XK3101 (KM05) Weighing Transducer

User Manual

- Read the manual carefully before use
- Please take good care of this manual for future reference

Contents

1.0 General Description

KM05 is a weighing transducer promoted by Keli Electric Manufacturing (Ningbo) Co., Ltd. It applies for an industrial control fields (or other applications with analog outp ut). It combines weight display and analog signal together. Its signal transaction of former part adopts high-precise A/D converter with 24 bits, and the output of analog signal adopts D/A converter with 16 bits. Its shell is a small box made from aluminum , easily to be inserted into control cabinet.

A. Main Specification

- Protection function of overload and short circuit in excitation loop for load cell
- High precision, high resolution Σ- mode A/D converter, maximum A/D pulse 1,000,000
- Updating rate: 6.25 times/second, 12.5 times/second, 25 times/second, 50 times/second
- Number of its division: 1000 ~ 10000
- Division value range: 0.001 ~ 50
- Two-point (off) relay output. Mode of output can be set: weight selective mode and value-fixed mode.
- Isolated digital communication interface, RS232 or RS485 can be selected.
- Analog output mode can be set : 4～20mA、0～20mA、0～5V or 0～10V
- 7 bits of LED digital tube display, height of word is 0.56 inch
- 20 segments of light pole display

B. Technical Specifications

a. Loading capacity
- Excitation voltage: 5.0 VDC, connect 8pcs of 350Ω analog load cells
- Signal range: 1.5 ~ 40mV
- Zero signal range: －40～38.5mV
- Analog current output: Max 500

- Analog voltage output: Min 10 K
- Touched – point capacity of relay: AC 7A／250V, DC 12A／120V

b. Performance
- Full scale temperature coefficient: 5PPM/
- Zero temperature drift: 0.06 uV/
- Max. Sensitivity: 0.6uV/d
- Non-Linearity:　0.01%FS
- Drift of analog output (0mA or 4mA): 50PPM／
- Output drift (20mA or 24mA): 50PPM／

c. Power supply

Voltage range of weighing transducer is AC 187 ~ 242V, frequency is 49 ～51Hz, maximum power consumption is 6 watt. Good ground wire is necessary, and it cannot share power supply with electrical equipments, for example, relay or heater which easily causes noise.

d. Temperature and Humidity

Working temperature: -20℃~50℃, humidity 10％~95％, no condensation.

Saving temperature: -30℃~60℃, humidity 10％~95％, no condensation.

e. Outline dimension (unit: mm)
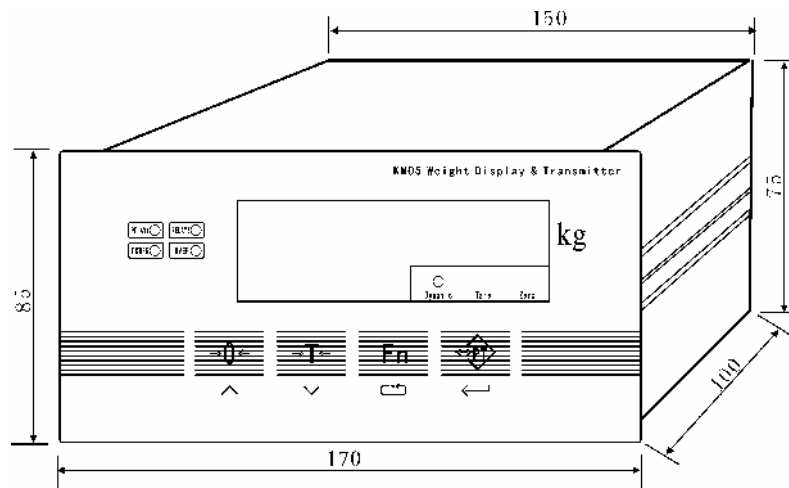
Fig. 8.4-1

2.0 Installation

A. Weighing transducer fixation

KM05 weighing transducer adopts panel installation, no thicker than 4mm for cabinet is requested. Hatch dimensions of cabinet are as below: (unit: mm)

Fig. 8.4-2

Before installation, mandril of both sides of weighing transducer should be removed firstly, and then weighing terminal is put into the cabinet. The two mandrils are fixed to both sides of weighing terminal tightly to guarantee the firm installation of weighing transducer.

B. Connection of weighing transducer

f.   Back View picture of weighing transducer
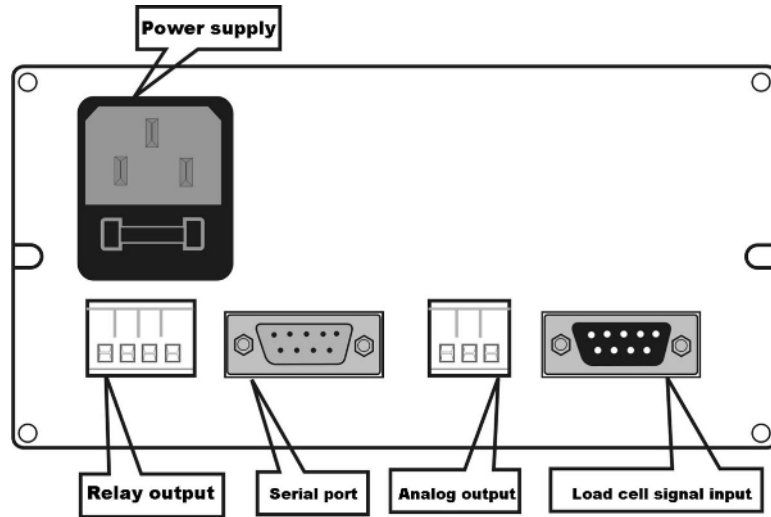
Fig. 8.4-3

g.   Connection to power supply

Weighing transducer adopts AV 220V with a 0.5A fuse under below par t of socket. Check

power supply before connection.

h.   Connection of load cell and weighing transducer

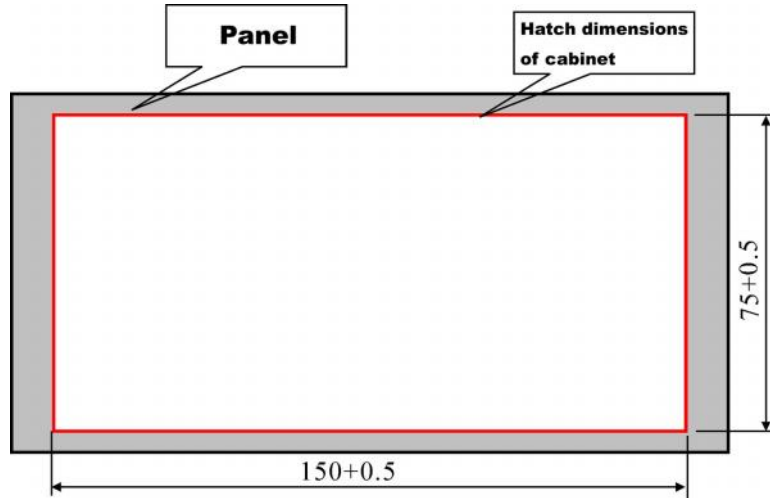Load cell adopts 9 wire plugs; end of weighing transducer is a hole. Definition for foot signal takes fig. 8.4-3 for reference.
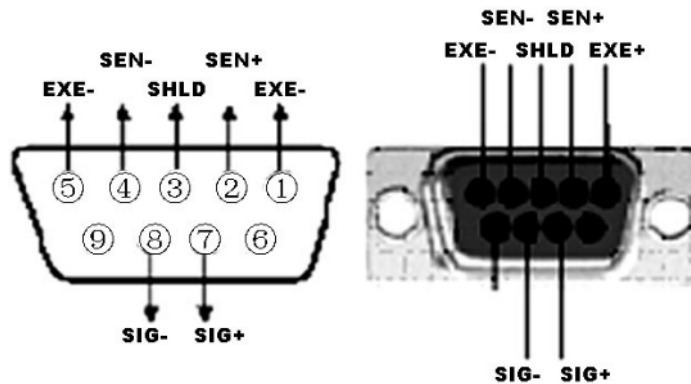
Fig. 8.4-3

If four wire shield cable is use, Exc + and Sen+, Exc - and Sen- must be connected,

    Connection for load cell to indicator and shield cable to ground must be reliable. Connecting wire mustn't be put in and out when indicator is being electrified; avoiding static power makes damage to indicator or load cell.

    As load cell and indicator are static sensitive equipments, measurement must be taken when they are used. Electric welding or other strong electric operations are prohibited on scales. Action to prevent damage caused to load cell and indicator from thunder must be taken in raining season. Safety for both operators and weighing

i.   Serial port communication wire connection

Weighing transducer has two communication ways RS232 and RS485. Both ways can be

used simultaneously when serial port transmits data and the data formats are the same. Among transducer inside wires, just one can be chosen when serial port receiving data. Two end wires are connected to one D type 9 wire socket. Definition of foot signal is as fig. 8.4-4.
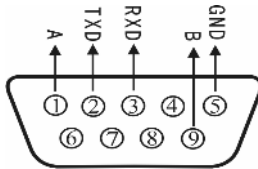
! Must not put in or out, welding with electric
! Professional person connect and debug serial port
! Transducer connect to ground must be reliable

Analog output connection (Fig. 8.4-5)
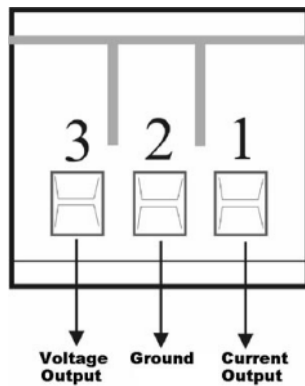
Transducer can choose voltage and current output. Connecting wire uses in-out connection end. The middle part is the common part for analog signals. Output of voltage and current are connected to different ends. To the backboard, the right one is current output, middle one is the common part and the left one is voltage output. Fig. 8.4 -5

Taking current output for example, connecting hi gher wire of current to 1 ＃ end, lower wire to 2 ＃ end. As voltage output, positive part connects to 3 ＃ end and negative part to 4 ＃ end.

Transducer cannot output voltage and current signals simultaneously. Just one can be chosen when it is used.

j. Relay output control (Fig.. 8.4-6)
Transducer has two-point relay output. Touching points which are open regularly are fetched out by four wire in-out end in the back.
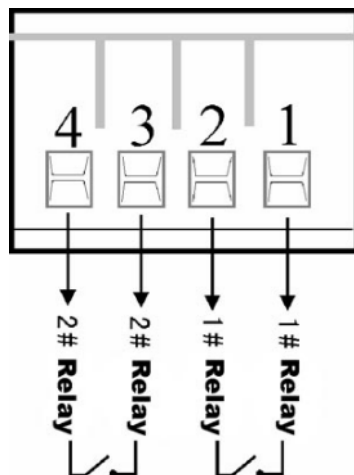
Note: capacity of relay touched point is AC 7A/250V, DC 12A/120V. To transducer backboard, right two are 1 ＃ relay output, left two are 2 ＃ relay output.

Fig. 8.4-6

3.0 Display Panel
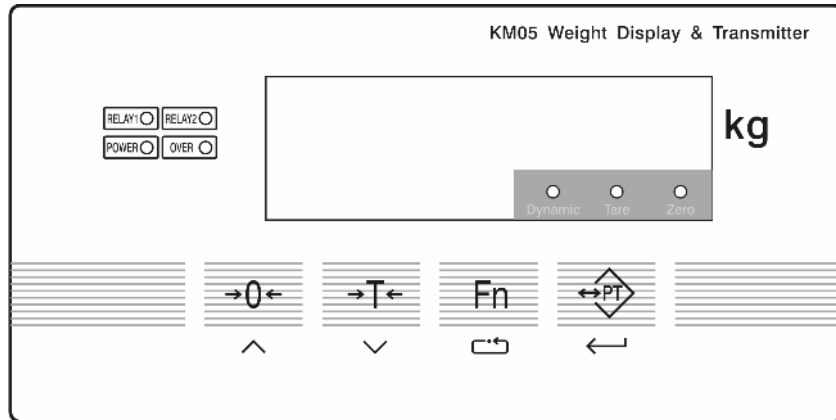
(Fig. 8.4-7)

XK3101 (KM05) weighing transducer has four buttons on display Panel, used for all operations and parameters set-up for indicator.

: Zero button, it is value increased button when in set-up state·

: Tare button, return (or value decreased) button, when in set-up state.

: Function button, can look over some parameter of indicator, it is a selective button when in set-up state.

: Confirmation button.

Indicator light:
RELAY1: 1＃relay action indicator light
RELAY 2: 2＃relay action indicator light
POWER: power supply indicator light
OVER: overload of load cell excitation loop or short circuit indicator light
Dynamic: it is bright when weight reading is unstable
Tare: tare indicator light
Zero: zero indicator light

4.0 Serial port data format

Transducer adopts two ways RS232 and RS485 to transmit data. Data are the same as contents of indicator displayer. Every frame of information is composed of 1 start bit, 8 data bits and 1 stop bit, no parity bit. Baud rate can choose 1200, 2400, 4800 or 9600.
Every data includes 8 frames. The first frame is data starting frame "=", following are 7 data frames. The higher bit use "0", if the displaying value is minus value, then the highest bit transmits "-"

> For example:
> Indicator displays "12345", serial port transmits data "=0012345"
> Indicator displays "1234.5", serial port transmits data "=012345"
> Indicator displays "-12345", serial port transmits data "=-12345"
> Data frame keeps 7 bits all the time, including radix point

5.0 Calibration

A. Parameters confirmation

Several parameters need to be confirmed before calibration, including Maximum weighing value, maximum divisional reading and maximum value. The formula is

Maximum weighing value = Maximum divisional reading * Maximum divisional value.

The divisional reading usually is from 1000 to 10000, divisional value is $1*10n$, $2*10n$ or $5*10n$ and n selects value as -3, -2, -1, 1. At a fixed maximum weighing value, choosing a suitable divisional value must guarantee that uV of each division is more than or equal to 0.6uV/d. Calculation of uV/d is as following formula:

$$uV/d = \frac{Divisional\ value(kg) * sensitivity\ of\ load\ cell\ output\ (mV/V) * excitation\ voltage\ (V) *1000}{capacity\ of\ load\ cell\ (kg) * quantity\ of\ load\ cell\ (pcs)}$$

Generally, the sensitivity of load cell is 2 mV/V. The exact parameters please take manual of load cell for reference.

B. Steps of calibration

Calibration should be operated by professional technician. If it is scale applied for

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commercial balance, it should be operated under supervision of Legal Metrology Institution as well.

Following is the steps of calibration:

a. Press [Fn] and [0] buttons simultaneously, indicator displays "F 1"

b. Press [PT] button, indicator displays "C   3 0 0 0", at this time the value is the previous calibrated divisional reading, then press [Fn] button to choose divisional reading.

c. Press [PT] button, indicator displays "d   1", press [Fn] button to choose divisional value.

d. Press [PT] button, indicator displays "F 1.1   0", then press [Fn] button to choose parameters. When F1.1=0, it means normal calibration of two points (zero point and another weighing point). When F1.1=1, it means calibration of three points (zero point, weighing point 1 and weighing point 2). Usually F1.1=0 is chosen.

e. Press [PT] button, indicator displays "C A L - 0 0 0", it means zero will be calibrated, at this time check if there is nothing on the scale.

f. Press [PT] button, indicator displays "▪ ▪ ▪ ▪ ▪ ▪ ▪"meanwhile the light pole is extinguished gradually. During this time the reading is unstable and the light pole comes back to the full-bright state. If it keeps full-bright all the time, please turn off the power supply to check wire connection of system or contact our after-sales services department. After light pole fully extinguished, indicator will turn to next step automatically.

g. When indicator displays "C A L - F 5 1", calibrate the weighing value. Standard poise is put on the scale and the poise whose weight is more than 20% of maximum weighing value is recommended. The poise is put evenly or at the center of scale.

h. Press [PT] button, indicator displays "▪ ▪ ▪ ▪ ▪ ▪ ▪", meanwhile the light pole is extinguished gradually. During this time the reading is unstable and the light pole comes back to the full-bright state. After light pole fully extinguished, indicator will turn to next step automatically.

i. The value of loaded poise should be inputted when indicator displays maximum weighing value XXXXX. Press [Fn] button, position of glittering can be chosen and

press [　0　] button, value of glittering bits can be amended.

j.　Press [PT] button, when F1.1=1, indicator displays "$CAL-FS2$", when F1.1=0, indicator displays "$CALSAuE$", take calibration step 13 for reference. When indicator displays "$CAL-FS2$", it means the non-linearity of second point of load is being amended. Adopting this method can improve it when linearity of scale is not good. Then loading poise can be continued.

　　Note: when uV of each division is less than 0.6 uV, indicator will show "E4", then press [Tare] button, it returns to the previous step. Press [PT] button, the calibrated result can be accepted. In other words, uV of each division is less than 0.6nV, indicator still work correctly.

k.　Press [PT] button, indicator displays "$- - - - - - -$", meanwhile the light pole is extinguished gradually. During this time the reading is unstable and the light pole comes back to the full-bright state. After light pole fully extinguished, indicator will turn to next step automatically.

l.　The value of loaded poise should be inputted when indicator displays maximum weighing value XXXXX. Press [Fn] button, position of glittering can be chosen and press [　0　] button, value of glittering bits can be amended.

m.　Press [PT] button, indicator displays "$CALSAuE$", then press [Fn] button, it can switch to display "$CAL ESC$". When it displays "$CALSAuE$", press [PT] button, it means accepting and saving the calibrated result. Whe n it displays "$CAL ESC$", press [PT] button, it means the calibrated result is available only this time, when turn on the transducer again, it adopts the previous calibrated data. Until now, calibration is finished.

　　Tips:

　　If the zero drift of load cell excee ds the range of zero set-ups when power on, Zero can be calibrated again as calibration steps. When it is step 7, press [Tare] button for many times, and when indicator displays "ESC", press [PT] button to quit out.

　　Notice: incorrect operation – such as press [PT] button when displaying "$CAL-FS1$", it will turn into capacity-proofread step. So you must be careful when calibrating zero separately.

6.0 Choice and adjustment of analog output modes

Calibrating head must be inserted and then the calibration can be operated. It is only available when indicator possesses analog output module.

A. Choose and adjustment of output mode

Analog output can choose one of the following modes: 0－20mA、4-20mA、0-5V and 0-10V. Choose according to the following steps:

a.   Press [Fn] and [0] buttons simultaneously, indicator displays "Ϝ Ρ"

b.   Press [Fn] button for three times continuously, indicator displays "Ϝ Ϥ"

c.   Press [PT] button, indicator displays "Ϝ Ϥ Ι   Ρ", press [Fn] button to choose parameter.

   F4.1=0, current output 0－20mA;

   F4.1=1, current output 4－20mA;

   F4.1=2, voltage output 0-5V;

   F4.1=3, voltage output 0－10V;

d.   Press [Tare] button, when indicator displays "Ε Ϛ Ϲ" then press [PT] button to quit out. Turn it on again; analog output will work as chosen mode.

B. Choose corresponding weight range of analog output

Weight range of analog output can be from zero to maximum weight value, or any section between zero and maximum value. Set-up as below:

a.   Press [Fn] and [0] buttons simultaneously, indicator displays "Ϝ Ρ"

b.   Press [Fn] button for three times continuously, indicator displays "Ϝ Ϥ"

c.   Press [PT] button for two times continuously, indicator "Ϝ Ϥ Ϧ   Ω", press [Fn] button to choose parameter.

   F4.2=0, weight transducing range is from zero to maximum value. When it is zero, it corresponds to bottom of analog output. When it is maximum weight, it corresponds to top of analog output.

   F4.2=1, weight transducing range is any section between zero and maximum value.

d.   When F4.2=1, press [PT] button, indicator displays "AL XXXXX" ，and set corresponding value of bottom of analog output, press [Fn] and [0] buttons to change

value. Value can be any point between zero and maximum weight.

e. Press [PT] button, indicator displays "AH XXXXX"，and set corresponding value of top of analog output, press [Fn] and [0] buttons to change value. Value can be any point between zero and maximum weight, but it must be more than AL.

f. Press [PT] button for one time, and then press [Fn] button for one time, when indicator displays "E 5 C" press [PT] button to quit out. Turn it on again; analog output will work according to chosen weight transducing range.

C. Adjust bottom and top of analog output

Calibrating four analog outputs before delivery, thus choosing mode of analog output is enough when using it. Bottom and top of analog output can be changed if necessary, for example, you can set analog output range from 1V to 4.5V.

Testing adjusting value with high-precise voltage or current meter, or connect to the former machine to adjust it directly as well.

Adjustment steps:

a. Press [Fn] and [Tare] buttons simultaneously, indicator displays "F B".

b. Press [PT] button continuously, indicating prompt of adjusting items can be displayed circularly.

H L _ n Il : Coarse adjustment of analog output bottom
H L _ n : Fine adjustment of analog output bottom
A L _: Elaborate adjustment of analog output bottom
A L _A H _ n Il：Coarse adjustment of analog output top
H H _ n：Fine adjustment of analog output top
H H _：Elaborate adjustment of analog output top
   :

Under adjusting items, press [0] button to increase value or press [Tare] button to reduce value the required one and then press [Fn] button to quit out.

Adjustment just can affect current set-up analog output mode.

D. Reset of bottom and top of analog output.

Setting bottom and top of analog output as original value, when users adjust it to be disordered, it can be reset quickly.

Reset method:

a. Press [Fn] and [Tare] buttons simultaneously, indicator displays "F B";

b. Press [Fn] button continuously, indicator change to "L o A d d E F" and "F B";

c. Press [PT] button when displaying "L o A d d E F", turn it on again and the analog

output will be original analog quickly.

7.0 Indicator parameter selection

A. Turn into working parameters choice
  a. Press [Fn] and [0] buttons simultaneously, indicator displays "⊢ ꟼ"
  b. Press [Fn] button, indicator displays "Ϝ ㄹ"
  c. Press [PT] button, turn into parameter choice "F2.1", each param eter choice to select parameter by pressing [Fn] button. Press [PT] button to next parameter choice.
  d. Press [Tare] button for many times at any time, Press [PT] button to quit out when indicator displays "ESC"

B. Content of function F2 choice parameter
F2.1 to choose ADC transmitting speed rate
0＝7.5Hz；1=15Hz；2=30Hz；3=60Hz (available when turn it on next time)

F2.2 to tare
0=prohibition, 1=allowance   tare range 100%FS

F2.3 to clear to zero
0=prohibition
1=allowance   clear zero range ±4%FS ;
2=allowance   clear zero range ±10%FS ;
3=allowance   clear zero range ±20%FS ;

F2.4 set zero tracking range automatically
0=prohibition
1=allowance auto zero tracking 0.5d/second
2=allowance auto zero tracking 1d/second
3=allowance auto zero tracking 3d/second

F2.5 dynamic testing
0=prohibit dynamic testing
1=allowance dynamic testing sensitivity 0.5d
2=allowance dynamic testing sensitivity 1d
3=allowance dynamic testing sensitivity 3d

F2.6 numeric filter choice
Number stands for intensity of filter, number is the bi gger, filter is stronger, stable time becomes longer accordingly

F2.7 auto zero-set range when turn it on
1=auto zero-set range ±4%FS when turn it on
2=auto zero-set range ±10%FS when turn it on
3=auto zero-set range ±20%FS when turn it on

8.0 Relay output

In-built two-point relay output of transducer, action mode of relay can be set: 1 no action of relay, 2 weight separate selective mode, 3 fixed value mode

Weight separate selective mode:
1＃relay: weight   out 1 value, close
        weight ＞out 1 value, cut
2＃relay: weight ＜out 2 value, cut
        weight   out 2 value, close

Fixed value mode:
1＃relay: weight   out 1 value, cut
        weight ＞out 1 value, close
2＃relay: weight ＜out 2 value, cut
        weight   out 2 value, close

Set-up steps of relay output
a.   Press [Fn] and [0] buttons simultaneously, indicator displays "├ ┌"。
b.   Press [Fn] button for three times, indicator displays "├ ┶"。
c.   Press [Fn] button, indicator displays "1PXXXXX", XXXXX is comparative value out 1 of 1＃ relay output. Press [Fn] button to move glittering bits, press [0] button to change value.
d.   Press [PT] button, indicator saves out 1, and displays "2PXXXXX", XXXXX is comparative value of 2＃relay output. Press [Fn] button to move glittering bit s, press [0] button to change value.
e.   Press [PT] button, indicator saves out 2, and displays "F5.1   X", set mode of relay output. Press [Fn] button to choose parameters.
    0: no action of relay
    1: weight separate selective mode
    2: fixed value mode
    If users do not use relay output function, recommend you to set it to be zero
f.   Press [PT] button, indicator displays "Ε �5 Γ"
g.   Press [PT] button to quit out

9.0 Serial interface setup

Serial interface can set to command mode or continuo us transmit mode. Baud rate can choose 1200, 2400, 4800 or 9600.

Note: The original mode is continuous transmit mode, it can be changed to command mode according to user's needs.

A. Set-up steps

a. Press [Fn] and [0] buttons simultaneously, indicator displays "Ⱶ ⲣ"
b. Press [Fn] button for two times, indicator displays "Ⱶ ∃"
c. Press [PT] button, indicator displays "F3.1   X", parameter X stands for baud rate, press [Fn] button to choose parameters:
   F3.1=0, 1200 baud rate
   F3.1=1, 2400 baud rate
   F3.1=2, 4800 baud rate
   F3.1=3, 9600 baud rate
d. Press [PT] button, indicator displays "F3.2   X"
   F3.2=0, command mode
   F3.2=1, continuous transmit mode
   Press [Fn] button to choose parameters
e. Press [PT] button, indicator displays "F3.3   XXX"
   XXX means the address of this indicator when multi-indicators are communicated together, press [0] or [Tare] to amend present address.
f. Press [PT] button, indicator displays "F3.4   X"
   0: Transmit the weight data
   1: Transmit the number of division of the weight data
   Choose "1" when the weight data includes decimal or the weight is bigger than 32767kg.
g. Press [Tare] button for many times, and press [PT] button to quit out when indicator displays "Ⱶ ㄅ ㄴ

Please contact KELI if you want to get the protocol of multi -indicator's communication. KELI also can make custom -built protocol per customer's request.

B. Choose assemble ways
Serial interface receive data by two ways: RS232 and RS485, and change wire position on circuitry board and choose one.

Open transducer backboard, pull out circuitry board slightly. In the middle of board there is a three wire pin marked J501, sideward number is the serial number of pin. Short block

insert on 1-2 feet to choose RS232 to receive data, and insert on 2-3 feet to choose RS485 to receive data.

10.0 Power on self test information

Turn on the indicator after all the system be connected, firstly indicator displays number "0"－"9", and then displays analog output mode.
0-20 stands for 0-20mA output
4-20 stands for 4-20mA output
0-5 stands for 0-5V output
0-10 stands for 0-10 output

When serial interface chooses continuous transmit data, it can displays pre-set baud rate. Finally indicator displays "   ", to catch zero, if weight data is unstable or no connection to load cell, indicator will keep this situation for a long time.

11.0 Prompt examinations for some parameters

Press [Fn] button to examine some parameters in normal working. Every time press it, contents of one item will be displayed. If it keeps on some contents more than 6 seconds, it will return to normal working state automatically.

Content "1PXXXXX" is displayed first, it is comparative value of 1＃relay action. And then content "2PXXXXX"is comparative value of 2 ＃ relay action. "ALXXXXX"is corresponding weight value of bottom of analog output, and "AHXXXXX" is corresponding weight value of top of analog output.

12.0 Error indicating information

E1: overload of excitation loop or short circuit of load cell
E2: restriction for button operation, operating weight calibration under hardware protection
E3: restriction for button operation, change mode of analog output under hardware protection
E4: parameters are incorrect when calibrating, uV value of each division is less than 0.6uV.
E5: restriction for button operation, adjust bottom and top of analog output under hardware protection

13.0 Maintenance of indicator

A. Regular maintenance

Tiny maintenance is needed. In clean environment, maintenance for one time each year is enough. But in dirty environment, times for maintenance should be increased accordingly. Soft cloth can be used to clean the board. Any industrial solvent and scour must not be used to spray indicator. Meanwhile, pay attention to dust and water in daily use.

If interior circuitry board needs cleaning, power supply must be turn off. After that open the outside box, and blow dust off from the board with dry high -pressure air.

B. Malfunction resolve

Phenomenon 1: Nothing is displayed after transducer is electrified.

Solution: 1. Check power supply

2. Check fuse

Phenomenon 2: Indicator displays "E1"

Solution: 1. Check load cell plug if it is short circuit

2. Check signal wire and junction box cable if they are damaged or short circuit

Phenomenon 3: After Self Test, indicator displays "   "all the time

Solution: 1. Check load cell plug if its connection is well

2. Check voltage if it is in the right range

Phenomenon 4: No analog output

Solution: 1. Check mode of analog output if it is correct

2. Check wire connection of analo g output end if it is correct

3. Turn to set-up choice 6.3 adjustment of bottom and top of analog output, to check if corresponding analog value of analog output bottom and top is correct

Phenomenon 5: No data of serial interface

Solution: 1. Check if baud rate is the same as that of former machine.

2. Check if serial interface is continuous transmit mode

Phenomenon 6: No action of rely

Solution: 1. Check comparative value of out 1 and out 2

2. Check working mode of relay (not work, weight separate selec tion or fixed mode)

Index: Calibrating head information

Calibrating head provides safeguard for hardware to avoid incorrectly changing some parameters which need to be locked when normal operation. At the same time, when changing parameters, using D type 9 wire plug and connecting 7 and 8 feet together is enough, the outside box needn't to be opened. A calibrating head will be delivered together with indicator to customers. If it is lost, the customers can make it by themselves according to the above instruction.

Appendix: Communication protocol

XK3101 supports master-slave mode communication, and can connect several indicators with one RS485 bus wire, and XK3101, as a slave device, can respond the instruction from master device.

Data Format

Master device instruction:

Instruction packet	Byte0	Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7	Byte8
Content	0X02	ADDR	WORD0		COMM0	COMM1	BCC	0X0D	0X0A
Definition	Start symbol	Communicator address	Preset point value (Remarks:1)		Command (Remarks: 2)		Sum verify (Remarks:3)	Enter	Line break

Remarks: 1: WORD0 is an Integer which has symbol, range is -32768~32767, Byte2 is high byte, Byte3 is low byte. The Preset point value can be practical weight（F3.4=0）or the division of the weight.（F3.4=1）.

Remarks: 2:

A Command byte   COMM0(Byte4)

Bit	Definition
0	1: While XK3101 is loaded with preset point 1、2, XK3101 will reserve this value permanently. 0: While XK3101is loaded with preset point 1、2, XK3101will not reserve this value permanently, and will resume previous preset point after be power on again
1	Undefinition
2	Undefinition
3	Undefinition
4	Undefinition
5	Undefinition
6	While this bit be changed from 0 to 1, character 1 will be loaded into XK3101 as preset point 2 Remarks: Preset point 1 value will not be reserved permanently unless is written via bit 0 of this byte.
7	While this bit be changed from 0 to 1, character 1 will be loaded into XK3101 as preset point 2 Remarks: Preset point 1 value will not be reserved permanently unless is written via bit 0 of this byte.

B Command byte COMM1（Byte5）

Bit	Definition
0	000: request（XK3101）transfer Weight
	001: request（XK3101）transfer Net weight
1	010: request（XK3101）transfer Display weight
	011: request（XK3101）transfer Tare weight
	100: request（XK3101）transfer Preset point 1 value
2	101: request（XK3101）transfer Preset point 2 value
	Others: Undefinition
3	Undefinition
4	While this bit be changed from 0 to 1, XK3101 executes the command of Clean the preset tare weight
5	While this bit be changed from 0 to 1, XK3101 executes the command of Tare
6	Undefinition
7	While this bit be changed from 0 to 1, XK3101 executes the command of Zero Clean

Remarks 3: Sum verify means the low byte of the sum of Byte0~Byte5.

Return data of indicator

Data packet	Byte0	Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7	Byte8
Content	0X02	ADDR	WORD0		State0	State1	BCC	0X0D	0X0A
Definition	Start symbol	Address	Weight or Present point value (Remarks 1)		Status (Remarks 2)		Sum verify (Remarks 3)	Enter	Line break

Remarks 1: WORD0 is an Integer which has symbol, range is -32768~32767, Byte2 is high byte, Byte3 is low byte. WORD0 is Weight value or Preset point value, this value also can be practical weight （F3.4=0）or the division of the weight.（F3.4=1）

Remarks 2:

A Byte of status information State0（Byte4）

Bit	Definition
0	Undefinition
1	Undefinition
2	Undefinition
3	Undefinition
4	1: Scale dynamic 0: Scale stable
5	1: Net weight status 0: Gross weight status
6	Undefinition
7	Undefinition

B Byte of status information State1（Byte5）

Bit	Definition
0	Preset point 1 Output status
1	Preset point 2 Output status
2	Undefinition
3	Undefinition
4	Undefinition
5	Undefinition
6	Undefinition
7	Undefinition