RM-6180A

WEIGHING DISPLAY CONTROLLER INTRODUCTION

INDEX

1.   Summarize

1.   Brief introduction

That RM-6180A series weighing display controller is controlled by single computer, collection, charges mixture with batching weighing controlling, PC, controls the intellectualized appearance as an integral part of the whole. It's distinctive anti-interference and resists lightning stroke ability makes it is able to use in very bad environment. That controller can satisfy with the industry automation batching such as building, metallurgy, package, feed, petroleum, chemical and tobacco needs.

2.   Main functions

* Incorporate weighing display and the batching controller an integral;

* Have the RS485 communication interface; it can realize the on-line group charge (selective breeding);

* Have RS232 printing interface, it can realize batching data printing in time (selective breeding);

* Provide the entire material batching control function (local and charge far, being able to control completely without exception);

* May control at most four or six kinds of materials to feed the material;

* Provide two kinds of being unloaded controlling way;

* Jar number control function;

* Zero following Automation;

* Button shelling function;

* Shelling function Automation;

* Have tolerance in advance be placed in hand, amend function voluntarily;

* Use software entire digital adjusting function;

* Processed automatic collation it can improve measurement accuracy;

* Adjusting nimbly can renew the tare fitting respectively;

* Jar number demonstration and batching condition instruction;

* Unique anti- thunder measurement.

3.   Operating principles

The RM-6180A series of weighing display controller provides the precision bridge for the load cell, and accepts the load cell's output signal, calculates after internal gathering processing and demonstrate the weight value in the measure dipper. After start the controller, by comparison of material's weight value in the dipper and the definite value we can realize material one, two, three, four's (five, six) automatic feed-material control. It may demonstrate each kinds of material's feed data respectively and can realize the automatic tolerance revision. Then waited for left (right) off-material permission signal and realize automatic left (right) off material. After off material completes, pot number will automatically add 1, then start the second up material, thus began the second batching cycle. To this analogizes, it will realizes the automate batching completely.

2. Technical specifications

1. General specification

1.1. Main supply: Alternating current 220V ±15％，50HZ ±2 ％;

1.2. Power dissipation: 9W;

1.3. Working temperature: 0~50℃;

Working humidity: ≤90 ％RH(have no curdles dew).

2. Simulate the measurement part

2.1. V: 10V ±5 ％, Maximum load ability:150mA;

2.2. Signal scope: 0~25mV;

2.3. Demonstrates the number of division: Maximal 9999d.

3. Import part of switch amount

Provide the direct-current 12 V from the inside, can't drive other loads except entering Contact.

4. Switch amounts export part

4.1. External power supply: Alternating current: 220V;

4.2. Electronic contact capacity:≤1A.

3. Controller Front Board Explanation

1. Outward Appearance

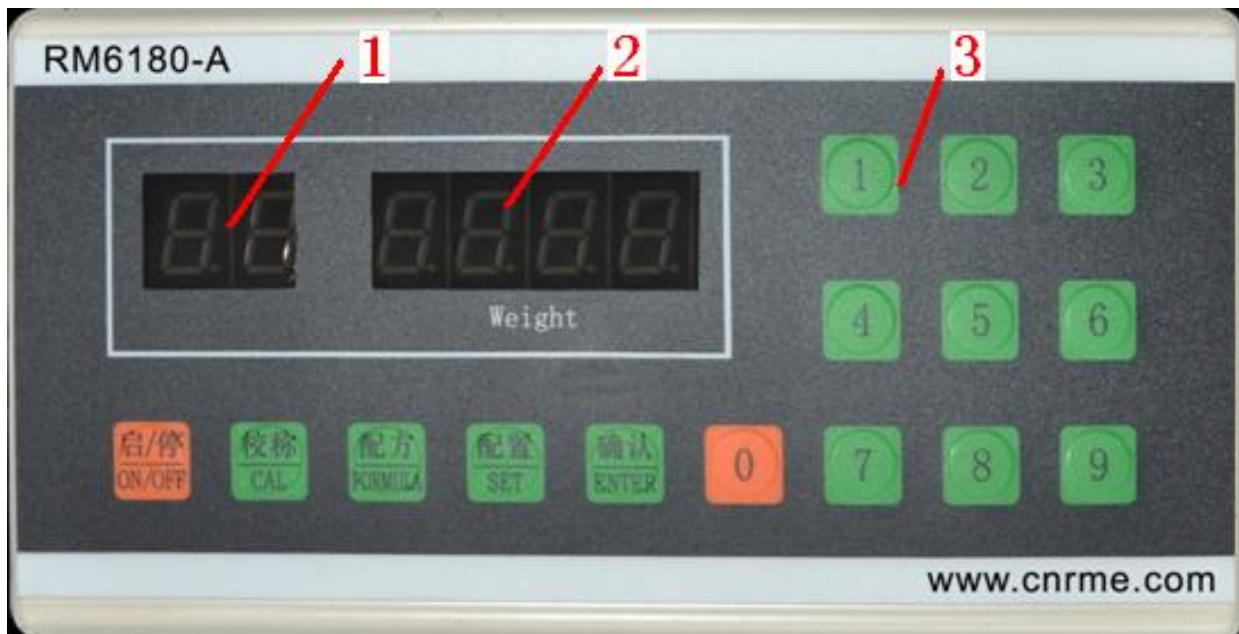Chart1. Controller' front board outward appearance sketch map

Annotate: 1. Display window 1(2 digital displays); 2. Display window 2(4 digital displays); 3. Key area

2. Display Window 1

At "batching" and "stop" state, demonstrates the pot number (batching cycle times). The Accumulate current batching jars after the controller "start" displays two digits within the Scope of l~99 jar when start

feeding material in this group, the material present path or off – material state(is Lx , indicates if demonstrating L1 is feeding with material 1) or readjust oneself to a certain extent expecting that state (demonstrates FL). Show glimmering when in "suspension state".

When in "stop" state, only when parameter is "adjusting ", revision "definite value" and revision "disposition" display window 1 will display the corresponding menu mark, other time it did not demonstrate.

3. Display Window 2

When in "ingredient" and "suspension" state it will demonstrate material's weight. When the demonstration window 1 demonstrates jar number or the off-material condition (FL), it demonstrates material's gross weight; when all paths feeding, it demonstrates each kinds of material's net weight. At "Stop" state, when definite value and tolerance value setting, disposition parameter setting, it demonstrates the corresponding definite value weight, the tolerance value and the parameter value; it will demonstrate material's weight in other time.

4. Buttons

4.1. Start/ Stop button

Press down this key for more than 0.5 second, it can switch "batching" and "stop" two states.

At the state of "stop", press down this key for more than 0.5 second, the controller will enter into "stop" state.

4.2. Adjusting button

At "stop" state, press down this key and enter into "adjusting" operation.

At "adjusting" state, press down this key you may skip over one step of the current adjusting so as to prevent the data changing, then enter into the next step(Annotate: When importing adjusting weight, this key do not play role).

4.3. The "definite value" button

In "stop" condition, press down this key and enters the definite value and the tolerance setting Operation.

4.4. Allocation button

In the **"stop"** state, press down this key, enters allocation parameter operation.

4.5. Affirm key

After finished input the data, press down this key, the controller will store the import value.

If press "affirming" button for more than 1 second, the controller will store the input value and will withdraw from setting up state beforehand (adjusting, constant value, allocation).

4.6. Figure key

0~9 those ten figure keys are used to import setting numerical value.

Among them, figure key 0 has two peculiar functions: one is under discontinuous circumstances, if pushing down this key for more than 1 second it will return zero automatically, this is button shelling function which is the same as "adjusting shelling" (JP) function; the other is to set up tolerance, it need to import negative tolerance value and don't lose it if pressing this key, then it will display the highest position " demonstrating window"2 show- alternately"- "and "0".

4. Controller Back Board Explanation

1. Explanation

On the controller's backboard have 5 outlets outside the protective tube. The fifth receptacle is the

signal receptacle, it is used to connect the load cell signal; the sixth receptacle is the line control the button box receptacle, it is used to control the button box or left (is right) under the spacing limit switch; the third receptacle is the power source, it is used to connect the 220V exchanging power source. The seventh (4 group's materials) or ninth (6 group's materials) receptacle is the output control l receptacle; it is used in the switch quantity control used in ingredients process... The circular aviation plug is the printing connection; it is used to connect the miniature printer or managing computer which matches with it.

2. **Power source plugs**

PE Earth wire should ensure that ground connection is fine.

Chart2.　Controller power source socket sketch map

3. **Switch Export Socket**

6 switch output route (chart 3.1);

6 switch the relay outputs, including 4 roads up material, 2 roads off materials.

8 switch output route (chart 3.2);

8 switch the relay outputs, including 6 roads up material, 2 roads off materials.

At the Controller "batching" state, the output route is valid;
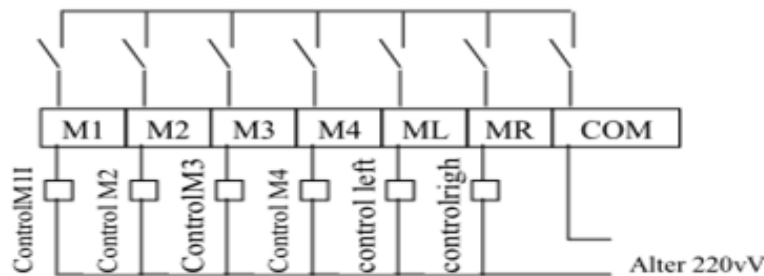
At the controller "stop" and "suspension" state, the output route is closed.

Chart3.1.　Controller's 6th road switch output socket sketch map
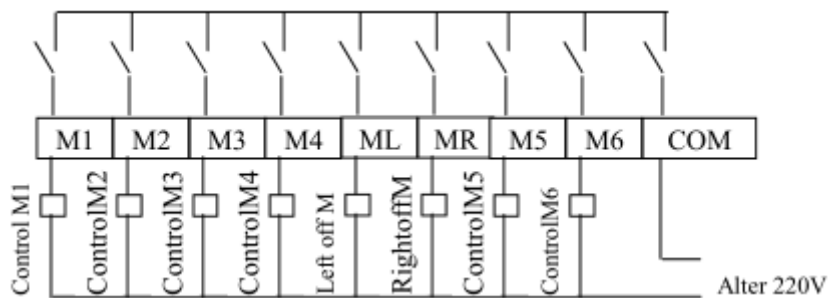
Chart3.2.　Controller's 8th road switch output socket sketch map

Annotate:　　M1~M6　Separately correspond one, two, three, and four (five, six) the road up material switch quantity output;

　　　　　ML　　　Left off material switch quantity output

　　　　　MR　　　Right off material itch quantity output

　　　　　COM　　　"M1-M4（M5 、M6 ）"、 "ML" 、 "MR" Public contact point

4. **Switch input socket**

It has 4 groups switches quantities input channel altogether , the controller provides the direct current 12V power source; it is used for no power contact examination and also can be connected with the wiring

controls button box.
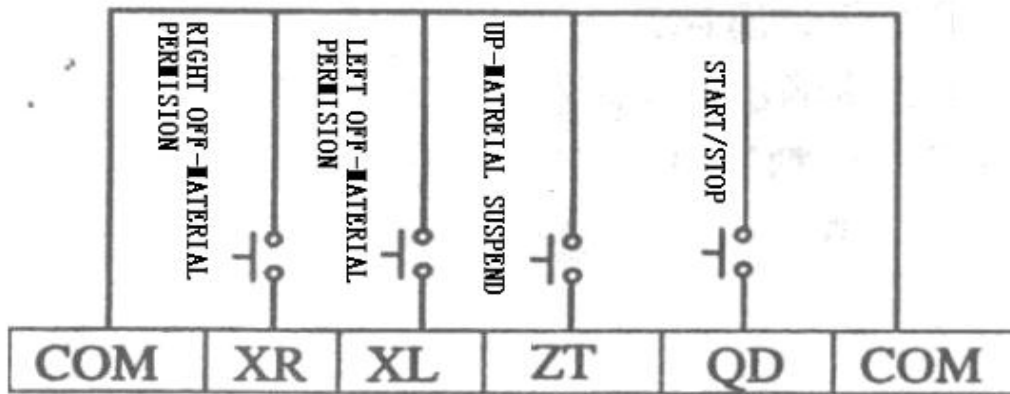
Chart4.   Controller switch amounts input socket sketch map

Annotate: XR   Right off material allowing switch input;

XL   Left off material allowing switch input;

QD   Start the switch input;

SL   Suspension the switch input;

COM   QD、SL、Xl and XR Public contact point;

4.1. **"start"** Switch input(QD—COM)

The controller has electricity, at the state of "stop" or "suspension" examines this switch from " separation" to "closed" when the condition maintains above for more than 1 second, it will enters " batching" and carries on the automatic ingredient.

4.2. **"suspension"** Switch input(SL—COM)

When in the automatic batching process, controller examines this switch from "separation" to "closed", and switch from "batching" state to "suspension" state.

4.3. **"left off material allowing"** switch input(XL—COM)

According to the scene need, it can connect "line controlling the button box " or "line controlling button" and do the software setting in the allocation menu; When FU = 00 is connect with "the line controlling the button box, when FU = 01 is connect with "the route travel switch", when connect with "the route travel switch" it must be isolated with the intermediate relay.

Connect the "line controlling the button box "control the left off material way press "left off material allowing" button to start off material, press again it will cancel left off material.

Connect "the route travel switch" control the left off material way when "the left route travel switch" closed; start off material; when this switch is in Separation, stop off material.

4.4. **"right off material allowing"** switch input (XR—C0M)

According to the scene need, it can be connected with "line controlling the button box " or do the software setting in the allocation menu; when FU = 00 is connect with the line controlling the button box, when FU = 01 is connect with "the route travel switch", when connect with "the route travel switch" it must be isolated with the intermediate relay.

Connect the "line controlling the button box "control the right off material way press "right off material allowing" button start off material, press again it will cancel right off material.

Connect "the route travel switch" control the right off material way: when "the right route Travel switch" closed, start right off material; when this switch is in Separation, stop off material.

Connect "the route travel switch" control the right off material way: when "the right route travel switch is closed, start off material; when this switch is in Separation, stop off material.

5. Load cell socket
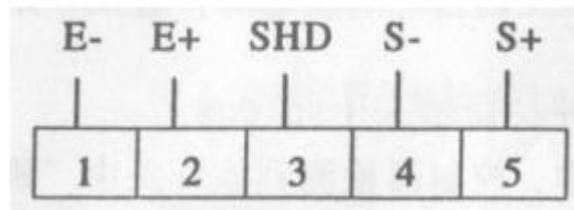
Chart5.　Controller load cell socket

Annotate: E-　Connect load cell's V -;

E+　Connect load cell's V+;

SHD　Connect load cell's Shielded wire;

S-　Connect load cell's signal-;

S+　Connects load cell's signal+;

5 prints/ the communication socket (selective breeding):
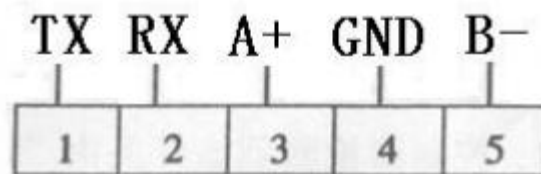
When connect RS232 printer ,TX/+connect printer s TX ending RX/-connect printer's Rx ending GND connect printer's GND ending; when RS485 communication, A+ connect A+, B-connect B- , GND connect GND.

5.　Controller disposition setting

1.　Related terminology

1.1. Feed-material spacing time

Feed-material spacing time is the controller in the process of feed-material; it is from the stopping to the next starting time. The unit is second

1.2. Control off-material delaying time

Control off-material delaying time is the controller in the process of off-material; it is the delaying time after off-material to the zero scope. Off-material will stop when time end, the unit is second.

1.3. Delay starting time

Delay starting time is that after the controller accomplishes the present off-material, till starting the next period feed-material's delaying time. When the time ending go ahead to the next period feed-material when feed-material allowing, the unit is second.

1.4. Prohibition comparison time

Prohibition comparison time is after group material starts due to the impact it causes the material

weight's large fluctuation and cannot carry on the material comparison within this period of time.

1.5. Zero position scope

The zero position scope is a weight's definite value. In the process of off –material, when this weight value is reached; the controller will start the control off-material delaying time.

1.6. Zero following function

It can set up as whether to use this zero following function or not. If the weight value is within the zero track scope (a fixture ±5number of division), the number which were followed will be zero, it used to eliminate the drafting of the load cell and the controller.

1.7. Jar number control function

Two parameters could be used to ascertain the jar number control function: the first is whether use the jar number control function or not, the second is the jar number setting value. If in allowing the jar number to control time, when the batching jar number reaches jar number's setting value, batching process will stop.

Only when pressing down "starting/ stop" again, the key or the "starting" button, on button box, at this time renew batching again.

2.   Basic Operation

Only when the controller in the state of "stop" Can carry out allocation set up.

2.1. Import the allocation password

Press [SET] button, the controller display gritting [ ] [5555]

Revision password, causes the controller demonstration [ ] [1616]

Press [ENTER] button, the controller display [t1] [----], display the password input is valid, the controller will automatically changes to "feed-material spacing time" setting menu.

If the input password is not correct, the controller will automatically withdraw from "the disposition" menu and returns to "stop" state.

Annotate: display windows 2 "-"expression arbitrarily value (similarly to the following).

2.2. Feed- material gap time sets up (t1)

Support the feed-material time is 3seconds.

Input this value display [t1] [30]

Press [ENTER] button, the controller display [t2] [----], display finish the feed-material time setting, the controller will automatically changes to "off-material control delaying time" setting menu.

The setting scope of t 1 is (1.0-9.9) second

2.3. Off-material control delaying time setting (t2)

Suppose the off-material control delaying time is 3seconds.

Input this value display [t2] [30]

Press [ENTER] button, the controller display [t3] [----], display finished the off-material control delaying time, the controller will automatically changes to "delay starting time" setting menu.

The setting scope of t2 is1.0-9.9 second.

2.4. Delay starting time setting (t3)

Suppose the delay starting time is 3 seconds.

Input this value display t3   30

Press ENTER button, the controller display t4 ———— , display finished the delay starting time setting , the controller will automatically changes to "Prohibition comparison time "setting menu.

The setting scope of t3 is1.0-9.9 second.

2.5. Prohibition comparison time setting (t4)

Suppose the prohibition comparison time is 1 second.

Input this value display t4   10

Press ENTER button, the controller display PP ———— , finished the prohibition comparison time, the controller will automatically changes to "Decimal point choice" setting menu.

The setting scope of t4 is1.0-9.9 second.

2.6. Decimal point choice setting(PP)

The decimal point may choose 0, 1. 0 expressed the controller demonstrated the window 2's weight value ,definite value and the tolerance setting value have no decimal, then demonstrated in the window2 of the computer,1 expression has a decimal.

Suppose need to have a decimal，press SET button, make the controller

Display 'PP   1

Annotate: press SET button, demonstrated window 2 demonstrate "0" or"1"alternatively.

Press ENTER button, the controller display PL —— display finished the decimal point choose setting, the controller will automatically changes to "zero position scope" setting menu.

2.7. Zero position scope setting (PL)

Suppose zero position scope is 40 numbers of divisions

Input this value display   PL   40

Press ENTER button, the controller display Fu   — , so zero position scope setting is finish , the controller will automatically changes to "off-material controlling way" setting menu.

The setting scope of PL is 0-99 numbers of division.

2.8. Off-material controlling way setting (FU)

Off-material controlling way is in order to suit for the need of batching scene, so the user can choose the "wire controlling button box" or the "route switch controlling" to control off-material. If choose 0 means to use wire controlling button box, if choose 1 means to use "route switch" control off-material. If it is needed to use "wire controlling button box", press SET button and make the controller display Fu   0 .

Annotate: press SET button, window 2 will demonstrate "0" or "1"alternatively.

Press ENTER button, the controller display Eo [--] , so the off-material controlling way is finished, the controller will automatically changes to "zero following function" setting menu.

Attention: when use the route switches off-material, you must use the intermediate relay to isolate.

2.9. zero following function setting (E0)

The user determines whether to use the zero track function or not according to the actual situation. E0=ON is permits zero position track, E0=OFF is forbid zero track.

Suppose using the zero following function, press SET button, the controller display E0 [on]

Annotate: press SET button each time, window 2 will demonstrate "ON" or "OFF" alternatively.

Press ENTER button, the controller display Cn [--] , show that the zero following function has finished, the controller will automatically changes to "pot controlling function" setting menu.

2.10.   Pot controlling function setting (Cn)

The user determines whether to use the pot digital control function or not according to the actual situation .Cn=On is permits the pot digital control, Cn=OFF forbids the pot digital control.

Suppose need to use pot controlling，press SET button, The controller display Cn [on]

Annotate: press each time SET button, window 2 will demonstrate "ON" or "OFF" alternatively

Press ENTER button, the controller display nn [--] , show that the pot controlling function has finished, the controller will automatically changes to "Pot value" setting menu.

2.11.   Pot value setting (n n)

Suppose the pot value is 50 pots.

Input this value display N n [50]

Press ENTER button, if has not selected and matched the communication or the printing connection, controller will back to "stops" condition; otherwise it will enter the communication or printing setting menu.

The setting scope of n is 0~99 pots.

If prohibit pot control, then "the pot value" setting menu will not appear.

The communication establishment related content, please reference to the eighth chapter. The printing establishment related content, please reference to chapter.9

6.   The controller adjusting operation

1.   Explanation

Entire weighing batching system's weighing precision was composed by the precisions, reliability, parameter coordination by the weighing load cell, the batching controller and the scale Therefore you must carry on the adjusting operation before the ingredient machine works.

Only when at "stop" state the RM-6180A series weighing display controller can carry on the adjusting

operation. In order to guarantee the adjusting value accuracy, the user must electrify for half an hour then carry on the adjusting operation.

The RM-6180A series weighing display controller uses the nimble adjusting way, including adjusting Shelling, adjusting zero position (low), adjusting fullness (high).This nimble adjusting way can be used at scene and other situations.

In adjusting zero and adjusting fullness (non- input weight condition), what displayed in window 2 is the internal code not the concrete weight.

2.　　Preparation

Insert the load cell line into controller firmly. The scale should be in balance and ensure that what be put into use load cell is consistent by the force; otherwise, you should do the scale- body adjustment beforehand.

3.　　Electrify

After the controller has electricity it is at the "stop" condition .Only when in "stop" condition being able to carry on the adjusting operation.

4.　　Input adjusting password

Press CAL button, the controller demonstrate glitzy [　] [5555] .

The n revise password causes the controller demonstration [　] [1234] .

Press ENTER button, the controller display [JC] [-----] , expressed the input password is effective, the controller will automatically changes to "adjusting shelling " menu.

If the input password is not correct, the controller will automatically withdraw from "adjusting" menu and returns to "stop" condition.

5.　　Adjusting fullness(JC)

Adjusting fullness namely adjusting height point demarcate in leaving the factory, it can be imported arbitrarily valid standard signal (want signal value higher than low point), usually carry out calibrating to weighing the weight placing poise during the period of scene calibrating.

After waiting the scale stabilizes sufficiently, press ENTER button in the demonstrated window 2, the value demonstrated becomes glittering , changes it when the high point and the low point signal expression weight difference(scene demarcates, usually is weights weight), like 2,000 kilograms, controller demonstration [JC] [2000]

Press ENTER button, the controller display [　] [2000] , show that the "adjusting fullness" has finished, the controller will automatically returns to "stop" menu.

The scale carries on the examination, if surpasses the error's allowing value you should check whether the scale does balance; if the load cell stress is consistent, after scale adjusts it will adjusting again.

6.　　The scene adjusting conventional step giving an example
1.　Clear empty the dipper, waits the scale is stable.
2.　Press "CAL" button, input the adjusting password, enter "JC" menu.
3.　Add the weights, and wait the body is stable, input the weight of weights.
4.　Press "ENTER", Withdraw from adjusting state.

7.   Controller Definite Value and Tolerance Setting

1.   Related terminology

The RM-6180A series weighing display controller may control four or six group feed-materials at most, two group off-material. Therefore, before the automatic movement it must be carried on the definite value setting and the tolerance setting to the formula.

1.1. Definite value hypothesis scope

The definite value hypothesis namely the given ingredient value input in the definite value menu. Four groups (or six groups) sum of the given weight value can't be bigger than9, 999 numbers of division, also cannot all be zero.

1.2. Tolerance concept

The tolerance setting is inputs the estimated given tolerance value in the tolerance menu.

Carry valid when testing batching machine, given value entering zero with tolerance.

When doing the actual batching work (or testing burden machine), input an estimated usual value to the given tolerant value , the controller will make a comparison between constant value and tolerance value according to actual burden weight value, in order to control every way feed-material start and stop. The controller goes through measurements and arithmetic to get the actual tolerance value and demonstrating the input value to replace tolerance value in the tolerance menu. Run unceasingly to replace, amend such ceaseless batching. Every road is worth several circulation queens and will tend to be stable.

Because the value in the tolerance menu is the actual tolerance value corresponding to the formula, therefore, through the browsing, the inspection and in the recording definite value menu and the tolerance menu value may accumulate the definite value and the tolerance correspondence relations experience. Prepare for other formulas tolerance variance hypotheses.

1.3. Tolerance sets up range

Tolerance sets up range is -300~+300number of division, it can't be equal to or greater than the setting value of this material.

2.   Basic Operation

Only when the batching controller at "stop" conditions it could being allowed to carry on the definite value setting.

2.1. A definite value hypothesis (L1)

Press FUNC button, display definite value menu 1 L1 ┌ ---- ┐

Suppose new definite value is 500 numbers of divisions

Input this value display L1 ┌ 0500 ┐

Press ENTER button, the controller display C1 ┌ ---- ┐, show that the "definite value hypothesis" has finished, the controller will automatically change to "tolerance--setting" menu.

2.2. Tolerance-setting(C1)

Suppose the tolerance experiential value is 40 numbers of divisions.

Input this value display C1 ┌ 0040 ┐

Press [ENTER] button, the controller display [L2] [____] show that the "tolerance-setting" has finished, the controller will automatically change to "definite value 2" setting menu.

2.3. The other definite value and tolerance setting

Reference to the operation process of definite value "one"

2.4. Withdraw

If it is a four group's material specification measuring appliance, after finished setting the definite value four and tolerance value four, the controller will automatically withdraw from definite value and tolerance setting menu and return to "stop" condition.

If it is six groups material specification measuring appliance, after finished setting the definite value six and tolerance value six, the controller will automatically withdraw from definite value and tolerance setting menu and return to "stop" condition.

Press "ENTHER" for 1 second, and then withdraw from the definite value and the tolerance hypothesis menu ahead of time.

Attention:

Suppose some group does not need feed-material, the definite value is zero. If some group definite value setting is zero, this group's tolerance menu does not appear.

8.   The controller communication setting (selects and matches)

1. Explanation

The RM-6180A series weighing display controller may select and match the RS485 communication connection same position labor controlling machine (or manages controller) in network and realize on-line group controlling. The controller's communication station number and the communication baud rate can be established on-line. The communication setting menu in the controller disposition menu, after establish the disposition vegetable single item automatically to change over to the communication setting (disposition setting please reference to the fifth chapter).

2. Communication station point number setting (Ca)

Suppose the communication station point number is 1.

Input this value the controller display' [Ca] [001] ,

Press [ENTER] button, he controller display, [Cb] [—] show that finish the communication station point number setting, the controller will automatically change to the "communication baud rate" setting menu.

The setting scope of Ca is 1~255.

3. Communication baud rate hypotheses (Cb)

The communication baud rate use the code to indicate that, 0 express9600; 1 expresses 14400; 2 expresses 19200; 3 expresses 38400; 4expresses 57600;

Suppose the controller uses 57,600 speeds communications

After inputs this value, the controller demonstrated [Cb] [4]

Press [ENTER] button, the controller display [ ] [----] show that finished.

Communication baud rate hypothesis, the controller will automatically return to "stop" state.

9. The controller printing setting (selects and matches)

1. Explanation

The RM-6180A series weighing display controller may select and match the miniature printer, cane real-time printing batching data, the controller uses RS232 and the printer connection, the baud rate 9600 has non- parity checking and use software shake hand agreement which shows the printer connection schematic drawing like fourth chapter of institute. Is selecting and matching with the establishment printing machine, please pay attention to its parameter and ensue it is coincide with the above details.

When controller replaces electricity, it will send out the printing test instruction. If you saw "the welcome uses the XK series measuring appliance", it showed the controller and the printer connection is right.

The printing may use to the forward and the opposite ways when vertical installs the printer, it is recommended to use the reverse printing.

The printer's setting menu is in the controller's disposition menu, after finished setting the single disposition menu item, it will automatically change to the printing setting (disposition hypothesis please to see the fifth chapter of disposition hypothesis).

2. Print directions hypothesis (Po)

Suppose to use the reverse printing.

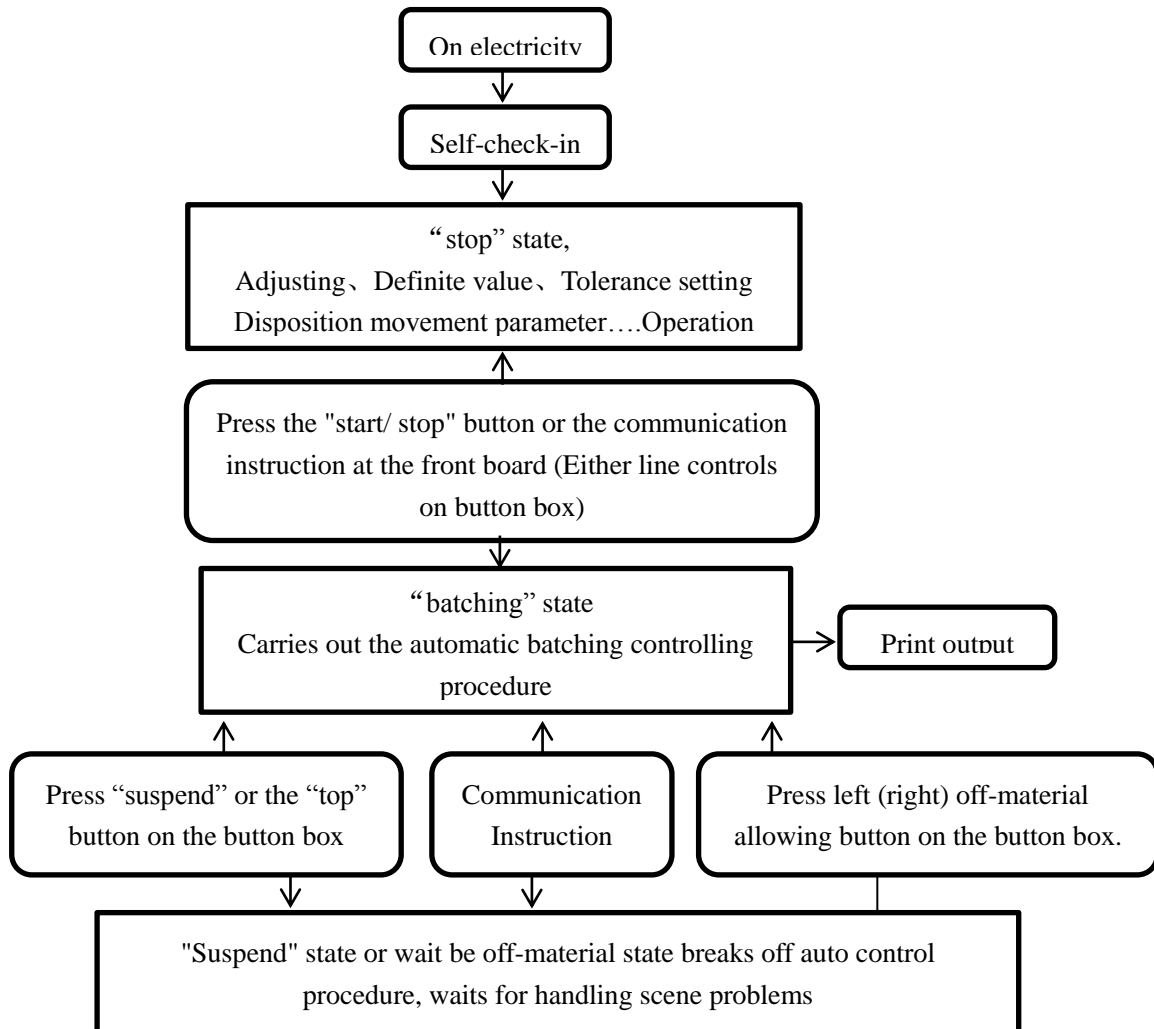Input this value, the controller display

The Po 's setting scope is 1 or 0; 1 express reverse printing, 0 express forward printing, according to "disposition" key to switch.

Press Button, the controller display , show that finished.

Print setting, the controller will automatically return to "stop" state.

10. Controller Concrete Application

1. Controller flow chart

```
                    ┌──────────────────┐
                    │   On electricity │
                    └──────────────────┘
                              ↓
                    ┌──────────────────┐
                    │   Self-check-in  │
                    └──────────────────┘
                              ↓
          ┌────────────────────────────────────────────┐
          │              "stop" state,                 │
          │  Adjusting、Definite value、Tolerance setting │
          │  Disposition movement parameter….Operation │
          └────────────────────────────────────────────┘
                              ↑
          ┌────────────────────────────────────────────┐
          │ Press the "start/ stop" button or the      │
          │ communication instruction at the front     │
          │ board (Either line controls on button box) │
          └────────────────────────────────────────────┘
                              ↓
          ┌─────────────────────────────────┐      ┌──────────────┐
          │       "batching" state          │ ───→ │ Print output │
          │ Carries out the automatic        │      └──────────────┘
          │ batching controlling procedure   │
          └─────────────────────────────────┘
              ↑              ↑              ↑
   ┌──────────────┐  ┌──────────────┐  ┌──────────────────┐
   │ Press        │  │ Communication│  │ Press left       │
   │ "suspend" or │  │ Instruction  │  │ (right)          │
   │ the "top"    │  │              │  │ off-material     │
   │ button on    │  │              │  │ allowing button  │
   │ the button   │  │              │  │ on the button    │
   │ box          │  │              │  │ box.             │
   └──────────────┘  └──────────────┘  └──────────────────┘
          ↓                  ↓
   ┌────────────────────────────────────────────────────┐
   │ "Suspend" state or wait be off-material state      │
   │ breaks off auto control procedure, waits for       │
   │ handling scene problems                            │
   └────────────────────────────────────────────────────┘
```

2. Leaving the factory acquiescing value

2.1. The disposition menu (according to your choosing, some menus possibly do not appear in the measuring appliance

T1	T2	T3	T4	PP	PL	FU	E0	Cn	Nn	Ca	Cb	Po
3	3	3	1	0	15	0	oFF	oFF	/	1	4	1

2.2. Definite value menu

DV ONE	TOL ONE	DV TWO	TOL TWO	DV THREE	TOL THREE	DV FOUR	TOL FOUR	DV FIVE	TOL FIVE	DV SIX	TOL SIX
200	0	200	0	200	0	200	0	200	0	200	0

3. The operation suggestion before the equipment leaves the factory

3.1 Disposition menu

Each disposition's parameter may carry on the revision according to the actual situation.

3.2 Adjusting

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Make the scale calibrate with the weight, the concrete step reference to "the controller is adjusting operation".

3.3 Definite value menu

According to this equipment batching number, the unnecessary definite value will be supposed to be "O".

4. Before the production testing preparation

4.1. Preparation

Examining every controller's terminal, the wiring should be correct and durable.

4.2. Disposition menu

Disposition parameter and so on time interval may carry on the revision according to the actual situation.

4.3. Adjusting

Make the scale calibrate by the weight, the concrete step reference to "the controller adjusting operation".

4.4. Definite value menu

Set each definite value and the tolerance value according to the actual needs.

5. Production operation step

Attention: This step is in the local manually controlled situation, if use the communication control, please reference to the software's system instruction booklet which provide by the supplier.

5.1. Electrify

When dipper is empty, the measuring appliance demonstration value should nearby the zero value. Press "0" on the controller make the display vale is returning zero.

5.2. Start "batching"

Checking each part has no abnormal phenomena.

If at "stop "state, press the "start /stop "on the controller or the "start" on the line controlling button box, so enter into "batching" state.

If at the state of "suspension", only can press the "start" on the line controlling button box, and then enter into "batching "state.

5.3. Self-checking

After entered the batching condition, firstly the controller will automatically carries on self-checking, and found problem auto-alarm changes over to the stopped state. After passed the Self-checking it enters the ingredient procedure.

5.4. Automatic Shelling

After enters the batching process, if the weighing value in the indefinite value and in 6% scope, the controller does automatically shelling process, thus solves sticks and the shifting etc. problems, if surpasses this scope, it expresses the inner of dipper has material, so the controller does not do the shelling .

5.5. Feed-material

The controller according to the established material definite value and the tolerance definite value of each group, realizes the open and stop in turn when feed in material, and automatically revises each tolerance value as the next time tolerance setting value

In the process of batching, if the material in insufficient you should promptly press the "suspension" button on the button box, the batching process will automatically enter the suspension condition. After finished the situation which appears, then press the "start" button on the line controlling button box, the batching t process will self-recovery, then automatically move from the suspension condition.

5.6. Off-material

After finished feed all materials, the controller waiting off-material permission signal, after satisfies the procedure automatically carry on off-material operation.

If choose the line controlling button box as the off-material controlling. According the need of left and right off –material., press the left(right)permission then begin off-material, in the state of off-material If you want to suspend please press the left (right)permission; if you press it again then rectory to off-material. If the controller in the process of up-material or off-material, The demonstration of "display window 1 " and "display window 2 "are different from the feed-material and the off-material. It is used to instruct the working state.

After the batching start, the controller "display window 1" demonstrated "01", indicated match 1 pot, after "the display window 2" demonstrates the value, after get rid of tare.

After beginning to feed with material, "display window 1 " display "L1", indicate feeding   material 1,"display window 2 "display the weight which had been feed.

Other feed way instruction the same as material 1.

After finished feeding the material the "display window 1"demonstrated "FL", expressed waited for or is putting the material, the "demonstration window 2" display the all-weighing value after tare.

5.7. Jar determination

When the dipper unloaded is empty, the process ended and he 1st pot' automatic batching process ended. In pot control permission situation, controller automatically inspection batching jar if it arrives to the definite value. To the definite value, stop batching t; otherwise automatically enters the next batching cycle.

5.8. Cycle batching

After enters the next batching circulation, controller batching number will automatically add 1, its controlled process reference to the above controlling step.

5.9. Suspension, stop "batching"

In the process of controller "batching", press the "start /stop" button on the controlling board, the controller enter into "stop "state.

In the process of controller "batching", press the "stop" button on the line controlling box, the controller enter into "stop "state.

5.10.   Recording tolerance value

Press ⌈Definite value⌉ button, enter into the definite value menu. Record each group's definite value and the dropping variance value. In this step users can chooses whether carries out or not according to the needs.

5.11. Close machine

In the state of "stop" can close safely.

6. The attention item in off-material controlled by line controlling button box.

6.1. In the disposition menu FU should establish is 0.

6.2. About left and right off--material transformation controlling.

After finished feed-material, press "left off-material allowing" start left off-material, now press "right off-material allowing" is no valid, must press "left off-material allowing" cancel left off-material, then press "right off-material allowing" start right off-material. Right off-material allowing is the same as above.

7. When connect mixer dipper distance switch controlling off-material, should pay attention.

7.1. In the disposition menu FU should establish is 1.

7.2. When connect the distance switch you must use the intermediate relay to isolate in order to avoid burning the controller. It cannot directly turn on the limited switch the batching controller.

7.3. After finish the feed-material, left distance switch will be closed and left off-material will be start, when the left distance switch separated, stops left off-material. Now if right distance switch closed you cannot carry on right off-material until left off-material finished, you can carry on right off-material, and the operation is the same as above.

When the left and right off-material switch arrived at the same time ,if the last time is left off-material, this time will be the right off-material; if the last time is right off-material ,this time will be the left off – material.

11.   Common breakdown processing

After the alarm phenomenon occurred, the RM-6180Aseries weighing display controller can automatically return to "stop" condition. Display window 1 demonstrates the corresponding code in order to reports to the user to each kind processing. After the alarm relieves, presses down **"start/ stop"** the key being able to enter the batching condition.

1. Adjusting value isn't right display window1 display E1.
   Reason:
   (1) The load cell wiring is not correct, or the load cell breakdown
   (2) Adjusting operation isn't right.
   (3) The Controller breakdown
   Removing measure:
   (1) The load cell wiring, still not correctly replaced the sensor again
   (2) Do adjusting operation again.
   (3) If load cell output signal normal, the adjusting operation is correct, but the controller still demonstrated E 1, delivered to the company Repair.
2. The definite value is not correct, display window 1 also shows E2 Reason:
   The sum of definite value setting surpasses 9,999 numbers of divisions either all for zero or the impulse ultra-scope.
   Removing measure:
   Input the definite value again.
3. The controller demonstration value isn't right or stable.
   Reason:
   (1) The load cell shielded wire has not well connected.
   (2)Adjusting isn't right.
   (3) The load cell wiring is not correct.
   (4) The load cell is damaged.
   Removing measure:
   (1) Guarantee the load cell shielded wire durable joint to controller binding clamp
   (2)Adjust again.
   (3) According to controller and load cell s instruction, connect wire again.

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(4) Check if the load cell output signal is stable, otherwise replaces the load cell.

4. When adjusting, scale value is too small, the controller display is correct; scale value is too big, the controller display is incorrect or too small.

   Reason:

   (1) The load cell stress is not correct; the fastening screw opens incomplete

   (2)When adjusting, the using standard weights weight is too small

   Removing measure:

   (1)Make the load cell fastening screw complete open.

   (2)Adjusting again, and increases the used standard weights

5. When adjust disposition parameter, press confirmed key cannot enter the next level of dispositions parameter, or cannot return to the stop state.

   Reason:

   The input disposition parameter is not correct or surpasses the scope.

   Removing measure:

   Adjust the disposition parameter again

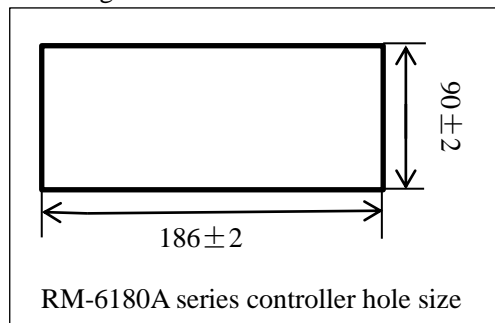6. The controller has no play

   Reason:

   (1) The 220V power source has not well connected

   (2) The measuring appliance s interior power burns out.

   (3) The appliance's interior pressure sensitive resistance RV 1 burns out; it can burn down the fuse repeatedly.
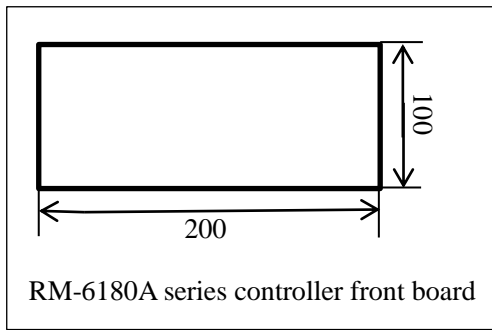
   Removing measure:

   (1) Check whether the 220V power source is correct or not

   (2) Replace measuring appliance s fuse.

   (3) If press and sensitive resistances burning down, you should firstly replace press and sensitive resistance, then replaces the measuring appliance's fuse.
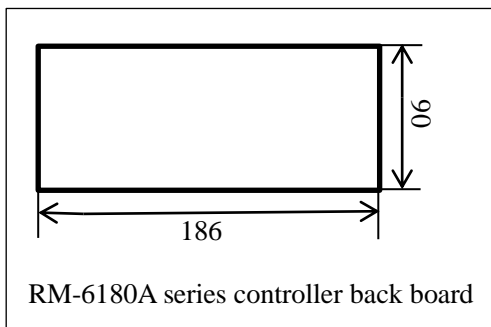
12.   The controller size

1. Installing hole size:

90±2

186±2

RM-6180A series controller hole size

2. Front board size

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200

100

RM-6180A series controller front board

3. Back board size

186

90

RM-6180A series controller back board

13. Appendix

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