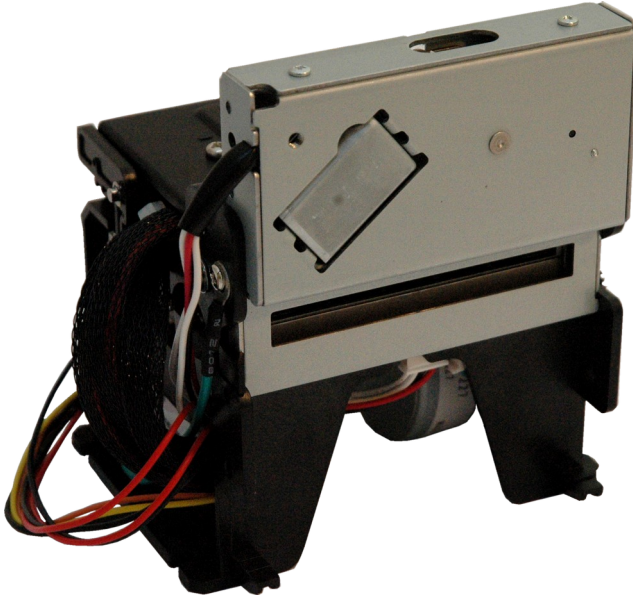


WSP-BT200

Direct thermal
Kiosk & Ticket printer



- Auto-cutting
- Supports text and graphic printing
- Low power consumption
- UART (RS-232C) interface
- High resolution (203dpi : 8dots/mm)

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Copyright

WSP-BT200 2inch Kiosk/Ticket printer operator's manual.

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Caution

Some semiconductor devices are easily damaged by static electricity. You should turn the printer "OFF", before you connect or removed the cable on the rear side, in order to guard the printer against the static electricity.

If the printer is damaged by the static electricity, you should turn the printer "OFF".

Notice

The contents of this manual are subject to change without notice.

Introduction

150mm/sec high-speed printer. The 2inch thermal panel printer is most suitable for ticketing applications, such as transportation, coupons, industrial machine, lottery, ATM and kiosks.

General features:

The general features of WSP-BT200 printer are as follows:

- Very silent printing thru direct thermal printing method.
- High speed (150mm/sec, MAX)
- High resolution (203dpi : 8dots/mm).
- UART (RS-232C) Interface
- Low power consumption.
- Auto cutting.
- Supports text and graphic printing.
- Printer door open & Paper-out sensor
- Easy paper handling
- Easier paper roll loading by CLAMSHELL design.
- Easier maintenance with self-diagnostics.
- In field programming – Update Firmware, Download Fonts and Logos
- Microsoft Windows / Windows CE, Linux, Android compatible
- Flow control : Software (XON/XOFF)
 - ※ Hardware flow control not supported in printer.

Operating precautions :

Please follow the precautions below to enjoy and maintain the full performance of the printer :

Using the printer :

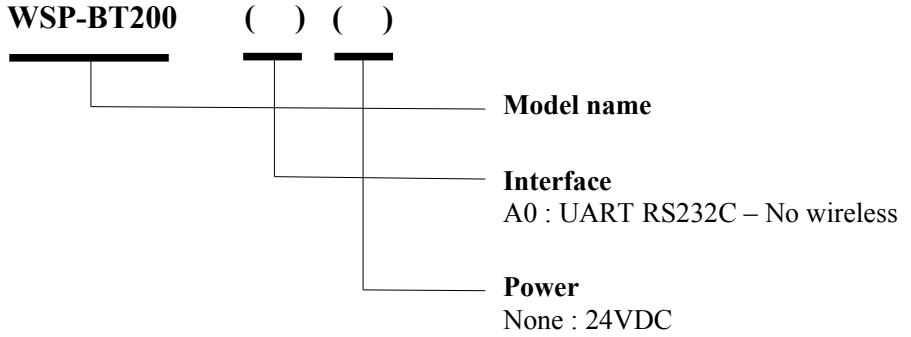
- Be careful not to drop or bump the printer on a hard surface.
- Do not install the printer in direct sunlight or such areas. Suitable environment for the use of the printer is as follow:
Operating temperature: -10°C to 50°C
Relative humidity: 10% to 90% (no condensation)
- Do not install the printer near devices that generate strong electromagnetic fields such as a copy machine.
- Do not open the platen cover during printing.
- Do not remove or reinstall the communication cable during printing or transmission.
- Do not touch the connectors of the communication during the printing.
- Switch the POWER OFF when not in use.
- Do not use alcohol or other solvent.

Thermal paper handling :

- Store the thermal paper in a cool, dry and dark place.
- Do not rub the paper with hard object.
- Do not leave the paper with hard object.
- Do not allow plastic film, erasers, or adhesive tape touch the paper for long periods.
- Do not use chemical glue.
- Always use a clean thermal paper.

1 Outlines

1.1 Model classifications



1.2 Specifications

Item	Specifications
Printing method	Direct thermal line printing
Characters per line	42cpl (max)
Characters size	Eng : 9x24 dots, 12x24 dots Kor : 16x24 dots, [24x24 dots]
Resolution	203dpi, 8 dots/mm
Print width	2 inch (56mm, 448 dots)
Paper width	60 - 0,5mm wide thermal roll paper) Paper thickness : 60 ± 5µm
Printing speed	150mm/sec (MAX)
Dimensions	99.8 x 87.1 x 112 mm
Weight	553g (without paper roll)
Interface	UART (RS-232C)
Barcode supplied	1-D : Code128, Code39, I2/5, Code93, UPC-A, UPC-E, EAN8, EAN13, CODABAR 2-D : PDF417, QR Code, DATA Matrix, Micro PDF417, Truncated PDF417
Black mark	Support black mark detection
H/W spec	MCU:32bits RISC, FLASH : 4Mbytes, RAM : 8Mbytes
Receive buffer size	1Mbytes
Input power	24VDC, Max 3A
Environment conditions	Temperature : -10°C → 50°C (operating) -10°C → 70°C (storage) Humidity : 30%→80 % (operating) 10%→90 % (storage)
MCBF (Mean Cycle Between Failure)	Mechanical : 37,000,000 lines Head : around 50km

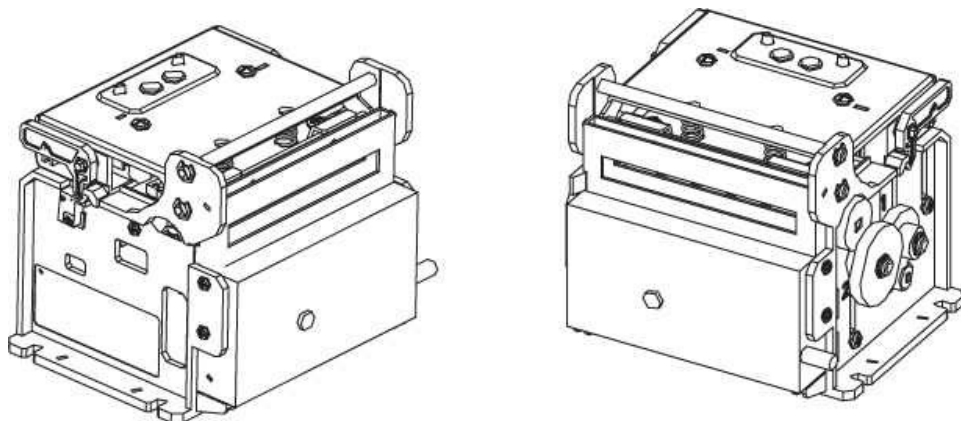
2 Setting up the printer

2.1 Printer & accessories

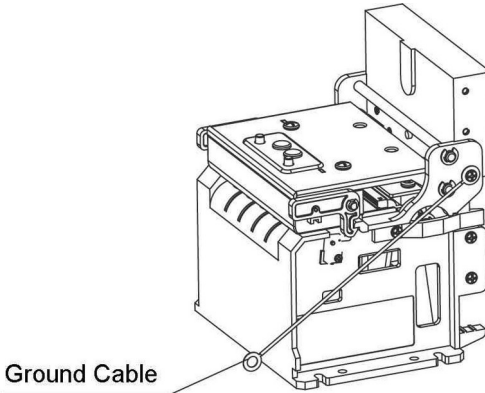
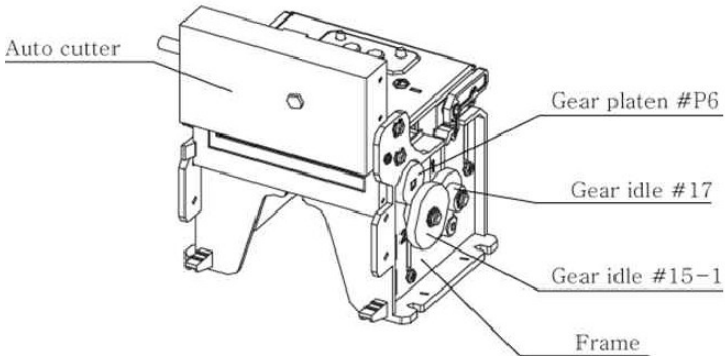
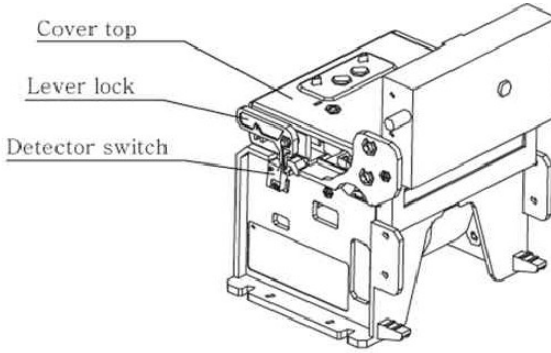
When unpacking your printer box, make sure it contains the printer and all accessories. If any accessories are missing or damaged, please contact your dealer for assistance.

Box content :

- One printer WSP-BT200 :

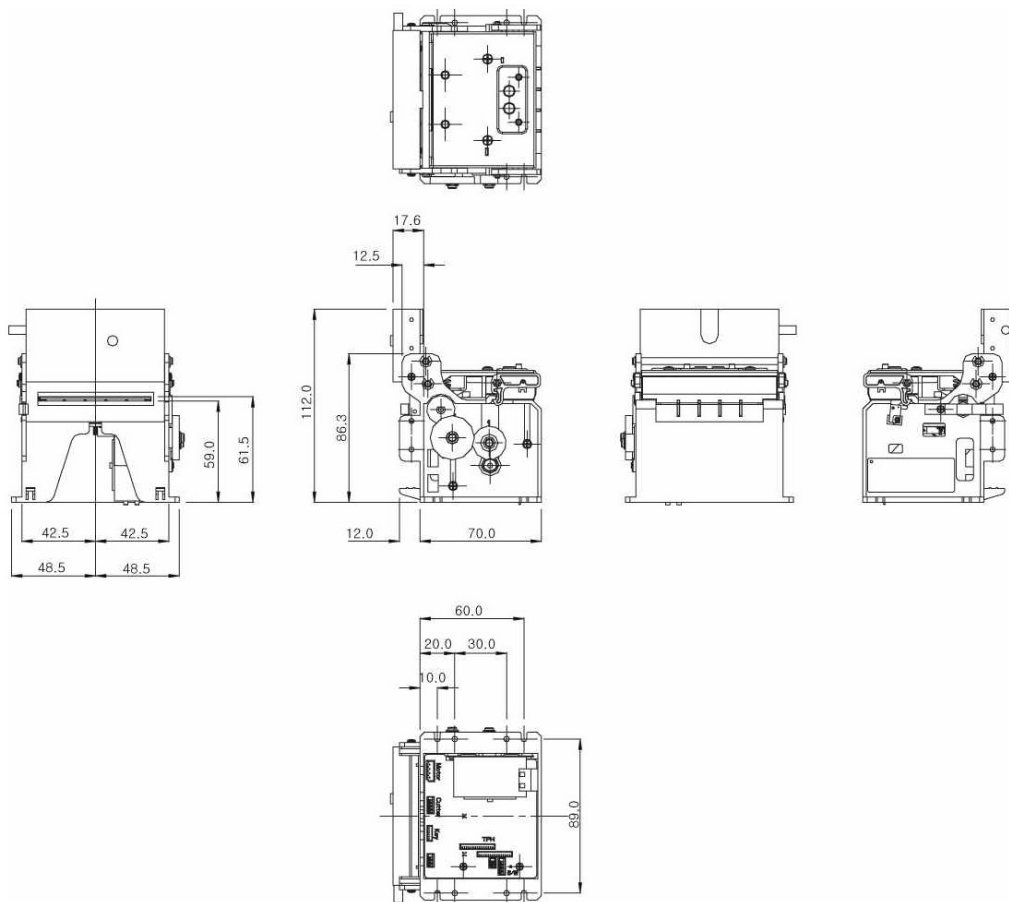


2.2 Printer features



Connecting Ground Cable to Ground (0V) or to the land. If Ground Cable is not correctly connected, it will cause the printer to malfunction or damage the printer

2.3 Dimensions



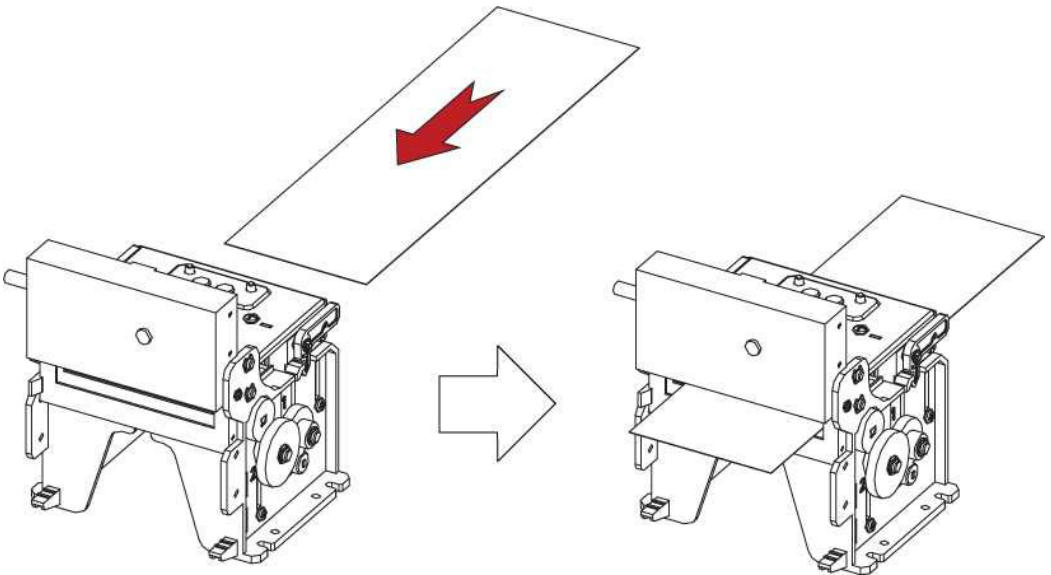
2.4 Replacing the paper roll

Note : Be sure to use paper rolls that meet the specifications.

Do not use paper rolls that have the paper glued to the core because the printer can not detect the paper end correctly.

Steps to follow :

1. Make sure that the printer is not receiving data; otherwise, data may be lost.
2. Remove the used paper roll if there is one.
3. Insert the paper roll as shown :



2.5 Power supply

2.5.1 Specified power supply

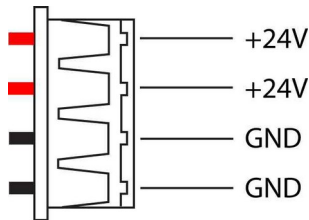
The following specifications are requested for power supply:

INPUT POWER : 24VDC,3A (RMS current)

- * According to the power supplying condition which is sent to a printer, inrush current would occur.
- * Avoid using power supply which its power capacity of power current is extremely high.

2.5.2 Power connector

The WSP-BT200 printer is equipped to an external supply electric power. The functions assigned to the pins in the connector are as follows:



51004-0400 (MOLEX)



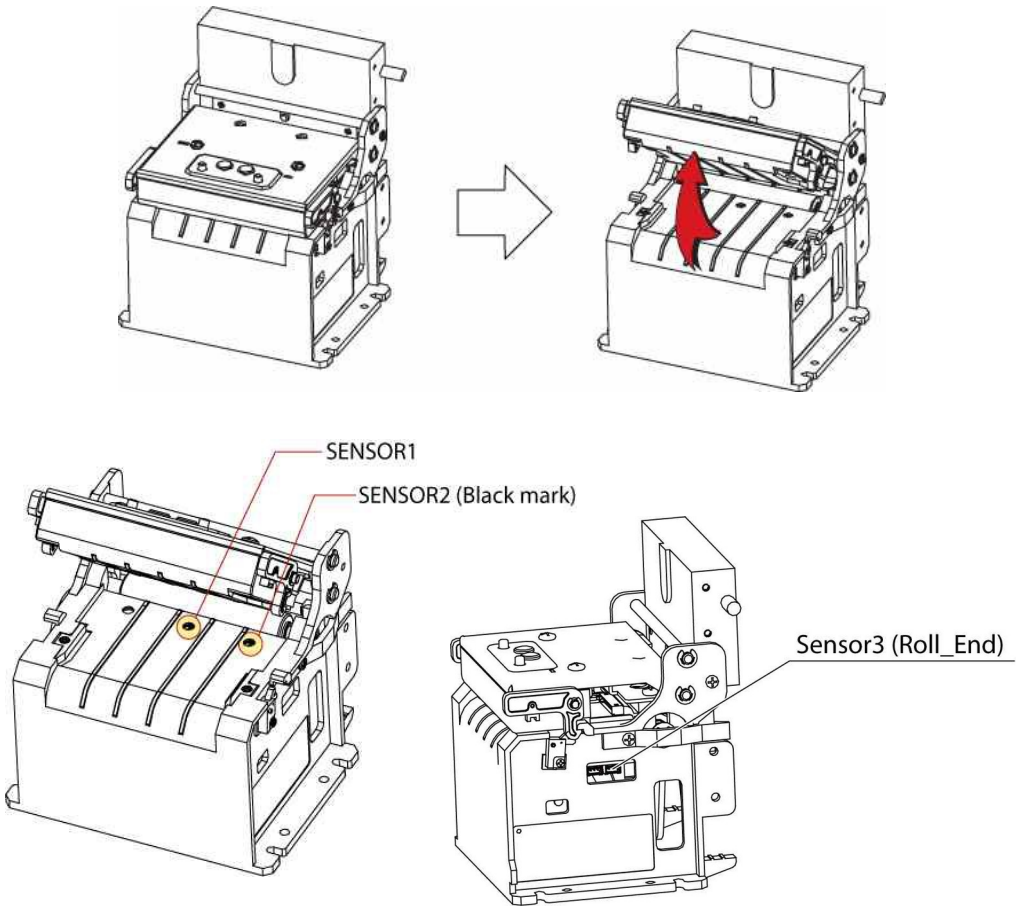
Warning



A wrong connection of power supply connector could damage the printer.

Applicable connector : MOLEX 51004-0400 or equivalent.

2.6 Sensors



Sensor n°1 : Paper out sensor

When using the general thermal paper, the sensor which detects the exhaust presence of the paper.

Sensor n°2 : Black mark sensor

When using label paper etc., is detected with the black mark sensor.

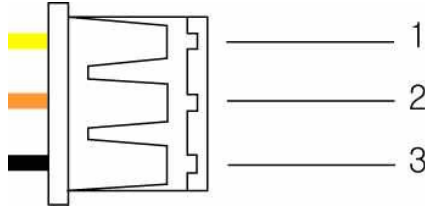
Sensor n°3 : Roll-end sensor

Detects the remainder condition of the paper.

3 Interface

3.1 UART (RS-232C)

The WSP-BT200 printer has a UART (RS-232C) interface and is connected by means of 3 pin female connector. In the following table, the signal present on the connector are listed:



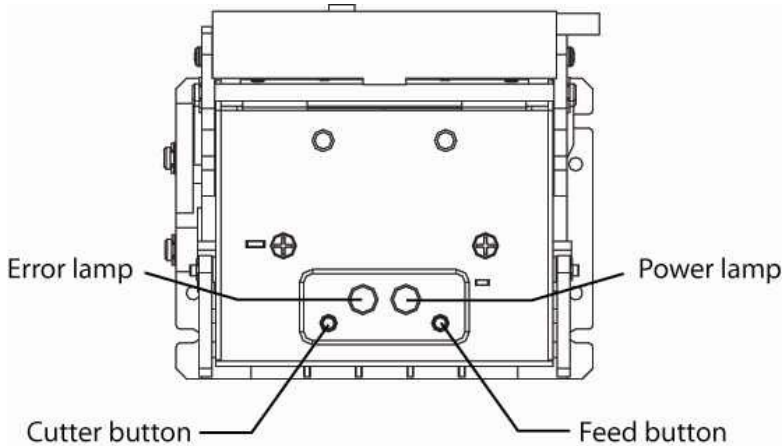
MOLEX : 51004-0300

Pin	Name	Direction	Function
1	TxD	Output	Transmit Data
2	RxD	Input	Receive Data
3	GND	-	Ground

Applicable connector : MOLEX 53014-0310 or equivalent.

4 Using the printer

4.1 Control panel



Button :

- FEED button :

When the printer is on, paper can be feed manually by pressing and holding the FEED button for more than one second.

- CUTTER button :

CUTTER button is used when once cutting paper.

Panel lamp :

- POWER (GREEN) :

Printer is ON and ready to receive data.

- ERROR (RED) :

Indicates a fault condition or a printer error. (i.e : no paper, etc...)

4.2 The self test

The self test procedure will check most of the printer functions. For self test, turn on the power while holding down the FEED button.

The self test checks the following :

- 1) Make sure paper roll has been installed properly.
- 2) The self test prints the current printer status, which provides the control ROM version and the communication method setting.
- 3) After printing the current printer status, the self test will print a pattern using the built-in character set.
- 4) The self test automatically ends.

The printer is ready to receive data as soon as it completed the self test.

5 Consumable parts

5.1 Recommended paper

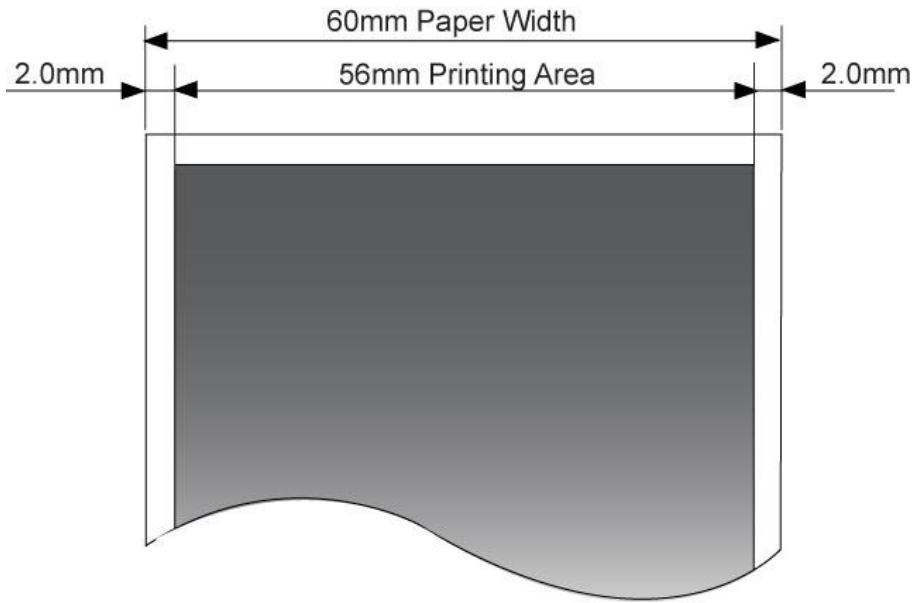
Type	: Thermal paper
Paper width	: 60 mm
Paper thickness	: 60 +5 μ m
Recording side	: Outside of roll

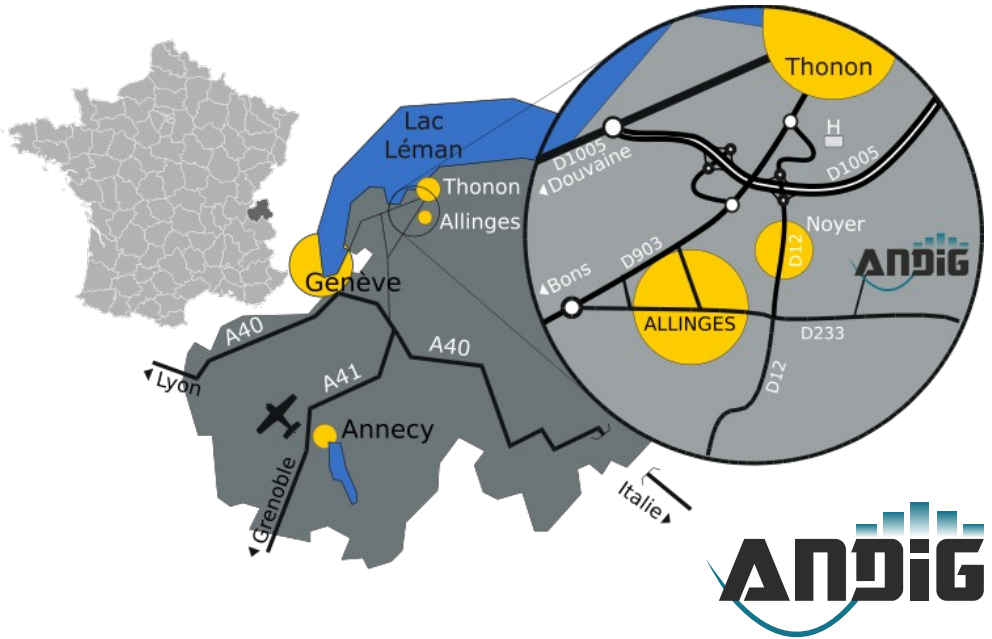


Warning

- 1- Do not paste the paper to the core. And the roll paper wich has near end mark printing on its near end is recommended.
- 2- Chemicals or oil may change the color of paper, or printed characters may fade.
- 3- Change of paper color starts from approx: 70°C. Pay attention to heat, humidity and sun light.
- 4- Color of paper may be changed by being scratched by nail or hard metal, etc...

5.2 Paper dimensions





Precision Potentiometers
 Precision Resistors
 Servo Systems
 Sensors
 Interface
 Printing systems
 Joysticks-Trackballs

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 Commercial Office**

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