

SNR-EP8303

Embedded Thermal Printer

User Manual



Key Opening



Button Opening



Command Controlling Opening



Revision record

Date of launch	Revised addition	Note
2022.3.16	V1.0	Sorted out in 2022
2022.6.17	V1.1	Modify some explanatory text and format errors
2022.7.11	V1.2	Sorted out
2022.7.28	V1.3	Added some explanatory text

* The information provided in this specification is for reference only.
specific configuration information is subject to the sales contract



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Product introduction

SM-EP8303 printing module adopts the line type thermal printing head, which has the characteristics of high-speed printing, low noise, strong reliability, high printing quality, compact structure and so on, making installation and maintenance more convenient and quick.

This module is ALL-IN-ONE, the control board and the movement are completely integrated into ONE, greatly saving the space of the module, greatly facilitating the development and design of the mold. This printer has easy - loading paper, sliding automatic paper cutting and other functions.

The printer has a variety of open cover mode, the printer multi-function control operation is simple, including:

- Open cover mode: Key opening, Button opening, Command controlling opening
- Black paper and paper end sensor
- Multiple sensors assist in control
- Unattended built-in thermal printer
- Variety of interface options: String port (RS232) as well as USB are available, and provide comprehensive soft Instruction and concise driver (Windows xp/Windows 7 / doing/win10 win11 / Linux/android).
- Printer control panel supports printing of a variety of bar codes, including: EAN8, EAN13, CODE39, CODE128 and other one-dimensional barcode printing.
- The printer control panel supports QR code printing.
- Characters: Simplified Chinese (GB-18030), Traditional Chinese (GIG-5), Korean, Japanese (Shift-JIS), Vietnamese (Code1258), Euro symbol(Code855), Slavic 2 (Code866), etc.

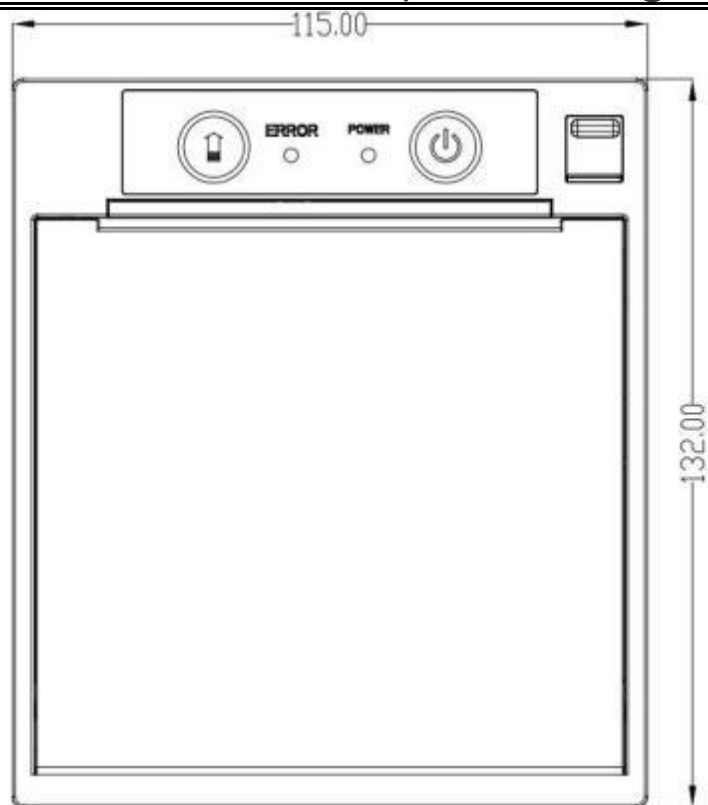
Main technical specification

This technical specification is used in the SNR-EP8303 structure printing module

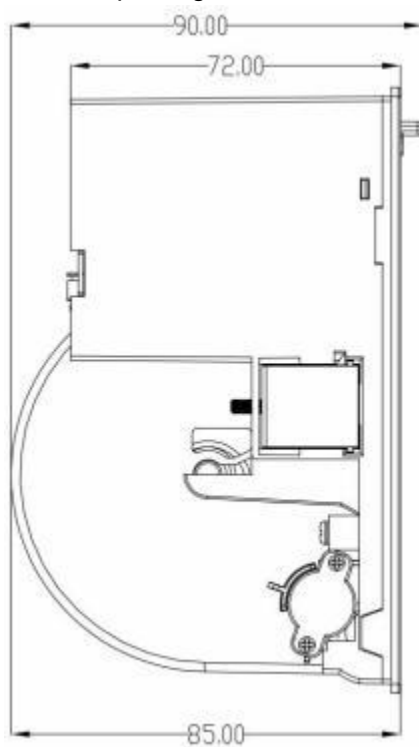
Model		SNR-EP8303
Printing	Printing mode	Line thermal printing
	Paper width	80mm/58mm
	Paper speed	150 mm/s(max)
	Point density	8 dots/mm
	Print point	576dots/line
	Effective print width	72mm(max)
	Feeding mode	Easy loading paper
	Print length	100KM

Product size and specification

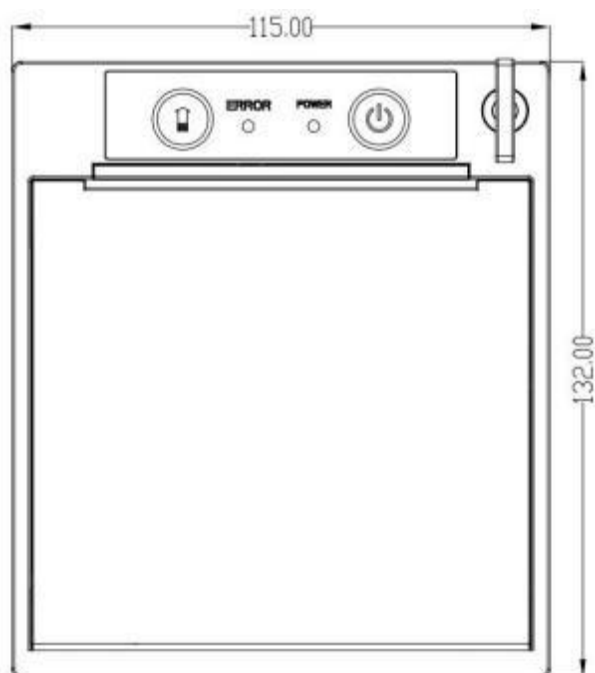
Knife cutting	Paper cutting method	half cut, full cut
	The thickness of the cut paper	60 - 120 um
	Cutter life	1000,000 times
Print head temperature		Thermistor
Operating voltage		DC24V $\pm$ 10% or DC12~24V
Mean current		58mm/3A;80mm/4A (25% of valid print points)
Peak current		10A
environment	Operating temperature	-10~50 °C (no condensation)
	Operating humidity	20%~85%RH(85% RH at 40 °C)
	Storage temperature	-20~60°C (no condensation)
	Storage humidity	10%~90%RH(90%RH at50°C)
Weight		About 0.45kg (excluding paper roll)
Connector		Serial port, USB port, money box
Sensor		Sensor print head open, paper end, paper shortage, Black label (optional)
Maximum diameter of paper roll that can be loaded		80 mm
Size (W*D*H)		W115mm * D85mm * H132mm



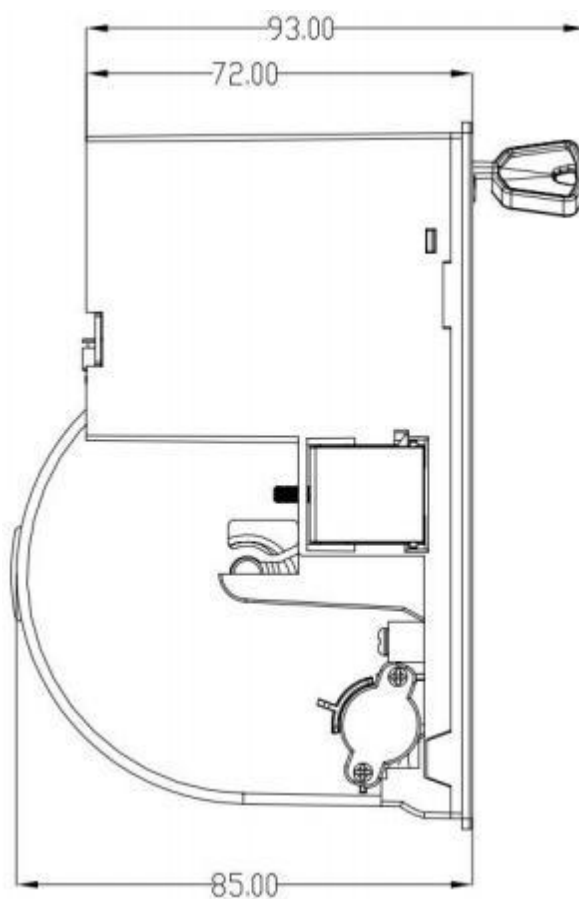
Button opening cover main view



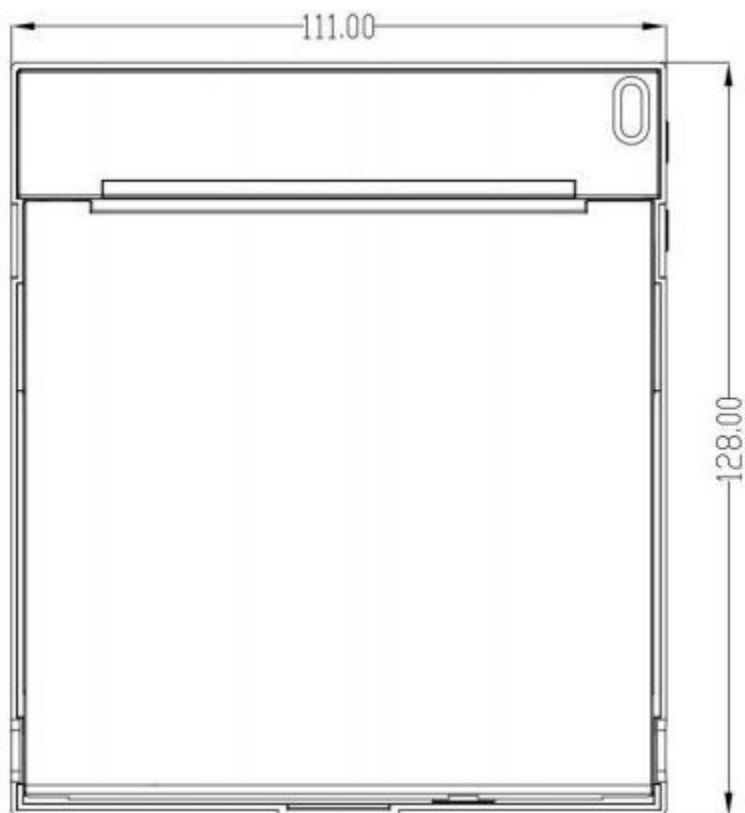
Button opening cover side view



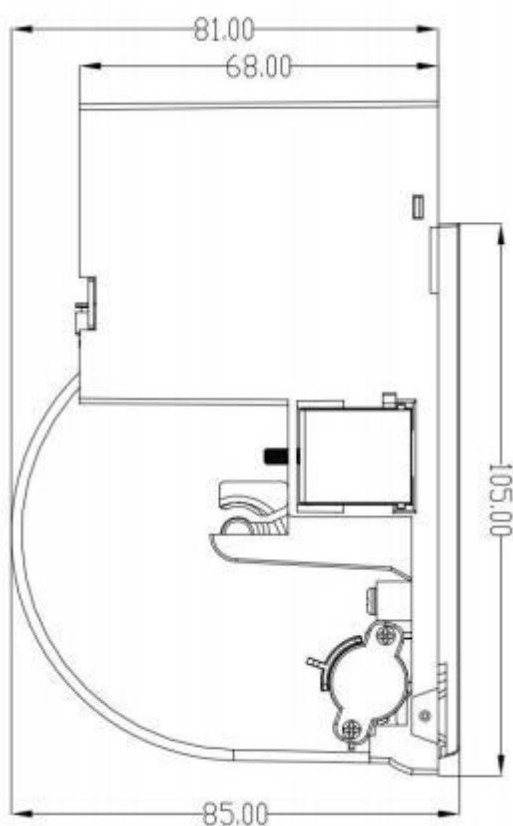
Key opening cover main view



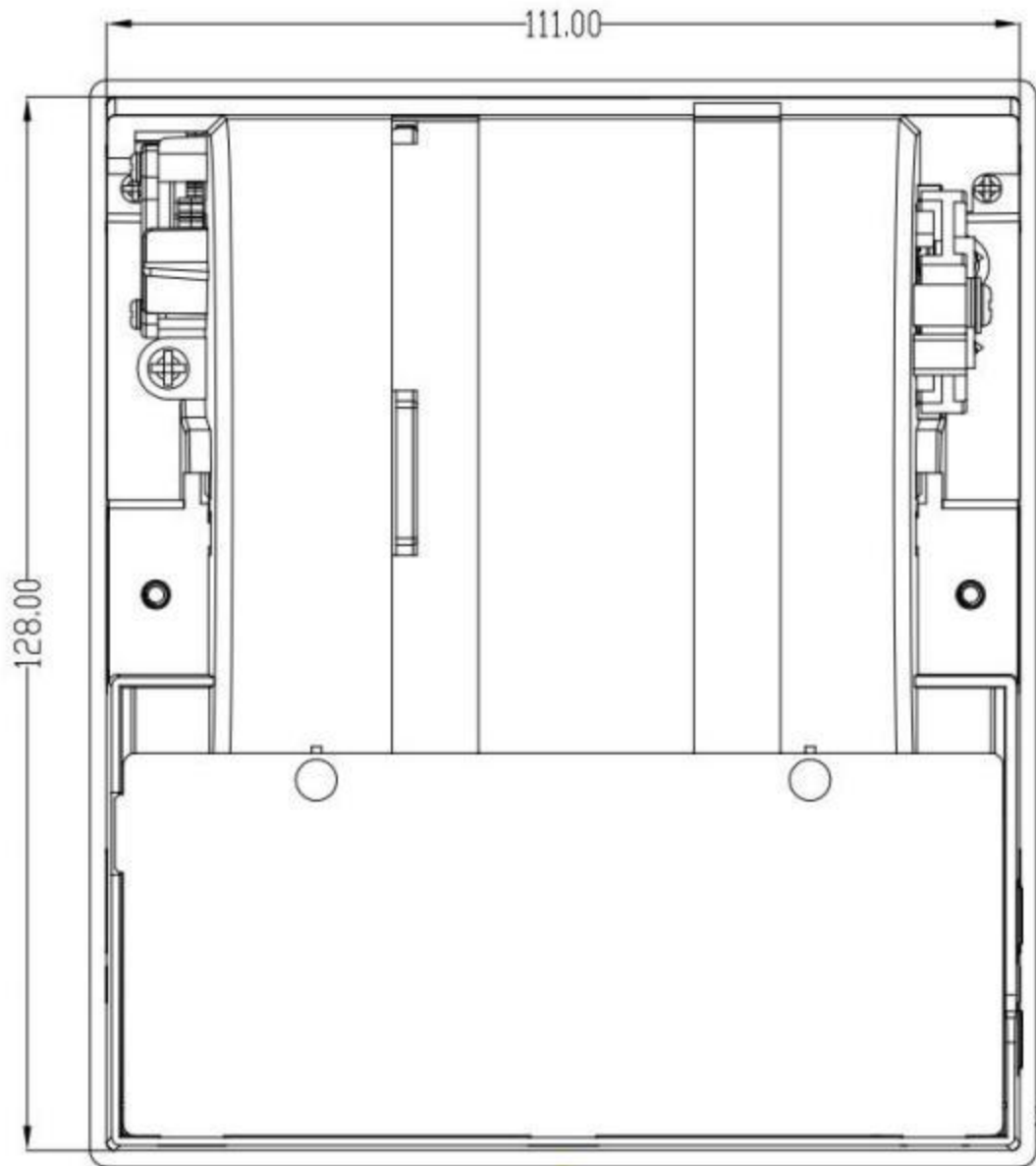
Key opening cover side view



Command controlling opening cover main view



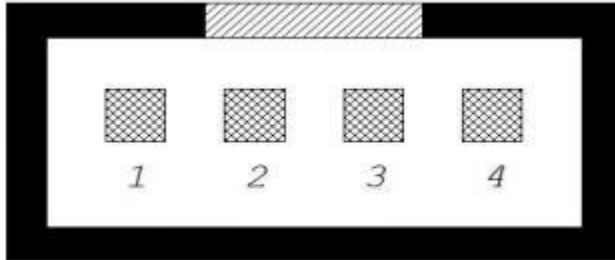
Command controlling opening open cover side view



Open frame size view

Interface connection

Input power interface:



The 12V power port adopts XH2.54-4A seat son, and the pins are defined as follows:

Serial port pin	definition
1	12V
2	12V
3	GND
4	GND

USB connector

USB terminal port supports USB2.0 high speed or full speed. MX1.25-4A terminal to standard USB interface, pin definition is as follows:



USB connector	Definition
4	VCC(+5V)
3	DATA-
2	DATA+
1	GND

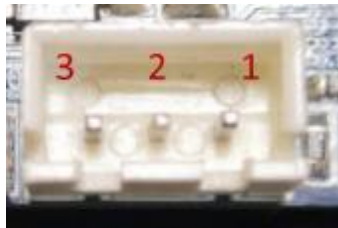
Serial port RS232 port



Printer serial cable is PH2.0-4A socket, can be transferred to the standard serial port interface line; Pins are defined as follows:

Serial pin	Definition
1	GND
2	TXD
3	RXD
4	DTR

Cash connector



The cash box interface is XH2.54-3A seat son, and the pins are defined as follows:

Cash connector	Definition
1	Cash box_VCC(+24V)
2	Cash box_Det
3	Cash box_DRV



Installation and operation

SNR-EP8303 Connection of printer power supply

Warning: Ensure that the 220V (110V) power plug is not plugged into the energized board;

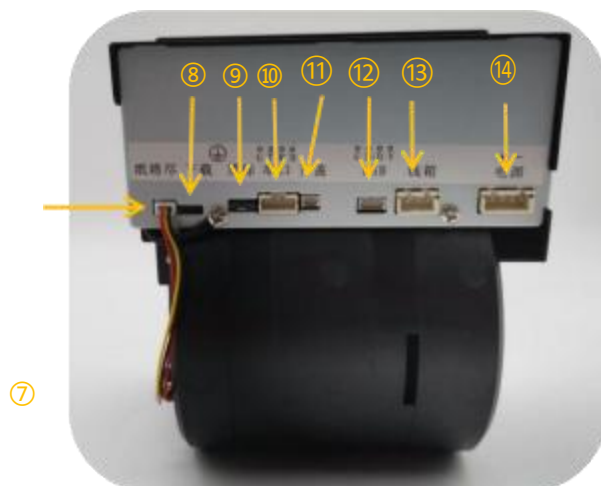
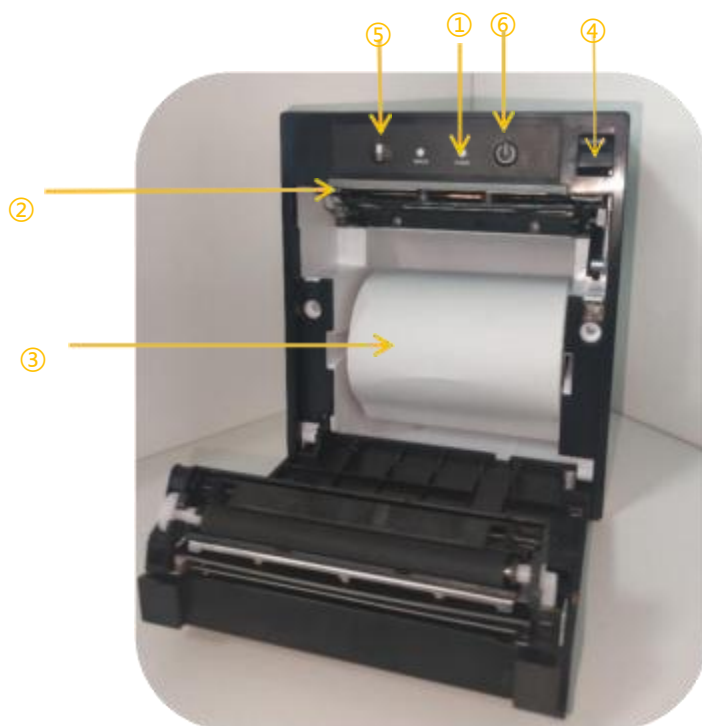
Otherwise, damage may occur power supply or printer.

- 1 First check whether the power switch of the printer is off.
- 2 Check whether the input power supply voltage of the printer is within the range of $12\pm 10\%$ V.
- 3 After connecting the power supply, observe whether the printer is normal. If it is abnormal, the power light is on, error occurs (Lights and paper lights flicker) Please turn off the power immediately.

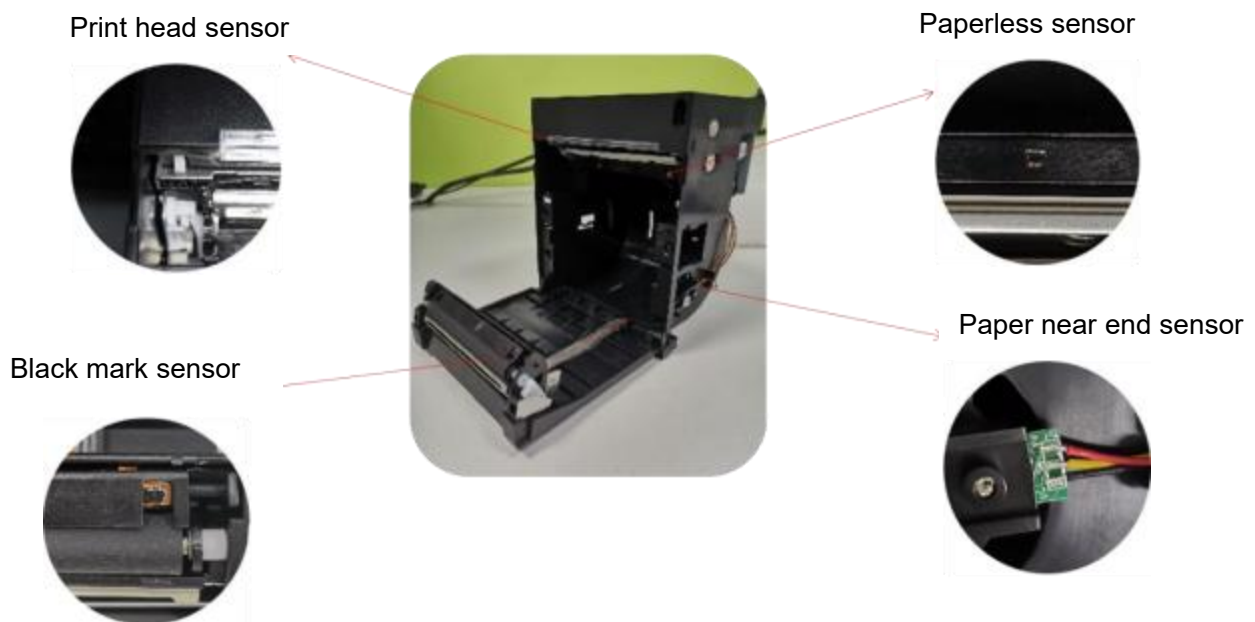
Tip: Check that the power is off before connecting any cable (must be done in the off state).

The module diagram is shown below

- | | | | |
|--------------------|---------------------------|------------------|--------------|
| ①Indicator light | ②Paper outlet light strip | ⑦ paper near end | ⑩Serial port |
| ③Paper Bin | ④Cover spanner | ⑧download | ⑪ cover open |
| ⑤paper feed button | ⑥On-off | ⑨black label | ⑫USB |
| | ⑬cash box | ⑭ Power supply | |



Sensor position identification diagram



Bottom and Indicator light

POWER Indicator light		ON	Normal on-voltage
		OFF	Unenergized
ERROR Indicator light		Blinking or steady on at a fixed frequency	recoverable
High temperature alarm	The temperature of the printer head is too high. The printer doesn't work.	Fixed frequency scintillation	Temperature return to normal
Low temperature alarm	The temperature of the printer head is too low. The printer doesn't work.		Temperature return to normal
Paper cabinet door open	Paper cabinet door open The printer doesn't work.		Close the door
Paperless	No paper The printer doesn't work		Load the paper roll
Paper near end	Almost paperless, printer still can work	Steady light	Load the new roll

Clean the printer

If there are obvious stripes on the bill printed by the printer or the printing content is not completely displayed, it is necessary to clean the print head. When cleaning the printer, it should be noted that the printer is in the state of power off. If the printer has just finished printing, wait 1-5 minutes for the printer to cool to room temperature.

Clean the print head: open the door of the bin, use a soft brush to clean the paper channel in the printer and various sensors in the residual paper scraps (remember not to use hands, metal objects directly contact the print head sheet and sensor), and then use alcohol sticky wet cotton ball (should be wring out) to wipe the dust and dirt on the thermal sheet of the print head.

Matters needing attention

Safety precautions

1. No current or voltage in excess of the maximum absolute rating shall be applied to any pin. If a current or voltage in excess of the maximum absolute rating is applied, the current flowing through the device may cause thermal damage.
2. Do not short-circuit any output pins with the power supply.
3. If conductive materials fall onto the circuit board, the pins on the circuit board will short circuit, and excessive current will cause thermal damage.
4. Ensure that the specified cable is used to connect the device.
5. An incorrect connection may result in a fire.
6. Do not disassemble or modify the product.
7. Incorrect changes to the product may result in damage such as fire or electric shock.

Precautions for use

1. Use the printer paper provided or confirmed by the supplier to meet the requirements, otherwise it may affect the print quality and print head life, or even damage the print head.
2. The width of the printing paper roll, the minimum diameter of the inner diameter and the maximum diameter of the outer diameter should meet the error requirements. When packing the carton cover, the paper should be in the channel, otherwise the paper will not smooth, not straight and other phenomena affect the normal work of the printer.
3. Do not unplug the signal interface cable when the printer is live.
4. After printing, if you open the machine head, do not touch the print head or motor shell immediately, so as to avoid being burned by the metal shell.
5. The friction between the roller and the heat-sensitive paper is very large. When there is no paper in the print head, the paper should be avoided at this time, not to print, otherwise it is easy to damage the heat-sensitive sheet.
6. The printing head shall be cleaned regularly (with anhydrous alcohol) to ensure the printing quality and service life.
7. If the printer works outdoors, pay attention to dust cleaning of the printer regularly to avoid the sensor can not accurately and effectively report the status of the printer due to dust coverage.
8. Do not block the outlet with your hand:



9. When the actual current is less than the rated current, the printing effect will be affected.

Transport and storage precautions

1. Ensure that the device is placed on a firm, stable horizontal surface.
2. The printer should be packed with foam and foam bags when transporting it.
3. If the device falls, it may be damaged or otherwise injured.
4. Too much moisture and too much dust may damage the equipment.
5. Do not place heavy objects on the product, and never stand or lean on the product.
6. Equipment may fall or collapse, resulting in damage and possible damage.
7. To ensure safety, unplug the power plug of the product when it is not used for a period of time.

(The manufacturer has the right to modify the contents of the manual without prior notice!)