



XK3108A/B/C/F

STAINLESS STEEL

WATERPROOF WEIGHING INDICATOR

USER'S MANUAL



Ver. 6.2x (201404)

Catalogue

1. Technical Parameters.....	3
2. Installation.....	3
2.1 Bottom schematic drawing of indicator.....	3
2.2 Connection between indicator and loadcell.....	3
3. Calibration.....	4
4. Function and Operating.....	5
4.1 Button Function	5
4.2 Zero	6
4.3 Tare	6
4.4 Print	6
4.5 Add up	6
4.6 Change unit	6
4.7 Counting	7
4.8 Weight value alarm	7
4.9 Save power	8
4.10 Charge	8
4.11 Extra Function	9
5. Set up Parameters.....	9
6. Data Transmission Function.....	10
7. Character Prompt	11

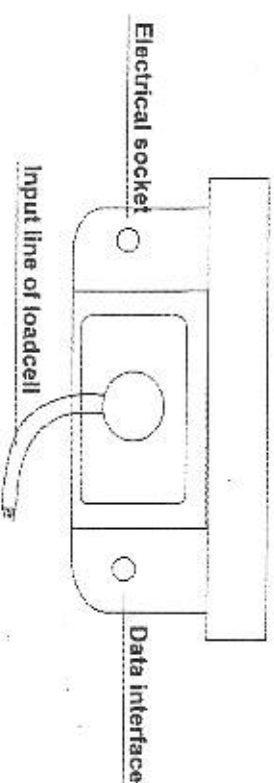
1. Technical Parameters

- 1.1 A/D Conversion principle: $\Delta\Sigma$
- 1.2 Display accuracy: 1/3000 ----1/30000
- 1.3 A/D Resolution: 300000
- 1.4 Bridge voltage: DC 5V, could connect 4 pcs 350Q loadcells
- 1.5 Capacity: 15, 30, 60, 100, 150, 300, 600, 1000, 1500, 3000kg
- 1.6 Serial communication interface: RS-232, Baud rate 1200, 2400, 4800, 9600 optional

- 1.7 Print: RS-232 or RS-485 Serial print output
- 1.8 Output valve amount of three-way switch
- 1.9 Power supply: AC 220V 50Hz / Inner 6V4Ah sealed rechargeable battery
- 1.10 Working temperature: -5 ~ 35℃
- 1.11 Storage temperature: -25 ~ 55℃
- 1.12 Size: 212×136×106mm
- 1.13 Weight: 2.5kg

2. Installation

2.1 Bottom schematic drawing of indicator



2.2 Connection between indicator and loadcell

2.2.1 Input signal line of loadcell:



2.2.2 Operation: Slip input line of loadcell on to waterproof heat pipe, slip four input signal line on to thinner heat pipe, then weld the corresponding four input signal lines and four output signal lines. Then, use heat dry to blow the pipe contraction.

Note: When install we must cut off the power supply of loadcell, must unite securely.

Note: Preventing static electricity, welding on platform is prohibited!

3. Calibration

3.1 Random point calibration.

3.2 When it displays 0, press **SET** **PRF** + **TARE** + **ZERO** the same time, enter to calibration.

3.3 When it displays **P 15.0**, repeat to press **TARE**, it displays **1.5 → 3.0 → 5.0 → 10.0 → 15.0 → 30.0 → 50.0 → 100.0 → 150.0 → 300.0** Means Max. capacity is: 15kg, 30 kg, 60 kg, 100kg, 150 kg, 300 kg, 600 kg, 1000kg, 1500 kg, 3000 kg), press **ZERO** to confirm.

3.4 when it displays **1.5 ---**, confirm no weight on plate and press

ZERO, display **1.5 --- 5**, the last number is **5 → 4 → 3 → 2 → 1**, if the zero

4

is stable, after display 1, now into next step.

3.5 when it displays **H2 ---**, put any weight on centre of plate, press **ZERO**, display **H2 --- 5**, the last number is **5 → 4 → 3 → 2 → 1**, if the data is stable, after display 1, now into next step.

3.6 when it displays **000000**, input the value of weight on plate: press **SET** **PRF** to change the flashing digit, press **TARE** to change the number, press **ZERO** to choose.

Now finish and show the weight value.

- Default unit is kg after into calibration.
- it could be most accurately when use a weight approach 1/2 Max. capacity.
- Please use a loadcell fit in the max. capacity.

4. Function and Operating

4.1 Button Function

ON/OFF Turn on/off.

ZERO Confirm function while Setting and calibration.

TARE Choose function while Setting and calibration.

SET **PRF** Displace digital function while Setting and calibration.

MC Add up current weight, times and total value.

UNIT **MC** Change units: Clear total data while adding up: Quit function while setting.

PCS Enter and quit counting.

5

4.2 Zero

G.W. data is in zero range ($\pm 4\%$ Max. capacity), press **ZERO** to zero. Cannot zero when there have a tare.

4.3 Tare

While stable, no Negative number and not at zero, press **TARE**, tare lamp lights.

If it is zero and with a tare, press **TARE** to quit N.W., tare is zero, tare lamp off.

4.4 Print

When data transmission is **U-5Lb** (see 5.8), press **SET PRt** to send current data to PC or printer.

4.5 Add up

4.5.1 When data is stable and stable lamp lights, press **M+** to add current data (weight or quantities) to memory, now display add up times and total value. Add up should at zero, Max. 255 times. Exceed Max. times it will show

11-UF, Exceed Max. memory capacity it will show **1-UF**.

4.5.2 At zero, press **M+** to show add up times and total value, return to zero after one second.

4.5.2 Press **UNIT MC** to clear total data.

4.5.3 While changing between weighing and counting or turn on scale again, auto clear total data.

4.6 Change unit

Under weighing state, press **UNIT MC** to change units (see 5.4), under counting

state, cannot change units.

4.7 Counting

4.7.1 Press **PCS**, counting indicate lights, show sample number

SHP 10, press **TARE** to choose sample number **10** → **20** → **50** →

100 → **200** → **500** → **1000**, press **ZERO** to confirm, now show

LOAD 1, now place the corresponding sample number, press **ZERO** to finish, now display the sample number.

4.7.2 While counting, press **PCS** to quit counting and return to weighing.

• Cannot save sample data after quit counting.

• While sampling, press **PCS** to return to weighing.

4.8 Weight value alarm

4.8.1 When it displays 0, press **SET PRt** + **ZERO** the same time, enter to set up weight value alarm.




4.8.2 Choose weight value alarm mode: press **TARE**, now repeat display

-10- → **-11-** → **-0UL-**, press **ZERO** to confirm.

10 close weight value alarm.

11 Open weight value alarm function, alarm in the set range, it sounds di-di-di.

0UL Open weight value alarm function, alarm out of the set range, it sounds di-di-di.

4.8.3 Low limit indicate lights, enter to set up low limit, press , change the flashing digit from left->right->left, press  to choose 0->9, Press  to confirm and high limit indicate lights, enter to set up high limit (same as set up low limit). After Setup completes, start alarming.

4.8.4 $0 < \text{Weight} \leq \text{low limit}$: Low limit indicate lights.

Low limit < Weight ≤ high limit. Accept indicate lights.

Weight > high limit: high limit indicate lights.

- High limit is equal or less than low limit, invalid.

- Data saves to next set.

- Data will change while unit changing.

This function will be closed when close counting function.

4.9 Save power (see 5.6)

4.9.1 XK3108A/C: More than 5 seconds at zero or 30 seconds at any other value, display is dimming; When indication changes, the brightness is back to normal. After 10 minutes after indication is stable, auto power off.

4.9.2 XK3103B/F: More than 5 seconds at zero or 30 seconds at any other

value, backlight will close; When Indication changes, the backlight is opening

After 10 minutes after indication is stable, auto power off.

4.10 Charge

4.10.1 This indicator is supplied power by built-in 6V4Ah non-maintaining sealed lead-acid battery. When voltage is lower than 5.8V, charge indicate is flicking (XK3108B/V/C) or battery indicate is flicking (XK3108B/F), please charge immediately. When voltage is lower than 5.5V, it will be auto-off.

4.10.2. **KK3108A/C:** When charging, charge indicate is flicking (flicking frequency is slower than low voltage flicking); When fully charging, charge indicate is always lighting. **KK3108B/F:** When charging, Battery graphics within the square circulation changes. When fully charging, Battery graphics within blocks all light.



4.10.3 Please charge in time while loss power, try to charge full to save battery life.

4.11 Extra Function

When it displays 0:



Press  to turn on, enter to relative zero-source display mode,

Press  to turn on, enter to absolute zero-source display mode,

Press  +  to display voltage.

Under the above three status, press  to return weighing or counting

5. Set up Parameters

When it displays 0, press  +  the same time, enter to set up.

parameters. Press **TAKE** to choose parameter, press **ZERO** to confirm and enter to next step.

5.1 P_{rE} (Display Accuracy) / means $n=3000$ \mathcal{L} means $n=6000$ \mathcal{J} means $n=15000$ \mathcal{Y} means $n=30000$ default is \mathcal{L}

5.2.2 $\text{d} \text{E} \text{L}$ (the display places behind the decimal point) 0 ~ 9 means 0~4 place (it is available only when the weight unit is kg. If not, there is no function.)

U means NO decimal point; 1 means 0.0; 2 means 0.00; 3 means 0.000; 4 means 0.0000

5.3 CTE^n (Zero range) $U = 5$ (0 -- 6 display division), default is 5

5.4 `Unit (units)` : means kg , lb.lb `2` means kg , lb.oz
means kg, lb.lb , lb.oz, default is 1

3.5 `arc` (Display brightness) `1 - 4`, default is `2` (XK3108B/F has no this function)

5.6 SHI (Save power) $f \sim 3$, f means close this function (but LCD

backlight is still on), 2 means if the scale is at zero for 40 seconds, the screen will show 0 and it returns to normal when weighing. (LCD backlight is off until weighing again), 3 means if the scale is at zero for 40 seconds, the screen will show 0 and it returns to normal when weighing. (LCD backlight is off until weighing again) and then if it stays steady for 10 minutes, the scale will be Auto-off, default is 3

5.7 F1 L L (Filter coefficients): 1 ~ 3, different display speed and stability, default is 2

5.8 5 P d (Display Update Speed) 0 is Slow Speed, 1 is Fast Speed, default is 1

5.9 d r 1 (Creep Tracking Range) 0 ~ 4, larger number means larger range, default is 1

5.10 U (Data transmission) 5 H U L is close, 5 E r is continuous Send, 5 L b is send after stable, 5 L b is press **SET** to send, default is 5 H U L

5.11 b (Baud rate): 1200, 2400, 4800, 9600, default is 9600 (When choose 5 H U L for 5.10, there is no function.)

After setting, return to normal status.

5.12 F R L (Output Data Type): 1 ~ 3, 1 is Weighing data, 2 is Chinese data, 3 is English data.

- During set up, press **UNIT** **MAC** could quit set.

6. Data Transmission Function

6.1 Weighing Data Format: 18 bytes in total

Output	ST	*XXXXXXXX	SP	g	CR	LF
Data						
Note	A	B	C	D	E	H

A(2 bytes) State Code, ST: stable US: unstable OL: overload

B (8 bytes) Display the weight [* is (-) or (SP), X is digit or point]
C (1 byte) SP: spacebar (ASCII 20H)
D (5 bytes) Weight Unit: g or kg or lb, lb; For example: g SP SP SP SP
E (1 bytes) CR: enter (ASCII 0DH)

H (1 bytes) LF: Line Feed (ASCII 0AH)

6.2 Print Format

6.2.1 English Print Format

EENO: xxxx

DATA: xxxx/xx/xx (Y/M/D)

TIME: xx:xx:xx (H/M/S)

W.T.: xxx.x

6.2.2 Chinese Print Format

Number: xxxx

Date: xxxx/xx/xx

Time: xx:xx:xx

Weight: xxx.x

7. Character Prompt

nnnnnn Indicate that the weighing object is overloaded.

LLLLL Output of load cell is lower

HHHHH Output of load cell is higher or Turn on zero is higher

-Lo- A reminder that it will shut off in 1 minute, power should be changed since the power voltage is too low.

Data is abnormal, press to turn on and re-calibrate

Power has been charged fully.

NABA
National de
pesage au
bras

PBX: (2) 441 2484
 Cels.: (318) 620 1780 - 318 500 7030
 E-mail: info@nabaindustries.com
 www.nabaindustries.com

XK3108A/B/C/F

STAINLESS STEEL

WATERPROOF WEIGHING INDICATOR

USER'S MANUAL



Catalogue

1. Technical Parameters.....	3
2. Installation.....	3
2.1 Bottom schematic drawing of Indicator.....	3
2.2 Connection between indicator and loadcell.....	3
3. Calibration.....	4
4. Function and Operating.....	5
4.1 Button Function	5
4.2 Zero	6
4.3 Tare	6
4.4 Print	6
4.5 Add up	6
4.6 Change unit	6
4.7 Counting	7
4.8 Weight value alarm	7
4.9 Save power	8
4.10 Charge	8
4.11 Extra Function	9
5. Set up Parameters.....	9
6. Data Transmission Function.....	10
7. Character Prompt	11

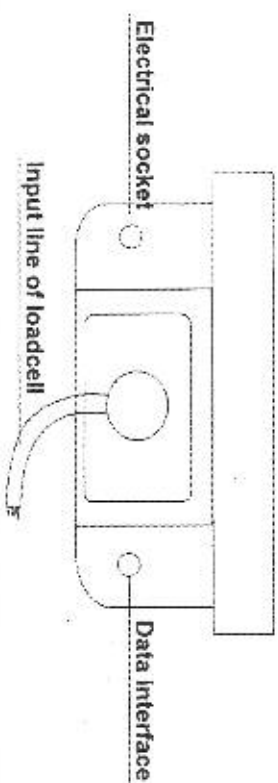
1. Technical Parameters

- 1.1 A/D Conversion principle: $\Delta\Sigma$
- 1.2 Display accuracy: 1/3000 ----1/30000
- 1.3 A/D Resolution: 300000
- 1.4 Bridge voltage: DC 5V, could connect 4 pcs 3500 loadcells
- 1.5 Capacity: 15, 30, 60, 100, 150, 300, 600, 1000, 1500, 3000kg
- 1.6 Serial communication interface: RS-232, Baud rate 1200, 2400, 4800, 9600 optional

- 1.7 Print: RS-232 or RS-485 Serial print output
- 1.8 Output value amount of three-way switch
- 1.9 Power supply: AC 220V 50Hz / inner 6V4Ah sealed rechargeable battery
- 1.10 Working temperature: -5 ~ 35℃
- 1.11 Storage temperature: -25 ~ 55℃
- 1.12 Size: 212×136×105mm
- 1.13 Weight: 2.5kg

2. Installation

2.1 Bottom schematic drawing of Indicator



2.2 Connection between indicator and loadcell

2.2.1 Input signal line of loadcell:



2.2.2 Operation: Slip input line of loadcell on to waterproof heat pipe, slip four input signal line on to thinner heat pipe, then weld the corresponding four input signal lines and four output signal lines. Then, use heat dry to blow the pipe contraction.

Note: When install we must cut off the power supply of loadcell, must unile securely.

Note: Preventing static electricity, welding on platform is prohibited!

3. Calibration

3.1 Random point calibration.

3.2 When it displays 0, press **SET** **PRT** + **TAKE** + **ZERO** the same time, enter to calibration.

3.3 when it displays **P 150**, repeat to press **TAKE**. It displays **15 → 30 → 50 → 100 → 150 → 300 → 500 → 1000 → 1500 → 3000**. Means Max. capacity is: 15kg, 30 kg, 60 kg, 100kg, 150 kg, 300 kg, 600 kg, 1000kg, 1500 kg, 3000 kg, press **ZERO** to confirm.

3.4 when it displays **1.5-----**, confirm no weight on plate and press

ZERO, display **1.5-----**, the last number is **5 → 4 → 3 → 2 → 1**, if the zero

is stable, after display 1, now into next step.

3.5 when it displays **H2-----**, put any weight on centre of plate, press **ZERO**, display **H2-----**, the last number is **5 → 4 → 3 → 2 → 1**, if the data is stable, after display 1, now into next step.

3.6 when it displays **000000**, input the value of weight on plate: press **SET** **PRT** to change the flashing digit, press **TAKE** to change the number, press **ZERO** to choose.

Now finish and show the weight value.

- Default unit is kg after into calibration.
- it could be most accurately when use a weight approach 1/2 Max. capacity.
- Please use a loadcell fit in the max. capacity.

4. Function and Operating

4.1 Button Function

Turn on/off.

ZERO Confirm function while Setting and calibration.

TAKE Choose function while Setting and calibration.

SET **PRT** Displace digital function while Setting and calibration.

MC Add up current weight, times and total value.

UNIT **MC** Change units: Clear total data while adding up: Quit function while setting.

PCS Enter and quit counting.

4.2 Zero

G.W. data is in zero range (+4% Max. capacity), press **[ZERO]** to zero. Cannot zero when there have a tare.

4.3 Tare

While stable, no Negative number and not at zero, press **[TARE]**, tare lamp lights.

If it is zero and with a tare, press **[TARE]** to quit N.W., tare is zero, tare lamp off.

4.4 Print

When data transmission is **[U-Stb]** (see 5.8), press **[SET PRT]** to send current data to PC or printer.

4.5 Add up

4.5.1 When data is stable and stable lamp lights, press **[M+]** to add current data(weight or quantities) to memory, now display add up times and total value. Add up should at zero, Max. 255 times. Exceed Max. times it will show

[n-Of] Exceed Max. memory capacity it will show **[L-Of]**.

4.5.2 At zero, press **[M+]** to show add up times and total value, return to zero after one second.

4.5.2 Press **[UNIT MC]** to clear total data.

4.5.3 While changing between weighing and counting or turn on scale again, auto clear total data.

4.6 Change unit

Under weighing state, press **[UNIT MC]** to change units (see 5.4), under counting

state, cannot change units.

4.7 Counting

4.7.1 Press **[PCS]**, counting indicate lights, show sample number

[SRP 10], press **[TARE]** to choose sample number **10** → **20** → **50** →

100 → **200** → **500** → **1000**, press **[ZERO]** to confirm, now show

[LoRd L], now place the corresponding sample number, press **[ZERO]** to finish, now display the sample number.

4.7.2 While counting, press **[PCS]** to quit counting and return to weighing.

• Cannot save sample data after quit counting.

• While sampling, press **[PCS]** to return to weighing.

4.8 Weight value alarm

4.8.1 When it displays 0, press **[SET PRT]** + **[ZERO]** the same time, enter to set up weight value alarm.

4.8.2 Choose weight value alarm mode: press **[TARE]**, now repeat display

[-10-] → **[-10-]** → **[-0.1%-]**, press **[ZERO]** to confirm.

[No] close weight value alarm.

[Y] Open weight value alarm function, alarm in the set range, it sounds di-di-di.

[0.1%-] Open weight value alarm function, alarm out of the set range, it sounds di-di-di.

4.8.3 Low limit indicate lights, enter to set up low limit, press **SET PRT**, change the flashing digit from left->right->left, press **TARE** to choose 0->9, Press **ZERO** to confirm and high limit indicate lights, enter to set up high limit (same as set up low limit). After Setup completes, start alarming.

4.8.4 0 < Weight ≤ low limit: Low limit indicate lights.

Low limit < Weight ≤ high limit: Accept indicate lights.

Weight > high limit: high limit indicate lights.

- High limit is equal or less than low limit, invalid.
- Data saves to next set.
- Data will change while unit changing.
- This function will be closed when close counting function.

4.9 Save power (see 5.6)

4.9.1 XK3108A/C: More than 5 seconds at zero or 30 seconds at any other value, display is dimming; When Indication changes, the brightness is back to normal. After 10 minutes after indication is stable, auto power off.

4.9.2 XK3108B/F: More than 5 seconds at zero or 30 seconds at any other value, backlight will close; When Indication changes, the backlight is opening. After 10 minutes after indication is stable, auto power off.

4.10 Charge

4.10.1 This indicator is supplied power by built-in 6V4Ah non-maintaining sealed lead-acid battery. When voltage is lower than 5.8V, charge indicate is flicking (XK3108A/C) or battery indicate is flicking (XK3108B/F), please charge immediately. When voltage is lower than 5.5V, it will be auto-off.

4.10.2 XK3108A/C: When charging, charge indicate is flicking (flicking frequency is slower than low voltage flicking); When fully charging, charge indicate is always lighting. XK3108B/F: When charging, Battery graphics within the square circulation changes. When fully charging, Battery graphics within blocks all light.

4.10.3 Please charge in time while loss power, try to charge full to save battery life.

4.11 Extra Function

When it displays 0:

Press **M+** to turn on, enter to relative zero-source display mode.

Press **UNIT MC** to turn on, enter to absolute zero-source display mode,

Press **SET PRT** + **M+** to display voltage.

Under the above three status, press **UNIT MC** to return weighing or counting.

5. Set up Parameters

When it displays 0, press **SET PRT** + **TARE** the same time, enter to set up

parameters. Press **TARE** to choose parameter, press **ZERO** to confirm and enter to

next step.

5.1 **P r E** (Display Accuracy) / means n=3000 **E** means n=6000 **E** means n=15000 **Y** means n=30000 default is **E**

5.2 **d E E** (the display places behind the decimal point) **E** ~ **Y** means 0~4 place (It is available only when the weight unit is kg. If not, there is no function.) **E** means NO decimal point; **E** means 0.0; **E** means 0.00; **E** means 0.000; **Y** means 0.0000

5.3 **E E r** (Zero range) **E** ~ **E** (0 ~ 6 display division), default is **E**

5.4 **U n t** (units) / means kg **E** means kg, lb, lb **E** means kg, lb, oz **Y** means kg, lb, lb, oz, default is /

5.5 **b r t** (Display brightness) / ~ **Y**, default is **E** (XK3108B/F has no this function)

5.6 **S R U** (Save power) / ~ **E**, / means close this function (but LCD

backlight is still on), $\bar{2}$ means if the scale is at zero for 40 seconds, the screen will show 0 and it returns to normal when weighing. (LCD backlight is off until weighing again), $\bar{3}$ means if the scale is at zero for 40 seconds, the screen will show 0 and it returns to normal when weighing. (LCD backlight is off until weighing again) and then if it stays steady for 10 minutes, the scale will be Auto-off, default is $\bar{3}$

5.7 $F1Lb$ (Filter coefficients): 1 ~ 3, different display speed and stability, default is $\bar{2}$

5.8 SPd (Display Update Speed) $\bar{0}$ is Slow Speed, $\bar{1}$ is Fast Speed, default is $\bar{1}$

5.9 dri (Creep Tracking Range) $\bar{0}$ ~ $\bar{4}$, larger number means larger range, default is $\bar{1}$

5.10 U (Data transmission) $SHUE$ is close, SEr is continuous Send, SEb is send after stable, ELb is press **SET** **PRT** to send, default is $SHUE$

5.11 b (Baud rate): 1200, 2400, 4800, 9600, default is 9600 (When choose $SHUE$ for 5.10, there is no function.)

After setting, return to normal status.

5.12 FHE (Output Data Type): 1 ~ 3, 1 is Weighing data, $\bar{2}$ is Chinese data, $\bar{3}$ is English data.

- During set up, press **UNIT** **MC** could quit set.

6. Data Transmission Function

6.1 Weighing Data Format: 18 bytes in total

Output	ST	*XXXXXXX	SP	g	CR	LF
t						
Data						
Note	A	B	C	D	E	H

A (2 bytes) State Code, ST: stable US: unstable OL: overload

B (8 bytes) Display the weight (* is (.) or (SP), X is digit or point)

C (1 byte) SP: spacebar (ASCII 20H)

D (5 bytes) Weight Unit: g or kg or lb, lb; For example: g SP SP SP SP

E (1 bytes) CR: enter (ASCII 0DH)

H (1 bytes) LF: Line Feed (ASCII 0AH)

6.2 Print Format

6.2.1 English Print Format

EENO: xxxx

DATA: xxxx/xx/xx (Y/M/D)

TIME: xx:xx:xx (H/M/S)

W.T.: xxx.x

6.2.2 Chinese Print Format

Number: xxxx

Date: xxxx/xx/xx

Time: xx:xx:xx

Weight: xxx.x

7. Character Prompt

nnnnnn Indicate that the weighing object is overloaded.

LLLLLL Output of load cell is lower

HHHHHH Output of load cell is higher or Turn on zero is higher

-LO- A reminder that it will shut off in 1 minute, power should be charged since the power voltage is too low.

Data is abnormal, press to turn on and re-calibrate

Power has been charged fully.