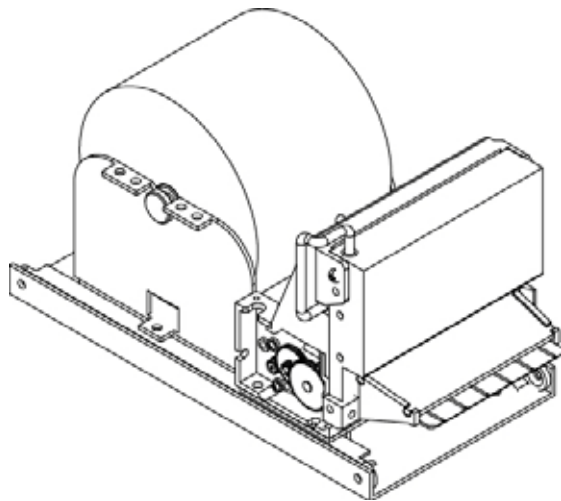


# MODEL PORTI-T

(Kiosk&Ticket Printer)

Rev. 2.0



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All specifications are subjected to change without notice

## ! Copyright

**PORTI-T** Kisok/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**

The **PORTI-T** printer is the ideal solution for kiosk, Ticket vending machines and receipt output for vending machines, ATM, etc

The general features of **Porti-T** printer are as follows:

- U Very silent printing thru direct thermal printing method.
- U High speed(60mm/sec, MAX)
- U High resolution(203dpi : 8dots/mm).
- U UART(RS-232C or TTL), Parallel[option] Interface
- U Low power consumption.
- U Auto cutting.
- U Supports text and graphic printing.
- U Easier maintenance with self-diagnostics.
- U In field programming – Update Firmware, Download Fonts and Logos
- U Microsoft Windows 98 / ME / 2000 / XP / VISTA / 7 compatible.
- U Flow control : Software (XON/XOFF)  
Hardware flow control not supported in printer.
- U Agency Approvals



## ! Operating Precautions

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

### U 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 follows:

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 printing.
- Switch the POWER OFF when not in use.
- Do not use alcohol or other solvent.
- The AC adapter, the battery charger and the battery pack may become warm when in use. This is normal and is not a malfunction.
- When the battery pack is used at low temperature, the length of time the printer can be used may be shortened.

### U 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 to touch the paper for long periods.
- Do not stack the thermal paper with diazo copies immediately after copying or wet-type copies.
- Do not use chemical glue.
- Always use the clean thermal paper.

**| Note**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

These equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception , which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

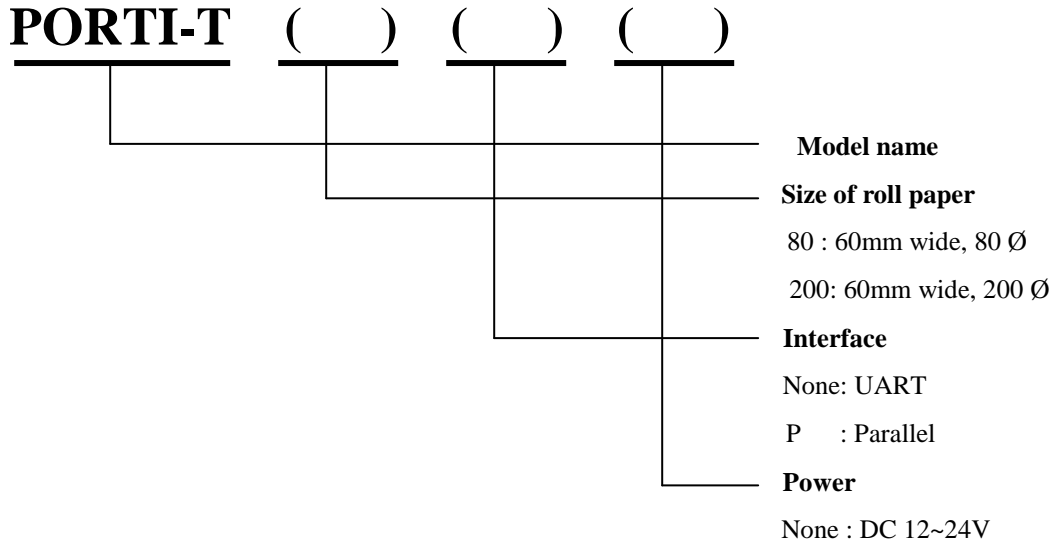
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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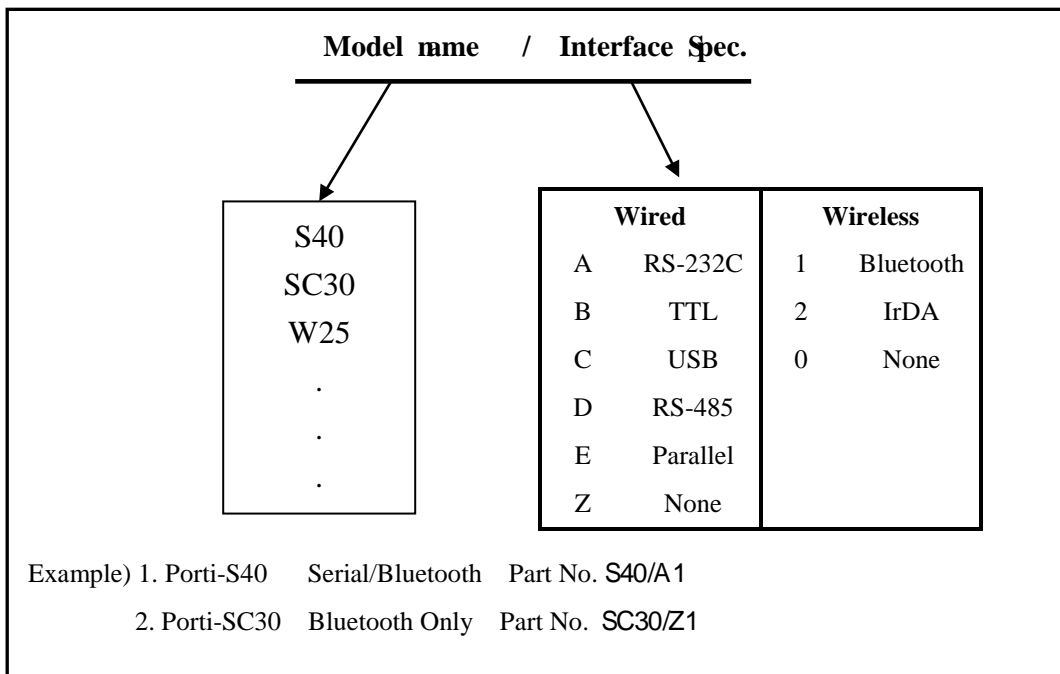
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# 1. Outline

## 1.1. Model classifications



## 1.2. Product Part Number System



### 1.3. Specifications

Item	Specification	
Printing method	Direct thermal line printing	
Characters per line	42cpl (MAX)	
Character size	Eng. : 9*24dots, 12*24dots    Kor. : 16*24dots, [24*24dots]	
Resolution	203dpi, 8dots/mm	
Print width	2-inch (48mm, 384dots)	
Printing speed	60mm / sec (MAX)	
Dimensions	Porti-T80 : 190 * 87.5 * 103 mm [Standard model]	
	Porti-T200 : 310 * 129 * 86 mm	
Weight	820.5g (except roll paper) [Standard model]	
Interface	UART(RS-232C or TTL) [Standard model]	
	Parallel [Option]	
Paper supplied	Thermal roll paper    PORTI-T80 : 60mm wide, 80ø PORTI-T200 : 60mm wide, 200ø	
Barcode supplied	1-dimension : Code128, Code39, I2/5, Code93 UPC, EAN, KAN, JAN, CODABAR	
	2-dimension : PDF417, QR Code, DATA Matrix	
H/W spec	MCU : 32bits RISC, FLASH : 4M bytes, RAM : 8M bytes	
Receive buffer size	1M bytes	
Input Power	12~24VDC, Stand by 80mA and Max 3A	
Option	Sliding mount assembly	
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	Approximately 50 Km

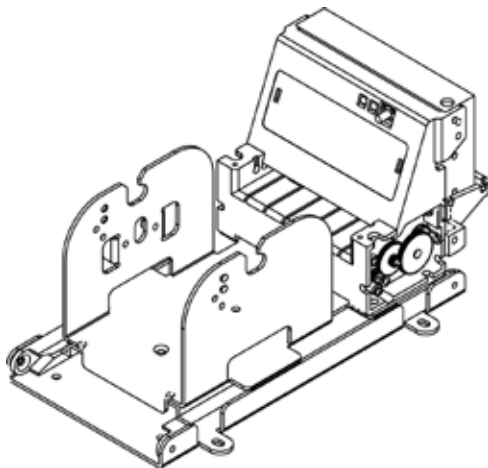
&lt; Table 1 &gt;



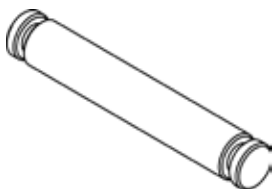
## 2. Setting up the printer

### 2.1. Printer & Accessories

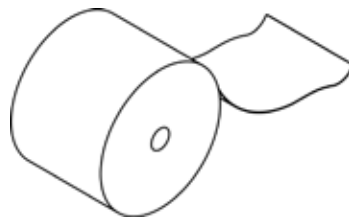
When unpacking your printer box make sure it contains the printer and all accessories.  
If any accessories are missing or damage, please contact your dealer for assistance.



**PORTI-T**

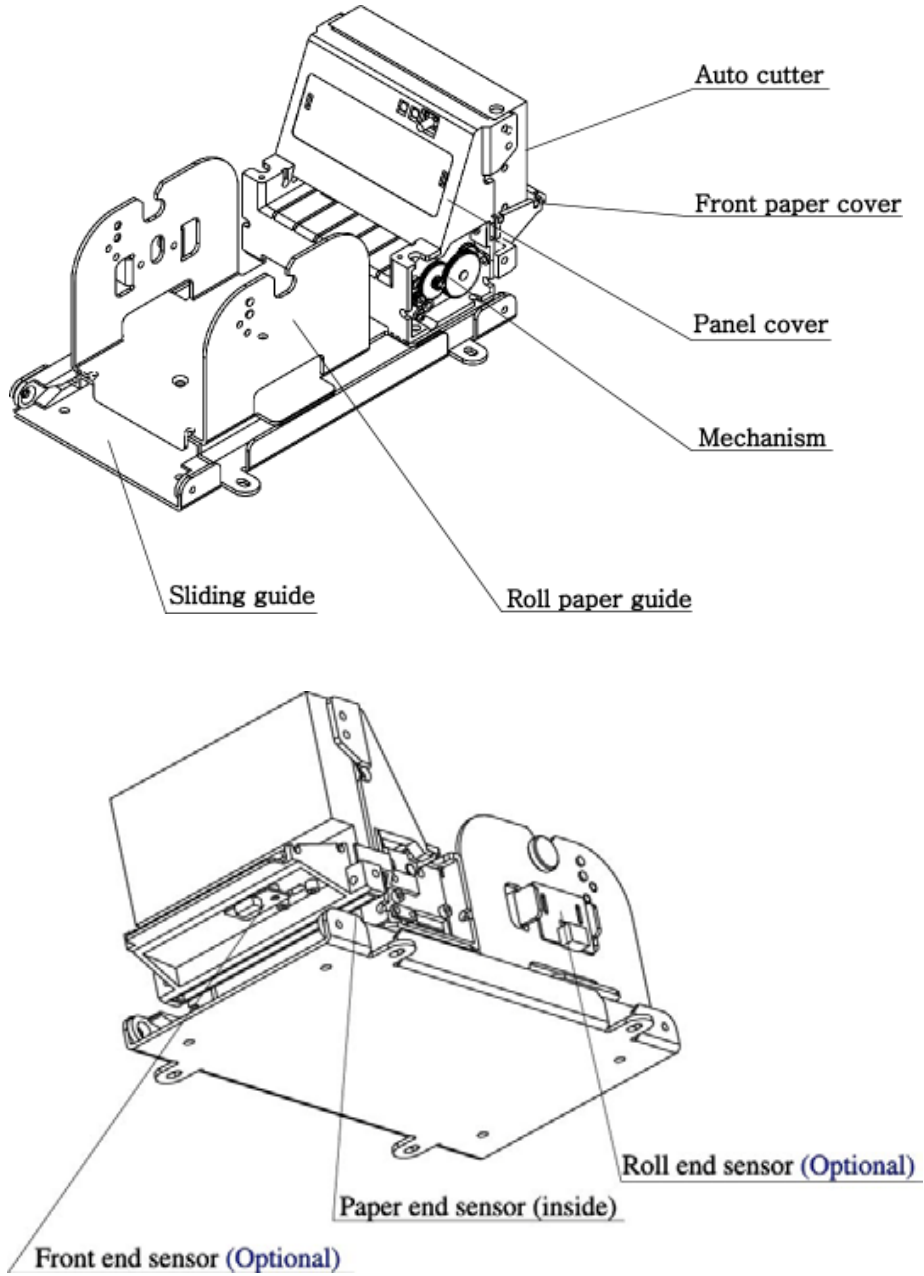


**SHAFT**



**Thermal roll paper**

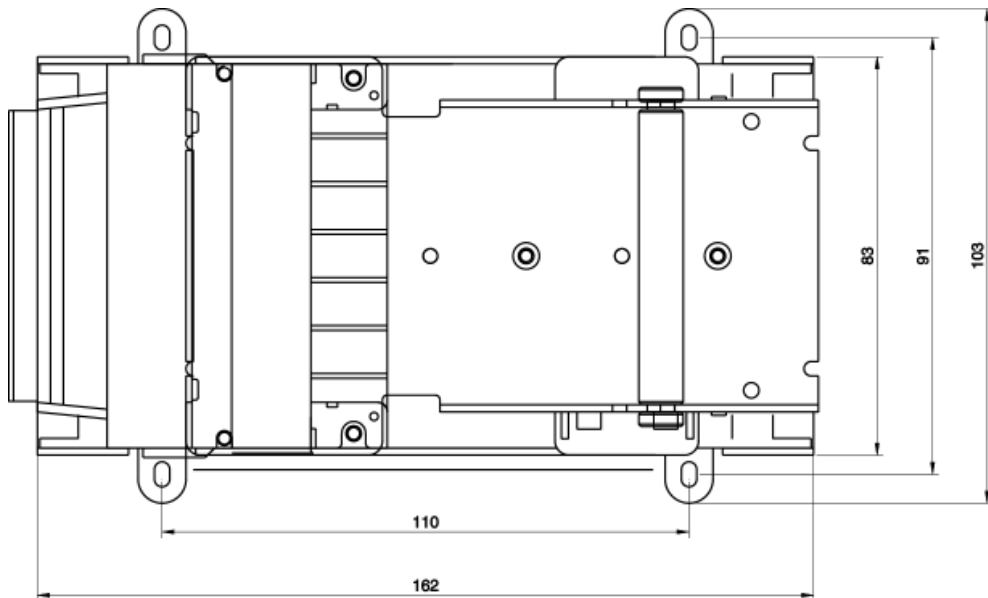
## 2.2. Printer Features



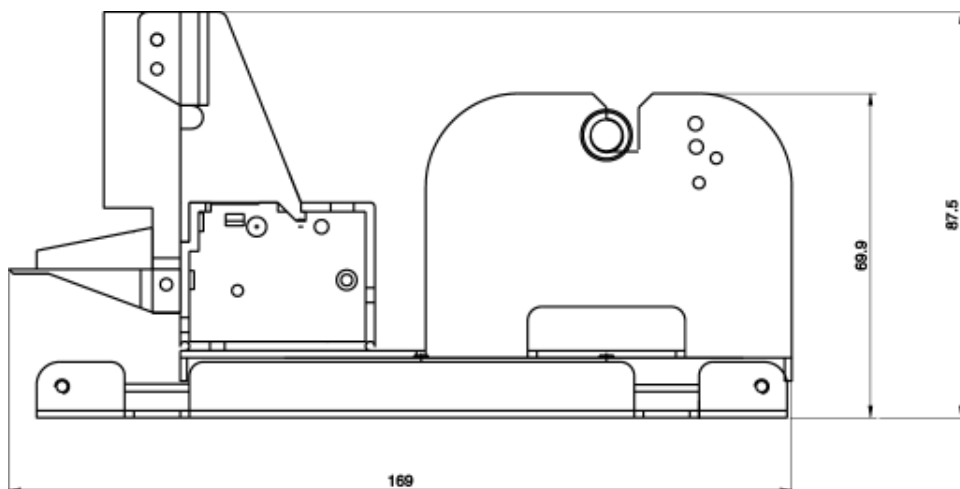
## 2.3. Dimensions

### 2.3.1. Porti-T80

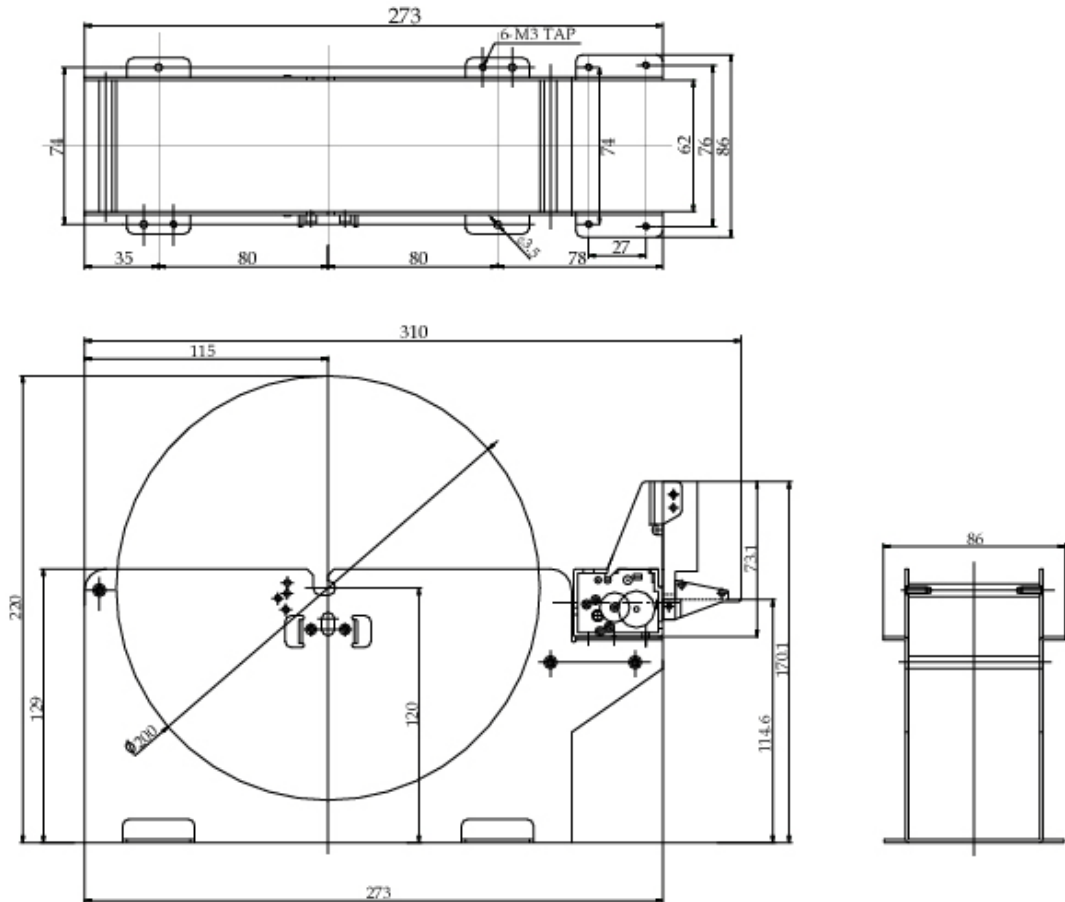
#### - Top view



#### - Side view



### 2.3.2. Porti-T200

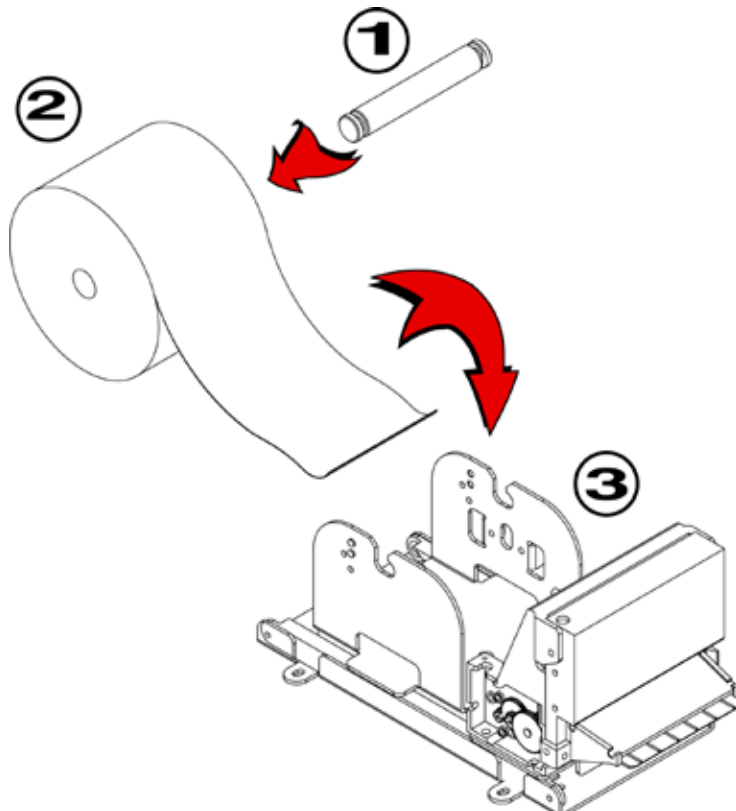


## 2.4. Replacing the paper roll

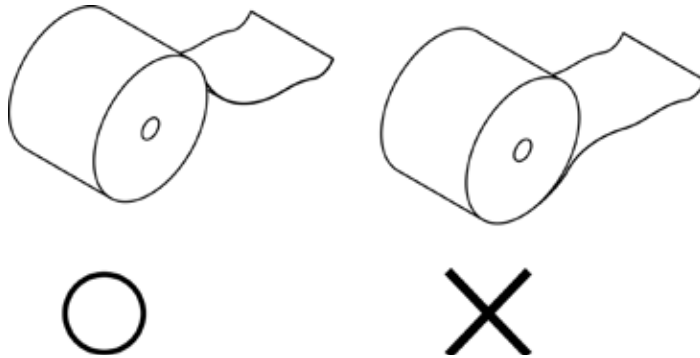
Note : Be sure to use paper rolls that meet the specifications.

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

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

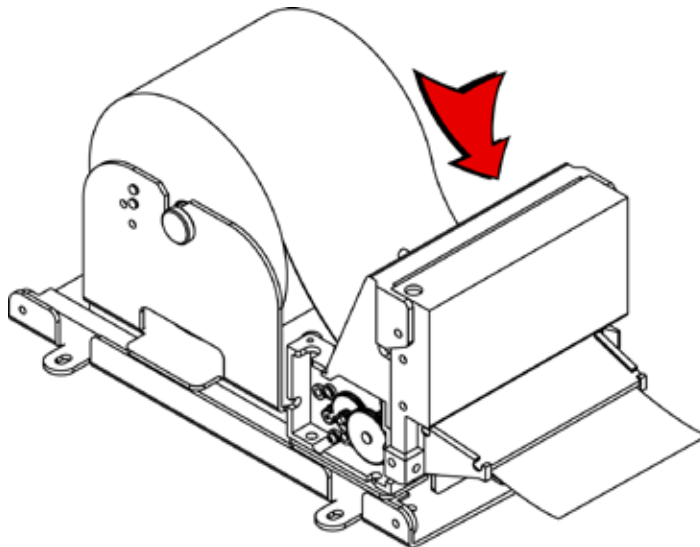


4. Be sure to not the correct direction that the paper comes off the roll.



5. Push in the paper, as shown.

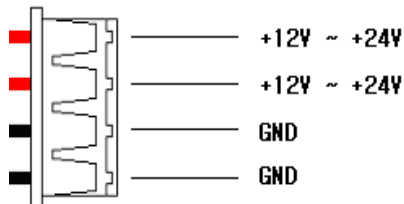
The paper will be loaded automatically.



## 2.5. Power Supply

### 2.5.1. Power connector

The PORTI-T printer is equipped to an external supply electrical 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 be damage the printer.

Applicable connector : MOLEX 53014-0410 or equivalent.

### 2.5.2. Specified Power supply

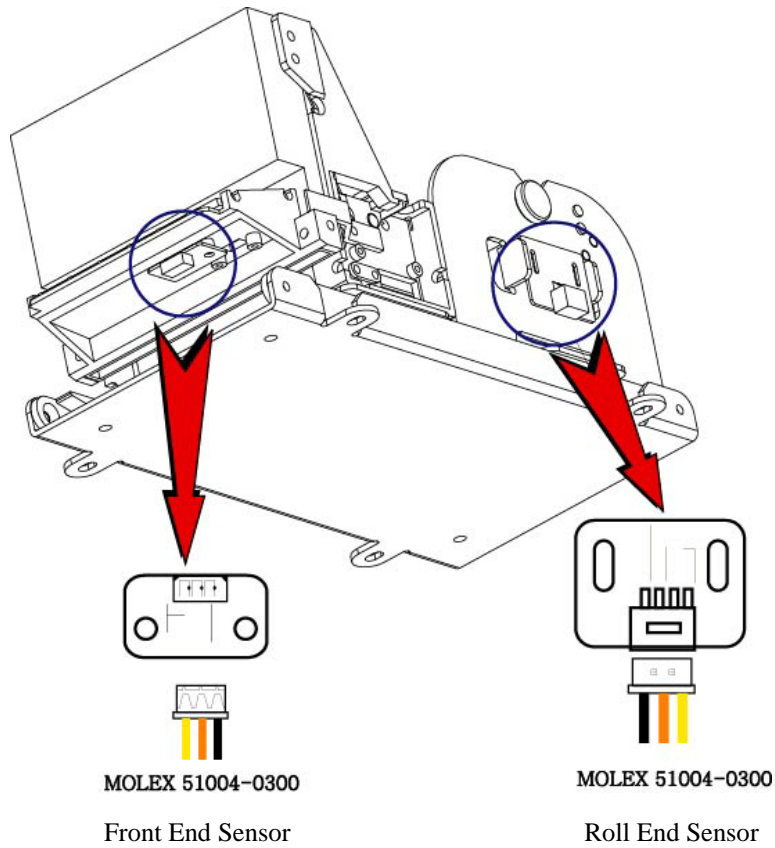
The following specifications are requested for Power supply.

Input : DC 12~24 / Max 3A

Avoid using power supply which its power capacity of power current is extremely high.

## 2.6. Sensor

### 2.6.1. Sensor connector



Applicable connector : MOLEX 53014-0310 or equivalent.

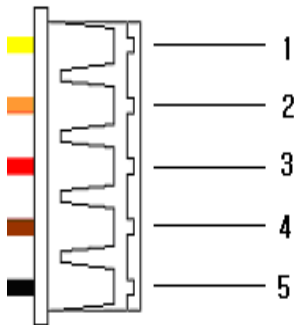


### 3. Interface

#### 3.1. UART ( RS-232C or TTL ) 12V Cutter Version

The PORTI-T(12V Cutter) printer has a UART(RS-232C or TTL) interface and is connected by means of a 5 pin male connector.

In the following table, the signals present on the connector are listed:

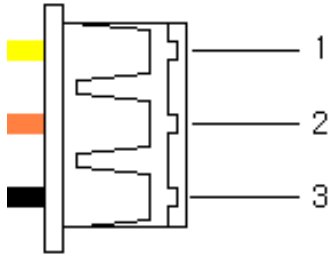


Pin No	Name	Direction	Function
1	TxD	Output	Transmit Data
2	RxD	Input	Receive Data
3	N.C	-	-
4	N.C	-	-
5	GND	-	Ground

<Molex : 51004-0500 >

Applicable connector : MOLEX 53014-0510 or equivalent.

### 3.2. UART ( RS-232C or TTL ) 24V Cutter Version



The PORTI-T(24V Cutter) printer has a UART(RS-232C or TTL) interface and is connected by means of a 3 pin male connector.

In the following table, the signals present on the connector are listed:

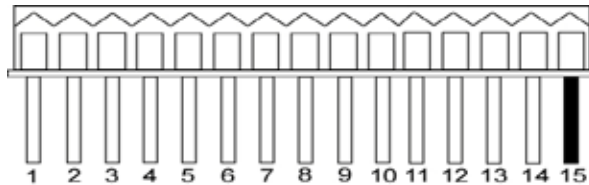
Pin No	Name	Direction	Function
1	TxD	Output	Transmit Data
2	RxD	Input	Receive Data
3	GND	-	Ground

<Molex : 51004-03P>

Applicable connector : MOLEX 53014-03P or equivalent.

### 3.3. Parallel

The PORTI-T printer has a Parallel interface(option) and is connected by means of a 15 pin male connector. In the following table, the signals present on the connector are listed:



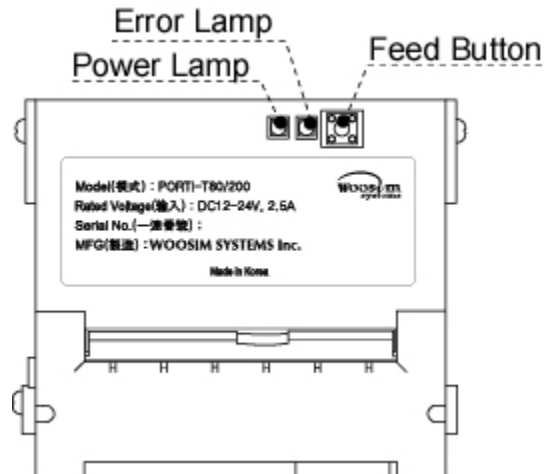
Pin No	Name	Etc
1	STB	
2	DATA BIT 0	
3	DATA BIT 1	-
4	DATA BIT 2	-
5	DATA BIT 3	-
6	DATA BIT 4	
7	DATA BIT 5	
8	DATA BIT 6	
9	DATA BIT 7	
10	ACK	
11	BUSY	
12	P/E	
13	ERR	
14	INIT	
15	GROUND	

<Molex : 51021-1500>

Applicable connector : MOLEX 53047-1510 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.

#### □ Panel lamp

-**POWER** : Printer is ON and ready to receive data.

-**ERROR** : Indicates a fault condition or a printer error.

(i.e : no paper, paper cover opened. 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, 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	: 60mm
Paper thickness	: $60 \pm 5 \mu\text{m}$
External diameter	: $\varnothing$ 80mm or less (T80), $\varnothing$ 200mm or less (T200)
Inside diameter	: $\varnothing$ 12mm
Recording side	: Outside of roll



#### Cautions

1. Do not paste the paper to the core. And the roll paper which 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. Printing position

