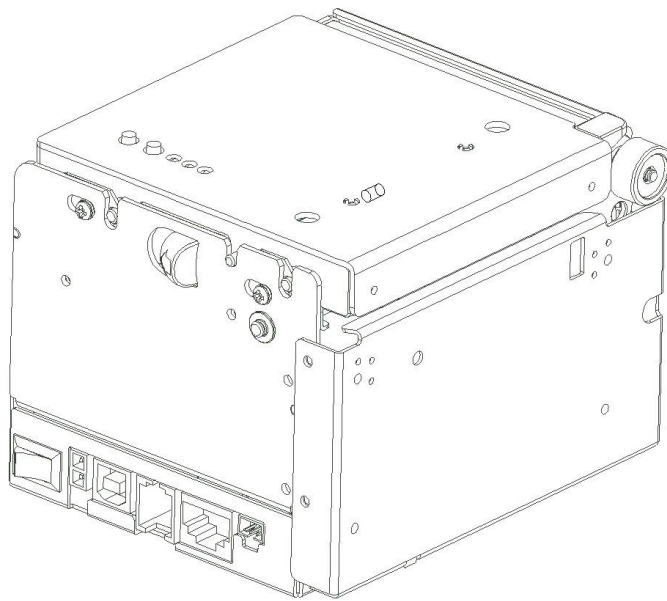


Kiosk Printer

HS-80D User Manual



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Pronouncement

The content of this manual cannot be changed without consent. HSPOS Technology Limited(zhongshan) reserves the right to change the product in terms of technology, components, software, and hardware. If users need further information related to the product, they can contact HSPOS Technology Limited(zhongshan). Without written permission from the company, no chapter of this manual may be copied or transmitted in any form or by any means.

Warn

 Warnings must be followed to avoid harm to the human body and damage to equipment. And important information and prompts for printer operation are provided.

 The printer head is a heating component. During the printing process and just after the printing is completed, do not touch the print head or surrounding components.

 Do not touch the print head and connector to avoid damaging the print head due to static electricity.

Notice

Due to continuous improvement of the product, the specifications, accessories, and procedures described in the manual are based on the actual machine, and are subject to change without prior notice.

Safety instructions

- 1) The printer should be installed in a flat and stable place;
- 2) Leave enough space around the printer for operation and maintenance;
- 3) The printer should be kept away from water sources and avoid direct sunlight, strong light, and heat sources;
- 4) Do not use and store the printer in areas with high temperature, high humidity, and severe pollution;
- 5) Avoid placing the printer in areas with vibration and impact;
- 6) Avoid using force or heavy objects to fold the power cord;
- 7) Connect the power adapter of the printer to a suitable grounding socket to avoid contact with large motors or sources that may cause power damage
Devices with voltage fluctuations use the same socket;
- 8) If the printer is not used for a long time, please disconnect the power adapter of the printer;
- 9) To ensure printing quality and product lifespan, it is recommended to use recommended or

equivalent quality paper;

10) When plugging in or disconnecting various interfaces, the power must be turned off, otherwise it may cause damage to the printer control circuit;

11) If you smell severe smoke or odor, please turn off the power and disconnect all interfaces before contacting the supplier;

12) Users are not allowed to disassemble the printer for maintenance on their own;

13) Safely keep this manual for reference and use.

1 Overview

1.1 Introduction

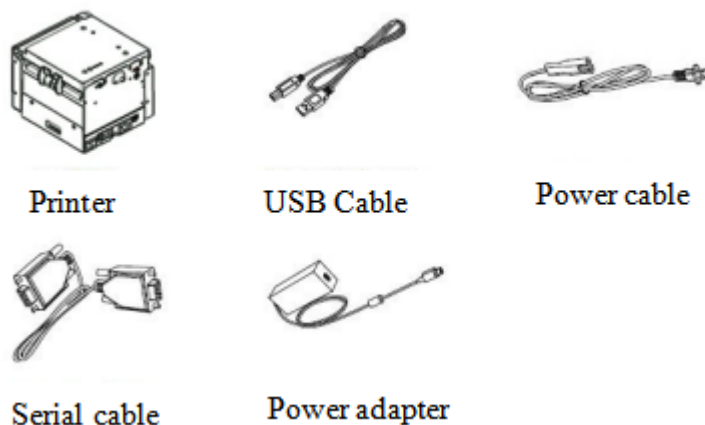
HS-80D printing module adopts a row type thermal printing head, which has the characteristics of high-speed printing, low noise, strong reliability, high printing quality, large paper cutting thickness, and compact structure. It is equipped with a dedicated engineering plastic paper outlet, making installation and maintenance more convenient and fast.

1.2 Features

- 1) Low noise, high-speed printing
- 2) Convenient and fast paper loading method
- 3) Easy to use and maintain
- 4) Compatible with multiple widths of paper
- 5) Metal motor firmware that can quickly dissipate heat

1.3 Unpacking List

- 1) Open the printer packaging and keep the packaging material for future shipping.
- 2) Ensure that you have all the items shown in Figure 1-1 and check for any damage caused by transportation.



Picture 1-1

Attention: The actual content inside the box shall be based on the shipping list.

1.4 Other precautions

Although we were very cautious and careful in writing this manual, some errors or omissions are still inevitable. If anyone suffers losses due to the use of the information in this manual, our company shall not be held responsible. Our company and its branches shall not be liable for any damages, losses, costs or expenses caused by users or third parties not following or ignoring the operation, maintenance information and instructions provided by our company, resulting in product damage, malfunction or misuse, as well as unauthorized modifications, repairs or modifications to the product.

We do not assume any legal responsibility for any damage or problems caused by the use of counterfeit parts, components, or unauthorized products from our company.

2 Specifications

2.1 Specification parameters

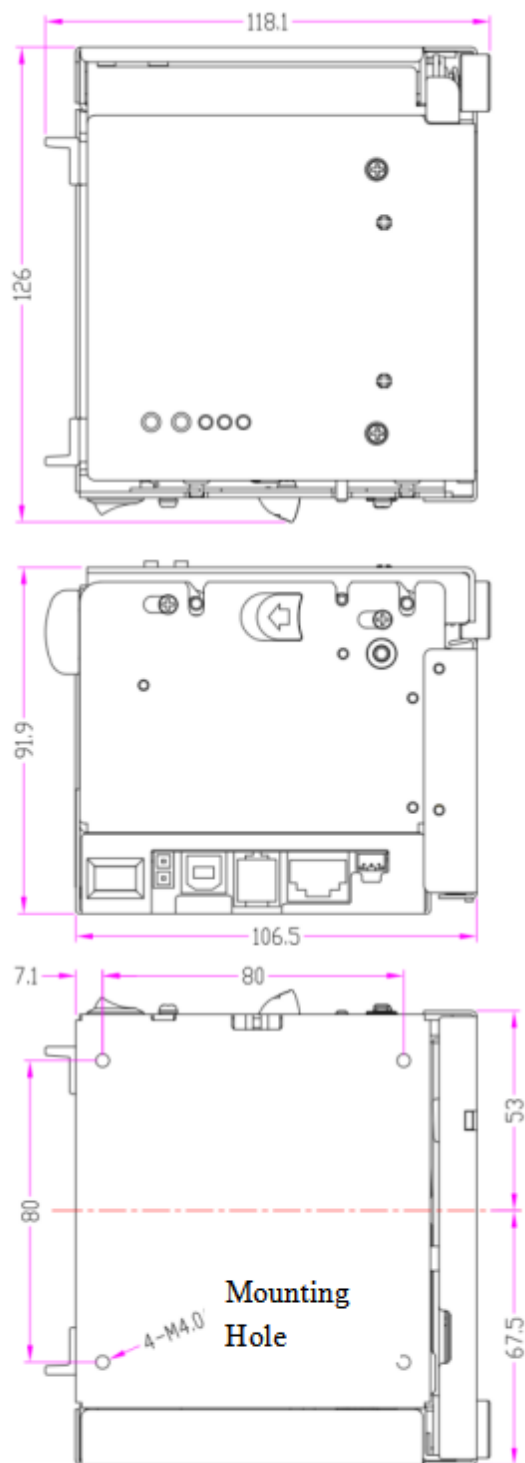
Print parameters	Printing method	Line thermal printing
	Print dot matrix	640Dots
	resolving power	203Dpi
	Maximum effective printing width	80mm (Max)
	Printing speed	0.1mm: 200mm/s (Max) 0.15mm: 180mm/s (Max) 0.2mm: 150mm/s (Max) 0.25mm: 120mm/s (Max)
	Print lifespan	100KM (Max)
	Multiple width adjustments	24/48/72/80mm
	Paper cutting method	Full cutting
Paper parameters	Feed method	Automatic paper feeding (positioning of the first ticket page, printing of the last ticket)
	Paper roll type	Heat sensitive ticket paper, label paper, folding paper
	Roll width	25-83 mm (adjustable)
Detection function	Paper roll thickness	0.1-0.25mm (optional)
	THP temperature	temperature sensor

	Cover opening detection	Micro touch switch
	cutter HOME point detection	
	Axis in place	
	Automatic paper feeding/paper detection	Paper detection (mechanical sensor)
	Paper output detection/paper output nozzle	
	Paper almost detected	Opposing photoelectric sensor
	Black Label Detection	
	Seam detection/transmission and reception	Opposing sensor
Power	Input voltage	110V-220V
	Output voltage	24V 2.5A DC \pm 10%
	Average current	2A/2.5A (25% Printing rate)
	Peak current	8.5A (100% Printing rate)
Character	Character requirements	ASCII 9 * 17, 12 * 24, Chinese 24 * 24 dots
	Character size	ASCII 9x17, 12x24 dots, 24x24 dots
	print font	Normal, 1-8 times height and width, reversed, underlined, italicized, bold
Barcode	1D	UPC-A, UPC-E, EAN13, EAN8, CODE39, ITF, CODABAR, CODE93, CODE128
	2D	QRCode,PDF417
reliability	abrasion resistance	100km (Max)
	Pulse count	100 million
	Cutter lifespan	0.1 thick paper costs 1 million cuts, 0.15 thick paper costs 500000 cuts, 0.25 thick paper costs 300000 cuts
Interface	Standard interface	USB+RS232+LAN

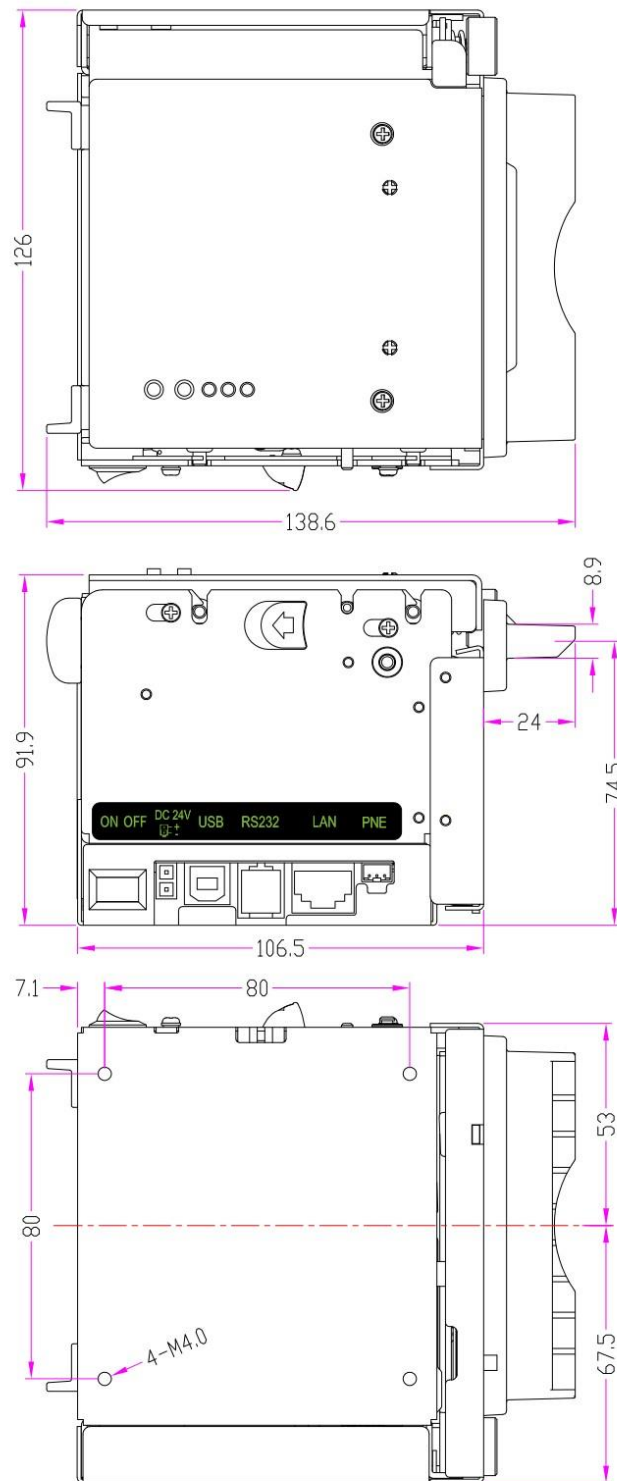
Operation interface	Indicator light	POWER light+ERROR light+PAPER light
	Keys	FEED key * 1 CUT key * 1
	Power switch	Ship type switch * 1
	Dialing code	8PIN
Environment	Operating temperature	-5°C~50°C
	Using humidity	20-80%RH (No condensation)
	Storage temperature	-20°C-70°C
	Electrostatic protection	Contact requires 6KV, air requires 8KV
	Storage humidity	10-90% RH (No condensation)
physical property	Product size	130.5x120.5x92 L*W*H
	weight	1.3KG

3 Printer instructions

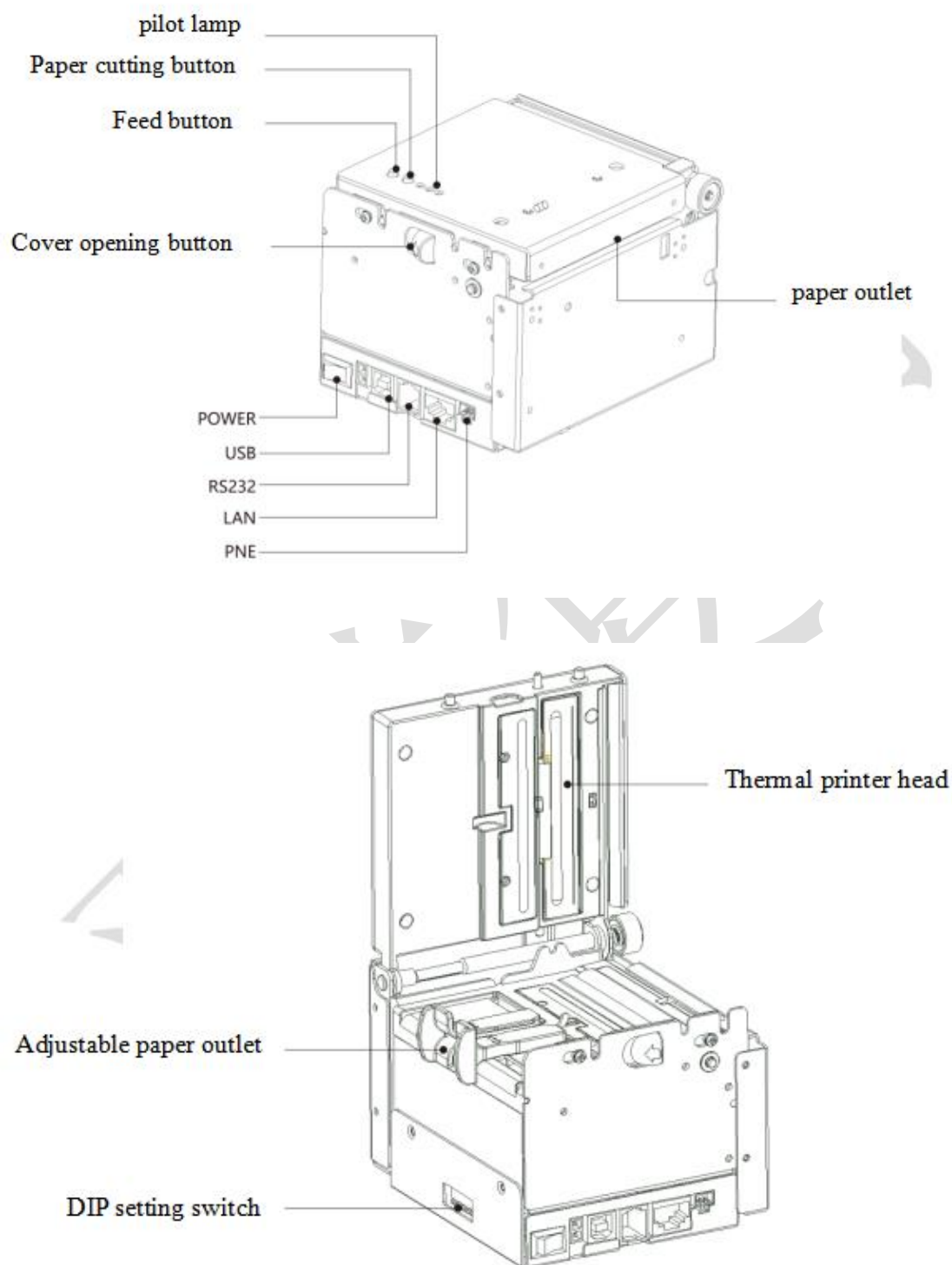
3.1 Dimensions (Without paper outlet bezel)



3.2 Dimensions (With paper outlet bezel)

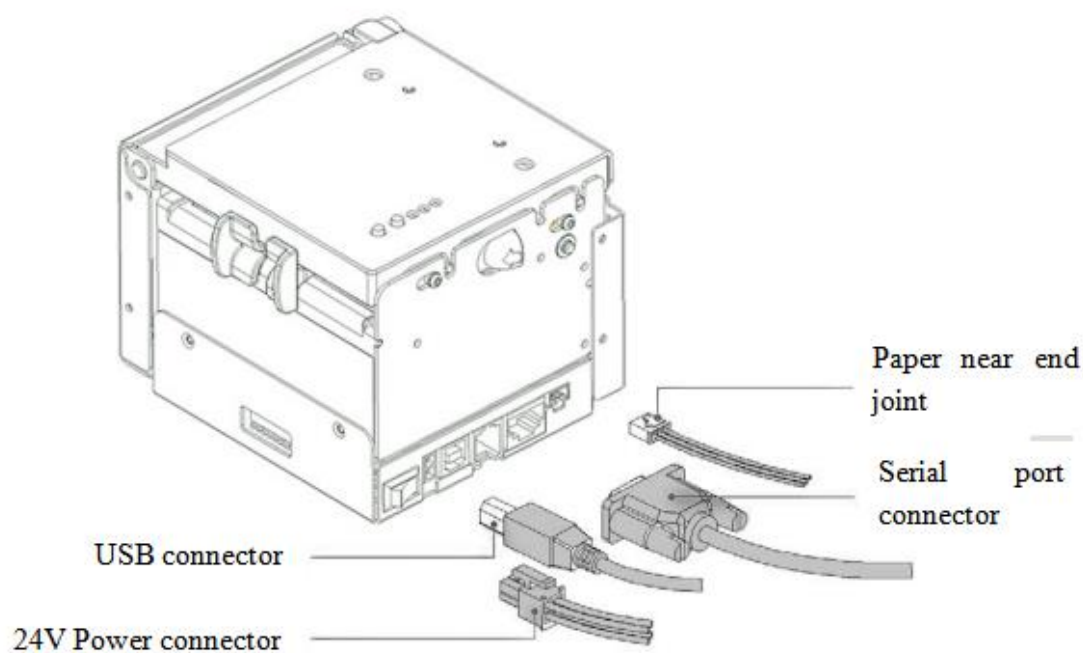


3.3 Appearance and Components

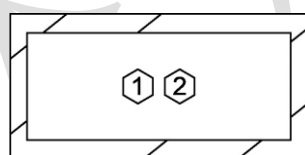


4 Interface

4.1 Interface type

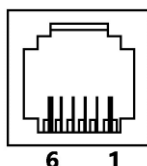


4.2 Power connector



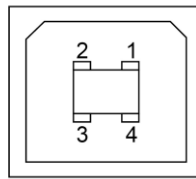
PIN No.	Signal name
1	+24V(DC)
2	GND

4.3 RS232 interface



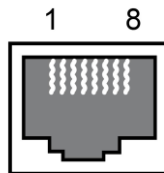
PIN No.	Signal name
1	GND
2	TXD
3	RXD
4	DTR

4.4 USB interface



PIN No.	Signal name
1	VBUS
2	USB-DM
3	USB-DP
4	GND

4.5 Ethernet interface



PIN No.	Signal name
1	TX+
2	TX-
3	RX-
4	n/c
5	n/c
6	RX-
7	n/c
8	n/c

5 Instructions for use

5.1 Keys and Operations

1) Power on:

Turn on the power, unplug the power switch on the right side of the printer to the "-" position, turn on the printer, turn on the printer, and the POWER power indicator light on the printer will remain on. Turn off the power switch to the "O" position, turn off the power, and the POWER indicator light will turn off.

2) Press key:

There is a "FEED" button on the printer, which is usually used as a paper feed button and can be used as a self check button when the printer is first powered on.

3) CUT key:

Cut paper (connect the power and press to cut paper).

4) Self Test:

Press and hold the "FEED" button when not powered on, power on for about 2 seconds, and the printer will perform a self check. Self inspection will print out basic information such as the machine model, firmware version, system configuration, interface type, etc

5) Feed paper:


When the printer is powered on, press and hold the "FEED" button to start paper feeding.

Release the button to stop paper feeding

Description of indicator lights

The printer has three indicator lights to indicate the various states of the printer after power on, with the following meanings:

Illustrate	LED (GREEN)	LED (YELLOW)	LED (RED)	Beeping state
Not turned on	Off	Off	Off	No sound
The printer is functioning properly	Continuously brightening	off	Off	No sound
Paper is about to run out	Continuously brightening	Continuously brightening	Off	No sound
Printer paper blockage	Continuously brightening	Off	Flashing once	One sound
printer out of paper	Continuously brightening	Continuously brightening	Flashing 3 times	3 beeps
cutter error	Continuously brightening	Off	Flashing 4 times	4 beeps
Printer Over Temp	Continuously brightening	Off	Flashing 5 times	5 beeps
Axis not pressed down	Continuously brightening	Off	Flashing 6 times	6 beeps
Black Label Detection	Continuously brightening	Off	Flashing 8 times	8 beeps
Seam label detection	Continuously brightening	Off	Flashing 8 times	8 beeps
Hole marking detection	Continuously brightening	Off	Flashing 8 times	8 beeps

 **Attention:** The printer uses a thermistor to detect the temperature of the print head. If the temperature of the print head exceeds 65 °C, the printer will issue a warning. If the print head temperature exceeds 80 °C, the printer will stop working until the temperature drops below 60 °C.

5.2 PIN

PIN 1	PIN 2	Location	PIN 5	PIN 6	Speed
ON	OFF	Hole	ON	OFF	200mm/s
ON	ON	Black Label	ON	ON	180mm/s
OFF	ON	Seam marking	OFF	ON	150mm/s
OFF	OFF	nothing	OFF	OFF	120mm/s

PIN 3	PIN 4	Width	PIN 7	PIN 8	Cutter
ON	OFF	24mm	ON	OFF	Last cut
ON	ON	48mm	ON	ON	Not cutting
OFF	ON	72mm	OFF	ON	Instruction cut
OFF	OFF	80mm	OFF	OFF	Single sheet cutting

Note: Changes to the DIP Switch switch setting will only take effect after the printer is powered back on or reset

5.3 Detection instructions

1) Automatic feed detection:

The paper detection sensor detects the presence of paper for printing, and triggers the sensor to drive the motor for continuous paper feeding or printing

2) Paper output detection:

The paper output detection sensor is located in the paper output nozzle and is used to detect whether the paper has been removed. When the paper output detection sensor detects the presence of paper, the light bar in the paper output nozzle flashes slowly

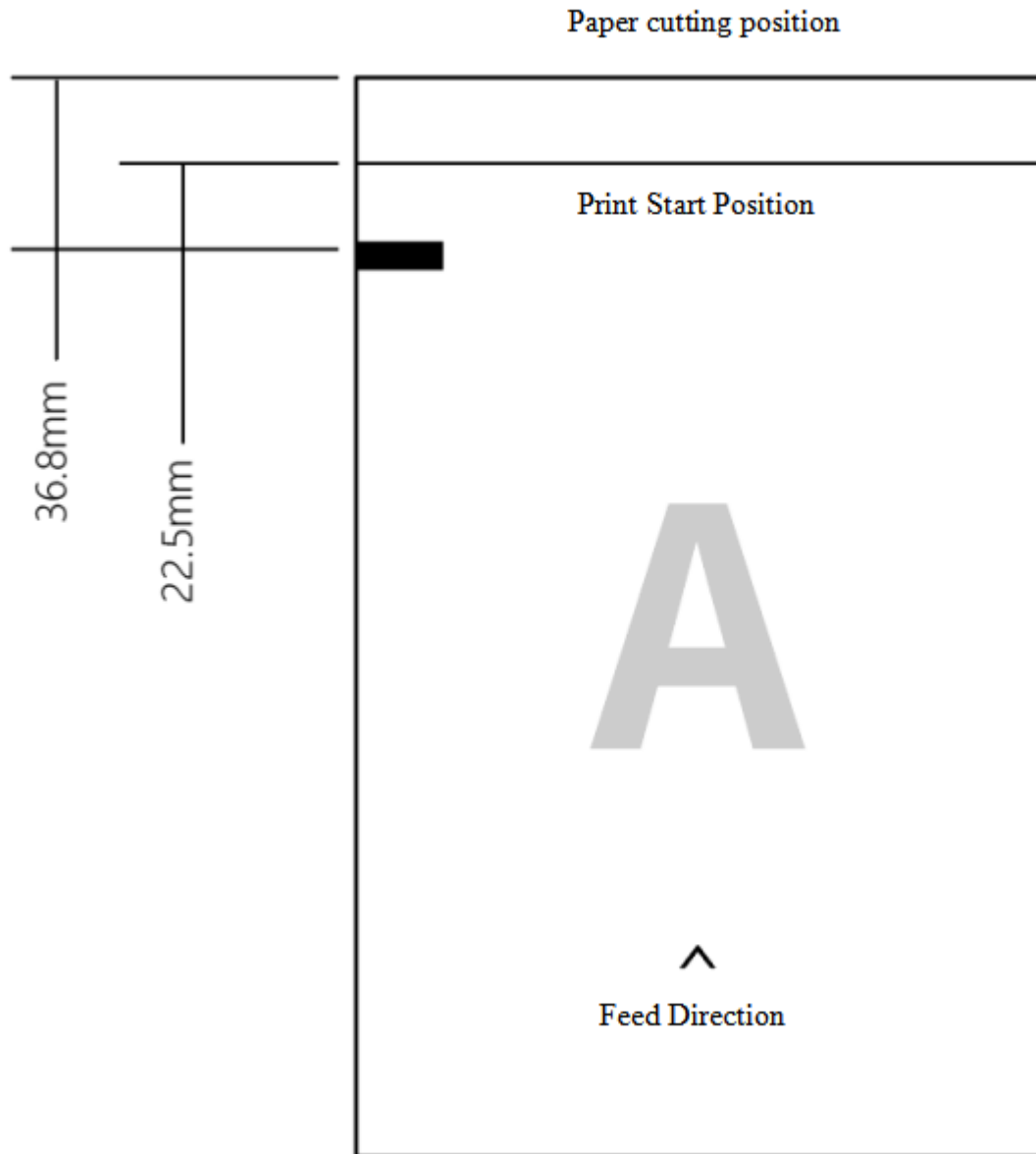
3) Seam detection:

The detection sensor is located in the upper and lower center positions of the print head, mainly detecting thermal label paper with gap gaps

4) Black Label Detection:

The black label detection sensor is installed in the paper path and detects pre printed black dots on the ticket (if present). This black label is used to position the paper on the preprint paper for printing. Usually, the ticket is pre positioned to the identification point, and when the ticket is completed, the paper is fed to the identification point and then cut

As shown in the figure below, the position of the marker points is 80mm or 82.5mm wide in Figure A, and 60mm wide in Figure B. (Mark points are all located in the non thermal sensitive layer)



5) Cover opening detection:

When the top cover is closed and the latch is pressed on the switch arm, the cover opening detection sensor installed on the right side of the print head is activated. When the top cover is opened, the printer enters offline mode.

6) Paper will detect as much as possible:

The paper will detect the component as much as possible, and customers can choose the installation position according to their own needs to detect the remaining amount of paper rolls. Check if the paper roll is in sufficient condition. If the sensor detects no paper at the specified position, the PE light will light up

7) Cutter HOME point detection:

The cutter return detection sensor is installed on the tool holder of the cutter section. If there is any abnormal situation such as paper jam, the cutter return detection sensor can detect the stuck paper and stop the printer operation.

5.4 Troubleshooting paper jams and cutter jams

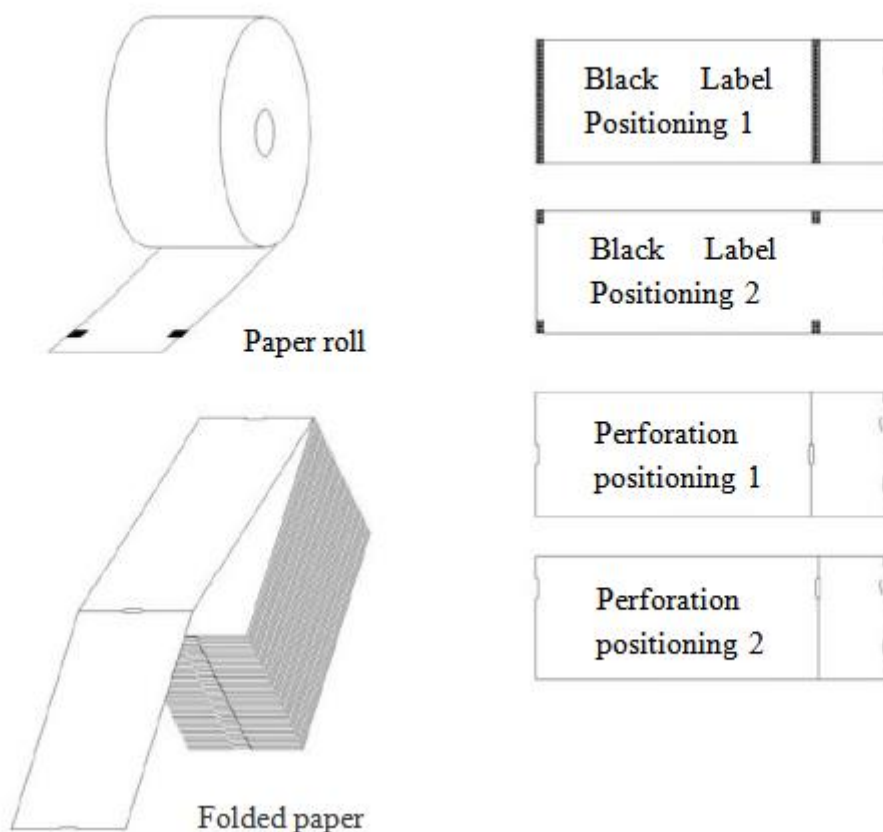
- 1) Reset the cutting blade by turning it off and then on again, and quickly eliminate tool jamming through software.
- 2) By opening the upper cover, forcefully remove the cutter jamming.
- 3) First eliminate the cutter jam, then eliminate the paper jam, and remove the remaining paper scraps in the paper feeding channel

6 Applicable paper types

6.1 Paper types

- 1) The printable paper has a width of 25mm~83mm and is made of thermosensitive copper plate paper. Customers using different types of ticket paper need to set it through debugging software.
- 2) If you need to print special size ticket paper, you can contact Xiamen Kaishennuo Technology Co., Ltd. for customization. Both roll paper and folding paper are suitable.
- 3) The printer can be used for hole positioning and black label positioning paper.
- 4) The printer is suitable for paper thicknesses ranging from 0.1mm to 0.3mm.

Paper types



7 Fault handling

When the printer malfunctions, you can refer to this chapter for corresponding handling. If the problem still cannot be resolved, please contact the agent or manufacturer.

7.1 Common faults

Fault phenomenon	Processing method
Lack of paper	Reapply paper
Cutter error and jamming	Turn off the power and then power on again, the cutter will automatically reset
The upper cover automatically pops open during printing	If the upper cover is not closed in place, close the upper cover again to ensure that the locking tab is fully engaged with the upper cover fixing pin.
Printing error	The positioning of the ticket paper is incorrect. Please reload the paper and ensure that the positioning method of the dial switch matches the actual ticket paper, and set the ticket length.
Unclear printing of QR code	Open the top cover, clean the print head with alcohol, and close the top cover to ensure it is

	fully closed.
Continuously returning paper during loading	The paper output sensor is interfered by strong light. Move the direction of the printer's paper output port to avoid interference from strong light.
Print white pages	No heat sensitive ticket paper was used or the heat sensitive side of the ticket paper was not loaded upwards.

8 Routine maintenance

8.1 Precautions

- 1) Dust, foreign objects, sticky substances, or other pollutants adhering to the print head or printer may reduce printing quality. When dirty, please clean the print head according to the following methods.
- 2) Be sure to turn off the printer power before cleaning.
- 3) Due to the print head becoming very hot during printing. Therefore, if you want to clean the print head, please turn off the printer power, And wait 2-3 minutes before starting.
- 4) When cleaning the print head, be careful not to touch the heating part of the print head to avoid damage caused by static electricity, etc.
- 5) Be careful not to scratch or damage the print head

8.2 Print head cleaning

- 1) Please open the printer paper compartment cover and use a cotton swab dipped in diluted alcohol (alcohol or isopropanol) along the center to all sides of the print head
Direction cleaning.
- 2) After cleaning the print head, do not immediately use the printer and wait for the cleaning alcohol used to completely evaporate (1 to 2 minutes),
The print head can only be used after it is completely dry

8.3 Cleaning of sensors, rubber rollers, and paper paths

- 1) Please open the printer paper compartment cover and remove the paper roll
- 2) Use a dry cotton cloth or swab to wipe away dust or foreign objects
- 3) Soak cotton cloth or swab in medical alcohol and use it to wipe away sticky foreign objects or other pollutants
- 4) After cleaning the components, do not immediately use the printer. Wait for the alcohol to completely evaporate (1 to 2 minutes) and the printer to dry completely before use

-
- 5) ※ When the printing quality or paper detection performance decreases, clean the components

9 **Transportation and Storage Matters**

- 1) Ensure that the device is placed on a sturdy and stable horizontal surface
- 2) When transporting the printer, use foam, foam bags, etc
- 3) If the device falls, it may be damaged or subjected to other injuries
- 4) Excessive humidity and dust may damage equipment
- 5) Do not place heavy objects on the product, and never stand or lean against it
- 6) The equipment may fall or collapse, causing damage and potential damage
- 7) To ensure safety, please unplug the power plug of the product when it is not used for a period of time