After this input is valid, the meter clears all cumulative data values, including recipe cumulative values, user cumulative values. Only respond to this signal in the stopped state.
I14	Clear Present Recipe ACUM	After this input is valid, the cumulative data value under the current recipe of the meter. Only respond to this signal in the stopped state.
I15	Start/E-Stop(LS)	Meter execution starts when signal is valid and stops when signal is invalid.
I16	Start/Pause(LS)	Meter execution starts when signal is valid, and pauses when signal is invalid.
I17	Start/Stop(LS)	The meter executes start when the signal is valid and slow stop when the signal is invalid.
I18	Manual Fi-Fill(LS)	The meter slow add output is valid when the signal is valid, and the meter slow add output is invalid when the signal is invalid. (Note: Only respond to this signal in the stopped state)
I19	Manual Me-Fill(LS)	When the signal is effective, the output of meter adding and slow adding is effective. When the signal is invalid, the output of meter

		adding and slow adding is invalid. (Note: Only respond to the signal in the stopped state)
I20	Manual Co-Fill(LS)	Instrument fast, medium and slow add output is valid when the signal is valid, instrument fast, medium and slow add output is invalid when the signal is invalid. (Note: Only respond to this signal in the stopped state)
I21	Manual Full	In the stopped state, the meter starts feeding when the feed level is below the upper limit and the manual feed input is valid.

4.5.2 IO test

The user can check whether the output and input interfaces of the instrument are properly connected to external devices through the **IO** test. Before the **IO** test, first turn on the **test switch**, and then carry out the output and input port test.

Output Test: In the switching quantity interface, the test switch is on. After clicking the corresponding output port button, the port color on the interface will light up, and the corresponding external connection output state should be valid. If it is invalid, it indicates that the connection is abnormal.

Input Test: Under the switching port interface, when the external input signal is effective, the color of the corresponding input defined port under the interface will be lit up as green. If the interface does not respond when the external input is effective, it indicates that the connection is abnormal. Check the power input and wiring of the switching quantity, etc.

4.6 Statistics

On the home screen, click the shortcut key **[Statistics]** to enter the statistics screen. Users can view recipe accumulations, user accumulations, history records, and clear and print the accumulations.

- Under **[Recipe ACUM]**, click on the right side to switch formula number **1-8**, 9-16, **17-20**, and view the cumulative times and cumulative weight of each recipe. If the serial communication mode is available, set it to "Print". Click [Print] to select Print total, print current recipe, print all recipe and select corresponding recipe to print.
- Under **[User ACUM]**, click on the right side to switch user numbers **1-4** and 5-9 to view the cumulative times and cumulative weight of each user. If the serial port communication mode is set to "Print", click "Print" to print the total cumulative, print the current user cumulative, print all users cumulative and select the corresponding user to print.
- Click any recipe in the **[Recipe ACUM]** interface to delete the recipe accumulation content. Click "Clear All Recipe Accumulations" in the lower right to delete all

recipe accumulations.

- Click any user in the **[User ACUM]** interface to delete the accumulated content of all clicked users. Click "Clear All User Accumulations" in the lower right to delete all user accumulations.
- In History, you can view the time, target value and actual weight of each scale. Click "Data Processing" to export history data or clear history data through the USB disk

4.7 Maintenance

Through [System maintenance], you can set communication parameters, restore factory parameters, data recovery and backup, software upgrade, set screen saver time and permission exit time.

In the maintenance interface

- Click Communication parameters, style Settings, Factory recovery and other parameters to switch, and view the corresponding sub-items under the information item.

System information item	Information sub-items	Instructions
Communication (Refer to Section 4.4 Communication Parameters for details)	COM	Set parameters **for serial port 1(RS232) and serial port 2 (RS485)**
	Ethernet	Set network port communication parameters
	Print	Set print-related parameters
Display Style	Screen Save Time	Screen save time can be set. Default: Never; Never /30 seconds /60 seconds /5 minutes /10 minutes /30 minutes optional.
	Permission Auto Logout	Set the exit permission time. 5 minutes, 10 minutes, 20 minutes, and 30 minutes are optional.
	Multiple User Login	Enable the multiple user login function to set the number of login users.
	Number Of Users	Multi-user login switch On You can set the number of login users.
	Auto Close Backlight	Turn on the backlight switch

	Delay Time Of Close	Turn on the backlight switch and set the backlight time length. Initial value: 30s range: **15 to 1800s**.
Reset	All	Press **[Reset]**to restore all meter parameter values to factory Settings.
	All(No Calibration)	Press **[Reset]** to restore all parameter values of instrument to factory setting values, do not restore calibration scale.
	Recipe	Press**[Reset]** to restore recipe parameter values to factory Settings.
	Calibration	Press**[Reset]** to restore calibration scale parameter values to factory Settings
	Communication	Press **[Reset]** to restore communication parameter values to factory Settings.
	Basic Para.	Press **[Reset]** to restore basic parameter values to factory Settings
	Advanced Para.	Press **[Reset]** to restore Advanced Para values to factory Settings
	I/O Function	Press **[Reset]** to restore the switch quantity parameter value to the factory setting value.
	Backup	Press the **[Backup]** ,meter to back up the current parameter Settings.
	Recovery From Backup	Press the Recovery meter to restore the parameter values to the most recent backup.
	Delete Backup	Press **[Delete],** meter to delete the backed up parameters.

5 Function description

5.1 **Number** of batches

The number of batches is used to remind the number of packaging times. When the number of batches set is completed in the process of automatic operation, the upper part of the weight display of the instrument will prompt the batch to finish the alarm and stop, waiting for the user to deal with it. The number of batches and the alarm output will be effective. If the number of batches is set to **0**, the number of batches will not be judged.

Users can click set batch on the main interface and set the number of batches in the pop-up box. The number of batches ranges from **0 to 50000**. When the initial default value is **0**, the number of batches is not determined.

5.2 Material level control

In the running state, when the weight of the material in the metering bucket is lower than the lower limit, the instrument feed output is effective, and when the material in the metering bucket is higher than the upper limit, the feed output is invalid.

Metering bucket in the process of reduction (start feeding to loose bag after the end), even if the weight of the material in the bucket (gross weight) is lower than the lower limit, also do not output effective signal, and must wait for the completion of the reduction can output effective signal for feeding.

Automatic feeding is prohibited under the stop state, unless manual feeding.

5.3 U disk upgrade software

5.3.1 Steps for the foreground upgrade

The steps are as follows:

1.	Plug the USB stick containing the upgrade kit "tpcbackup" into the meter;
2.	Pop up "You are using mcgsTpc USB flash drive comprehensive function Pack, click 'Yes' to enter the system setting interface and start the comprehensive function pack, click' No 'to exit", click' yes' to pop up "User engineering Update button"
3.	Click "user project update" button, select GM9907 **- L4** project began to download
4.	Automatically restart after successful download

5.3.2 Background Upgrade Procedure

The steps are as follows:

1.	Insert **U** disk to a computer, in **the U** dish "GM9907 **- L4**" new folder;

2.	Will "**GM9907 - L - Upload. Gm**" file into "**GM9907 - L4**" folder;
3.	Insert the USB flash **drive** into the instrument, switch to the system administrator rights, go to the Maintenance - Software Upgrade interface, long press the blank on the lower right corner for **5s**, the "Click Upgrade" button pops up, jump to the upgrade interface, click upgrade, "in the process of upgrading" appears, indicating that the instrument is being upgraded in the background;
4.	Wait for the progress bar to finish, countdown 10 seconds after the upgrade successfully jump to the startup login interface

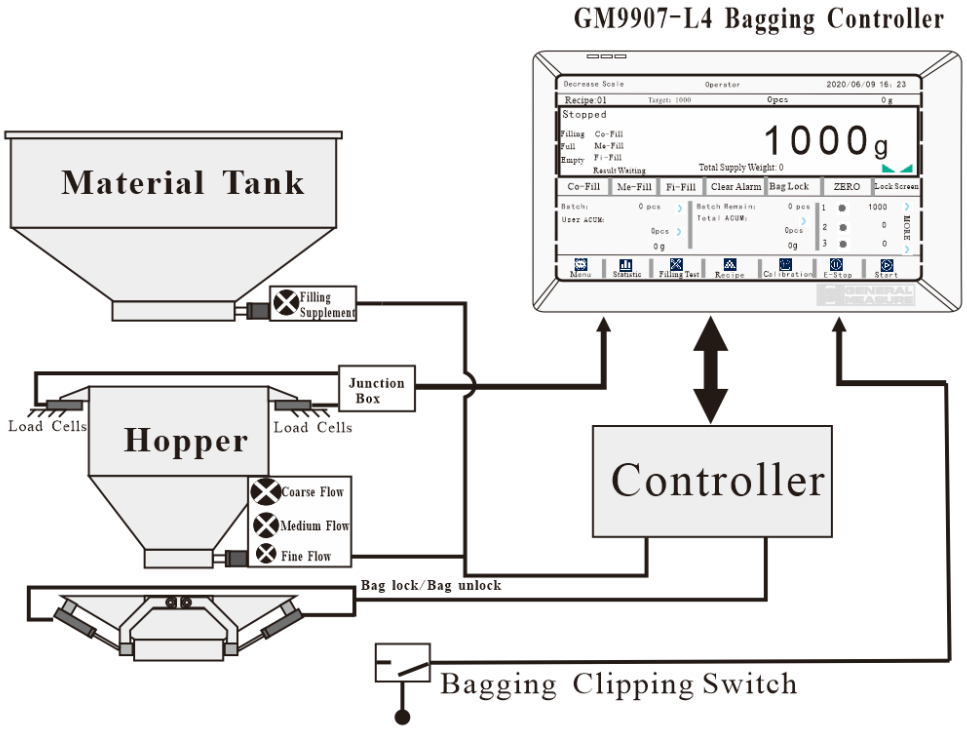
5.4 U disk upgrade boot interface

The steps are as follows:

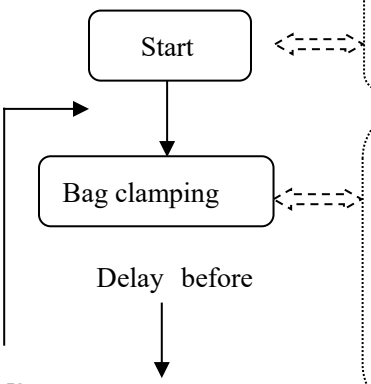
1.	The (resolution 800*480, format.bmp) picture file and boot interface project package (tpcbackup) into the USB flash drive root directory;
2.	Insert the USB stick into the meter;
3.	Meter pops up [Device vendor USB Flash Drive Kit] display box, select "Update startup bitmap"
4.	Go to the Logo selection screen, select the picture you want to upgrade and click OK, prompting you to restart after successfully updating the bitmap.

6.Automatic packaging process

GM9907 - L4 packaging controller in automatic batching state, reducing materials from the preparation to the measurement through feeding mechanism fights in feed, when weighing hopper in the material weight is greater than or equal to the threshold value set, stop feeding. And instrument in the weighing hopper of the three feeding door to the bags below feeding (fast, slow), instrument testing material to reduce the weight of the value in the weighing hopper, after completion of measurement, instrument control clip loose bag bag institutions, to complete a quantitative process. Its structure is as shown in the figure below:

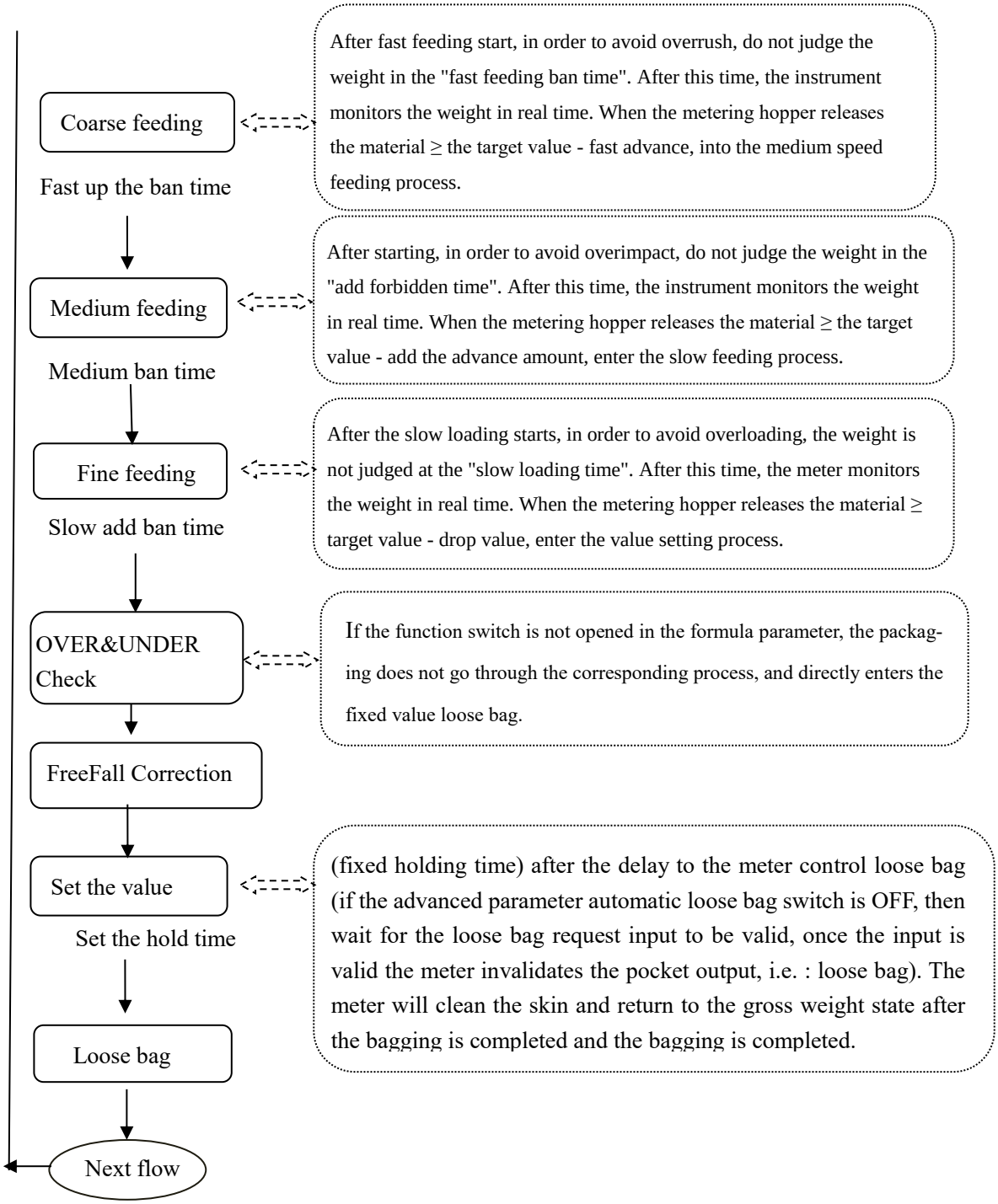


Basic process description:

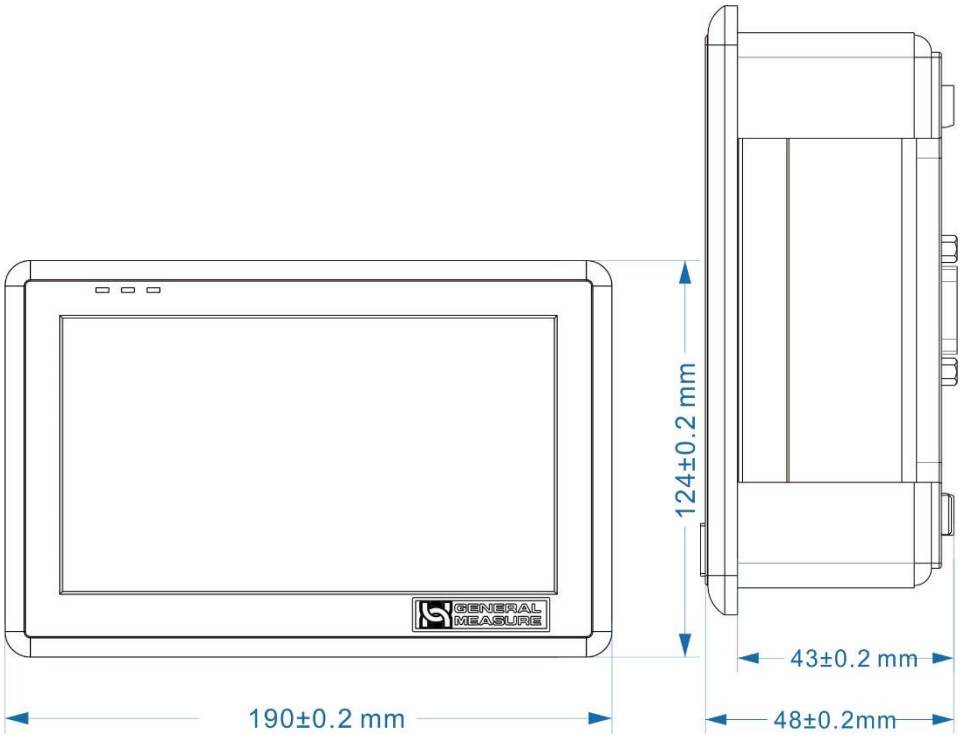


Start signal input is effective, judge the feed signal, if the feed signal is effective, wait for feed is invalid, wait for bag input is effective.

If the switch of the bag clamping mechanism is open in the advanced parameters, the delay before feeding is started only after the external input of the bag signal. After the delay is over, the skin is judged to be stable and the feeding is started. If the switch of the bag clamping mechanism is off, the charging can be started without judging whether the bag is clamping.


Coarse feeding
After fast feeding start, in order to avoid overrush, do not judge the weight in the "fast feeding ban time". After this time, the instrument monitors the weight in real time. When the metering hopper releases the material ≥ the target value - fast advance, into the medium speed feeding process.
Fast up the ban time
Medium feeding
After starting, in order to avoid overimpact, do not judge the weight in the "add forbidden time". After this time, the instrument monitors the weight in real time. When the metering hopper releases the material ≥ the target value - add the advance amount, enter the slow feeding process.
Medium ban time
Fine feeding
After the slow loading starts, in order to avoid overloading, the weight is not judged at the "slow loading time". After this time, the meter monitors the weight in real time. When the metering hopper releases the material ≥ target value - drop value, enter the value setting process.
Slow add ban time
OVER&UNDER Check
If the function switch is not opened in the formula parameter, the packaging does not go through the corresponding process, and directly enters the fixed value loose bag.
FreeFall Correction
Set the value
(fixed holding time) after the delay to the meter control loose bag (if the advanced parameter automatic loose bag switch is OFF, then wait for the loose bag request input to be valid, once the input is valid the meter invalidates the pocket output, i.e. : loose bag). The meter will clean the skin and return to the gross weight state after the bagging is completed and the bagging is completed.
Set the hold time
Loose bag
Next flow

7 Dimensions



Hole size