

## GM9907-L2

# User's manual

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Company website <a href="http://www.szgmt.com">http://www.szgmt.com</a> <a href="http://www.szgmt.com">www.gmweighing.com</a>

Implementation standards of this product: GB/T 7724-2008





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### 1. Outline

**GM9907-L2** bagging controller is a new weighing control controller specially developed for the single scale incremental method automatic quantitative packing scale. The controller English displays interface for easy operation; completely new algorithm coarseer and more accurate control so that the load; the USB port and dual port serial device to make it easier to system interconnect. It can be widely used in fill, chemical, grain and other industries that require quantitative packaging equipment.

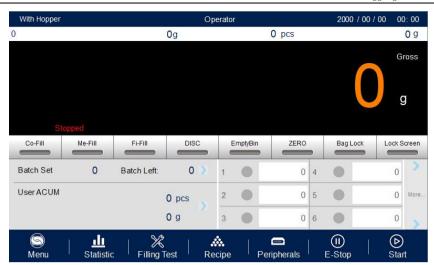
#### 1.1 Functions and Features

- > Full English display interface, make the operation more intuitive and easy
- There are five modes of bagging application, Net Weigher, Gross Weigher, Jumbo Bag, servo motor, PLC.
- ➤ 28-digital input and output control (12 in / 16 out), input and output port positions can be customized.
- > I/O Module test function, convenient for debugging of packing scale
- Fully automatic double material speed, three material speed filling control, with jog filling function
- > Twenty formulas can be stored to facilitate bagging of different range materials
- ➤ USB interface facilitates import and export of various paracontrollers
- Fill control function, convenient control connection between bagging scale and front filling equipment
- Fill speed adaptive function
- ➤ IO User Logic programming
- > Auto free fall correction function
- Multiple digital filtering
- ➤ Batch setting function
- ➤ Bag patting function, suitable for bagging of powder materials
- > Automatic zero tracking
- > Time / date function
- > Three-level user identity setting
- Dual serial port, external serial printer, computer or second display
- With single port communication function, it is convenient to communicate with the host computer

## 1.2 Front panel description

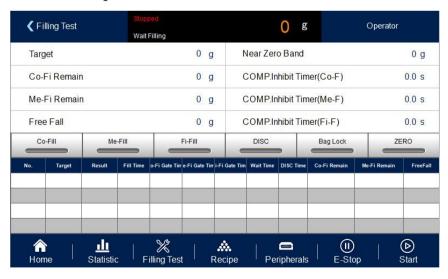
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- ①User Info: Display the current login user ID, Recipe ID, System time, ACUM And Batch
- ②Weight status: Including weight value display, weight unit display, 8bit zone display and output I/O Module short cut key.
- ③Packaging information area: display current ACUM information, short cut setting batch and target value.

## Interface 1 description:



- ①Short cut set receipt pare: can quickly set receipt paracontroller.
- **②Packing history recording:** can easily review current history data, easy to compare.

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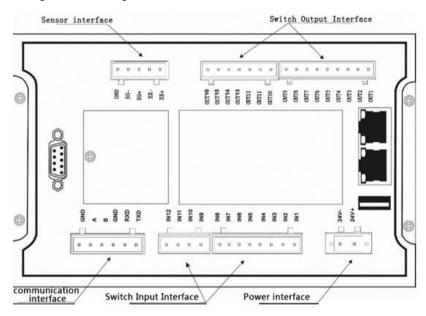
## Indicator light description:

Left 1: power light;

Left 2: Serial port 1-RS232 communication indicator light, the indicator light flashes during communication

Left 3: Serial port 2-RS485 communication indicator light, the indicator light flashes during communication

## 1.3 Rear panel description



## 1.4Technical Specifications

#### 1.4.1General Specifications

Power supply: DC24V Power filter: included

Operating temperature: -10 ~ 40 °C

Maximum humidity: 90% RH non-condensing

Power consumption: about 15 W

Dimensions: 190 mm × 124 mm × 48 mm

#### 1.4.2 Analog part

Load cell power supply: DC 5 V 125 mA (MAX)

Input impedance:  $10M\Omega$ 

Zero adjustment range: 0. 00 2 ~ 15 mV (when loal cell 3mV / V)

Input sensitivity: 0.02uV / d Input range: 0.02 ~ 15mV



Conversion: S igma- D elta

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

Non-linear: 0.01% FS Gain drift: 10PPM / °C

The maximum display accuracy: 1 / 100,000

## 1.4.3digital part

Display: 7 inch resistive touch screen

Negative Number Display: "-"

Overload Indication: "Over Full Scale / Load cell Input Under."

Decimal point position: 5 optional



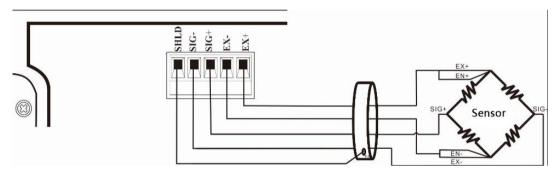
## 2. Installation

## 2.1General principles

- 1) Make appropriate installation holes on the control box, (size: 179 (±1) mm ×113 (±1) mm)
- 2) Install GM9907-L2 into a control box.
- 3) Remove the fixing plates on both sides of GM9907-L2, fix it with the fixing plates and lock them with M3\*10 screws.

## 2.2Load Cell connection

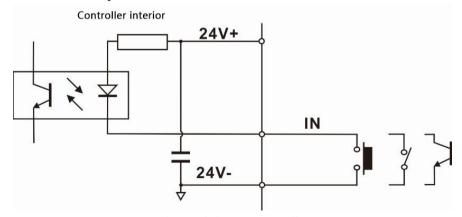
**GM9907-L2** bagging controller can be connected to a resistive strain bridge load cell. When using a six-wire load cells, you must bridge the SN+ with EX+ and bridge the SN- with EX-



EX+: Excitation+Ex-: Excitation- SN+: Sense+ SN-: Sense- SIG+: Signal+ SIG-: Signal-

#### 2.3I/O Module Port connection

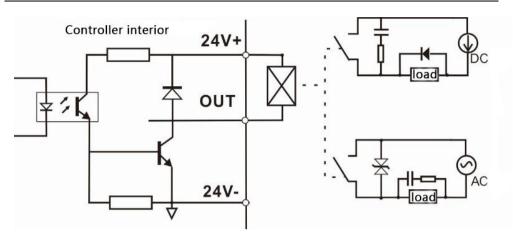
**GM9907-L2** bagging controller controls 28 lines I/O (12 input and 16 output). It uses optoelectronic isolation technology to transfer data. The I/O signal input is low level effective, and the output is open-collector mode. The driving current can reach 500mA and the full load current is up to 3A, and Terminal connection is shown as below:



I/O Module Input port diagram

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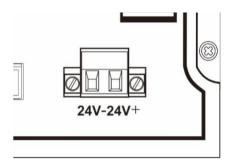


I/O Module output connection diagram

GM 9907-L2 I/O signals definitions refer Section 4.8.

## 2.4 Power supply connection

**GM9907-L2** bagging controller use 24V DC power supply. The connection is as shown below:



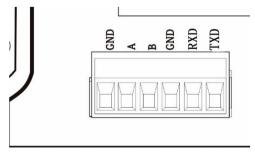
Power terminal diagram

### 24V+ connect DC+, 24V-connect DC-.

Note: this product use 24V DC power supply, use 220V AC power supply will permanently damage the controller and cause danger

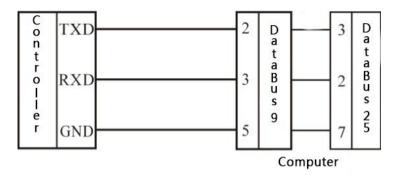
## 2.5 Serial port connection

GM9907-L2 provides two serial ports as shown in the figure below. One is RS - 232 mode (terminal port  $TXD,\,RXD,\,GND$ ); the other is RS - 485, (terminal port A, B, GND). Serial port support: MODBUS protocol, continuous mode and print format.

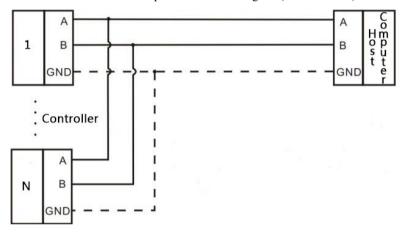


Controller and computer connection diagram





Controller and computer connection diagram (RS-232 mode)



Controller and host computer connection diagram (RS-485 mode)

#### 2.6 Touch screen calibration

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:

GM9907-L2 power on, long press any point on the touch screen at the same time, system turn to touch screen calibration interface. Long press cursor position on touch screen, cursor position calibrate finish, after the interface displays the coordinates of this point, enter to next calibrate automatically. Follow cursor position changes long press accordingly, calibrate finish, and interface show 5 calibration point coordinates, enter to main interface automatically. If enter the calibration interface of the touch screen by mistake, press the "cancel" button in the lower right corner to exit the interface.

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## 3. User Manage

In order to prevent the malfunction of the controller caused by the malfunction of the controller, the **GM9907** bagging controller provides **three** levels of authority (operator, Administrator and Engineer) to choose: where the **Engineer can perform all operations on the controller** (not open to the user ) . Operator and Administrator permissions are as follows:

User level	Permission		
	Can refer all paracontrollers		
Operator	You can set part of the quantitative paracontrollers and process paracontrollers of the formula paracontrollers, switch test, U disk data export.		
Operator	You can set batch on the main interface, clear the current formula accumulation, the current user accumulation, and operate the shortcut keys on the main interface.		
	All operations are not restricted.		
Administrator	Can calibrate the scale, set the weighing paracontrollers, set the formula paracontrollers in the scale structure paracontrollers and adaptive, over and under difference, drop correction and fine moving function paracontrollers, I/O Module definition, set the language and time, modify the host mode paracontrollers.		
	Opened peripheral paracontrollers can be modified.		

### Permission description:

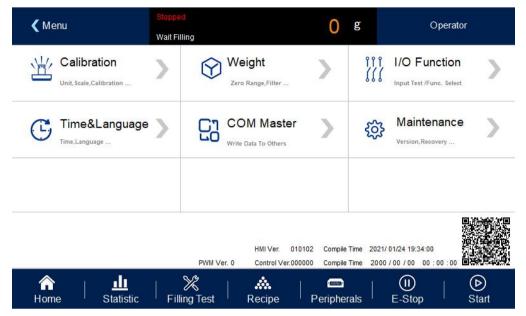
- ◆ After the controller is power on, enter the permission selection interface, and enter the main interface after selecting the permission
- ◆ Operator have four login methord: Single operator login, multiple operator login, single operator keyword login, multiple operator keyword login.
- ◆ In 【System Trial】 【Style setting 】 parameter, set the multi-operator login function ON/OFF, turn ON, set the number of operator logins. This is used to set the login mode for multiple operators.
- ◆ In 【System Trial】 【Style setting 】 parameter, set login operator need keyword ON/OFF, turn ON, this is used to set whether a password is required for operator login.
- ◆ Multi-operators are set to 8, operator~operator 8
- ◆ The operator cumulative data of single operator and multiple operators are merged into the user cumulative operator column in 【statistics】
- ◆ Click the permission in the foreground, the logout pop-up window will pop up, you can logout the current permission to return to the permission selection interface. After the power is powered off and the system restarts, the rights are automatically deregistered.

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## 4. Menu

Press menu, can refer and modify paracontrollers.



- Click paracontroller, enter current paracontroller to check, set paracontroller.
- Press [return] to exist current interface and return to the previous interface.

Paracontroller item	paracontroller list	Paracontroller Description
	weight calibration	Performs calibration operation for calibrating the controller weight value
Calibration	Material calibration	Perform calibration operation to calibrate controller weight value
Weight paracontroller	Zero range/filter lever setting	Set weight para, such as Zero range, stable para.
I/O Module	Input Define	Define the meaning of the controller input port
I/O Module	Output Define	Define the meaning of the controller output port
Time and	Language Setting	Default Chinese, English optional.
Language	Time Setting	Set screen time.
Host computer mode	Computer communication	Set computer mode paracontroller.
Motor	Filling Paracontroller	Set filling related paracontrollers
MOTOI	Bag Clutch paracontroller	Set the relevant paracontrollers of the bag clutch



	Discharge paracontroller	Set discharge related paracontrollers
	Scale	Set scale structure, working mode,etc
	Communication setting	Set serial port, Ethernet, print etc.
	Logic edit	Auxiliary logic paracontroller:6 group output logic paracontroller
System maintenance	Peripheral ON/OFF	Set Peripherals paracontroller ON/OFF
	Factory default	Set paracontrollers factory default and backup.
	Hardware test	Test input and output connection.
	Style setting	Set sreensaver timer
	Software upgrade	Software upgrade

#### 4.1 Calibration

The calibration scale is the calibration of the controller. When the **GM9907** bagging controller or any part of the weighing system is changed for the first time and the current equipment calibration paracontrollers cannot meet the user's requirements, the controller should be calibrated. The calibration scale paracontroller directly affects the weighing result of the controller. To prevent personnel from mis operation, the Administrator and the Engineer are required to log in to calibrate the controller (select the identity login in the [User Login] option).

The calibration scale paracontroller of the national standard symmetrical heavy controller requires password protection. Therefore, the password must be entered correctly when entering the calibration paracontrollers (initial password: **000000**); the calibration password is changed in the "Password Management" item of [System Information].

In calibration interface, support two method: weight cal and material cal. Steps as follow:

Calibration scale paracontroller	paracontroller	Description
	1 unit	Initial value: kg; g/kg/t/lb isavailable.
Weighing	2. Decimal point	Initial value: 000; 0 to 0.0000 five kinds of options.
paracontroller	3. Resolution	Initial value: 1; 1/2/5/10/20/50 six optional.
	4. Full Scale	Initial value: 100.00; The range is less than or equal to the minimum division × 10 0000 can be set.



Weight Calibration	The function of weight calibration is to use the weight calibration method in the field. Here are the steps:  Step 1: Select weighing paracontrollers such as unit, decimal point and indexing value according to the demand.  Step 2: Empty the bucket and click "Zero Calibration". This step is the zero point of calibration, the requirements are: the measuring bucket is empty, the scale body is stable.  Step 3: Put weights on the weighing table. When the weighing table is stable, click [Weight Calibration], input the weight of weights in the bullet frame, and click OK to complete the calibration of weights.
Material calibration(Only for With Net Weigher mode)	Material calibration function is in the field is not convenient to use the weight of the calibration method. Here are the steps:  Step1: Empty the scale platform, wait for the millivolt to stabilize, and click "Zero calibration". This step is the zero point of calibration, the requirements are: the measuring bucket is empty, the scale body is stable.  Step2: Click "Manual Filling", then the filling door will open, add material to the controllering bucket, click "Manual Filling" again to close the filling door. (If the manual filling time (Step2 time setting is manual filling time) is not set to 0, wait for the manual filling time to arrive, then automatically close the filling door)  Step3: Click [Calibration of Unloading]. When the discharge door opens, the background will record the current relative millivolt. Weighing and recording the weight of discharged material.  Step4: Click [Material Calibration], enter weighing data, and click OK. Material calibration is finished.

## 4.2 Recipe paracontrollers

Press recipe in Menu, enter 20 recipes choose interface, display recipe ID, name and target value.

- ◆ Click recipe ID, can swift recipe ID.
- Click recipe enter paracontrollers display
- Click upper left to return to the upper level interface.

Recipe paraco ntroller item	paracontroller	Description
	Used to set the ba	agging weight value related paracontrollers
	1. Target	Quantify the target value.
	2. Coarse Flow Remains	In the quantification process, if the weighing value ≥ the target value - Coarse Flow Remains, Coarse Fill is turned off.
Target	3. Medium Flow Remains	In the quantification process, if the weighing value ≥ the target value - Medium Flow Remains, Medium Fill is turned off.
	4.Free Fall	In the quantification process, if the weighing value ≥ the target value – Free Fall, Fine fill is turned off.



	5. Near Zero Band	In the quantification process, if the weighing value ≤Near Zero Band, Discharge Delay Timer is started.
	6. COMP. Inhibit Timer(Co-F)	At the beginning of the value, in order to avoid overshooting without weight judgment during this time, Co-F has been effective.Initial value: 0.9;Range: 0.0~99.9.(unit: s)
	7. COMP. Inhibit Timer(Me-F)	After the end of Co-F, in this period of time, in order to avoid overcharging without weight judgment, Me-F has been effective.Initial value: 0.9;Range: 0.0~99.9.(unit: s)
	8.COMP. Inhibit Timer(Fi-F)	After Me-F, in this period of time, in order to avoid overcharging without weight judgment, Fi-F has been effective.Initial value: 0.9;Range: 0.0~99.9.(unit: s)
	Used to set the de	elay timer related paracontrollers of the filling process
	1. Filling Start Delay	In Net Weigher mode, when the quantification process starts, after the delay time, the controller will stable and zeroing (if it does not meet the Zero Interval condition, it will not stable and not zeroing), and then start the filling process; In Gross Weigher mode, after lock bag is finished, after the delay time, the controller is to be stable and tare. Initial value: <b>0.5</b> ; Range: <b>0.0~99.9</b> . (Unit: <b>s</b> )
	2. Result Waiting Timer	Result Checking Mode chose "Delay Timer", after the fine filling is turned off (or the Over/Under is turned on, the Over/Under alarm is finished), quantification process is started, and the holding time is passed, and the quantification process is finished, enter to next process.  Initial value: 0.5; Range: 0.0~99.9. (Unit: s)
Time	3. Bag Locked Delay Timer	After the clutch bag signal is given, after the delay, controller judges that the bagging operation is completed. Initial value: <b>0.5</b> ; Range: <b>0.0~99.9</b> . (Unit: <b>s</b> )
paraco ntroller	4. Unlock Bag Pre-Delay Timer	After Net Weigher mode discharge is completed, the unlock bag signal is output after the delay time; After the Gross Weigher mode setting (patting bag) is completed, the unlock bag signal is output after this delay. Initial value: <b>0.5</b> ; Range: <b>0.0~99.9</b> . (Unit: <b>s</b> )
	5. Discharge Delay Timer	During the discharge process, when the weight value of the weighing hopper is less than the Near Zero Band, the delay is started, when delay time is finished, discharge signal is closed.  Initial value: <b>0.5</b> ; Range: <b>0.0~99.9</b> . (Unit: <b>s</b> )
	6. Auto Zero Interval	How many times the packaging process has been completed and then reset once. When entering the running state, the controller is not reset during the first packaging process. Initial value: 0; Range: $0 \sim 99$ . (Note: This paracontroller is only valid for Net Weigher mode)
	7.Result Checking Mode	Stable value: After the fi-fo is turned off, the weight is stabilized and the set value process is completed.  Delay setting: After the fi-fo is turned off, the fixed value is completed after the fixed value is maintained.



		Initial value: a stable value.
	8. Result Holding	On/Off is optional; set to "On", the weight display remains unchanged after the end of the set time, and the weight changes again after the discharge starts.  Initial value: off.
	9. Manual Unlock bag I/O	I/O optional, when set to on, running, need manal to control unlock bag. Initial value: off.
	Used to set adapt	ive relevant paracontroller
Adapti ve	1.Adaptive ON/OFF	Adaptive function, automatically adjust the coarse, medium and fine speed of the controller in the running process after the ON/OFF is turned on.  Optional ON/OFF, off, double speed, triple speed.  Initial value: off.  (note:  1. All Remains must be zero before normal use.  2. If Auto Free Fall Correction and the adaptive function are opened at the same time, the Auto Free Fall Correction will be closed forcibly.  3. When the first balance is self-adaptive, the balance body must be stable and the current weight is zero.)
	2.Adaptive Level	The higher the level, the coarseer the filling speed, the lower the accuracy. Initial value: 3; Range: $1 \sim 5$ .
	3.Paracontrolle r updated ON/OFF	When opened, the change value of Coarse, Medium, Fine Flow Remains will be updated to the value of quantitative paracontroller; When off, quantitative paracontroller values cannot be updated.
	Used to set Auto	Free Fall Correction relevant paracontrollers
Auto Free	1. Auto Free Fall Correction	The drop value is the weight value that has not fallen into the measuring hopper after the fine filling signal is turned off. The drop correction is corrected according to the actual blanking value as required.  (Note: If the drop correction and adaptive functions are turned on at the same time, the drop correction function is invalid)
Fall Correct ion	2. Reference Samples PCS	The controller averages the difference of the set number of times as the basis for the drop correction.  Initial value: 1; Range: 1 to 99.
	3. Correction Effective Range	The controller averages the difference of the set number of times as the basis for the drop correction. Initial value: 1; Range: 1 to 99.
	4. Correction Percentage	The magnitude of each drop correction.  Three ranges are available in 100%, 50%, and25%.  Initial value: 50%.
Over/	Used to set Over	Under relevant alarm paracontroller



Under	1.OVER/UND ER ON/OFF	"On / Off" is optional. When this paracontroller is set to "On", the quantification process judges the Over/Under.
	2. OVER/UND ER Pause	"On / Off" is optional. When it is set to "On", when the quantitative process is over or under, controller pauses and waits for the user to process.  I/O Module enter Emergency Stop, returns to the stop state, and clear alarm; or I/O Module enter clear alarm, continue quantitative process.
	3. OverLimit Value	In the quantification process, if the weighing value $\geq$ the target value + Over value, it is judged as Over. Initial value: <b>0</b> .
	4. Under Limit Value	In the quantification process, if the weighing value ≤ target value – Under value, it is judged as Under. Initial value: <b>0</b> .
	5. Compensation ON/OFF	Set the Compensation ON/OFF On: Finely add the fill according to the number of fills. Off: Do not replenish when there is a shortfall.
	6. Compensation Times	When the quantitative process is judged to be inferior, the fill is finely added according to this value.  Initial value: 1; range 1~99.
	7.Flow-ON Times	When filling the output, the effective time is added finely during an on-off cycle.  Initial value: 0.5; range: 0.0 to 9 9.9. (units)
	8.Flow-OFF times	When filling an output, a pass off the cycle time has no effect on <b>chronic</b> .  Initial value: 0.5; range: 0.0 to 9 9.9. (units)
	Used to set manu	al fine filling related paracontrollers
Jog	1. Jog Flow ON/OFF	"On / Off" is optional. When set to "On", the controller is finely added and jogged. Initial value: off.
Flow Paraco ntroller	2. Jog Flow-ON Timer	When the jog output is finely added, the effective time is added finely during an on-off cycle.  Initial value: 0.5; range: 0.0 to 9.9. (unit s)
	3. Jop Flow-on Timer	When the jog output is finely added, the inactive period is finely added during an on-off period.  Initial value: 0.5; range: 0.0 to 9.9. (unit s)

## **4.2.1** Scale body structure paracontrollers

The controller provides 5 kinds of scale structure, Net Weigher, Gross Weigher, ton bag, valve port and PLC mode. Select different scale structure, the formula paracontrollers show different paracontrollers, the specific scale structure paracontrollers are shown as follows



	Used to set the relev	ant paracontrollers of Net Weigher scale mode
Net Weigher Paracont roller	1. Filling Combination Times	When there is Net Weigher, the unlock bag is unloaded several times. If it is 0, the controller discharges directly after the filling is completed without judging whether the pocket is valid. Initial value: 1; Range: 0 to 99.
	Used to set the relev	vant paracontrollers of ton bag scale mode
	1. Delay time of hanging bag	The bag delay time until the bag is completed. Initial value: 0.5; range: 0.0 to 99.9. (unit s)
	2. Air Blow mode	Before rise delay air blow: air blow output valid, hanger rise output is valid. After rise delay air blow, after hanger output continue hanger rise delay time starts air blow.  Initial value:Before Rise delay starts blowing
	3. Blowing timer	Blowing timer Initial value: 0.5; range: 0.0~99.9. (unit s)
	4. Return valve mode	Close the return valve after filling: after closing the fine fill, the return valve output is invalid. Close return valve after bag unlockning: return valve output is invalid after bag unlockning. Initial value: Close the return valve after filling.
Ton package scale Paracont roller	tacont 5. Reset time of hanging bag	When the paracontroller is not set to 0, after filling is completed, the output of the bag is invalid and continues to be valid after this time.  Initial value: 0.0;Range: 0.0 ~ 99.9.(unit s)  Note: The reset time of the lifting bag shall be longer than the delay time of the lifting bag before the reset is valid.  Controller operation first scale needs to manually give a bag signal.  Paracontroller is set to 0, controller before each start charging, need punching bag signal.
	6. Hanger control mode	Optional automatic rise, automatic fall;Automatic rise, manual down;Manual up, automatic down;Manual up, manual down.  Default: auto up, auto down
	7. <b>D</b> elay Before Hanger Rise	This delay is executed after the rising signal is sent. Initial value: 5.0; range: 0.0 to 99.9. (unit s) Note: only valid at Air Drive-unlimit space mode.
	8. Delay Before Hanger Drop	This delay is initiated after the quantitative delay has expired. Initial value: 5.0; range: 0.0 to 99.9. (unit s) Note: only valid at Air Drive-unlimit mode.
	9. Hanger Rise Overtime	The maximum waiting time for the controller hanger in place. Initial value: 5.0; range: 0.0 to 99.9. (unit s)



			Note: only valid at Motor-Dual-Limit/Air Drive-Dual-Limit mode.
	10. H	anger Drop me	The maximum waiting time for the controller hanger to drop. Initial value: 5.0; range: 0.0 to 99.9. (unit s) Note: only valid at Motor-Dual-Limit/Air Drive-Dual-Limit mode.
		a. Decoupled up I/O	ON: When is on. OFF: When is off. Initial value:OFF
	11. Deco	<b>b</b> . Delay before decouplin	When is on, after decoup, need to delay the time hanger to rise. Initial value:0.0s Range: 0.0~99.9 (unit s)
	uple d up	c. Decouplin g rise time	When the rise I/O is on and the rise support output needs to last for this time after the rise is executed Initial value:0.0s Range: 0.0~99.9 (unit s)
	d. D g pa		When the rise I/O is on, and after the decoupling rise is over, it is necessary to wait for the time before descending.  Initial value:0.0s Range: 0.0~99.9 (unit s)
	12	a. Uncouple d alarm I/O	ON: Uncoupled alarm I/O is ON. OFF: Uncoupled alarm I/O is OFF Initial value: OFF
	Unc oupl ed alar m I/O	b. Decouplin g alarm conveyor reversal time	The uncoupled alarm I/O is on. When the uncoupled alarm is complete, the conveyor will perform the reversal immediately for the duration.  Initial value:0.0s Range: 0.0~99.9 (unit s) (Set to 0: means the conveyor does not reverse)
		c. Weight value of decouplin g alarm	The uncoupled alarm I/O is on. If the current weight is greater than the value of the decoupling alarm during the period of decoupling ascending, controller will output the decoupling alarm signal.  Initial value:0, range: 0~Maximum range
	Used to set the valve scale mode related paracontrollers		e scale mode related paracontrollers
Valve	1.Delay Before Lifting Bag		The delay time before the bag is started at the same time when the unlock bag starts to start.  Initial value: 0.5; range: 0.0 to 99.9. (unit s)
Scale Paracont roller	2. Lifting Bag Timer		The time is started after the delay timebefore the bag is lifted, and the bag signal output is valid. After the time is over, the bag signal output is invalid. Initial value: 0.5; range: 0.0 to 99.9. (unit s)
	3. Delay Before Pusing Bag		When the unlock bag start delay starts, the delay time before pushing the bag is started at the same time.



		Initial value: 0.5; range: 0.0 to 99.9. (unit s)
	4. Pushing Bag Timer	The time is started after the delay timebefore pushing the bag, and the push bag signal output is valid. After the time is over, the push bag signal output is invalid.  Initial value: 0.5; range: 0.0 to 99.9. (unit s)
	Used to set PLC mo	de related paracontrollers
PLC paracont roller	1. PLC-OverLimit Value	When the weighing value > target value + excess value, the out-of-tolerance output is valid Initial value: <b>0.00</b> ; range: <b>0.00~100.00</b> .
	2. PLC-UnderLi mit Value	When the weighing value <target -="" <b="" initial="" is="" the="" under-difference,="" under-output="" valid="" value="" value:="">0.00; range: <b>0.00~100.00</b>.</target>
	3. PLC-UpperLi mit Value	When the weighing value > upper limit value, the upper limit output is valid Initial value: <b>0.00</b> ; range: <b>0.00~100.00</b> .
	<b>4.</b> PLC-LowerLi mit Value	When the weighing value is < lower limit, the lower limit output is valid. Initial value: 0.00; range: 0.00~100.00.

## 4.3 Weight paracontroller

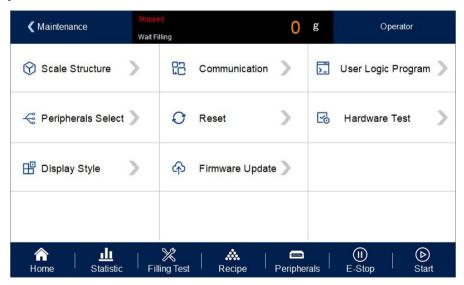
In the menu interface, click the **(** Weighing **)** menu to enter the current paracontroller item to view and set the attribution paracontroller information.

Sys&Co m	paracontroller	Description
	1. Zero Range	The range can be cleared. Initial value: 50; Range: 1 to 99 (% of full scale).
Weight Paracont roller	2. Stable Range / Timer	During the judgment time, the weight change range is within this set value and the controller judges that the scale is stable.  Initial value: 2; Range: 0 to 99 (d).  First value: 0.3; range: 0.1 to 99.
	3. Zero Track Range / Timer	The weight value is within this range and the controller is automatically cleared. When it is 0, zero tracking is not performed.  Initial value: 0; range: 0 to 9 (d).  First Value: 20; range: 0.1-9 9.9. (unit s)
	4.Power-Up Zero	On / off is optional. When it is "on", the controller will automatically perform the clear operation when the power is turned on (the weight inside the scale bucket meets the clearing range).  Initial value: off
	5. A/D Sampling Rate	A/D sampling rate. 120 times / sec, 240 times / sec, 480times /



		sec, 960 times / sec. Initial value: 240 times / sec.
6. Stop Digital Filter level		Stop Digital Filter level Initial value: 7; range 0~9.
	<b>a</b> . Dynamic Filter	During the bagging process, whether to perform the filter operation ON/OFF and set "On", the following three paracontrollers are valid. Initial value: on.
7.	<b>b.</b> Advance Filter ON/OFF	On/off optional, secondary filtering based on digital filtering. Initial value: off.
Filter Parac ontro	c. Filling Filter Level	Filter paracontrollers during filling: 9: The filtering effect is the strongest. Initial value: 4; Range: 0 to 9.
ller	d. Waiting Process Filter	Filter paracontrollers during the setting process: 9: The filtering effect is the strongest. Initial value: 7; Range: 0 to 9.
	e. Dischange Process Filter	Filter paracontrollers during unloading: 9: The filtering effect is the strongest. Initial value: 1; Range: 0 to 9.
8. Running Stable Timeout		Initial value: $0.0$ ; range: $0.0 \sim 9.9$ .(unit s )

## 4.4 System Maintenance



## 4.4.1 Weigher structure

paracontroller Description	
1. Valve Scale	There are Net Weigher / Gross Weigher/ PLC / Jumbo bag / valve port bagging selection available. Initial value: Net Weigher.

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	<b>a</b> .Working Mode	Optional single scale, interlock A, interlock B. Initial value: single scale.
	<b>b</b> .Filling control mode	Single filling/comb filling; Initial value: Comb filling Comb filling: Co-F plus Co-F, Me-F and Fi-F filling port at the same time filling; Add medium and small filling port at the same time filling; Fine time small filling port filling Single filling: Co-F large filling port filling; Me-F Add when the filling port filling; Fi-F small filling port filling.
	c. Filling Mode	0, pneumatic mode; 1, stepper motor filling; 2, ordinary motor mode.
2. Net Weigher scale	d. Lock/Release Mode	0, pneumatic mode; 1, stepper motor; 2, MotorDrive Dual-Limit; 3, MotorDrive Single-Limit Default: 0 pneumatic
paracontro ller setting	e. Discharge Mode	Initial value: 0 pneumatic discharge; Optional: 0: pneumatic mode; 1: Stepping motor unloading; 2: motor single limit discharge; 3: motor double limit discharge; 4: The motor rotates in one direction.
	f. Manual Unlock Bag ON/OFF	Optional on/off;Set to "on", in operation, need to manually control unlock bag.Initial value: off.
	g. Realtime Detecting When Discharge	Optional on/off;When "on" is selected, the limit signal is detected in real time;When "off", the limit signal is detected only when filling is started.  Initial value: off.  (Note: discharge mode is valid in motor mode)
	<b>a.</b> Working Mode	Optional single scale, interlock A, interlock B. Initial value: single scale.
	<b>b</b> . G/N Mode	Gross /Net Mode.Initial value: Net filling
3. Net Weigher scale paracontro ller setting	c.Filling control mode	Single filling/combination filling is optional;Initial value: Combination filling. Combination filling: coarse adding large, medium and small filling port at the same time;Add medium and small filling port at the same time filling;Fine time small filling port filling. Separate filling: coarse adding large filling port filling;Add when the filling port filling;Fine time small filling port filling.
	d. Filling Mode	0, pneumatic mode; 1, stepper motor filling; 2, ordinary motor mode.
	e. Lock/Release Mode	0, pneumatic mode; 1, stepper motor; 2, MotorDrive Dual-Limit; 3, MotorDrive Single-Limit Default: 0 pneumatic



	f. Unlock bag switch is allowed in filling	Optional on/off;Set to "on", no bucket scale mode, after starting, it is allowed to unlock bags in filling.Set to "off". After starting, it is not allowed to unlock bags in filling Initial value: off.
	g. Manual unlock bag ON/OFF	Optional on/off; Set to "on", in operation, need to manually control unlock bag. Initial value: off.
	h. Bracket control ON/OFF	Optional on/off;Set to "on". In operation, the movement mode of the bracket needs to be controlled manually. Initial value: off.
	i. Bracket movement mode	Optional pneumatic - infinite/electric - double limit/pneumatic - double limit. Initial value: pneumatic - infinite bit.(Note: Paracontrollers can be seen when the support control switch is on)
	j. Double scale unlock bag mode	Different Unlock Bag/Simultaneous unlock Bag 1/ Simultaneous unlock Bag 2 are optional. Initial value: unlock bag at different times. unlock bag at different time: unlock bag after finishing packing, when A/B scales are all unlock bag, the controller controls the signal output of conveyor and starts the conveyor. Simultaneously unlock bag 1: in the normal mode, the filling of one scale has been completed and the filling of the other has not been completed. After the completion of the other scale, both scales are loosing bag at the same time. If a scale has finished filling, the other scale is not in the bag (filling) state, then do not wait for another scale, this scale directly unlock bag. At the same time, unlock bag 2: for the coarse mode, this mode defaults to scale A in the front and scale B in the back.After filling, scale A will not judge whether B is finished or not, and will unlock the bag directly. After the completion of filling, B should judge whether A is in the state of bag clamping (filling). If A is filling, B should wait for A to finish adding and unlock the bag. (Note: the working mode is interlocking scale A and interlocking scale B, paracontrollers can be seen.)
	k. allow unlock bag when filling switch	Optional on/off; When set to "on", Gross Weigher, controller filling allow manual unlock bag, after unlock bag controller re-enter to filling wait mode. Initial value: off.
	a.G/N mode	Gross /Net Mode.Initial value: Net filling
4. Jumbo Bag paracontro ller setting	<b>b</b> . Filling control mode	Single filling/combination filling is optional;Initial value: Combination filling. Combination filling: coarse adding large, medium and small filling port at the same time; Add medium and small filling port at the same time filling;Fine time small filling port filling.

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		Separate filling: coarse adding large filling port filling;Add when the filling port filling;Fine time small filling port filling.
	c. Filling Mode	0, pneumatic mode; 1, stepper motor filling; 2, ordinary motor mode.
	d. Lock/Release Mode	0, pneumatic mode; 1, stepper motor; 2, MotorDrive Dual-Limit; 3, MotorDrive Single-Limit Default: 0 pneumatic
	e. Manual unlock bag ON/OFF	Optional on/off; Set to "on", in operation, need to manually control unlock bag. Initial value: off.
	f. Bracket movement mode	Optional pneumatic - infinite/electric - double limit/pneumatic - double limit.  Initial value: pneumatic - infinite bit.(Note: Paracontrollers can be seen when the support control switch is on)
	g. Hanger bag movement control ON/OFF	Optional on/off;Set to "open", ton bag scale mode, after starting, allowed to lift bag, not allowed to take off the bag. Initial value: off.
	h. Hanger bag inverse logic ON/OFF	Optional on/off;Set to "on", in the ton bag scale mode, when the bag output is effective, the output of switching quantity is invalid; when the bag output is invalid, the output of switching quantity is effective.  Initial value: off.
	i. Tare weight detection switch	Optional on/off; When set to "on", the controller will return to the stop state without filling to a fixed value in the operation of the controller. When it is started again, it does not need to remove the skin and start filling directly.  Note: This function will only record the tare value when the current weight is greater than 0 and it is started again.  Initial value: off.
	a.G/N mode	Gross /Net Mode.Initial value: Net filling
5. Valve scale paracontro ller	<b>b</b> .Filling contril mode	Sigle filling/Comb filling; Initial value: Comb filling Combination filling: coarse adding large, medium and small filling port at the same time; Add medium and small filling port at the same time filling; Fine time small filling port filling. Separate filling: coarse adding large filling port filling; Add when the filling port filling; Fine time small filling port filling.
	c. Filling Mode	0, pneumatic mode; 1, stepper motor filling; 2, ordinary motor mode.
setting	d. Lock/Release Mode	0, pneumatic mode; 1, stepper motor; 2, MotorDrive Dual-Limit; 3, MotorDrive Single-Limit Default: 0 pneumatic
	e. Manual unlock bag ON/OFF	Optional on/off; Set to "on", in operation, need to manually control unlock bag. Initial value: off.



## 4.4.2 Communication Setting

**GM9907** Two serial communication interfaces can be provided. See Section 2.5 for the definition of serial port output; correct setting of port paracontrollers can be used for communication.

Sys&Com	paracontroller	Description
	1. Communication ID	Initial value: 1; 1 ~ 9 9 optional.
	2.Communication Mode	Initial value: Modbus-RTU. Modbus-RTU / Print / Continuous Mode / MD-R (compatible with version 01.) isoptional.
Serial port ( Serial port	3. Baudrate	Initial value: 38400; 9600/19200/38400/57600/115200 optional.
1 (232) \ Serial port 2 (485) )	4. Data Format	Initial value: 8-E-1 (8 -bit data bit -even parity - 1 stop bit ); 8-E-1/8-N-1/7-E-1/7-N-1 is optional.
	<b>5. Modbus</b> Dword Format	Modbus communication display mode: Initial value: AB-CD (high word first); AB-CD (high word first) / CD-AB (low word first) optional.
	1. Communication Mode	Fix: Modbus-TCP.
	<b>2.modbus-TCP</b> Dword Format	Initial value <b>AB-CD</b> . Range: <b>AB-CD</b> (high word first) <b>CD-AB</b> (low word first)
	3. Server Port	Initial value: 502 Range: 1~65535
Ethernet Interface		Initial value: 192 Range: 0~255
interface	4 ID	Initial value: 168 Range: 0~255
	4.IP	Initial value: 101 Range: 0~255
		Initial value: 246 Range: 0~255
	5.MAC	BC.66.41.9x.xx.xx。
Print paracontrolle rs	1. Auto Print	On/Off is optional; when "On" is selected, the package result will be printed out automatically every time the package is completed (the serial port should be selected as "Print"). Initial value: off.
	2. Printer Format	Initial value: 24 columns of printing; 24columns of printing / 32 columns of printing.
	3. Printing Language	Initial value: Chinese; Chinese / English optional.
	<b>4.</b> Printing Line Nos.	The number of lines after the print is completed. Initial value: 3; 0~9 optional.



### 4.4.3 User Logic

Auxiliary logic programming function, up to 6 sets of auxiliary logic trigger signals can be defined, and the effective time and output port after the auxiliary logic signal is triggered can be set. The simple logic signal output can be configured to control other auxiliary devices, and 6 sets of auxiliary logic signals. They can also control each other.

Under the auxiliary logic programming interface:

Auxiliary logic(1~ 6) Programming paracontroller	paracontroller	Description
1.Logic Type (1-6)	CLOSE  Delay ON  Delay Off  Delay ON And OFF  OFF-ON,Edge Trigger  ON-OFF,Edge Trigger	The type of auxiliary logic programming signal is selected based on the logic to be implemented.
	Self-Define Trigger (default)	After setting any of the 1~ 12 channels as the trigger signal, the input port will be fixed as the trigger signal.
<b>2.</b> User	IN port 1~12	Set any of the $1 \sim 1$ 2 input ports as the trigger signal, then the input can be either the trigger signal or the function signal of the input port.
Logic (1-6) Trigger Define	Output definition	After the trigger signal is set to "an internal function signal", the trigger output is performed according to the function signal.
	> = or < = weight Value Trigger	After the trigger condition is set, the current weight value is compared with the set weight threshold, and theoutput is triggered when the condition is met.
3. Logic(1-6) Trigger Input Port IN1~12		Initial value: no definition. Select the digital input port corresponding to the function signal. The input port " <b>0</b> is not defined" means that the function is not defined.
4. Logic(1-6) Output Port	OUT1~16	Initial value: no definition. Select the digital output port corresponding to the function signal. The output port " <b>0</b> is not defined"means that the function is not defined.
5. Logic(1-6) Delay ON Timer	Unit s	Initial value: <b>0.0</b> ; Range: <b>0.0~99.9</b> . After the trigger signal is valid, the logic



		output signal is valid after the delay.
6. Logic(1-6) Delay OFF Timer	Unit s	Initial value: <b>0.0</b> ; Range: <b>0.0~99.9</b> . After the trigger signal is invalid, the logic output signal will be invalid after the delay.
7. Logic(1-6) Output ON Timer	Unit s	Initial value: <b>0.0</b> ; Range: <b>0.0~99.9</b> . The duration after the logic output signal is valid, and becomes invalid after the end of the time.
8. Logic(1-6) Trigger weight	Unit <b>KG</b>	Initial value: <b>0.00</b> ; Range: <b>0.0~100.00</b> . Set the weight value, the current weight and the threshold weight comparison, and trigger when theweight value trigger condition is met .(When the trigger select "> =, or <=weight value" valid).

#### 4.4.3.1 Delay on

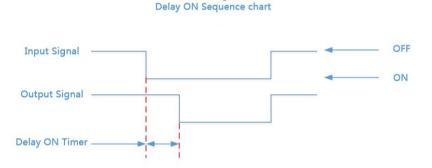
- When the delay is turned on [Custom Input Port Trigger], the operation is as follows:
- 1. Set paracontrollers and ON/OFF quantity: type selection [delay turn-on], trigger signal If [Custom trigger input] is selected, the trigger input port is defined as " 1 " (you can see that the ON/OFF input port 1 is displayed as "auxiliary logic" Trigger input 1 "), the logic output port is defined as " 1 " (you can see that the digital output port 1 is displayed as "auxiliary logic output 1 "), and the [delay on time] is set to 2 seconds.
- 2. Execute operation: make the trigger signal input 1 valid, start the delay delay on time, and continue to be valid until the delay on time 2s ends, the logic output signal port 1 output is valid until the trigger signal input 1 is invalid, the logic output Signal port 1 also becomes invalid. See the timing diagram below:
- When the delay is turned on [fixed input port trigger], the operation is as follows:
- 1. Set paracontrollers and ON/OFF quantity: trigger signal to select "input port 1" (you can see that the digital input port 1 is displayed as "the original unchanged definition", assuming the original definition is start, the function of input port 1 can be "start" "It can also be "signal trigger"), the logic output port is defined as 1 (the ON/OFF output port 1 can be seen as "auxiliary logic output 1"), and the [delay on time] is set to 2 seconds.
- 2. Execution operation: make the trigger signal input 1 valid (starting is also valid, the controller running output is valid), start the delay-on time, and remain valid until the delay-on time is2s, the logic output signal port 1 output is valid. Until the trigger signal input 1 is invalid, the logic output signal port 1 also becomes invalid. The controller will continue to run until an emergency stop signal is given.
- When the delay is turned on [ON/OFF output definition trigger], the operation is as follows:
- 1. Set paracontrollers and ON/OFF quantity: trigger signal select "Run" (ON/OFF output



can define or not define running signal), logic output port is defined as 1 (can see that ON/OFF output port 1 is displayed as auxiliary logic output 1), [Delayed On Time] is set for 2 seconds.

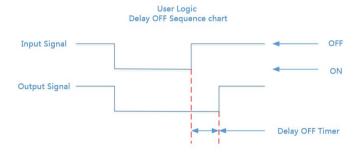
- 2. Execution operation: After the external input "start", when the "run" output signal is valid, it starts to go [delayed on time], and remains valid until the end of the delay on time 2s, the output of the logic output signal port 1 is valid. The logic output signal port 1 becomes invalid until the "Emergency stop or pause" is valid and the "Run" output signal is invalid.
- When the delay is turned on [ > = or < = weight value trigger], the operation is as follows:
- 1. Set the corresponding threshold weight, the logic output port is defined as 1 (you can see that the ON/OFF output port 1 is displayed as the auxiliary logic output 1), and the [delayed on time] is set to 2 seconds.
- 2. Execution operation: current weight value > = or < = logic 1 threshold weight is valid when setting value, start to go [delay on time], it is valid until the end of delay on time 2s, logic output signal port 1 The output is valid until the current weight < or > logic 1 threshold weight setting value is invalid for logic output signal port 1.

User Logic



#### 4.4.3.2 Delay off

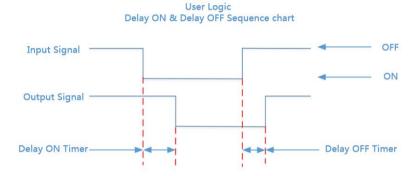
Related paracontrollers: Type selection [delay disconnect], select [trigger signal], set [trigger input port], [logic output port definition], [delay disconnect time]. Operation Reference "3.8 .1-Delay."Its output function is shown below:





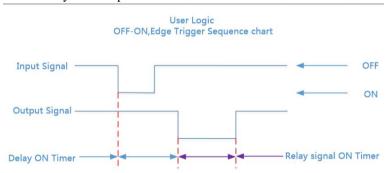
#### 4.4.3.3 Delay on and delay off

Related paracontrollers: Type selection [delay on and delay off], select [trigger signal], set [trigger input port], [logic output port definition], [delay on time], [delayed off time]. Operation Reference "4.4.3.1-Delay." Its output function is shown below:



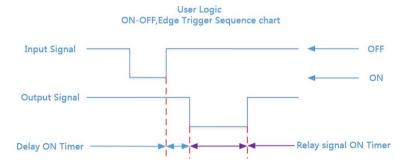
## 4.4.3.4 Invalid - valid edge triggered

Related paracontrollers: Type selection [invalid - valid edge trigger], select [trigger signal], set [trigger input port], [logic output port definition], [delay on time]. Operation Reference "3.8.1-Delay." Its output function is shown below:



#### 4.4.3.5 Valid - invalid edge trigger

Related paracontrollers: Type selection [valid - invalid edge trigger], select [trigger signal], set [trigger input port], [logic output port definition], [delay on time]. Operation Reference "3.8.1-Delay." Its output function is shown below:





## 4.4.4 Peripheral paracontrollers

This paracontroller sets the switch of controller peripheral. If set on, peripheral paracontrollers of the main interface can be set. Refer to Chapter 4.5 for specific peripheral paracontrollers.

Peripheral s	paracontroller	Description
Peripheral s	1. Patting Mode	Bag mode selection; Initial value: Do not pat bag. Optional: Net Weigher mode: the bag is not available after the bag / set value; No jogging mode: Sign bag / bags after setting Sign / addition in the film bag /bags jog plus values were correctly predicted; T packet mode: Sign bag / bags after setting Sign / addition in the film bag /bags jog plus values were correctly predicted; Port mode: Sign bag / bags after setting Sign / addition in the film bag / bags jog plus values were correctly predicted; PLC mode: Sign bag / bags after setting Sign / addition in the film bag / bags jog plus values were correctly predicted;
	Sewing machine ON/OFF	Whether to turn on the function of bale sewing machine. Optional on and off. When open, the peripheral can start to sew the bag, and the paracontrollers of the sew machine can be set.
	Conveyor mode	Selection of conveyor mode: Initial value: Off With bucket/without bucket/valve port scale mode: closed /1 level conveyor optional; Ton bales scale mode: closed /1 level conveyor /2 level conveyor /3 level conveyor optional.
	Coding Device ON/OFF	Whether to enable the coding function. On and off are optional. When on, the peripheral starts coding function and the coding paracontrollers can be set.
	Discharge patting Switch	Whether to open the Discharge patting function. Optional on and off. When on, the external device opens the Discharge patting function, and the Discharge patting paracontrollers can be set.
	Auxiliary Pulse ON/OFF	Whether to enable auxiliary pulse function. On and off are optional. When on, this function is enabled by peripheral and auxiliary pulse paracontrollers can be set.
	Fill/Discharge overtime alarm	Whether to turn on the timeout alarm function of Fill/Discharge .On and off are optional. When on, this



function is enabled by peripheral paracontroller can be set.	al and timeout alarm
--	----------------------

## 4.4.5 Factory reset

System Engineers can restore and backup data through the recovery factory in [System Maintenance].

	1. Reset All (Except calibration)	Click this item to restore all paracontrollers of the controller (except calibration paracontrollers) to factory setting values.
Factory reset	2. Reset All	Click this to restore all the paracontroller values of the controller to the factory settings.
	3. Reset Calibration Paracontroller	Click this to restore the calibration scale paracontroller value to the factory setting value.
	4. Reset weight paracontroller	Click this to reset weight and scale body paracontroller as factory setting
	5. Reset Recipe Paracontroller	Click this to restore the recipe paracontroller value to the factory setting.
	<b>6.</b> Reset Communication Paracontroller	Click this item to restore communication setting paracontroller value is factory setting value.
	7. Reset Peripherals Paracontroller	Click this item to restore peripheral paracontroller values and peripheral switch to factory setting values.
	8. Reset Motor Paracontroller	Click this item to restore motor paracontroller value to factory setting value.
	9. Reset I/O Function	Click this item to restore I/O Function to factory setting value.
	10. Reset logic edit paracontroller	Click this item to restore logic edit paracontroller to factory setting value.
	11. Execute paracontroller backup	Click controller to backup the current paracontroller setting values.
	12. Recovery From Backup data	Click controller to restore the paracontroller value to the most recent backup value.
	13. Delete paracontroller Backup	Click controller to delete the backup paracontrollers.

### 4.4.6 Hardware setting

This can check whether the output and input interfaces of the controller are normally connected with external devices through IO test. Before I/O test, I/O test switch on, and then I/O test.

Output port test: under the IO test interface, start the output test, that is, after clicking the corresponding output port button, the color of the interface port will light up. The output



state of the corresponding external connection should be valid. If it is invalid, it means the connection is abnormal.

Input port test: in the IO test interface, when the external input signal is valid, the corresponding input port color under the interface will light up to green. When the external input is valid, the interface has no response, indicating abnormal connection. Check the power supply input and wiring of the I/O Module.

### 4.4.7 Style setting

Style setting	1. Screen Saver Time	You can set the time when the screen is off. Default: Never;Optional never /60 seconds /10 minutes /30 seconds /5 minutes /30 minutes
	2. Screen Saver	Data rendering style, quick debugging style is optional.Default: data rendering style.
	3. Permission Cancel timer	Set Permission Cancel time
	<b>4.</b> Multi-user login function ON/OFF	Enable multi-user login function, can set the number of users login
	<b>5.</b> Number of users logged in	The multi-user login switch is turned on to set the number of users logging in

## 4.5 Peripheral paracontrollers

Click the 【 Peripheral 】 menu bar in the main interface (Note: the corresponding peripheral switch in system maintenance paracontrollers is turned on, and the corresponding peripheral paracontrollers can only be seen)

Peripher als	paracontroller	Description
Patting Paracont roller	1. Patting Mode	Select according to the pat bag mode of the system maintenance peripheral switch
	<b>2.</b> Patting ON Timer	During the on-off cycle of the bag, the bag output valid time.  Initial value: 0.5; Range: 0.0~99.9. (unit s)
	3. Patting OFF Timer	In the on-off cycle of the bag, the bag output invalid time. Initial value: 0.5; Range: 0.0~99.9. (unit s)
	<b>4.</b> Patting Start Delay Timer	After the bag is started, the bag output is valid after this delay time. Initial value: <b>0.5</b> ; Range: <b>0.0~99.9</b> . (units)
	5. Patting Times(Waiting)	After the fixed value, the number of times the bag is set, the number of times the bag is taken.  Initial value: 4; Range: 0~99.
	6. Extra ON Timer	Generally used in the anchor bag function.  After all the bags are finished, the additional bag output



		is added once, and the effective time is set to the time. The invalid time is "the bag invalid time".  Initial value: 0.0. Range: 0.0~99.9. (units) (Note: the time when the unlock bag is delayed is not changed, or the "lead bag delay" time is started after all the original bag output ends effectively, that is, the effective time of the extra bag output is started after the bag output valid time is over. To achieve the abutment function, the time and the "unlock bag delay" time should be set appropriately, but the time setting shouldgenerally be greater than the "unlock bag delay", that is, the bag should be unlockned first, then the bag mechanism will rise again).
	7. Pat bag start up weight 1	Under without hopper,ton bag, valve scale mode are valid, choose Filling medium pat bag mode, current weight must >=pat bag start up weight, starts pat bag.  Initial value: 0; Range: 0 ~ Maximum range
	8. Start-Up Weight 2	The current weight must be greater than or equal to the starting weight of the racket bag 2 to start the racket bag.  Initial value: 0;Range: 0~ maximum range
	9. Start-Up Weight 3	The current weight must be greater than or equal to the starting weight of the racket bag 3 to start the racket bag. Initial value: 0; Range: 0~ maximum range.
	10. Patting Times(Filling) 1	Setting paracontroller for the number of petting bags in filling, if set to 0, no petting bags. Note: when the filling process enters the fine filling, force the end of the filling bag, no matter whether the filling bag is completed or not. (After entering the small throw, do not shoot the bag in the middle of filling)  The number of raps corresponding to the starting weight of the bag 1  Initial value: 0; Range: 0~99.
	11. Patting Times(Filling) 2	The number of raps corresponding to the starting weight of the bag 2 Initial value: 0; Range: 0~99.
	12. Patting Times(Filling) 3	The number of raps corresponding to the starting weight of the bag 3 Initial value: 0; Range: 0~99.
	13.Patting output interface	This can be used to quickly define the output of the patting switching I/O module.
Sewing	1. Sewing ON/OFF	The peripheral switch is set to "on" to turn on the function of the bagging machine
	2. Sewing Start Delay Timer	After the sewing machine start ON/OFF is activated, the sewing machine delay time is started.  Initial value: 0.5. Range: 0.0~99.9. (unit s)

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3. Sewing ON Timer    Discharge patting paracont roller   Discharge patting paracont roller			
4. Cutter ON Timer  Cutter and continue the output time of the cutter. Initial value: 0.5.Range: 0.0–99.9(unit s)  5. Sewing machine anti-shake time  5. Sewing machine anti-shake time  6. Cutter ON Timer  6. Cutter ON Timer  7. Cutter output valid timer  7. Cutter output valid timer  8. IO function define  8. IO function define  1. Discharge patting Switch  7. Cutter output of the base of the start of the cutter, start the output of the cutter and continue the output time of the cutter and continue to output the valid time. Initial value: 0.5.Range: 0.0–99.9(unit s)  7. Cutter output valid timer  8. IO function define  8. IO function define  8. IO function of the start of the cutter, start the output of the cutter and continue to output the valid time. Initial value: 0.5.Range: 0.0–99.9(unit s)  This can be used to quickly define the input port of the start and emergency stop of the bagging machine, and the output port of the bagging machine and the thread cutting machine.  When the fixed value hold time is, the period from the start of output discharge signal to the start of discharge delay after discharge is completed is the effective discharge time. When the unloading duration exceeds this time, it is considered abnormal and the unloading vibration action is started Initial value: 2.0; range 0.0–9.9 (Unit s)  1. Discharge patting OFF Timer  5. Discharge patting OFF Timer  5. Discharge patting Times  6.Discharge on This can be used to quickly define the discharge vibration output port.  Conveyor  1. Conveyor I Start Delay Timer  Conveyor 1  Start Delay Timer  After the delay of the unlock bag, the controller judges that the conveyor is started. Initial value: 0.5; range: 0-99.9 (unit s)		_	is continuously output .
5.Sewing machine anti-shake time  the photoelectric jitter of the sewing starting During the de-shaking time, the photoelectric jitter of the baling, but the output of the output of the baling is still valid at this time. Initial value: 0.3.Range: 0.0-99.9 (unit s)  6. Cutter ON Timer  7. Cutter output valid timer  7. Cutter output valid timer  8. 10 function define  8. 10 function define  8. 10 function of the start of the cutter, start the output of the cutter and continue to output the valid time. Initial value: 0.5.Range: 0.0-99.9 (unit s)  This can be used to quickly define the input port of the start and emergency stop of the bagging machine, and the start of the bagging machine and the thread cutting machine.  1. Discharge patting Switch  2. Discharge valid time  Discharge patting paracont roller  Discharge patting  Discharge patting  Discharge patting  Discharge patting  Discharge patting  Discharge patting OFF Timer  5. Discharge patting OFF Timer  5. Discharge patting Times  6. Discharge patting output port  1. Conveyor mode  1. Conveyor mode  1. Conveyor 1  Start Delay Timer  After the delay of the unlock bag, the controller judges that the conveyor is started. Initial value: 0.5; range: 0-99.9 (unit s)			cutter and continue the output time of the cutter.
cutter and continue the output time of the cutter.  Initial value: 0.5.Range: 0.0-99.9 (unit s)  7. Cutter output valid timer  7. Cutter output valid timer  This can be used to quickly define the input port of the start and emergency stop of the bagging machine, and the output port of the bagging machine and the thread cutting machine.  1.Discharge patting Switch  Discharge e patting paracont roller  Discharge patting OFF Timer  4. Discharge patting OFF Timer  5. Discharge patting Times  6.Discharge patting Times  1. Conveyor 1  Start Delay Timer  Conveyor 1  Conveyor 1  Start Delay Timer  Cutter and continue the output time of the cutter. Initial value: 0.5; range 0.0-99.9 (unit s)  After the start of the cutter, start the output of the cutter and continue the output of the cutter. Initial value: 0.5 (not page) (unit s)  After the start of the cutter, start the output of the cutter and continue the output valid time.  Initial value: 0.5.Range: 0.0-99.9 (unit s)  The peripheral switch is set to "on" to open the Discharge patting function  When the fixed value hold time is, the period from the start of output discharge signal to the start of discharge inconsidered abnormal and the unloading vibration action is started Initial value: 2.0; range 0.0-9.9 (Unit s)  Initial value: 2.0; range 0.0-9.9 (Unit s)  Initial value: 0.5; range 0.0-9.9 (Unit s)  1. Conveyor grating output port  After the delay of the unlock bag, the controller judges that the conveyor is started. Initial value: 0.5; range: 0-99.9 (unit s)			the photoelectric jitter of the sewing starting. During the de-shaking time, the photoelectric jitter of the baling, but the output of the baling is still valid at this time. Initial
Atter output valid timer    A clutter valid timer   Solution   Solution			cutter and continue the output time of the cutter.
8.10 function define start and emergency stop of the bagging machine, and the output port of the bagging machine and the thread cutting machine.  1.Discharge patting Switch The peripheral switch is set to "on" to open the Discharge patting function  2. Discharge valid time Subscharge is completed is the effective discharge time. When the unloading duration exceeds this time, it is considered abnormal and the unloading vibration action is started Initial value: 2.0; range 0.0~9.9 (Unit s)  3. Discharge ON Timer Initial value: 0.5; range 0.0~9.9 (Unit s)  4. Discharge patting OFF Timer 5. Discharge patting Times Initial value: 0.5; range 0.0~9.9 (Unit s)  1. Conveyor mode When the peripheral switch selects the 1 level conveyor /2 level conveyor /3 level conveyor, the output function of the conveyor is started. Initial value: 0.5; range: 0~99.9 (unit s)		1	and continue to output the valid time.
patting Switch  Patting function  When the fixed value hold time is, the period from the start of output discharge signal to the start of discharge delay after discharge is completed is the effective discharge time. When the unloading duration exceeds this time, it is considered abnormal and the unloading vibration action is started Initial value: 2.0; range 0.0~9.9 (Unit s)  3. Discharge ON Timer  4. Discharge patting OFF Timer  5. Discharge patting Times  6.Discharge patting Times  6.Discharge patting output port  1. Conveyor mode patting output port  1. Conveyor mode conveyor /3 level conveyor, the output function of the conveyor is turned on  2. Conveyor 1 Start Delay Timer  Conveyor rule output port started. Initial value: 0.5; range: 0~99.9 (unit s)  After the delay of the unlock bag, the controller judges that the conveyor is started. Initial value: 0.5; range: 0~99.9 (unit s)			output port of the bagging machine and the thread cutting
2. Discharge valid time   Start of output discharge signal to the start of discharge delay after discharge is completed is the effective discharge time. When the unloading duration exceeds this time, it is considered abnormal and the unloading vibration action is started Initial value: 2.0; range 0.0~9.9. (Unit s)    3. Discharge ON Timer   Initial value: 0.5; range 0.0~9.9 (Unit s)   4. Discharge patting OFF Timer   Initial value: 0.5; range 0.0~9.9 (Unit s)   5. Discharge patting Times   Initial value: 10; range 0~99 (Unit s)   6. Discharge patting output port   Unit soutput port.   Initial value: 10; range 0~99   Unit soutput port.     1. Conveyor mode   When the peripheral switch selects the 1 level conveyor /2 level conveyor /3 level conveyor, the output function of the conveyor is turned on   After the delay of the unlock bag, the controller judges that the conveyor is started.   Initial value: 0.5; range: 0~99.9 (unit s)			The peripheral switch is set to "on" to open the Discharge patting function
Toller    Timer	e patting paracont	_	start of output discharge signal to the start of discharge delay after discharge is completed is the effective discharge time. When the unloading duration exceeds this time, it is considered abnormal and the unloading vibration action is started
Start Delay Timer   Initial value: 0.5; range 0.0~9.9 (Unit s)			Initial value:0.5; range 0.0~9.9 (Unit s)
Datting Times   Initial value: 10; range 0~99			Initial value:0.5; range 0.0~9.9 (Unit s)
Conveyor  The conveyor output port output port.  1. Conveyor mode level conveyor /3 level conveyor, the output function of the conveyor is turned on  2. Conveyor 1 Start Delay Timer Start Delay Timer Initial value: 0.5; range: 0~99.9 . (unit s)			
Conveyor   Conveyor		patting output port	· ·
Conveyo r Start Delay Timer that the conveyor is started. Initial value: 0.5; range: 0~99.9 . (unit s)		1. Conveyor mode	When the peripheral switch selects the 1 level conveyor /2 level conveyor /3 level conveyor, the output function of the conveyor is turned on
	Conveyo		that the conveyor is started.
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	paracont	3. Conveyor 1	Conveyor runtime setting.



roller	Running Timer	Initial value: 4.0; range: 0~99.9. (unit s)
	4. Conveyor 2/3 Max running Timer	Conveyor 2/3 runtime setting. (Note: In the Jumbo Bag mode, the paracontrollers of the conveyor level 2 or level 3 can only be seen when the conveyor level is turned on) Initial value: 30.0; range: 0~99.9。 (unit s)
	5. IO function define	Through this, the I/O module related to conveyor can be quickly defined, including manual conveyor 1 forward rotation, manual conveyor 1 reverse, conveyor 2 limit, conveyor 3 limit input port, conveyor 1, conveyor 1 reverse, conveyor 2, conveyor 3 output port
Coding	1. Coding Device ON/OFF	On/off optional; set to "on", the controller has a code output function; Initial value : off.
	2. Coding Start Delay Timer	The pocket is completed, and the output is valid after the delay; Initial value: <b>0.5</b> ; Range: <b>0.0~99.9</b> . (units)
Paracont roller	3. Coding Duration Timer	The effective time of coding; Initial value: <b>0.5</b> ; Range: <b>0.0~99.9</b> . (units)
	4.Not Allow Fill/Discharge When Coding	On/Off is optional; set to "On", it is not allowed to start filling (no bucket mode) output or unloading (with bucket mode) output during coding.  Initial value: off.
	1. Auxiliary pulse ON/OFF	The peripheral ON/OFF is set to "on" to enable the auxiliary pulse function
	2. Auxiliary pulse mode	Auxiliary pulse mode 1~4 can be selected according to requirements 0: Pulse mode;1: Level mode. Initial value: 0: Pulse mode.
	3. Auxiliary Pulse 1 Execute Total Timer	Auxiliary Pulse 1 Execute Total Timer. If 0, keeps running. Initial value: <b>0</b> ; range: <b>0.0~999.9</b> .(unit <b>s</b> )
Auxiliar	<b>4.</b> Auxiliary Pulse 1 On Timer	Initial value : <b>10.0</b> ; range : <b>0.0~999.9</b> .(unit <b>s</b> )
y pulse paracont roller	<b>5.</b> Auxiliary Pulse 1 Off Timer	Initial value : <b>10.0</b> ; range : <b>0.0~999.9</b> .(unit s )
	6. Auxiliary Pulse 2 Execute Total Timer	Auxiliary Pulse 2 Execute Total Timer. If 0, keeps running. Initial value: 0; range: 0.0~999.9.(unit s)
	7. Auxiliary Pulse 2 On Timer	Initial value : <b>10.0</b> ; range : <b>0.0~999.9</b> .(unit <b>s</b> )
	8. Auxiliary Pulse 2 Off Timer	Initial value : <b>10.0</b> ; range : <b>0.0~999.9</b> .(unit s )
	9. Auxiliary Pulse 3 Execute Total Timer	Auxiliary Pulse 3 Execute Total Timer. If 0, keeps running. Initial value: 0; range: 0.0~999.9.(unit s)



	10. Auxiliary Pulse 3 On Timer	Initial value : <b>10.0</b> ; range : <b>0.0~999.9</b> .(unit <b>s</b> )	
	11. Auxiliary Pulse 3 Off Timer	Initial value : <b>10.0</b> ; range : <b>0.0~999.9</b> .(unit s )	
	Pulse 4 Execute Total Timer	Auxiliary Pulse 4 Execute Total Timer. If 0, keeps running. Initial value: 0; range: 0.0~999.9.(unit s)	
	Pulse 4 On Timer	Initial value : <b>10.0</b> ; range : <b>0.0~999.9</b> .(unit <b>s</b> )	
	Pulse 4 Off Timer	Initial value : 10.0 ; range : 0.0~999.9 .(unit s )	
	1. Overtime Checking ON/OFF	Add and discharge timeout judgment ON/OFF. After the opening, the loading and unloading timeout judgment is performed in the running state.  Initial value: off.	
	2 Coarse Flow Overtime	In the running state, after the coarse output exceeds the time, the output timeout alarm is issued and the machine stops.  Initial value: 5.0; range 0.0~99.9. (units)	
Overtim er alarm	3. Medium Flow Overtime	In the running state, after the output is over this time, the output timeout alarm is issued and the machine stops. Initial value: 5.0; range 0.0~99.9. (units)	
	4. Manual Fine Overtime	In the running state, after the fine output exceeds the time, the output timeout alarm is issued and the machine stops.  Initial value: 5.0; range: 0.0~99.9. (unit s)	
	5. Discharge Overtime	In the running state, after the discharge output exceeds this time, the output timeout alarm and stop. Initial value: 5.0; range: 0.0~99.9 (unit s)	

## 4.6 Motor paracontroller

When the scale structure is Net Weigher, Gross Weigher, ton bag and valve port scale structure, the "filling mode", "Lock/Release Mode " and "discharge mode" of the system maintenance paracontroller scale property are set to the motor mode, and the following paracontrollers can be seen.

- ◆ Enter the interface of motor paracontrollers from [Menu] [Motor].
- ◆ The unit number on the right side can be switched.

Motor	paracontroller	Description	
	1. Filling mode	Initial value: pneumatic filling; Optional: 0, pneumatic mode; 1, stepper motor filling; 2,	

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			ordinary motor mode.
	2. Closing in place signal type		when the signal is valid in place (when the input is valid, the door is considered to be in place).     the signal is invalid in place (when the input is invalid, the door is considered to be in place).
	3. Current Cfg ID	Filler Motor	Set Current Filler Motor Cfg ID
	<b>4.</b> Filler Ga	ate Close	Default: <b>4.0</b> , Range: <b>0.0~99.9</b> (Unit: <b>s</b> )
Filling		<b>a</b> . Filling frequency	Default: 12000, Range: 1~50000 (Unit: Hz)
paracont roller		<b>b</b> . Fi-f pulse	Default: 1800, Range: 1~60000
Toller		c.Me-f pulse	Default: 4300, Range: 1~60000
		d.Fa-f pulse	Default: 7750, Range: 1~60000
		e. Manual Fine Flow, Manual Medium Flow, Manual Coarse Flow	Test shortcut key, used to check the device opening status, to quickly adjust the pulse number
	5. Step	f. Start Frequency	Filling motor Start Frequency。 Default: 2000 Range: 0~50000。 (Unit: Hz) (This value cannot bigger than the filling motor frequency)
	Motor Drive	g. ACC Time	Filling motor ACC Time Default: <b>100</b> , Range: <b>0~9999</b> (Unit <b>ms</b> )
	paracontr oller	h. DEC Time	Filling motor DEC Time Default: 50, Range: 0~9999. (Unit ms)
	i. IO function define		Options:  a) State of filling door opening direction signal:  0 When the signal is invalid, it is the direction of the door opening: when the filling door opening action, the output of the rotation direction signal of the filling stepper motor is invalid, and the output of the direction signal is effective when the closing action;  1 When the signal is effective, it is the direction of opening the door: when the filling step motor is opening the door, the output of the rotation direction signal of the filling step motor is effective, and the output of the direction signal of the closing action is invalid.  b) Quickly define the input port, filling



			direction signal and filling pulse output port I/O module in place of filling and closing	
		j. Power back to zero frequency	When the power is off and restarted, the filling motor returns to the origin with this frequency.  Initial value: 2000, Range: 0~50000° (Unit Hz)	
		a. Fi-F timer	The time required to open the filling door to the Fi-F position. Initial value: 0.2, Range: 0~99.99 (Unit s)	
		<b>b</b> Me-F timer	The time required to open the filling door to the Me-F position.  Default: <b>0.4</b> , Range: <b>0~99.99</b> (Unit s)	
		<b>c</b> .Fa-F timer	The time required to open the filling door to the Fa-F position.  Default: <b>0.8</b> , Range: <b>0~99.99</b> (Unit s)	
6. Filling normal motor paracontrol ler setting	normal motor paracontrol	d. Manual Fine Flow, Manual Medium Flow, Manual Coarse Flow	Test shortcut key, used to check the state of the equipment, to quickly adjust the motor coarse, fine and add time.	
		e. Filling door close in place input port  f. Filling door	Quickly set the input/output port of filling related I/O module	
		output port  g Output port of filling door		
		a. Lock/Release bag mode	Step motor	
Bag Clutch	3. Step motor Lock/Rele	<b>b</b> .Release bag dignal mode	O In place when the signal is effective (when the input is effective, the door is considered to be in place  1 In place when the signal is invalid (when the input is invalid, the door is considered to be in place)	
Paracont roller	ase bag paracontr	c. Lock bag dignal mode	Default: <b>3.0</b> , Range: <b>0.0~99.9</b> (Unit s)	
	oller	d. Clutch Lock Frequency	Default: <b>30000</b> , Range: <b>1~50000</b> (Unit: <b>Hz</b> )	
		e. Clutch Release Frequency	Default: <b>20000</b> , Range: <b>1~50000</b> (Unit <b>Hz</b> )	
		f. Lock bag	Default: <b>12000</b> , Range: <b>1~60000</b> (Unit <b>Hz</b> )	



		steps	
		g. Start Frequency	Default: 2000, Range: 0~50000 (Unit Hz) (this value can't bigger than clutch bag frequency)
		h. ACC Time	Default: 200, Range: 0.0~9999 (Unit ms)
		i. DEC Time	Default: 50, Range: 0.0~9999 (Unit ms)
		j.IO function define	Optional A) Bag direction signal state: 0 direction signal output is invalid when the bag is clamped: when the bag unlockning mechanism clamps the bag, the rotation direction signal output of the stepping motor of the bag unlockning mechanism is invalid, but the direction signal output is effective when the bag unlockning mechanism clamps the bag; 1. Effectiveness of direction signal output when the bag is clamped: when the bag is clamped unlock, the rotation direction signal output of the stepper motor of the bag is effective, but when the bag is clamped unlock, the direction signal output is invalid. B) Quickly define the switching quantity of input port, direction signal and pulse output port of unlock bag in place.
		k. Power on zero frequency	When the power is cut off and restarted, the clutch motor returns to the origin at this frequency.  Initial value: 2000, range: 0~50000° (Unit Hz)
		I. Bag Clutch button	The shortcut button is used to detect the condition of the bag clutch
		a.Lock/Relea se Mode	MotorDrive Dual-Limit
	4. Typ MotorDri ve Dual-Lim it Relo paracontr oller d. I	<b>b</b> . Clutch Limit Signal Type	<ul> <li>0: Place in place when the signal is effective (when the input is effective, the door is considered to be in place)</li> <li>1: Place in place when the signal is invalid (when the input is invalid, the door is considered to be in place)</li> </ul>
		c. Bag Release Overtime	Default: 3.0, range: 0.0~99.9 (Units)
		<b>d</b> . Bag Lock Overtime	Default: <b>3.0,</b> range: <b>0.0~99.9</b> (Units)
		e. Bag Locked Input f. Bag Released	Quick setting of motor double limit lock unlock bag related switch input and output ports.



		Input		
		<b>g</b> . Bag Locked Output		
		h. Bag Released Output		
		i. Bag Clutch button	The shortcut button of Bag Clutch	
		a.Bag Clutch mode	MotorDrive Single-Limit	
		b. Clutch Limit Signal Type	<ul><li>0 when the signal is valid in place (when the input is valid, the door is considered to be in place).</li><li>1 the signal is invalid in place (when the input is invalid, the door is considered to be in place).</li></ul>	
	5.	c. Bag Lock Overtime	Default: 3.0, range: 0.0~99.9 (Unit s)	
	MotorDri ve Single-Li mit Bag	d. Bag Release valid time	Normal motor release bag valid time Default: 0.5, range: 0~99.99 (Units)	
	Clutch Paracontr	e. Clutch bag button	Shortcut key for clutch bag	
	oller	f. Bag Locked Input		
		g. Bag Locked Output	Quick setting of motor single limit clutch bag related switch input and output ports.	
		h. Bag Released Output		
		<b>a</b> .discharge mode	Step motor	
		b. DISC Gate Close Overtime	Default: 3.0 range: 0.0~99.9 (Unit s)	
Discharg e Paracont roller ( Net	1.Step motor Discharge Paracontr ollersettin g	c. DISC Gate Limit Signal Type	0 when the signal is valid in place (when the input is valid, the door is considered to be in place).  1 the signal is invalid in place (when the input is invalid, the door is considered to be in place).	
( Net Weigher mode)		d. Discharge gate open frequency	Default: 30000, range: 1~50000 (Unit Hz)	
		e. Discharge gate close frequency	Default: <b>20000</b> , range: <b>1~50000</b> (Unit <b>Hz</b> )	
		f. Discharge	Default: 12000, range: 1~60000	



		steps	
		<b>g</b> . Motor Start Frequency	Default: 2000, range: 1~50000 (Unit Hz) (this value can't bigger than discharge frequency)
		h. ACC Time	Default: 200, range: 0.0~9999 (Unit ms)
		i. DEC Time	Default: 50, range: 0.0~9999 (Unit ms)
		j.IO function define	Optional A) Discharging direction signal status: 0 direction signal output is invalid when discharge door opening: when discharge mechanism opens the door, the direction signal output of discharge stepper motor is invalid, and the direction signal output is effective when closing the door; Direction signal output is effective when discharge and opening the door: when discharge mechanism opens the door, the rotation direction signal output of discharge stepper motor is effective, and the direction signal output is invalid when closing the door. B) Quickly define the discharge input port, discharge direction signal, discharge pulse output port switching quantity.
		k. Power on zero frequency	When the power is cut off and restarted, the clutch motor returns to the origin at this frequency.  Initial value: 2000, range: 0~50000. (Unit Hz)
		a.discharge mode	Dual motor limit
	2. Motor double	<b>b.</b> DISC Gate Close Overtime	Default: 3.0, range: 0.0~99.9 (Unit s)
		c. DISC Gate Limit Signal Type	0, when the signal is effective in place (when the input is effective, the door is considered to be in place).  1, the signal is invalid in place (when the input is invalid, the door is considered to be in place).
	limit discharge paracontr	d. DISC Gate Open Overtime	Default: 3.0 range: 0.0~99.9 (Unit s)
	ollers setting	e. DISC Gate Opend input  f. DISC Gate Closed input  g. DISC Gate Open Output  h. DISC Gate Close Output	Quick setting of motor double limit discharge related switch input and output ports
		Close Output  i. Manual	Manual Discharge shortcut key



		Discharge	
		<b>a</b> . Discharge Mode	MotorDrive Single-Limit
	3. MotorDri	<b>b</b> . DISC Gate Close Overtime	Default: 3.0, range: 0.0~99.9 (Unit s)
		c. DISC Gate Limit Signal Type	0, when the signal is effective in place (when the input is effective, the door is considered to be in place).  1, the signal is invalid in place (when the input is invalid, the door is considered to be in place).
	Single-Li mit paracontr	d. DISC Gate Open Timer	Motor opening signal output time Default: 1.00, range: 0.00~99.99 (Unit s)
	oller setting	e. Manual Discharge	Manual Discharge short cut key
		f. DISC Gate Closed input g. DISC Gate Opened output h. DISC Gate Closed output	Quick setting of motor single limit discharge related switch input and output ports
		<b>a</b> . Discharge Mode	MotorDrive Rotating
	4. MotorDri	<b>b</b> . DISC Gate Close OT	Default: 3.0, range: 0.0~99.9 (Unit s)
		c. DISC Gate Limit Signal Type	0, when the signal is effective in place (when the input is effective, the door is considered to be in place); 1, the signal is invalid in place (when the input is invalid, the door is considered to be in place).
	ve Rotating	d. DISC Gate Open Timer	Motor Gate Open signal output timer Default: 1.00, range: 0.00~99.99 (Unit s)
	Discharge Paracontr oller	e. Manual Discharge	Manual Discharge short cut key
	setting  f. DISC Ga Opend inpu  g. DISC Ga Closed inpu  h. DISC Ga Opend outp  i. DISC Ga	f. DISC Gate Opend input g. DISC Gate Closed input h. DISC Gate Opend output	Quickly set the input and output ports of the I/O module related to discharging in one direction rotation of the motor.
		i. DISC Gate Closed output	



#### 4.7 Statistics

In the main interface, click [Statistics] to enter the interface. Under the [Statistics] paracontroller, the user can view the total accumulation/batch, formula accumulation, user accumulation, history record and carry out clearing, printing and other operations.

- ◆ Under the 【Total ACCU/Batch】 interface, you can view the total accumulation and batch number and set the batch number. If the serial port is set to print, click 【Data Processing】 to print the total total and clear the total total and the batch.
- ◆ In total accumulated with batch interface can set 【 Set Batch 】, such as a complete set of batch, controller in the main interface box prompts "batch complete alarm", wait for the user processing, when the "clear alarm" input signal effectively, or "clear alarm" button, controller will clear the alarm, it can remove or input stop back to stop state can clear alarm.
- ◆ Under "recipe ACUM", check the cumulative times and weight of each formula number. Click the right side of the interface to switch formula numbers 1-10 and 11-20. Click "Data Processing" to clear all formula accumulations, print all formula accumulations, print the current formula accumulations and select the formula to print.
- ◆ Click the formula accumulation to be deleted in the "recipe ACUM" interface to delete the selected formula accumulation content.
- ◆ Under 【User ACUM】, check the cumulative times and weight of each user. Click 【Data Processing】 to clear all user accumulations, print all user accumulations, print current user accumulations, select user printing and other operations
- ◆ Click the user accumulation to be deleted in the 【User ACUM】 interface to delete the selected user accumulation content.
- ♦ In the 【History 】 interface, you can view the history. Click 【Data Processing】 to export the history through the U disk or erase the historical data.

Note: if working in combination mode, the number of batches completed is increased by 1. The set number of batches and the accumulated number of batches are power-off and saved

#### 4.8 I/O Module

The GM9907 provides 12 inputs and 16 output interfaces to interface the controller with external devices.

The input and output factory definition contents are as follows output 1 - 16 corresponds to the controller  $OUT1 \sim OUT16$  interface, input 1 - 12 corresponds to the controller  $IN1 \sim 12$  interface).

There are Net Weigher default definition:

Output		Input quantity	
Output port -1	O1 Running	Output port -1	I1 Start



Output port -2	O2 Stoped	Output port -2	I2 Emergency Stop
Output port -3	O3 Coarse Flow	Output port -3	I3 Stop
Output port -4	<b>O4</b> Medium Flow	Output port -4	I5 Zeroing
Output port -5	O5 Fine Flow	Output port -5	I6 Clear Alarm
Output port -6	O6 Bag Lock	Output port -6	I8 Clear Total ACUM
Output port -7	O7 Result Waiting	Output port -7	I7 Bag Lock/Unlock Request
Output port -8	O8 Ready	Output port -8	I9 Manual Discharge
Output port -9	O9 Discharge	Output port -9	I10 Manual Fine Flow
Output port -10	O10 (-NZ-)	Output port -10	I11 Manual Coarse Flow
Output port -11	O11 Pag Bag	Output port -11	I13 Change Recipe
Output port -12	O13 FILL	Output port -12	I12 Empty Material
Output port -13	O14 EMPT	Note: In interlock mod	e.
Output port -14	O15 Alarm	Input port -12 is the interlock input.	
Output port -15	O17 Batch Complete	Output port - 16 is the dual scale interlock output.	
Output port -16	O16Over/Under		

Gross Weigher scale default definition:

Output		Input quantity	
Output port -1	O1 Running	Input port - 1	I1 Start
Output port -2	O2 Stopped	Input port - 2	I2 Emergency Stop
Output port -3	O3 Coarse Flow	Input port - 3	I3 Stop
Output port -4	<b>O4</b> Medium Flow	Input port - 4	I4 Pause
Output port -5	O5 Fine Flow	Input port - 5	I5 Zeroing
Output port -6	O6 Bag Lock	Input port - 6	I6 Clear Alarm
Output port -7	O7 Result Waiting	Input port - 7	I7 BagLock/Unlock Request
Output port -8	O10 (-NZ-)	Input port - 8	<b>I8</b> Clear Total ACUM
Output port -9	O11 Pat Bag	Input port - 9	I10 ,Manual Fine Flow
Output port -10	O15 Alarm	Input port - 10	I11 Manual Coarse Flow
Output port -11	O13 FILL	Input port - 11	I13 Change Recipe
Output port -12	O27 Bag Release	Input port - 12	I12 Empty Material
Output port -13	O14 EMPT	Note: In interlock mode.	
Output port -14	O17 Batch Complete	Input port -12 is changed to interlock input.  Output port -12 is changed to missing material.	
Output port -15	O16 Over/Under	Output port- 13 is changed to batch completion.  Output port- 14 is changed to the sewing	
Output port -16	O44 Sewing Output	machine output. Output port -15 is cha	nged to conveyor output. changed to dual scale



# Jumbo Bags default definition:

Output		Input quantity	
Output port -1	O1 Running	Input port - 1	I1 Start
Output port -2	O2 Stoped	Input port - 2	I2 Emergency Stop
Output port -3	O3 Coarse Flow	Input port - 3	I3 Stop
Output port -4	<b>O4</b> Medium Flow	Input port - 4	I4 Pause
Output port -5	O5 Fine Flow	Input port - 5	I5 Zeroing
Output port -6	O6 Bag Lock	Input port - 6	I6 Clear Alarm
Output port -7	O31 Hang bag	Input port - 7	I8 Clear Total ACUM
Output port -8	O34Controllering	Input port - 8	I7 BagLock/Unlock
	bracket up		Request
Output port -9	O7 Result Waiting	Input port - 9	I32 Hanging Request
Output port -10	O10 (-NZ-)	Input port - 10	I3Manual Hanger
			Up/Down
Output port -11	O33 Return Valve	Input port - 11	I19 Manual Fine Flow
Output port -12	O32 AirBlow	Input port - 12	I20 Manual Coarse Flow
Output port -13	O15 Alarm		
Output port -14	O17 BatchComplete		
Output port -15	None		
Output port -16	None		

# Valve scale default defined:

Output		Input quantity	
Output port -1	O1 Running	Input port - 1	I1 Start
Output port -2	O2 Stop	Input port - 2	I2 Emergency Stop
Output port -3	O3 Coarse Flow	Input port - 3	I3 Stop
Output port -4	<b>O4</b> Medium Flow	Input port - 4	I4 Pause
Output port -5	O5 Fine Flow	Input port - 5	I5 Zeroing
Output port -6	O6 Bag Lock	Input port - 6	I6 Clear Alarm
Output port -7	O7 Result Waiting	Input port - 7	I8 Clear Total ACUM
Output port -8	O17 Batch Completed	Input port - 8	I7 Bag Lock/Unlock Request
Output port -9	O10 (-NZ-)	Input port - 9	I10 Manual Fine Flow
Output port -10	O11 Pag Bag	Input port - 10	I11 Manual Coarse Flow
Output port -11	O13 FILL	Input port - 11	I13 Change Recipe
Output port -12	O15 Alarm	Input port - 12	I12 None
Output port -13	O16 Over/Under		
Output port -14	O30 Pushing Bag Signal		
Output port -15	O29 Lifting Bag Signal		
Output port -16	O42 Conveyor Start		

# P LC mode default definition:

0 + +	T , , , , ,
Output	Input quantity



Output port -1 O3 Coarse Flow		Input port - 1	I5 Zeroing
Output port -2 O4 Medium Flow		Input port - 2	I6 Clear Alarm
Output port -3	O5 Fine Flow	Input port - 3	None(No definition)
Output port -4	O38 Over (PLC)	Input port - 4	None
Output port -5	O39 Under(PLC)	Input port - 5	None
Output port -6	O49 upper limite(PLC)	Input port - 6	None
Output port -7	O41Lower limite(PLC)	Input port - 7	None
Output port -8	None	Input port - 8	None
Output port -9 None		Input port - 9	None
Output port -10	None	Input port - 10	None
Output port -11	None	Input port - 11	None
Output port -12	None	Input port - 12	None
Output port -13	None		
Output port -14	None		
Output port -15	None		
Output port -16	None		

# 4.8.1 Output, input port definition

Output port, input port content can be defined according to the actual application. Modify the definition of input and output I/O module paracontrollers through the menu interface I/O module paracontrollers. Each I/O module corresponds to a code, as follows:

I/O module content decription

	Output		
Code	content	Description	
O0	None	If the port number is defined as $0$ , this output port is undefined.	
01	Running	When the controller is in the running state, the output port signal is valid.	
O2	Stopper	When the controller is in the stop state, the output port signal is valid.	
О3	Coarse Flow	Used to control the large discharge port of the filling mechanism. During the filling process, when the current weight is less than the target value -coarseer advance amount, the output port signal is defined as valid.	
O4	Medium Flow	Used to control the middle discharge port of the filling mechanism. During the addition, the current weight is less than the target value - added inadvance during the definition output signal is active.	
O5	Fine Flow	Used to control the small discharge port of the filling mechanism. During the filling process, when the current weight is less than the target value -fall difference, the output	



		port signal is defined as valid.
O6	Bag Lock	It is used to control the pocket mechanism, and the signal effectively realizes the pocket; the signal is invalid, that is, the unlock bag.
<b>O</b> 7	Result Waiting	Used to indicate the end of the filling process. The output port signal is valid before the end of the fine addition to the discharge (with bucket) or the bag (no bucket).
<b>O8</b>	Ready	After the setting is completed, the output port signal is valid.
09	Discharge	A discharge door for controlling the measuring bucket. The defined output port signal is valid when the discharge is started, so that the material is discharged from the measuring bucket into the package.
O10	(-NZ-)	When the current weight of the scale is less than the set near zero value, the output port signal is valid.
011	Pat Bag	Used to control the bag making machine. A pulse signal with a controlled pulse width and number of times.
O12	Cutting Material	This output is valid during the fill and is not valid during the non-fill period.
O13	FILL	The filling mechanism for controlling the front end of the bagging scale, when the filling hopper lower level input (the lower material level input is defined) is invalid, the output is valid; when the filling hopper upper material level (the loading level input is defined) is valid, The controller invalidates this output.
O14	ЕМРТ	When the blanking input is defined and the input is invalid, the output is valid. When the hopper lowering level (the lowering input is defined) is valid, the controller invalidates the output.
015	Alarm	When the controller has an out-of-tolerance, batch number, etc. alarm, the output port signal is valid.
O16	Over/Under	When the tolerance or undershoot is exceeded, the output signal is defined as valid.
<b>O17</b>	Batch complete	When the set number of batches is completed, the output port signal is valid.
O18	Interlock Output	Used in the double scale mode, connected to the ON/OFF "Double scale interlock input" of another controller.
O19	Filling O/P PU	When the filling mode is set to stepper motor mode to control the filling door ON/OFF: This signal issued as a pulse signal output to the filling stepper motor driver to control the motor rotation.  Note: This function can only be defined on one of the ports of OUT12~16.
O20	Filling O/P DR	When the filling mode is set to stepper motor mode to control the filling door ON/OFF: This signal is used as the motor rotation direction signal output to the filling stepping motor driver to control themotor to reverse.



		Note: This function can only be defined on one output port. There can be no multiple output ports to define this function. And can only be defined to one of the ports OUT1~11.
O21	Bag Clutch O/P PU	When the bag mode is set to the stepping motor mode control lock unlock bag: This signal is used as the output pulse signal to the pinch stepper motor driver to control the motor rotation.  Note: This function can only be defined on one of the ports of OUT12~16.
O22	Bag Discharge O/P DR	When the bag mode is set to the stepping motor mode control lock unlock bag: This signal is used as the motor rotation direction signal output to the pinch bag stepping motor driver to control the motor to reverse. (No bucket mode is valid)  Note: This function can only be defined on one output port. There can be no multiple output ports to define this function. And can only be defined to one of the ports OUT1~11.
O23	DISC O/P PU	When the unloading mode is set to stepper motor mode to control unloading: this signal is used as a pulse signal output to the discharge stepper motor driver to control the motor rotation.  Note: This function can only be defined on one of the ports of OUT12~16.
O24	DISC O/P DR	When the unloading mode is set to stepper motor mode to control unloading: this signal is used as the motor rotation direction signal output to the discharge stepper motor driver to control the motor to reverse.  Note: This function can only be defined on one output port. There can be no multiple output ports to define this function. And can only be defined to one of the ports OUT1~11.
O25	Filler Open	When the filling mode is set to the normal motor mode to control the filling door ON/OFF: the large discharging port for controlling the weighing mechanism is opened. This signal is active at the beginning of the filling process and the effective time is set in the motor paracontrollers.
O26	Filler Close	When the filling mode is set to the normal motor mode to control the filling door ON/OFF: it is used to control the action of closing the filling port of the filling mechanism. The signals are valid at the time of coarse addition, medium addition and fine addition respectively. The effective time is based on the time paracontroller set in the motor paracontrollers. It is decided that the signal is valid at the end of the fill until it becomes invalid when the fill limit is valid.
O27	Bag Release	When the bag mode is set to the ordinary motor control lock unlock bag: it is used to control the unlock bag.



		When the signal is valid, the motor is driven to perform the
		unlock bag action. When the signal is invalid, the unlock bag action stops.
O28	DISC Gate Close	When the unloading mode is set to normal motor forward and reverse control discharge, it is used to control the closing action of the controllering bucket discharge door. When the signal is valid, the motor is driven to open and close the door. When the signal is invalid, the door closing action stops.
O29	Lifting Bag Signal	It is used to control the bag-making mechanism, and this signal effectively realizes the bag-lifting action .
O30	Pushing Bag Signal	It is used to control the push bag mechanism, and the signal effectively realizes the push bag action.
031	Hanging Bag	It is used to control the bag mechanism, and the signal effectively realizes the hanging bag; the signal is invalid and the hook is unlock.
O32	AirBlow	For controlling the operation of the blowing means, at the end of the controllering bracket upward, the signal is valid.
O33	Return Valve	Return valve for controlling the run, at the end of blowing, the signal is valid.
O34	Hanger Up (this paracontroller is reserved)	Used to control the upstream of the controllering bracket.  This signal is valid until the upper limit is valid if both the bag and the bag have been completed before filling.  This signal output is valid after the unlock bag is completed. Until the lower limit input is valid.
O35	Hanger Down (motor )(this paracontroller is reserved)	Used to control the downstream of the controllering bracket . ( When there is a bag making function, it needs to be started after the bag is finished ) .
O36	Convery A (this paracontroller is reserved)	Electric mode, for controlling the operation of the belt <b>A</b> , the unlock bags, the hook after the song, the signal is valid.
O37	Convery <b>B</b> (this paracontroller is reserved)	Electric mode, for controlling operation of the belt <b>B</b> , the belt <b>A</b> is stopped, the signal is valid.
O38	Over( PLC)	This signal is valid when it is out of tolerance (PLC).
O39	Under(PLC)	This signal is valid when there is a short circuit (PLC).
O40	Upper Limite (PLC)	When the weighing value > upper limit value, the upper limit output is valid .
O41	Lower Limite (PLC)	When the weighing value < lower limit, the lower limit output is valid .
O42	Conveyor Start	In the bucketless mode, it is used to control the start and stop of the conveyor. The signal is effectively activated by the conveyor and the signal is invalid and the conveyor is stopped.
O43	Coding	The code signal is output when the pocket signal output is



		valid and the code delay is over.
O44	Sewing Output	When the sewing machine input is valid, the sewing machine output is valid.
O45	Cutter Output	After the sewing machine output time is over, the output is valid, and the effective time is the tangential machine output time.
O46	Auxiliary PU Output 1	After the auxiliary pulse <b>input</b> effective, the output pulse signal (valid for the auxiliary pulse <b>an</b> effective time, dead time of the auxiliary pulse <b>a</b> dead time), and outputs the total time to stop the output (the total time is set to <b>0</b> , it has been by Pulse output).
O47	Auxiliary PU Output <b>2</b>	After the auxiliary pulse 2 input is active, the output pulse signal (valid for the auxiliary pulse 2 effective time, dead time of the auxiliary pulse 2 dead time), and outputs the total time to stop the output (the total time is set to 0, it has been by Pulse output).
O48	Auxiliary PU Output <b>3</b>	After the auxiliary pulse 3 input is valid, the pulse signal is output (the effective time is theauxiliary pulse 3 valid time, the invalid time is the auxiliary pulse 3 invalid time), and after the output execution total time is reached, the output is stopped (the total execution time is set to 0, then the button is pressed. Pulse output).
O49	Auxiliary PU Output <b>4</b>	After the auxiliary pulse 4 input is valid, the pulse signal is output (the effective time is theauxiliary pulse 4 valid time, the invalid time is the auxiliary pulse 4 invalid time), and after the output execution total time is reached, the output is stopped (the total execution time is set to 0, then the button is pressed. Pulse output).
O50	DISC Patting Output	The output of the discharge rapping function.
O51	User Logic Output 1	Auxiliary logic 1 output signal.
O52	User Logic Output 2	Auxiliary logic output signal 2.
O53	User Logic Output 3	The output signal of the auxiliary logic output 3.
O54	User Logic Output 4	The output signal of the auxiliary logic output 4.
O55	User Logic Output 5	The output signal of the auxiliary logic output 5.
O56	User Logic Output 6	The output signal of the auxiliary logic output 6.
O57	Multi-function support control patting bag (ton bag scale mode)	For one - piece control bracket and patting bag. When the patting bag is not executed: this I/O Module is the same as the uplink state of the measuring bracket. When the function of patting bag is on: this I/O Module is



		opposite to the state of patting bag.(valid patting bag support
		is invalid, invalid patting bag support is valid).
O58	Conveyor 2 output	Control conveyor 2 output is valid
O59	Conveyor 3 output	Control conveyor 3 output is valid
O60	Conveyor 1 reverse output	Control conveyor 1 reverse output is valid
		Input quantity
10	None	If the port number is defined as ${\bf 0}$ , this input port is undefined.
I1	Start	The signal valid controller will enter the running state. This input is a pulse input signal.
<b>I2</b>	Emergency Stop	The signal valid controller will return to the stop state. This input is a pulse input signal.
13	Stop	The signal valid controller will return to the stop state after completing the current bagging process. This input is a pulse input signal.
<b>I</b> 4	Pause	The signal valid controller will suspend work, retain the current state, and resume working after receiving the start signal. This input is a pulse input signal.
15	Zeroing	The signal valid controller will clear the weight. This input is a pulse input signal.
<b>I</b> 6	Clear Alarm	Used to clear the alarm output of the controller. This input is a pulse input signal.
17	Bag Lock/Unlock	It is used to control the action of the pocket mechanism. This input is effective for one pocket output, and the effective pocket output is invalid again (ie: unlock bag).
18	Clear Total ACUM	Clearing the total accumulated weight and number of times will also clear the recipe accumulation and user accumulation.
19	Manual Discharge	Used to manually remove material from the measuring hopper. The input is effective once, the discharge output is valid, and the effective discharge output is invalid again.
I10	Manual Fine Flow	The input is valid once and the output is valid, and the effective fine input is invalid again.
I11	Manual Coarse Flow	Pulse type signal. Function in the stop state, used to manually turn the controller on and off. Effective once, it is effectively turned off again.
I12	Empty Material	Pulse type signal. Acting in the stop state, used toempty the storage hopper while opening the discharge door and the fill door. Effective once, it is effectively turned off again. (Gross Weigher, PLC, valve port, Jumbo Bag)
I13	Change Recipe	This input is valid once, the recipe number is changed to the next target whose value is not zero, and the recipe number



		with the target value of zero is skipped.
I14	Supplement Full	Used to connect the upper level of the hopper, this input should be level input.
I1 5	Supplement Empty	Used to connect the lower level of the hopper, this input should be level input. The blanking bit input is invalid or left blank to indicate the material shortage. The blanking level input is valid to indicate that there is no shortage of material.
I16	Start/E-stop ( level Signal)	The signal is valid and the controller enters the running state. If it is invalid, it returns to the stop state. This input is a level signal.
I17	Start/Stop ( level Signal)	The signal valid controller enters the running state, and if it is invalid, it returns to the stop state after completing the current bagging process. This input is a level signal.
I18	M Discharge ( level Signal)	Used to manually remove material from the measuring hopper. The input effective discharge output is valid, and the input invalid discharge output is invalid.
I19	M Fine Flow (level Signal)	The signal is effectively fine and the signal output is valid. The signal is invalid and the fine signal output is invalid.
120	M Coarse Flow( level Signal)	The signal is valid and the signal output is valid. The signal is invalid and the signal output is invalid.
121	Bag Locked (level Signal)	If this input is defined, it effectively indicates that the pocket is in place, and vice versa.  No fighting mode: the folder bag has state, the controller must be detected "bag-in place" input active material began to increase, the process ofadding material, detecting whether the signal is notvalid. This input should be a level input.
122	DISC Gate Opended ( level Signal)	The unloading mode is set to the normal motor forward and reverse double limit mode to control the unloading: this signal is used as the limit input signal of the discharge door opening door. When the controller detects that the signal is valid, it considers that the discharge door has been opened.
123	Filler Gate Closed ( level Signal)	When the unloading mode is set to normal motor forward and reverse double limit mode to control unloading: this signal is used as the limit input signal of the filling door closing door. When the controller detects that the signal is valid, it considers that the filling door has been closed.
I24	DISC Gate Closed ( level Signal)	This signal acts as a limit input signal for the discharge door to close the door. When the controller detects that the signal is valid, it considers that the discharge door has been closed.
125	Bag Released (level Signal)	The pocket mode is set to stepper motor lock unlock bag / motor double limit lock unlock bag mode control lock unlock bag: This signal is used as the limit input signal of the pocket bag unlock bag in place.  (Note: This signal is determined by the type of in-position signal and is set to positive logic: when the input signal is



		valid, it is considered that the pocket mechanism has
		been unlockned in place; set to reverse logic: when the input signal is invalid, it is considered that the pocket mechanism has been unlockned in place.)
<b>I26</b>	Sewing Input	When the digital input is valid, the effective output of the sewing machine is started.
<b>I27</b>	Sewing Emergency	When the digital input is valid, the sewing machine stops outputting.
<b>I28</b>	Auxiliary PU Input 1	Auxiliary PU Input 1 self defined trigger input signal
129	Auxiliary PU Input 2	Auxiliary PU Input 2 self defined trigger input signal
I30	Auxiliary PU Input 3	Auxiliary PU Input 3 self defined trigger input signal
I31	Auxiliary PU Input <b>4</b>	Auxiliary PU Input 4 self defined trigger input signal
I32	Hanger Request	Used to control the movement of the bag mechanism.
I33	Hanger Up Done	The upper limiter for connecting the controllering bracket, this input should be a pulse input.
I34	Hanger Down Done	The lower limiter used to connect the controllering bracket, which should be a pulse input.
I35	Hanger Lower Limitation	The lower limiter for connecting the controllering bracket, this input should be a pulse input.
136	Convery A Stop (this paracontroller is reserved)	In the electric mode , the stop detection load cell for connecting the belt $\bf A$ , which should be a pulse input .
137	Convery A Stop (this paracontroller is reserved)	In the electric mode, the stop detection load cell for connecting the belt <b>B</b> should be a pulse input.
138	Manual Hanger Up/Dowm(this paracontroller is reserved)	Used to control the motion of the stand, this input is a pulse input.  The motion of the stand can be controlled in the stopped state.  In the running state, it is the start signal of the motion of the bracket.
139	Interlock Input	Used in the double scale mode, the ON/OFF "double scale interlock output" used to connect another controller.
I40	Auxiliary logic input 1	Auxiliary PU Input 1 self defined trigger input signal.
I41	Auxiliary logic input 2	Auxiliary PU Input 2 self defined trigger input signal.
I42	Auxiliary logic input 3	Auxiliary PU Input 3 self defined trigger input signal.



I43	Auxiliary logic input 4	Auxiliary PU Input 4 self defined trigger input signal.
I44	Auxiliary logic input 5	Auxiliary PU Input 5 self defined trigger input signal.
I45	Auxiliary logic input 6	Auxiliary PU Input 6 self defined trigger input signal.
I46	Filling allow input	If the Filling allow input is defined in the I/O Module, judge whether the Filling allow input is valid before the filling process. If it is valid, start the filling process; if not, wait.
147	Discharge allow input	Discharge allow input is only for Net Weigher. If discharge allow input is defined in the I/O Module, it is necessary to judge whether the discharge allow input is valid after setting the value. If it is valid, the discharge process will start; if it is not, it will wait.
I48	Conveyor 1 is turning forward	At stop status, manual control conveyor starts turning forward(When the emergency stop signal is valid, the forward turning output of conveyor 1 is invalid)
149	Conveyor 1 is turning reversal	Control conveyor starts reversal (When the emergency stop signal is valid, the reversal turning output of conveyor 1 is invalid)
150	Conveyor 2 limit input	Conveyor 2 Limit Signal Type
I51	Conveyor 3 limit input	Conveyor 3 Limit Signal Type

## 4.9 Host mode

Host mode to communicate with the slave to send commands, using host mode, note the following points.

- ◆ The communication paracontrollers of serial port 2 are fixed in host mode. Only when the communication mode is Modbus-RTU mode can host mode be used, otherwise it is prohibited.
- ◆ In host mode, the starting address is fixed to 1
- ◆ Successful write will return successful send; Failure to write data returns failure to send; when there is no return for a long time, the return send timeout.
- ◆ In host mode, changing the high and low bytes of serial port 2 will change the storage order of data sent to the slave. The high and low bits correspond to each other, and the data can be used when the length is double word

	1. Communication ID	Initial value: 1; 1~99 option
Host mode	2. Data Length	Initial value: single byte; single byte /double byte option
	3. Initial value	Initial value: 1; 1~65535 option, default initial address starts from 0X0001
	4. Write paracontroller	Initial value: 0; 0~999999 option



## 5. Function

## 5.1 Setting the working mode

The GM9907- L2 has five scale body structures. Choose between the system and the communication - scale structure.

They are: Net Weigher, Gross Weigher, PLC mode, Jumbo Bags, valve scales .

(Note: Among them, the working mode of the Net Weigher and Gross Weigher supports the dual scale interlock mode. Other scales do not support the dual scale interlock mode)

#### 5.2 Batches

The batch number is used for reminder of the number of packages. When the set number of batches is completed during the automatic running process, the controller issues the batch number to the alarm and stops, waiting for the user to process, the batch number and the alarm output are valid. At this time, press the clear alarm button or make The "clear alarm" input signal is valid and the controller will clear the above alarm. If the batch number is set to  $\mathbf{0}$ , the batch number judgment is not performed.

The batch number ranges from **0** to **50000**. The initial default value is **0** (no batch count judgment).

### 5.3 Level control

Due to the different application conditions, the filling device of the storage scale storage bin is divided into **two** types: double material level (upper and lower material level), single material level (lower material level) and no level positioner.

### 5.3.1 Double digit

The upper and lower material levels are defined, corresponding to the double material level. At this time, the controller has a filling control function, and the control principle is: when the upper and lower material level inputs are invalid, the controller filling output is valid; when the filling level input is valid, the filling output is invalid. At the same time, before each filling ( coarse , medium, fine), the controller will check whether the lower level is valid. If it is invalid, wait for this signal; only when this signal is valid, the filling process starts. During the filling process, the controller does not detect whether the material level signal is valid.

### 5.3.2 Single Level

The blanking level is defined, and the loading level is not defined, corresponding to the single material level. At this point the controller will not perform fill control. Only the fill level is detected before filling. If the material level is invalid, wait for this signal; only when



this signal is valid, the filling process starts. During the filling process, the controller does not detect whether the material level signal is valid.

The upper and lower material levels are not defined, corresponding to the situation without the positioner. At this time, the controller does not perform the filling control, and the raw material level is not detected before the filling.

## 5.4 Quick setup

In the stopped state, the quickly modified recipe data is saved in real time.

The data modified during operation, the zero zone value is saved in real time, and other recipe paracontrollers are automatically updated when the next scale is started after exiting the quick setting interface (the combination mode is to be released after the unlock bag is started and the next scale target value is updated).

The recipe paracontrollers are modified during operation, but when the next scale is updated, the emergency stop signal is entered and the controller is stopped and the recipe is updated immediately.

**M odbus** can also be carried out at runtime when communicating recipe quantitative value changes, but can not modify the recipe number.



## 5.5 Adaptive function

The adaptive function is a convenient function to adjust the filling speed when the user first uses the controller. When this function is turned on, it will automatically adjust the paracontrollers such as the coarse increase advance amount, the medium increase advance amount, the fine increase advance amount, the coarse add ban time, the medium plus ban time, and the fine add time. The filling process is optimized.

#### Note:

- 1. All advances must be zero in order to be used normally.
- 2. If the drop correction and the adaptive function are turned on at the same time, the drop correction function is forcibly turned off.
- 3. When the first scale is adaptively started, the scale body must be stable and the current weight is zero.

## 5.6 U disk upgrade software

### 5.6.1 Upgrade process

### Proceed as follows:

1.	containing the upgrade kit "TPCBACKUP" into the controller						
2.	Power up the controller, and the message "You are using the comprehensive function						
	package of MCGSTPC USB flash disk, click 'Yes' to enter the system setting						
	interface and start the comprehensive function package, click' No 'to exit" pops						
	up;Click "Yes" and the "User Project Update" button pops up						
3.	Click "user project update" button, select GM9907 - L2 engineering began to						
	download						
4.	Download success, restart automatically						

## 5.6.2 U disk upgrade boot interface

#### Proceed as follows:

1.	Insert the USB flash drive into the computer and create a new " GM9907-L2 "
	folder in the USB flash drive
2.	Save the image of "GM9907-L - Logo .bmp" into the "GM9907-L2" folder;
3.	Plug the USB flash disk into the controller, switch to the system Engineer permissions, go to the System Maintenance - Software Upgrade interface, long press the blank in the lower right corner of 5S, and the "Click Upgrade" button pops up, jump to the upgrade interface, click "Upgrade", click "Upgrade" again, and the words "Upgrade in process" appear, indicating that the controller is upgrading the background
4.	When the progress bar is finished, the upgrade will be successful after the countdown
	of 10s and the login interface will be switched to

# 5.7 U disk upgrade boot interface

### Proceed as follows:

1. Save the image file (resolution 800\*480, format.bmp) into the root directory of U disk containing the project package (tpcbackup)



2.	Insert the USB flash drive into the controller					
3.	The controller pops up the display box of [Equipment vendor USB disk kit], and					
	select "Update startup bitmap".					
4.	Enter the LOGO selection interface, select the image to be upgraded, and click OK. It					
	will prompt you to restart after successful bitmap update					

## 5.8 Decoupling function

Decoupling formula paracontrollers of ton bag scale paracontrollers, the decoupling upstream ON/OFF is opened:

Setting value after filling, unlock bag, control equipment bracket downward, downward after, take off the hook, the conveyor start, after decoupling before delay on bracket start up, decoupling upward duration, then execute the uplink pause time, pause time arrives, stent decline, time duration for decoupling.

## Decoupling alarm:

If the uncoupled alarm ON/OFF is opened, during this process, if the current weight value is greater than the uncoupled alarm weight value, the machine will stop and the uncoupled alarm will be stopped. The conveyor performs reversal.

Note: This function is mainly used for prevention. After the filling, the bag can't take off the hook completely. When the conveyor is running, the current weight value will suddenly increase, resulting in controller damage

## 5.9 Running mode of bracket

Running mode of bracket: Air Drive-unlimit, Motor Drive-dual limit, Air Drive-dual limit

#### Air Drive-unlimit

I/O Module: bracket uplink

When the controllering bracket is mounted, the uplink output of the controllering bracket is effective. After the uplink delay time of the controllering bracket, the uplink of the controllering bracket is in place. (During operation, after ascending to position, the controller can start peeling and filling, etc.)

When the measuring support goes down, the uplink output of the measuring support is invalid. After the delay time of the measuring support goes down, the support goes down in place.(In operation, the controller can start to take off the hook after the downlink is in place)

#### Motor Drive-dual limit:



I/O Module input: support up in place, support down in place. I/O Module output: controllering support up, controllering support down.

When the measuring support is mounted, the uplink output of the measuring support is effective, while the downlink output of the measuring support is invalid. Wait for the uplink of the measuring support to be in place. If the support is still not in place within the uplink timeout period, the rising timeout alarm will be given. After the up-flow is in place, the up-flow output of the controllering support and the down-flow output of the controllering support are invalid

When the controllering support is in the downward direction, the downstream output of the controllering support is effective, while the upstream output of the controllering support is invalid. If the support is still not in the downward direction within the downward timeout period of the support, the downward timeout alarm will be given. When the downlink is in place, the downlink output of the controllering support and the uplink output of the controllering support are both invalid

### Air Drive-dual limit:

I/O Module input: support up in place, support down in place. I/O Module output: controllering support up, controllering support down.

When the measuring support is mounted, the uplink output of the measuring support is effective, while the downlink output of the measuring support is invalid. Wait for the uplink of the measuring support to be in place. If the support is still not in place within the uplink timeout period, the rising timeout alarm will be given. After the up-flow is in place, the up-flow output of the controllering support is effective, while the down-flow output of the controllering support is invalid

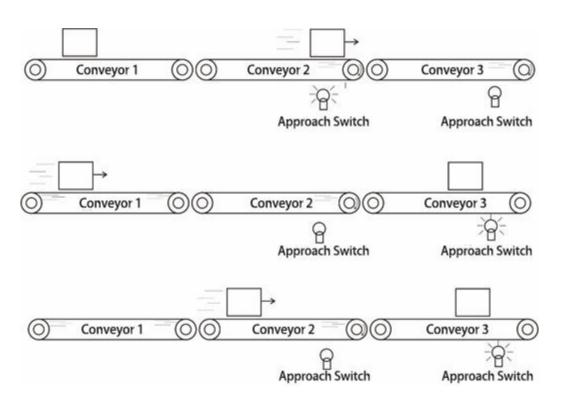
When the controllering support is in the downward direction, the downstream output of the controllering support is effective, while the upstream output of the controllering support is invalid. If the support is still not in the downward direction within the downward timeout period of the support, the downward timeout alarm will be given. When the downlink is in place, the downlink output of the controllering support is effective, while the up-link output of the controllering support is invalid

## 5.10 Use method of 3 - class conveyor for ton baling scale

Three conveyors are placed under the ton-bale balance. Conveyor No. 1 is placed under the ton-bale balance. One bag of materials is placed on conveyor 1 after decoupling. Conveyer 2 is behind conveyer 1. Conveyer 3 is behind conveyer 2. There is a limit switch (approach switch) at the end of conveyor 2 and 3 respectively.



- 1) If the limit switch (approach switch) of conveyor 3 is invalid, then conveyor 2 and Conveyor 3 will rotate to transport materials to conveyor 3. When the limit switch (approach switch) of conveyor 3 is effective, the rotation of conveyor 3 will stop. Similarly, conveyor 1 transports materials to conveyor 2.
- 2) When the upper limit switch (proximity switch) of conveyor 2 is in effect, conveyor 1 cannot start operation even though it has been disconnected. When the limit switch (proximity switch) of conveyor 2 is invalid, conveyor 1 rotates to transport materials to conveyor 2.
- 3) When there are materials in conveyor 3 and Conveyor 2, the forklift truck can shovel the materials away and wait for the next start and rotation.





## 6. Serial communication

GM9907 provides two serial communication interface, and serial port 1 and 2 can be selected in a continuous manner, Modbus mode and printed three kinds of functions. The first serial port of the controller is RS - 23 2 and the second serial port of the controller is RS - 485.

## 6.1 Printing method

When the serial port serial port 1 or serial port 2 is selected as the printing mode, the corresponding serial port can realize the printing of the related accumulated content by connecting the serial printer.

The communication paracontrollers related to the printing method refer to the serial port paracontroller items, among which are noted:

- 1) **Baud Rate** This paracontroller should be selected in accordance with the printer settings used for the connection.
- 2) Communication Format This paracontroller should be selected in accordance with the printer settings used for the connection.

Note: When the print language is selected as Chinese, the data bit cannot be used in 7 -bit format, otherwise there will be an error in printing.

3) Print Format - The peripheral format allows you to set the print format to 24 columns or 32 columns. In addition, the print language of the peripheral paracontrollers is set to Chinese or English.

#### 6.1.1 Auto print

In the **print** mode, the automatic print ON/OFF for peripheral paracontrollers is set to  $\mathbf{On}$ . Then, each time the weighing of the controller is completed, the weighing result will be printed automatically. The format is as follows:

The Er	glish 24	column	print	The English 32 column print format is as			
format is a	s follows:			follows:			
Packing	Detail			Packing schedule			
Unit: k	g			Unit: kg			
Recipe ID: 20				Recipe number: 20			
Total ACUM PCS Result				Total ACUM PCS Target Result			
		-					
1	5.50	)		3 5.60 5.50			
2	5.50	)		4 6.00 5.80			



### **6.1.2** Total cumulative printing

In the **printing** mode, stop the state, enter the "Accumulate and Batch" interface, and click "Print Total Accumulation". The format is as follows:

The English	24 column	print	The English 32	2 column print format is as	
format is as follo	ows:		follows:		
Total ACUM	I report		Total ACUM	I report	
Time: 2018/	6/19 13:28		Time: 2018/6/19 13:36		
Unit: kg			Unit: kg		
PCS:	18		PCS:	24	
Wt:	84.16		Wt:	129.40	

### **6.1.3** Formula cumulative printing

In the printing mode, stop the state and enter the "Accumulate and Batch" interface. Select "Recipe Accumulation" and click "Print Selected Receipts".

Click the "Print all the recipes rolled-up" to print all the recipes (1 to 20) accumulated, the controller will automatically skip the cumulative recipe 0 does not print. The format is as follows:

The English 24 column print format is	The English 32 column print format is			
as follows:	as follows:			
All Recipe ACUM Report	All Recipe ACUM Report			
Time: 2018/6/19 13:29	Time: 2018/6/19 13:36			
Unit: kg	Unit: kg			
Recipe ID: 20	Recipe ID: 20			
PCS: 18	PCS: 24			
Wt: 84.16	Wt: 129.40			

### **6.1.4** User cumulative printing

In the printing mode, stop the state and enter the "Accumulate and Batch" interface. ON/OFF to the user cumulative interface and press "Print Selected User Accumulation".

Click "Print All Users Accumulate" to print the total of all users (0~9). The controller will automatically skip users whose user accumulation is 0 and will not print. The format is as follows:

The English 24 column print format is	The English 32 column print format is
as follows:	as follows:



All User ACUM Report	All User ACUM Report
Time: 2018/6/19 13:29	Time: 2018/6/19 13:37
Unit : kg	Unit: kg
User ID: 9	User ID: 9
PCS: 16	PCS: 22
Wt: 72.26	Wt: 117.50

### 6.2 Continuous mode data frame format

١	STX	COM	R	T	SP	SP	Cumulati	,	Cumulati	CRC	CR	LF
		ID.					ve		ve weight			
١							number					

among them:

R — 52H

T — 54H

SP —— 20H

Cumulative number - 9 digits, 000000000~999999999

Cumulative weight - 10 digits, including decimal point

For example, the controller sends the following data (in hexadecimal form):

### 02 30 31 52 54 20 20 20 20 20 20 20 20 31 30 30 2C 20 20 20 30 2E 35 30 30 30 32 39 0D 0A

It means: 1# scale, the current total cumulative number is 100 times, the total cumulative weight is 0.5000.

## 6.3 Re-Cont specific protocol

In this way, there is no need to send any command to the weighing display, and the display will automatically send the collected data to the computer

Return data frame format description:

State	,	GS/NT	,	+/-	Displaye d value	Unit	CR	LF
2 Units	2C	47 53/4E 54	2C	2B/2D	7 Units	2 Units	0D	0A

#### Note:

State—2Units, OL(spill): 4FH 4CH;ST(stable):53H 54H;US(unstable):55H 53H

Displayed value—— 7 Units, Include decimal point, If there is no decimal point, the high value is a space

Unit —2units, g:20 67; kg 6B 67; t:20 74

## 6C 62(lb)

## For example:

When the weighing display automatically sends the following frame of data:



## 53 54 2C 47 53 2C 2B 30 31 31 2E 31 32 30 6B 67 0D 0A

The current state is stable, the data value is positive, and the display value is 11.120kg

## 6.4 Modbus-RTU Protocol

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

#### **6.4.1** Abnormal function code and code

### • Function code supported by the controller:

function code	name	Description
03	Read register	Read up to 125 registers in a single pass.
06	Write a single register	Use this function code to write a single holding register.
10	Write multiple registers	This controller only supports writing double registers. It must be aligned when writing. It is not allowed to write only a part of dual registers. Read-only part is allowed when reading.
01	Reading coil	Note that this length is in bits .
05	Write coil	1 vote that this length is in one.

Note: This controller only supports the above MODBUS function code. When the controller performs other function codes, the controller will not respond.

# ◆ MODBUS exception code response

Code	name	meaning		
02	Illegal data	For the controller, the error code indicates that the data		
	address	address received is an address that is not allowed.		
03	Illegal data	The portion of data written and the allowed range.		
	value			
04	Slave failure	An unrecoverable error occurs when the controller is attempting to perform the requested operation.		
07	Unsuccessful programming request	For the controller, the received command cannot be executed under the current conditions.		

### 6.4.2 MODBUS transmission mode

The MODBUS transmission mode is the RTU mode.

When communication with the RTU mode, information of each 8-bit byte is divided into two 4-bit transmission character hexadecimal.

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

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

Baud rate: 9600/19200/38400/57600/115200 (optional)

Code: RTU Example :

Read command:



Command function (single /double) byte	COM ID.	function code	Data address	Number of data read	CRC ch	eck code
Read weight (double)	01	03	0002	0002	65	СВ
Target value (double )	01	03	01F6	0002	25	C5
Zero voltage (double)	01	03	0069	0002	14	17
Gain voltage (double)	01	03	006B	0002	B5	D7

## Write command:

(Note: Write weight data with 50 as an example. When it is displayed as two decimal places, it should be written to 5000)

1 /								
Command function (single /double) byte	CO M ID.	func tion code	Data address	Write register number	Write bytes	data input		Ccheck ode
Write target value (double)	01	10	01F6	0002	04	0000 1388	7C	07
Zero calibration (double)	01	10	0069	0002	04	0000 0001	F4	2D
Gain calibration (double)	01	10	006B	0002	04	0000 1388	В9	62

## 5.3.3 MODBUS address allocation

Protocol address	PLC address	meaning	Descri	ption	
0000-0001	40001-40002	GW	Controller display GW value, signed		
0002-0003	40003-40004	NW	Controller display NW value, unsigned		
0004-0005	40005-40006	GW	GW Value		
	0006-0007   40007-40008	Control status (bit )	Bit	Description	
			. 0	Unstable weight : 0; stable : 1	
			. 1	Non-zero : 0 ; zero :1	
0006-0007			. 2	Currently showing the weight of the symbol +/- Positive sign: 0; minus sign: 1	
			. 3	overflow	
			. 4	Weight overflow	



			. 5	Negative weight overflow
			. 6	Load cell is overflowing
			. 7	Load cell negative overflow
			. 8	Millivolts stable: 1 unstable: 0
			. 9~ . 31	Reserved
			.0	0 : stop; 1 : run
			.1	Before filling
			.2	Coarse Flow
			.3	Medium Flow
			.4	Fine Flow
			.5	Result Checking
			.6	Ready
			.7	Discharge
			.8	(-NZ-)
			.9	Over
			.10	Under
	40009-40010		.11	Qualified(合格)
			.12	OVER/UNDER Pause
			.13	Bag Lock
			.14	Lifting Bag ( valve )
			.15	Pushing bag (valve )
			.16	Hanging bag (ton pack)
0008-0009		Operating status	.17	AirBlowing (ton pack)
			.18	Return Valve (ton pack)
			.19	Hanger Up (ton pack)
			.20	Hanger Down (ton pack)
			.21	Upper limite ( PLCmode )
			.22	Lower limite ( PLCmode )
			.23	Batch complete
			.24	Alarm
			.25	Gross weight
				status: 1 : Net :0 : Gross
			.26	Clear (DLC)
			.27	OverLimit (PLC)
			.28	UnderLimit (PLC) In the non-bucket mode,
				after unlock the bag, the
			.29	mark is valid until the end
				of this filling
		.30	Stop	
			.31	Pause
			0	Dual scale Interlock
0010-0011	40011-40012	Control state 2	.0	Output (interlock mode )
			.1	Supplement Full



				.2	Supplement Empty
				.3	FILL
				.4	EMPT
				.5	Cutting Material
				.6	Pat Bag
				.7	Coding
				.8	DISC Patting Output
				.9	Conveyor Start
				.10	Sewing output
				.11	Cutter Output
				.12	Auxiliary PU Output 1
				.13	Auxiliary PU Output 2
				.14	Auxiliary PU Output 3
				.15	Auxiliary PU Output 4
				.16	User Logic Output 1
				.17	User Logic Output 2
				.18	User Logic Output 3
				.19	User Logic Output 4
				.20	User Logic Output 5
				.21	User Logic Output 6
				.22	Convery A (ton pack)
				.23	Convery <b>B</b> ( ton pack )
				.24	Manual Fine Flow
				.25	Manual Discharge
0012~0013	40013~40014	Reserved		•	
				.0	Target Value Can Not Be 0
				.1	Can Not Run When Weight OFL
				.2	Over Zero Range!
				.3	Non-Stable
				.4	Over/Under Alarm
				.5	Beyond Discharge gate Limitation
				.6	Reserved
0014-0015	40015-40016	Automatic	clear	.7	Running, Zero Disabled
0014-0015	40013-40010	alarm		.8	Over Zero Range When AutoZero
				.9	Automatic zeroing instability
				.10	Filler Gate Close Err
				.11	DISC Gate Close Err
				.12	Fi-Filling Gate Open Width Not be 0
				.13	Me-Filling Gate Open Can Not Narrower Than



				Fi-Filling	
				Co-Filling Gate Open Can	
			.14	Not Narrower Than	
			.17	Me-Filling	
				Co-Filling Gate Open Can	
			.15	Not Narrower Than	
			•••	Fi-Filling	
			.16	Running Stable Timeout	
0016~0019	40017~40020	Reserved			
			.0	Batch Completed!	
			.1	Over/Under Pause	
			.2	Filling Gate Close	
			.2	OverTime t	
			.3	Bag Lock OT	
			.4	Bag Unlock OT	
			.5	DISC Gate Close Overtime	
			.6	DISC Gate Open OverTime	
			.7	Reserved	
	40021-40022		.8	Reserved	
			.9	Internal Communication	
		Manually clear the alarm		Failed	
0020-0021			.10	Coarse Flow OT	
			.11	Medium Flow OT	
			.12	Manual Fine OT	
			.13	Discharge OT	
			.14	Discharge Patting OT	
			.15	Uncoupled alarm I/O	
			.16	Hanger rise overtime alarm	
			.17	Hanger down overtime alarm	
			.18	Motor mid filling in place	
				alarm	
			.19	Motor fine filling in place	
				alarm	
0022~0025	40023~40026		i e	erved	
				ty Low	
				ty Over	
			Zero Voltage Over		
				oltage Low	
000 < 000	40037 40030	G-1111	Input Unstable		
0026-0027	40027-40028	Calibration alarm	Gain Voltage Over		
			Gain Voltage Low		
			Input Unstable		
			Weight Error		
			Over Resolution		
		L			



		i .	1	
0028-0029	40029-40030	Alarm 3		Reserved
0070 077	· ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `	l time parac		
0030-0031	40031-40032			ight is 6digits
0032-0033	40033-40034			weight low 9
0034-0035	40035-40036			umber of packets
0036-0037	40037-40038			nulative weight is 6 digits high
0038-0039	40039-40040			umulative weight low 9
0040-0041	40041-40042			nulative number of packages
0042-0043	40043-40044	User cumu	ılative wei	ght is <b>6</b> digits
0044-0045	40045-40046	User cumu	ılative wei	ght is 9digits lower
0046-0047	40047-40048	User cumu	ılative nun	nber of packets
0048	40049	Batch rem	aining	
0049	40050	Coarse Flo	w Timer	
0050	40051	Medium F	low Timer	ſ
0051	40052	Fine Flow	Timer	
0052	40053	Result Wa	iting Time	r
0053	40054	Discharge	timer	
0054	40055	Previous package timer (Coarse timer + medium timer + fine timer + Result Waiting timer + Discharge timer + Filling Start Delay timer)		
0055-0056	40056-40057	Previous bag weight		
0057-0058	40058-40059	Packing speed		
0059-0060	40060-40061	Flow rate		
0061	40062	Filling Start Delay		
0062~0099	40063~40100			Reserved
Calibration pa	aracontrollers (re	served 100~	200)	
		unit	Initial va	lue:1;
0100	40101	uiiii	0: g,	1: kg, 2: t, 3: lb (lbs)
		Decimal	Initial val	lue:2;
0101	40102	point	Option:	0-0; 1-1; 2-2; 3-3; 4-4
0102	40103	Resoluti	Initial va	
0102	70103	on	Optional	: ( 1/ 2/ 5/ 10/ 20/ 50 ) .
0103-0104	40104-40105	Full Scale	Initial value: 10000; Write range (maximum range value minimum scale ≤ × 10 0000, andnot more than 999,999)	
0105-0106	4010640107	Zero calibrati on	When writing 1 to the current weight as zero, the weighing is allowed to be written when the weighing platform is stable; the current zero millivolt is returned when reading.	
0107-0108	40108-40109	Enter the standard wei weight (≤ maximum range);		weight (≤ maximum range); Read as the current load cellrelative
0109-0110	40110-40111	Weightless Calibration		Write the millivolts corresponding to the gain weight,



No code calibrated and returns (weight (if the current millivolts corresponding to the current weight (if the current millivolt is too small or too large, it cannot be calibrated and returns NAFFF .)    Write and gain the weight value corresponding to millivolts. Before writing this register, use both to perform gain calibration. Returns 0000H when read.   O113			(MC11: 1/ )		41 4 11 : - 4
the absolute millivolts corresponding to the current weight (if the current millivolt is too small or too large, it cannot be calibrated and returns0XFFFF.).  Write and gain the weight value corresponding to millivolts. Before writing this value, you must first write the gain millivolts. When writing this value, you must first write the gain millivolts. When writing this value, you must first write the gain millivolts. When writing this value, you must first write the gain millivolts. When writing this value, you must first write the gain millivolts. When writing this value, you must first write the gain millivolts. When writing this value, you must first write the gain millivolts. When writing this value, you must first write the gain millivolts. When writing this value, you must first write the gain millivolts. When writing this value, you must first write the gain millivolts. When writing this value, you must first write the gain millivolts. When writing this value, you must first write the gain millivolts. When writing this value, you must first write the gain millivolts. When writing this value, you must first write the gain millivolts. When writing this value, you must first write the gain millivolts. When writing this value, you must first write the gain millivolts. When writing this value, you must first write the gain millivolts. When writing this value, you must first write the gain millivolts. When writing this value, you must first write the gain millivolts. When writing this value; you must first write the gain millivolts. When writing this value; 10 0000, and not more than 999,999)  10118-0119 40119-40120 Filling liming (maximum range value minimum scale ≤ × 10 0000, andnot more than 999,999)  10120-0121 4012-40122 Material calibration (with the gain millivolts. Write range (maximum range value minimum scale ≤ × 10 0000			(Millivolts)		the controller is temporarily
Corresponding to the current weight (if the current millivolt is too small or too large, it cannot be calibrated and returns0XFFFF.).    Write and gain the weight value corresponding to millivolts. Before writing this value, you must first write the gain millivolts. When writing this register, use both to perform gain calibration. Returns 0000H when read.    0113					
0111-0112					
Write and gain the weight value corresponding to millivolts. Before writing this value, you must first write the gain millivolts. When writing this register, use both to perform gain ealibration. Returns 0000H when read.    O113					
No code calibration (weight)   Corresponding to millivolts. Before writing this value, you must first write the gain millivolts. When writing this register, use both to perform gain calibration. Returns 0000H when read.					
No code calibration (weight)   Writing this value, you must first write the gain millivolts. When writing this register, use both to perform gain calibration. Returns 0000H when read.					
0111-0112   40112-40113   calibration (weight)   write the gain millivolts. When writing this register, use both to perform gain calibration. Returns 0000H when read.    0113   40114   Load cell sensitivity   3mV/V			NT 1		ı 1 C
(weight)   writing this register, use both to perform gain calibration. Returns 0000H when read.	0111 0112	10112 10113		gain	
Deprivation   Returns 0000H when read	0111-0112	40112-40113			
Returns 0000H when read .   0113			(weight)		
0114-0115					
0114-0115         40115-40116         Controller load cell voltage         voltage between EX + and EX (Note 2 )           0116-0117         40117-40118         Load cell maximum range         Initial value: 10000; (Note 2 ). Write range (maximum range value minimum scale ≤ × 10 0000, andnot more than 999,999)           0118-0119         40119-40120         Filling time         Initial Value: 0.0s; Write range: 0~99.9s           Write the weight value corresponding to the gain millivolts; Press "manual discharge" to record the current relative millivolt, and use the two to calibrate the gain when writing this register; Return 0000H on read.         Reserved           0122~0199         40123~40200         Reserved           Weighing paracontroller(1)         Initial value: 2; Stable range (0~9 9 d optional) Unit: d           0200         40201         Stable range         Initial value: 0.3; range: 0.1~9.9. (unit s)           0201         40202         Stable Timer         Initial value: 0.3; range: 0.1~9.9. (unit s)           0202         40203         Zero Range         Initial value: 0; Range: 1-99units: %           0204         40205         Zero Track Time         Initial value: 2; Optional: 0: 120 times / sec; 2: 480 times / sec; 1:24 0 times / sec; 2: 480 times	0113	40114	Load cell ser	nsitivity	
0114-0115   40115-40116   cell voltage   between EX + and EX (Note 2 )			Controller le	nad	
10116-0117	0114-0115	40115-40116		<b>Jua</b>	
0116-0117         40117-40118         Coat cell maximum range walue minimum scale ≤ × 10 0000, andnot more than 999,999)         Write range (maximum range value minimum scale ≤ × 10 0000, andnot more than 999,999)           0118-0119         40119-40120         Filling time         Initial Value:0.0s; Write range:0~99.9s           Write the weight value corresponding to the gain millivolts;Press "manual discharge" to record the current relative millivolt, and use the two to calibrate the gain when writing this register; Return 0000H on read.         Reserved           0122~0199         40123~40200         Reserved           Weighing paracontroller(1)         Initial value : 2; Stablerange (0~9 9 d optional) Unit: d           0200         40201         Stable Timer         Initial value: 0.3 ;range: 0.1~9.9. (unit s)           0201         40202         Stable Timer         Initial value: 0; Range : 1-99units: %           0202         40203         Zero Range         Initial value: 0; Range : 0-9Unit: d           0204         40205         Zero Track Time         Initial value: 2; Optional: 0: 120 times / sec; 1:24 0 times / sec; 2: 480 times				T '.' 1	
0118-0117			Load cell	ll .	
Material calibration   Material calibration	0116-0117	40117-40118	maximum	ll .	
Material calibration			∥range ∥		· · · · · · · · · · · · · · · · · · ·
Material calibration   Material calibration	0118-0119	40119-40120		Initial '	Value:0.0s; Write range:0~99.9s
Material calibration  Precord the current relative millivolt, and use the two to calibrate the gain when writing this register;  Return 0000H on read.  Reserved  Weighing paracontroller(1)  Material calibration  Reserved  Material calibration  Precord the current relative millivolt, and use the two to calibrate the gain when writing this register;  Return 0000H on read.  Initial value: 2; Stablerange (0 ~9 9 d optional )Unit: d  Initial value: 0.3 ;range: 0.1~9.9. (unit s)  Material calibration  Precord the current relative millivolt, and use the two to calibrate the gain when writing this register;  Return 0000H on read.  Reserved  Initial value: 2; Stablerange (0 ~9 9 d optional )Unit: d  Initial value: 50 ; Range: 1-99units: %  Initial value: 50 ; Range: 0-9Unit: d  Material calibration  Reserved  Initial value: 2; Optional: 0: 120 times / sec; 1:24 0 times / sec; 2: 480 times			time	Write	he weight value corresponding to the
Material calibration         record the current relative millivolt, and use the two to calibrate the gain when writing this register; Return 0000H on read.           Reserved           Weighing paracontroller(1)           O200         40201         Stable range         Initial value: 2; Stablerange (0~9 9 d optional) Unit: d           0201         40202         Stable Timer         Initial value: 0.3 ; range: 0.1~9.9. (unit s)           0202         40203         Zero Range         Initial value: 50; Range: 1 -99units: %           0203         40204         Zero Track Range         Initial value: 0; Range: 0-9Unit: d           0204         40205         Zero Track Time         Initial value: 2; Optional: 0: 120 times / sec; 1:24 0 times / sec; 2: 480 times					
Calibration   the two to calibrate the gain when writing this register;   Return 0000H on read.	0120 0121	40121 40122	Material		
Return 0000H on read.   Reserved	0120-0121	40121-40122	calibration		
Reserved           Weighing paracontroller(1)           0200         40201         Stable range         Initial value : 2 ; Stablerange ( 0 ~9 9 d optional )Unit: d           0201         40202         Stable Timer         Initialvalue: 0.3 ;range: 0.1~9.9. (unit s)           0202         40203         Zero Range         Initial value: 50 ; Range : 1 -99units: %           0203         40204         Zero Track Range         Initial value: 0 ; Range : 0-9Unit: d           0204         40205         Zero Track Time         Initial value: 2 ; Optional: 0: 120 times / sec; 1:24 0 times / sec; 2: 480 times					
Weighing paracontroller(1)           0200         40201         Stable range         Initial value : 2; Stablerange ( 0 ~9 9 d optional )Unit: d           0201         40202         Stable Timer         Initialvalue: 0.3; range: 0.1~9.9. (unit s)           0202         40203         Zero Range         Initial value: 50; Range : 1 -99units: %           0203         40204         Zero Track Range         Initial value: 0; Range : 0-9Unit: d           0204         40205         Zero Track Time         Initial value: 2.0 ; range: 0.1~99.9 . (unit s)           0205         Sampling Rate (SPS)         Optional: 0: 120 times / sec; 2: 480 times			Return		
0200         40201         Stable range         Initial value : 2 ; Stablerange ( 0 ~9 9 d optional )Unit: d           0201         40202         Stable Timer         Initialvalue: 0.3 ;range: 0.1~9.9. (unit s)           0202         40203         Zero Range         Initial value: 50 ; Range : 1 -99units: %           0203         40204         Zero Track Range         Initial value: 0 ; Range : 0-9Unit: d           0204         40205         Zero Track Time         Initial value: 2 ; optional: 0: 120 times / sec; 1:24 0 times / sec; 2: 480 times	0122~0199	40123~40200			
0200         40201         Stable range         Stablerange ( 0 ~9 9 d optional )Unit: d           0201         40202         Stable Timer         Initialvalue: 0.3 ;range: 0.1~9.9. (unit s)           0202         40203         Zero Range         Initial value: 50 ; Range : 1 -99units: %           0203         40204         Zero Track Range         Initial value: 0 ; Range : 0-9Unit: d           0204         40205         Zero Track Time         Initial value: 2.0 ; range: 0.1~99.9 . (unit s)           0205         Sampling Rate (SPS)         Initial value: 2 ; Optional: 0: 120 times / sec; 1:24 0 times / sec; 2: 480 times			Weighing pa	racontro	
0201         40202         Stable Timer         Initialvalue: 0.3 ;range: 0.1~9.9. (un it s)           0202         40203         Zero Range         Initial value: 50 ; Range : 1 -99units: %           0203         40204         Zero Track Range         Initial value: 0 ; Range : 0-9Unit: d           0204         40205         Zero Track Time         Initial value: 2.0 ; range: 0.1~99.9 . (unit s)           0205         Sampling Rate (SPS)         Initial value: 2 ; Optional: 0: 120 times / sec; 1:24 0 times / sec; 2: 480 times	0200	40204	G. 11		
0201         40202         Stable Timer         Initial value: 0.3 ; range: 0.1~9.9. (un it s)           0202         40203         Zero Range         Initial value: 50 ; Range : 1 -99units: %           0203         40204         Zero Track Range         Initial value: 0 ; Range : 0-9Unit: d           0204         40205         Zero Track Time         Initial value: 2.0 ; range: 0.1~99.9 . (unit s)           0205         Sampling Rate (SPS)         Initial value: 2 ; Optional: 0: 120 times / sec; 1:24 0 times / sec; 2: 480 times	0200	40201	Stable range	,	
0201       40202       Stable Timer       it s )         0202       40203       Zero Range       Initial value: 50 ; Range : 1 -99units: %         0203       40204       Zero Track Range       Initial value: 0 ; Range : 0-9Unit: d         0204       40205       Zero Track Time       Initial value: 2.0 ; range: 0.1~99.9 . (unit s )         0205       Sampling Rate (SPS)       Initial value: 2 ; Optional: 0: 120 times / sec; 1:24 0 times / sec; 2: 480 times					
0202         40203         Zero Range         Initial value: 50; Range: 1 -99units: %           0203         40204         Zero Track Range         Initial value: 0; Range: 0-9Unit: d           0204         40205         Zero Track Time         Initial value: 2.0; range: 0.1~99.9 . (unit s)           0205         Sampling (SPS)         Rate (SPS)         Optional: 0: 120 times / sec; 1:24 0 times / sec; 2: 480 times	0201	40202	Stable Time	r	
0203       40204       Zero Track Range       Initial value: 0; Range : 0-9Unit: d         0204       40205       Zero Track Time       Initial value: 2.0 ; range: 0.1~99.9 . (unit s)         0205       Sampling (SPS)       Rate (SPS)       Optional: 0: 120 times / sec; 1:24 0 times / sec; 2: 480 times	0202	40202	7 P		
0204         40205         Zero Track Time         Initial value: range: 0.1~99.9 . (unit s)         2.0 ; range: 0.1~99.9 . (unit s)           0205         Sampling (SPS)         Rate (SPS)         Optional: 0: 120 times / sec; 1:24 0 times / sec; 2: 480 times					value: 50; Range: 1-99units: %
0204         40205         Zero Track Time         range:0.1~99.9 . (unit s )           0205         Sampling (SPS)         Rate (SPS)         Optional: 0: 120 times / sec; 1:24 0 times / sec; 2: 480 times	0203	40204	Zero Track	Range	
0205   Sampling   Rate   Initial value: 2;   Optional: 0: 120 times / sec; 1:24 0 times / sec; 2: 480 times	0204	40205	Zero Track Time		,
0205   Sampling Rate Optional: 0: 120 times / sec; 1:24 0 times / sec; 2: 480 times					
0205   40206   (SPS)   sec; 1:24 0 times / sec; 2: 480 times			Sampling	Rate	· · · · · · · · · · · · · · · · · · ·
	0205	40206		Ruic	
			(51.57		/ sec; <b>3: 960</b> times / sec.
0206~0249 40207~40250 Reserved	0206~0249	40207~40250			
	0206~0249	40207~40250			



System and communication paracontrollers - filter paracontrollers				
0250	40251	Digital Filter	Initial value: 7; Range: 0 to 9	
0251	40252	Advance Filter ON/OFF	Initial value: 0; 1: On 0: Off	
0252	40253	Dynamic Filter	Initial value: <b>0</b> ; <b>1</b> : On ; <b>0</b> : Off	
0253	40254	Filling Filter Level	Initial value: 2; Range: 0 to 9	
0254	40255	Waiting Process Filter	Initial value: 7; Range: 0 to 9	
0255	40256	Discharge Process Filter	Initial value: 1; Range: 0 to 9	
0256~0299	40257~40300	Reserved		
		Weighing paracontroll	ler (3)	
0300	40301	Power-Up Zero	Initial value: 0; 1: On; 0: Off	
0301	40302	Auto Zero Interval	Initial value: 0; Range: 0-99 has the bucket tocomplete the packing and then clear the current weight.	
0302	40303	Running Stable Timeout	The initial value is 0; therange is 0 to 9 9.9. (unit s)	
0303	40304	Result Checking Mode	Initial value: 0; (range: 0, 1) 0: Stable Status; 1: Delay Timer	
0304	40305	Add toTotal When Manual Discharge	Initial value: <b>0</b> ; <b>1</b> : On ; <b>0</b> : Off	
0305	40306	Result Holding	Initial value: <b>0</b> ; <b>1</b> : On ; <b>0</b> : Off	
0306	40307	Adaptive Level	Initial value: 3; Range: 1~5	
0307	40308	Adaptive ON/OFF	Initial value: $0$ ; Range: $0 \sim 2$	
0308	40309	Manual clutch ON/OFF	Initial value: 0;1:On;0:Off	
0309	40310	Bracket running control ON/OFF	Initial value: 0;1:On;0:Off	
0310	40311	Hang bag running control ON/OFF	Initial value: 0;1:On;0:Off	
0311	40312	Hang bag OFF logic ON/OFF	Initial value: 0;1:On;0:Off	
0312	40313	Gross weight detect ON/OFF	Initial value: 0;1:On;0:Off	
0313~0349	40314~40350	Reserved		
Syst	tem and commun	ication paracontrollers	s - structural paracontrollers	
0350	40351	Weigher Structure	Initial value: 0; 0: Net Weigher; 1: Gross Weigher; 2: PLC mode; 3: Jumbo Bag; 4: Valve scale.	
0351	40352	Working Mode	Initial value: 0; 0: single scale; 1: Dual Scale:	



	Griffor bagging controller			
			Master ;2: Dual Scale: Slave	
0352	40353	Mode	Initial value: 1; 0: Gross; 1:Net	
0353	40354	Hanger Movement Type	Initial value: 0; 0: Air Drive; 1: Motor Drive	
0354	40355	Filling Mode	Initial value: 1; 0 : Solo Filling; 1 : Combination Filling	
0355	40356	Dual Scale Unlock Bag Mode	Initial value: 0; 0: Asynchro Unlock; 1: Synchro Unlock1; 2: Synchro Unlock2.	
0356	40357	Holder control ON/OFF	Initial value: 0; 0: OFF; 1: ON	
0357~0499	40358~40500		Reserved	
	Recipe pa	aracontrollers - Value	e paracontrollers	
0500-500	40501-40502	Recipe ID	Initial value 1; range: 1 to 20	
0502-0503	40503-40504	Target		
0504-0505	40505-40506	Coarse Flow Remains	W. I. I. W.	
0506-0507	40507-40508	Medium Flow Remains	Weight value writing range : ≤maxi mum range	
0508-0509	40509-40510	Free Fall		
0510-0511	40511-40512	Near Zero Band		
0512-0513	40513-40514	Adaptive Level	Initial value 3; range: 1 to 5	
0514-0515	40515-40516	Adaptive ON/OFF	Initial value 0; range: 0 to 2	
0516~0549	40517~40550	Reserved		
	Recipe	paracontroller - time		
0550	40551	Filling Start Delay	Initial value: <b>0.5</b> ; range: <b>0 to99.9</b> . (unit <b>s</b> )	
0551	40552	COMP.Inhibit Timer(Co-F)	Initial value: 09; range: 0 to99.9. (unit s)	
0552	40553	COMP.Inhibit Timer(Me-F)	Initial value: 0.9; range: 0 to 99.9. (unit s)	
0553	40554	COMP.Inhibit Timer(Fi-F)	Initial value: 0.9; range: 0 to99.9. (unit s)	
0554	40555	Result Waiting Timer	Initial value: <b>0.5</b> ; range: <b>0 to99.9</b> . (unit <b>s</b> )	
0555	40556	Bag Locked Delay Timer	Initial value: 0.5; range: 0 to99.9. (unit s)	
0556	40557	Unlock Bag Pre-Delay Timer	Initial value: 0.5; range: 0 to99.9. (unit s)	
0557	40558	Discharge Delay Timer	Initial value: 0.5; range: 0 to99.9. (unit s)	
0558~0599	40559~40600		Reserved	



Over/Under Paracontroller			
	42.52.5	OVER/UNDER	
0600	40601	ON/OFF	Initial value: <b>0</b> ; <b>1</b> : On ; <b>0</b> : Off
	40602	OVER/UNDER	
0601	40602	Pause	Initial value: <b>0</b> ; <b>1</b> : On ; <b>0</b> : Off
0602	40603	OVER/UNDER	Initial value: 10;
0002		Alarm Timer	range: 0 ~999. (unit s)
0603-0604	40604-40605	Over Limit Value	Weight value writing range : ≤ <b>maxi</b>
0605-0606	40606-40607	Under Limit Value	mum range
0607	40608	Compensation ON/OFF	Initial value: 0 ; 1 : On ; 0 : Off.
0608	40609	Compensation Times	First: <b>1;</b> range: <b>1 ~ 99.</b>
0609	40610	Flow-ON Times	Initialvalue: <b>0.5</b> ; range: <b>0 to 99 .9</b> . ( unit <b>s</b> )
0610	40611	Flow-OFF Times	Initial value: <b>0.5</b> ; range: <b>0 to 99 .9</b> . ( unit <b>s</b> )
	Auto	Free Fall Correction P	aracontroller
		Auto Free Fall	
0611	40612	Correction ON/OFF	Initial value: 0; 1: On; 0: Off.
0612	40613	Reference Samples PCS	Initial value: 1; Range: 1~99.
0613	40614	Correction Effective Range	Range: 2.0; Range: 0 to 9.9 ( unit: %)
0614	40615	Correction Percentage	Initial value: 1; Optional: 0100 % correction; 15 0% correction; 2 - 25% correction
		Jog Flow Paracontr	oller
0615	40616	Jog Flow ON/OFF	Initial value: 0; 1: On; 0: Off.
	40617	Jog Flow-ON	Initial value: <b>0.5</b> ;
0616	7001/	Timer	range: <b>0 to9.9</b> . (unit <b>s</b> )
0.617	40618	Jog Flow-OFF	Initial value: <b>0.5</b> ;
0617		Timer	range: <b>0 to9.9</b> . (unit <b>s</b> )
		Net Weigher Paracon	itroller
0618	40619	Single scale combination Times	First: <b>1;</b> range: <b>0 ~ 99.</b>
0619~0649	40620~40650	comonation inites	Reserved
0017 -0017		oss Weigher Scale Para	
0.570		Next Lock Bag	Initial value: <b>4.0</b> ;
0650	40651	Start Delay Time	range: <b>0 to 99 .9</b> . (unit <b>s</b> )
0651~0699	40652~40700	-	Reserved
		PLC Paracontrol	ler
0700-0701	40701-40702	PLC-OverLimit Value	0 ~ Full Scale



0702-0703	40703-40704	PLC-UnderLimit Value	0 ~ Full Scale
0704-0705	40705-40706	PLC-UpperLimit Value	0 ~ Full Scale
0706-0707	40707-40708	PLC-LowerLimit Value	0 ~ Full Scale
0708~0749	40709~40750		Reserved
		Jumbo Bag Paracont	troller
0750	40751	Hang Up Bag Delay	Initial value: <b>0.5</b> ; range: <b>0 to 99.9</b> . ( unit <b>s</b> )
0751	40752	Auto Hanger ON/OFF	Initial value: 0; 1: On; 0: Off
0752	40753	Delay Before Hanger Rise	Initial value: 5.0; range: $0 \sim 99.9$ . (unit s)
0753	40754	Delay Before Hanger Drop	Initial value: 5.0; range: $0 \sim 99.9$ . (unit s)
0754	40755	Hanger Rise Time Limitation	Initial <b>value: 5.0;</b> range: <b>0</b> ~ <b>99.9.</b> ( unit <b>s</b> )
0755	40756	Hanger Drop Time Limitation	Initial <b>value: 5.0;</b> range: <b>0</b> ~ <b>99.9.</b> ( unit <b>s</b> )
0756	40757	Fan Rotating Time	Initialvalue: <b>0.5</b> ; range: <b>0 to 99.9</b> . ( unit <b>s</b> )
0757	40758	Decoupled up ON/OFF	Initial value: 0; 1: On; 0: Off.
0758	40759	Uncoupled alarm ON/OFF	Initial value: 0; 1: On; 0: Off.
0759	40760	Hang bag reset delay	Initial value: <b>0.0</b> ; range: <b>0 to 99.9</b> . ( unit <b>s</b> )
0760	40761	Blow	Initial value: 0. 0: Uplink delay before blowing 1: Uplink delay after blowing
0761	40762	Selection of return valve mode	Initial value: 0; 0: Close the return valve after filling; 1: close the return valve after unlock bag
0762	40763	Second unlink delay	Initial value: <b>0.0</b> ; range: <b>0 to 99.9</b> . ( unit <b>s</b> )
0763	40764	Second unlink timer	Initial value: <b>0.0</b> ; range: <b>0 to 99.9</b> . ( unit <b>s</b> )
0764	40765	Second uplink pause timer	Initialvalue: <b>0.0</b> ; range: <b>0 to 99.9</b> . ( unit <b>s</b> )
0765	40766	Conveyor reversal timer	Initialvalue: <b>0.0</b> ; range: <b>0 to 99.9</b> . ( unit <b>s</b> )
0766	40767	Weight value of decoupling alarm	0~maximum range
0767~0799	40769~40800	Reserved	
Valve Scale Paracontroller			



			GM7707 bagging controller
0800	40801	Delay Before Lifting Bag	Initial value : 0.5; range: 0 to 99.9. (unit s)
0801	40802	Lifting Bag Timer	Initial value : <b>0.5</b> ; range: <b>0 to 99.9</b> . (unit <b>s</b> )
0802	40803	Delay Before Pusing Bag	Initial value : 0.5; range: 0 to 99.9. (unit s)
0803	40804	Pushing Bag Timer	Initial value : 0.5; range: 0 to 99.9. (unit s)
0804~0999	40805~41000	Reserved	
	Patting I	Paracontroller ( reserve	ed 1000~1200 )
1000	41001	Patting Mode	Initial value: 0; Optional: 0: Disable; 1: After Waiting; 2: When Filling; 3: All time. Net Weigher Can Write: 0,1; Gross Weigher Can Write: 0~3.
1001-1002	41002-41003	Start-Up Weight	Initialvalue: <b>0</b> ; Range: <b>0</b> ~Maximu m range.
1003	41004	Patting Times(Filling)	Initial value: <b>0</b> ; range: <b>0~99</b> . Set the paracontrollers for the number of shots in the fill.
1004	41005	Patting Times(Waiting)	Initial value: 4; Range: 0~99.  Set the paracontrollers for the number of shots after the value is set.
1005	41006	Patting Start Delay Timer	Initial value: <b>0.5</b> ; range : <b>0~99.9</b> . (unit <b>s</b> ) After the bag is started, the bag output is valid after this delay time.
1006	41007	Patting ON Timer	Initial value: <b>0.5</b> ; range: <b>0~99.9</b> . (unit <b>s</b> ) During the on-off cycle of the bag, the bag output valid time.
1007	41008	Patting OFF Timer	Initial value: <b>0.5</b> ; range : <b>0~99.9</b> . (unit s) In the on-off cycle of the bag, the bag output invalid time.
1008	41009	Extra ON Timer	Initial value: 0; range: 0~99.9.(units)
1009~1019	41010~41020	Reserved	
		Coding Paracontro	ller
1020	41021	Coding Device ON/OFF	Initial value: 0; 1: On; 0: Off.
		ON/OIT	



diamon bagging controller			
1022	41023	Coding Duration Timer	Initial value: <b>0.5</b> ; range: <b>0 to 99.9</b> . (unit <b>s</b> )
1023	41024	Not Allow Fill/Discharge When Coding	Initial value: 0; 0: The discharge output or the fill output is allowed to start during the coding process; 1: The discharge output or fill output is not allowed to start during the coding process.
1024~1029	41025~41030		Reserved
		Sewing Paracontro	oller
1030	41031	Sewing Start Delay Timer	Initialvalue: <b>0. 5</b> ; range: <b>0 to 99 .9</b> . (unit <b>s</b> )
1031	41032	Sewing ON Timer	Initial value: <b>4.0</b> ; range: <b>0 to 99 .9</b> . ( unit <b>s</b> )
1032	41033	Cutter ON Timer	Initialvalue: <b>0. 5</b> ; range: <b>0 to 99 .9</b> . (unit <b>s</b> )
1033	41034	Sewing Stop Delay	Initial value: <b>0.5</b> ; range: <b>0 to 99.9</b> . (unit <b>s</b> )
1034	41035	Cutter Start Delay	Initialvalue: <b>0. 5</b> ; range: <b>0 to 99 .9</b> . (unit <b>s</b> )
1035	41036	Sewing machine ON/OFF	Initialvalue: 0; 1: ON; 0: OFF
1036	41037	Sewing machine shaking time	Initialvalue: 0.3; range: 0~99.9.
1037~1039	41038~41040	Reserved	
	D	ischarge Patting Parac	controller
1040	41041	Discharge Patting ON/OFF	Initial value: 0;1:On;0:Off.
1041	41042	Discharge ON Timer	Initial value: 2.0; range: 0 to 9.9. ( unit s)
1042	41043	Discharge Patting ON Timer	Initialvalue: 0.5; range: 0 to 9.9. ( unit s)
1043	41044	Discharge Patting OFF Timer	Initialvalue: 0.5; range: 0 to 9.9. ( unit s)
1044	41045	Discharge Patting Times	Initial value: 10; Range: 0 to 99.
1045~1049	41046~41050	Reserved	
	(	Overtime alarm paraco	ontroller
1050	41051	Overtime Checking ON/OFF	Initial value: 0; 1: On; 0: Off.
1051	41052	Coarse Flow Overtime	Initialvalue: 5.0; range: 0 to 99.9. (unit s)
1052	41053	Medium Flow Overtime	Initialvalue: 5.0; range: 0 to 99.9. (unit s)
1053	41054	Manual Fine	Initialvalue: <b>5.0</b> ; range: <b>0</b> to <b>99</b> . <b>9</b> .



		Overtime	(unit s)
1054	41055	Discharge	Initialvalue: 5.0; range: 0 to 99.9.
1034	41033	Overtime	(unit s)
1055~1059	41056~41060	Reserved	
	A	uxiliary Pulse Parace	ontroller
1060	41061	Auxiliary Pulse 1 Execute Total	Initial value: <b>0.0</b> ;
1000	41001	Timer	Range: <b>0 to 9 9 9.9</b> . (unit <b>s</b> )
1061	41062	Auxiliary Pulse 1 ON Timer	Initial value: 10.0;
		Auxiliary Pulse 1	Range: 0 to 9 9 9.9 . (unit s )  Initial value: 10.0;
1062	41063	OFF Timer	Range: <b>0 to 9 9 9.9</b> . (unit <b>s</b> )
		Auxiliary Pulse 2	Initial value: <b>0.0</b> ;
1063	41064	Execute Total Timer	Range: <b>0 to 9 9 9.9</b> . (unit <b>s</b> )
1064	41065	Auxiliary Pulse 2	Initial value: 10.0;
1004	41003	ON Timer	Range: 0 to 9 9 9.9 . (unit s)
1065	41066	Auxiliary Pulse 2	Initial value: 10.0;
		OFF Timer Auxiliary Pulse 3	Range: 0 to 9 9 9.9 . (unit s )
1066	41067	Execute Total	Initial value: <b>0.0</b> ;
1000	41007	Timer	Range: <b>0 to 9 9 9.9</b> . (unit <b>min</b> )
1067	41068	Auxiliary Pulse 3	Initial value: 10.0;
1007	41000	ON Timer	Range: <b>0 to 9 9 9.9</b> . (unit <b>min</b> )
1068	41069	Auxiliary Pulse 3 OFF Timer	Initial value: 10.0;
		Auxiliary Pulse 4	Range: <b>0 to 9 9 9.9</b> . (unit <b>min</b> )
1069	41070	Execute Total	Initial value: <b>0.0</b> ;
1002	11070	Timer	Range: <b>0 to 9 9 9.9</b> . (unit <b>min</b> )
1070	41071	Auxiliary Pulse 4	Initial value: 10.0;
1070	410/1	ON Timer	Range: <b>0 to 9 9 9.9</b> . (unit <b>min</b> )
1071	41072	Auxiliary Pulse 4 OFF Timer	Initial value: <b>10.0</b> ; Range: <b>0 to 9 9 9.9</b> . (unit <b>min</b> )
1072	41073	Auxiliary Pulse 1	
1073	41074	Auxiliary Pulse 2	Initial value: 0;
1074	41075	Auxiliary Pulse 3	0—Pulse Mode , 1—Level Mode
1075	41076	Auxiliary Pulse 4	
1076	41077	Auxiliary Pulse ON/OFF	Initial value: 0, 1: On; 0: Off
1077~1079	41078~41080	Reserved	
		Conveyor Paraconti	roller
1080	41081	Conveyor ON/OFF	Initial value: 0; 1: On; 0: Off.
1081	41082	Conveyor Start Delay Timer	Initial value: <b>0.5</b> ; range: <b>0 to 99.9</b> . (unit <b>s</b> )



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1082	41083	Conveyor Running Timer	Initial value: <b>4.0</b> ; range: <b>0 to 99.9</b> . (unit <b>s</b> )
1083	41084	Conveyor 2/3 Max running timer	Initialvalue: 30.0; range: 0~99.9
1084~1089	41085~41090		Reserved
		Print Paracontrol	ler
1090	41091	Auto Print	Initial value: 0, 1: On; 0: Off
1091	41092	Printer Format	Initial value: 0; 0: 24 columns printing; 1:32 columns printing.
1092	41093	Printing Language	Initialvalue: 0; 0: Chinese; 1: E n glish.
1093	41094	Printing Line Nos.	Initial value: 3; Range: 0 to 9.
1094~1199	41095~41200		Reserved
	User Logic-	1 (User Logic-1-6 re	served <b>1200~1400</b> )
1200	41201	Logic Type	Initial value: 0; range 0~5. 0: CLOSE 1: Delay on 2: Delay OFF 3: Delay ON & Delay OFF 4: OFF-ON,Edge Trigger 5: ON-OFF,Edge Trigger
1201	41202	Trigger Define	Initial value: 0; range: 0~64.  Can be selected from the definition of the trigger input port, fixed digital input port1~12, digital output definition, weight value trigger.
1202	41203	Trigger Input Port	Initial value: 0; range 0~12. Select the digital input port 0~12 corresponding to this function signal, and input port 0 means that this function is not defined.
1203	41204	Output Port	Initial value: 0; range 0~16.  Select the digital output port0~16 corresponding to the function signal, and the output port-0 means that the function is not defined.
1204	41205	Delay ON Timer	Initial value: 0; range: 0~99.9.(unit s) After the trigger signal is valid, the logic output signal is valid after the delay.
1205	41206	Delay OFF Timer	Initial value : 0; range: 0~99.9 .(unit s)



			GH17707 bagging controller
			After the trigger signal is invalid, the logic output signal will be invalid after the delay.
1206	41207	Output ON Timer	Initial value : 0 ; range: 0~99.9 .(unit s)  The duration after the logic output signal is valid, and becomes invalid after the end of the time.
1207-1208	41208-41209	Trigger Weight	Initial value: 0; Range:0~999999 When the trigger signal selects "Threshold Weight", the current weight is compared to this value.
1209~1219	41210~41220	Reserved	
		User Logic- 2	
1220	41221	Logic Type	Initial value: 0; range 0~5. 0: CLOSE 1: Delay on 2: Delay OFF 3: Delay ON & Delay OFF 4: OFF-ON,Edge Trigger 5: ON-OFF,Edge Trigger
1221	41222	Trigger Define	Initial value: 0; range: 0~64.  Can be selected from the definition of the trigger input port, fixed digital input port1~12, digital output definition, weight value trigger.
1222	41223	Trigger Input Port	Initial value: 0; range 0~12. Select the digital input port 0~12 corresponding to this function signal, and input port 0 means that this function is not defined.
1223	41224	Output Port	Initial value: 0; range 0~16. Select the digital output port0~16 corresponding to the function signal, and the output port-0 means that the function is not defined.
1224	41225	Delay ON Timer	Initial value : 0 ; range: 0~99.9 .(unit s)  After the trigger signal is valid, the logic output signal is valid after the delay.
1225	41226	Delay OFF Timer	Initial value : 0 ; range: 0~99.9 .(unit s ) After the trigger signal is invalid, the logic output signal will be invalid after the delay.



			GM19907 bagging controller
1226	41227	Output ON Timer	Initial value : 0 ; range: 0~99.9 .(unit s) The duration after the logic output signal is valid, and becomes invalid after the end of the time.
1227-1228	41228-41229	Trigger Weight	Initial value: 0; Range: 0~999999 When the trigger signal selects "Threshold Weight", the current weight is compared to this value.
1229~1239	41230~41240		Reserved
		User Logic- 3	
1240	41241	Logic Type	Initial value: 0; range 0~5. 0: CLOSE 1: Delay on 2: Delay OFF 3: Delay ON & Delay OFF 4: OFF-ON,Edge Trigger 5: ON-OFF,Edge Trigger
1241	41242	Trigger Define	Initial value: 0; range: 0~64.  Can be selected from the definition of the trigger input port, fixed digital input port1~12, digital output definition, weight value trigger.
1242	41243	Trigger Input Port	Initial value: 0; range 0~12.  Select the digital input port 0~12 corresponding to this function signal, and input port 0 means that this function is not defined.
1243	41244	Output Port	Initial value: 0; range 0~16. Select the digital output port0~16 corresponding to the function signal, and the output port-0 means that the function is not defined.
1244	41245	Delay ON Timer	Initial value: 0; range: 0~99.9.(unit s) After the trigger signal is valid, the logic output signal is valid after the delay.
1245	41246	Delay OFF Timer	Initial value: 0; range: 0~99.9.(unit s) After the trigger signal is invalid, the logic output signal will be invalid after the delay.
1246	41247	Output ON Timer	Initial value : 0 ; range: 0~99.9 .(unit s ) The duration after the logic output



			GM7707 bagging controller
			signal is valid, and becomes invalid after the end of the time.
1247-1248	41248-41249	Trigger Weight	Initial value: 0; range: 0~999999. When the trigger signal selects "Threshold Weight", the current weight is compared to this value.
1249~1259	41250~41260		Reserved
		User Logic- 4	
1260	41261	Logic Type	Initial value: 0; range 0~5. 0: CLOSE 1: Delay on 2: Delay OFF 3: Delay ON & Delay OFF 4: OFF-ON,Edge Trigger 5: ON-OFF,Edge Trigger
1261	41262	Trigger Define	Initial value: 0; range: 0~64.  Can be selected from the definition of the trigger input port, fixed digital input port1~12, digital output definition, weight value trigger.
1262	41263	Trigger Input Port	Initial value: 0; range 0~12.  Select the digital input port 0~12 corresponding to this function signal, and input port 0 means that this function is not defined.
1263	41264	Output Port	Initial value: 0; range 0~16.  Select the digital output port0~16 corresponding to the function signal, and the output port-0 means that the function is not defined.
1264	41265	Delay ON Timer	Initial value: 0; range: 0~99.9.(unit s) After the trigger signal is valid, the logic output signal is valid after the delay.
1265	41266	Delay OFF Timer	Initial value: 0; range: 0~99.9.(unit s) After the trigger signal is invalid, the logic output signal will be invalid after the delay.
1266	41267	Output ON Timer	Initial value: 0; range: 0~99.9.(unit s) The duration after the logic output signal is valid, and becomes invalid after the end of the time.



			GM19907 bagging controller
1267-1268	41268-41269	Trigger Weight	Initial value: 0, range:0~999999.  When the trigger signal selects "Threshold Weight", the current weight is compared to this value.
1269~1279	41270~41280		Reserved
		User Logic- 5	
		Ober Logic 3	Initial value: 0; range 0~5.
1280	41281	Logic Type	0 : CLOSE 1 : Delay on 2 : Delay OFF 3 : Delay ON & Delay OFF 4 : OFF-ON,Edge Trigger 5 : ON-OFF,Edge Trigger
1281	41282	Trigger Define	Initial value: 0; range: 0~64.  Can be selected from the definition of the trigger input port, fixed digital input port1~12, digital output definition, weight value trigger.
1282	41283	Trigger Input Port	Initial value: 0; range 0~12. Select the digital input port 0~12 corresponding to this function signal, and input port 0 means that this function is not defined.
1283	41284	Output Port	Initial value: 0; range 0~16. Select the digital output port0~16 corresponding to the function signal, and the output port- 0 means that the function is not defined.
1284	41285	Delay ON Timer	Initial value: 0; range: 0~99.9. (unit s) After the trigger signal is valid, the logic output signal is valid after the delay.
1285	41286	Delay OFF Timer	Initial value: 0; range: 0~99.9.(unit s) After the trigger signal is invalid, the logic output signal will be invalid after the delay.
1286	41287	Output ON Timer	Initial value: 0; range: 0~99.9.(unit s) The duration after the logic output signal is valid, and becomes invalid after the end of the time.
1287-1288	41288-41289	Trigger Weight	Initialvalue: 0; Range: 0~Maximu m range. When the trigger signal selects



			"Threshold Weight", the current	
1000 1000	44200 44200		weight is compared to this value.	
1289~1299	41290~41300	Reserved		
		User Logic- 6		
1300	41301	Logic Type	Initial value: 0; range 0~5. 0: CLOSE 1: Delay on 2: Delay OFF 3: Delay ON & Delay OFF 4: OFF-ON,Edge Trigger 5: ON-OFF,Edge Trigger	
1301	41302	Trigger Define	Initial value: 0; range: 0~64.  Can be selected from the definition of the trigger input port, fixed digital input port1~12, digital output definition, weight value trigger.	
1302	41303	Trigger Input Port	Initial value: 0; range 0~12. Select the digital input port 0~12 corresponding to this function signal, and input port 0 means that this function is not defined.	
1303	41304	Output Port	Initial value: 0; range 0~16.  Select the digital output port 0~16 corresponding to the function signal, and the output port- 0 means that the function is not defined.	
1304	41305	Delay ON Timer	Initial value : 0 ; range: 0~99.9 .(unit s)  After the trigger signal is valid, the logic output signal is valid after the delay.	
1305	41306	Delay OFF Timer	Initial value : 0 ; range: 0~99.9 .(unit s)  After the trigger signal is invalid, the logic output signal will be invalid after the delay.	
1306	41307	Output ON Timer	Initial value : 0 ; range: 0~99.9 .(unit s)  The duration after the logic output signal is valid, and becomes invalid after the end of the time.	
1307-1308	41308-41309	Trigger Weight	Initial value: 0; range: 0~999999.  When the trigger signal selects "Threshold Weight", the current weight is compared to this value.	
1309~1399	41310~41400		Reserved	



	Motor paracontrollers - filling mode ( reserved 1400~1600)			
1400	41401	Current Filler Motor Cfg ID	Initial value: 0; Range: 0~4	
1401	41402	Filling Mode	Initial value: 0; Optional: 0: Air Drive; 1: Step Motor Drive; 2: Motor Drive.	
1402	41403	Filler Gate Close Overtime	Initial value: <b>4.0</b> ; range: <b>0~99.9.</b> (unit <b>s</b> )	
1403	41404	Filler Gate Limit Signal Type	Initial value: 0; Optional: 0: In Position When Have Signal; 1: In Position When No Signal	
1404	41405	Filler Motor Cfg ID	Initial value: 0, range: 0~4	
1405	41406	Filler Motor Frequency	Initialvalue : 12000 , range:1~50000Hz	
1406-1407	41407-41408	Steps For Filler Open to Fi-F	Initialvalue : <b>1800</b> ; range: <b>1~60000</b> .	
1408-1409	41409-41410	Steps For Filler Open to Me-F	Initialvalue : 4300 ; range:1~60000	
1410-1411	41411-41412	Steps For Filler Open to Co-F	Initialvalue : 7750 ; range:1~60000	
1412	41413	Filler Motor DR	Initial value: 0; Optional: 0: Gate Open When Signal ON; 1: Gate Open When Signal OFF	
1413	41414	Filler Motor Start Frequency	Initial value: 2000; Range: 0~50000Hz (This value should preferably not be greater than the filling motor frequency)	
1414	41415	Filler Motor ACC Time	Fill motor acceleration time Initial value: <b>200</b> ; Range: <b>0~9999</b> . (unit <b>s</b> )	
1415	41416	Filler Motor DEC Time	Fill motor deceleration time Initial value: <b>50</b> ; Range: <b>0~9999</b> . (in <b>ms</b> )	
1416	41417	Co-F,Gate Open Time	Initial value: <b>0.80</b> ; Range: <b>0~99.99</b> . (unit <b>s</b> )	
1417	41418	Me-F,Gate Open Time	Initial value: <b>0.40</b> ; Range: <b>0~99.99</b> . (unit <b>s</b> )	
1418	41419	Fi-F,Gate Open Time	Initial value: <b>0.20</b> ; Range: <b>0~99.99</b> . (unit <b>s</b> )	
1419	41420	Lock Mode	Initial value: 0; Optional: 0: Air Drive	



			GM7707 bagging controller
			1 : Step Motor Drive 2 : MotorDrive Dual-Limit; 3 : MotorDrive Single-Limit .
1420	41421	Bag Release Overtime	Initial value: <b>3.0</b> ; Range: <b>0</b> ~ <b>99.9</b> . (unit <b>s</b> )
1421	41422	Bag Lock Overtime	Initial value: <b>3.0</b> ; range: <b>0~99.9</b> . (unit <b>s</b> )
1422	41423	Clutch Limit Signal Type	Initial value: 0 ;Optional: 0 : In Position When Have Signal 1 : In Position When No Signal.
1423	41424	Clutch Lock Frequency	Initial value: <b>30000</b> ; Range: <b>1~50000 Hz</b> .
1424	41425	Clutch Release Frequency	Initial value: 20000; range: 1~50000 Hz.
1425-1426	41426-41427	Steps to Lock Bag	Initial value: 12000; range: 1~60000.
1427	41428	Clutch Motor DR	Initial value: 0; Optional: 0: Lock Bag When Signal OFF; 1: Lock Bag When Signal ON.
1428	41429	Clutch Motor Start Frequency	Initial value: 2000; range: 0 ~ 50000 Hz.  (This value cannot be greater than the pocket frequency)
1429	41430	Clutch Motor ACC Time	Initial value: <b>200</b> ; Range: <b>0~9999</b> . (in <b>ms</b> )
1430	41431	Clutch Motor DEC Time	Initial value: <b>50</b> ; Range: <b>0~9999</b> (in <b>ms</b> ).
1431	41432	Bag Release Time	Initial value: <b>0.5</b> , range: <b>0~99.99</b> . (unit <b>s</b> )
1432	41433	Discharge mode	Initial value: pneumatic mode;  0, Air Drive;  1. Step Motor Drive  2, MotorDrive Single-Limit;  3, MotorDrive Dual-Limit;  4. MotorDrive Rotating.
1433	41434	DISC Gate Close Overtime	Initial value: <b>3.0</b> ; range: <b>0</b> ~ <b>99.9</b> . (unit <b>s</b> )
1434	41435	DISC Gate Open Overtime	Initial value : 3.0 ; range: 0 ~ 99 .9 . (unit s)
1435	41436	DISC Gate Limit Signal Type	Initial value: 0; Optional: 0, In Position When Have Signal. 1. In Position When No Signal.
1436	41437	Realtime Detecting When	Initial value : <b>0</b> ; <b>0</b> : off ; <b>1</b> : on.
		Discharge	



		Frequency	range: 1~50000 ( Hz ).
		DISC Motor Close	Initial value : 20000 ;
1438	41439	Frequency	range: 1~50000 ( Hz ).
1439-1440	41440-41441	Discharge Steps	Initial value : 12000 ; range: 1~60000 .
1441	41442	DISC Motor DR	Initial value: 0; Optional: 0: Gate Open When Signal OFF 1: Gate Open When Signal ON
1442	41443	DISC Motor Start Frequency	Initial value: 2000; range: 1~50000
1443	41444	DISC Motor ACC Time	Initial value: 200; range: 0~9999
1444	41445	DISC Motor DEC Time	Initial value: 50; range: 0~9999
1445	41446	DISC Gate Open Timer	Initial value: 1.00; range: 0~99.99
1446	41447	Filling motor returns to zero frequency	Initial value: 20000; range: 0~50000
1447	41448	Unlock bag motor power back to zero frequency	Initialvalue: 20000; range: 0~50000
1448	41449	Discharging motor power back to the original zero frequency	Initial value: 20000; range: 0~50000
1449~1599	41450~41600	•	Reserved
Communicati	<u> </u>	rs - serial port 2 parace	ontrollers ( reserved 1600~1700 ) 485
1600	41601	Communication ID	Initial value: 1; 1 ~ 9 9 optional.
1601	41602	Communication Mode	0: Modbus-RTU; 1: Printing Mode 2: continuous mode 3: MD-R (compatible with 01. version)
1602	41603	Baud rate	0:9600; 1:119200 2:38400; 3:57600 4:115200
1603	41604	Data Format	Communication data format selection (data bit, parity bit, stop bit. E: even parity; N: no parity)  0:8-E-1; 1:8-N-1  2:7-E-1; 3:7-N-1
1604	41605	Dword Format	Initial value : 0 : Range : 0-1 0 : AB-CD;1: CD-AB.
Communicati	on paracontroller	rs - serial port 1 paraco	ontrollers 232



-					
1605	41606	Communication ID	Initial v	value: 1; 1 ~ 9 9 optional.	
1606	41607	Communication Mode	0 : Mod 1 : Prin 2 : con 3 : MD	dbus-RTU; ating Mode tinuous mode D-R (compatible	
1607	41608	Baud rate	II .	0; 1:119200 00; 3:57600 200	
1608	41609	Data Format	selection bit. E: 0:8-E	unication data format on (data bit, parity bit, stop even parity; N: no parity) -1; 1:8-N-1 -1; 3:7-N-1	
1609	41610	Dword Format	ll .	value : <b>0 :</b> Range : <b>0-1</b> -C <b>D;1</b> : CD- <b>AB</b> .	
Co	ommunication pa	racontrollers - Etherne	et Interfa	ce paracontrollers	
1610	41611	Dword Format		value : <b>0 :</b> Range : <b>0-1</b> - <b>CD</b> ; <b>1</b> : CD- <b>AB</b> .	
1611	41612	Server Port	ll .	value: 502 ; 1 ~ 65535	
1612	41613				
1613	41614		Initial v	nitial value: <b>192.168.1 01. 246</b> . Range: <b>0</b> ~ <b>255</b> .	
1614	41615	IP-address	ll .		
1615	41616				
1616~1699	41617~41700		Rese	erved	
	I/O Module cu	stom paracontrollers (	reserved	11800~1900)	
1700	41701	Digital input port 1definition		1900 )	
1701	41702	Digital input port <b>2</b> definition			
1702	41703	Digital input port 3definition		Write the corresponding value of the function.If the	
1703	41704	Digital input port 4definition		input port 3 is defined as running, write 1 at address	
1704	41705	Digital input port <b>5</b> definition		41703 (refer to 4.8.1 output and input definition table	
1705	41706	Digital input port 6definition		code for numeric function code) Read: return the	
1706	41707	Digital input port 7definition		current switching value custom state	
1707	41708	Digital input port 8definition			
1708	41709	Digital input port 9definition			



		D		1
1709	41710	Digital input		
		port 10definition		
1710	41711	Digital input		
		port 11definition		
1711	41712	Digital input		
		port 12definition		
1712	41713	ON/OFF output		
		port 1definition		1
1713	41714	ON/OFF output		
		port 2definition		
1714	41715	ON/OFF output		
		port 3definition		
1715	41716	ON/OFF output		
		port 4definition		_
1716	41717	ON/OFF output port <b>5</b> definition		
		ON/OFF output		
1717	41718	port 6definition		
		ON/OFF output		
1718	41719	port 7definition		Write the corresponding value of the function. If the
		ON/OFF output		output port 3 is defined as
1719	41720	port 8definition		running, write 1 at address
		ON/OFF output		41715 (refer to 4.8.1 output
1720	41721	port 9definition		and input definition table
		ON/OFF output		code for numeric function
1721	41722	port 10definition		code).
1700	44.700	ON/OFF output		
1722	41723	port 11definition		
1722	41724	ON/OFF output		
1723	41724	port 12definition		
1724	41725	ON/OFF output		
1/24	41725	port 13definition		
1725	41726	ON/OFF output		
1723	41720	port 14definition		
1726	41727	ON/OFF output		
1720	71/2/	port 15definition		
1727	41728	ON/OFF output		
1,2,	11720	port <b>16</b> definition	1	
			write:	
		G / 1		op state can be
1728	41729	Start / end	II .	. Write <b>1 to</b> start the FF test.
		ON/OFF test	ll .	
			state.	0 to exit the ON/OFF test
				not allowed to write
			II .	From the low to the high, the
1729	41730	Input test		conding port IN1~12 input.
				lid for input, <b>0</b> is invalid for
	L			



	GM9907 bagging controller		
			input.
1730-1731	41731-41732	Output test	Write: The ON/OFF test ON/OFF can be written in the open state, and the output from the low to the high port corresponds to the port OUT1~16. 1 is valid for output, 0 is invalid for output.  Read: Returns the status of the current output ON/OFF port, from the low to the high, respectively, corresponding to the port OUT1~16 output. 1 is valid for output, 0 is invalid for output.
1732~1799	41733~41800		Reserved
	Other parac	controller settings (rese	erved 1900~2000 )
1800	41801	Print Total ACUM	Read as <b>0</b> Write <b>1</b> , Print Total ACUM
1801	41802	Print recipe ACUM	Read as 0 Write 100 to print the current recipe ACUM Write 1-20, print the corresponding formula ACUM Write 101 to Print All Recipe ACUM
1802	41803	Print user ACUM	Read as 0 Write 100 to Print Choose User ACUM Write 0-9, print the corresponding user ACUM Write 101, Print All User ACUM
1803	41804	reset	8800 Reset All(Including Calibration) 8801 Reset All(Except Calibration) 8802 Reset Recipe Paracontroller 8803 Reset Sys&Com Paramter 8804 Reset Peripherals Paracontroller 8805 Reset Motor Paracontroller 880 6 Reset Calibration Paracontroller 880 7 Reset I/O Module 880 8 Reset User Logic Paracontroller 8809 Reset communicate paracontroller
1804	41805	backup	read: 0: No Backup Data; 1: Have Backup Data. write:



	i e		GM7707 bagging controller
			Write 9900 to Execute Paracontroller Backup; Write 9901 to Execute Recovery From Backup Write 9902 to p Execute Delete
			Backup.
1805-1806	41806-41807	Backup date	Read only
1807-1808	41808-41809	Backup time	reductionly
1809	41810	year	0-99
1810	41811	month	1-12
1811	41812	day	1-31
1812	41813	Time	0-23
1813	41814	Minute	0-59
1814	41815	second	0-59
1815	41816	Clear All Recipes ACUM	Write 1 clear total accumulation
1816	41817	Clear recipe ACUM	Write 1-20 to clear the Recipe ID ACUM; Write 100 to Clear Choose Recipe ACUM; Write 101 to Clear All Recipe ACUM.
1817	41818	Clear user ACUM	Read as 0. Write 0-9 to clear the user ID ACUM; Write 100 to clear choose user ACUM; Write 101 to clears all user ACUM.
1818	41819	User ID	Read out current ID, paracontroller ready only
1819-1949	41820-41950	Reserved	
		Batch setting	
1950	41951	Batch	Initial value: 0; range: 0~9999.
1951	41952	Remain PCS	Read only
1952~1999	41953~42000	Reserved	
	Formul	a target value (reserve	d 2000~2300 )
2000-2001	42001-42002	Recipe 1 target	Initial value: <b>0</b> .
2002-2003	42003-42004	Recipe 2 target	Initial value: <b>0</b> .
•••••		•••••	Initial value: <b>0</b> .
2038-2039	42039-42040	Recipe 20 target	Initial value: <b>0</b> .
		Cumulative weig	2
2040-2041	42041-42042	Total cumulative we	
2042-2043	42043-42044	The total cumulative weight low 9	
2044-2045	42045-42046	Total accumulated number of packets	



2046-2047	42047-42048	Formula 1cumulative weight is 6digits high		
2048-2049	42049-42050	Formulation 1cumulative weight low 9		
2050-2051	42051-42052	Formula 1cumulative count		
•••••				
2160-2161	42161-42162	Formulation 6High 20cumulative weight		
2162-2163	42163-42164	Formulation20 cumulative weight low 9		
2164-2165	42165-42166	Formula 20 cumulative times		
	User cun	nulative weight and number of times		
2166-2167	42167-42168	User <b>0</b> cumulative weight is <b>6</b> digits high		
2168-2169	42169-42170	User <b>0</b> cumulative weight is <b>9</b> digits lower		
2170-2171	42171-42172	User <b>0</b> cumulative times		
2172-2173	42173-42174	User 1cumulative weight is 6digits high		
2174-2175	42175-42176	User 1cumulative weight is 9digits lower		
2176-2177	42177-42178	User 1cumulative times		
2178-2179	42179-42180	User 2cumulative weight is 6digits high		
2180-2181	42181-42182	User 2cumulative weight is 9digits lower		
2182-2183	42183-42184	User 2cumulative times		
2184-2185	42185-42186	User 3cumulative weight is 6digits high		
2186-2187	42187-42188	User 3cumulative weight is 9digits lower		
2188-2189	42189-42190	User 3cumulative times		
2190-2191	42191-42192	User 4cumulative weight is 6digits high		
2192-2193	42193-42194	User 4cumulative weight is 9digits lower		
2194-2195	42195-42196	User 4cumulative times		
2196-2197	42197-42198	User 5cumulative weight is 6digits high		
2198-2199	42199-42200	User 5cumulative weight is 9digits lower		
2200-2201	42201-42202	User 5cumulative times		
2202-2203	42203-42204	User 6cumulative weight is 6digits high		
2204-2205	42205-42206	User 6cumulative weight is 9digits lower		
2206-2207	42207-42208	User 6cumulative times		
22082209	42209-42210	User 7cumulative weight is 6digits high		
2210-2211	42211-42212	User 7cumulative weight is 9digits lower		
2212-2213	42213-42214	User 7cumulative times		
2214-2215	42215-42216	User <b>8</b> cumulative weight is <b>6</b> digits high		
2216-2217	42217-42218	User 8cumulative weight is 9digits lower		
2218-2219	42219-42220	User <b>8</b> cumulative times		
2220-2221	42221-42222	User 9cumulative weight is 6digits high		
2222-2223	42223-42224	User 9cumulative weight is 9digits lower		
2224-2225	42225-42226	User 9cumulative times		
2226~2299	42227~42300	Reserved		



G. T. C. (1. ( 1000 0100)				
000000000	Compile information ( reserved 9000~9100)			
9000-9001	49001-49002		For example : 0 1000 0	
9002-9003	49003-49004	Date	For example: 161201	
9004-9005	49005-49006	Logic Compile Time	For example: 130805	
9006-9007	49007-49008	IO Board Version	For example: 100	
9008~9099	49009~49100	Reserved (reserved 9100~9200)		
	(	Coil address (reserved 0	~100)	
0	00001	Start		
1	00002	Emergency stop		
2	00003	stop		
3	00004	Pause		
4	00005	Zeroing		
5	00006	Clear Alarm		
6	00007	Lock/Unlock Request		
7	00008	Change Recipe		
8	00009	Manual Fine Flow		
9	00010	Manual Coarse Flow		
10	00011	Manual Discharge		
11	00012	Manual Empty Materi		
12	00013	Hanging bag	(Only write <b>FF00H</b> );	
13	00014	Sewing Input	Read: <b>0001H</b> = On <b>0000H</b> = Off	
14	00015	Sewing Emergency St		
15	00016	Auxiliary PU Input	1	
16	00017	Auxiliary PU Input 2	2	
17	00018	Auxiliary PU Input	3	
18	00019	Auxiliary PU Input1	4	
19	00020	Clear For Adaptive		
20	00021	Manual Medium Flow	This address can only be written to 1. Read 1 is valid, 0 is invalid.	
21	00022	Manual Flow(Only for material Calibration)	This address can only be written to 1.  Read 1 is valid, 0 is invalid.	
22	00023	Manual Discharge(On material Calibration)	This address can only be written to 1.  ly for Read 1 is valid, 0 is invalid.	
•••	•••	Reserved		



80	00081	Clear Choose user ACUM	
81	00081	Clear all users ACUM	
01	00082	Clear Choose Repice	Write: <b>FF00H</b> = valid;
82	00083	ACUM	Read 0000H.
83	00084	Clear all Repice ACUM	
84	00085	Clear Total ACUM	
•••	•••	Reserved	
100	00101	Reset All	
101	00102	Reset Calibration	
102	00103	Reset Sys&Com Paracontroller (not including communication paracontrollers)	
103	00104	Reset Recipe Paracontroller	Write: <b>FF00H</b> = valid; Read <b>0000H.</b>
104	00105	Reset Peripherals Paracontroller	Run time can write but not effective, need stop run
105	00106	Reset I/O Module	then write valid
106	00107	Reset Motor Paracontroller	
107	00108	Reset User Logic Paracontroller	
108	00109	Execute Paracontroller Backup	
109	00110	Execute Recovery From Backup	
110	00111	Execute Delete Backup	Write: <b>FF00H</b> = delet back up paracontroller read: <b>0001H</b> =have back up paracontroller; <b>0000H</b> =no back up paracontroller.
111	00112	Communication paracontroller reset	Write: FF00H = valid; Read 0000H Writable at run time but not effective, need to stop running to write effective.
	Coil	ON/OFF test ( reserved 200	D~250)
150	00151	IO test ON/OFF: Write: FF00H = valid; 0000H = invalid Read: 0001H = valid; 0000H = invalid	
151	00152	Input port 1	
152	00153	Input port 2 Write invalid	
153	00154	T	: 0001H = valid; 0000H alid (When input port is valid,
154	00155	I I	ess read out 1)
155	00156	Input port 5	



156	00157	Input port 6	
157	00158	Input port 7	
158	00159	Input port 8	
159	00160	Input port 9	
160	00161	Input port 10	
161	00162	Input port 11	
162	00163	Input port 12	
163	00164	Output port 1	
164	00165	Output port 2	
165	00166	Output port 3	
166	00167	Output port 4	
167	00168	Output port 5	
168	00169	Output port 6	Read: <b>FF00H</b> = valid: <b>0000H</b> =
169	00170	Output port 7	invalid (When write FF00H,
170	00171	Output port 8	corresponding port to the address
171	00172	Output port 9	shall be valid
172	00173	Output port 10	) Read: <b>0001H</b> = valid; <b>0000H</b> =
173	00174	Output port 11	invalid
174	00175	Output port 12	
175	00176	Output port 13	
176	00177	Output port 14	
177	00178	Output port 15	
178	00179	Output port 16	

Note 2: The controller will perform the weightless gain calibration according to the currently stored load cell power supply voltage, load cell sensitivity, and load cell maximum range (where the maximum range input cannot be greater than the maximum range set in the controller calibration (modbus addresses 10104 and 40105). Calibration principle:

Zero calibration: Zero calibration can be performed via modbus (40106 and 40107) addresses. (If you skip the zero calibration and directly perform the weightless gain calibration, the last recorded zero will be used as the current zero calibration) Gain calibration: Gain millivolts is the input load cell power multiplied by the load cell sensitivity, and the gain weight is the load cell's maximum range. The gain millivolts and gain weight used for gain scaling here are referenced below.

The first type of weightless gain calibration method: when the load cell power supply (5000mv) is input separately, the weightless calibration operation will be directly performed.

The second type of weightless gain calibration method: input load cell sensitivity (2mv/v) and input the load cell's maximum range (1000kg) will carry out the



weightless calibration operation (note here, please input only the load cell sensitivity or only input the maximum When the range is measured, the entered value is not saved immediately. Only when both values are entered and the two values entered are reasonable, the data is saved and then the gain calibration is performed.

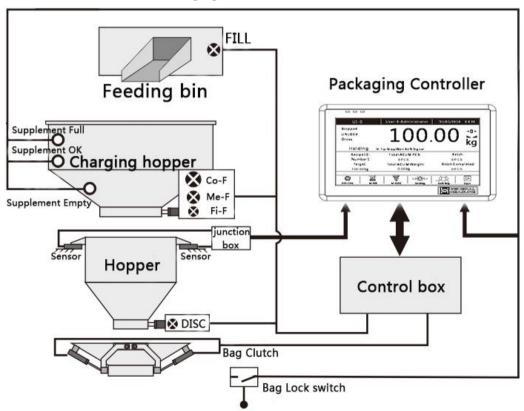


## 7. Automatic bagging process

The GM9907 bagging controller automatically controls the entire bagging process of coarse, medium and fine filling and unloading in the automatic bagging state. Supports a variety of modes including bucket, bucketless scale, ton pack scale, valve port scale and PLC. The scale structure and working mode are selected in the system and communication paracontrollers.

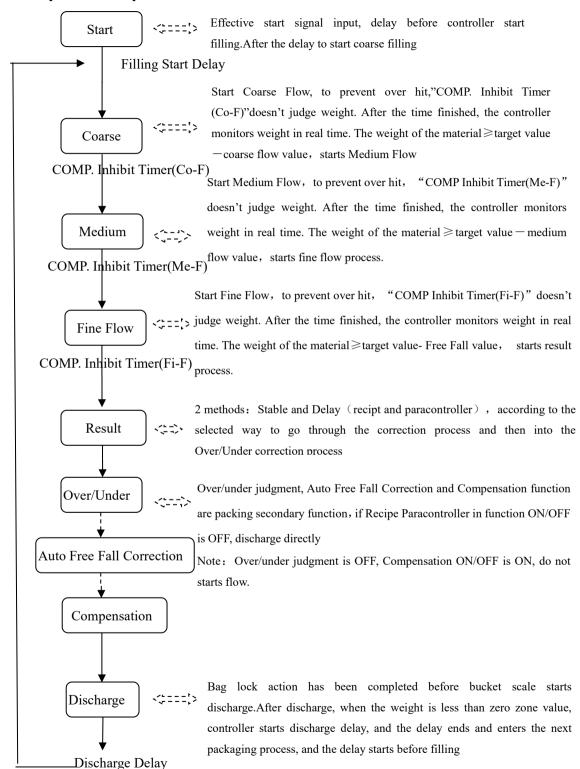
### 7.1 With a single scale Net Weigher

In this mode, the material is fed from the preparation hopper to the measuring hopper through the filling mechanism (coarse, medium and fine), and the weight sampling of the controllering control process is completed in the measuring hopper (the weighing load cell is mounted on the measuring hopper). After the controllering is completed, the material is discharged into the package through the unloading mechanism on the measuring hopper. Its structure is shown in the following figure:





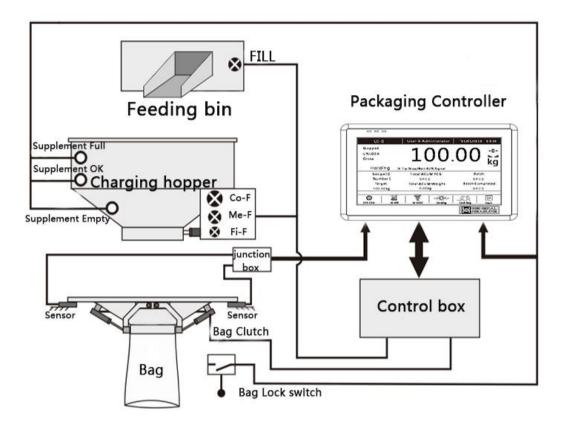
#### **Basic process description:**





## 7.2 Without a single scale Gross Weigher

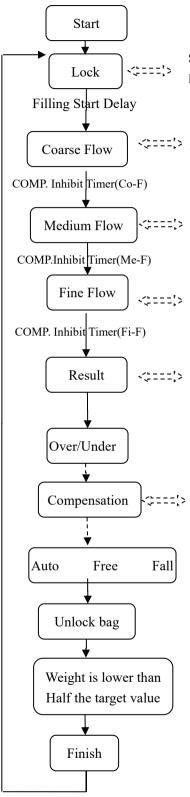
In this mode, the material is directly fed into the package from the hopper through the filling mechanism (coarse, medium, and fine), and the weight sampling of the controllering control process is completed in the package (the weighing load cell is mounted on the hopper). After the controllering is completed, the controller controls the unlock bag directly. Its structure is shown in the following figure:



The difference between the Gross Weigher process and the Net Weigher process is that the load cell is installed on the hopper. After starting, it is necessary to complete the bag clamping action before starting the filling delay and starting the filling process.



#### **Basic process description:**



Start signal input is valid, controller starts Filling Start Delay. When time up, starts coarse filling.

Start Coarse Flow, to prevent over hit,"COMP. Inhibit Timer (Co-F)"doesn't judge weight. After the time finished, the controller monitors weight in real time. The weight of the material ≥ target value — coarse flow value, starts Medium Flow

Start Medium Flow, to prevent over hit, "COMP Inhibit Timer(Me-F)" Doesn't judge weight. After the time finished, the controller monitors weight in real time. The weight of the material ≥ target value — medium flow value, starts fine flow process.

Start Fine Flow, to prevent over hit, "COMP Inhibit Timer(Fi-F)" doesn't judge weight. After the time finished, the controller monitors weight in real time. The weight of the material  $\geq$  target value- Free Fall value, starts result process.

2 methods: Stable and Delay (recipt and paracontroller), according to the selected way to go through the correction process and then into the Over/Under correction process

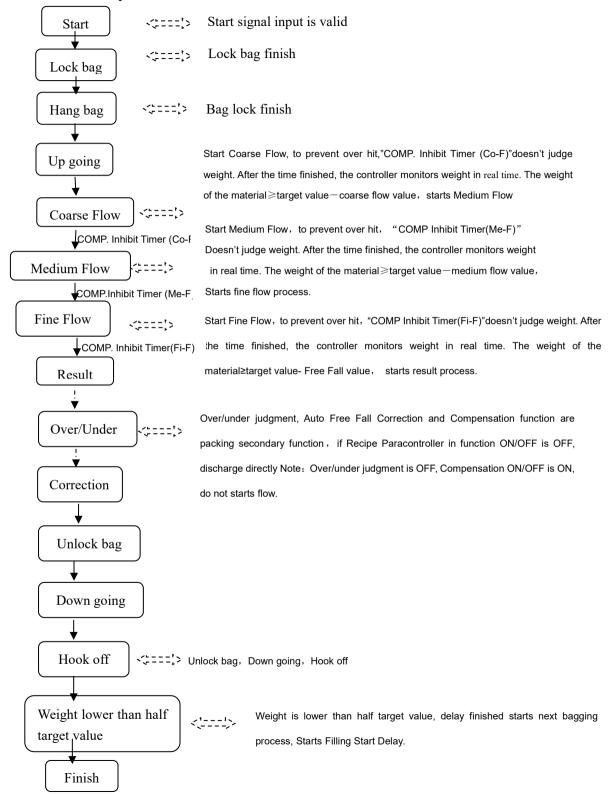
Over/under judgment, Auto Free Fall Correction and Compensation function are packing secondary function, if Recipe Paracontroller in function ON/OFF is OFF, discharge directly

Note: Over/under judgment is OFF, Compensation ON/OFF is ON, do not starts flow.



## 7.3 Tons of package scale

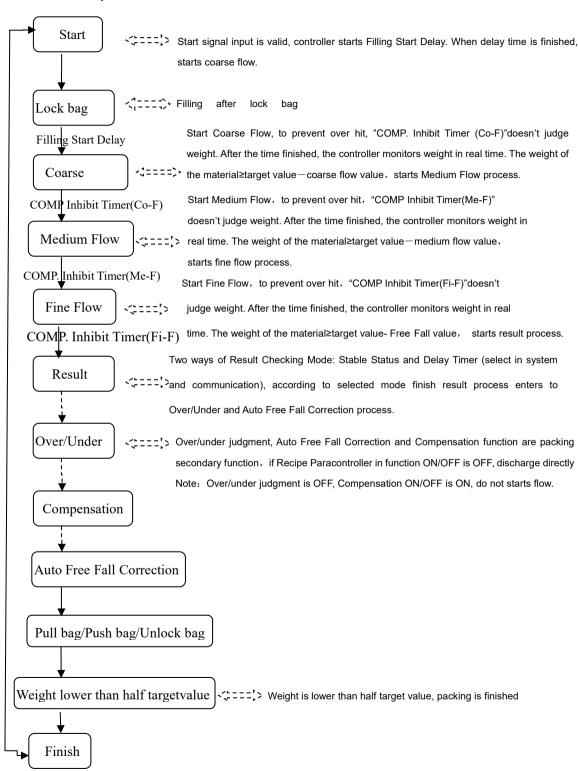
#### **Process description:**





### 7.4 Valve port scale

#### Process description:





### 7.5 PLC mode

In the PLC mode, the status displayed on the main page of the controller is changed to: coarse add, medium add, fine add, over tolerance, undershoot, upper limit, lower limit, zero zone.

When the weighing process starts, the quick addition, medium addition, and fine addition output are effective, and the main interface displays the coarse addition, medium addition, and fine addition in sequence.

When the weighing value > target value + excess value, the out-of-tolerance output is valid. The under output is valid when the weighing value < target value - underbalance value.

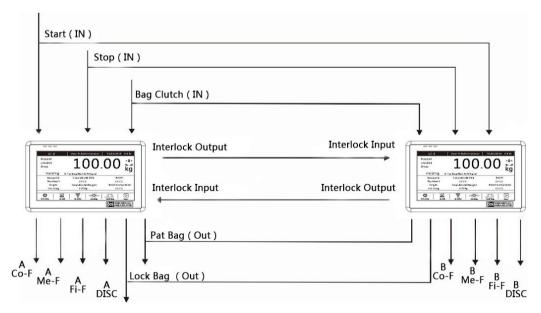
When the weighing value > upper limit value, the upper limit output is valid.

When the weighing value < lower limit, the lower limit output is valid.

When the weighing value < zero zone value, the zero zone output is valid.

## 7.6 Double scale interlocking bagging mode

The two controllers can be combined into two pairs of Net Weigher and double Gross Weigher scales by setting and wiring. The two measuring buckets can be weighed at the same time and connected to the same pocket mechanism. The two scales can be fed at the same time to improve the bagging speed. Setting 2 aspects, the working mode of the controller system and the communication paracontroller scale body structure are two controllers: interlocking A scale and interlocking B scale. Note: The pockets are delayed by two controllers to be set the same. Its structure is shown in the following figure: Refer to the following figure for ON/OFFing wiring:



If the scale body mode selects the double Net Weigher interlock mode, the target values  $\mathbf{A}$  scale and the  $\mathbf{B}$  scale should be set separately, the quick addition, the



medium addition value, and the drop value, and the materials are separately measured from the storage hopper through the two filling mechanisms. Filling in the bucket (coarse, medium and fine filling), under the operating state, it can independently control the filling speed of **A** scale and **B** scale, the whole bagging process of unloading and automatic unlock bag. **The A** and **B** scales are first quantitatively completed before the unloading process.

#### Lock bag

**Net Weigher:** A scale or **B** scale, first judge the pocket signal before unloading, start the pocket delay when the pocket signal is valid, the mechanism clamps the bag after the delay is over, and then starts the unloading action, who is **A** and **B** scale First, quantify who will discharge first. If one is discharging scale, the other scale even quantitatively complete, also need to wait for the next bag-scale signal is valid before unloading.

Gross Weigher: judge the pocket signal before filling. When the pocket signal is valid, both scalesstart the pocket delay. After the delay, the mechanism clamps the bag. After the bag is completed, the delay before filling is started to avoid leakage of materials. After the delay time of the bag is reached, the controller judges the stability, peels after stabilization, and the weight of the bag is used as the tare weight. Then the controller changes from the gross weight state to the net weight state and starts the filling process.

#### Unlock bag

**Net Weigher**: the controller judges whether the material in the **A** scale or the **B** scale hopper is lower than the near zero value. If it is lower, the timer discharge delay is started. After the delay time is reached, the controller closes the unloading and starts the unlock bag delay. The unlock bag is automatically released after the delay of the unlock bag. **Gross Weigher:** Start the unlock bag start delay after the setting, and automatically release the bag after the delay. (If there is a bag patting function, start the unlock bag start delay after the bag is finished). The controller controls the conveyor signal output and starts the conveyor.



## 8. Motor working process

## 8.1 Motor filling section

#### **8.1.1** Stepper motor filling

Stepper motor mode control fill door ON/OFF: The ON/OFF quantity involved is: (fill pulse output) / (fill direction signal), (fill gate closes in place), (signal in-position signal type determines).

Take the process of coarse filling and fine adding as an example:

- Coarse addition process: controller control (motor rotation direction signal) output, to ensure that the motor rotation direction is the door opening direction, then (fill pulse output) according to the set filling motor frequency to output pulses, control the filling stepper motor to turn in the door opening direction, (When the number of filling pulse output reaches the set value, the output pulse signal is stopped, and the filling door stops rotating. At this time, it is in the coarse-adding state. Then the controller changes (motor rotation direction signal) output to the door closing direction.
- In the process of adding: (fill pulse output) according to the set filling motor frequency to output pulses, control the filling stepper motor to turn in the closing direction, (the filling pulse output) reaches the set value and stops outputting the pulse signal, the filling gate Stop turning, this time is in the middle state.
- Fine addition process: (fill pulse output) according to the set fill motor frequency to output pulses, control filling stepper motor continues to turn in the closing direction, (fill pulse output) number reaches the set value and then stop output pulse signal, filling door stops rotating, in this case the fine fill state.
- Filling off: (filling pulse output) According to the set filling motor frequency, the pulse is output, and the filling stepping motor continues to rotate in the closing direction until the detection (filling door closes in place). The input pulse is stopped after the input is valid, and the filling gate stops. Rotate, at this point the fill is completely closed.
- Note: If the closing process time exceeds the filling door closing timeout time set by the filling closing timeout time, the controller has not detected (the filling door is closed in place), then the controller will stop (fill pulse output), and the alarm filling will close the timeout.

#### **8.1.2** Ordinary motor filling

Ordinary motor mode control fill door ON/OFF: The I/O Module involved is: (adding material to open the door) / (adding material to close the door), (the filling door is closed in place).

Take the process of coarse filling and fine adding as an example:

Take the process of coarse filling and fine adding as an example:



Coarse filling process: The filling process starts after the delay time. The controller first makes the (filling and opening) signal output valid, the effective time is the coarse opening time, and the coarse filling process begins.

- In the process of medium filling: When the weight of the material in the hopper  $\geq$  the single scale target value coarse increase the advance amount, the signal output (filling closes) is valid, and the effective time is "coarse opening time medium opening time".
- Fine filling process: When the material weight in the hopper ≥ single scale target value medium advance amount, the (filling closes) signal output is valid, the effective time is "medium plus door opening time fine plus door opening time"
- Filling off: When the material weight in the hopper ≥ single scale target value fine plus advance, the (fill closing) signal output is valid until the fill door in-position signal is detected (the fill door is closed).

## 8.2 Motor lock bag part

#### 8.2.1 Step motor lock unlock bag

Stepper motor mode control lock unlock bag: The ON/OFF quantity involved is: (lock bag pulse output) / (lock bag direction signal) / (unlock bag in place), ( signal is determined by the type of in-position signal ).

Take the process of clamping the unlock bag in the measuring bucket mode as an example:

- Lock bag process: the controller control (lock bag direction signal) output, to ensure that the motor rotation direction is the bag direction, and then (lock bag pulse output) according to the set bag motor frequency to output pulses, control lock unlock bag stepping The motor rotates in the direction of the pocket, and the number of pulses required to set the pocket is stopped after the number of pulses required to set the pocket is stopped. At this time, the pocket mechanism is in the pocket state. Then the controller changes (the signal of the pinch pocket direction) and the output is in the direction of the unlock bag.
- Unlock bag process: (pinch bag pulse output) according to the set unlock bag motor frequency to output pulses, control the unlock bag stepper motor to the direction of the unlock bag, until the detection (unlock bag in place) input is valid, stop output pulse signal In this case the bag is unlock state. Note: If the unlock bag process time exceeds the set unlock bag process timeout period, the controller has not detected (the unlock bag is in place), then the controller will stop output (lock bag pulse output), and the alarm will call the unlock bag timeout.



#### **8.2.2** Motor double limit lock unlock bag

Ordinary motor double limit control lock unlock bag: The ON/OFF quantity involved is: (lock bag) / (unlock bag), (lock bag in place) / (unlock bag in place). (The signal is determined by the type of signal in place).

Take the process of adding a unlock bag in the measuring bucket mode as an example:

- Process lock bags: a signal controller output control lock folder bag to bag-bulk bags motor rotational direction, until a bag-detected signal and outputs the stop bit input signal is active folder bag, the bag clamp mechanism is in this case the bag sandwiched state. Note: If the bagging process time exceeds the set bagging process timeout period, the controller has not detected the bag in place signal, then the controller will stop outputting the bagging signal and the alarm bagging process will time out.
- Process unlock bags: unlock bags signal controller output control lock unlock bulk bags of rotation of the motor direction of the bag, the bag in place until detecting unlock bulk bags stops outputting the signal after the input signal is active, whereupon the bag-state mechanism is unlock bags. Note: If the unlock bag process time exceeds the set unlock bag process timeout period and the controller hasnot detected the unlock bag in-position signal, the controller will stop outputting the unlock bag signaland the alarm unlock bag process will time out.

#### **8.2.3** Motor single limit lock unlock bag

Ordinary motor dual output control control lock unlock bag: the amount of ON/OFF involved is: (lock bag) / (unlock bag), (lock bag in place).

Take the process of adding a unlock bag in the measuring bucket mode as an example:

- The bagging process: the controller controls the ON/OFF output signal, and the output signal until the detection of the pocket in-position signal input is valid, the output signal output is invalid, and the device pocket is realized.
- The unlock bag process: the controller controls the ON/OFF output signal to realize the unlock bag of the device, and the output signal duration is the unlock bag output, and the output signal output is invalid.

#### 8.3 Motor discharge part

#### **8.3.1** Stepper motor discharge

Stepper motor control discharge: The ON/OFF quantity involved is: (discharge pulse output), (discharge direction signal), (discharge opening door is in place).

Take the unloading as an example:

Discharge opening process: controller control (discharge direction signal) output, to ensure that the motor rotation direction is the door opening direction, and then (discharge pulse output) according to the set discharge door motor frequency to output pulses, control the discharge stepper motor to the direction of rotation of the discharge door, stops



outputting a pulse signal(output pulse discharge) the value of the number reaches the number of pulses required to set the discharge, the discharge mechanism is in the open state at this time

• Discharge closing process: After the discharge door is opened, if the weight of the controllerdetection hopper is lower than the near zero value, the discharge delay time will be started. After the discharge delay time is over, the controller change (discharge direction signal) output is closed. Direction, (discharge pulse output) according to the set discharge motor frequency to output the pulse, control the discharge stepper motor to rotate in the closing direction, until the detection (discharge door open in place) input is valid, stop output pulse signal, this The time is closed. Note: If the door closing process time exceeds the set discharge closing timeout time, the controller has not detected the door closing in-position signal (the discharge door is in place), then the controller will stop output (discharge pulse output), and the alarm unloading closes the door timeout.

#### **8.3.2** Motor single limit discharge

Ordinary motor forward and reverse single limit mode to control unloading: the ON/OFF quantity involved is: (unloading to open the door), (unloading to close the door in place).

Take the unloading process as an example:

- Discharge opening process: At the beginning of the unloading process, the controller output discharge signal controls the unloading motor to rotate in the direction of the discharge opening, and continuously **discharges the door opening output effective time** set discharge motor door opening signal output time, and then closes the unloading signal Output.
- Closing the discharge process: After the discharge door is opened, the controlleration near the hopper weight is less than zero, then the discharge start delay time, delay time after the discharge, the discharge door closing output signal, to control the discharge motor closing the discharge direction of rotation until the sensed discharge doors close off the discharge stops outputting the input signal is position signal active, whereupon the discharge door in a closed state. **Note**: If the discharge door closing process time exceeds the set **discharge closing timeout time**, the controller has not detected the discharge door closing in-position signal, then the controller will stop output and the alarm **discharge closes the timeout**.

#### **8.3.3** Motor double limit discharge

Ordinary motor forward and reverse double limit mode control discharge: the ON/OFF quantity involved is: (unloading) (unloading closes the door), (unloading closes the door) / (unloading opens the door in place).

Take the unloading process as an example:



- Discharge opening process: At the beginning of the unloading process, the controller output discharge signal controls the unloading motor to rotate in the direction of the unloading door opening, until the discharge door in-position signal input is detected to stop outputting the discharge signal, and the discharge door is discharged. Is open. Note: If the discharge door opening process time exceeds the set **discharge opening timeout time**, the controller has not detected the discharge door open door in-position signal, then the controller will stop output, and the alarmunloading will open the door timeout.
- Discharge closing process: After the discharge door is opened, The controlleration near the hopper weight is less than zero, then the discharge start delay time, delay time after the discharge, the discharge output closing signals to control the discharge motor is rotated in the closing direction of the discharge until the sensed discharge Close door input valid signal in place to close the discharge stop signal is output, when the discharge doors in a closed state. Note: If the discharge door closing process time exceeds the set **discharge closing timeout time**, the controller has not detected the discharge door closing in-position signal, then the controller will stop output and the alarm **discharge closes the timeout**.

#### 8.3.4 Motor one-way rotary discharge

Ordinary motor one-way rotation one-week single limit mode control discharge: the ON/OFF quantity involved is: (unloading), (unloading closes the door in place). Take the unloading process as an example:

- Discharge opening process: At the beginning of the unloading process, the controller output discharge signal controls the unloading motor to rotate in the direction of the discharge opening, and continuously sets the **discharge motor to open the door signal output time**, and then closes the discharge signal output.
- Discharging and closing process: After the unloading door is opened, if the controller detects that the weight in the hopper is lower than the near zero value, the discharge delay time isstarted. After the discharge delay time is over, the discharge signal is output, and the unloading motor continues to be controlled. closing the discharge direction of rotation until the sensed discharge doors closing the discharge stops outputting the input signal is position signal active, whereupon the discharge door in a closed state.
- Note: If the discharge door closing process time exceeds the discharge closing timeout time, the controller has not detected the discharge door closing in-position signal, then the controller will stop output and the alarm discharge closes the timeout.

#### 8.3.5 Motor debug function

 Motor debug function is for the convenience of users quickly determine the door size of coarse, medium, fine flow. Take door size of debug fine flow for example as below.



Steps as below:

- 1: The left side of the interface is the current coarse, medium, fine pulse count. You can modify the data in fine flow pulse input box.
- 2: Click"Open fine flow"buttom, then controller ouput fine flow signal. User can determine whether the current pulse is appropriate by checking the opening size of the charging door. (Note: click "close fine flow" again to close fine flow.Controller can only be in a state, can not be in the state of coarse flow or medium flow at the same time),
- 3: If the pulse number has been modified, press the "save" button to save the modified pulse number, If do not want to save the modified pulse number, exit the motor debugging interface to restore the previous coarse ,medium, fine pulse number.



## 9. Peripheral workflow

### 9.1 Pat bag

The amount of ON/OFF involved in the bag making function is: "patting bag".

The bag-making function consists of three optional processes: "Bag in the filling", "Bag after setting", "and extra bag".

(Note: The extra bag function is not available in PLC mode).

If you want to use the bag making function, first set the bag shooting function in the bag paracontrollers under the peripheral paracontrollers. Different scale body structures are different depending on the optional bag mode.

#### In the filling bag:

During the filling process, if the bag in the filling is set, when the current weight is greater than the starting weight of the bag, the bag in the filling starts, and the output of the bag effective time and the bag invalid time are regarded as one bag at a time. After the "number of shots in the filling" is reached, the output of the shot bag in the filling is stopped.

#### After the value is taken, the bag is:

After the fixed value is over, if the set value is set and the bag is taken, the bag will be taken directly after the fixed value is set, and the output of the "bag valid time" and the "bag invalid time" will be regarded as one shot at a time, after reaching the "set value". After the number of times the bag is taken, the bag output is stopped after the fixed value is stopped.

#### Extra patting bag:

After all the bags are output, an additional bag output is performed. The effective time is the effective time of the extra bag output, and the invalid time is the bag invalid time. End the extra shot output after the bag is taken once.

#### 9.2 Coding

The amount of ON/OFFing involved in the coding function is: "code".

After the pocket is completed, if the code ON/OFF is turned on and the "code valid time" is not 0, the "code start delay" will be started. After the delay is over, the code delay will be started. The time is "coded effectively". Time", after the time is up, the coding process ends. (Note: If "Do not allow unloading ON/OFF when coding" is turned on, the loading and unloading function is prohibited during the code process)



## 9.3 Conveyor

The amount of ON/OFF involved in the conveyor function is: "conveyor output".

After the fixed value is over, check whether the "conveyor ON/OFF" is turned on. When it is turned on, run the "conveyor start delay time". After the delay time, the conveyor starts to run, and the "conveyor running time" is counted. Stop running.

Under the bucket scale structure, if the previous scale conveyor is still running, stop the conveyor before unloading.

Under the structure without bucket scale, if the conveyor of the previous scale is still running, stop the conveyor before the unlock bag.

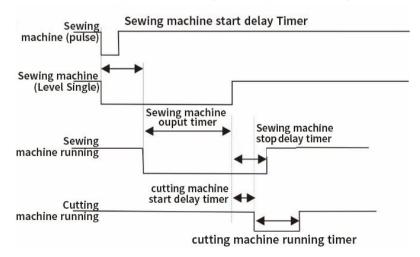
## 9.4 Printing

After connecting the printer, you need to set the communication paracontrollers of the controller and select the communication method as the printing method. The print format is available in 24 columns and 32 columns. The language is available in both English and Chinese, and the number of lines to be printed can be set.

#### 9.5 Sewing machine

The number of ON/OFFes involved in the sewing machine function is: "sewing machine output", "cutting machine output", "sewing machine start", "sewing machine emergency stop".

When the sewing machine ON/OFF is effective, the sewing machine starts to delay. When the delay time reaches, the sewing machine starts to work. The continuous output time is the output time of the sewing machine. After the output time of the sewing machine arrives, the delay time before the sewing machine is started and the delay time of the cutting machine is started. Sewing machine continues to work output, the duration of the sewing machine shutdown delay time. Tangent machine start delay time, when the tangent machine start delay time arrives, the tangent machine begins to work, the working time is the output time of the tangent machine, the tangent machine stops working after the output time arrives.





## 9.6 Discharge Patting

Discharge Patting function involved I/O modules are: Output I/O module- "Discharge Patting" .

When discharging mode to open the closed after opening, if the current discharging time is longer than the set of discharge time effectively, began to discharge shaking output, according to an effective time and discharging shaking a discharge shaking invalid combination for a discharge time shaking, when discharging vibrating frequency reaches the set of discharge after the vibrating frequency, discharge end of the vibrating process and output alarm stop

## 9.7 Filling/Discharge Overtime Paracontroller

If "Filling/Discharge Overtime Paracontroller" turns on, in running state, in the process of coarse, medium and fine adding and discharging, if the current process delay is longer than the set timeout time of coarse, medium and fine adding and discharging, the output timeout alarm and stop.

## 9.8 Auxiliary Pulse

Auxiliary Pulse function involved I/O module are: "Auxiliary Pulse input 1~4", "Auxiliary Pulse output 1~4" .

Take Auxiliary Pulse 1 for example:

#### Auxiliary mode:

In controller stopped or running state, when the I/O Module input "auxiliary pulse input 1" effectively, the switch output auxiliary pulse output "1" to start the output, continuous output Settings "auxiliary pulse duration 1", after time to stop output, waiting for the set of "auxiliary pulse 1 no time" to the later, once again began to output. Stop output until the "total execution time of auxiliary pulse 1" reaches, and turn off the auxiliary pulse switch.

If the "total execution time of auxiliary pulse 1" is set to 0, the output process will continue in a loop.

During the execution of the auxiliary pulse, if the switch input auxiliary pulse input 1 is valid, the output of the auxiliary pulse 1 will stop.

#### Level mode:

- 1. Set paracontrollers and I/O Module: Click the paracontroller of "auxiliary pulse mode" in "peripheral paracontrollers" "auxiliary pulse", select the type of "level mode" for the corresponding pulse, set the "effective time of auxiliary pulse" of the corresponding pulse as 2 seconds, and set the "invalid time of auxiliary pulse" of the corresponding pulse as 2 seconds. Select the input port and output port of the auxiliary pulse in the "IO function definition" paracontroller.
- 2. Perform operation: select [Level Mode], continue to give high level at the input end set, and start the effective time of auxiliary pulse at the same time, and continue to be



effective until the effective time of auxiliary pulse ends at 2s.At this point, the output of the trigger signal becomes invalid until the invalid time of the auxiliary pulse ends at 2s.When the invalid time of auxiliary pulse ends, the output end becomes effective again, and the effective time of auxiliary pulse is restarted, so as to cycle.Until the input terminal no longer input high level, the output signal port no longer output high and low level.



# 10. Dimension (mm)

