

Weighing Indicator

Model : XK3190-A15

Attention:

**Please read this user's manual
carefully before operating the
indicator!**

Content

1. Specifications	---3
2. Installation and Keypad	---4
2.1. Front and Back View of the indicator	
2.2. Connecting the Load Cell to the Indicator	
2.3. Keypad	
2.4. Communication(optional)	
3. Calibration	---9
4. Operating Instructions	---12
4.1. Switching on	
4.2. Zero-setting	
4.3. Tare Operation	
4.4. Parameter Setting	
4.5. Price computing operation	
4.6. Counting operation	
4.7. Accumulation and Accumulation clear(MC)	
4.8. Alarm for fixed value of low/high limit	
4.9. Pre-taring	
5. Errors Information	---17
6. Guide for battery	---18

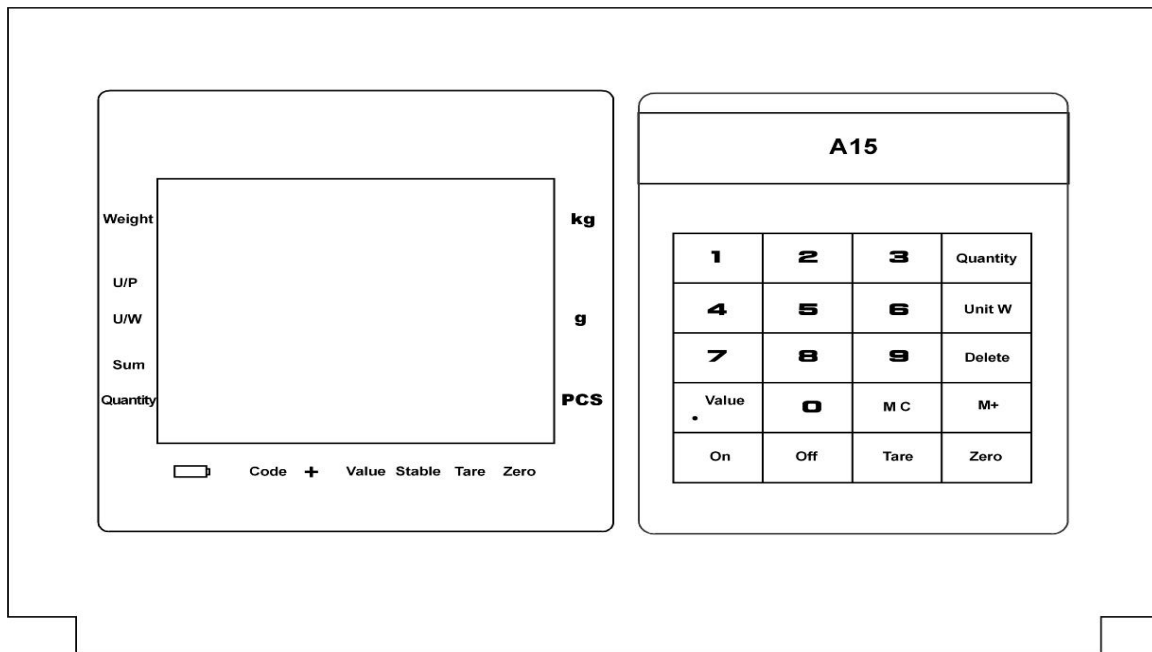
Specifications

1. **Model: XK3190-A15**
2. **Accuracy: Class III , N=3000**
3. **Simulation Part**
 - 3.1. Conversion Principle: $\Sigma-\Delta$
 - 3.2. Input Signal Range: -2mV~13mV
 - 3.3. Sample Rated: 10~15 times/sec
 - 3.4. Stimulating Voltage: DC 5V
4. **Display**
 - 4.1. Totally 21-bits LCD, 0.56 inches character height including 7 bits for weight; 6 bits for unit price/unit weight; 7 bits for sum/quantity
 - 4.2. 10 status indicating
5. **Powersupply: AC 187~242V; Frequency 49~50HZ**
Built in rechargeable battery, 6V/4AH
6. **Fuse: 500mA**
7. **Pre-heat time: 15~30 minutes**
8. **Operation Temp/RH: 0~40°C; ≤85%RH**
9. **Storage/Transportation Tem: -25°C~55°C**
10. **Dimension: 260×190×170mm; Weight: 1.75KG**
11. **Optional: one output connected to controlling units; RS232 interface, connected to PC or scoreboard.**

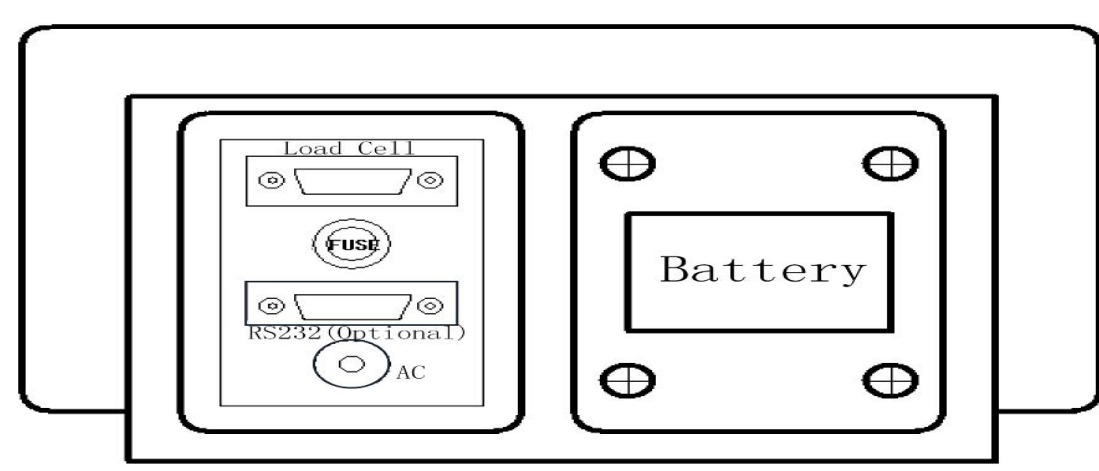
Installation and Keypad

1. Front and Back View of the indicator

1.1. Front View

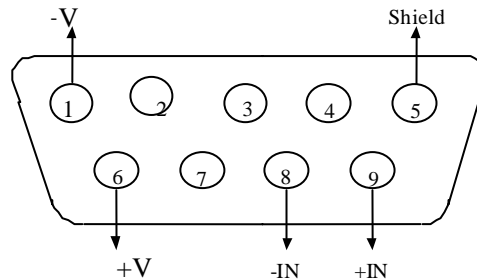


1.2. Back View

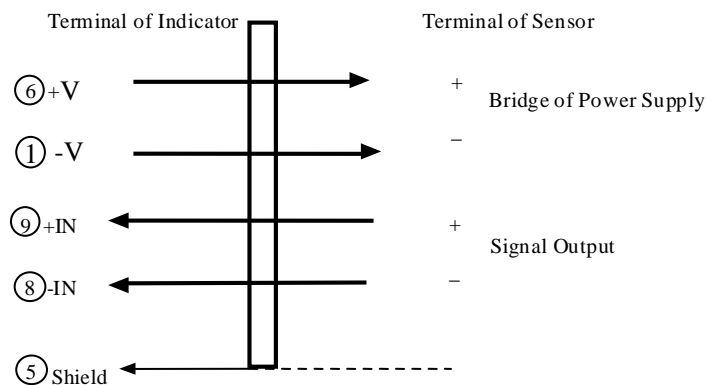


2. Connecting the Load Cell to the Indicator

2.1. The 9-pin socket is used for the connection of the load cell, as shown below:



2.2. The below graph clearly shows the connection of the load cell and the indicator



2.3. ▲! Warning: Connection of indicator and load cell must be reliable and the operation should be in power off statement.

2.4. ▲! Warning: After connection, the 9-pin socket must be fixed to ensure the security. No plugging or pulling the connection freely. And be sure the connection must be operated under power off statement.

2.5. ▲! Warning: As both the load cell and indicator are sensitive to the static electricity, anti-static measures must be taken. No soldering operation or other strong electricity operation is permitted. And anti-thunder measurements also should be taken to avoid any injury to the devices or the operators.

3. Keypad(all valid in weighing status)

3.1. Function of single key

- A [Zero]:Indicator will come to zero,the "Zero" light will be on;Press [Zero] again,it will come to the gross weight status,the "Zero" light will be off
- B [Tare]:The current weight value will be regarded as tare weight,the "Tare" light will be on.
- C [M+]:The current sum(quantity) will be added to the accumulated value.The u.p(u.w) display will show the accumulated number,the sum(quantity)display will show the accumulated value,the "M+" light will be on.When the value is over 999999,the sum(quantity) display will show"Over".
- D [MC]:The accumulated number and accumulated sum(quacity) will be cleared out.The "M+" light will be off.
- E [Delete]:Delete the current input u.p(u.w) value
- F [.Value]:In counting status,press this key,decimal point for the u.w can be entered into.
- G [Quantity]:Confirm key while setting parameter;Confirm key while setting quantity number in counting operation
- H [Unit W]:Confirm key while setting unit weight;Quit key while setteing parameter
- I [On]:Turn on the indicator
- J [Off]:Turn off the indicato
- K [0~9]:Numeric key

3.2. Function of combined keys

- A [Quantity]+[.Value]:When the calibration jumper is plugged on,first press[Quantity],then press[.Value],it will enter into calibration status

B [Quantity]+[0]:While in the weighing status,first press[Quantity],then press[0],it will enter into the inner code display statement.The "Code" light is on.Repeat the operation again,the "Code" light will be off.

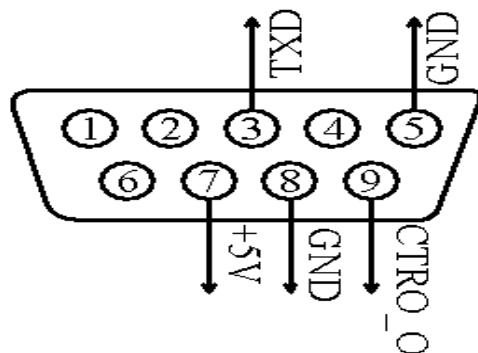
C [Quantity]+[MC]:While in the weighing status,first press[Quantity],then press[MC],it will enter into the parameter-setting statement.

D [Quantity]+[Tare]:While in the counting status,first press[Quantity],then press[Tare],it will enter into the pre-tare statement.

4. Communication(Optional)

4.1. Definition of the communication interface

XK3190-A15 has the optional part of the RS232 interface and alarm signal output.The interface is shown below:

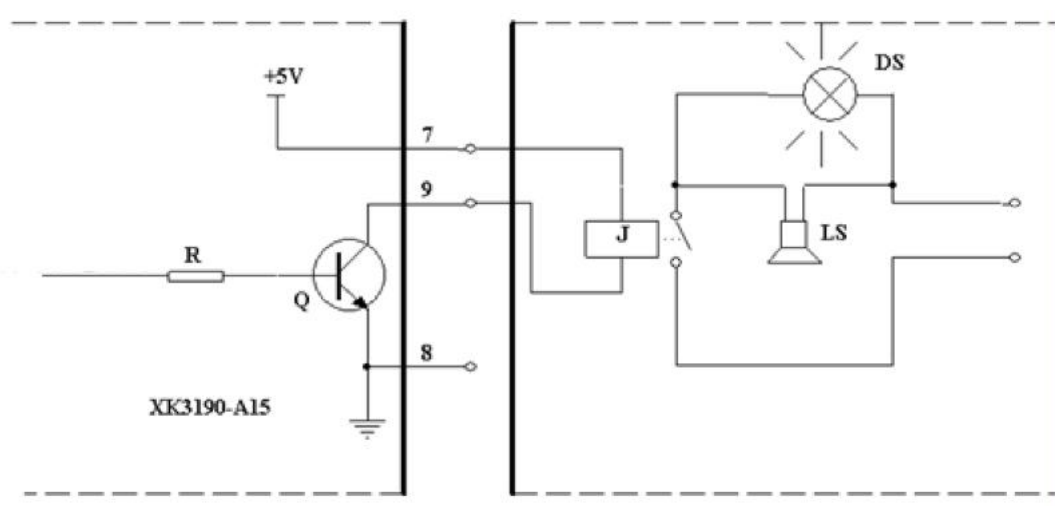


Pin 3 TXD is used for the output of RS232
Pin 5 GND is used for the ground connected
Pin 9 CTRO_0 is used for the output of the alarm signal

4.2. The communication method is continuous sening,the data format is:7 bits for weight value(low data in front of high data),1 bit for sign.For example:
The weight value is 200.0KG,the communication data will be:=0.002000
The weight value is -200.0KG,the communication data will be:=0.00200-

4.3. The fixed value alarm output graph:

The output can be connected to the voice/light alarming system or other controlling unit,for details,pls refer below:



Attention:▲! Assure the current from Pin 7 no more than 100mA

Calibration

1. Connect load cell properly,then turn on the indicator,it will perform self-checking,then enter into the weighing statement.(15~30 minutes pre-heat is necessary to assure excellent performance)
2. Put the jumper inside the indicator at "On" location(the default location is just "On"),then calibrate as shown table:

Step	Operation	Display	Notes
1	[Quantity] + [.Value]	[PASS] [000000] []	Enter the calibration,notes for inputting the password
2	Input the password by keypad,,Press[Quantity]for confirm	[PASS] [319015] []	Password: 319015
3	Press[2],Press[Quantity]for confirm	[E] [002] []	Enter division optional: 1/2/5/10/20/50/100/200,if the original division is accepted,then press[Quantity]for confirm Example: 2
4	Press[2],press[Quantity]for confirm	[POS] [2] []	Enter decimal number (0~4) Example: 2
5		[2Ero] [WXYZ] []	Set the Zero parameter (Detail in Note 2-1) W: Zero track speed X: Zero track range Y: manual zero setting range Z: auto zero setting range
6	Press[1][2][4],Press[Quantity]for confirm	[2Ero] [0124] []	Example:0124
7		Display: [FLT] [XYZ] []	Set the digital filter intensity (Detail in Note 2-2) X anti-vibration select Y stable range Z filter insensity, the high value it is,the more filter insensity and the lower response it is.The parameter 012 is

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			strongly recommended
8	Press[0][1][2], Press[Quantity]for confirm	Display [FLT] [012] []	Example:012
9	Press[6][0][0], then press[Quantity]for confirm	Display [FULL] [006000] [*****]	Input full range: 6000
10	After stability, press[Quantity]for confirm	[noLoAd] [SurE] [*****]	Zero- point calibration
11	After 5~10 seconds stability , press[6][0][0][0], then press[Quantity]for confirm	[AdLoAd1] [006000] [*****]	Linearity calibration : Put certain load, the more close to the full range, the better it is. After 5~10 seconds stability, input the actual value of the loaded weight Example: 6000
12	Calibration over, return to the weighing status	[*****] [*****] [*****]	Note 2-3

Note 2-1, Pn parameter setting:

W	0	1	2	3
Zero track speed	0.4second	0.3second	0.2second	0.1second

X	0	1	2	3	4	5	6	7	8	9
Zero track range	No track	0.5e	1.0e	1.5e	2.0e	2.5e	3.0e	3.5e	4.0e	4.5e

Y	1	2	3	4	5
manual zero setting range	2%F.S	4%F.S	10%F.S	20%F.S	100%F.S

Z	1	2	3	4	5
auto zero setting range	2%F.S	4%F.S	10%F.S	20%F.S	100%F.S

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Note 2-2:

X anti-vibration select:0 stands for turn off;1 stands for turn on

Y stable range:the parameter 0~3 corresponds to the range 0.5d、1.0d、1.5d、2.0d respectively

Z filter insensity: the high value it is,the more filter insensity and the lower response it is.

Note 2-3

From step 1 to step 8,press[Unit W] will quit calibration

Operating Instructions

1. Switching on(15~30 minutes pre-heat will assure excellent performance)

1.1. Press[ON],the indicator will perform self-checking.

1.2. After self-checking,the indicator will come into the status of price computing or counting.

Attention:▲! For the first time the rechargeable battery is used,it must be fully charged.

2. Manually Zero-setting

When the gross weight is within the zero setting range,press[zero],indicator will perform zero.When tare is applied,pressing [zero]won't effect.

3. Tare

When the value is stable,not negative,and without the zero range,press[Tare],indicator will perform tare,the "Tare"light will be on.Repress[Tare],the "Tare"light will be off.

4. Parameter Setting

4.1. The parameter includes working method setting、 background light setting、 fixed value alarm setting、 Baud rate setting.The operation step is shown below:

4.2.

Step	Operation	Display	Notes
1	In weighing status ,press[Quantity]+ [MC], then come into parameter setting	[FUnC] [*] []	Enter into the first step of parameter setting
2	Working method setting:Press[0] ,then	[FunC] [*] []	Working method set: 0 stands for counting 1 stands for price computing

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	press[Quantity] for confirm		<u>Example: 0</u>
3	Background light setting : press[1], then press[Quantity] for confirm	[bL] [*] []	Background light setting:0~3 0 No background light 1 While gross weight is zero, background light will be off after 15 seconds 2 While net weight is zero, background light will be off after 15 seconds 3 All the time, the background light is on Example: 1
4	Fixed value alarm setting: press[0][1][1] , then press[Quantity] for confirm	[Lt] [XYZ] []	Fixed value alarm setting: X while alarming, the buzzer speak or not Y Check the fixed value while stable or not Z Alarm method (Note 4-1) Example: 011
5	Baud rate setting : press[0], then press[Quantity] for confirm	[bAUd] [*] []	Baud rate: 0 600; 1 1200; 2 2400; 3 4800 4 9600; 5 19200
6	Return the weighing status	[*****] [*****] [*****]	Then indicator will work according to the above set parameter.

Note 4-1

X:0 stands for the buzzer speak;1 stands for the buzzer doesn't speak

Y:0 stands for check the fixed value whether stable or not;1 stands for check the fixed value while it is stable

Z:0 stands for alarm while it is less than the low limit;1 stands for alarm while it is between the high limit and low limit;2 stands for alarm while it is more than the high limit;3 stands for alarm while it is less than the low limit or more than the high limit

5. Price computing operation

In the price computing status, the unit price can be entered by the keypad, then the sum display the value according to the current unit price. while the weight is negative, the sum will always be 0. While the weight is stable, accumulation operation can be valid.

The decimal point of the unit price and sum is fixed as two. The

maximum unit price is :9999.99 and maximum sum is:9999.99.If the sum is over 9999.99,it will display "oUer".

6. Counting operation

Two methods of the counting operation:one is the unit weight is unknown,then get the unit weight by putting some quantities of the samples and putting the number;the other is the unit weight is known,then press[Unit W] to operate counting.Pls see the following for detail:

6.1. Unit weight unkown:Put some quantities of samples,then while the weight is stable,input the actual number of the samples,press[Quantity] for confirm.After the indicator calculate the unit weight,then counting operation can be performed.

6.2. Unit weight known:Input the unit weight of the to be counted sample,press[Unit W] for confirm,then counting operation can be performed.

Notes:

A The unit of the unit weight is g.And the decimal point of the unit weight is decided by that of the weight.

B For 6.1,the advised sample number is over 50.

C If the weight is negative,the indicator won't count.If the unit weight is less than 0.25 division,the indicator will display"L" to show the unit weight isn't enough.If the unit weight calculated by "Quantity" is less than 0.05 division,the indicator will display"Err 10" to show sample not enough.

7. Accumulation (M+) and Accumulation clear (MC)

The operation is shown as below:

Step	Operation	Display	Notes
1	When there is value of sum/quantity, press [M+]	[*****] [Add ***] [*****]	Operaiton: When the weight is unchanged, Unit P/Unit W displays the accumulated number, sum/quantity display the accumulated result, the "+" light is on
2	Return to the weighing status by few seconds display, one M+ operation is over	[*****] [*****] [*****]	Note 7-1
3	Manully zero the indicator, perform another price computing or counting	[*****] [*****] [*****]	After weight is zero or below, or perform tare operation, load again for a second price computing/quantity
4	When there is value of sum/quantity, press [M+]	[*****] [Add ***] [*****]	A second M+
.....	More operation of M+
5	Manully zero the indicator, perform another price computing or counting, press [M+]	[*****] [Add ***] [*****]	Display: The weight is unchanged, Unit P/Unit W displays the accumulated number, sum/quantity display the accumulated result
6	Press [MC]	Data display unchanged	MC: the accumulated number will be zero, the accumulate result will be zero, the "+" light be off

Note 7-1:

The maximum accumulated value is 9999999 while the accumulated number is within limit; The maximum accumulated number is 255 while the accumulated number is within limit. It will display "oF" if the number or value is out of the limit.

8. Alarm for fixed value counting

While in the counting status, the indicator has the function of low/high limit fixed value alarm. First, set the fixed value, pls refer below:

Step	Operation	Display	Notes
1	While in counting status, press [Value] to set the low limit	[LLLLLLL] [*****] []	Low limit setting
2	Press [1][0][0][0] Then press [Quantity] for confirm, directly to step 4	[LLLLLLL] [*****] []	Input the low limit, press [Value] for confirm, come to step 3, or press [Quantity] directly to step 4. Note 8-1 Example: 1000
3	High limit setting : press [2][0][0][0], then press [Quantity] for confirm	[HHHHHHH] [*****] []	High limit setting: input the high limit, then press [Quantity] for confirm Example: 2000
4	Return to the weighing status	[*****] [*****] [*****]	

Note 8-1:

If the low limit is 0, any value the high limit it is, the alarm function will be forbidden

9. Pre-taring

Pre-taring operation is valid in the counting status. Pls operate as following:

Press [Quantity]+[Tare] to enter into the pre-taring operation, the indicator display "[PrESet][*****][]", then input the pre-tare value, press [Quantity] for confirm, the indicator will return to the counting status. The weight will display the net value concerned to the pre-tare value, the "Tare" light is on.

10. Code

For view the inner code, pls operate as following: press [Quantity]+[0] while in the weighing status to display the inner code, then the "Code" light is on. Press [Quantity]+[0] again to quit. Then inner code and outer division rate is 20:1, that is to say one division corresponds to 20 inner codes.

Errors Information

1. For details of the error information,pls refer to the following table:

Error	Notes	Solution
[Err 01] [*****] [*****]	The analog signal is seriously negative	Check the connection of the load cell and indicator
[Err 02] [*****] [*****]	The analog signal is too high or error from load cell	Check the connection of the load cell and indicator
[Err 03] [*****] [*****]	The weight is overloaded	1. If the indicator hasn't been calibrated,calibrate it. 2. Decrease the weight so that it is within the full range 3. Re-set the full range
[Err 10] [*****] [*****]	The unit weight isn't enough	1. Re-select the load cell with high precision 2. Increase the samples.
[Err 13] [*****] [*****]	Parameter is wrongly set	Re-set the parameter
[Err 11] [*****] [*****]	The loaded analog signal is too weak while calibration	Decrease the full range or select load cell with more range sensitivity
[Err 15] [*****] [*****]	The full range too small	Full range should be more than 100
[Err 23] [*****] [*****]	Memory defective	Check the memory on the main board or the circuit to see whether therer is shorted or opened,otherwise,change the memroy

Guide for battery

1. When AC 220 V is on, then the battery will charge automatically.
2. Attention: Red wire stands for positive while black wire stands for negative.
3. The first time charge for the battery, pls take more than 24 hours to assure the security and stability of the battery.