Value Each Gram A professional weighing products manufacturer and supplier

VALUE EACH GRAM
HiWEIGH

Weight Indicator **K7**

User Manual

v.202107

Before Use

Safety precautions

WARNING!

Do not use K7 weighing indicator in hazardous area! Do not use it within areas classified as hazardous division 1/2 or zone 0/1/2/21/22 because of combustible or explosive atmospheres.
Never immerse it in corrosive chemical liquid.

Static sensitive device, it must be handled only by qualified technicians.Improper handling may damage the circuit card and the device, which is not covered by the warranty.

DANGER!

Electric shock hazard!
Make sure the indicator is grounded well.
Always unplug AC cable before performing any service work on the indicator! And wait for at least 30 seconds before any operation on the indicator.

Disposal

In conformance with the European Directive 2002/96/EC on Waste Electrical and Electronic Equip - ment (WEEE), this device may not be disposed of in domestic waste. This also applies to countries outside the EU .The battery contains heavy metals. Please observe the local regulations on the disposal of environmentally hazardous materials.

Thank you for selecting and purchasing our K7 weight indicator, this indicator provides a compact and flexible solution for a variety of weighing needs.

Various housing and different protection:

1. K7 – ABS+PBT, IP67
2. K7S – Stainless steel, IP65 or IP54
3. K7P – Stainless steel (with printer), IP54
4. K7A – ABS, IP43

Various power choices:

100-240V AC power cord or 12V AC/DC adapter
6V4Ah Rechargeable Battery

Big FSTN LCD display which can assure a clear read from any side, perfect for both indoor or outdoor use.
Multi-units of kg/lb, g/oz Exchange | Checkweigh | Counting | Accumulating | Animal Weighing | x10 Resolution

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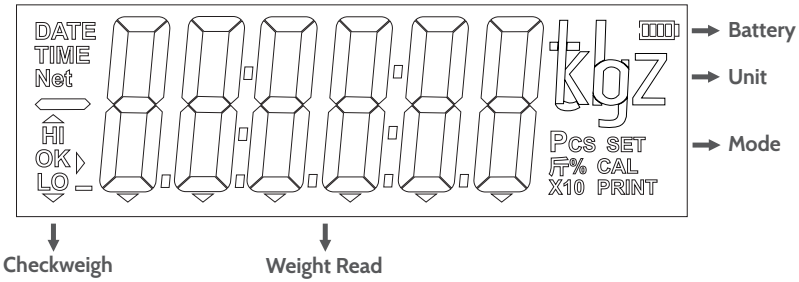
1.Packing List

After the weighing indicator received, please open the box carefully and check the following items included:

Indicator	x 1
S.S bracket with screws	x 1 (K7A without)
Connector and screw bag	x 1
Manual	x 1
Pole holder	x 1
Other parts	depend
AC/DC adapter	12V

2.LCD Display

1.35" FSTN LCD with backlight, clearly read even in the bright sunlight.



3.Standard Operation

3.1 Switch On/Off

Press [ON] key to turn on the indicator
Press [OFF] key to turn off the indicator

3.2 Zero →0←

If the indicator not on zero point and the weight value <2%F.S., press [→O←] key to zero the scale, and the zero arrow will display

3.3 Tare →T←

Manual Tare:
Put the container on the scale (weight>0) and after the read stable (also the tare arrow not appear), press [→T←] the scale will remove the weight read and record as tare, and the scale will display the net weight, press [→T←] again, it will display the gross weight (tare + net weight)

Repeat Tare:
After the first tare operation, put the 2nd weight on the scale, press [→T←], it will display the gross weight of 1st+2nd weight and press [→T←] again, it will take that gross weight as new tare weight and start the new net weighing operation.

Remove Tare:
When the net weight display and the tare arrow appears, press [→T←], it will remove the tare value and display the gross weight, and the tare arrow disappears.

Auto Tare:
When the user function (AUT) set to be 10 or 11 and the weight reach to the valve value as it set, the scale will do tare automatically, refer to AUT configuration.

3.4 Print PT

In manual print/accumulate mode, when the weight value >20d and stable, press [PT], it will print the weight bill, and it can be printed once again if you press [PT] again.

3.5 Accumulate and Print M+

In manual print/accumulate mode, when the weight value >20d and stable, press [M+], it will print the weight receipt and accumulate to the record (also it will display the accumulation times like [n 12]), next print/accu - mulating available only after the weight value <20d.

3.6 Weight Unit Exchange/ User Function Set FN

Long press [FN] key for 2 seconds to exchange between the 1st unit and 2nd unit.Kg and lb, g and oz, t only. Enter function during parameter configuration.

4. Accumulated Record Retrieve and Clean

(In weighing mode)

Operation	Display	Explanation
Long press [M+]	[n 12]	Display accumulated times
Press [↑]	[H 3]	Display the first 4 digits
Press [↑]	[L506.5]	Display the following 4 digits, accumulated weight=3506.5
Press [↓]	[n 12]	When it displays the accumulated times, press [↓] to clean the accumulated record
Press [FN]	[0]	Return to weighing mode

5. User Setting Menu

Press [FN]	[Aut 00]	Weighing mode set
Press [FN]	[000200]	Auto tare valve value (when Aut=10 or 11)
Press [FN]	[PrInt]	Communication, printing format and percentage set
Press [FN]	[PErC]	Set weight value for percentage weighing (100%)
Press [FN]	[SEtP]	Set setpoints
Press [FN]	[PCS]	Set sample quantity (Aut=07)
Press [FN]	[0.002]	10 times resolution
Press [FN]	[0.00]	Return to weighing mode

6. Weighing Mode Set

Operation	Display	Explanation
Press [FN]	[Aut 00]	User function set
Press [→] Press [↑] or [↓] Press [FN]	[Aut 01]	00: Normal weighing mode, manual print/accumulate 01: Normal weighing mode, automatic print/accumulate after the weight stable, auto arrow appears 02: Normal weighing mode, automatic save the weight value, and print/accumulate it after the load < 20d and auto arrow appears 03: Dynamic weighing mode, automatic print/accumulate after the weight <20d, auto arrow appears 04: Peak hold mode, automatic print/accumulate after the weight <20d, auto arrow appears 05: Dynamic weighing mode, manual print/accumulate 06: Peak hold mode, manual print/accumulate 07: Counting mode, manual print/accumulate 08: Positive/Negative weighing, use for testing the tension or compression force 09: Minus weighing mode 10: Automatic tare mode 11: Continuous automatic tare mode Modify the mode and push [FN] to confirm

Press [FN] Press [↑] or [↓] to modify	[Aut 03] [t 3]	If the Aut=03 or 05, there is the time set for dynamic weighing (average weight during the set time) After set done, press [FN] to confirm.
Press [FN]	[0]	Return to weighing mode

7. Communication | Print Configuration

Operation	Display	Explanation
Press [FN]	[Aut 00]	Weighing mode selection
Press [FN]	[PrInt]	Communication, printing set
Press [→] Press [↑] or [↓] Press [FN]	[Adr 00]	Communication address selection
Press [→] Press [↑] or [↓] Press [FN]	[b1 24]	COM1 baud rate select: 24=2400 48=4800 96=9600 144=14400 192=19200
Press [→] Press [↑] or [↓] Press [FN]	[CHE1 n]	COM1 Check mode n: None E: Even check O: Odd check S: Always 0 A: Always 1
Press [→] Press [↑] or [↓] Press [FN]	[C1 Ct1]	COM1 Output Ct1: Continuous output Cnd: Command (Modbus) F1: Print format 1 F2: Print format 2 F3: Print format 3 Ct2: Stable output(when Aut=01) Ct3: Continuous output (format = Ct2)
Press[→] Press [↑] or [↓] Press [FN]	[b2 24]	COM2 baud rate select: 24=2400 48=4800 96=9600 144=14400 192=19200
Press [→] Press [↑] or [↓] Press [FN]	[CHE2 n]	COM2 Check mode n: None E: Even check O: Odd check S: Always 0 A: Always 1
Press [→] Press [↑] or [↓] Press [FN]	[C2 Ct1]	COM1 Output Ct1: Continuous output Cnd: Command (Modbus) F1: Print format 1 F2: Print format 2 F3: Print format 3 Ct2: Stable output(when Aut=01) Ct3: Continuous output (format = Ct2)

Press [→] Press [↑] or [↓] Press [FN]	[dF 2]	Date format 0 = d/m/y 1 = m/d/y 2 = y/m/d
Press [→] Press [↑] or [↓] Press [FN]	[tIt 2]	Printing head 0: None 1: On top 2: On bottom 3: Both (top and bottom)
Press [↑] or [↓], press[→] Press [PT] or [ON] to next letter Press [FN] to end	[00¯077] [01 ¯ 079] .... [25 ¯ 255]	Top head input (total 64 letters): 00: The sequence of letter 087: ASCII code, 087 represents M, 079 represents O... (refer to appendix I) and input 255 to end the head
Press [↑] or [↓], press[→] Press [PT] or [ON] to next letter Press [FN] to end	[00¯077] [01¯079] .... [25¯255]	Bottom head input (total 64 letters): 00: The sequence of letter 087: ASCII code, 087 represents M, 079 represents O... (refer to appendix I) and input 255 to end the head
	[0.0]	Configuration saved and back to weighing mode

8. Percentage Weighing

Operation	Display	Explanation
Press [FN]	[Aut 00]	Weighing mode selection
Press [FN]	[PrInt]	Communication, printing format and percentage set
Press [FN]	[PErC]	Set weight value for percentage weighing (100%)
Press[→], press [↑] or [↓] Press [FN]	[3000]	Input the weight value for 100% index
	[0.0]	Back to the weighing mode

Note: Percentage weighing available only when Aut=00, and long press [→T←] for 2 seconds to start the percentage weighing mode.

9. Setpoints

For instructions on setpoints, please refer to **17.Setpoint Output**

Operation	Display	Explanation
Press [FN]	[Aut 00]	Weighing mode selection
Press [FN]	[PrInt]	Communication, printing format and percentage set
Press [FN]	[PErC]	Set weight value for percentage weighing (100%)
Press [FN]	[SEtP]	Set setpoints
Press[→] Press [↑] or [↓] Press [FN]	[oP 0]	Setpoints mode: oP=0: no output oP=1: 2 setpoints output oP=2: 4 setpoints output (for 3-LED alarming lights) oP=3: 4 setpoints output
Press [FN]	[r00050]	When the fixed output starts weighing, the fixed output does not work.

Press[→] Press [↑] or [↓] Press [FN]	[ALA 0]	Beeper working mode: ALA=0: No beep ALA=1: It beeps when the weight out of range (Hi/Lo, stable) ALA=2: It beeps when the weight within range (OK, stable)
Press[→] Press [↑] or [↓] Press [FN]	[A00500] [000000] [000200]	A setpoint input
Press[→] Press [↑] or [↓] Press [FN]	[b00700] [000000] [000300]	B setpoint input
Press[→] Press [↑] or [↓] Press [FN]	[C01000] [000000] [000400]	C setpoint input
Press[→] Press [↑] or [↓] Press [FN]	[D01200] [000000] [000500]	D setpoint input
	[0.0]	Back to the weighing mode

10. Counting

10.1 Sampling

Put the sample on the scale (if the scale is not zero, please zero or tare the scale firstly) and it's more precise if there are more samples counted (1-999)

Operation	Display	Explanation
Put the sample on the scale	[26.0]	Display the weight of the sample
Press [FN] Press [→] Press [↑] or [↓]	[Aut 00] [Aut 07]	Select Aut=07 (counting mode)
Press [FN]	[PrInt]	Communication and printing set
Press [FN]	[PErC]	Set weight value for percentage weighing (100%)
Press [FN]	[SEtP]	Set setpoints
Press [FN]	[PCS]	Set the number of sample, this menu appears when Aut=07
Press [→] Press [↑] or [↓]	[Cnt000] [Cnt030]	Input the sample number Example = 30
Press [FN]	[C 30]	Save the sample number Ready for counting operation

10.2 Counting

After sampling saved, put the goods on the scale, it will display the quantity of the goods, like [C 108], press [ON] key to shift the display between the quantity or the weight of the goods, and after the weight stable, press [PT] to print the receipt or accumulated receipt.(Requires to set output in print format)

10.3 Counting Records and Clean

Operation	Display	Explanation
	[C 108]	In counting mode
Long press [M+]	[n 8]	Display the accumulated times
Press [↑]	[C 532]	Display the total quantity
Press [FN]	[C 108]	Back to counting mode
Press [↓]	[n 8]	When it displays the accumulated times, press [↓] to clean the accumulated value and back to counting mode

11. Positive/Negative Weighing

(Aut=08)
In this mode, the indicator can accept the positive or negative signal, when it displays the positive weight, tare operation is available, when it displays the negative weight, the tare operation can't access. Accumulating and printing is unavailable for this mode.

12. Minus Weighing

(Aut=09)
In this mode, the indicator will display the removed load.
Put the object on the scale, long press [→O←] to zero the scale, now remove the object and the scale will display the removed weight. Tare/Accumulate/Print is available for this mode.

13. Automatic Tare

After Aut=10 or 11 configured, press [FN], it will display the valve value [000200], set the value by [→] [↑] or [↓], if the decimal point set as 0.0, the [000200]=20.0

(Aut=10) Auto Tare
In this mode, when the weight > the valve value, it will do tare automatically.
When the scale back to zero (empty), it will clean the tare automatically.

(Aut=11) Continuous Auto Tare
In this mode, when the weight > the valve value, it will do tare automatically, and now put more objects on the scale, and after the weight stable, press [PT] or [M+] to print or accumulated print, the scale will do tare again by itself.
When the scale back to zero (empty), it will clean the tare automatically.

14.Clock Adjust

When it display time or date, press [↑] to shift display of time or date.

Operation	Display	Explanation
	[27]	In weighing mode
Long Press [PT] Press [→], press[↑] or [↓]	[00:00:80] [09:30:01]	Display time (hour/minute/second) After modifying, press [FN] to confirm
Press [↑] Press [→], press[↑] or [↓]	[00.01.01]	Press to [↑] display the date After modifying, press [FN] to confirm
Press [FN]	[0.0]	Back to the weighing mode

15.Weight Record Retrieve and Print

Operation	Display	Explanation
	[27]	In weighing mode
Long Press [M+]	[n 8]	Display the accumulated times
Press [→] Press [↑] or [↓]	[000008]	Input the serial number of the weight record
Press [FN]	[r 2]	Display the sequence number of that record
Press [PT]	[r 3]	Display the next record
Press [ON]	[r 2]	Display the previous record
Press [↑]	[16.06.03]	Display the date of that record
Press [↑]	[14:53:02]	Display the time of that record
Press [↑]	[30.06]	Display the gross weight of that record
Press [↑]	[20.00]	Display the tare weight of that record
Press [↑]	[10.06]	Display the net weight of that record
Press [↑]	[153]	Display the quantity of that record (for counting)
Press [FN]	[27.00]	Push [FN] to return to weighing mode during any data display (date-time-gross weight-tare weight-net weight-quantity)
Press [PT]	[16.06.03]	Press [PT] to print the record during any data display (Requires to set output in print format)
Press[→] Press [↑] or [↓]	[b 0001]	Press [→] to input the start number of the records (for retrieve)
Press [FN]		
Press[→] Press [↑] or [↓]	[E 0008]	Input the end number of the records (for retrieve)
Press [FN]	[27.00]	It will print all records from 0001 to 0008 and back to weighing mode after the printing ends. (Requires to set output in print format)

16.Communication Protocol

Byte format: 8 bits; if there is check bit, it's the first digit; one stop bit
Output format:

1.Continuous format (Ct1, Ct2, Ct3): if the display weight = -123.45

Ct1: no matter the weight stable or not, output continuously:

Adr=00-98: =54.3210-=54.3210-=54.3210-...

Adr=99: =-0123.45=-0123.45=-0123.45...

Ct2: When the weight stable, output the following ASCII code:

A B CCCCCC D EE F G

02, 2D, 30, 31, 32, 33, 2E, 34, 35, 20, 6B, 67, 47, 0D

A	B	C	D	E	F	G
Start 0x02	Sign >=0, 0x20 (space) <0, 0x2D (-)	Weight include decimal point	Space 0x20	Unit kg/lb/t	G/N	Enter 0x0D

Ct3: No matter the weight stable or not, continuous output the Ct2 data.

2.Command (Cnd)

COM1: Modbus

COM2: Handshaking, the computer send the request (ASCII) as below:

P – print gross/tare/net weight

G – Print gross weight

B – Print tare weight

N – print net weight

A – Print quantity

Z – Zero

T- Tare

C – Clean tare

3.Print format (F1)

Weighing Bill	Counting Bill (Aut=07)
HIWEIGH TECHNOLOGIES	HIWEIGH TECHNOLOGIES
03-06-2017	03-06-2017
14:58:26	14:58:26
No.0002	No.0002
G: 7.73kg	G: 7.73kg
T: 4.82kg	T: 4.82kg
N: 2.91kg	C: 54pcs

4.Print format (F2)

Weighing Bill	Counting Bill (Aut=07)
No.0002 03-06-2017 14:58:26 7.73kg	No.0002 03-06-2017 14:58:26 7.73kg 54pcs

5.Print format (F3)

Weighing Bill
0002 03-06-2017 14:58:26 7.73kg 4.82kg 2.91kg
Counting Bill (Aut=07)
0002 03-06-2017 14:58:26 7.73kg 4.82kg 2.91kg 54pcs

6.Accumulated format

Weighing Bill	Counting Bill (Aut=07)
03-06-2017 14:58:26 No.0002 S: 25.02kg	03-06-2017 14:58:26 No.0002 C: 108pcs S: 25.02kg

7.Countinous ouput (Ct4)

Send continuously regardless of stability. If the screen shows 12.34kg, send: ST,+00012.34kg

8.Manually output (FC1)

Press [PT] to send, the format is the same as CT1

9.Manually output (FC3)

Press [PT] to send, the format is the same as CT2

10.Manually output (FC4)

Press [PT] to send, the format is the same as CT4

11.Countinous ouput (Ct5)

Send continuously regardless of stability, the format is the same as Fox's Ct1

17.Setpoints Output

A B C D 4 setpoints, A<B<C<D
Relay board optional, not included in standard package

24.1oP=1 (2 relay output 1# and 2#)

W<A or W>D: Hi/Ok/Lo LED lights off and no relay output
A¯W¯B: Lo LED on, 1# relay output
B<W<C: OK LED on, no relay output
C¯W¯D: Hi LED on, 2# relay output

Relay connecting (sharing with RS232C DB9 interface):
Pin6 & pin7: 1# relay NO (normally open)
Pin8 & pin9: 2# relay NO (normally open)

24.2oP=2 (4 relay output 1#, 2#, 3# and 4#)

If connecting to the 3-LED alarming lights:
1# - yellow, 2# - green, 3# - red, 4# - beeper

W<A: Lo LED lights on, 1# and 4# relay output
A¯W<B: Lo LED on, 1# relay output
B¯W¯C: OK LED on, 2# relay output
C<W¯D: Hi LED on, 3# relay output
W>D: Hi LED on, 3# and 4# relay output

Relay connecting (sharing with RS232C DB9 interface):

Pin1: COM
Pin6: 1# relay NO (normally open)
Pin7: 2# relay NO (normally open)
Pin8: 3# relay NO (normally open)
Pin9: 4# relay NO (normally open)

24.3oP=3 (4 relay output 1#, 2#, 3# and 4#)

W¯A: Lo LED lights on, 1# and 2# relay output
W¯B: Lo LED on, 2# relay output
B¯W¯C: OK LED on
W≥C: Hi LED on, 3# relay output
W≥D: Hi LED on, 3# and 4# relay output

Relay connecting (sharing with RS232C DB9 interface):

Pin1: COM
Pin6: 1# relay NO (normally open)
Pin7: 2# relay NO (normally open)
Pin8: 3# relay NO (normally open)
Pin9: 4# relay NO (normally open)

VALUE EACH GRAM

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