XK3190-DS8

Weighing Indicator

USER MANUAL

(V1.10 Version)

Dear Users:

Please read the instruction manual carefully before using this indicator.

Chapter 1 Technical Parameter

1、Model ： XK3190-DS8

2、Interface of digital load cell(s)：

Interface mode： RS485

Transmission distance： ≤1000meter

Transmission speed： 9600 baud

Signal power source： DC10V，≤400mA

Interface capability： 1~16 digital load cell(s)

Compatible protocol： YAOHUA digital load cell communication protocol

Support manufacturers： Zhonghang Electronic Measuring Indicators Co., Ltd., ZEMIC Guangzhou Electrical Measuring Indicators Factory, Ningbo BENUI Electric Co., Ltd. BENUI and Ningbo Board Electric Co., Ltd. etc. manufacturers support the digital sensor (load cell) of protocol of the Company. Please be advised that whether they can support YAOHUA protocol when you buy the matching digital load cell.

3、Display： 7-digit super brightness white light LED display, 10 status indicating lights

4、Keyboard： Number keys 0 ~ 9

Function keys 24（10composite keys with number keys）

5、Clock： For displaying year, month, date, hour, minute, second, leap year/month automatically, without the influence from power break down.

6、Electronic lead sealing： It can inspect and record the opening status of indicator。

7、Scoreboard display interface

Transmission mode Serial output，20mA electric current loop signal

Transmission baud rate 600 Transmission distance ≤ 1200meters

8、Serial communication interface

Transmission mode serial port 0：RS232/RS485

Serial port 1：RS232

Baud rate 600/1200/2400/4800/9600/19200/38400 optional

Transmission distance RS232 ≤30meter ； RS485 ≤1200meters

9、Printing interface

Standard parallel output interface： DS-300、LQ300K$^+$、KX-P1121、KX-P1131etc. wide line printers.

POS58、T58D etc. thermal printers；

TpuP16 mini-printer、LX300+ wide line printer（it just supports English print）.

Panel printer： ①.dot-matrix（96 dot each line），adoptM-150Ⅱ head。

②.print paper：common white paper，wide 44.5±0.5mm，thickness 0.07mm。

10、Data storage it can stores 1023 sets vehicle numbers and tare weights，255sets article numbers and 4096 sets weighing records.

11、Application environment

AC power supply AC 220V（-15%～+10%）50Hz（±2%）

DC power supply outside rechargeable12V/7Ah battery

Operating temperature －10℃ ～40℃;Storage temperature -25℃ ～55℃

Relative humidity ≤85%RH

Preheat time ≤30 minutes

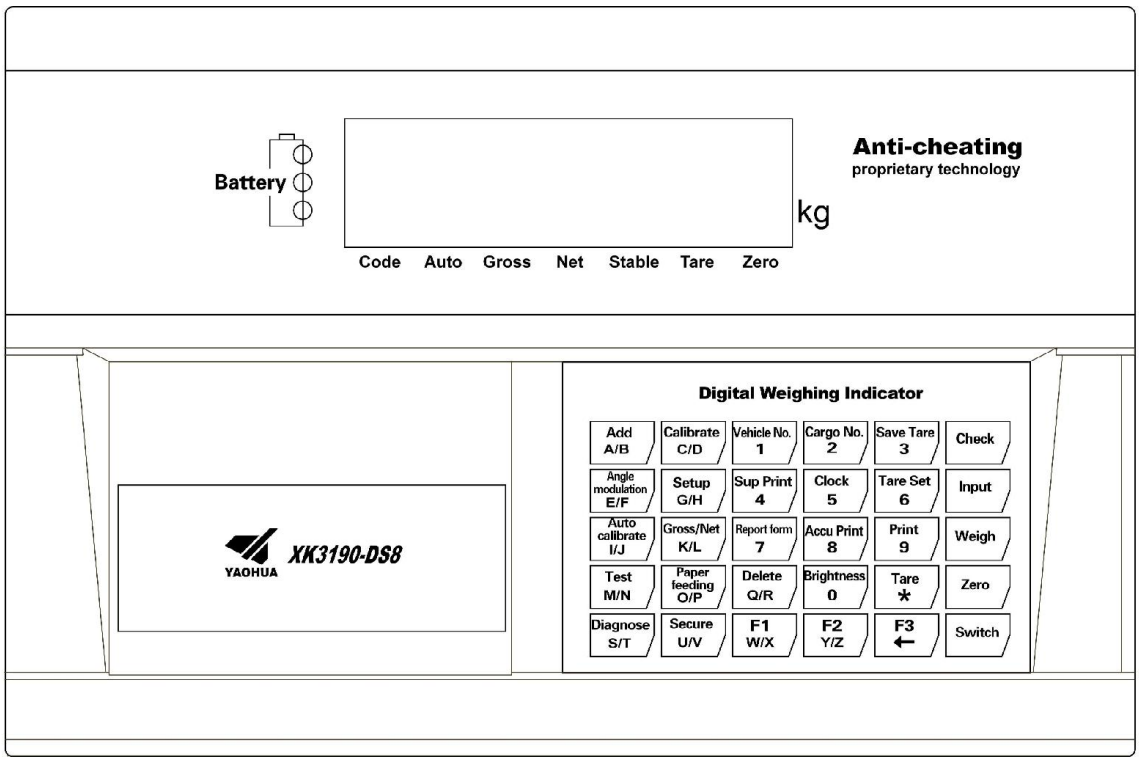
Fuse 0.5A

12、Shape（mm） 320×217×183

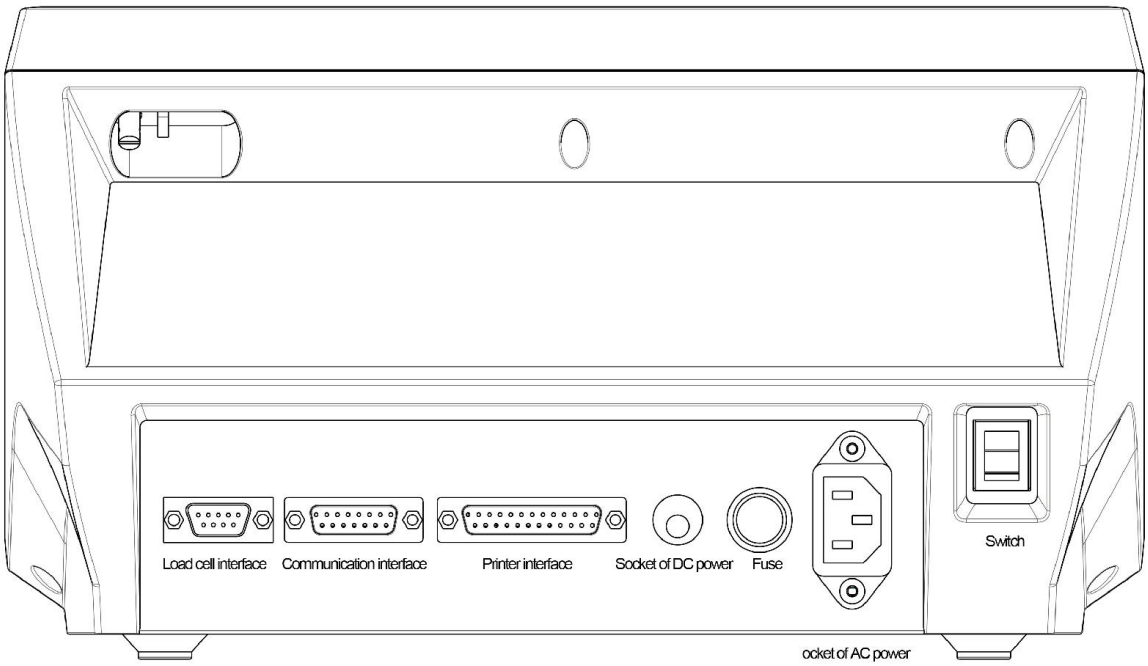
13、Self-weight about 2.5kg

Chapter 2 Installation

1) Front and back functional schematic diagrams of indicator**:**



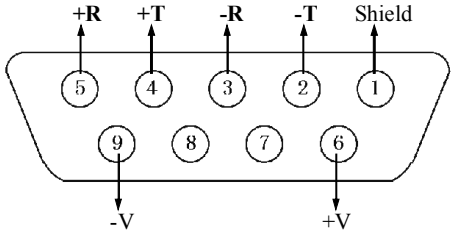
(Figure 2－1) Front functional schematic diagrams



(Figure 2－2) Back functional schematic diagrams

2) Connection between load cell and indicator：

XK3190-DS8 is a digital weighing indicator. Therefore, it can only be connected with **digital load cell (indicator). For easy indication, the product is called as load cell (indicator) for short.**



(Figure 2-3) Digital load cell interface

I. The load cell is equipped with 9 core connector for connection. Meanings of all pins are marked in Figure 2-3.

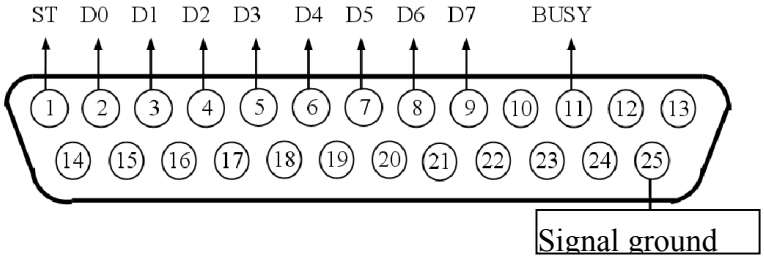
II、2. Load cell interface of XK3190-DS3 adopts the interface mode of four-wire RS485 mode.

Indicator Interface Pins		Sensor (load cell) Interface Pins …… Color of Corresponding Wire			
Pin No.	Definition	Connection Method	Zhonghang Electronic Measuring Indicators Co., Ltd.	Guangzhou Electrical Measuring Indicators Factory	Ningbo Benui Electric Co., Ltd. /Ningbo Board Electric Co., Ltd.
2	Signal transmission negative (－T)	Connect Signal reception negative (－R)	Brown	White	White
4	Signal transmission positive (＋T)	Connect Signal reception positive (＋R)	Yellow	Green	Green
3	Signal reception negative (－R)	Signal transmission negative (－T)	White	Yellow	Light yellow or brown
5	Signal reception positive (＋R)	Signal transmission positive (＋T)	Blue	Blue	Blue
6	Positive pole of power source (＋ V)	Connect positive pole of power source (＋V)	Red	Red	Red
9	Negative pole of power source (－V)	Connect negative pole of power source (－V)	Black	Black	Black
1	Shield	Connect the shielded wire	——	——	——

Table 2-1-1 Digital Load Cell Connection

3). Connection between Printer and Indicator

I. The printer is equipped with standard parallel output interface and 25-core RS232 connector assembly. See definition of its pins in Figure 2-4.



(Figure 2-4) Printer interface signal

II、Printing directions:

▲! The printer may be used only after completing relevant settings. All relevant parameters

of the printer must be set before using it.

▲! Connection between printing interface output pin of the indicator and the printer must be accurate without fault. Only dedicated connecting wire for printing may be used. (Indicator must be connected with printer by appropriative cable accurately.) If wrong connection occurs, output interface of the indicator or that of the printer and even the indicator and printer may be damaged.

▲! When using printer, connect all lines accurately at first, then switch on the power of indicator and at last the power of printer. After use, please turn off the printer first and then turn off the power of indicator and disconnect all the cables. Any reversed operation may damage the indicator and printer. Please be careful.

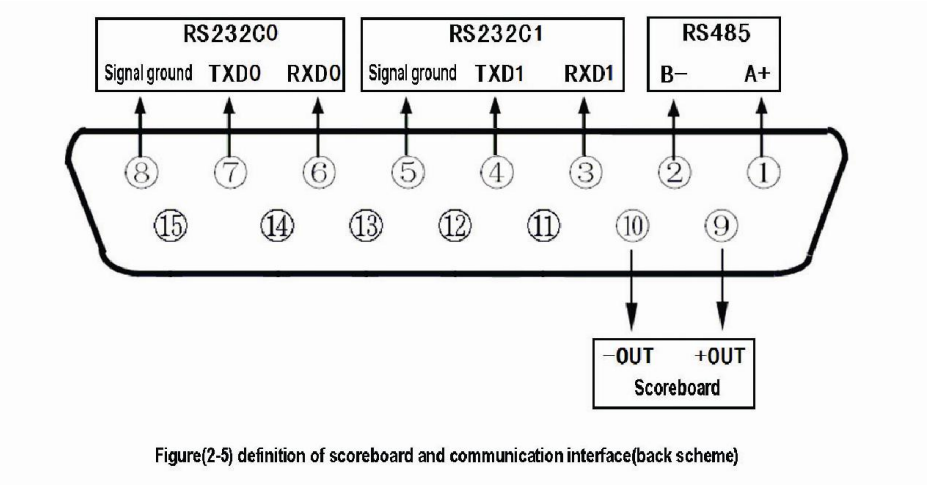
▲! Printers are of various models and parameters, they may be not compatible with our indicator. Please choose printers as recommended.

▲! The printer must be equipped with reliable ground. Otherwise, this may disturb regular performance of the indicator or even damage the indicator and printer.

4) . Connection and Using between Scoreboard and Indicator

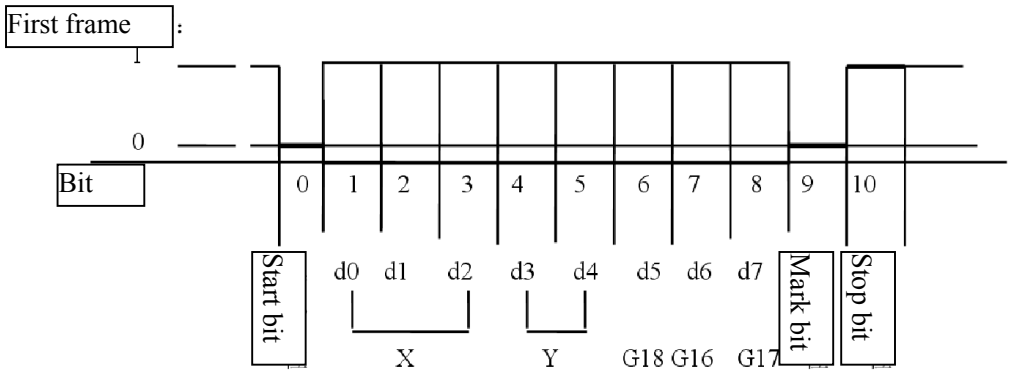
▲ ! Output pin of the scoreboard shall be connected accurately without fault. Error connection may damage the output interface of indicator or that of scoreboard or even damage the indicator and scoreboard seriously. The connection requires the use of dedicated connection wires.

I. Interface of the scoreboard is 15-core RS232 connector (use in common with the serial communication interface《sharing with serial communication interface》). See Pins 9 and 10 for definition of its pins in Figure (2-5).

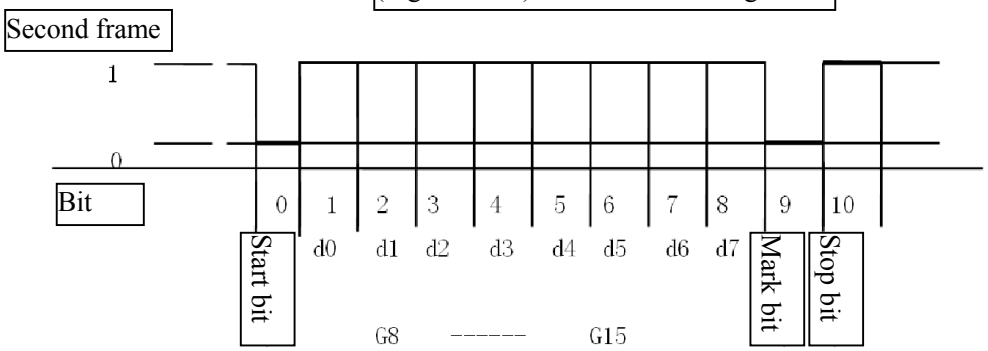


Figure(2-5) definition of scoreboard and communication interface(back scheme)

2. Signal of scoreboard is current loop or RS232 signal and it is output serially in binary code with baud rate of 600. Each frame has 11 bits, i.e. one start bit (0), 8 data bits (lower bits in front), one mark bit and one stop bit (1).
3. 3. The indicator sends out a group of data every 100ms with 3 frames of data contained. See the meaning in Figure (2-6).



(Figure 2-6.1) First frame oscillogram



(Figure 2-6.2) Second frame oscillogram

First frame data: the mark bit is 0;

X : D0、D1、D2 – is the position of decimal point (0～4)

Y : D3 — is the symbol of weight (1－negative, 0－positive)

D4 — standby

G 18~G16: data of weight (net weight)

Second frame data: the mark bit is 0;

G 15~G8: data of weight (net weight)

Third frame data: the mark bit is 1;

G 7~G0: data of weight (net weight)

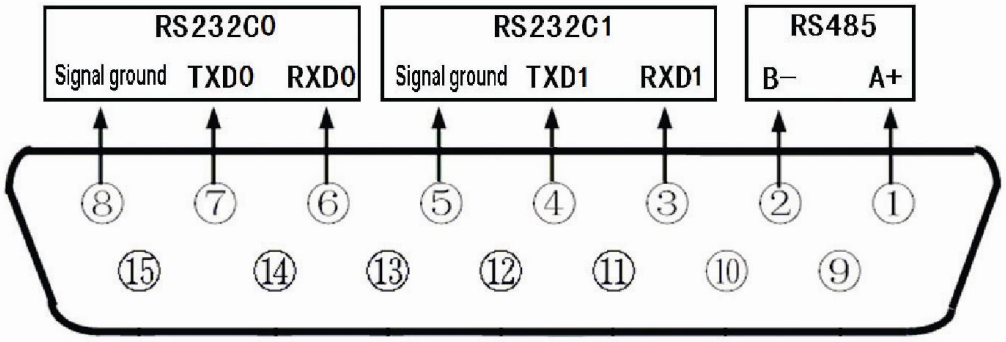
G0~G18: constitute the 19 bits binary codes of weight from low to high (net weight)

5). Connection and Using between Serial Communication Interface and the Indicator

▲! Output lead of the communication interface and computer shall be connected accurately. Error connection may damage the output interface of indicator, communication input interface of computer or even damage the indicator, computer and corresponding external equipment.

▲! Operation related to computer communication requires necessary computer technology and capability of programming. Therefore, it shall be participated or guided by professional technician. Non-professionals are not allowed to connect the indicator.

The indicator XK3190-DS8 is equipped with RS232 and RS485 serial communication interface for communicating with computer, detailed definition of pins as follows:



Figure(2-5-2) definition of communication interface(back scheme)

I. Communication interface is equipped with 15 core D model connector assembly (shared with scoreboard), definition of pins as figure 2-5-2. RS232C0 use 6、7、8 pin, RS485 use 1、2、8 pin as serial port 0; RS232C1 use 3、4、5pins as serial port 1, RS232C0 and RS485 can be used at the same time when using continuous mode, either RS232C0 or RS485 can be used when using command mod.

II. All data are of ASCII code. Every group of data is constitute of 10 bits of data, the first bit is start bit, the 10th bit is stop bit and the mid eight bits are data bits. Communication methods are divided into:

(1) Continuous transmit mode:

Data being sent is the current weight (gross weight or net weight) displayed on indicator. Data of each frame is comprised of 12 groups of data. See the forms as follows,

Byte X	Content and Note	
1	02(XON)	Start
2	+ or -	Sign bit
3	Weighing data	Higher bit
:	Weighing data	:
:	Weighing data	:
8	Weighing data	Lower bit
9	Decimal points	From right to left (0~4)
10	Xor checking	Four higher bits
11	Xor checking	Four lower bit
12	03(X0FF)	End

Xor =2 ⊕ 3 ⊕ ……8 ⊕ 9

(2). Command mode:

Corresponding data is sent by the indicator by command from host computer. With a command sent from the host computer, the indicator outputs a frame of corresponding data.

a. Commands sent by host computer are as follows,

X byte	Content and Note	
1	02(XON)	Start
2	A~Z	Serial No. of Address
3	A~D	Command A: Hand shaking
		Command B: Reading gross weight
		Command C: Reading tare

X byte	Content and Note
	Command D: Reading net weight
4	Xor checking Four higher bits
5	Xor checking Four lower bits
6	03(X0FF) End

Xor=2 ⊕ 3

Command list sent by host computer (set address of the indicator as 01):

Category	Content of Command	Host computer sends out commands (hexadecimal)
Command A	Hand shaking	02 41 41 30 30 03
Command B	Reading gross weight	02 41 42 30 33 03
Command C	Reading tare	02 41 43 30 32 03
Command D	Reading net weight	02 41 44 30 35 03

b. Contents output by the indicator:

X byte	Content and Note
1	02(XON) Start
2	A~Z No. of Address
3	A~E Command A: Hand shaking
	Command B: Input the gross weight
	Command C: Input the tare
	Command D: Input the net weight
4	Press command to output corresponding data
:	Press command to output corresponding data
n-1	Press command to output corresponding data
n	Press command to output corresponding data
n+1	Xor checking Four higher bits
n+2	Xor checking Four lower bits
n+3	03(X0FF) End

Xor=2 ⊕ 3 ⊕ …… (n-1) ⊕ n

Contents of 4~n output by the indicator are as follows,

Command A	No data	Each frame is composed of six groups of data
Command B	Gross weight, form:	Each frame is composed of 14 groups of data
	a: Symbol (+ or -)	
	b: Gross weight value (6 bits）	
	: (From higher to lower)	
	g	
	h: Decimal point from right to left (0～4)	
Command C	Tare, form:	Each frame is composed of 14 groups of data
	a: Symbol (+ or -)	

	b: Tare value (6 bits）	
	: (From higher to lower)	
	g	
	h: Decimal point from right to left (0～4)	
Command D	Net weight, form:	Each frame is composed of 14 groups of data
	a: Symbol (+ or -)	
	b: Net weight value (6 bits)	
	: (From higher to lower)	
	g	
	h: Decimal point from right to left (0～4)	

Note 1: Xor checking four higher and lower bits' confirmation: Xor value and four higher and lower bits are smaller than or equal to 9 will be added with 30h and turned to be ASCII code number for sending, for example, four higher bits of Xor checking is 6, and this plus 36h is 6 in ASCII for sending out; Xor, four higher bits and four lower bits which are larger than 9 will be added with 37h and turn to be ASCII code letter for sending, for example, Xor checking four higher bit is B. With 37h added, it is 42h, i.e. letter B in ASCII code for sending out.

III. Indicator communication parameter setting:

(1). Communication parameters

Communication parameters are made up of three groups of parameters, i.e. communication address, baud rate and communication method. There are two sets of communication parameters, respectively serial port 0 and serial port 1.

(2) Steps for setting communication parameters:

Step	Operation	Displayed content	Note
1	Press [Parameter setting]	In the weighing and displaying state	
2	Press [9][8] Press [Input]	[P 00] [P 98]	setting password “98” or “99” 98—setting communication parameter of serial port 0 99-- setting communication parameter of serial port 1 E.g.:98
3	Press [1] Press [Input]	[ADR0 **] [ADR0 01]	ADR0 is serial port 0，ADR1 is serial port 1 Communication address (01～26) e.g. ： 1
4	Press [1] Press [Input]	[BT0 *] [BT0 1]	BT0 is serial port 0, BT1 is serial port 1. Baud rates of serial communication (0~6) means following baud rates respectively: 600、1200、2400、4800、9600、19200、38400 baud rates. E.g.:1
5	Press [0] Press [Input]	[TF0 *] [TF0 0]	TF0 is serial port 0，TF1 is serial port 1 Ways of serial communication: 0--Continuous transmit mode(gross weight) 1--command answering mode 2--Old D2+ continuous communication format(net weight), 8 bits every frame 3--New D2+ continuous communication format(net weight), 9 bits every frame 4--Old D2+ continuous communication format(gross weight), 8 bits every frame 5--New D2+ continuous communication format(gross weight), 9 bits every frame 6--Special continuous communication format1 7--Special continuous communication format2 （See Note 2） E.g. 0
6		Weighing state	Communication parameter setting is completed

Note 2: In the old D2+ continuous communication format, data is output in form of ASCⅡcode with 8 bits in every frame (including the decimal point). Lower bits of the data are sent at first and then the higher ones. The frames are divided by “=”. Data being sent is the net weight (i.e. the value displayed on indicator), for example, when the value 70.15 is displayed, the indicator continuously sends out 51.0700＝51.0700＝51.0700…….

In the new D2+ (300 tons) continuous communication format, data is output in form of ASCⅡcode with 9 bits in every frame (including the decimal point). Lower bits of the data are sent at first and then the higher ones. The frames are divided by “=”. Data being sent is the net weight (i.e. the value displayed on indicator), for example, when the value 70.15 is displayed, the indicator continuously sends out 51.07000＝51.07000＝51.07000…...

Chapter 3 Operation Method

1) Startup and Auto Startup Zero Setting

I. Connect the AC power source or external battery and turn on the power to conduct stroke self-check of "9999999"~ "0000000" and then enter into weighing state automatically after this.

II. During the process of stroke self-check, you may press any key to stop the self-check.

III. After starting up, if weight on the scale is deviated from null point but still within the setting range, the indicator will conduct zero setting automatically. See detailed parameter selection and setting methods of startup zero setting in relevant chapter of calibration.

During normal operation, please turn the calibration switch to non-calibration position.

2) Manual Zero Setting (Semi-auto Zero Setting)

I. Press [Zero] to make the indicator setting return to zero. At this moment, null position identifier lights up.

II. When the displayed value is deviated from null point but still within range of zero setting, the key [Zero] will work; otherwise, it will not work. See detailed parameter selection and setting methods of zero setting in relevant chapter of calibration.

III. Zero setting may only be conducted when the stable identifier is on.

3) Tare operation

I. There are three tare methods:

①.Normal tare:

Under weighing displaying state, when weight is positive and stable, press [Tare] to deduct the value displayed as tare weight. At this moment, the instrument displays the net weight 0 and the tare light is on.

②Preset tare:

Under weighing displaying state, press [Tare] to see [P ***.**] displayed on the indicator. This is the original tare weight. For setting a new tare weight, please input the value with number keys and press [Input] for confirmation.

③.Call tare weight by vehicle no.:

Under weighing displaying state, press [Vehicle No.] to see [o *****] displayed on the indicator. Please input the correct vehicle no. with number keys and press [Tare]. At this moment, the indicator may find a tare weight corresponding to the vehicle no. from its memory for use.

II. Under weighing displaying state, continuous tare operation may be conducted. When tare weight is 0, the tare light is off; when the indicator meets the requirement of zero setting, press [Zero] to set the tare weight to zero. At this moment, the tare light is off.

4) Set Date and Time

Under weighing state, press [Clock] to see current date [D **.**.**] on the indicator. Enter the correct date and press [Input] for confirmation. The indicator then displays current time [T **.**.**]and runs automatically. At this moment, input the correct time and press [Input] for confirmation to complete date and time setting.

5) Use of Battery

I. When using battery for power supply, it displays "Battery capacity" on the left side of display window for indicating the remaining electricity; when three indicating lights are all on, there is sufficient electricity; when the lower two identifiers are on, there is still comparatively sufficient electricity and when only the bottom one is on, it indicates the electricity is low. When the electricity is not sufficient, please charge the battery. Further use may decrease the battery capacity till the instrument automatically power off for protecting the battery.

II. After connecting the battery to the indicator and switching on the AC power, the indicator may charge the battery (full charge needs about 20 hours). Whether the power switch is turned on or off, the battery will be charged. However, it is recommended to charge.

III. The first time the battery is used, make sure it is fully charged.

IV. On the connecting line of battery, the plug marked with red color is the positive pole (+) and it shall be connected with the positive pole of battery and the one marked with black color is the negative pole (-) and it shall be connected with the negative pole of battery.

V. For protecting the indicator and battery, both wrong connection of the battery's positive and negative poles or short-circuit may cause circuit broken of DC resettable fuse to protect the

indicator and battery. Then, please connect the battery properly and restart the indicator for regular service.

VI. As batteries are consumables, they are not in warranty scope.

6) Save Data Record

I. Vehicle no. of the indicator is 5-7-bit number and article no. is 3-bit number. 1023 vehicle numbers and 255 article numbers can be saved at most.

II. The record of a group of data will be printed out at after a complete set of data is saved (relevant printing setting shall be valid).

III. Three methods of data storage:

a. Save weight for empty vehicle at first and then for full vehicle or save weight for full vehicle at first and then for empty vehicle, i.e. a complete record is composed of two times' data saving.

b. For weighing full vehicle with known tare weight, one time of data saving may form a complete record.

c. For weighing just article, one time of data saving may form a complete record.

For recognizing and classifying three above situations, we make following agreement for XK3190-DS8:

▲ The vehicle no. shall be a number within the range of 00001～99999, i.e. 00000 cannot be kept as a real vehicle number. When being set as 00000, it means that the object being weighed is not a vehicle with article but only a article.

▲ When [Tare] light is on, the tare is known and therefore one time data saving may constitute a complete record.

▲ When vehicle no. is an any 5-7-bit number other than 00000, the highest bit of parameter Y in the printing parameters is set as 0 and the tare light of indicator is not on, two times' saving may constitute a complete record.

IV. Saving Method:

(Table 3-1)

Step	Operation	Display	Note
1	Press [Print]	Under weighing displaying state	
2	Input the vehicle no. by pressing number keys Press [Input]	[o *****] [o 03217]	Input the vehicle no. E.g.: 03217
3	Input the article no. Press [Input]	[HN **] [HN 35]	Input the article no. E.g.: 35
4	Press [10] Press [Input]	[BFL **] [BFL 10]	Input the percentage of discount rate E.g.: 10
			Complete saving

Data saving of indicator may adopt the way of vehicle number or not. See detailed information in the chapter printing settings. If setting as not using vehicle number, there will be no operations, steps or printing contents about vehicle number. Similarly, data saving of indicator may adopt the way of article number or not. See details in the chapter about printing settings.

▲ ! When data is unstable or when gross weight ≤0 or net weight≤0, data cannot be saved.

V. About automatic save and printing:

(1) See setting about automatic save and printing in the chapter about printing settings.

(2) Automatic save and printing have no operation method of two times' saving.

(3) The vehicle number and article number saved during the process of automatic saving are the vehicle number and article number set before saving.

(4) Tare weight during the process of automatic saving has following three detailed occasions,

①When tare light is on, the current tare weight will be recorded in the group of data.

②When tare light isn't bright, the indicator will automatically search for tare weight of the vehicle from its memory and save this tare weight in current group of record.

③When tare light isn't bright and there is no tare weight of the vehicle saved in memory, 0 will be judged as the tare weight and saved in the group of record.

VI. When vehicle numbers are more than 1023, [Err 10] will be displayed on the indicator. A vehicle number or all

contents recorded may be deleted in the way introduced in Chapter 11.

7) Printing operation

I. Printing setting (Table 3-2)

Step	Operation	Display	Note
1	Press [Set] Press [9] [7] Press [Input]	[P 00] [P 97]	Input the password 97
2	Press [1] Press [Input]	[AUTO *] [AUTO 1]	Select auto/manual printing 0-Manual; 1-Auto; 2-Auto(keep power off) E.g.: Select 1 (Automatic printing)
3	Press [4] Press [Input]	Auto identifier lights up [TYPE *] [TYPE 4]	Select type of printer 0--just for saving, not printing 1--outside micro-printer (English) 2--Panasonic KX-P1131 3--Panasonic KX-P1121 4--EPSON LQ-1600K, LQ300K＋, D300 5--With built in panel micro-printer 6--External thermal micro-printer POS58 and T58D etc. 7—EPSON LX300(English) E.g.: Select 3
4	Press [5] [0] Press [Input]	[HL **] [HL 50]	Print only when: 00-Back to zero 25-Back to <25% F.S. 50- Back to <50% F.S. 75- Back to <75% F.S. 99- Even it's F.S. E.g.: 50
5	Press [3] Press [Input]	[ARR *] [ARR 3]	Select print form Arr=0: record format 1--1-page linked format 2-- 2-page linked format 3--3-page linked format E.g.: 3
6	Press [1] [0] [0] Press [Input]	[L *****] [L001.00]	Set min. weight for auto print function It must be lager than 10d E.g.: 1.00
7	Press [0] [5] Press [Input]	[B **] [B 05]	Rows for printer(0~30) E.g.: 05
8	Press [1] Press [Input]	[ODE *] [ODE 0]	Select filled-in print: 0：Not select 1：Select 2：Select 1-page linked format 3：Select customized 3-page format1 4：Select customized 3-page format2 E.g.: 0
9	Press [1] Press [Input]	[DCT *] [DCT 0]	Select discount rate at filled-in print form: 0-Not use discount rate 1-Use discount rate E.g.: 0
10	Press [0] [0] [0][1][1] Press [Input]	[Y *****] [Y 00011]	Parameter Y has 5 digits, they are respectively 1st~5th digit from left to right. Their functions are as follows, 1st digit:0 twice weighing printing mode; 1 once weighing printing mode; 2 Current weight printing mode; 2nd digit: Reservation 3rd digit: 0 Unit of weight is kilogram 1 Unit of weight is ton; 4th digit: 0 Do not use article number in

Step	Operation	Display	Note
			data record 1 Use article number in data record; 5th digit: 0 Do not use vehicle number in data record 1 5-digits vehicle number ; 2 5-digits digital-alphabet mixture vehicle number 3 6-digits vehicle number 4 6-digits digital-alphabet mixture vehicle number 5 7-digits vehicle number 6 7-digits digital-alphabet mixture vehicle number 7 7-digits full vehicle number with Chinese Please reference the next segment of Vehicle input mode E.g.: Select 00011
11	Press [8] Press [Input]	[TELN **] [TELN 08]	Set digits of Tel number: (0~12) 0：not print Tel number，skip the following two steps
12	Press [1234] Press [Input]	[H **] [H 12]	Input high-digits of Tel number
13	Press [5678] Press [Input]	[L ******] [L 345678]	Input low-digits of Tel number
		End of operation	

Note: (1) When using an external printer, types of printers are 1, 2, 3, 4 and 6 according to different style of printers.

(2) Steps 8 and 9 are only applicable to printers of type 2、3 and 4 Instead of others.

(3)When types of printers are1、5、6，they can print Tel number, other printers cannot print Tel number.

(4)Select 2 as the first digit of Y parameter，save tare weight as 0，not call tare weight of vehicle number.

★ **Discount rate will be selected only when the print format is filled-in.**

★ See detailed printing forms in appendix.

★ Special format carbon-free duplicating and typing paper can be used for Filled type printing for quick print in triplicate. Special format normal typing paper may also be used for quick print in one copy.

★ For commanding filled type printing of special format, please contact the distributor.

II. Data saving and printing of the indicator are conducted at the same time. Press [Print], you may print the weighing record while a complete group of record is saved (setting of printing have to be valid).

III. For printing failure of weighing record caused by some reasons (for example, printer fault), current record may be printed by press [Supplement Print] after relevant fault is removed.

IV. After weighing, you may press [Accumulated Printing] to print the accumulated recording amount of this group.

V. When twice weighing and printing mode is set in the indicator, with the twice saving method of empty vehicle at first and then heavy one or heavy vehicle at first and then empty one, as the record is still not complete during the first time of saving, [LoAd] will be

displayed on the indicator for about 1.5 seconds for reminding the operator. However, printing will not be conducted now. At this moment, you may press [Suppl Printing] to print the incomplete record out.

Results of printing will always be: ①Serial no.: blank;
②Gross W, net W: 0
③Tare W: Current display

(See information about setting of twice weighing and printing mode in contents about parameter Y in printing setting)

VI. When once weighing and printing mode is set in the indicator, data for each time of weighing will be saved and printed as a complete record. Under tare state, the indicator will regard current tare weight as the one to be recorded. If not, the indicator will call the corresponding memorized tare weight saved in indicator and regard the value as tare weight to be recorded (tare weight will be recorded as 0 if there is no memorized tare weight). See information about setting of once weighing and printing mode in contents about parameter Y in printing setting.

8) Select of vehicle no. and input alphabet

1、Model of vehicle no.： vehicle no can be chose from5-7digits number and mixture alphabet vehicle no., default as 5-digits number.

2、Type parameter: vehicle no. type parameter is the far right one of parameter Y for print setting，it can inputs 0~7。

3、The corresponding relationship between parameter and vehicle no.：

0：Do not use vehicle number

1：Use 5-digits vehicle number，cannot input alphabet

2：Use5-digits digital-alphabet mixture vehicle number

3：Use 6-digits vehicle number

4：Use 6-digits digital-alphabet mixture vehicle number

5: Use 7-digits vehicle number

6: Use 7-digits digital-alphabet mixture vehicle number

7: 7-digits full vehicle number with Chinese, the far left digit is the abbreviation code of province and city.

4、Display method：

When digits less than7，the far left displays ”o”，remind to input content as vehicle no.；
When digits as 7, before display vehicle no, indicator display “o----” for one second, then switch to display vehicle no. automatic.

5、Input method：

Number：Press Number key to input directly

Alphabet：Each alphabet button corresponding to two alphabets, single-click to input the prior alphabet, double-click to input the later alphabet.

If it need to change after input the alphabet，it can press[switch] to switch input the current alphabet.

Chinese：When select vehicle no. as 7, the far left one as the abbreviation code of province and city，input code, it can print Chinese directly when printing.

Abbreviation corresponding as follows ：

Abbreviation	Jin	Zang	Shan	Yue	Ji	Ji	Jin	Gang	Ao	Gan	Chuan
Code	1	2	3	5	6	7	8	9	A	B	C

Abbreviation	Dian	E	Gui	Gan	Hu	Hei	Jing	Liao	Lu	Meng	Ning
Code	D	E	F	G	H	I	J	K	L	M	N

Abbreviation	Min	Qian	Qing	Su	Qiong	Xin	Yu	Wan	Xiang	Yu	Zhe
Code	P	Q	R	S	T	U	V	W	X	Y	Z

For example：When vehicle type as 7，
input vehicle no "HA23456"，it can print vehicle no. as "Hu A23456"。
input vehicle no "3A88A88"，it can print vehicle no. as "Shan A88A88"。

9. Report Printing

1. Press [Report], input the date and press [Input] to print daily report on the basis of classified statistics (i.e. statistical form made according to time sequence, vehicle number and article number).
2. Press [Report] and [1] to print summary report 1 (i.e. statistical form made according to time sequence)
3. Press [Report] and [2] to print summary report 2 (i.e. statistical form made according to vehicle number)
4. Press [Report] and [3] to print summary report 3 (i.e. statistical form made according to article number)
5. Press [Report] and [4] to print summary report 4 (i.e. tare report made according to vehicle number)

10. Inquiry Record

All kinds of recorded contents in the indictor can be checked by using the key [Check] in different ways. See detailed operation ways as follows.

1. Check weighing record according to date(Table 4-4)

Step	Operation	Displayed c Content	Note
1	Press [Check] Press [Input]	Under weighing state [REAd 1]	Select the content and format to be checked REAd= 1-- Check all record of a day 2--Check all record of a vehicle number 3-- Check all record of a article number 4—Check vehicle number
2	Input the date Press [Input]	[D **.**.**] [D 08.08.25]	Select the date you want to check: E.g.: August 25 Each time of record of August 25th, 2008 will then be displayed in sequence.
3	Press [Input] Press [Input] Press [Input] Press [Input] Press [Input] Press [Input] Press [Input]	[NO 0001] [T **.**.**] [o *****] [HN ***] [A *****] [T *****] [N *****]	First time Time (Hour/Minute) Vehicle No. Article No. Gross Weight Tare Net Weight Record of the first time
4	Press [Input] Press [Input] Press [Input] Press [Input] Press [Input] Press [Input] Press [Input]	[NO 0002] [T **.**.**] [o *****] [HN ***] [A *****] [T *****] [N *****]	Second time Time (Hour/Minute) Vehicle No. Article No. Gross Weight Tare Net Weight Record of the second time
…	…	…	
	Press [Input]	[END]	End
		Return to weighing and displaying state	

(1) At Step 2, you may delete all weighing record of the date by pressing [Zero]. (Reset mode ④)
(2) In Step 3 and after that, you may delete the group of weighing record you are checking by pressing [Zero]. (Reset mode ⑦)
（3）After entering in the state of checking, Press [Check] for Inverse checking of records.

2. Check weighing record according to vehicle number (Table 4-5)

Step	Operation	Displayed content	Note
1	Press [Check] Press [2]	Under weighing state [REAd 1] [REAd 2]	Select “2” means check record according to vehicle number
2	Press [Input]	[o *****]	Select the vehicle number you want to check

Step	Operation	Displayed content	Note
	Input the vehicle number	[o 12345]	E.g.: 12345
3	Press[Input] Press[Input] Press[Input] Press[Input] Press[Input] Press[Input] Press[Input]	[NO 0001] [D**.**.**] [T**.**.**] [HN ***] [A *****] [T *****] [N *****]	Then, all weighing record of vehicle 12345 will be displayed. Date (Month/Date) Time (Hour/Minute) Article No. time Gross Weight Tare weight Net weight Record of the first
4	Press[Input] Press[Input] Press[Input] Press[Input] Press[Input] Press[Input] Press[Input]	[NO 0002] [D**.**.**] [T**.**.**] [HN ***] [A *****] [T *****] [N *****]	Date (Month/Date) Time (Hour/Minute) Article No. second time Gross Weight Tare weight Net weight Record of the
…	…	…	
		[END]	End

(1) (At Step 2, you may delete all record of the vehicle number but maintain its memorial tare weight by pressing [Zero]. (Reset mode ⑤)
(2) At Step 4 and after that, you may delete the group of weighing record you are checking by pressing [Zero]. (Reset mode ⑦)
(3) After entering in the state of checking, Press [Check] for Inverse checking of records.

3. Check weighing record according to article number (Table 4-6)

Step	Operation	Displayed content	Note
1	Press [Check] Press [3] Press [Input]	In weighing state, [REAd 1] [REAd 3]	Select 3 means checking record according to article number
2	Input the article no. Press [Input]	[HN **] [HN 23]	Select the article number you want to check e.g.:23;
3	Press [Input] Press [Input] Press [Input] Press [Input] Press [Input] Press [Input]	[NO 0001] [o *****] [D**.**.**] [T**.**.**] [A *****] [T *****]	Then all weighing record of article with serial number 23 will be displayed. Vehicle Number Date (Month/Date) Time (Hour/Minute) Gross Weight Tare Record of the first time

4	Press [Input] Press [Input] Press [Input] Press [Input] Press [Input] Press [Input]	[NO 0002] [o *****] [D**.**.**] [T**.**.**] [A *****] [T *****]	Vehicle Number Date (Month/Date) Time (Hour/Minute) time Gross Weight Tare } Record of the second
…	…	…	
		[END]	End

(1) In Step 2, you may delete all record of the article number by pressing [Zero]. (Reset mode ⑥)
(2) In Step 3 and after that, you may delete the group of weighing record you are checking by pressing [Zero]. (Reset mode ⑦)
(3) After entering in the state of checking, Press [Check] for inverse checking of records.

4. Vehicle no. checking (Table 4-7)

Step	Operation	Displayed content	Note
1	Press [Check] Press [4] Press [Input]	Under weighing state [REAd 1] [REAd 4]	Select"4 "means vehicle number checking
2	Press [Input] Press [Input]	[NO 001] [o *****]	The first vehicle no.
3	Press [Input] Press [Input]	[NO 002] [o *****]	The second vehicle no.
…	…	…	
n	Press [Input] Press [Input]	[NO nnn] [o *****]	The last vehicle no.
	Press [Input]	[END]	
		Return to weighing display state	

(1) During the process of above operation, when the vehicle number is displayed, you may delete the vehicle number, its memorial tare and all weighing record of the vehicle number by pressing [Zero]. (Reset mode ②)
(2) After entering in the state of checking, Press [Check] for Inverse checking of records.

11. Operation of Clearing Record

1. The indicator has following record clearing modes:

Mode ①: Clear all record (including all vehicle numbers and memorial tare weight)
Mode ②: Clear a vehicle number, memorial tare weight and all the corresponding weighing records of the vehicle number;
Mode ③: Clear the weighing record saved at last time;
Mode ④: Clear all records of a certain date;
Mode ⑤: Clear all the corresponding weighing records of a vehicle number (but reserve the vehicle number and its memorial tare)
Mode ⑥: Clear all the corresponding weighing records of a vehicle number;
Mode ⑦: Clear a random weighing record in the indicator.

1. When using any methods to clear record, [SURE 0] will be displayed on the indicator for operator's confirmation. When [Sure]≠0, press [Input] for confirmation. For negation, set [Sure]=0 and press [Input] or [Weigh] to quit.
2.
3. Operation method:

1) Under weighing state, press [Clear] to clear all records. [Mode ①]
2) Under weighing state, press the key [Vehicle No.], input the vehicle number with number keys and press [Zero] to clear the vehicle number, its corresponding memorized tare weight and record. [Mode ②]
3) Under weighing state, press [Clear], [9] and then [Input] to clear the record saved at last

time[Mode ③]

4) See clearing modes ④, ⑤, ⑥ and ⑦ in the chapter of data record and check.

▲! Cleared data is nonrecoverable. So please be careful to avoid incorrect operation and data loss.
▲! All weighing records shall be cleared after calibration or printing parameter modification.

12. Input Method of Saving Memorial Tare weight

The indicator can remember 1023 tare weight for a long time. Three input modes are as follows:

1. Input tare weight with number keys: (* is the original setting value) (Table 3-8)

Step	Operation	Displayed content	Note
1	Press [Vehicle No.]	Under weighing and displaying state	
2	Input the vehicle no. Press [Input]	[o *****] [o 35790]	Input the vehicle number, e.g.: 35790
3	Input the tare weight Press [Input]]	[P *****] [P 01000]	Input the tare weight, e.g.: 1000(kg)
4		Return to weighing and displaying state	End

2. Tare saving by weighing

Under tare weighing state, load an empty vehicle on the weighing platform, wait until the scale is stable, press [Tare Storing], input the vehicle number and press [Input].

3. For saving a group of weighing record, if there is no memorized tare weight of the vehicle number in the indicator, the tare value of this group recorded will be regarded as memorized tare weight of the vehicle and saved in memory.

13. Switch between Gross Weight and Net Weight

Under weighing state, when there is tare weight(net weight displaying state), the indicator may be switched to gross displaying state by pressing [Gross/Net] and then switched back to the original net displaying state by pressing [Gross/Net]again.

After tare or preset tare weight, the indicator enters into net weight displaying state automatically.

When there is no tare weight, the indicator will stay under gross displaying state and the key [Gross/Net] will be invalid.

14. Paper slip with Panel type micro printer.

XK3190-DS8P is matched with panel type micro printer, when set “TYPE” as “5”, hold on【Paper Slip】for continuous paper slip of the printer.

Chapter IV Description of Optional parts

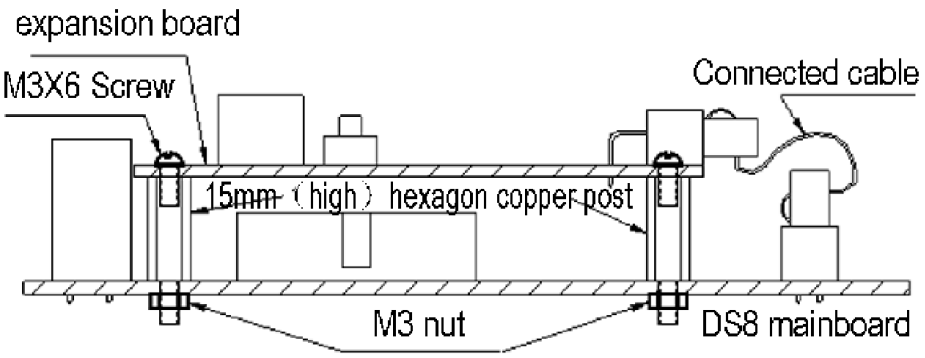
1. General

DS8 could be connected with optional extension modules as follows:

- Switch input&output extension module; could be simultaneously connected with 2 modules
- Ethernet extension module
- Analog 4-20mA output extension module
- Industry MODBUS communication extension module
- Radio Frequency RF communication extension module
- Message SMS/Internet GPRS extension module.
- Internet WIFI/Ethernet extension module

Extension module is installed in the inner side of the indicators, it could be simultaneously connected with 4 extension modules of different functions, using 10-core IDE bus wire for connection.

Installation Method as shown below:



Picture 1: Schematic diagram of the Overstow extension plate on the main board (Side view)

2、Parameter Setting：

Indicator's parameter setting:

After installation, set on the indicators for the connected extension module type, setting method is as follows:

Step	Operation	Displayed content	Note
1	Press[Set] Press[8][0] Press [Input]	"P 00" "P 80"	Enter into the configuration function of extension module
2	Press[0-8] Press [Input]	"EXP1 00" "EXP1 00"	Set type of the extension module1 00- Indicator will be adaptive, and act auto scan after power on 01-Switch input&output extension module 1 02- Switch input&output extension module2 03-Ethernet module 04-Analog 4-20mA module 05-Industry MODBUS communication module 06- RF communications module 07-SMS/ GPRS module 08- WIFI/Ethernet module
3	Press[0-8] Press[Input]	"EXP2 00"	Set type of the extension module2 (As above)
4	Press[0-8] Press[Input]	"EXP3 00"	Set type of the extension module3 (As above)
5	Press[0-8] Press[Input]	"EXP4 00"	Set type of the extension module4 (As above)
6		Return to weighing state	

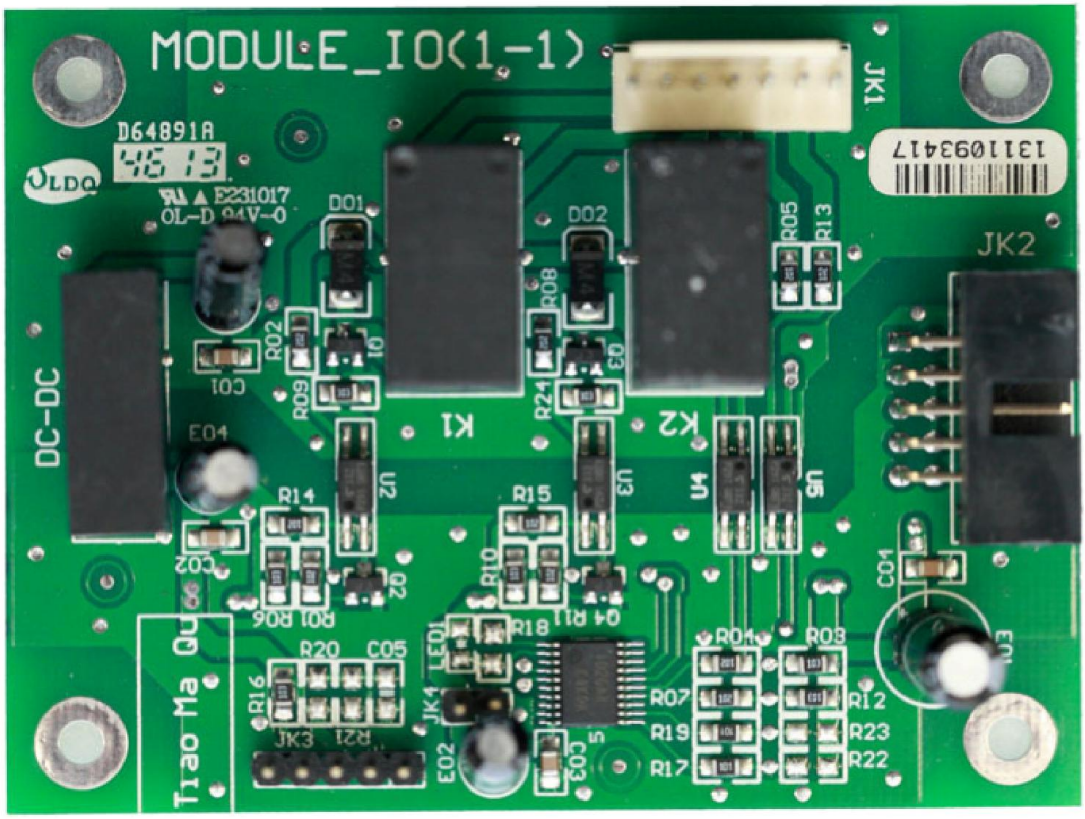
Module's parameter setting

The module will be able to work only after correct setting of parameters, please refer to the module manual for the detailed setting methods.

3、Switch input&output extension module

Switch input&output module could realize two way switch output& two way switch input, the switch output could self-define its output conditions. Switch input is configured as Sendkeys.

1. Mechnical interface of communication: 7 core aviation socket
2. Power-up: Internal charging, no need for external power supply.
3. Isolation: input&output both adopts photoelectric isolation, isolated voltage: 3000V
4. Switch output: relay output, max. Driver 250VAC, 30VDC, 1A
5. Switch input: Passive input mode, could be connected with simple input device like buttons



4、Ethernet extension module

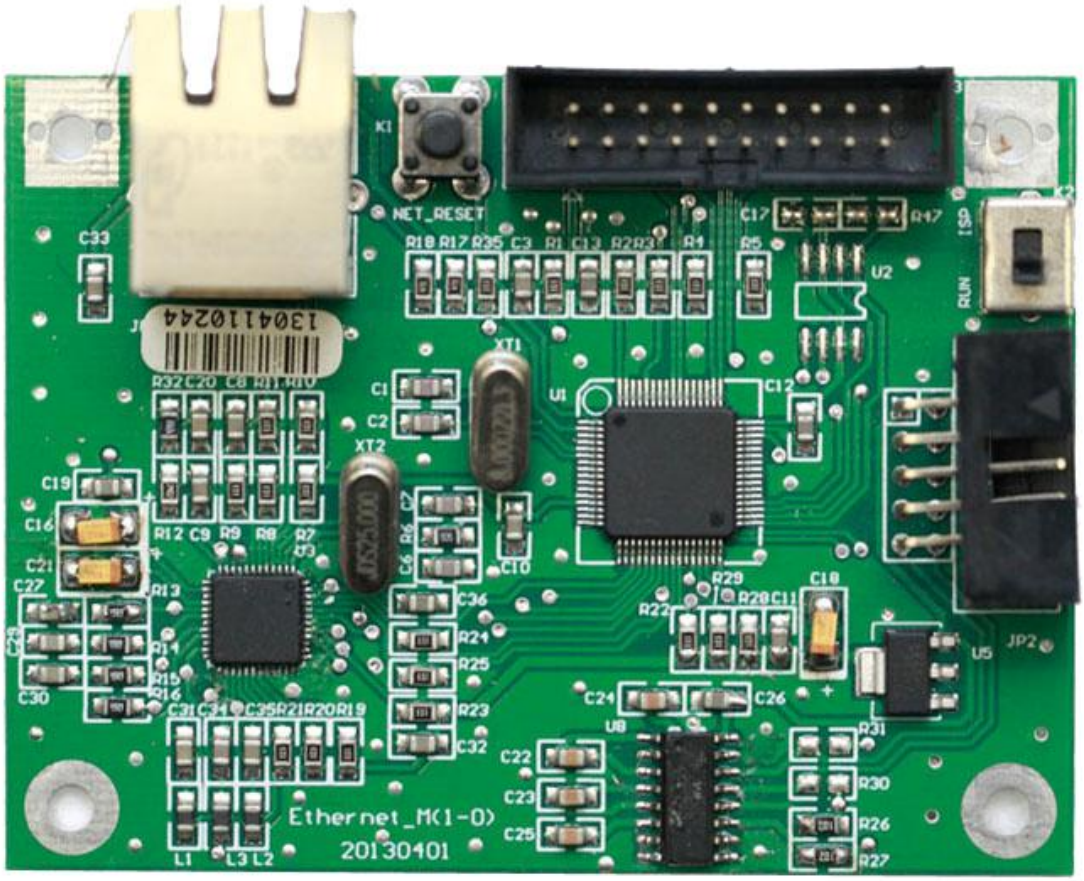
Ethernet extension module is used for the weighing indicator to extend the Ethernet interface, to realize far-distance transmission and share

1. Support IEEE 802.3/IEEE 802.3u 10BASE-T/100BASE-TX

2.Support MDI/MDI-X Automatic cross function (Auto-MDI）

3. Support IEEE 802.3u Automatic consultation function

4.Interface：RJ45 Ethernet interface.



5、Analog 4-20mA output extension module

Analog 4-20mA output extension module could realize 4-20mA Current loop output which is corresponding to indicator's weight, the inner side provide with isolated power supply.

1. Mechanical interface of Communication, 15 core D type interface

2. Power supply: internal charging, no need for external power supply

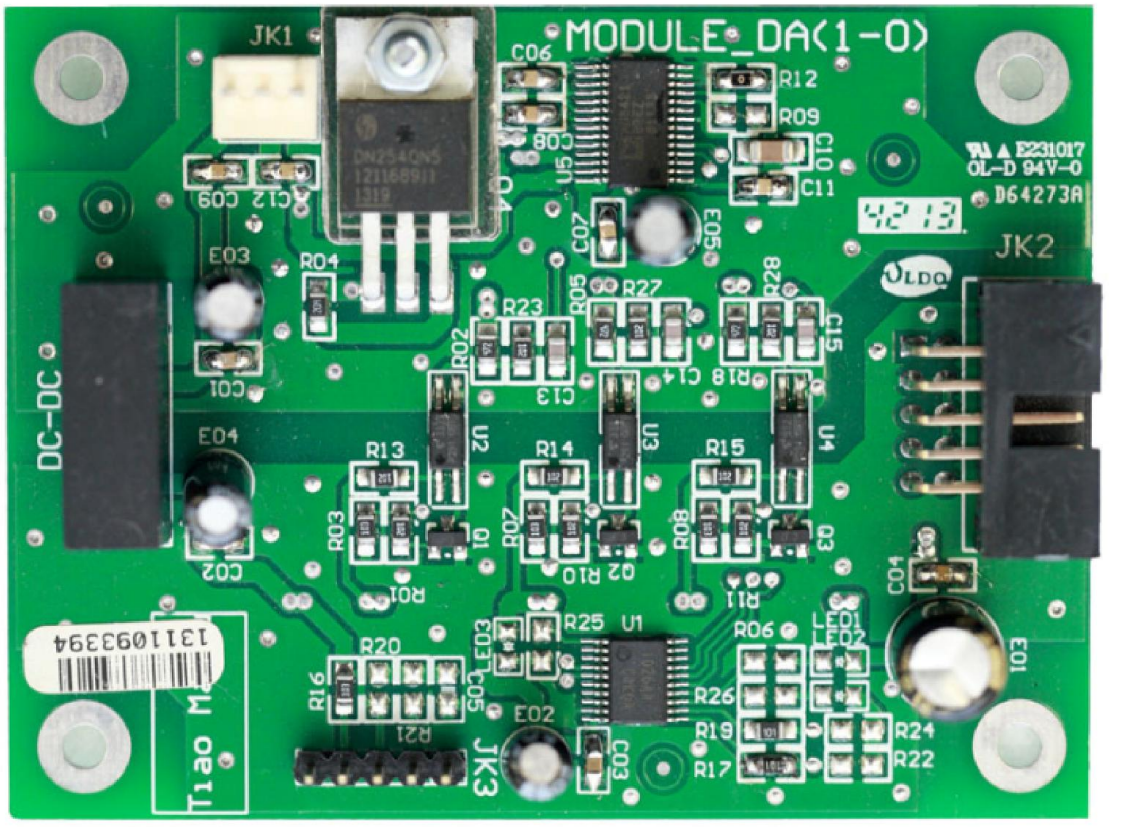
3. Isolation: Photoelectric isolation adopted, isolated voltage 3000V

4. Max. Load: 680Ω

5. False alarm: 3.2mA current loop

6. Output method: 4-20mA current loop

7. Output Accuracy: 1%

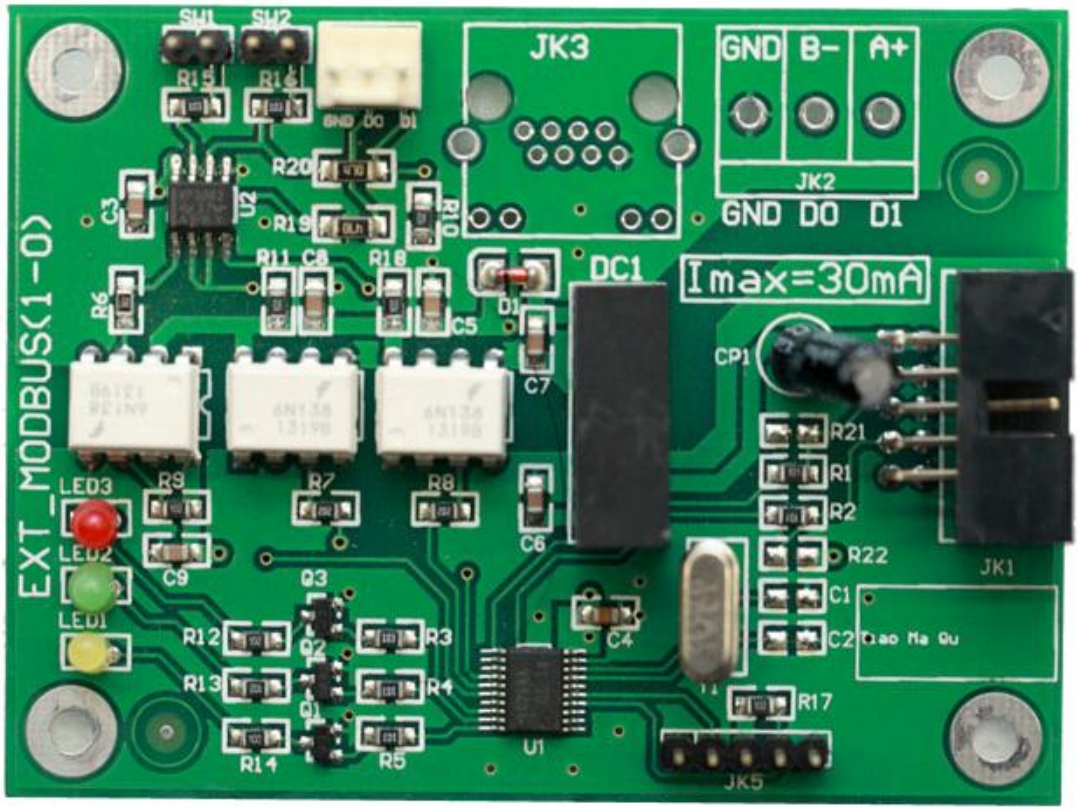


6、Industry MODBUS communication extension module

Industry MODBUS communication extension module aims at the industrial application design of weighing system, it's mainly used for real-time acquisition of weight and status of weighing indicators

1. Electrical interface: RS-485 2W Cable connection.
2. Isolation: Photoelectrical isolation, isolated voltage 3000V
3. Communication mode: RTU
4. Parity check: no check, odd parity check, even parity check optional
5. Baud rate: 4800bps、9600bps、19200bps、38400bps optional
6. Address could be configured: 1~247
7. Mechanical interface of communication:15 core D type connector(external),RJ45 connector(Internal),cable terminal(Internal)
8. Power supply: Internal charge adopted, no need for external power supply
9. Max. modules connected:32pcs
10. Support Function code

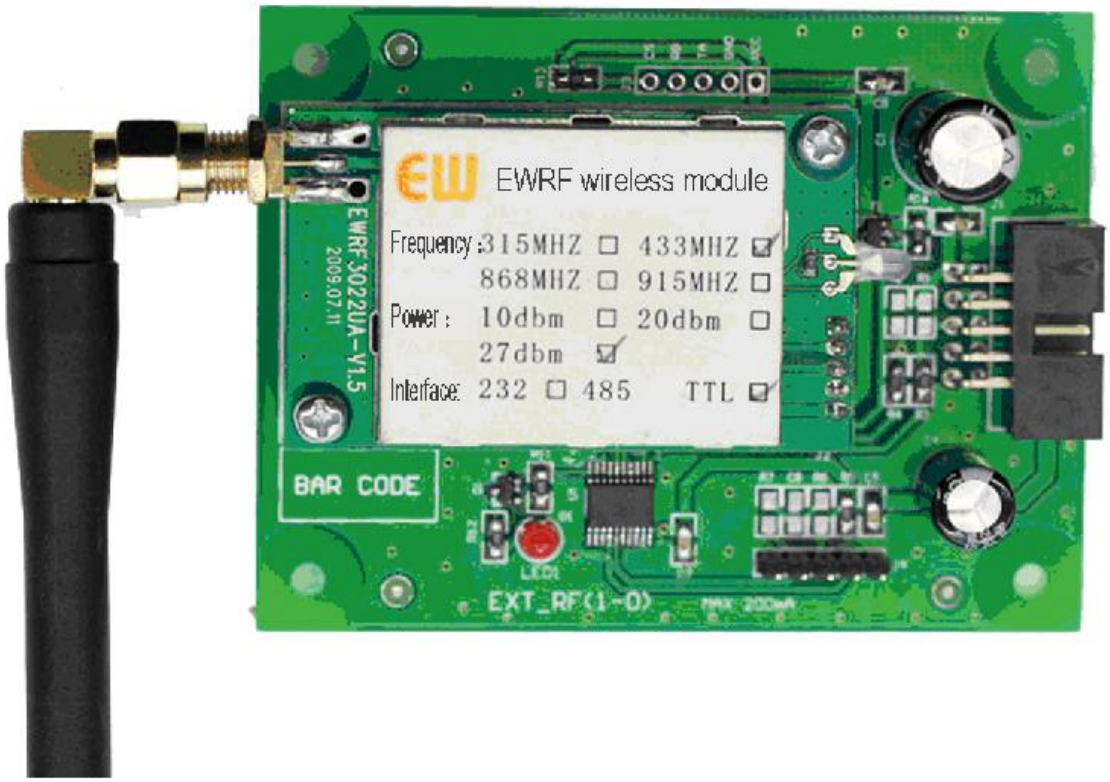
Function code	Name	Register Address
02	Read discrete magnitude	0x1000~0x100D（See definition in the module manual）
03	Read holding register	0x0000~0x0009（See definition in the module manual）
04	Read input register	0x0000~0x0009（See definition in the module manual）



7、Radio Frequency RF communication extension module

Radio Frequency RF communication extension module aim at the application design of weighing system, it could send indicator weighing data and do remote operation through 433MHZ wireless t1ansmission. It could be connected with we produced wireless scoreboard.

1. Wireless transmission baud rate:2400bps
2. Wireless transmission distance: 1000m at Max. Power& No block
3. Communication method configured:
   1) Continuous sending method no.: 5
   2) Command response method no.: 1
4. Configured address：1~26
5. Configured Channel：0~31
6. Configured power：0~9
7. Power-up: Internal charge adopted, no need for external power supply
8. Max. Wireless matched number
   1) Continuous sending mode: no limitation for the host(Computer or Scoreboard), indicator 1 pc
   2) Command mode: Host (Computer) 1pc, indicator 1-26pcs



8、Message SMS/Internet GPRS extension module.

Message SMS Extension module：

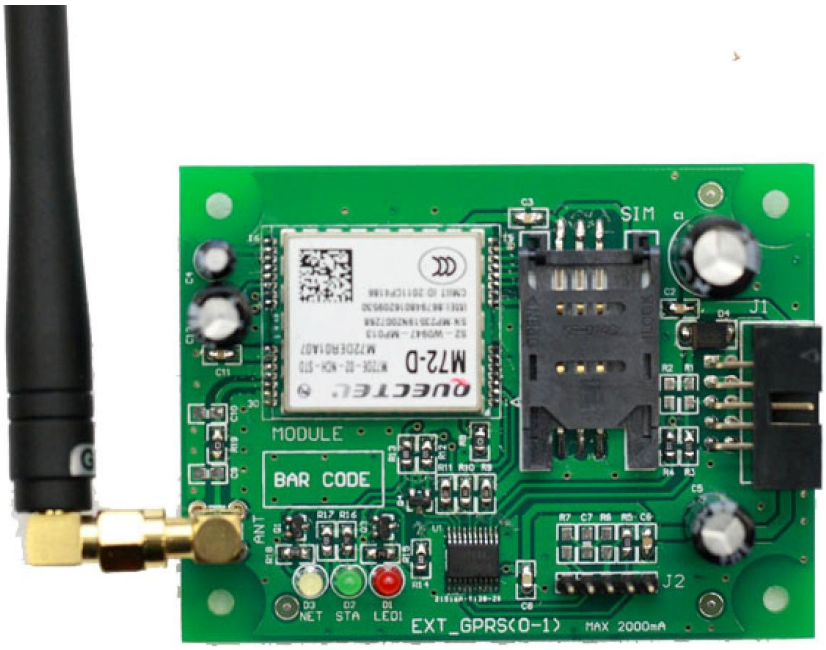
Communication protocol aims at the application design of weighing system, this module could send mobile message containing indicator status through Mobile GSM net

1. SIM card type: China Mobile GSM，China Unicom GSM
2. Applicable environment: network environment with corresponding mobile network operator
3. Configured licensed mobile number: 2 pcs
4. Power-up: Internal charge adopted ,no need for external power supply.

Internet GPRS extension module：

Only make simple configuration to the indicator to send indicator status, weighing record to the cloud corner through GPRS net, it could realize remote-monitoring &record checking of indicator status working with the PC, mobile software.

1. SIM card type: China Mobile GSM, China Unicom GSM
2. Applicable environment: network environment with corresponding mobile network operator
3. Server configuration: Auto connection with the cloud corner, no need for additional configuration.
4. Sending content: all weighing records, every 30 minutes send one indicator status
5. Safety: every module have its unique ID, data visit is safe and reliable.
6. Power supply: Internal power adopted
7. Assorted software: network software(windows),mobile checking software(android)、computer checking software(windows)



9、Internet WIFI/Ethernet extension module

After connecting with Internet WIFI/Ethernet extension module, the indicator could join Ethernet with simple configuration, and could send indicator status, weighing record to the cloud corner, it could realize remote-monitoring &record checking of indicator status working with the PC, mobile software

1、Net type: WIFI wireless standard IEEE 802.11n/g/b, limited standard IEEE 802.3(u)

2、Interface: Normally use wireless WIFI, no need for other interface connection., could be optionally matched with limited Ethernet interface.

3、Server configuration: Auto connection with the cloud server, no need for additional configuration.

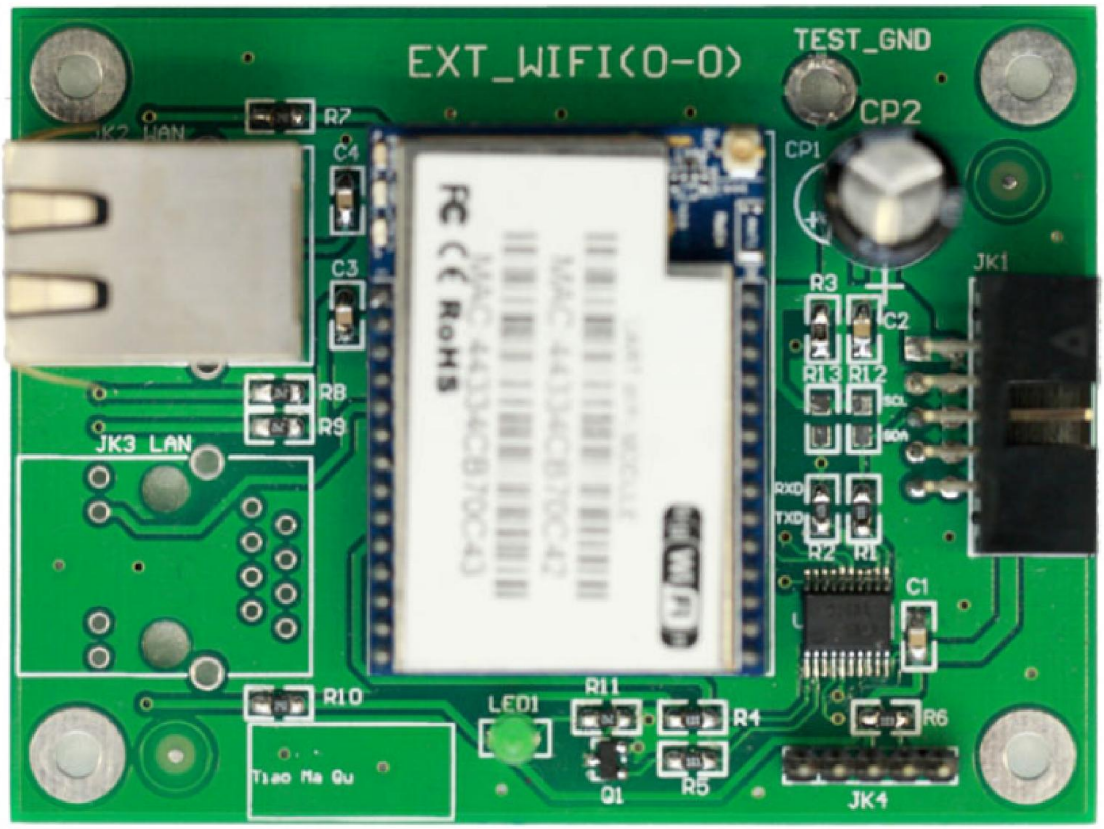
4. Sending content: all weighing records, send one indicator status for every 30 minutes

5. Safety: every module have its unique ID, data visit is safe and reliable.

6. Power supply: Internal power adopted

7. Pre-heating time: appro.2 minutes

8. Assorted software: network software(windows),mobile checking software(android)、computer checking software(windows)



Chapter V: Maintenance and Attentions

1. To ensure clarity of display and service life of indicator, the indicator should be used off direct sunlight and should be kept at flat place.
2. Do not use the indicator in place of much dust, serious vibration or humidity .
3. Connection between load cell and indicator shall be reliable and the system should have valid grounding. Keep them away from high electric and high magnetic fields. Load cell and indicator shall be kept away from highly corrosive object and inflammable and explosive materials.

▲! Do not use in occasion with inflammable gas or stream or system with pressure vessel tank.

▲! Do not use in area with high frequency of thunder. Reliable lightning protectors shall be installed for ensuring personnel security of operators and preventing damage of indicator and relevant equipment caused by thunder.

▲! As load cell and indicator are both static-sensitive equipment, feasible anti-static precautions must be taken during the process of use. Welding operation or other high electric field operations are strictly prohibited on weighing platform; in the season of thunder storm, reliable lightning protection measures must be taken for preventing load cell and indicator from damage caused by thunder and ensuring personnel security and safe operation of weighing equipment and relevant equipment.

4. Do not use strong solvent (e.g. benzene or nitro oil) for cleaning the machine housing.
5. Do not inject fluid or other conductive particle into the indicator so as to prevent damage of instrument and electric shock.
6. Before plugging or unplugging connecting wire between indicator and external equipment, please cut off the electricity supply of indicator and relevant equipment.
   - **▲ ! Before plugging or unplugging connecting wire of load cell, please cut off the power supply of indicator at first.**
   - **▲ ! Before plugging or unplugging connecting wire of printer, please cut off the power supply of printer and indicator at first.**
   - **▲ ! Before plugging or unplugging connecting wire of scoreboard, please cut off the power supply of scoreboard and indicator at first.**
   - **▲ ! Before plugging or unplugging connecting wire for communication, please cut off the power supply of indicator and host computer at first.**
7. **The Company advises our customers to check and accept before using instrument products of the Company. We are only responsible to quality of the indicator itself. The highest compensation amount is within double value of the fault indicator. We assume no responsibility for system problem of the indicator.**
8. External interfaces of the indicator shall be used according to methods defined in the operation commands. No unauthorized modification to the connection is allowed. In case of any failure, please unplug the plug and send the indicator to professional manufacturer for maintenance. Unprofessional weighing apparatus manufacturers are not allowed to fix the indicator by themselves in command to avoid greater damage. **The indicator shall not be opened at random. Otherwise, we will provide no warranty service.**
9. Batteries are consumables and they are not in warranty scope.

▲! For extending service life of battery, please use it after full charge.
For long time unused, please charge the battery once every two months for 20 hours each time.

▲! Handle with care during transportation and installation. Avoid strong vibration, strike or impact in command to avoid short circuit inside the batteries and damage of batteries.

10. Within 1 year since the indicator is sold, under normal use conditions, damages not caused by man-made fault belong to the warranty scope. Please mail the product and warranty card (with matched ID) to authorized maintenance point or the supplier. The manufacturer provides life-long maintenance service for the indicator.

Chapter VI Information Cue

I. Regular information cue:

1. ····· means: Please wait, the indicator is conducting internal calculation. Do not carry out any operation now.
2. Prnt means: Please wait; data is transmitted between the indicator and printer.
3. LoAd means: Data save. It will be displayed for less than two seconds for giving a cue to the operator.

II. Error operation information cue:

1. Err 03 means: overload alarm, all or part of the load must be unloaded at once.
2. ERR 10 means: Vehicle numbers saved are more than 1023
3. ERR 12 means: hardware saving has error
4. ERR 13 means：Operation mistake, or not meet the operating conditions
5. ERR 17 means: Parameter setting does not meet the requirement, please reset it.
6. ERR 19 means: Printing cannot be conducted in occasion of zero or negative weighing, unstable weighing or unfulfilled zero reset condition.
7. ERR 28 means: When the print date is earlier than that saved in weighing record, please reset date and clear all record.
8. NO DATA means: no record, or checking condition occurs error
9. DELETE means: current record is for empty record, cant “added print”

III. Error connection information cue:

1. Err P means: Error printer connection or printer fault. Press any key to exit and re-connect the printer or replace it with another one.
2. ERD ** means: The digital load cell with address “**” has communication failures.
3. ERN ** means: The digital load cell with address “**” has incompatible protocol
4. ERM ** means: The digital load cell with address “**” has incompatible protocol

IV. Information cue of components and parts failure and elimination methods

1. ERR 05 means: the CPU inside the indicator is broken, please return to the factory for maintenance.
2. ERR 18 means: The keyboard fails. This will be displayed for 5 seconds before entering into weighing displaying page. The keyboard shall be replaced.
3. ERR 20 means: a part of the data in E^2PROM has been lost.
4. ERR 21 means: E^2PROM calibration data has been lost.
5. ERR 22 means：RTC destroyed; please replace it with a new chip
6. ERR 23 means：E^2PROM destroyed; please replace it with a new chip.
7. ERR 24 means：FLASH destroyed; please replace it with a new chip.

Appendix 1: (applicable to printers of TYPE=2, 3 and 4)

Bills in a set:

Weighing Sheet		**Weighing Sheet**		**Weighing Sheet**	
No.	0001	No.	0001	No.	0001
Date	1999-07-2	Date	1999-07-28	Date	1999-07-28
Time	12.02.31	Time	12.02.31	Time	12.02.31
Vehicle No	12345	Vehicle No.	12345	Vehicle No.	12345
Article No.	022	Article No.	022	Article No.	022
G.W	2.000(kg)	Gross Weight	2.000(kg)	Gross Weight	2.000(kg)
T.W	0.300(kg)	Tare Weight	0.300(kg)	Tare Weight	0.300(kg)
N.W	1.700(kg)	Net Weight	1.700(kg)	Net Weight	1.700(kg)

Recording format: **Weighing Sheet** **Date**：1999-07-28

No.	Time	Vehicle No.	Article No.	G.W	T.W (kg)	N.W (kg)
0002	12.03.24	12345	033	2.000	0.300	1.700
0003	12.03.24	00888	033	2.000	0.300	1.700
0004	12.04.11	00888	022	2.000	0.300	1.700
Accumulated amount:			Gross weight:：8.000(kg)		Net weight：6.800(kg)	

Filled type: (the printing procedure will take only 5 seconds)

WEIGHT BILL		
For Operator		
SERIAL No.	123	
DATE	1999-07-28	
TIME	12 .35 .28	
VEHICLE No.		
CARGO No.		
GROSS WEIGHT	1580	kg
TARE WEIGHT	80	kg
DISCOUNT	10	%
NET WEIGHT	1350	kg
REMARK		

Appendix 2: (applicable to printers of TYPE=2, 3 and 4)

Detailed list **Date**：1999-07-28

No.	Time	Vehicle No.	Article No.	Gross Weight (kg)	Tare Weight (kg)	Net Weight (kg)
0002	12.03.24	12345	033	2.000	0.300	1.700
0003	12.03.24	00888	033	2.000	0.300	1.700
0004	12.04.11	00888	022	2.000	0.300	1.700
Accumulated amount:		Gross weight: 8.000(kg)		Net weight: 6.800(kg)		

Statistical list **Date**：1999-07-28

No.	Vehicle No.	Vehicle Weight (kg)	Times	Gross Weight (kg)	Total Net Weight (kg)
0001	12345	0.300	0002	4．000	3．400
0002	00888	0.300	0002	4．000	3．400

Statistical list **Date：** 1999-07-28

No.	Article No.	Times	Total Net Weight (kg)
0001	022	0002	3.400
0002	033	0002	3.400

Appendix 3: (applicable to printers TYPE=6)

Bills in a set:

No. 0001
Date 02－03－14
Time 10 .57 . 27
Vehicle No. 00001
Article No. 001
Gross Weight 10 .00kg
Tare Weight 1 .00kg
Net weight 9 .00kg
tel: 013888888888

Total gross weight:
10 .00kg
Total net weight:
9 .00kg

Recording format:

Date 02－03－14
No. weight kg
0001 9 .00
0002 9 .00
Accumulated amount:
18 .00kg

Appendix 4: Printing examples
1. An example of manual tare weight preset weighing sheet printing

Step	Condition	Operation	Displayed content	Note
1	Load article on the scale	Press [Tare]	[P00.000]	
2	Input the preset tare weight	E.g.: [1000]	[P1. 000]	
3		Press [Input]	[*****]	Deduce the tare weight
4		Press [Print]	[o *****]	Original vehicle no.
5	Input the vehicle no.	E.g.: [00123]	[o 00123]	To obtain the original vehicle no., please press [input] directly. Do not change the vehicle no.
6		Press [Input]	[HN **]	Original article no.
7	Input the article	E.g.: [11]	[HN 11]	To obtain the original article

Step	Condition	Operation	Displayed content	Note
	no.			no., please press [input] directly. Do not change the article no.
8		Press [Input]	[PRINT]	Weighing sheet printing

2. An example of manual and direct article weighing sheet printing

Step	Condition	Operation	Displayed content	Note
1	Load article on the scale	Press [Print]	[o *****]	Original vehicle no.
2	Input "0"	E.g. [0]	[o 00000]	"0" vehicle no. means the object being weighed is article
3		Press [Input]	[HN **]	Original article no.
4	Input the article no.	E.g. [11]	[HN 11]	To obtain the original article no., please press [input] directly. Do not change the article no.
5		Press [Input]	[PRINT]	Weighing sheet printing

3. Weighing sheet printing (storage method for twice weighing, i.e. empty vehicle at first and then a heavy one or heavy vehicle at first and then an empty one)

Step	Condition	Operation	Displayed content	Note
1	Loading empty vehicle (wait till the stable indicating light lights up)	Press [Print]	[o *****]	Original vehicle no.
2	Input the new vehicle no.	E.g. [00123]	[o 00123]	To obtain the original vehicle no., please press [input] directly. Do not input the new vehicle no.
3		Press [Input]	[HN **]	Original article no.
4	Input the new article no.	E.g. [11]	[HN 11]	To obtain the original article no., please press [input] directly. Do not input the new article no.
5		Press [Input]	[LOAD]	Return to weighing state after 1.5 seconds
6	Loading heavy vehicle (wait till the stable indicating light is on)	Press [Print]	[o 00123]	Vehicle no. input in Step 2
7		Press [Input]	[HN 11]	Article no. input in Step 3
8		Press [Input]	[PRINT]	Weighing data printing

★ Note 5：if the first step for heavy vehicle, then the sixth for empty, other operation the same

4. Auto weighing sheet printing with preset tare

Step	Condition	Operation	Displayed content	Note
1		Press [Set]	[AUTO *]	Select 1 for auto printing
2		Press [1]	[AUTO 1]	
3		Press [Input]	[TYPE *]	No modification is required hereinafter
4		Press [Weigh]	[0000]	Return to weighing state
5		Press [Tare]	[P ***]	
6	Tare preset	E.g. [100]	[P 00100]	
7		Press [Input]	[-100]	
8	Loading heavy vehicle (wait till the stable indicating light lights up)		[400]	Heavy vehicle: 500, minus tare: 100
9			[PRINT]	Weighing sheet auto printing

5. Invoking and printing weighing sheet according to vehicle no.

Step	Condition	Operation	Displayed	Note
	Vehicle no. and tare have been preset			The indicator has had relevant data saved
1	Loading heavy vehicle (wait till the stable indicating light lights up)	Press [Vehicle No.]	[o *****]	Original vehicle no.
2	Input the required vehicle no.	E.g. [00123]	[o 00123]	If the original vehicle number matches, please press [Tare] directly. Do not input the vehicle no.
3		Press [Tare]	[***]	Deduce the tare weight
4		Press [Print]	[o *****]	Required vehicle no.
5		Press [Input]	[HN **]	Original article no.
6	Input the new article no.	E.g. [11]	[HN 11]	If the original article number matches, please press [input] directly. Do not input the new article no.
7		Press [Input]	[PRINT]	Weighing sheet printing
8	Negative number in the table	Press [Tare]	[000]	Return to weighing state

6. Manual weighing sheet printing with tare of several kinds of vehicle preset

Step	Condition	Operation	Displayed	Note
1		Press [Vehicle No.]	[o *****]	Original vehicle no.
2	Input the new vehicle no.	E.g. [00123]	[o 00123]	To obtain the original vehicle no., please press [input] directly. Do not input the new vehicle no.
3		Press [Input]	[P *****]	Tare preset

4	Input the preset tare	E.g. [100]	[P 100]	
5		Press [Input]	[000]	Return to weighing state
	Saving several kinds of vehicles Tare preset	……	[……]	Set preset tare of several kinds of vehicle. Steps 1-5.
6	Loading heavy vehicle (wait till the stable indicating light lights up)	Press [Vehicle No.]	[o *****]	Original vehicle no.
7	Input the required vehicle no.	E.g. [00123]	[o 00123]	If the original vehicle number matches, please press [input] directly. Do not input the new vehicle no.
8		Press [Tare]	[***]	Deduce the weight of tare
9		Press [Print]	[o *****]	Required vehicle no.
10		Press [Input]	[HN **]	Original article no.
11	Input new article no.	E.g. [11]	[HN 11]	If the original article number matches, please press [input] directly. Do not input the new article no.
12		Press [Input]	[PRINT]	Weighing sheet printing
13	Negative number in the table	Press [Tare]	[000]	Return to weighing state (vehicle leaves away)

7. Weighing Sheet Printing (Once weighing and storing mode)

Step	Condition	Operation	Displayed content	Note
1	Loading heavy vehicle (wait till the stable indicating light lights up)	Press [Print]	[o *****]	Original vehicle no.
2	Input new vehicle no.	E.g. [00123]	[o 00123]	To obtain the original vehicle no., please press [input] directly. Do not input the new vehicle no.
3		Press [Input]	[HN **]	Original article no.
4	Input new article no.	E.g. [11]	[HN 11]	To obtain the original article no., please press [input] directly. Do not input the new article no.
5		Press [Input]	[PRNT]	Print weighing data