XK3190-A23p

Weighing Indicator

User Manual

（Version 1.00）

This product accords with China National standard GB-T 7724-2008`

Content

Dear user:

Please read this manual before using.

ＸＫ３１９０－A23p

Chapter 1 Technical Parameter

1. Model : XK3190-A23p

2. Accuracy class : Class Ⅲ

3. A/D conversion mode: $\sum$ - Δ

4.A/D conversion resolution： 1 million yard

5. A/D conversion speed： 10 times/second

6. Load excitation voltage : DC　5V

7. Signal source: 1 load cell（four line mode）

8. Input signal range： -16 mV　～18mV

9.Display: 6+6+6 digits LCD, 6 state indication symbol,3 class
battery power prompting

10. Keypad: 4×6 membrane key

11. Power supply: AC 220V/50 Hz

12. DC power : built-in rechargeable 6V/5AH battery

13. Fuse: 0.5A

14. Warm-up time : 15～30 minutes

15.Operation temperature： 0～40℃

16.Storage temperature： -25℃～55℃

17.External dimensions: 264×174×172（mm）

18.Net weight : about 2.2kg

ＸＫ３１９０－A23p

Chapter2　Installation

1. **A23p weighing indicator front side function instruction and back side function instruction:**
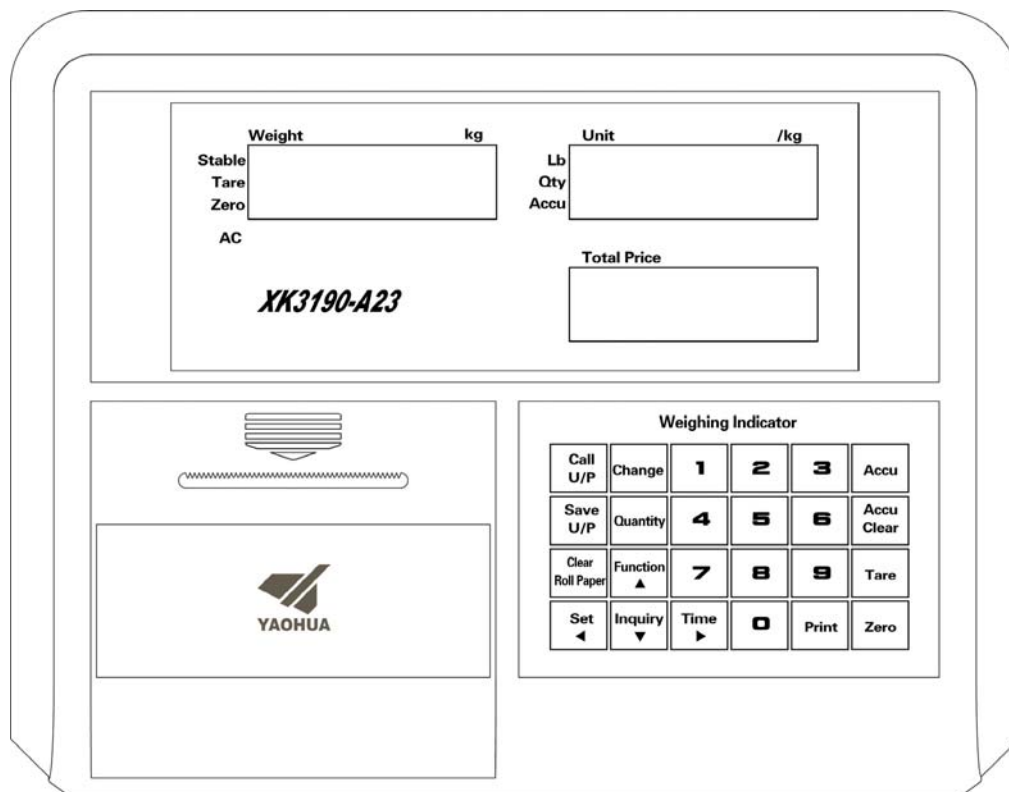
(picture 2-1-1)　**Front side function instruction**

(picture 2-1-2)　**Back side function instruction**

2. Load cell and weighing indicator connection :

A23p adopts 5 pin plug connect with sensor, and definition are as follows:
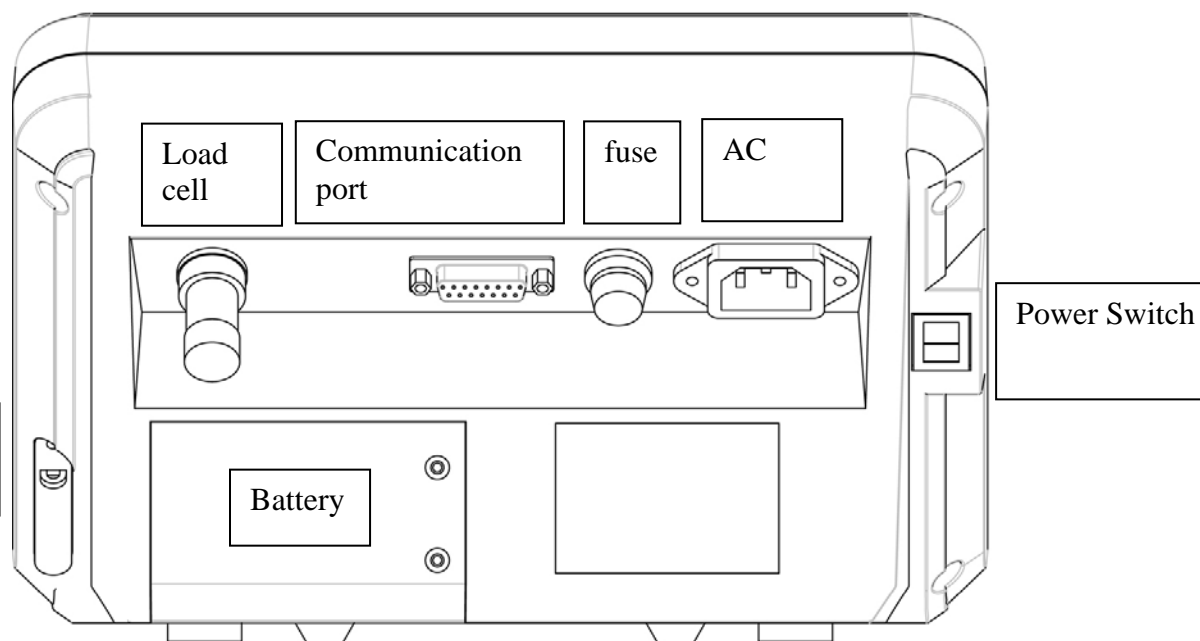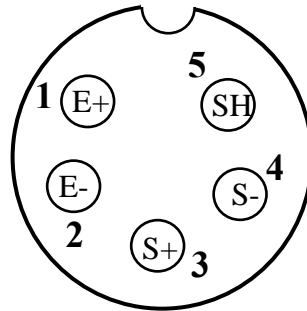
Foot position	definition
1	Excitation voltage + （E+）
2	Excitation voltage - （E-）
3	Signal+ （S+）
4	Signal- （S-）
5	Shielding wire（SH）

（picture 2-2-1）

▲ ！ **warning:**： Weighing indicator power supply must be cut off when install the load cell and wire connecting must be correct and reliable.

▲ ！**warning** ：To ensure the system is working fine , please fix the plug with screw to the indicator after the signal source wiring, the user can not insert and pull out plug at discretion, and it is forbidden while the indicator is on .

▲ ！ Signal source and weighing indicator are all static electricity sensitivity equipment，so user must adopt anti-static electricity when weighing indicator works. To avoid the damage of the signal source and weighing indicator by lighting strike and insure the operator's safety and correlative equipment working well in the thunder storm season, the user must adopts credibility measures to avoid lighting strike.

3. Communication interface definition：Communication interface definition is as follows:

RS232 definitions：pin 6 is RXD，pin 7 is TXD，pin 8 is GND. scoreboard current loop definition: pin 9 is current loop＋,pin 10 is current loop-.
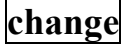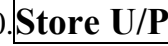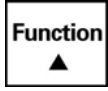
Scoreboard RS232 definition: pin 11 is used for connect scoreboard with RS232 connection method

(RS232 Signal)

Signal **TXD RXD**

TX **-OUT** **+OUT**
(Scoreboard output)
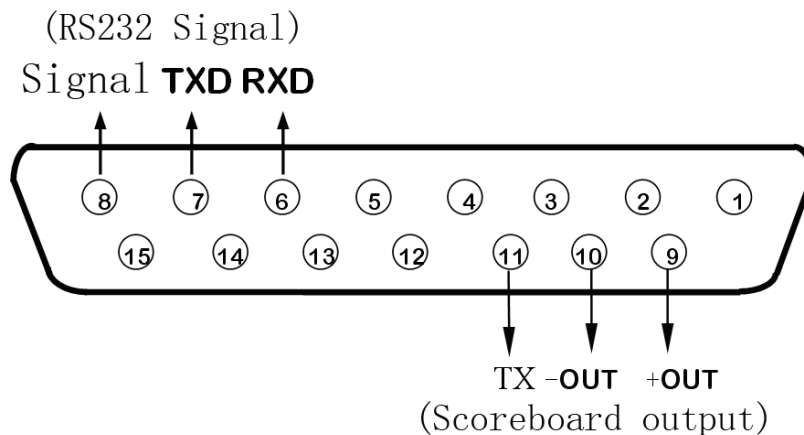
Chapter 3   Operation Instruction

(1). Button function：

    (1) Number button   weighing state：   unit price input

                                parameter setting：   parameter input

    (2). **Accu**   Sum is not zero：   accumulation sum and times

                                Sum is zero: accumulation display

                                Parameter setting： **As input button**

    3. **Accu clear**   Clear accumulate sum and times

    4. **Tare**   G.W＞0：The current gross weight as tare weight

                              G.W＜0：Clear net weight

    5. **Zero**   In Zero range：The current gross weight as Zero

                              Outside zero range：no effect

                           Parameter setting：as "exit" key

    6, **Print**   Print store content

    7. **change**   Enter into odd change calculation function

    8. **Quantity**   Enter into pricing state by quantity

    9. **Call U/P**   Input the 2 bit serial number to call unit price after press button

    10. **Store U/P**   Input the 2 bit serial number to save unit price after press button

    13、 **Inquiry ▼**   Enter into inquiry function, when inquire it performs as "turn over" button.

    12、 **Function ▲**   Hold function, when inquire it performs as "up turning" button.

    11、 **Time ▶**   Press button to set date and time, when inquire performs as

"move right "button
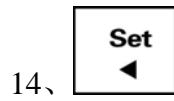
14、 **Set ◄**　　　　　　　Come into parameter function setting, when inquire it performs as "move left" button.
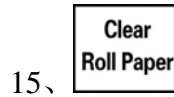
15、 **Clear Roll Paper**　　　　Clear unit price, press 2 seconds the printer will roll the paper .

(2) Startup （**startup warm up 15～30 minutes**）

Turn on the indicator, it will show all 8, and indicating lights are on, then the indicator will start self-test, after that, indicator will enter into weighing mode. The built-in battery must be fully charge when it is used for the first time.

Note: if the panel of setting time and date after start-up, please change the battery and re-set the time and date.

(3) Battery use

(1) Battery charge

Indicator is turned off, connect the AC power (AC indication light is on), began to charge the battery , 3 class battery indication is full after full-charged, the charging time is about 20 to 30 hours

(2) Use

Start indicator without connection AC power, and the rechargeable battery inside the indicator will supply the power to the indicator .

(3) The indicator upper left indicates the remaining battery capacity, three grid means that fully charged；two grid means capacity is not full；1 grid means capacity is low and need connect to the AC power and charging at one； there is no grid means battery use out , the indicator will power off automatically three seconds later to protect the inside battery ,please use the indicator after charging .

(4) Start zero and manual zero

1. Start zero

After self-test finished when start the indicator, if the loading of platform is on the zero range, the indicator automatically set to zero, gross weight is displayed as 0.

2.Manual zero

Manually set to zero in weighing state, if the scale weight is within the scope of manually set to zero, press 【zero】 key, you can put the weight as the current zero, gross weight is displayed as 0.

(5) Tare operation

1 .Tare

In weighing state and if the gross weight is above zero and in stable state press 【tare】 button and delete the current gross weight as tare weight, and display the net weight is

zero and tare indicate symbol light is on.

Cancel tare

If the gross weight is zero or below zero and in the tare state also in weighing state, press【tare】can put the current gross weight to zero and the tare indicate symbol light is off.

(6) Unit price input

1 Input

Press 0-9 number button in weighing stare can input the unit price.
Enter the unit price, the key is not more than 2 seconds interval, otherwise the meter will automatically be cleared and re-start inputting. The unit price is "rmb/ kg", fixed to two decimal places.

1 clear

Method 1：press "clear/paper" button，unit price clear to zero

Method 2：2 seconds after unit price input，press "0" button，unit price clear to zero

(7) Accumulate calculate, accumulate display and accumulate clear

1. Accumulate calculate

When the amount is above zero and is stable, press 【**Accumulate calculate**】 button , you can accumulate the total amount of the current amount, the cumulative number of times plus one, the cumulative indicate light is on.

Indicator display【Add   】 （Accumulated reminder, 3 seconds to return to weighing mode automatically ）

【n   **   】 （Accumulated times，up to 99 times）

【   ***.**   】 （Accumulated amount，up to 9999.99 RMB）

After one time accumulated，you must return to the below 50% of cumulative weight or re-input the unit price to the next cumulative .

2. Accumulative display

When the amount is zero, press "accumulate calculate" button, you can check the current accumulate times and amount .

Indicator display【totAL   】 （Accumulate display reminder，press any key to back into the weighing state）

【n   **   】 （Accumulate times）

【   ***.**   】 （Accumulate amount）

3. Accumulate clear

When indicator accumulate calculate（accumulate indicate symbol light is on），press "accumulate clear" button can clear accumulate amount and accumulate times to

zero，accumulate calculate indicate symbol is off.

(8) Saving and re-call of unit price

Indicator can save and call 100 unit prices, the corresponding memory number 00 to 99.

1、Unit price saving method is as following：

First press the number keys to enter the unit price to be saved, then press【unit price save】button.

Indicator display【SAVE   】 （unit price save reminder）

【   - -   】

Now press number button to input 2 digit saving number , indicator will be back to weighing state automatically after saving the data.

2、Unit price call

press【call unit price】button in weighing mode

indicator display【LoAd   】 （unit price call reminder）

【   - - 】

now press number button to input 2 digit call number, and indicator call the unit price and then back to weighing state automatically.

3、Unit price will be called or saved automatically after enter the corresponding number;

When entering 2 digit number , the interval should not be longer than 2 seconds, otherwise it will call or save the unit price corresponds to the first number automatically

For example：unit price saving number is"01"，unit price is1.00RMB/kg，first press number button，input unit price 1.00，then press【unit price saving】button，input saving number【01】，or input【1】，it will saving automatically after 2 seconds；press 【call unit price】button when it need to be called，input call number【01】or input【1】，it will call after 2 seconds，indicator unit price display1.00RMB/kg。

(9) Odd change operation:

(1) When accumulate amount or current amount is not zero, press 【change】button and indicator display：

Change amount ◀── 【 - - - - - - 】 【   0.00】 ──▶ paying amount can be input

【   *.**】──▶ amount should be paid

Now you can input number button"0～9"to input amount, when amount input is

bigger than the amount should be paid , the first screen will display the change amount.

You can press 【clear】button to delete the pay amount you input when you input the wrong number.

(2)Instruction：1. When accumulate amount and current amount are both zero, 【change】 button will take no effect .

2. Under change state, pressing【change】button will exit the change state and back to weighing state .

(10). Pricing by quantity：

Pricing by quantity is divided into fixed quantity pricing and changeable quantity pricing, setting method is as following :

NO.	Operation	Display	Note
1	press【setting】press【5】then press【accumulate】	【P S t 　　】【　　　0 5 】	Input password 05，and enter into parameter setting
2	Counting mode setting：press 【0】press 【accumulate】to confirm	【Ec　　　】【　　　　0 】	**Counting mode setting：**0－fixed quantity pricing 1－changeable quantity pricing default：0
3	Back to normal working state		Now indicator will work as the above parameter setting

1.Fixed quantity pricing：

Under weighing state, press number button to input the single goods price and then press 【quantity】button，indicator display：

Quantity able to be input 　　【 n 　0000 】【 ⟶ *.**】 　　　unit price

【　　　0.00】⟶ 　　current amount

Now press number button , input the quantity. Amount will be displayed at same time by calculation ,and you can call the unit price ,accumulate and print.

2.Changeable quantity pricing ：

Under weighing state, press number button to input the single item price and then press 【quantity】button，indicator display：

【 coUnt 　　】【　　　0000】

【　　　　　】

Now press number button , you can input current quantity of the goods on the platform, then press【quantity】button to confirm，indicator will calculate the unit weight, and after calculation will come into counting state, and quantity will change by weight，indicator

display：

> 【c   **** 】 【   *.**】
> 【   *.**】

The first window displays quantity, and second window displays unit price and third window displays amount.

    Note：1.The maximum quantity is 9999, if above this will display 【 - - - - - - 】；

        2.If the item weight is lower than the 1/4 of the division，counting function will not workable，the first window displays 【L ****】,and this reminds that quantity was locked.

        1、You can call the unit price , accumulate and print under the counting state.

Press 【quantity】button to exit the counting state and back to weighing state.

(11). Date、Time setting：

Step	Operation	Display	Description
1	Press【Time】button	【dAtE 】 【10.10.10】	display current date allow change date by number button
2	Press【Time】after date change	【t 】 【08.00.00】	display current time allow change time by number button
3	Press【Time】after		exit setting

If indicator come into date and time setting menu automatically after start, it means that the standby button battery capacity is not enough, need to change the button battery and re-setting the time.

(12)Backlight setting

1、Power saving mode instruction

A23 Indicator come into the power saving mode , the back light is off, and indicator can do the normal weighing operation.

2、When bL=1~3，pressing of any button or the alteration of weight will make the indicator exit the power saving mode.

Back light setting method is as following diagram：

Step	Operation	Display	Note
1	press【setting】press【1】then press【accumulation】	【PSt 】【 01】	Input password 01，and come into the parameter setting
2	Back light setting：press【1】press【accumulation】confirm	【bL 】【 0】	**Backlight setting method** ：Input parameter range 0～3。0－ Close the backlight 1－ Close backlight 15 seconds after gross weight is 0. 2－ Close backlight 15 seconds after net weight is 0 3－ Back light is always on For example：1
3	Back to normal working state		Indicator working as the above parameter setting.

(13). Fixed value alarming function：

A23 indicator can set upper limit and lower limit. It will alarm according to the alarming mode, alarming mode is buzzer alarming.

Fixed value alarming is not workable when the lower limit is 0 .

If user choose the KG/LB switch function, indicator will clear the upper and lower limits setting when switch the unit .

Setting method is as following：

Step	Operation	Display	Note
1	Press【Set】press【2】then press【accumulation】	【PSt 】【 02】	Input password 02 then come into parameter setting.

2	Fixed value alarming setting： press【011】 press【accumulation】 confirm	【Lt 】 【 X Y Z】	Fixed value alarming setting： **X it means need buzzer ring or not when alarming** 0－yes，1－no **Y it means alarming only stabilization** 0－No，1－yes **Z it means when alarming,0～3can be** input： 0－weight≤lower limit 1－lower limit＜weight≤upper limit 2－weight＞upper limit 3－weight≤lower limit or weight＞ upper limit 例 for example：011
3	Fixed value alarming lower limit： press 【1000】 press【accumulation】 button confirm	【LLLLLL】 【 ＊＊＊＊＊＊】	for example：input lower limit 1000
4	Fixed value alarming lower limit： press 【2000】 press【accumulation】 button confirm	【HHHHHH】 【 ＊＊＊＊＊＊】	for example：input upper limit 2000
5	Back to weighing state		

(14) Weighing unit switch function：

Indicator weighing unit can be selected，when start the kg/lb conversion function, press 【function】button to switch the weighing unit.

When it come into the calibration state, it will switch to Kg unit automatically.

The indicator will clear the fixed value alarming limitation automatically when switch the unit.

Setting method are as following：

Step	Operation	Display	Note
1	Press【Set】press【4】then press 【accumulation】	【PSt 】 【 04】	Input password 04，come into parameter setting
2	Weighing unit setting：press【0】press【accumulation】confirm	【EU 】 【 0】	kg/lb conversion function startup or not ： 0－ forbidden，1－startup default：00
3	Back to normal weighing state		Indicator working as the above parameter setting.

Chapter 4 Save, Inquire and Clear

Saving function：

Saving method：Press 【accumulation】 button when the accumulation is
allowed ,indicator will save the current record in the same time when accumulation.
XK3190-A23p indicator can store 1000 groups of record，the indicator will delete the
earliest record when the record exceeds 1000 groups.
Record information including date, time, gross weight, tare weight, net weight, quantity ,
unit price, amount.

Inquire function：

1、Inquire a group of accumulation , each group of accumulation is distinguished by
different accumulation S/N number.

2、Accumulation indicating light is on when display accumulation, meanwhile, quantity
and unit indicate light is off。

3、The accumulation indicating light is off when display the details , the quantity and
unit indicate symbol will change according to the display content.

4、During the inquiry process , 【set】 button is the last accumulation record；【time】
button is the next accumulation record；【function】 button is the previous detail ；
【inquire】 is the next detail

For example : Press 【inquiry】 button come into the inquiry function in the weighing
state.

Step	Operation	Display	Note
1	Press 【Inquiry】 button, display accumulation	【tno **】 【n 3】 【 **.**】	Display accumulation S/N number Display accumulation times, accumulation indicating light is on Display accumulation amount
2	Press 【inquiry】 button, display accumulation	【tno **】 【10.10.10】 【09.01.01】	Display accumulation S/N number Display record generated date Display record generated time
3	Press 【inquiry】 button, display details	【no 001】 【 ***】 【 *.**】	Display S/N Display net weight is kg，LB indicate light is off Display left amount

ＸＫ３１９０−A23p

Step	Operation	Display	Note
4	Press 【inquiry】 button, display details	【no 002】 【 ∗∗∗】 【 ∗.∗∗】	Display S/N Display net weight is LB，kg indicate light is off Display left amount
5	Press 【inquiry】 button, display details	【no 003】 【 ∗∗∗】 【 ∗.∗∗】	Display S/N Display quantity and quantity indicating light is on Display left amount
6	Press 【inquiry】 button	【 End 】	This time record inquiry finished
7	Press 【inquiry】 button		Exit inquiry and back to weighing state.

Clear function：

1、Clear all the record：

Press 【accumulate clear】button during the inquiry，indicator display：【SUEr   】
【   0】
press number button【1】confirm，clear all the record，and the accumulation number start from 1.

2、Clear a group of accumulation：

Press 【clear & roll paper】 button when display accumulation during the inquiry，
indicator display：【SUEr   】【   0】
press number button【1】confirm，it can clear all the corresponding accumulate details.

3、Clear details during the accumulation：

Press 【clear & roll paper】 button when display details during the inquiry, indicator display：【SUEr   】【   0】
press number button 【1】 confirm，it can clear current details.

Chapter 5 Print Function

Indicator can select internal dot matrix printer or external printer LQ300+. External printer connect with the indicator through serial port connection line ,and also occupy the serial port.

Note: when choose the external printer , the indicator communication function is forbidden. （It need modification when connect to the external printer ）

1、Auto print during accumulation ：

Auto print during accumulation is selectable, corresponding parameter is "AddP", details setting , please check the following print setting.
Auto print when accumulation is selected（AddP=1），press【accumulation】button，it will print current details automatically after accumulation is finished successfully. Details print format can be selected；
Press【accumulation clear】button can clear accumulate times and amount, and print the current accumulation amount in the same time.

2、Print accumulation details：

Press【print】button when the accumulation indicate light is on，it will print the current all the accumulation details and amount; print format can not be selected and it's fixed as the record format.

3、Weight print：
Weight print is workable when the accumulation indicate light is off.
1、Auto print："Auto" parameter is 1，when the weight is bigger than the auto print lower limit and stable, it will auto print and save the current information.
2、Manual print：press【print】button when accumulation indicate light is off and stable, and print the current information.
3、Press【accumulate clear】button after one group weight print finished, and print the accumulation net weight .

4、Print during checking：

Press【print】when display accumulation during the checking, it can print all the accumulation details .
Press【print】when display details during the checking, it can print current details .

5、Change print：

When change and change amount is not 0, press【print】can print pay off and pay amount and change.

6、 **Print set：**

Step	Operation	Display	Note
1	press【set】press 【07】 then press 【accumulation】	【PST 　　】 【　　07】	Input password 07，then come into parameter setting
2	Press【1】 press 【accumulation】	【Auto ＊】 【Auto 1】	Weight auto print function selected： （0-manual 1-auto） For example：1（auto print）
3	press【1000】 press 【accumulation】	【L 　　】 【001.000】	Weight auto print lower limit input： it can print automatically when it's above the lower limit
4	press【5】 press 【accumulation】	【Type ＊】 【Type 5】	Select printer mode(1~3 reserved) 0~3-- print is not valid 4--EPSONLQ300K＋(need modification) 5--Built-in printer For example：5
5	press【0】 press 【accumulation】	【AddP 　】 【　　0】	Auto print the selected when accumulation 0－not print，1－auto print
6	press【0】 press 【accumulation】	【odE ＊】 【odE 0】	Filling model print format selection 0：Not use 1：Use the filling model print format For example：0
7	press【3】 press 【accumulation】	【Arr ＊】 【Arr 3】	Choose print format Arr=0--record format 　　　1--1Manifest format 　　　2--2Manifest format 　　　3--3Manifest format For example：3
8	press【05】 press 【accumulation】	【b ＊＊】 【b 05】	Run paper lines set(0～30) For example： 05

ＸＫ３１９０－A23p

Step	Operation	Display	Note
9	press【8】 press 【accumulation】	【teln *】 【teln 8】	Select a phone number digits（0～8） 0： Not print phone number 1～8：Micro print manifest format print phone number For example：8
10	Press【6728】 Press 【accumulation】	【tH ****】 【tH 6728】	Phone number four higher digits set For example：6728
11	Press【2800】 Press 【accumulation】	【tL ****】 【tL 2800】	Phone number four lower digits set For example：2
		End	

When the printer type is set to connect an external printer, the communication function is disabled.

If the printer type 5 is selected, the setting filling print is invalid；

7、Set the print content：

Print content is selected and when the parameter is set to 0 and the corresponding
  content does not print.

If print format is selected to be the record format, printing contents can not be less than
  two items.

Step	Operation	Display	Note
1	Press【set】press【6】 then press 【accumulation】	【PSt 】 【 06】	Input password 06，then enter into parameter setting
2	Press【1111】 Press【accumulation】 for confirmation	【PS1 】 【 1111】	**Print content selection：** from left to right S/N、date、time、gross weight 0－ not print，1－ print

ＸＫ３１９０－A23p

Step	Operation	Display	Note
3	Press【1111】 Press【accumulation】for confirmation	【PS2 　　】 【　　1111】	**Print content selection：** from left to right, it's： tare weight、net weight、unit price、total 0－ not print，1－ print
4	Back to normal working state.		Indicator works as the above parameter setting now.

For example： PS1 is set to choose 1110，PS2 choose 0100，printing content is S/N, date, time, net weight.

8、Micro printing format example：

Manifest format

```
S/N:     0001
Date :2010-12-03
Time :   14:02:55
G/W  :    3.000kg
T/W  :    1.000kg
N/W  :    2.000kg
U/P  :     1.00
Total:     2.00
- - - - - - - -
```

Record format

```
     Weight Bill
Date:2010-12-03
S/N        Amount
- - - - - - - -

0001      0.50 $
0002      0.60 $
0003      0.20 $
0004      0.10 $
- - - - - - - -

Total:    1.40 $
```

Change print

```
Payable:        2.00
Amount:         1.40
Change:         0.60
```

X K 3 1 9 0 -A23p

Chapter 6 Communication function

1. Introduction

There are 5 kinds of RS232 serial communication format for indicator A23, and 4 kinds of baud rate for choosing.

All the data are ASCII code，each group of data includes a start bit ,8 data bits,1 stop bit.

When the printer type is set to connect an external printer, the communication function is disabled.

2、Wiring method

Indicator 15 pin D type connector terminal 6,7,8 connected to PC serial port 3,2,5 terminal

3、Communication parameter setting

Step	Operation	Display	Note
1	Press【Set】press【8】then press【accumulation】	【PSt 】 【 08】	Input password 08，enter into parameter setting
2	Communication address setting：press【1】press【accumulation】confirm	【Adr 】 【 01】	Input communication address For example：01
3	Communication baud rate setting：press【0】press【accumulation】confirm	【bAUd 】 【 0】	**Communication baud rate setting：** parameter 0～4 can be input 0－ 600; 1－ 1200; 2－ 2400; 3－ 4800; 4－ 9600。
4	Communication method setting：press【0】press【accumulation】confirm	【tF 】 【 0】	**Communication method setting：** 0－ continuous mode1; 1－command method ; 2－ continuous mode2;3－ continuous mode3 4－ continuous mode4; 5－ three windows large display method（continuous）;

4、Communication protocol instruction

Continuous communication format 1：
there are 12 bytes of data of each frame, the details format are as below diagram.

The X byte	Content and note	
1	02(XON)	start

2	+ or -	Symbol bit
3~8	Weighing data（display value）	front is high digit and low in the post
9	Decimal position	From right to left（0～4）
10	XOR checksum	Higher four digits
11	XOR checksum	Lower four digits
12	03(X0FF)	End

Note: The confirmation of higher 4 digits and lower 4 digits XOR checksum

XOR checksum operated in 16 hex byte way from byte 2 to byte 9. The high 4 and low 4 bits of checking result was conversion and transmit in ASCII code, conversion method are as follows:

If less than, or equal to 9, then add 30h, will send a number of ASCII code, for example: XOR checksum high 4 to 6, after adding 30h, 36h is ASCII code for the 6 to send;
If higher than 9, then add 37h, will send a letter ASCII code, for example:
XOR checksum high 4 bits of B, plus 37h, the ASCII code for the 42h that is sending B

Continuous communication format 2

There are 9 bytes in each frame data, and detail format please check the diagram as below.

The X byte	Content and Note	
1	=	Start
2~8	Weighing data （including decimal point）	lower position in front and high position in behind
9	0 or-	symbol position

For example the current weight is -1.00，so the sending data is：

＝00.1000－＝00.1000－＝00.1000－＝00.1000－

Continuous communication format 2：

There are 9 bytes in each data of the frame, for more details please check the diagram below.

The X byte	Contents and Notes	
1	=	start
2	0 or -	symbol position
3~9	Weighing data　（including decimal point）	high position in front and low position at behind

For example the current weight is 3.000，so the sending data is：

＝0003.000＝0003.000＝0003.000＝0003.000

For example the current weight is -1.00，so the sending data is：

＝－0001.00＝－0001.00＝－0001.00＝－0001.00

Continuous communication format 4：

There are 27 bytes in each data of the frame, for more details please check the diagram below.

The X byte	Content and Note	
1	=	start
2	0 or -	symbol position
3～9	Weighing data	high position in front and low position at behind
10、11	Weighing unit	kg or lb or pc
12	;	separator
13～19	unit price	high position in front and low position at behind
20	;	separator
21～27	amount	high position in front and low position at behind

For example the current unit is kg，weight is 2.000，unit price1.00，amount is2.00，so the sending data is：

＝0002.000kg;0001.00;0002.00＝0002.000kg;0001.00;0002.00⋯⋯

For example the current display is quantity, and the quantity is 20,unit price is 1.00,amount is 20.00 , so the sending data is :

＝00000020pc;0001.00;0020.00＝00000020pc;0001.00;0020.00⋯⋯

Three windows large screen mode：

There are 24 bytes in each of the frame，please check the detailed format in the below diagram .

The x byte	Content and note	
1	S(53H)	start
2	T(54H)	start
3～8	the first window displays data	
9	0x0a	Change line symbol (\n)
10～15	the second window displays data	
16	0x0a	Change line symbol (\n)
17～22	the third window displays data	
23	0x31	Fixed
24	0x0d	Enter symbol(\r)

Send data synchronization with the indicator's display, the screen can be used as an extension one.

For more detailed data format specification please check YH three large-screen window user's manual..

The command mode：

Indicator sending corresponding data according to the commands of the host computer, indicator will send a frame of data each time when host computer sending a command.

Command list （indicator communication address take 01 as example）：

ＸＫ３１９０－A23p

Command type	Command meaning	Commands sending by the host computer (hex)	Note
Command A	Shake hands	02 41 41 30 30 03	The second byte is the information address, from 0x41 (A) start, such as information address is 2, the second should send 0x42 (B); the third byte is the command byte; fourth and fifth are byte checksum .
Command B	Read G.W	02 41 42 30 33 03	
Command C	Read T.W	02 41 43 30 32 03	
Command D	Read N.W	02 41 44 30 35 03	
Command E	Read U.P	02 41 45 30 34 03	
Command F	Read Amount	02 41 46 30 37 03	

Indicator responding contents：

The X byte	Content and Note	
1	02(XON)	Start
2	A～Z	Address number
3	A～F	Command type
4～n	See below table	Sending corresponding data output by the command
n+1	XOR Checksum	high 4 digit
n+2	XOR Checksum	low 4 digit
n+3	03(XOFF)	end

OR＝2 ⊕ 3 ⊕ ······（ n-1 ） ⊕ n

4 ~ n the above table reads as follows：

Command A	No data		Composed by 6 groups of data per frame
Command B	Gross weight		Composed by 14 groups of data per frame
	1：	symbol (+or-)	
	2～7：	gross weight value（ 6 bit）	
	8： number of decimal digits （ 0～4）		

(24)

Command C	Tare weight	Composed by 14 groups of data per frame
	1： symbol (+or-)	
	2～7： tare weight value（6 bit）	
	8：number of decimal digits （0～4）	
Command D	Net weight	Composed by 14 groups of data per frame
	1： symbol (+or-)	
	2～7： tare weight value（6 bit）	
	8： number of decimal digits （0～4）	
Command E	Unit price	Composed by 13 groups of data per frame
	1～6： unit price （6bit）	
	7： fix number of the decimal digits 2	
Command F	Amount	Composed by 13 groups of data per frame
	1～6： amount（6bit）	
	7： fix number of the decimal digits 2	

Chapter7 Information Indication

1. Err 03 ： Overload alarming, need remove parts of the load or all of the load.

2. Err 05 ： AD part fault, please examine and dispose as following method：
   1.Examine sensor and its connecting wire.
   2.AD part broken, please send back to factory for repairing.

3. Err 08 ： Parameter input is not meet the requirements, please input parameter again

4. Err 09 ： Not meet the requirement of accumulate count /print's request :not stable or no zero operation.

5. Err 10 ： Unit weight is too small, count function is stop, and weight will be locked.

6. | Err 18 | ： Keypad is broken, and back to weighing state 10 seconds later.

7. | Err 22 | ： Clock is broken

8. | Err 23 | ： Memory is broken

9. | Add | ： Accumulate count, back to weighing state 3 seconds later automatically.

10. | totAL | ： Accumulate display, back to weighing state 3 seconds later automatically.

Chapter 8 Maintenance and attention

1.To guarantee its clarity and service life, the indicator shouldn't be placed directly under sunshine and should be set in the plain space.

2.It is not suitable to place the indicator in the dusty and vibration environment and also avoid using in the moist environment.

3.Signal source and weighing indicator should be reliably connected, and system should be well grounding. It should be far away with strong electric field, strong magnetic field. Load cell and indicator should be far away with strong corrosive, inflammable, explosive object.

▲ **Do not use under inflammable gas or inflammable steam; do not use under pressure container canning system.**

▲ **Lightning frequent areas, it must be installed reliable lightning arrester, to ensure operators safety and prevent damage of instruments and relevant equipment due to lightning.**

▲ **Signal source and indicator are static sensitive equipments, when using must earnestly adopt anti-static measure. It is prohibited in measuring device for welding operation or other strong electric field operation; in thunderstorms season, we must implement the reliable lightning-protection measures to prevent signal source and the indicator damage caused by lightning strike, ensure operators safety of weighing equipment and related equipment safety operation.**

4. Never use strong solvents (e.g., benzene, nitro class oil) to clean the housing.

5. Liquid or electricity conducting particles should not be poured into the indicator, in case the indicator damage and electric shock.

6. You should cut off power supply of indicator and relevant device before you pull-in and out the connecting cable of indicator and external device.

ＸＫ３１９０－A23p

▲！You should cut off power supply before pull-in and out connecting cable of signal source.

7.Output interfaces of indicator must be strictly in accordance to the user's manual, you should not alter any connection. If there is failure when using the indicator, you should immediately unplug it, and send to manufacturers for repair. Ordinary non-professional manufacturers should not repair it to avoid bigger damage.

8 . Company advice for customers: start to use our indicator after test. The company is only responsible for the quality of indicator, the biggest compensation is not more than twice of indicator value, the company is not responsible failure of the whole system.

9.   The built-in battery of indicator is a consumable part that is not within the range of "three guarantees".

▲！In order to prolong the battery service life, ensure fully charging before using. If indicator has not been used for a long time, it must be charged every two months, every time 20 to 25 hours.

（Note：Charging time is around 20-25 hours and the indicator must be power off）

▲！When moving or installing the indicator, you must carefully move it and avoid strong vibration, impact or bump in order to avoid electrode in the battery being shorted and damaged

10. Since invoice date, the indicator has a one-year free repair period. If any non-artificially failure happens under regular using conditions within this period, the user can send the indicator with its guarantee card (of the correct number) back to our service station or supplier for repair. The indicator shouldn't be open without authorization , otherwise free guarantee will be cancelled