

User Manual

KDW Weighing Indicator

Edition :1.9

1、Main parameter

Accuracy:	III class
Specification:	(0~30000) d
Nonlinearity:	$\leq 0.01\%F.S$
System working voltage:	DC:5V
Division:	1/2/5/10/20/50
Sampling speed:	10/80 times / second
Internal resolution:	300000~600000

2、Power supply

2-1 AC:	Use adapter
Input:	AC 110~240V
Output:	DC 9V/500~600mA

2-2 Lithium battery: 3.7V 3000mah

When the voltage is less than 3.9v, the system will display the battery sign. When the voltage is less than 3.8v, the system will flash the battery sign to remind the user to charge in time. When the voltage is less than 3.7v, the system will prompt "batlow" and shut down automatically.

3. System current consumption

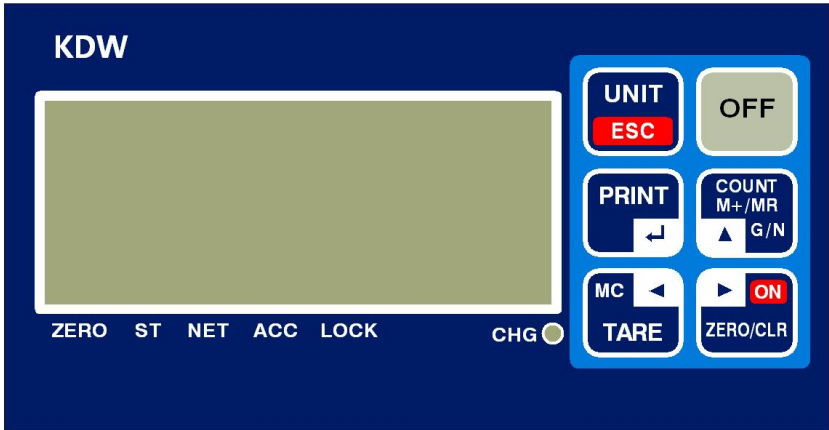
Main system consumption current (sleep state): About 25mA

Main system consumption current (LCD working state): About 50mA

4. LOADCELL connection (for indicator)

PIN1:	E+
PIN2:	E-
PIN3:	S+
PIN4:	S-
PIN5:	GND

5.Key function: (item ☆only exists in multi-function version)



Key	Key function	Remark
	UNIT: Under weighing condition, short press the key to switch units.	The current switchable unit depends on the timing code specification. Specification code setting can be referred to calibration step 4.
	CANCEL: Cancel current operation	When calibrating, press this key, go back to the previous step.
	☆ COUNT: In counting state, long press can enter counting setting state, display C 10, then short press this key, select setting counting value.	When the specification code D = 1, press the unit key when weighing, and the unit can be switched to the counting state. If 1 kg is currently placed and the counting value is set as C 100, the weight of the unit is 10 G. When 2.8kg weight is placed, the number will be 280.
	☆ ACCUMULATION: Weighing state, Put weight first, Press this key again to accumulate the current weight.	When the former weight is accumulated, it is necessary to take the goods first then the scales can return to zero, so that the next weight can be accumulated.

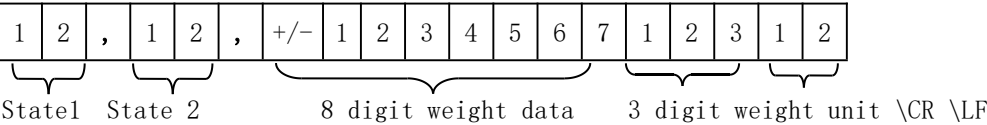
	☆REPEAT: Weighing state, first empty the scales, then short press this key and repeat the total.	Entering recurrence, the total cumulative sum and total accumulated weight in turn will be reappeared in turn.
	G. W. /N. W. : Weighing state, Long press this key, G. W. /N. W. status switching	
	PRINT: Weighing state, short press this key, serial port will output protocol data.	When the protocol mode is set to KEY, press the print key to output protocol data. Protocol mode settings refer to menu settings F6.
	TARE: Weighing state, short press this key, tare operation for current weight.	The tare range is full scale.
	☆Accumulative clearance: Redisplay state, short press this key, Clear the current accumulated count and weight and return to weighing state.	
	ON: Short press this key, turn on indicator	When the indicator starts self-checking, long press the button and enter the calibration.
	Zero: Weighing state, short press this key, clearing the current weight	The cleared range is 3% full scale.
	OFF: Editing long press this key, the current edit number can be cleared	For example, the current edit value is 123456, when long press the clear key, the edit value will be changed to 000000.
	OFF: Under any state, long press this key, turn off the indicator.	

6. Protocol specification

This indicator has 25 protocols, combined with menu F9 function, to be used for docking different kinds of guns.

Some of the agreements are as follows:

6-1, Protocol 1 format: fixed 19 ASCII characters.



State 1						State 2					
OL - Overload											
ST - Stable						NT - Net weight					
US - Unstable						GS - Gross weight					

For example, the net weight of +0.876 kg is as follows :

S	T	,	N	T	,	+	0	0	0	.	8	7	6		k	g	\CR	\LF
---	---	---	---	---	---	---	---	---	---	---	---	---	---	--	---	---	-----	-----

6-2, protocol 18 format. : No state information, no fixed data for weight data, no weight unit.

For example:

-0.001772\CR\LF \CR and \LF are control characters
-18\CR\LF
0.117\CR\LF

6-3, Protocol 11 format: Weight data are 7, not enough to fill in 0, The decimal point occupies 1 place. inverted
=510000-=3626100=2.3000-=2.26430

6-4, Protocol 4 format: Weight data are 6, not enough to fill in 0, The decimal point occupies 1 place. Inverted, press space key.
=31000- =442710 =8.200- =0.5064

6-5, Protoco23

Newland/Urovo special protocol for barcode gun

6-6, Protocol 22 format:

No state information, unfixed number of weight data, No weight unit, no decimal places, for example:
weight: 12.350 hour, Upload format is
31 32 33 35 30

Note: The agreement can also be customized according to customer needs.

7. Menu settings (with *-Default value, with☆only exists in multi- function indicator)



Weighing state, press meanwhile , enter menu settings

Press←key, return to the previous menu item

Press→key, go to the next menu item

Press↑key, Edit or select the current menu item.

Press↵key, options for entering this menu item, after the menu item is selected, press the key again to save the current settings and return to the superior menu.

Press CLR key, to cancel edit or return to weighing status.

Menu item	Set function description	Remark
F1 AD	Displays current ad values and battery voltage values.	
F2 SLP	Dormancy setting 0: Not dormant, 1, 5, 10, 15, 30 10, 50, 100, *150, 300 seconds later, enter dormancy.	
F3 BL	Backlight setting (LCD) 0: turn off the backlight. 1: no weight change after 6 seconds automatically turn off the backlight. * 2: backlight is always bright.	When you choose to turn off the backlight automatically, place heavy objects, stabilize 6 seconds, turn off the backlight. When the weight is removed and weighed back to zero, the system will turn off the backlight immediately.
F4 AZ	Automatic zero tracking 0: Non-automatic zero tracking 1~9: Automatic zero tracking 1d~9d * Default value: automatic zero 2d	D represents a single graduation value.

F5 Filt	Filter setting * 0: Normal filtering (fast) 1: Medium filtering (medium speed) 2: Depth filtering (slow)	
F6 232	232- xx, Alternative XX for communication protocol selection 0: No agreement 1~23: Agreement1~23 * Default value: Protocol 10	When choosing protocol 1~6, the following 2 steps are included: 1, Serial baud rate Choose : 1200~38400 2, Sending mode selection: STCO: Continuous transmission in stable condition. CO: Continuous transmission ST: When it is stable, it will be sent once (after the weight is returned to zero). ACK: Answer mode KEY: Press print key to send
☆F7 HL	Calibration setting includes 3 steps: 1, HI value setting xxx.xxx 2, LO value setting xxx.xxx 3, Calibration setting valueo ABC A: Is buzzer stable? * 0: Buzzer is not stable. 1: A stable buzzer is allowed to call the buzzer. B: Is the indicator and RELAY output stable? * 0: Indicator and RELAY output are not stable. 1: Indicator and RELAY output after stabilization. C: Buzzer call settings * 0: Buzzer does not sing. 1: The buzzer calls in the middle area (OK) 2: The buzzer calls at the upper and lower limits (HI, LO).	The initial value of HI value and LO value is 000.000 The initial value of calibration setting ABC is 000 The decimal places of HI values and LO values are based on the decimal digits set by the timingWhen the weight value is less than or equal to 9D or LO, the calibration value is 0

☆F8 Hold	Dynamic weighing setting hold x, The option x is *0: static weighing 1: Dynamic weighing When selecting hold 1, the following 2 steps are included: 1, Dynamic range setting xxx.xxx 2, Setting of stable time value time xx	The initial default value of the dynamic range value is 010.000 The decimal places are based on the decimal digits set by the timing, and the units selected by the standard timing are the norm. Stabilization time,* initial default value is 05, unit: sec.
F9 DLY	Protocol send delay settings dly xx, Edit delay parameter xx * 0: No delay 1~99: Delay parameter setting	The initial delay is 00 The greater the parameter setting, the slower the protocol sends.
F10 PW	Password setting The following 2 steps are included.: 1, Enter the original password o xxxx 2, Enter a new password n xxxx	* The initial value of the password is 0000
F11 out	Minimum output weight for protocol output * 0, No minimum transmission weight limit 50, The minimum transmitted weight is 50 100, The minimum transmitted weight is 100 200 The minimum transmitted weight is 200	The minimum sending weight should be determined according to the number of decimal places. For example, calibration of decimal 0, current unit kg F11 selects 100, and the minimum sending weight is 1.00kg.
F12 pwz	Setting of reset range 10 : Turn off zero range is + 10% range 20 : Turn off zero range is + 20% range 30 : Turn off zero range is + 30% range 40 : Turn off zero range is + 40% range * 50 : Turn off zero range is + 50% range	

8. Calibration operation (with *-Default value, with☆only exists in multi- function indicator)



Press  turn on, when self-checking, long press , it will enter calibration settings,
Press←, →Key selection edit bit,
Press↑key Modify the value of the current edit bit
Press←┐ key, Save the current settings and proceed to the next step.
Press CLR key Return to the previous step / return to weighing status.

Step	Description of calibration steps	instruction
1	Display of ad value constantly	Display the original ad value of the sensor without filtering constantly.
2	☆Edit local GEO value x.xxxxx	The default value of the G value is 9.79429 (China). It can be reset according to the GEO value of the instrument location. The correct input range of GEO is: 9.77039 ~ 9.83239, Otherwise, we can not enter the next step.
3	Password verification P xxxx	Enter the correct password before it can be calibrated.。 Otherwise, you can't enter the next step (the password is set by menu F10).
4	Calibration specification code: A B C D E F A : Metric unit 0 : Not set * 1 : kg 2 : g ☆3 : t	A metric units, B British units can not be set at 0. The initial value of the calibration code is: 100000 The initial value is expressed.: The initial unit is:kg The initial calibration unit is:kg

	B : British unit * 0 : No set ☆1 : lb ☆2 : oz C : Other units * 0 : No set ☆1 : kg for Taiwan(LCD version does not have this option). ☆2 : Kg for Hongkong (LCD version does not have this option). D : PCS unit (count) * 0 : Unit cycle does not join PCS ☆1 : Unit cycle does not join PCS E : Capacity setting * 0 : single range 1 : Dual range F : Correction unit setting * 0 : Kg is the calibration unit. ☆1 : lb is the calibration unit.	PCS unit: The unit is counting. When the D bit of the calibration code is set to 1, the unit can be switched by pressing the unit key. When switch to PCS unit, scale automatically enters count state.
5	Decimal digit setting The setting range is: d 0 ~ 0.00000	* The default value is: d0.00
6	Division setting div xx The XX option is: * 1, 2, 5, 10, 20, 50	When the calibration specification is set to double range timing, The optional range of div XX is 1, 2, 5, 10, 20. Note: when entering the second range, the graduation value will automatically switch to 2, 5, 10, 20, 50.

7	Range setting xxx. xxx	The decimal digits are based on the decimal digits set by the timing.
8	Zero point collection ZERO	At this point, you must clear the scales and press the key ←↵, otherwise, it will lead to no calibration or weighing. If you press the key ←↵, if the weighing is unstable, you will report it wrong.
9	Weight and weight collection "-LOAD-" prompts one second., Editor placing weight value: xxx. xxx	The decimal digits are based on the decimal digits set by the timing.。 If you press the key ←↵, if the weighing is unstable, you will report it wrong.
10	"-OK-" hints for 1 second. Calibration success	Automatic return weighing state

9. Quick calibration



Weighing state, press the 2 keys   at the same time, enter quick calibration settings

option	Remark
"-cALL-"	Collect zero point and ad value of loading weight.
"-ZERO-"	Collecting zeros only
"-SPAN-"	The ad value of loading weight is only collected.

10. False hints

Number	Error tips	Error explain
1	"NO CAL"	Not calibrated
2	"ZERO E"	Turn on clear zero wrong
3	"~~~~~"	Overload (weight>full range+9d)

4	"uuuuuu"	Under load
5	"Too LW"	The current loading weight is too small in calibration.
6	"-----"	The current weighing is not stable enough to correct.
7	"-Full-"	Cumulative number of >99 pen or cumulative amount beyond the screen can be displayed.
8	"-Err-"	Illegal operation at present
9	"bat low"	Current electricity is low, charging as soon as possible.

11. Considerations:

1. Place the product in a stable and flat place. Do not use it on a shaking or shaking table. Use four adjusting feet of the scale to keep the platform stable and adjust the horizontal bubbles to the horizontal position.

2. Please use independent power supply to avoid other electrical interference

3. When you turn on the power, please do not put anything on the scale.

4. Before use, please warm up for 3-5 minutes.

5. Avoid placing the product in places with excessive temperature changes or intense air flow, such as air-conditioner outlets.

6. When using, the center of gravity of the articles should be at the center of the scale, and the scale should not exceed the scope of the scale to ensure accuracy.