JWI-700B Series

Weighing Indicator

User Manual

Content

Appendix 1:   Printing format (Optional)

1. Introduction

Thanks for purchasing the JWI-700B Series weighing indicator. Please read the manual completely before installation and operation.

2. Precautions

- Place the indicator on a flat and stable surface.
- Verify that the input voltage and the plug type match the local AC power supply, see 3-4.
- Over 2 years without using the scale for the first time, please charging fully before utility.
- Please cut off the charging power after the battery is fully charged.
- If the charge indicator indicates red light (24 hours or more) when the battery is charged, please check the scale or replace a new battery.
- Warm up for 15 minutes before using it at the first time.
- Battery lifetime is about 1 year. Please replace a new battery once it's damaged.
- Keep the indicator away from EMI noise, strong wind and vibration, which might cause incorrect reading.
- Avoid sudden temperature changes (suitable operating temperature is between 0℃~ 40℃.)
- Disconnect the power supply when cleaning the indicator with wet cloth.
- Do not immerse the indicator in water or other liquids.
- Service should be performed by authorized personnel only.

3. Product Introduction

3-1 Specifications & Features

Specifications

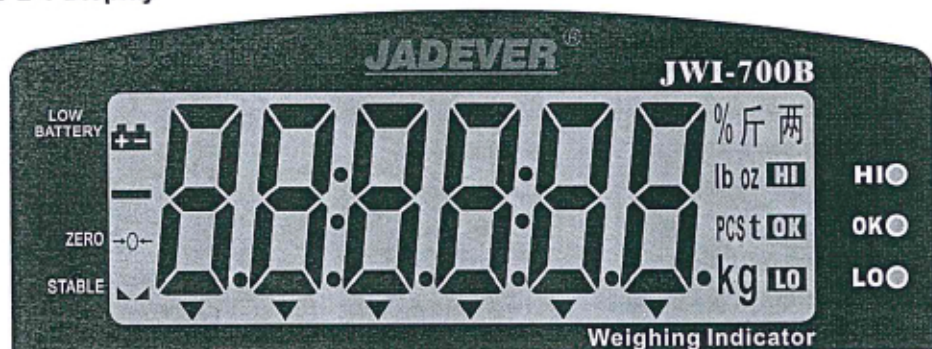| Model	JWI-700B
Input sensitivity	0.2 uV/DIV
Input voltage range	-2 mV ~20 mV
Load cell excitation	DC 5V, Up to 4 ×350 ohm load cells
Non-linearity	0.007% of full capacity（assure of 15000 accuracy）
Input impedance	More than 10×10^6 ohm
A/D conversion mode	$\triangle$-Σ
A/D internal resolution	700,000 count
A/D conversion speed	10 times/second
External display resolution	15000 count
Display	6 digits

Power supply	AC 100V~240V or Rechargeable battery（6V/4A）
Certification	CE

Features

- Simple operation: pre-tare, manual tare, check weighing, simple counting, gross or net weight switchable, weight accumulation and display one by one.
- Large LCD display with 51mm*19mm digits and with white LED backlit.
- Adjustable capacities, resolutions（division is from 300 to 300000.
- Suitable for a wide range of bases and load cells.
- Adjustable filtering level for weighing under various conditions.

3-2 Front Panel
3-2-1 Display

Low battery indication

Turn to zero indication. The range of turning to zero is in 2% of scale full capacity.

Stable indication

Units of measurement

HI The weight on the weighing pan is greater than the upper limit(with HI lamp on)
OK The weight on the weighing pan is between upper and lower limits.(with OK lamp on)
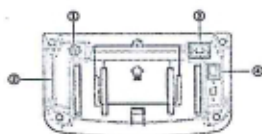LO The weight on the weighing pan is smaller than lower limit. (with LOW lamp on)

3-2-2 Keyboard

◄/M+/MR	1. Adds the indicated weight into accumulation memory
	2. Long press to enter into Memory recall
	3. Shift keys leftwards
+/PRINT/HI	1. During setting value, add 1 to the current value
	2. Manual print
	3. Long press to set the upper limit of the weighing check
-/G/N/LO	1. During setting value, deduct 1 to the current value.
	2. Displays gross and net weight by turns.
	3. Long press to set the lower limit of the weighing check
TARE/ ►	1. Tares the weight of the container or accepts the keypad tare entries
	2. Long press to enter pre-tare
	3. Shift keys rightwards
ZERO/ESC	1. Reset zero point
	2. Press one time to exit
	3. Long press to exit from certain operation without save
UNIT/SET	1. Units change
	2. Long press to set parameters

3-3 Rear Panel

1. Port for connecting load cell
2. RS-232 port: Serial interface port (computer, printer, Light Tower and Large LED display)
3. Power socket
4. Power ON/OFF switch

3-4 Power supply

1) AC 100V~240V

2) (6V/4A) Internal Rechargeable Battery

Power Consumption

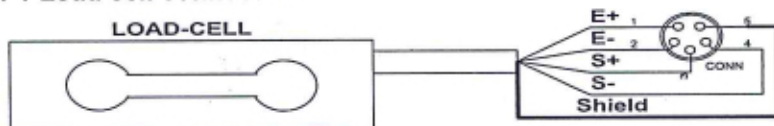About 130 hours without backlight

About 60 hours with backlight

Low battery warning

When "➕➖" appears in the upper left corner of the weight window, the battery power requires recharging. The charge lamp turns green from red when the recharging is completed (which

takes about 8 hours). Disconnect the scale from power supply once it is fully charged.

Note: Battery is to be replaced only by an authorized service dealer .Risk of explosion can occur if replaced with the wrong type or connected improperly.
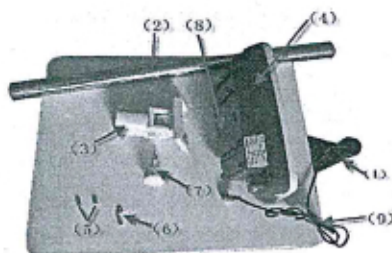
4. Installation

4-1 Load cell connection

	PIN	SIGNAL
LOAD CELL	1	E+
	2	E-
CONNECTION	3	S+
	4	S-
	5	SHIELD

4-2 Assembly Description of Upright Pole

(1) Rod seat

(2) Upright pole

(3) Racket

(4) Indicator

(5) Screw (for fixing the upright pole)

(6) Screw (for fixing bracket)
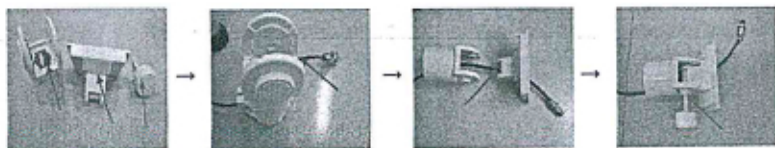
(7) Knob pole

(8) Bracket slot

(9) Load cell wire

Step 1: Thread the wire of the Load Cell (9) on the rod seat (1) through the upright pole (2). Insert The upright pole into the rod seat and then Lock it with two screws (5).

Step 2: After threading the Load Cell wire through the bracket (3), attach the bracket to the upright pole and then lock it with the screw (6).

Note: if the load cell connector is too big to thread through the bracket, then separate the bracket by removing the knob pole (7), see the following pictures.

Step 3: Install the Indicator (4) on the bracket, with the bracket aligning with the bracket slot (8) of the indicator.

Step 4: After connecting load cell connector to load cell port, the installation is completed.

Note: Use the knob pole (7) to adjust the inclination angle of indicator and the screw (6) to adjust direction of indicator. Please lock the screw after adjusting the indicator to an optimal position.

5. Setting Mode

5-1 Maximum Weighing Capacity & Division Setting

1. Press key TARE/ ► and key ZERO/ESC to power on, then enter into capacity setting and it displays " 300.00 kg ".

2. Method 1: press key +/PRINT/HI or key -/G/N/LO to choose common used value, press key ◄/M+/MR or key TARE/ ► to shift decimal point leftward or rightward, press key UNIT/SET to choose unit: kg, g, t, lb or 台斤.

   Method 2: If the capacity needed is not within the default common used value, long press key UNIT/SET to enter into capacity free setting mode while the number leftest blinking; Press the key ◄/M+/MR or key TARE/ ► to shift key leftward or rightward; Press key +/PRINT/HI or -/G/N/LO to change the value or shift the decimal point; Press key UNIT/SET to choose kg, g, t, lb or 台斤.

   Press the key ZERO/ESC to save and enter into division setting, while long press key ZERO/ESC to return to weighing condition without saving.

3. The window displays *0.02kg* when entering division setting after finishing capacity setting.

4. Model 1: Press key `+/PRINT/HI` or key `-/G/N/LO` to choose division; Press key `◄/M+/MR` or key `TARE/ ►` to shift decimal point leftwards or rightwards.

   Model 2: If the division needed is not within the default common used value, long press key `UNIT/SET` to enter into division free setting based on the principle of 1/2/5 minmum division while the number rightest blinking; Press key `◄/M+/MR` or key `TARE/ ►` to shift leftwards and rightwards; Press key `+/PRINT/HI` or key `-/G/N/LO` to change the value or shift the decimal point.

   Press key `ZERO/ESC` to save and enter into the calibration setting while press key `ZERO/ESC` to return to capacity setting without saving.

5. The window displays "*CAL*" when entering the calibration setting after finishing division setting. Press `TARE/ ►` to enter calibration setting. Press `ZERO/ESC` to return to weighing condition without saving.

5-2 Function Setting

1. Press key `UNIT/SET` to power on, or long press key `UNIT/SET` under normal weighing mode to enter function setting.

2. Press key `◄/M+/MR` or key `TARE/ ►` to shift between the functions.

3. Press key `UNIT/SET` to enter the parameter setting.

4. Press key `◄/M+/MR` or key `TARE/ ►` to shift between the function parameters.

5. Press `ZERO/ESC` to save and return. Long press `ZERO/ESC` to exit without saving.

6. Press `ZERO/ESC` toreturn to weighing condition.

5-3 Description of Parameter Values

1. ⌠ℏℇℇℏ Offset value Displays the offset value and the keypad testing can be conducted.

2. ⌠ⁱ℧℟ℇ Backlight mode

   Off: No backlight

   Auto: when weight value is stable or any key is pressed. But auto off after N seconds (N=2s, 5s, 10s, 20s, ever) with no action

   Ever= It is always on when the weights over 9e

   On: Backlight on

3. ℏ℧⌠℧ Auto-off

   Off : Non power off

5, 10, 30, 60(less than 9d of gross weight) : Auto power off when "------" appears after keeping the scale unused for **5, 10, 30, 60**(minutes).

4. **ūn iC Unit setting**

Init : Press key **Unit** to select the default unit when powering on the scale: pcs, FT, lboz, g, kg, final .(Final = keep the final being used unit when power off)

Use: Press key **Unit** to select the using unit. **on** : Enable the unit   **off** : Disable the unit

Note: press UNIT/SET to choose unit, and press ◀/M+/MR or TARE/ ▶ to start or close.

5. **řĿrŌ Zero range**

d0, d1, d2, d3, d4 and d5 (d= scale division)

d0: the first division can be shown;

d1: 2times of division could be shown and it shows 0 when place the first division weight. d2~d5 are the like.

6. **Ĺ ĥɪ Check weighing memory**

on : Check weighing on when reboot   **off** : Check weighing off when reboot

7. **ĹĥȘĹ Check weighing function**

On: Check weighing under the condition that the weight is within the limits and the stable indication appears.

Off: Check weighing under the condition that the weight is within the limits

8. **ḃĿĿP Check Weighing buzzer beep**

Hi: There will be a warning sound when the weight of articles exceeds the upper limit, and the weight is equal or more than 20d

LO: There will be a warning sound when the weight of articles under the lower limit, and the weight is equal or more than 20d

ok : There will be a warning sound when the weight of articles is between the upper and lower limit (including the upper and lower limits), and the weight is equal or more than 20d

out : There will be a warning sound when the weight of articles is beyond the upper & lower limit, and the weight is equal or more than 20d

no.beep: without beep when do weighing check

9. **PĿr ɪ External device, available choices:** PC, JMS, Godex, BIRCH, ZEBRA, GP, DMP, CK, ET, CX, T.CONT, EXCEL, U-KEY, LP-50.

PC: computer

JMS: JADEVER management system

GODEX: Godex printer

BIRCH: Birch printer

ZEBRA: Zebra printer

GP: Adhesive sticker label printer

DMP: Dot matrix printer

CK: Thermal printer (Chinese available)

ET: Large LED display

CX: CX large screen display (version 0.02)

T.CONT: the output format is compatible with Toledo Continuous Mode

EXCEL: Work with the function of "Use Serial Keys" of Windows and transfer

the weight Data to Excel and other software. Reference to the user manual:

http://www.jadever.com.cn/Download.aspx.

U-KEY: Work with the U.KEY Connector to output the weighing data to Excel and other software. Windows XP / Win7 system is available.

LP- 50: Adhesive sticker label printer

Note: if you want to use CK printer in Chinese, please contact with authorized personal to set.

10. $b\mathcal{A}\mathcal{U}\mathcal{d}$ **RS-232 Serial Transmission Rate**

Available: 9600, 4800, 2400.

11. $Pr\bar{t}\mathit{n}$ **Print mode**   **Available:** key, stable, contin.

Key: Manual print by pressing key +/PRINT/HI

stable: Stable printing（weight is equal or more than 20d）

Contin: Continuous printing

12. $Prtf$ **Print format**

See the appendix (more than 100 formats. The appendix just shows two formats.)

13. $F\mathit{iL}$ **Filtering setting** Options: 1, 2, 3, 4

Set the filtering level when the stable indication turns on. The higher the setting, the more stable the weighing condition.

14. $7-t$ **Tare/Zero condition**

Stable: Only after the stable indication appears, Tare or Zero function acts after pressing key

TARE/ ► or ZERO/ESC

Always: Tare or Zero function acts by pressing TARE/ ► or ZERO/ESC even if it's unstable.

Auto: Press key TARE/ ► or ZERO/ESC is available even if it is not stable, but Tare/Zero function acts only after stable.

15. $r\mathcal{L}\mathcal{L}$ **RTC set**

OFF: Enable RTC function

ON: Disable RTC function

16. 0-off **zero off-set function**

OFF: not display the previous weight when powering on again

ON: display the previous weight when powering on again.

17. $r E S E t$ **Initialization**
Press UNIT/SET to initialization and display RESET.

6. Calibration

Note: Before calibration, please set the unit first. The unit used in calibration is the one that has been set before. During the calibration procedure, press ZERO/ESC to return to normal weighing mode without saving. Press TARE/ ► to power on or after saving the division setting to enter into "CAL" mode.

Here we take 3kg/10g as an example

1. Press and hold TARE/ ► while powering on. Do not release it till the window displays "*CAL*".

2. With no load on the weighing pan, press TARE/ ► to start zero point calibration and "*0.00*" is blinking.

3. Wait till the window displays the first calibration value "**1.00kg**" (the first calibration value is default value according to its 1/3 capacity). If you want to change the calibration value, press UNIT/SET to enter free setting mode. Press key ◄/M+/MR to shift leftwards, key TARE/ ► to shift rightwards. Press key +/PRINT/HI or key -/G/N/LO to modify value. Press ZERO/ESC to save and exit.

4. Place corresponding weigh and press TARE/ ► to finish the first calibration. (Note: After the first point calibration, the window can display the weight value. If no need for the other point calibration, move to step 6 to finish the calibration procedure)

5. Freely choose the point later to calibrate. If you have place weight of the first calibration at 1 kg, then place another 500g, and the windows will show 1.5kg. Then press TARE/ ► to finish the second calibration. Do the same to continue if you need.

6. Press ZERO/ESC , window shows "PASS", you can save and return to weighing condition.

7. Operation
7-1 Weighing

Place item(s) to be weighed on the scale when there's no load on the weighing pan). The display shown is the gross weight. (Note: the desired weighing unit should be selected before weighing.)

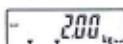`0.00 kg` → `1.00 kg`

7-2 Tare and Preset tare
Tare

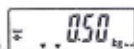When weighing a sample that must be held in a container, tare is essential to do.

1. Under the weighing mode, place the container on the weighing pan, wait till stable symbol appears, then press the key TARE/ ►. The container is tared.

   `0.50 kg` → `0.00 kg`

2. Place the item(s) to be weighed into the container. The weight displayed is the net weight.
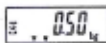
   `2.00 kg`

3. Remove all items from the weighing pan; the screen displays the tare value. `0.50 kg`
4. To clear tare with an empty pan, press key TARE/ ► or key ZERO/ESC
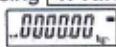
Preset Tare

1. Long press key TARE/ ► for 3 seconds. The scale is now in digital inputting mode with the left-most digit blinking. `000000 kg`

2. Set tare value: Press key ◄/M+/MR to shift leftwards, key TARE/ ► to shift rightwards, key +/PRINT/HI to increase setting values and key -/G/N/LO to decrease setting value. E.g. here we set the Preset Tare value as 0.500kg. `000050 kg`

3. Press key ZERO/ESC to save and return to weighing mode. `0.50 kg`

4. Put the load on the container, the scale will automatically deduct the value of the container from the total value.

5. To clear tare with an empty pan, press key TARE/ ► or key ZERO/ESC

7-3 Check Weighing
Upper limit setting

1. Begin by pressing +/PRINT/HI. The scale is now in digital inputting mode with the right-most digit blinking. `000000 kg`

2. To set the value of upper limit, press key ◄/M+/MR to shift leftwards, key TARE/ ► to shift rightwards. Key +/PRINT/HI to increase setting values and key -/G/N/LO to decrease setting

value. `..050000 ㎍`

3. Press **UNIT/SET** to start or close check weighing function. There will be triangle symbol to remind of starting.
4. To save the upper limit and return to weighing mode, press key **ZERO/ESC**

Lower limit setting

1. Begin by pressing **-/G/N/LO**. The scale is now in digital inputting mode with the right-most digit blinking. `..000000 ㎏`
2. To set the value of lower limit, press key **◄/M+/MR** to shift leftwards, key **TARE/ ►** to shift rightwards. Key **+/PRINT/HI** to increase setting values and key **-/G/N/LO** to decrease setting value. `..005000 ㎏`
3. Press **UNIT/SET** to start or close check weighing function. There will be triangle symbol to remind of starting.
4. To save the Lower limit and return to weighing mode, press key **ZERO/ESC**
5. After finishing setting the upper and lower limiting value. Place the sample on the weighing pan:
   If the sample weight is under the lower weight range while over or equal to 20d, the LOW lamp will light up. If the sample is within the lower and upper weight range while over or equal to 20d, the OK lamp will light up. If the sample is over the upper weight range while over or equal to 20d, the HI lamp will light up.
   Note: weighing check will be open once enter into upper and lower limit setting. If the lower limit value is over upper value, then the upper value auto changes to the lower limit value.

7-4 Simple Counting

1. Press key **UNIT/SET** to select the unit "PCS". `¦ 0`

2. Press key **-/G/N/LO** + key **TARE/ ►** the ex-factory default sample quantity (10pcs) is displayed. `¦ S: 10`

3. Press Key **+/PRINT/HI** and key **-/G/N/LO** to choose sample amount. Available options are10, 20, 50, 100, 200, 500, 1000(pieces). `S: 20`

4. Put the corresponding samples on the weighing pan, and then press key **TARE/ ►** to confirm. ` - SAnP · ` is displayed momentarily before the display reverts to the sample quantity. `.. SAnP` ⟶ `.. 20 ᵖ`

5. Remove the samples and put the load on the pan, the scale calculates the amount of the load.

6. If you want to go back to the normal weighing mode, remove the load and press key **UNIT/SET** to select the proper weighing unit.

Note:

1. The larger the sample amount, the more accurate the counting.

2. Symbol "▼" points at "UW" when calculated unit weight is lower than 4 / 5 of scale division.

7-5 Accumulation, Accumulation Display and Accumulation clear

Accumulation

Under the weighing mode, put the item on the weighing pan. Press key ◀/M+/MR at the appearance of '◣◢'. "$Rddd I$" is displayed momentarily before the display reverts to the weight of the item.

Remove the item and the display goes back to zero before the next accumulation can register.

（The maximum is 99 pieces, display the latest 10 accumulation events in details ）

Accumulation Display

Long press key ◀/M+/MR to display the accumulation data.

Press ◀/M+/MR or key TARE/ ▶ to check the total accumulation and each accumulation event in details.

Accumulation Clear

To clear accumulation data (total accumulation data or one of the accumulation events). Press ◀/M+/MR or key TARE/ ▶ to the window which data is needed to be deleted and press key -/G/N/LO . When the total accumulation data is deleted, the sign "▼" disappeared and turn back to weighing mode. To exit and return to normal weighing mode , press key ZERO/ESC

7-6 Printer initialization by the indicator operation (optional function)

1. Press UNIT/SET while powering on or press UNIT/SET while in weighing normal weighing mode to enter parameter setting. Press ◀/M+/MR or key TARE/ ▶ to $PEr\ i$

2. Press UNIT/SET to enter the external device setting. Press ◀/M+/MR or key TARE/ ▶ to choose the printer model.

3. Shift to certain printer model. Press UNIT/SET and the window will show "UNSUP" or "INIT?" "UNSUP" means the printer is no need for initialization. Press key ZERO/ESC to return.

"init?" means the printer is should be initialized. Press UNIT/SET to initialize the printer, and it shows init..., and it shows the printer after one second. Press key ZERO/ESC recycle to return to $PEr\ i$. Press ZERO/ESC again to turn back to weighing condition. If you don't want to initialize this printer, then press ZERO/ESC to cancel and window shows the printer. Press ◀/M+/MR or key TARE/ ▶ to choose other printers which needed to be initialized.

8. Input commands (optional)

Connect the indicator with computer through RS232 interface. Choose PC in PEr ı, and the print format as **KEY.** Run serial port debugging program on the computer. Input the capital number "Z", "T", "R" ,"C","P" in the sending area, and the indicator can conduct the corresponding actions and there is sound of key.

R/P=Reading Weighing

Z=Zero

T=Tare

C=Cancel Tare

9. Error message

Error Message	Problem	shootings
ERR0	Exceed the zero range	The item should be within 2% of full load
ERR1	Resolution exceeds 300 to 300000, or the capacity setting is disordered.	Modify resolution or modify resolution after setting the capacity
ERR2	Exceed the initial zero point	1. Check whether there are other alien articles on the scale pan, remove those articles. 2. LOAD CELL failure, which requires to be changed or to contact our Service.
ERR3	Exceed the A/D resolution range	1. Check whether it is A/D failure, if yes, please replace AD. 2. LOAD CELL failure, replacement is required or contact our Service.
ERR4	EEPROM failure	Re-sold EEPROM or contact our Service.
ERR5	Overload condition	Remove weight that is greater than the scale capacity from the pan.
ERR6	Exceeds the display range	--
ERR7	Accumulated number of weights exceed the display range	Delete the accumulated number which exceeds display range

ERR8	The upper or lower limit value exceeds full load value	Reset the upper and lower limit value
ERR9	Exceed tare or pre-tare range	The tare value should be over zero and less than or equal to full load.
ERR10	Wrong calibration weights	1. The higher resolution, the lower A/D value. (different resolution influences different A/D value) 2. Check whether the calibration value is the same as last calibration value 3. Place the right calibration value to calibrate and the calibration value should be less than or equal to full load.

Appendix 1: Printing format (Optional)

Printing Device	Format	Sample
PC	prt-01	1. 000 kg
	prt-02	G.W.: 1. 500 kg T.W.: 0. 500 kg N.W.: 1. 000 kg
	prt-03	1. 000 kg
	prt-04	ST GW + 100. 00 UT GW + 100. 00 UT NW - 200. 00 ST NW - 200. 00 ST: stable; UT: unstable; NW: net weight; GW: gross weight

	prt-05	ST, GS, + 100. 00kg US, GS, + 100. 00kg US, NT, − 200. 00kg ST, NT, − 200. 00kg ST: stable; US: unstable; NT: net weight; GS: gross weight
	prt-06	ST, + 100. 00kg ST, − 100. 00kg "ST," is the prefix
	prt-07	+ 100. 00kg − 100. 00kg
	prt-08	02 + mark + data (6 digits without decimal point) + decimal place + XOR checksum high + XOR checksum low + 03
	prt-09	:=801.000 (means 0.108)
	prt-10	US NT 0000.201
BIRCH/GODEX/ZEBRA/CK	prt-01	1. 000 kg
	prt-02	G.W.: 1. 500 kg T.W.: 0. 500 kg N.W.: 1. 000 kg

CK	prt-02	G.W.: 1.48 kg T.W.: 0.00 kg N.W.: 1.48 kg
DMP	prt-01	1. 000 kg
	prt-02	G.W.: 100.00 kg T.W.: 0.00 kg N.W.: 100.00 kg
ET	prt-01	EtOut: 1. 00 kg
U-key	prt-01	0.985
	prt-02	0.985 kg

NOTE:

The printing sample could be of different kinds of formats. When there is specific demand about the format, conduct as follows

1) As for **BRICH/GODEX/ZEBRA/GP** printers, the factory designs the format as planned and email to the user. Add the format into the previous format file via computer. Then it is successful to add the new format and able to print the new format.

2) As for **DMP/CK** printer, it needs to change the scale design.