USER MANUAL

PLUS4

CUSTOM®

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THE IMAGES USED IN THIS MANUAL ARE USED AS AN ILLUSTRATIVE EXAMPLES. THEY COULDN'T REPRODUCE THE DESCRIBED MODEL FAITHFULLY.

UNLESS OTHERWISE SPECIFIED, THE INFORMATION GIVEN IN THIS MANUAL
ARE REFERRED TO ALL MODELS IN PRODUCTION AT THE ISSUE DATE OF THIS DOCUMENT.

GENERAL SAFETY INFORMATION
Your attention is drawn to the following actions that could compromise the characteristics of the product:
- Read and retain the instructions which follow.
- Follow all indications and instructions given on the device.
- Make sure that the surface on which the device rests is stable. If it is not, the device could fall, seriously damaging it.
- Make sure that the device rests on a hard (non-padded) surface and that there is sufficient ventilation.
- When positioning the device, make sure cables do not get damaged.
- Use the type of electrical power supply indicated on the device label. If uncertain, contact your dealer.
- Make sure the electrical system that supplies power to the device is equipped with a ground wire and is protected by a differential switch.
- Do not block the ventilation openings.
- Do not insert objects inside the device as this could cause short-circuiting or damage components that could jeopardize printer functioning.
- Do not carry out repairs on the device yourself, except for the normal maintenance operations given in the user manual.
- Make sure that there is an easily-accessible outlet with a capacity of no less than 10A closely to where the device is to be installed.
- Periodically perform scheduled maintenance on the device to avoid dirt build-up that could compromise the correct, safe operation of the unit.
- Before any type of work is done on the machine, disconnect the power supply.
- Do not touch the head heating line with bare hands or metal objects. Do not perform any operation inside the printer immediately after printing because the head and motor tend to become very hot.

GENERAL INSTRUCTIONS
CUSTOM S.p.A. declines all responsibility for accidents or damage to persons or property occurring as a result of tampering, structural or functional modifications, unsuitable or incorrect installations, environments not in keeping with the equipment's protection degree or with the required temperature and humidity conditions, failure to carry out maintenance and periodical inspections and poor repair work.

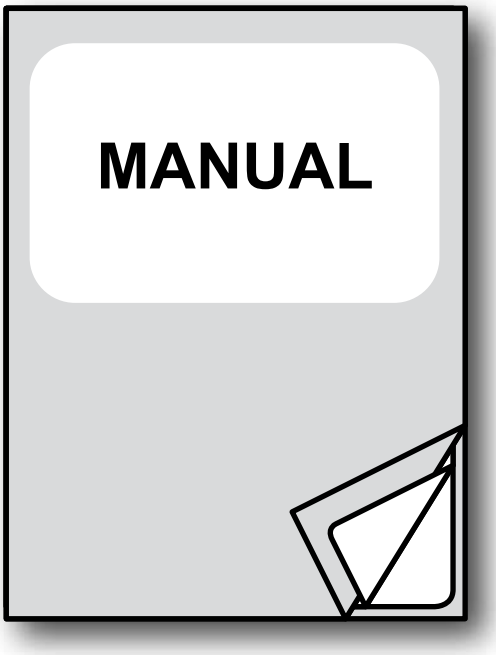
CE THE CE MARK AFFIXED TO THE PRODUCT CERTIFY THAT THE PRODUCT SATISFIES THE BASIC SAFETY REQUIREMENTS.

The device is in conformity with the essential Electromagnetic Compatibility and Electric Safety requirements laid down in Directives 2006/95/CE and 2004/108/CE inasmuch as it was designed in conformity with the provisions laid down in the following Standards:
- EN 55022 Class B *(Limits and methods of measurements of radio disturbance characteristics of Information Technology Equipment)*
- EN 55024 *(Information Technology Equipment – Immunity characteristics – Limits and methods of measurement)*
- EN 60950-1 *(Safety of information equipment including electrical business equipment)*

GUIDELINES FOR THE DISPOSAL OF THE PRODUCT

The crossed-out rubbish bin logo means that used electrical and electronic products shall NOT be mixed with unsorted municipal waste. For more detailed information about recycling of this product, refer to the instructions of your country for the disposal of these products.
- Do not dispose of this equipment as miscellaneous solid municipal waste, but arrange to have it collected separately.
- The re-use or correct recycling of the electronic and electrical equipment (EEE) is important in order to protect the environment and the wellbeing of humans.
- In accordance with European Directive WEEE 2002/96/EC, special collection points are available to which to deliver waste electrical and electronic equipment and the equipment can also be handed over to a distributor at the moment of purchasing a new equivalent type.
- The public administration and producers of electrical and electronic equipment are involved in facilitating the processes of the re-use and recovery of waste electrical and electronic equipment through the organisation of collection activities and the use of appropriate planning arrangements.
- Unauthorised disposal of waste electrical and electronic equipment is punishable by law with the appropriate penalties.

The format used for this manual improves use of natural resources reducing the quantity of necessary paper to print this copy.



For details on the commands,
refer to the manual with code **772000000002100**

TABLE OF CONTENTS

1 INTRODUCTION

1.1 Document structure

This document includes the following chapters:

1	INTRODUCTION	information about this document
2	DESCRIPTION	general description of device
3	INSTALLATION	information required for a correct installation of the device
4	OPERATION	information required to make the device operative
5	CONFIGURATION	description of the configuration parameters of the device
6	MAINTENANCE	information for a correct periodic maintenance
7	SPECIFICATION	technical specification for the device and its accessories
8	CONSUMABLES	description and installation of the available consumables for the device
9	ACCESSORIES	description and installation of the available accessories for the device
10	ALIGNMENT	information required for managing the paper alignment
11	TECHNICAL SERVICE	information required for contacting the technical service
12	ADVANCED FUNCTIONS	information about special functions available with the device

1.2 Explanatory notes used in this manual

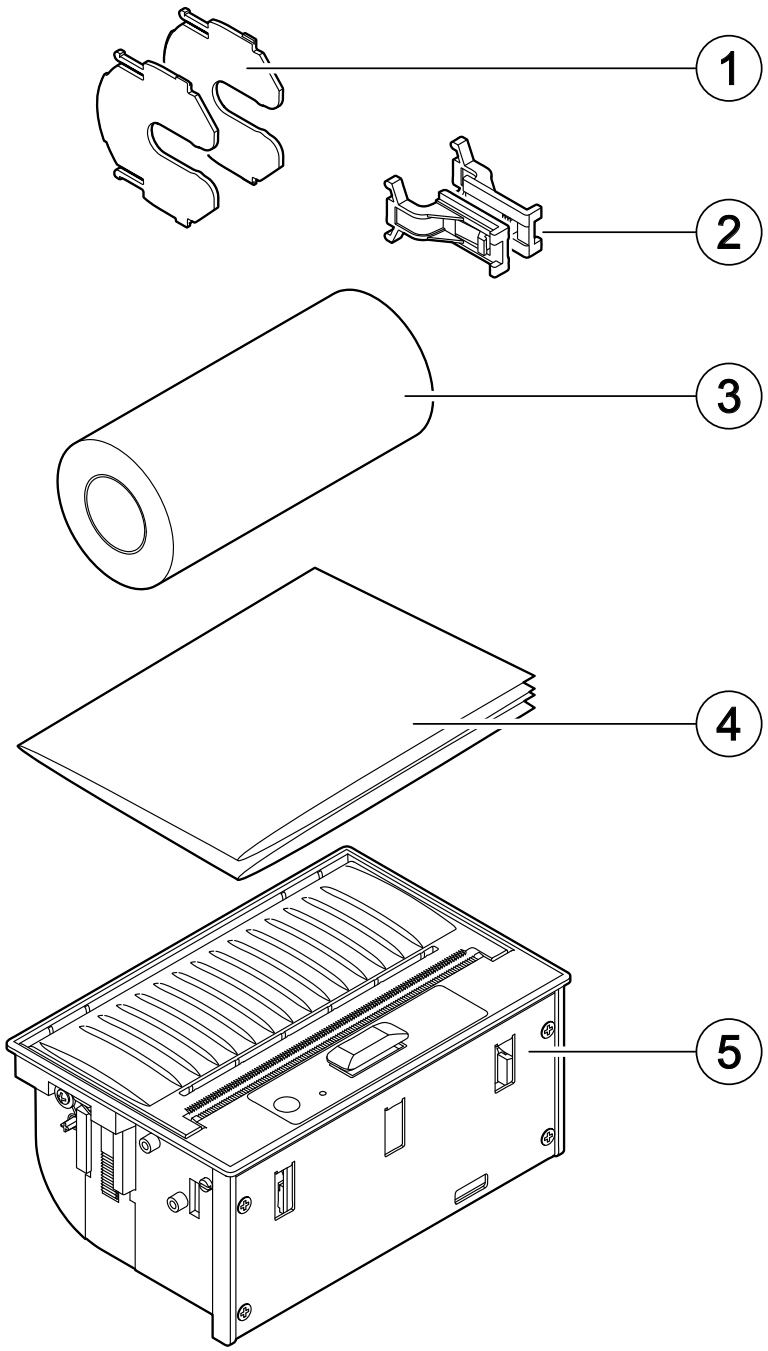
NOTE:	Gives important information or suggestions relative to the use of the device
ATTENTION:	Gives information that must be carefully followed to guard against damaging the device
DANGER:	Gives information that must be carefully followed to guard against operator injury or damage

2 DESCRIPTION

2.1 Unpacking the device

Remove the device from its carton being careful not to damage the packing material so that it may be re-used if the printer is to be transported in the future.
Make sure that all the components illustrated below are present and that there are no signs of damage. If there are, contact Customer Service.

1. Paper adjustment guides (already assembled)
2. Fixing hooks
3. Paper roll (already inserted into the device)
4. Installation instruction
5. Device

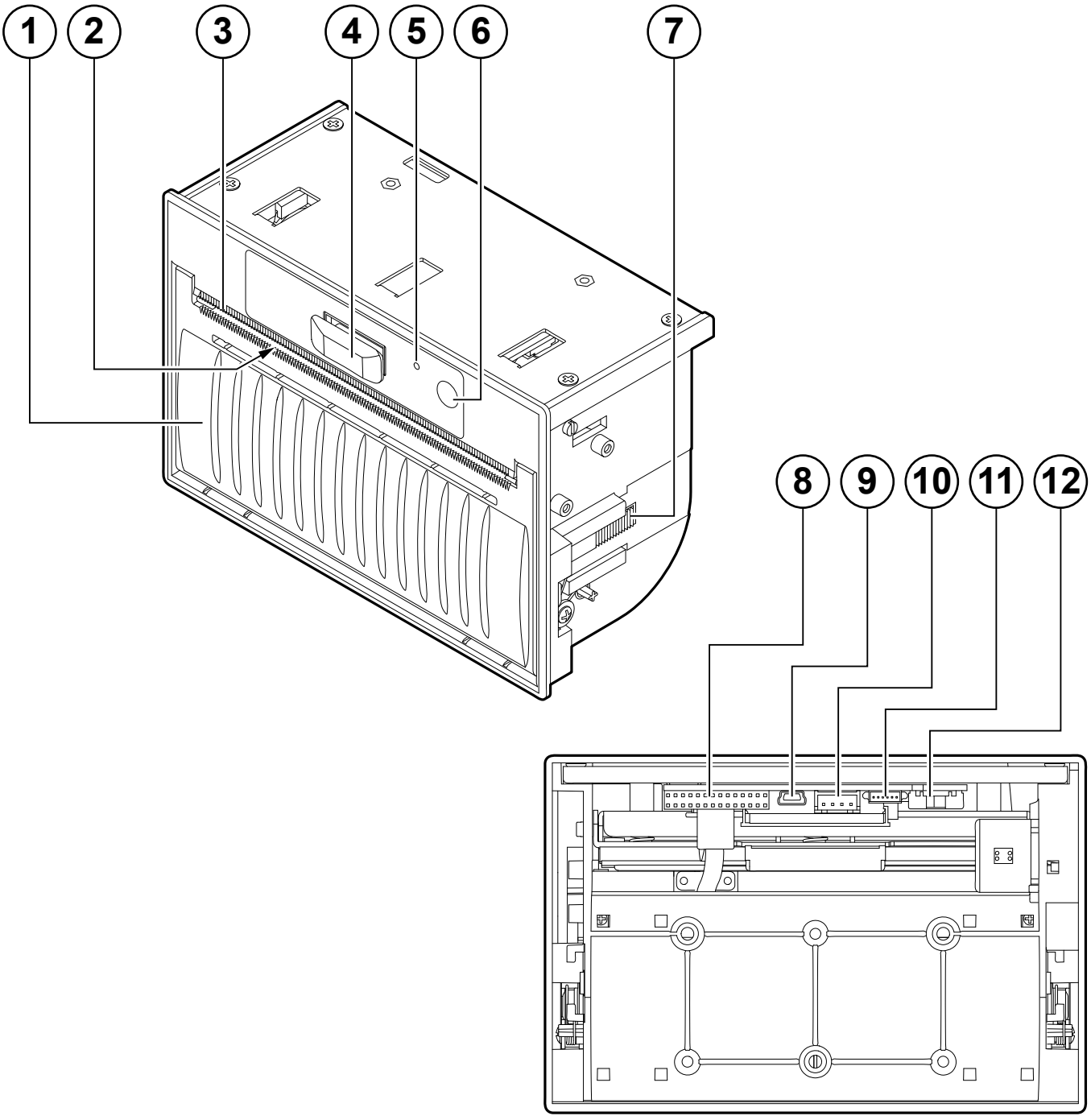


- Open the device packaging.
- Remove the packing frame content and remove the packing frame.
- Take out the device.
- Keep the box, trays and packing materials in the event the printer must be transported/shipped in the future.

2.2 Device component: external views

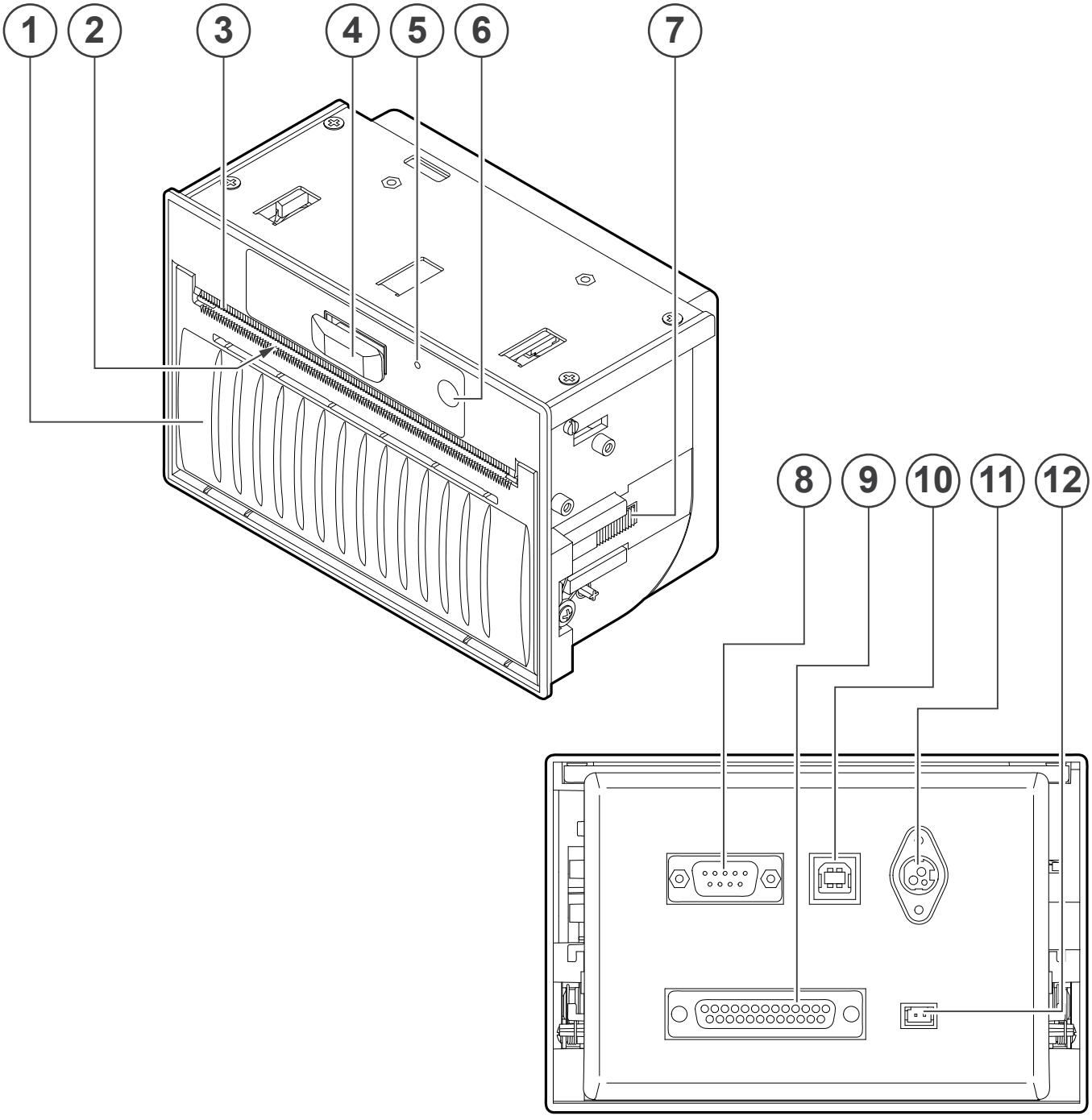
Model without interconnection module

1. Frontal cover
2. Paper output
3. Serrated blade for manual tear off
4. Release lever for cover
5. Status led
6. FEED key
7. Seat for fixing hook
8. Connector for interconnection module (optional)
9. USB interface connector (miniUSB)
10. Power supply connector
11. RS232/TTL serial interface connector
12. Switch for serial interface setting



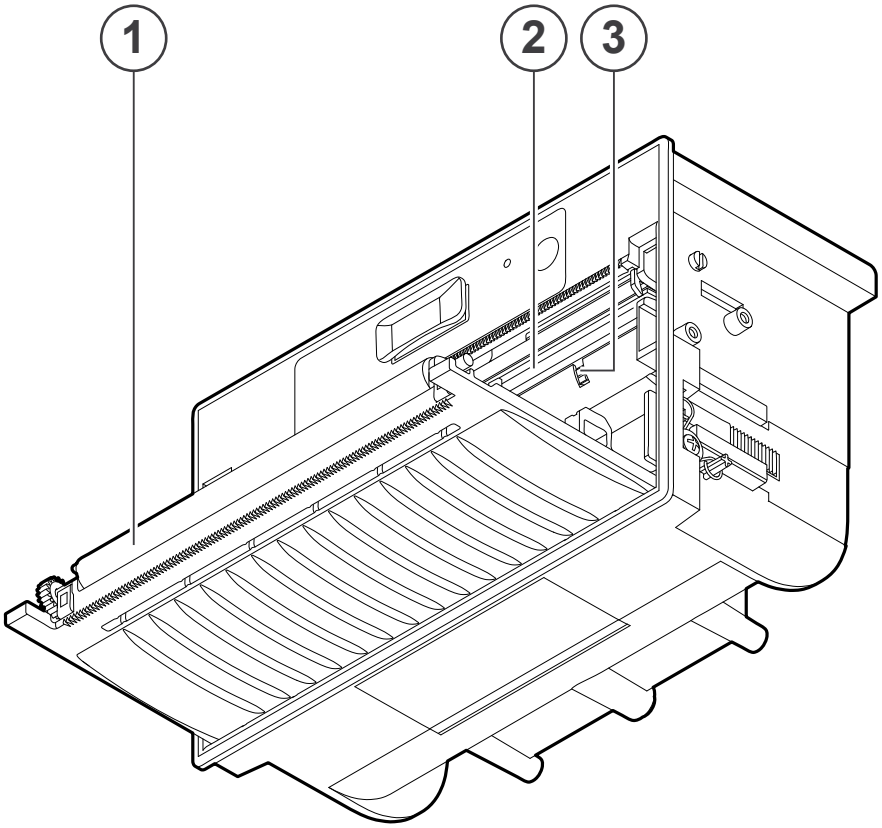
Model with interconnection module

1. Frontal cover
2. Paper output
3. Serrated blade for manual tear off
4. Release lever for cover
5. Status led
6. FEED key
7. Seat for fixing hook
8. RS232/TTL serial interface connector
9. Parallel interface connector
10. USB interface connector (type B)
11. Power supply connector
12. Connector for external device (optional)



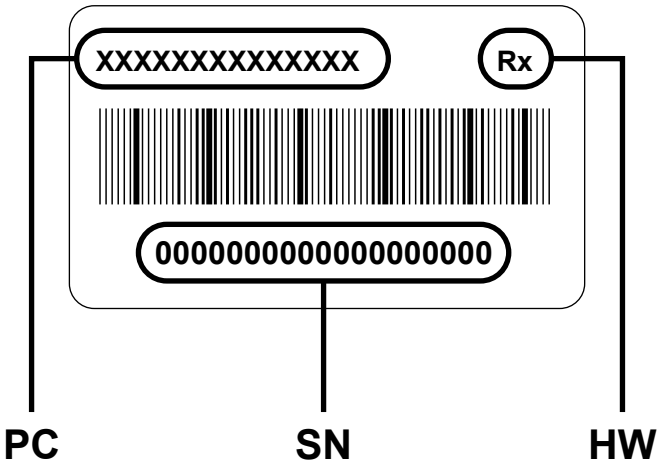
2.3 Device component: internal view

1. Printing roller
2. Printing head with temperature sensor
3. Sensors for detecting paper presence



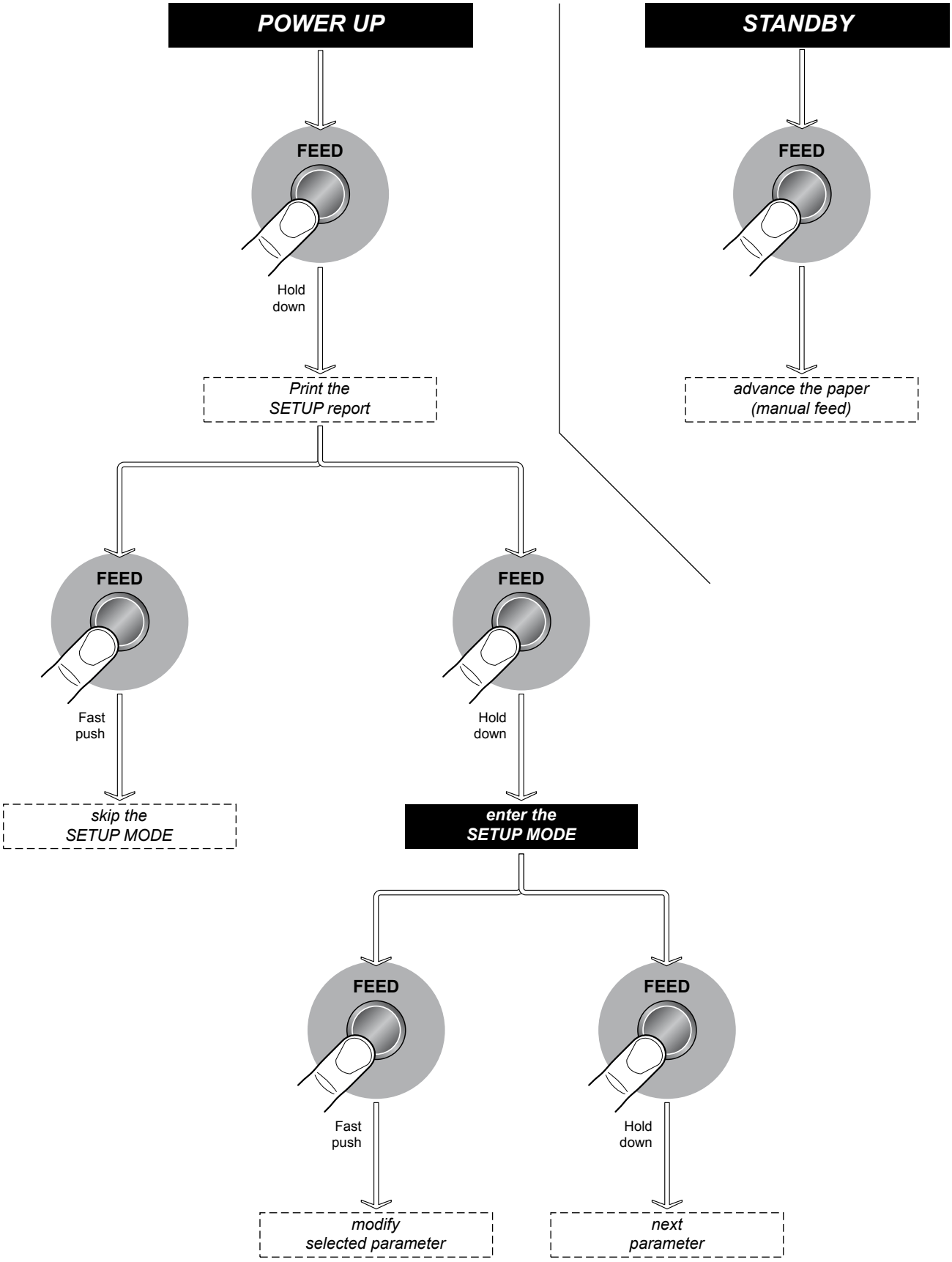
2.4 Product label

PC = Product code (14 digits)
SN = Serial number
HW = Hardware release



2.5 Key functions

The following figures show the functions of key according to the operating condition of the device.



2.6 Status led flashes

The status led indicates hardware status of device. Given in the table below are the various led signals and the corresponding device status.

STATUS LED			DESCRIPTION
-	○	***OFF***	PRINTER OFF
GREEN	●	***ON***	PRINTER ON: NO ERROR
GREEN COMMUNICATION STATUS	●	***x 1***	RECEIVE DATA
		x 2	RECEPTION ERRORS (PARITY, FRAME ERROR, OVERRUN ERROR)
		x 3	COMMAND NOT RECOGNIZED
		x 4	COMMAND RECEPTION TIME OUT
YELLOW RECOVERABLE ERROR	●	***x 2***	HEADING OVER TEMPERATURE
		x 3	PAPER END
		x 4	PAPER JAM
		x 5	POWER SUPPLY VOLTAGE INCORRECT
		x 6	COVER OPEN
RED UNRECOVERABLE ERROR	●	***3 x***	RAM ERROR

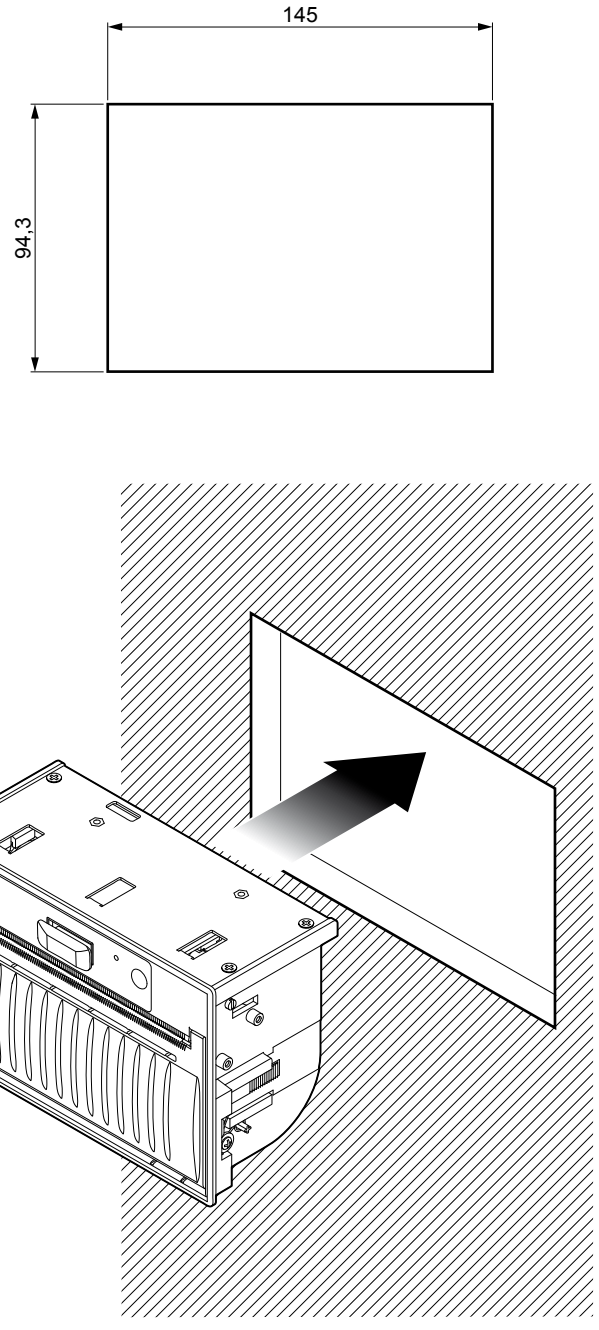
3 INSTALLATION

3.1 “EASYLOCK” fastening

The device includes two plastic hooks for the “Easylock” fastening. This system allows to fix the device to panels of variable thickness from a minimum of 3mm and a maximum of 8mm and requires no tools.
To use the fixing hooks, proceed as follows:

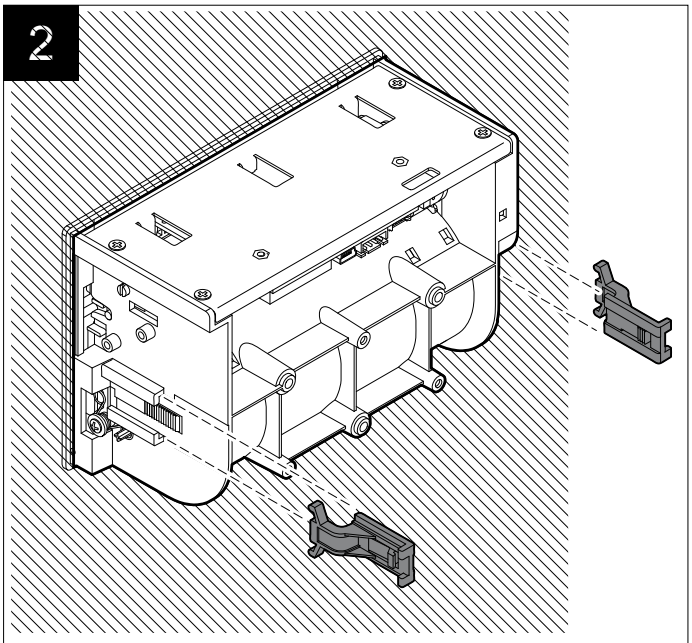
NOTE: All the dimensions shown in following figures are in millimetres.

1



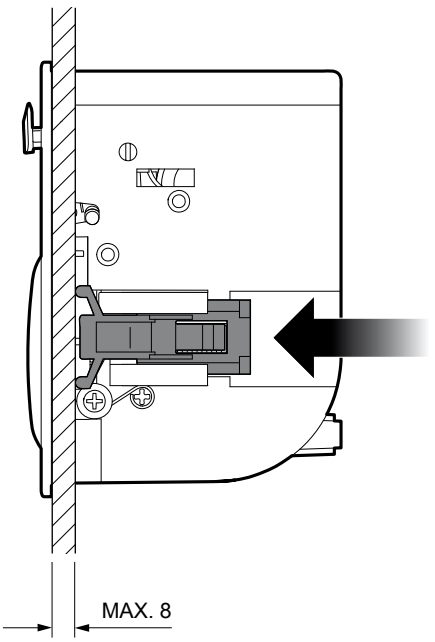
Insert the device inside the panel

2



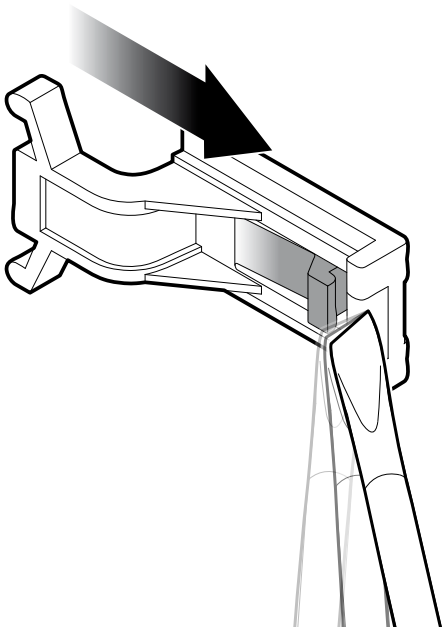
Insert the fixing hooks into the seat on both the device sides

3



Push the two fixing hooks to strike the panel

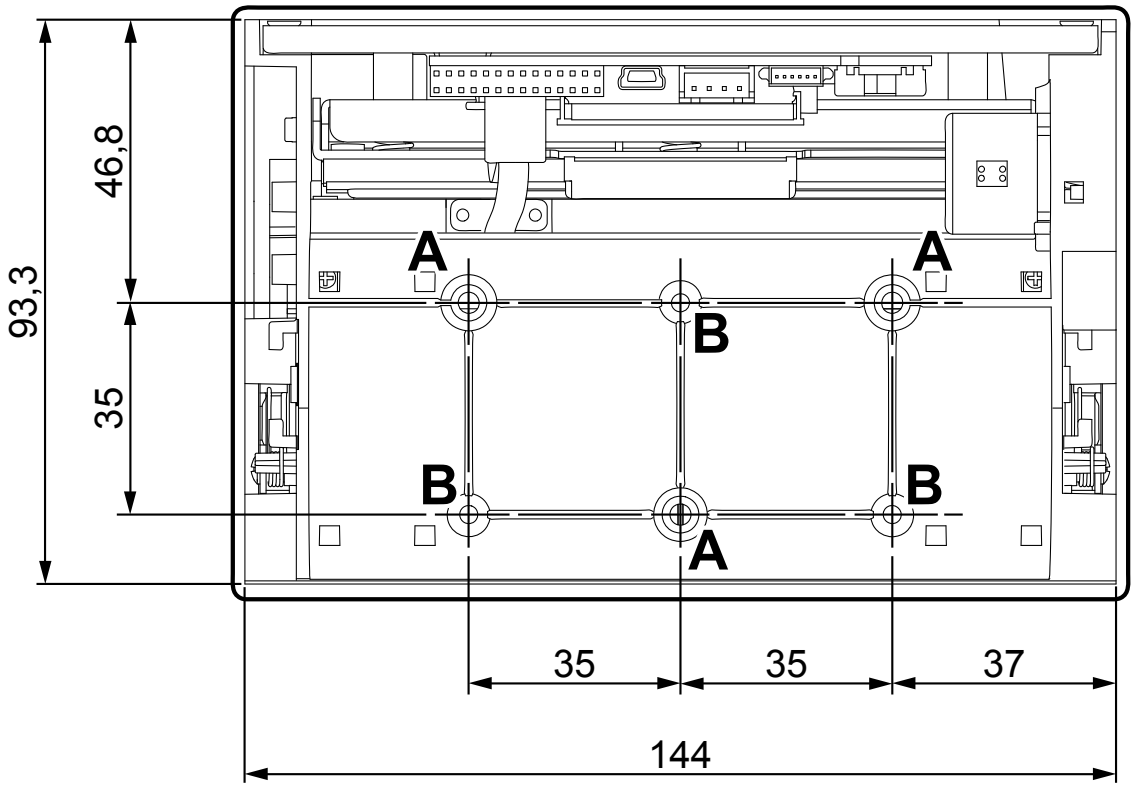
4



To remove the fixing hooks
lift the lever shown in figure
with a small screwdriver

3.2 Fixing with screws (model without interconnection module)

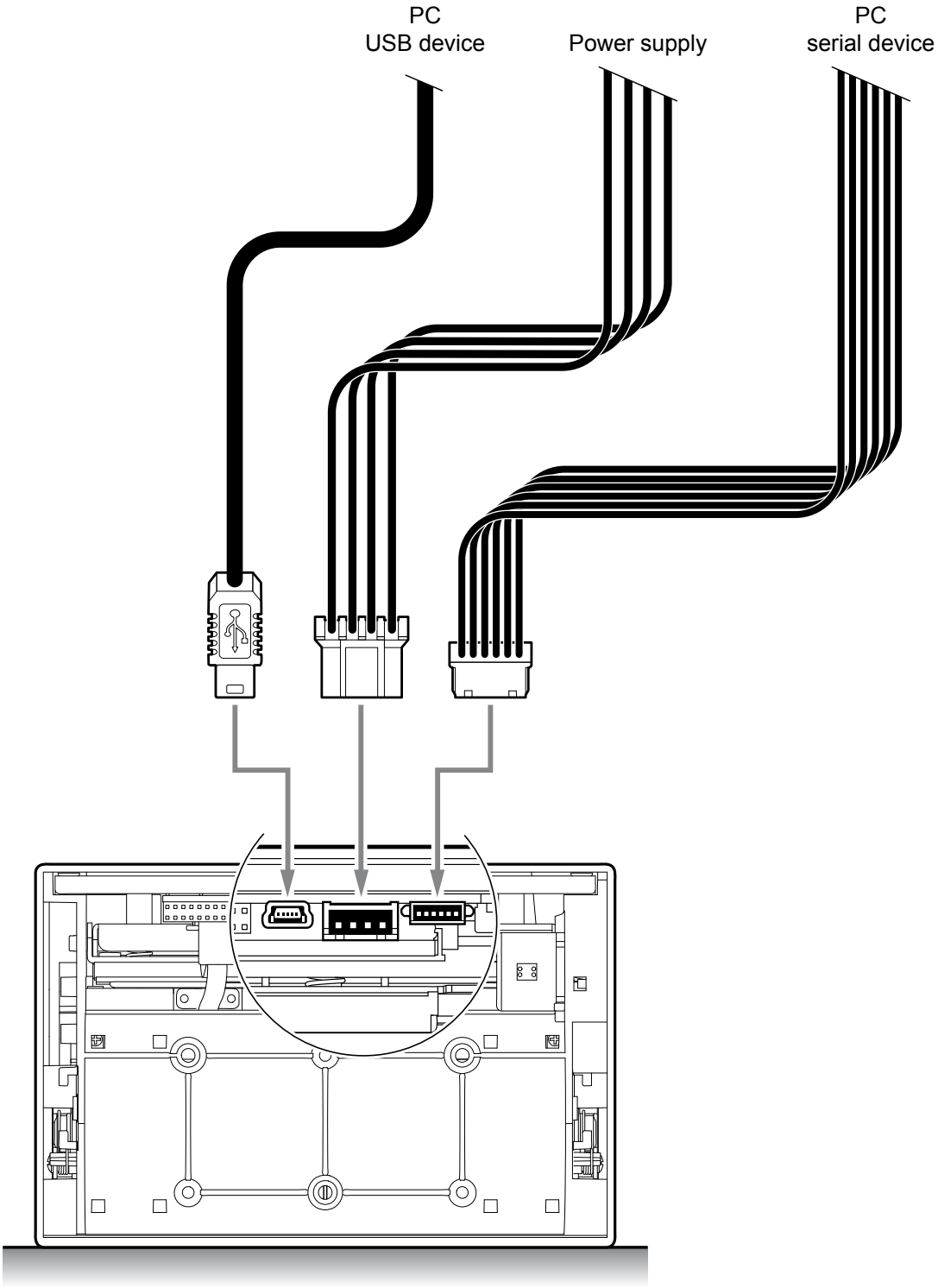
The device is provided with six fixing holes in the back side.
To install the device on a panel it is possible to use three M3 threaded screws into the holes indicated by the letter A or three screws for plastic d = 3 (length 6 mm) into the holes indicated by the letter B (see following figure).



3.3 Connections

The following figures show the possible connections for device.

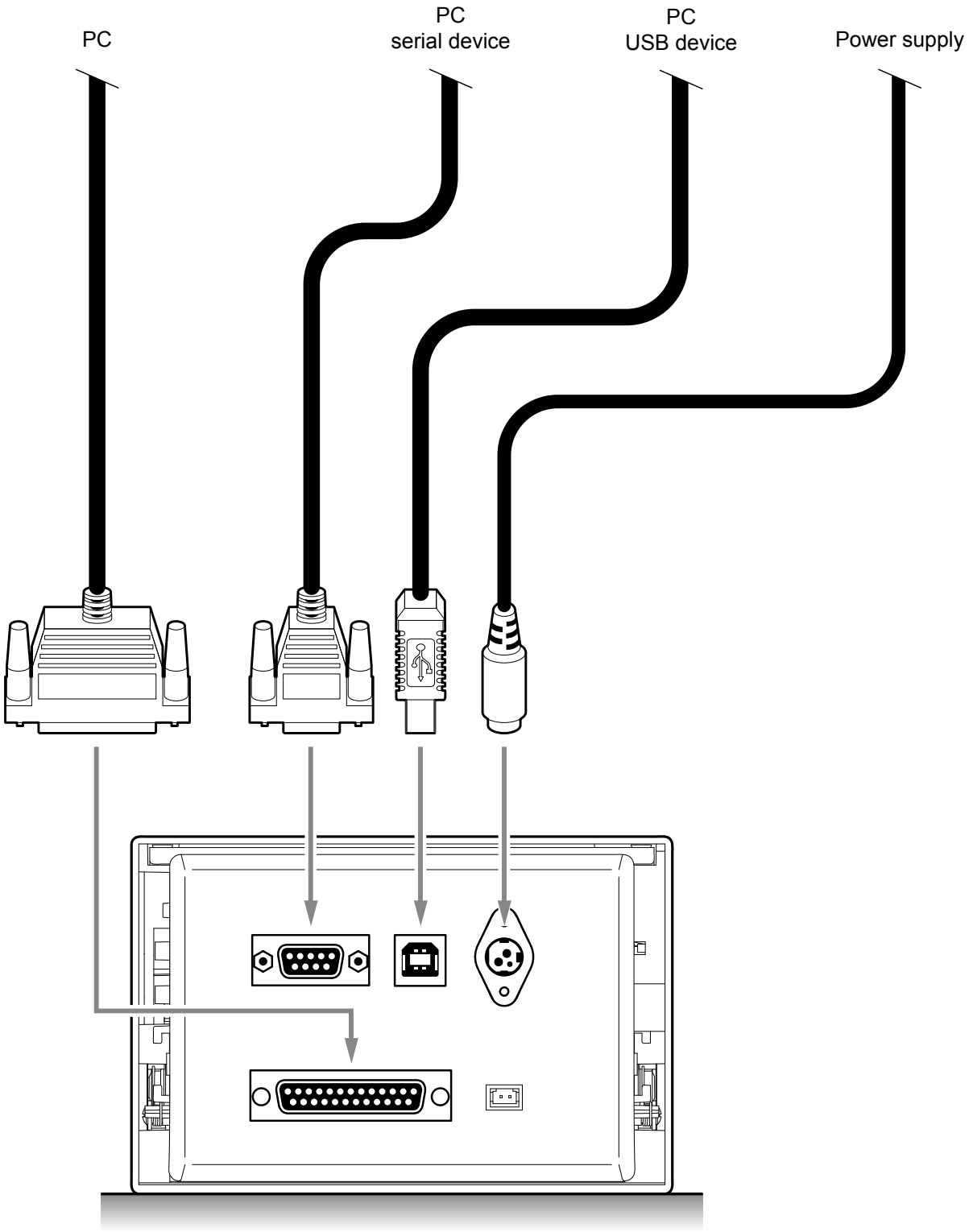
Model without interconnection module



ATTENTION: In some using conditions, we recommend the installation of a ferrite core on the power supply cable.

NOTE: If RS232 and USB connectors are inserted, communication port is USB.

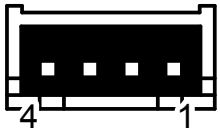
Model with interconnection module



ATTENTION: In some using conditions, we recommend the installation of a ferrite core on the power supply cable.

NOTE: If RS232 and USB connectors are inserted, communication port is USB.

3.4 Pinout (model without interconnection module)



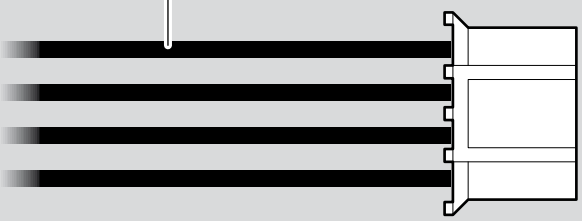
POWER SUPPLY
JST male connector 90° (S4B-XH-A-1)

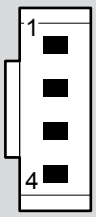
J13	1	+VL
	2	+VP
	3	GND
	4	GND

ATTENTION:
Respect power supply polarity.

NOTE: Power supply cable
The following figure shows the connector pinout of the power supply cable for the device:

Power supply cable



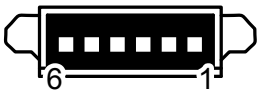


Female JST connector series XHP-4

PIN	*Cable color*	*Segnal*
1	*Red*	*+VL*
2	*Orange*	*+VP*
3	*Black*	*GND*
4	*Black*	*GND*

MINI USB INTERFACE
Female MINI USB type B connector

J6	1	VPLUG
	2	D0-
	3	D0+
	4	n.c.
	5	GND
	SH1	GND
	SH2	GND
	SH3	GND
	SH4	GND



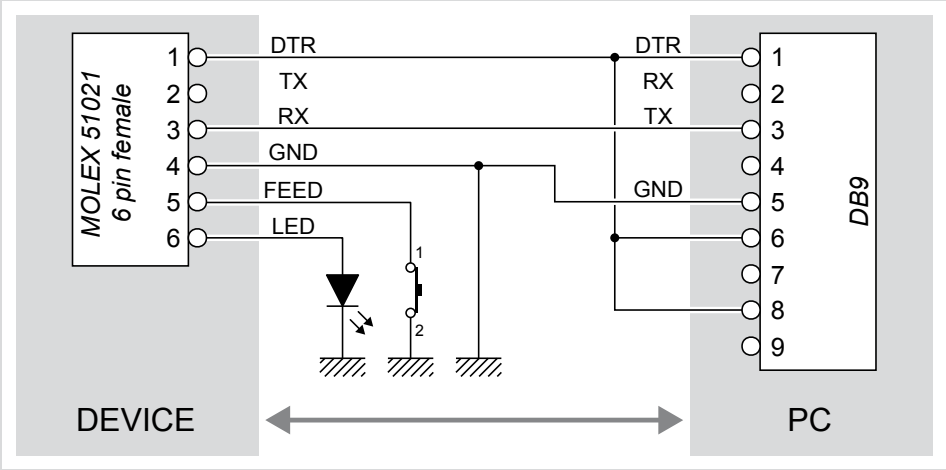
RS232/TTL SERIAL INTERFACE

Molex male connector 53261 series (90°)

J4	1	RT	
	2	TX	During transmission, oscillates between “0” and “1” depending on data
	3	RX	During reception, oscillates between “0” and “1” depending on data
	4	GND	
	5	EXT-PUSH	
	6	EXT-LEDV	

NOTES:
Given the presence of the RS232 standard, logic value “0” corresponds to a voltage level of between +3Vdc and +15Vdc and logic value “1” corresponds to a voltage level of between -3Vdc and -15Vdc.

DEVICE > PC connection
The following picture shows an example of connection between the device and a personal computer using a 9 pin RS232 serial connector:



When use a serial cable, we recommend the installation of a ferrite core on the power supply cable.

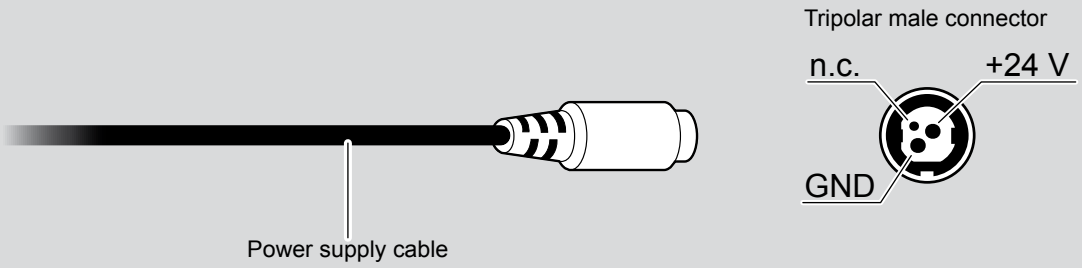
3.5 Pinout (model with interconnection module)

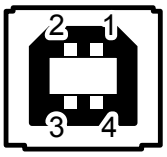
POWER SUPPLY
Tripolar female connector

J2	1	GND
	2	+VRE
	3	GND
	4	Frame GND
	5	Frame GND

ATTENTION:
Respect power supply polarity.

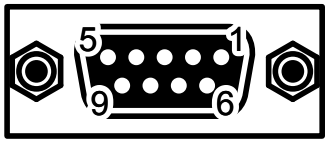
NOTE: Power supply cable
The following figure shows the connector pinout of the power supply cable for the device:





USB INTERFACE
Female USB type B connector

J5	1	VPLUG	(in)
	2	D0-	(in/out)
	3	D0+	(in/out)
	4	GND	
	SH1	GND	
	SH2	GND	



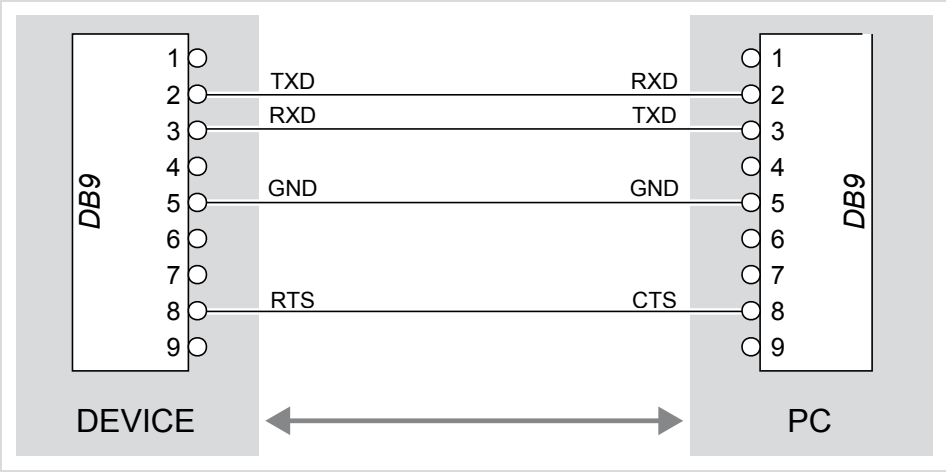
RS232 SERIAL INTERFACE

DB9 female connector

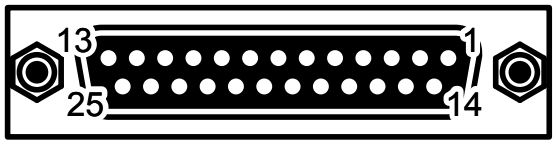
J3	1	n.c.	
	2	TX	During transmission, takes the value “0” and “1”, depending on data
	3	RX	During reception, takes the value “0” and “1”, depending on data
	4	n.c.	
	5	GND	
	6	n.c.	
	7	n.c.	
	8	RTS	When “1”, printer is ready to receive data
	9	n.c.	
	SH1	GND	
	SH2	GND	

NOTES:
Given the presence of the RS232 standard, logic value “0” corresponds to a voltage level of between +3Vdc and +15Vdc and logic value “1” corresponds to a voltage level of between -3Vdc and -15Vdc.

DEVICE > PC connection
The following picture shows an example of connection between the device and a personal computer using a 9 pin RS232 serial connector:



When use a serial cable, we recommend the installation of a ferrite core on the power supply cable.



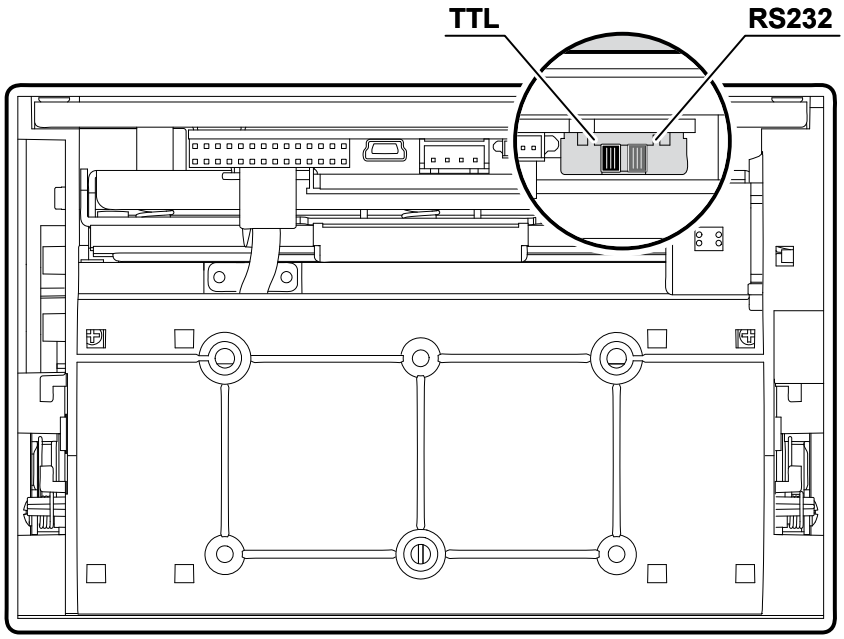
PARALLEL CENTRONICS/TTL INTERFACE

DB25 female connector

J7	1	STROBE	(in)
	2	AD0	(in)
	3	AD1	(in)
	4	AD2	(in)
	5	AD3	(in)
	6	AD4	(in)
	7	AD5	(in)
	8	AD6	(in)
	9	AD7	(in)
	10	ACK	(out)
	11	BUSY	(out)
	12	PAP-END	(out)
	13	VCP	(out)
	14	n.c.	
	15	ERROR	(out)
	16	n.c.	
	17	GND	
	18	n.c.	
	19	GND	
	20	GND	
	21	GND	
	22	GND	
	23	GND	
	24	GND	
	25	GND	
	SH1	GND	
	SH2	GND	

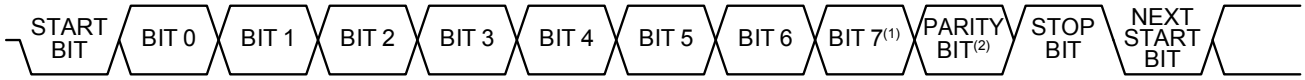
3.6 Serial port setting (model without interconnection module)

To set the serial port of the device, slide the switch shown in figure in the correct position:



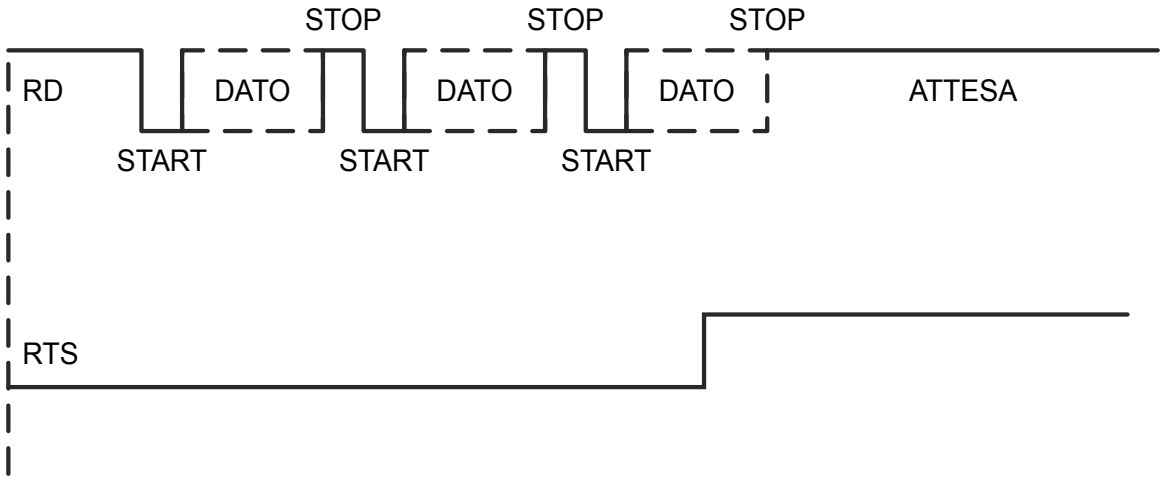
In the serial protocol, the signals which distinguish the communication are TD, RD, and RTS if the RTS/CTS protocol has been selected while, if the XON/XOFF protocol has been selected, the signals are TD and RD.

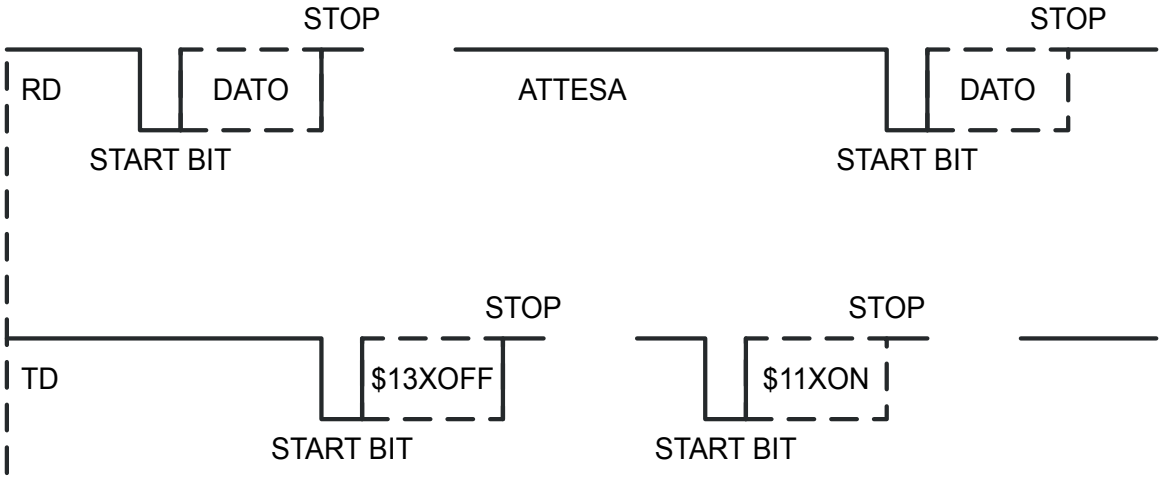
Transmission format



NOTES:
(1) : Bit 7 is present if only in the printer set-up is enabled 8 bit/char as data length.
(2) : Parity Bit is preset if only in the printer set-up the parity is enabled.

RTS/CTS Protocol

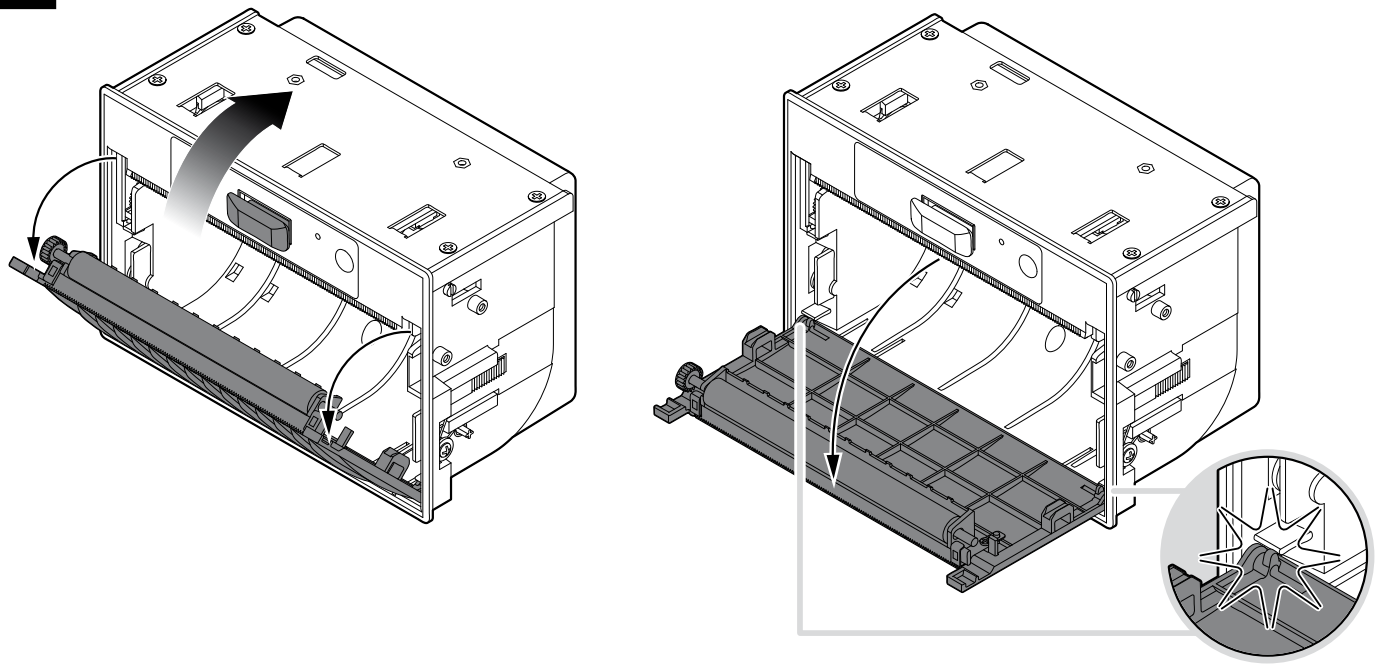




3.7 Parallel port setting (model with interconnection module)

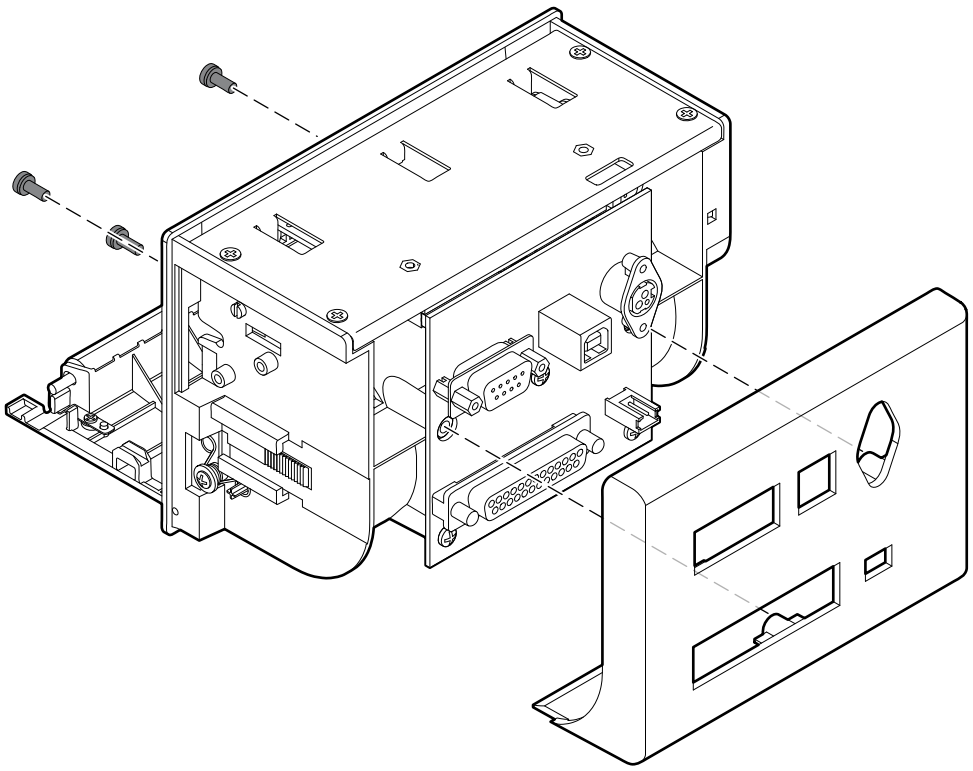
To set the parallel port of the device, proceed as follows:

1



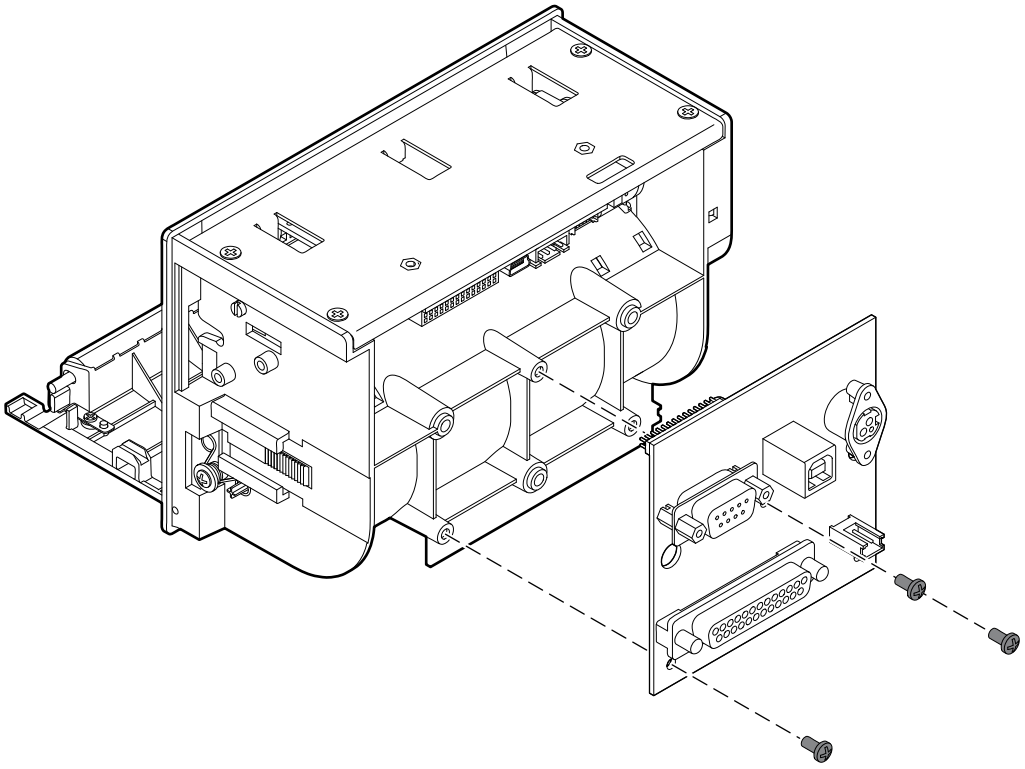
Lift the release lever to unhook the frontal cover
and completely open the cover to the maximum opening position

2



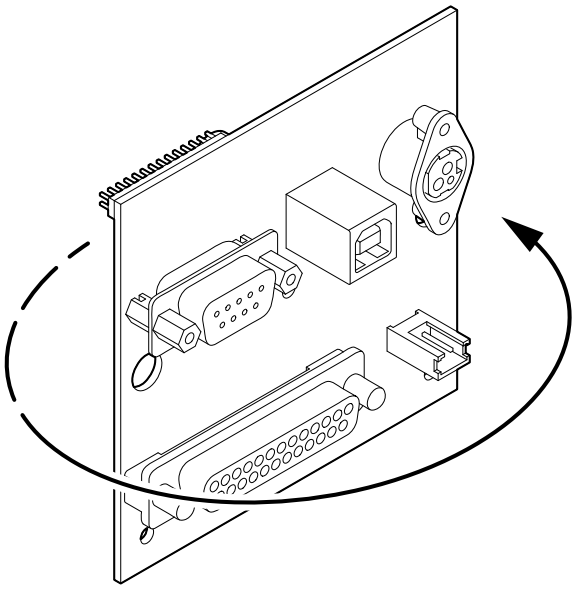
Unscrew the 3 fixing screws
and remove the rear cover

3



Unscrew the 3 fixing screws
and remove the interconnection board

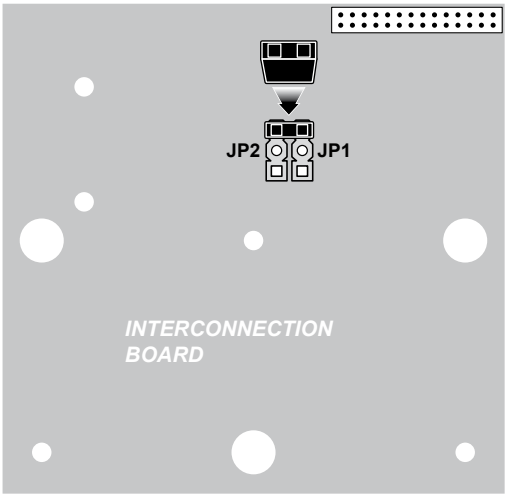
4



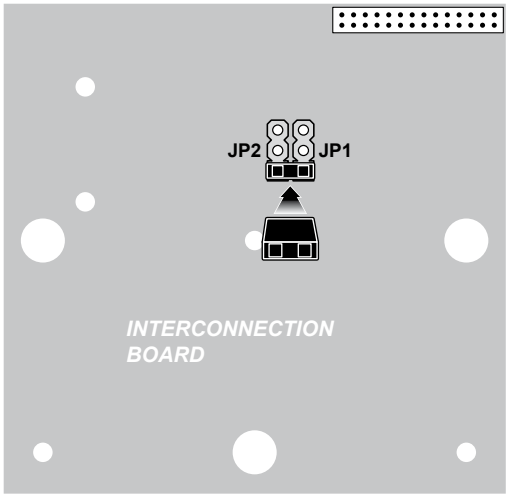
Rotate the interconnection board

5

TTL parallel interface

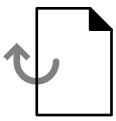


Centronics parallel interface



Close the jumpers JP1 and JP2 as shown in figure
according to the desiderd setting

6

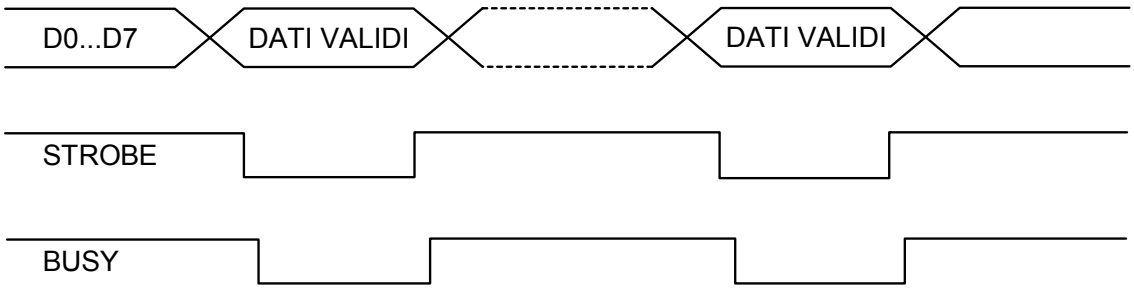


SEE PREVIOUS STEPS

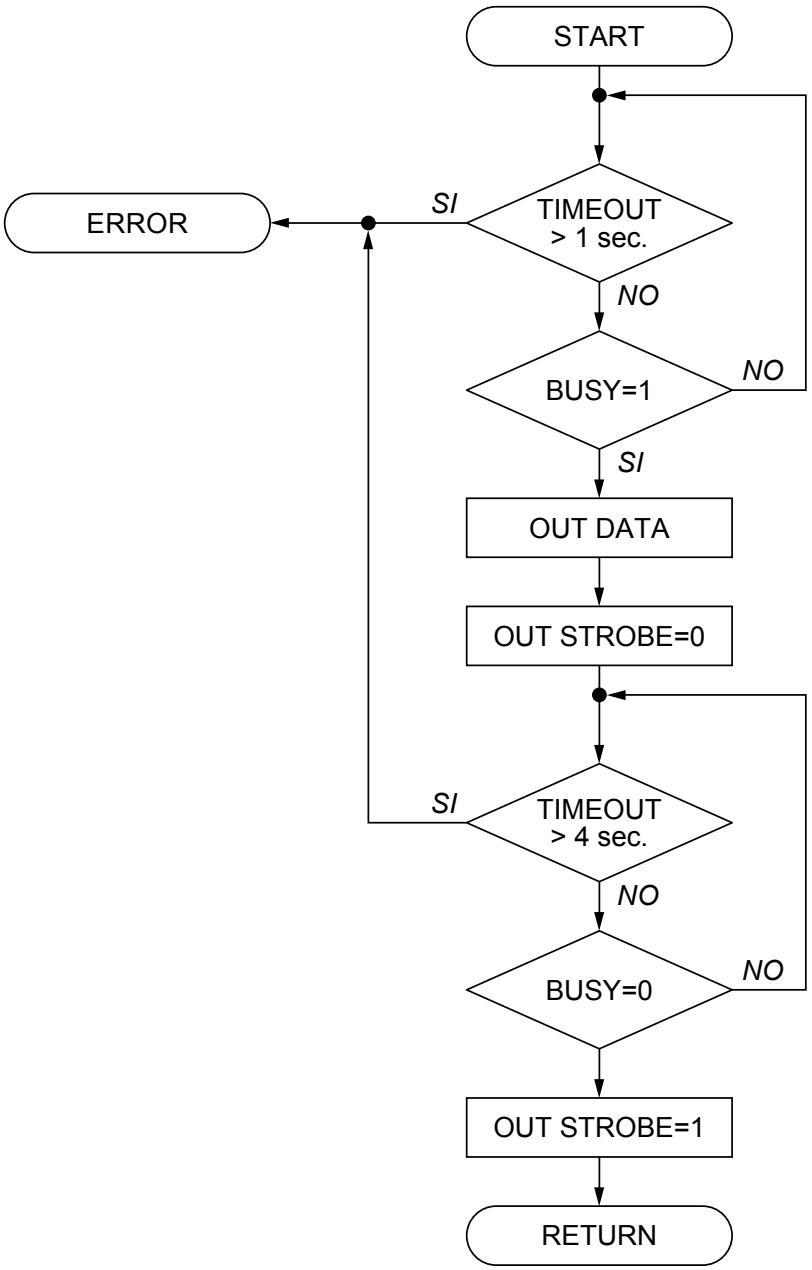
Assemble the device
by reversing the previous steps

For models with parallel TTL interface, the communication signals are: 8 bit DATA BUS, STROBE (indicate the data validity) and BUSY (indicate that the device is ready to receive data).

Transmission format



Flow diagram



3.8 Driver and SDK

The drivers are available for the following operating system:

OPERATING SYSTEM	DESCRIPTION	INSTALLATION PROCEDURE
Windows	Driver per Windows XP	From the START menu, press Run and type-in the path where the SW was saved on your PC, then click OK. Follow the instructions that appear on the screen to install the driver.
	Driver per Windows VISTA (32/64bit)	
	Driver per Windows 7 (32/64bit)	
	Driver per Windows 8 (32/64bit)	
Linux		Follow the instruction get back on the README.TXT file. You can find it in the software package downloaded in advance.
Android	Library for CustomAndroidAPI	Extract the zipped folder to the destination path desired. Follow the instructions present in the software package that you downloaded on how to install and use the library.

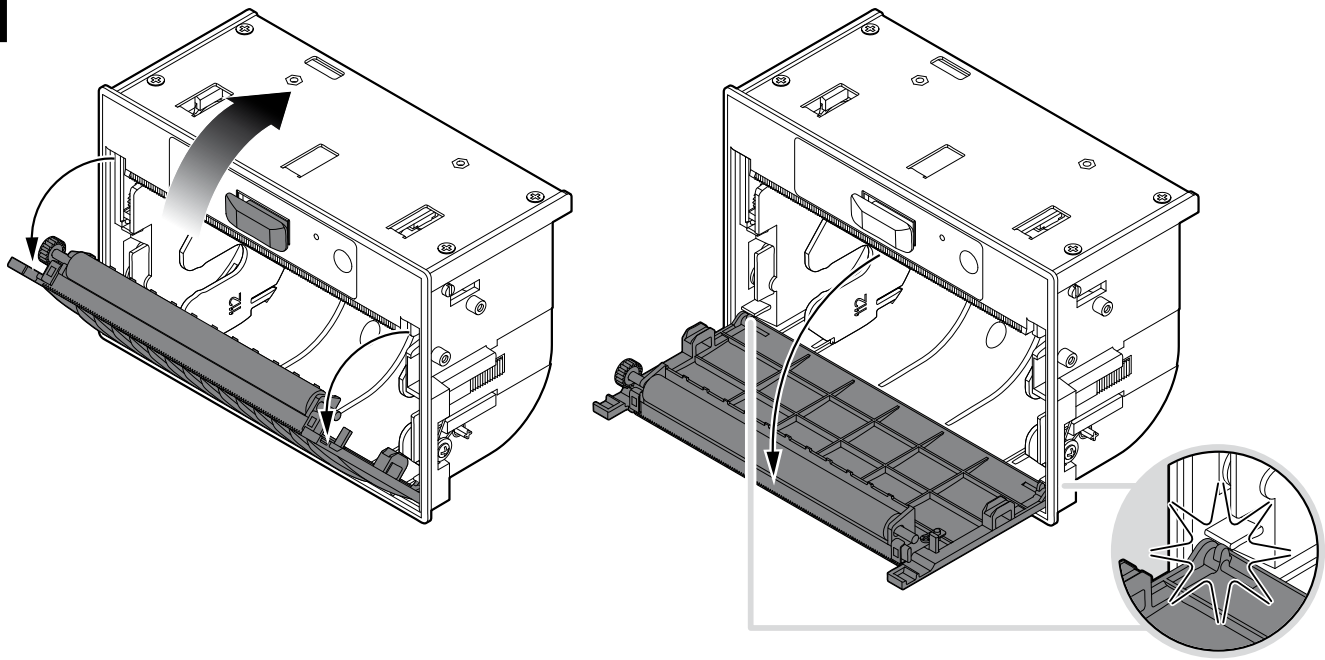
NOTA:
All drivers can be found in the DOWNLOAD section of the web site www.custom.biz.

4 OPERATION

4.1 Adjusting paper width

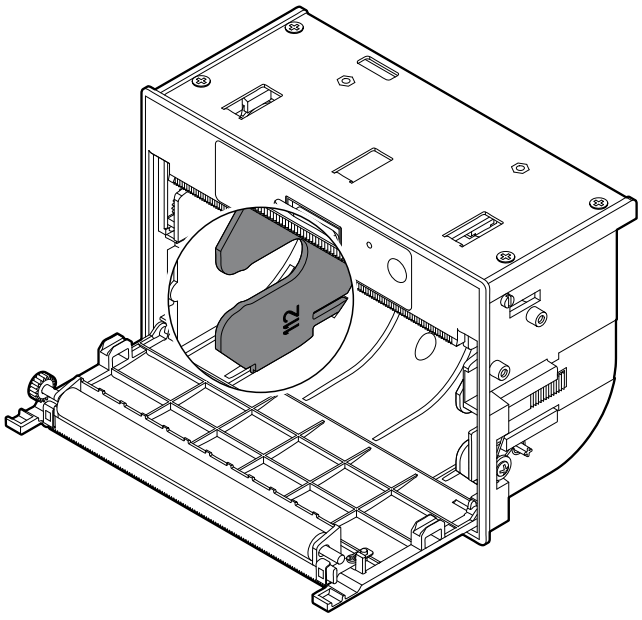
The device includes two plastic guides for the adjustment of paper width to 144mm or 112mm.
To adjust the paper width proceed as follows.

1



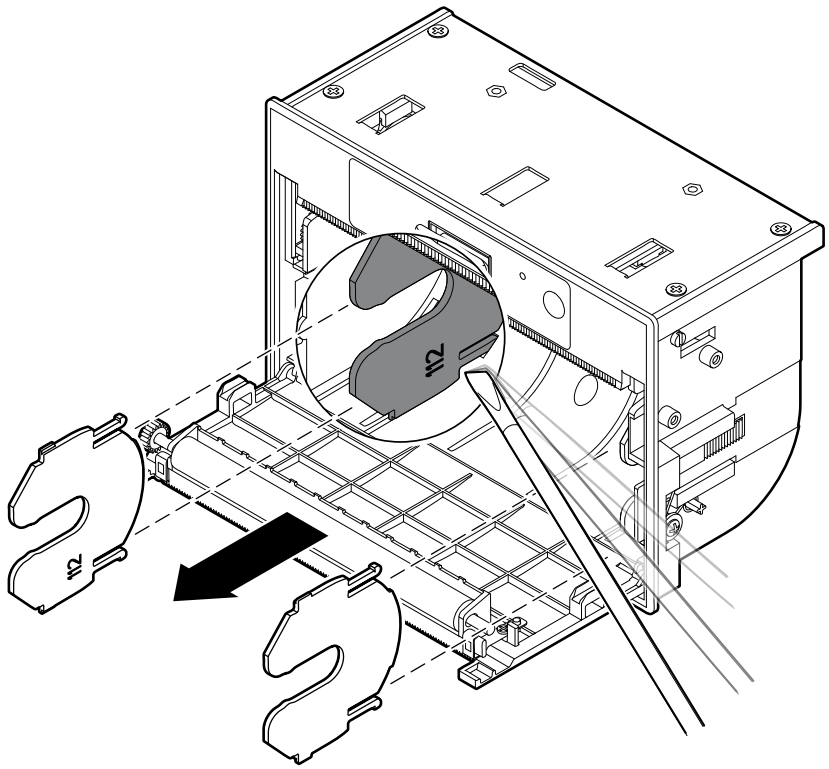
Lift the release lever and completely open the frontal cover
to the maximum opening position

2



Check the number impressed on the visible side of guides.
If the number does not match the paper width desired, proceed with the following steps

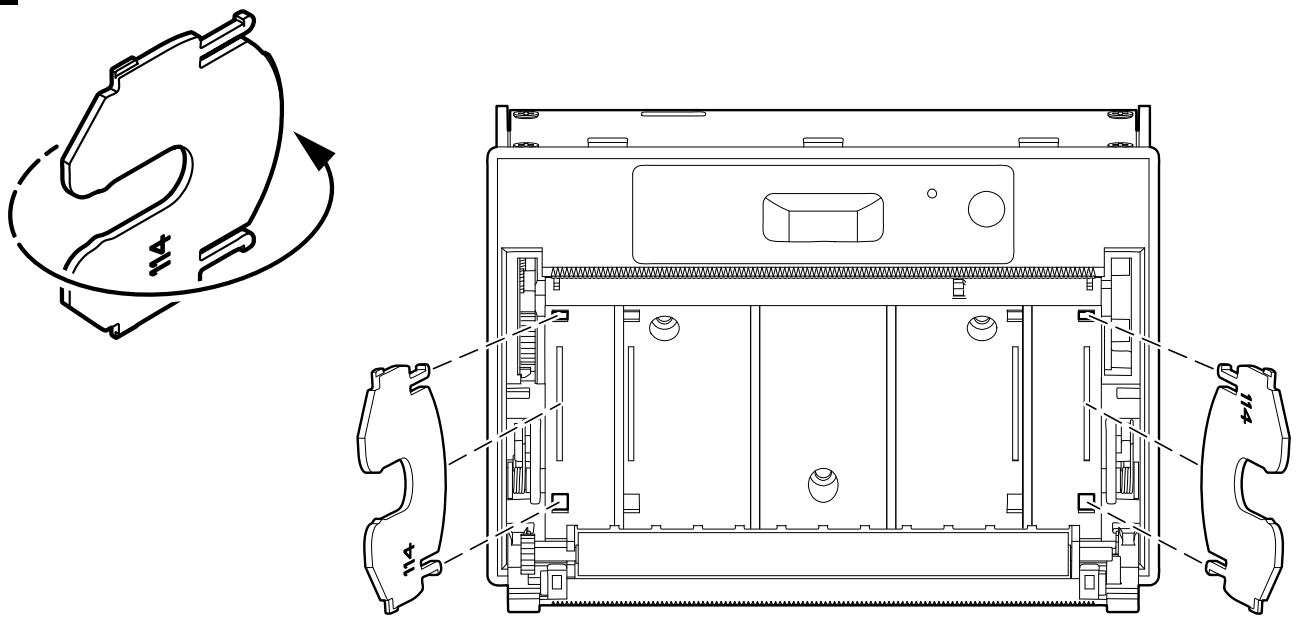
2



ATTENTION:
While using the screwdriver, be carefull not to damage the two guides and the paper compartment

Remove the two guides by gently levering with a small screwdriver
at the point shown in the figure

4



Rotate the guides and hook them into the seat of the paper compartment
with the correct side facing inwards

NOTE:
The assembly procedure for the adapter guides is the same for all the device models.

4.2 Paper roll insertion

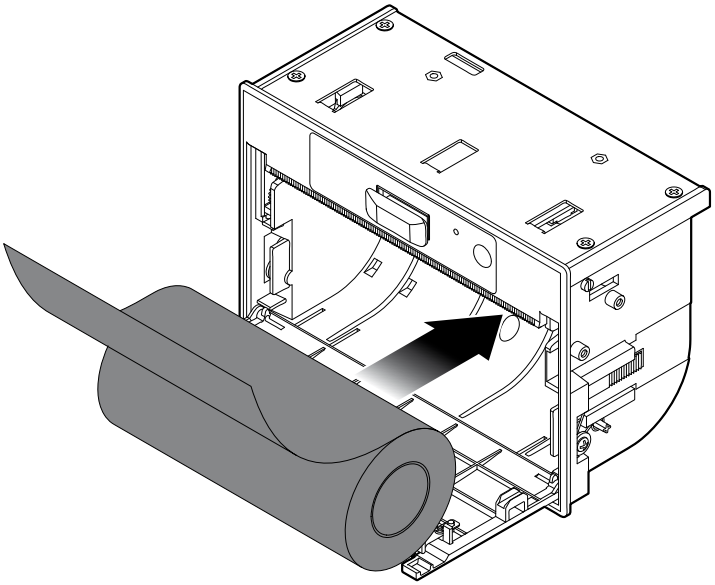
At every change of paper roll, check inside the device. To change the paper roll, proceed as follows:

1

SEE PREVIOUS PARAGRAPHS

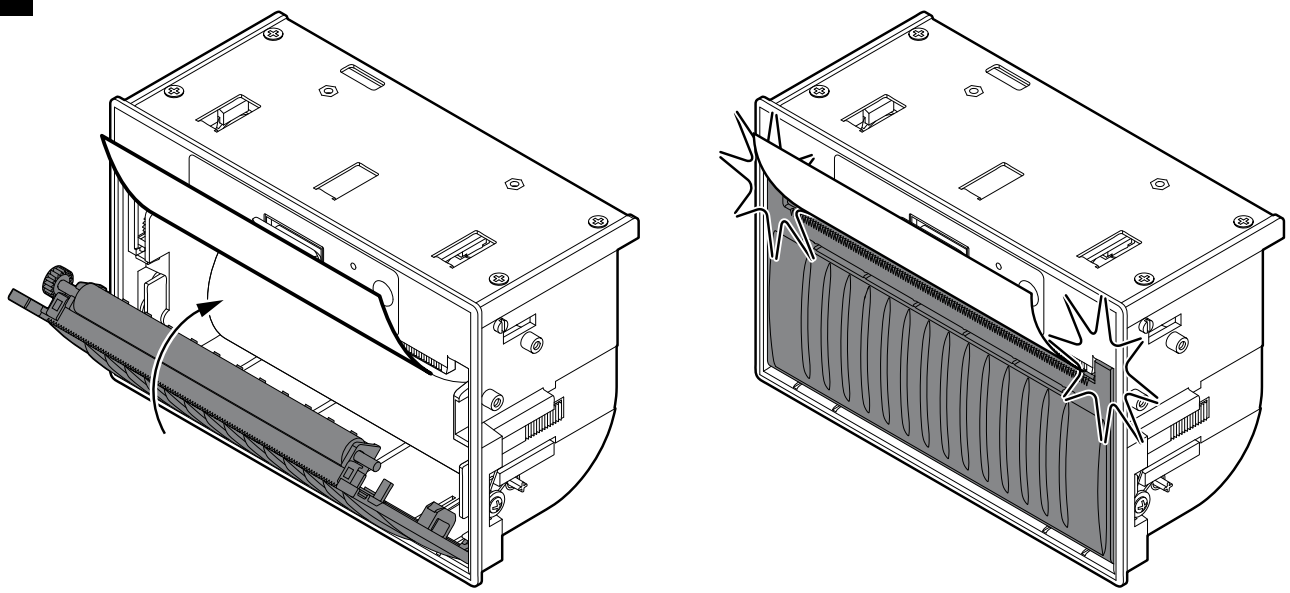
Adjust the paper width

2



Insert the paper roll so that
it unrolls correctly as shown in figure

3



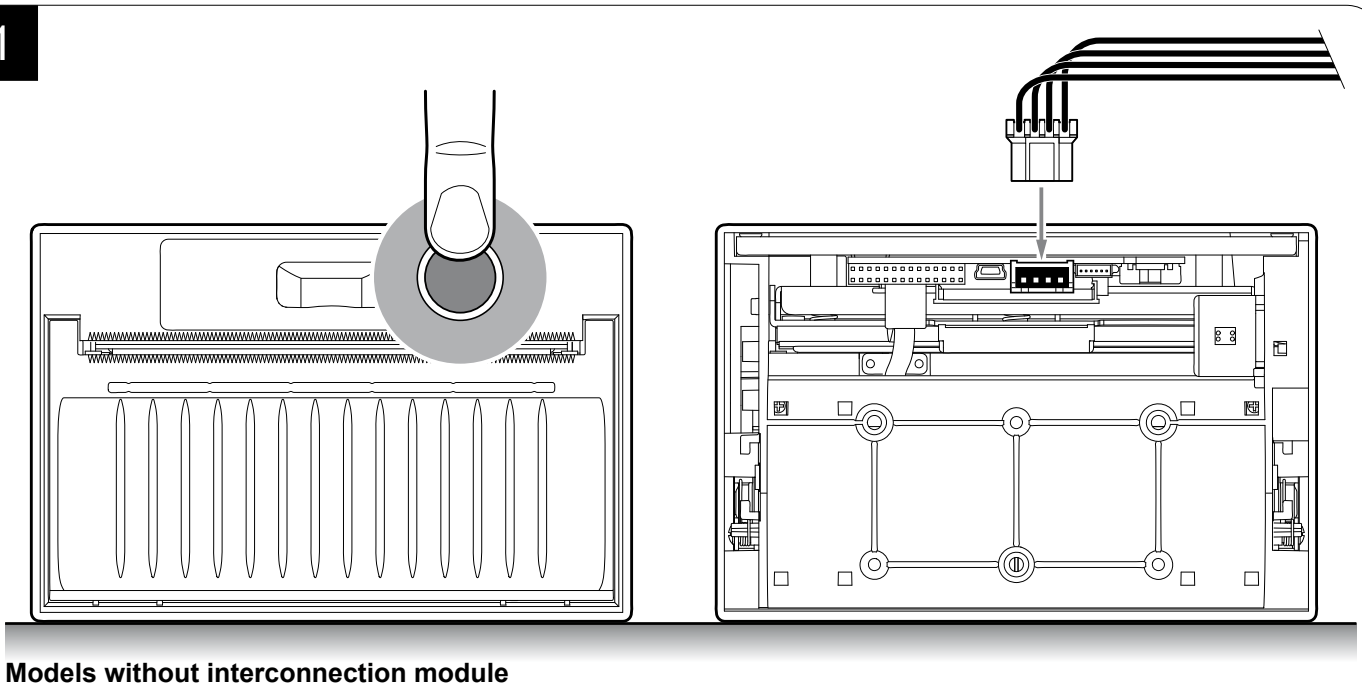
Pull out of the paper compartment a few centimeters of paper
and close the frontal cover

5 CONFIGURATION

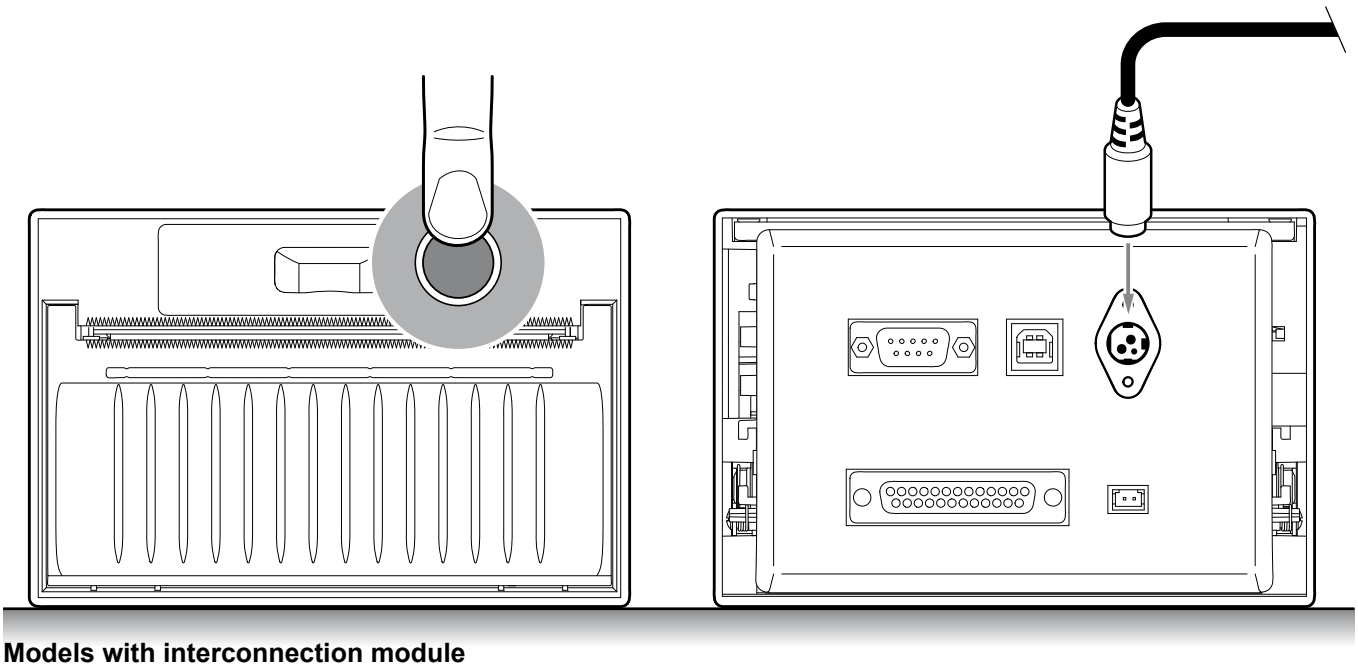
5.1 Configuration mode

To enter the configuration mode and print a SETUP report with the operating parameters of the device, proceed as follows.

1



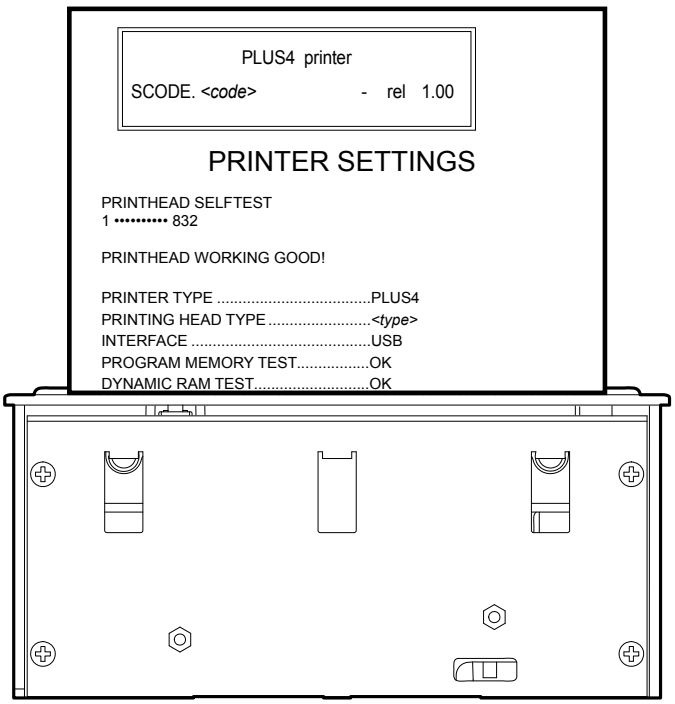
Models without interconnection module



Models with interconnection module

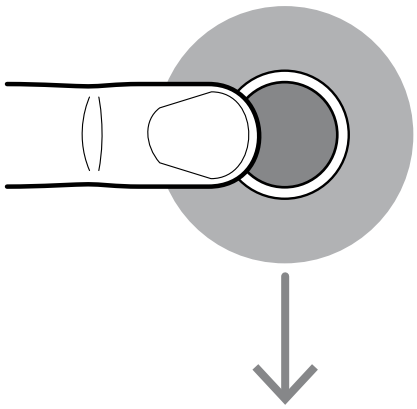
While pressing the FEED key,
switch on the device by inserting the power supply cable.

2



The device prints the report with parameters for settings

3

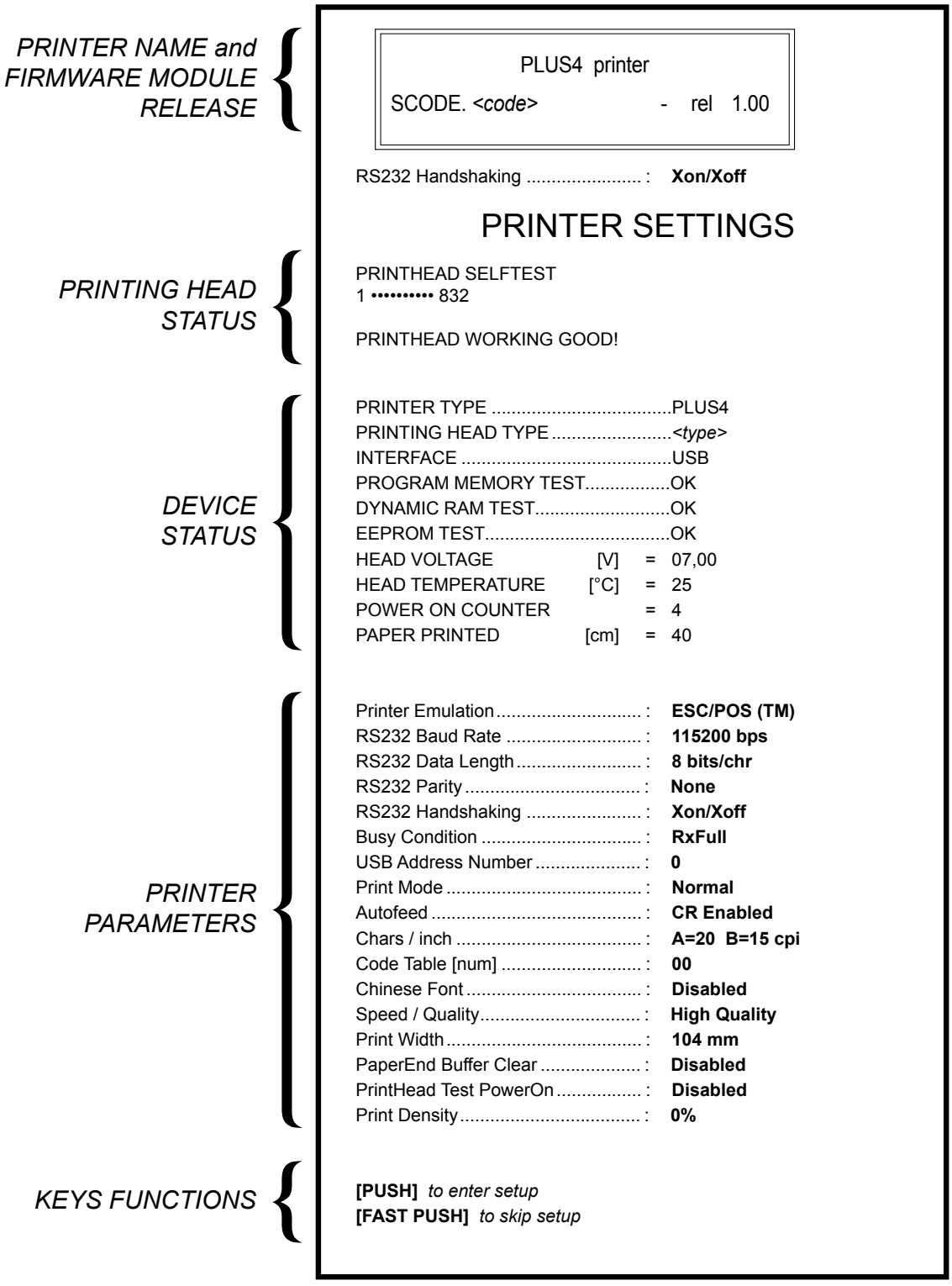


Enter setup

Press the FEED key to enter the configuration mode

5.2 Setup report

The following figure shows the setup report of the device. The shown values for parameters are sample values; for the list and the description of device parameters see the following paragraphs.



5.3 Printer status

Device operating status is indicated in the configuration print-out in which, next to the name of the components displayed, the following information is given:

PRINTER TYPE	*device model*
PRINTING HEAD TYPE	*print head model*
INTERFACE	*interface present*
PROGRAM MEMORY TEST	*OK appears if functioning and NOT OK if faulty*
DYNAMIC RAM TEST	*OK appears if functioning and NOT OK if faulty*
EEPROM TEST	*OK appears if functioning and NOT OK if faulty*
HEAD VOLTAGE	*voltage of the head*
HEAD TEMPERATURE	*temperature of the head*
POWER ON COUNTER	*number of power-ups made*
PAPER PRINTED	*centimetres of paper printed*

5.4 Printer parameters

This device allows the configuration of the parameters listed in the following table.
The parameters marked with the symbol [D] are the default values.
Settings remain active even after the device has been turned off and they are stored in non-volatile memory.

PRINTER EMULATION	*Available emulations for the device:* *ESC/POS™ [D]*
RS232 BAUD RATE	*Communication speed of the serial interface:* *115200 [D]* *9600* *57600* *4800* *38400* *2400* *19200* *1200* NOTE: Parameter valid only with serial interface.
RS232 DATA LENGTH	*Number of bit used for characters encoding:* *7 bits/car* *8 bits/car [D]* NOTE: Parameter valid only with serial interface.
RS232 PARITY	*Bit for the parity control of the serial interface:* *None [D] = parity bit omitted* *Even = even value for parity bit* *Odd = odd value for parity bit* NOTE: Parameter valid only with serial interface.
RS232 HANDSHAKING	*Handshaking:* *XON/XOFF [D] = software handshaking* *Hardware = hardware handshaking (CTS/RTS)* NOTES: Parameter valid only with serial interface. When the receive buffer is full, if handshaking is set to XON/XOFF, the printer sends the XOFF ($13) on the serial port. When the receive buffer has cleared once again, if handshaking is set to XON/XOFF, the printer sends the XON ($11) on the serial port.
BUSY CONDITION	*Activation mode for Busy signal:* *OffLine/ RXFull = Busy signal is activated when the printer is both in OffLine status and the buffer is full* *RXFull [D] = Busy signal is activated when the buffer is full* NOTE: Parameter valid only with serial interface.

USB ADDRESS NUMBER

Numerical address code for the univocal identification of the USB device (in case of more than a USB device connected with the same PC):

0 [D]	*2*	*4*	*6*	*8*
1	*3*	*5*	*7*	*9*

PRINT MODE

Printing mode:

Normal [D] = enables printing in normal writing way
Reverse = enables printing rotated 180 degrees

AUTOFEED

Setting of the Carriage Return character:

CR disabled = Carriage Return disabled
CR enabled [D] = Carriage Return enabled

CHARS / INCH

Font selection:

A = 11 cpi, B = 15 cpi
A = 15 cpi, B = 20 cpi
A = 20 cpi, B = 15 cpi [D]

NOTES:
CPI = Characters Per Inch

CODE TABLE [num]

Identifier number of the character code table to use.
The numeric value of the identifier is made up with the following two parameters for the setting of two digits for the tens and the units:

CODE TABLE [num x 10]

Setting the digit for tens:

0 [D]	*2*	*4*
1	*3*	*5*

CODE TABLE [num x 1]

Setting the digit for units:

0 [D]	*2*	*4*	*6*	*8*
1	*3*	*5*	*7*	*9*

NOTE:
See the paragraph 7.5 to learn about the character tables corresponding to the identification numbers set with this parameter.
The character tables set with this parameter are the same set with the command $1B $74 (refer to the Commands Manual of the device).

CHINESE FONT

Setting of the chinese font:

Disabled [D] = Disables the use of the chinese extended font GB18030-2000
Enabled = Enables the use of the chinese extended font GB18030-2000

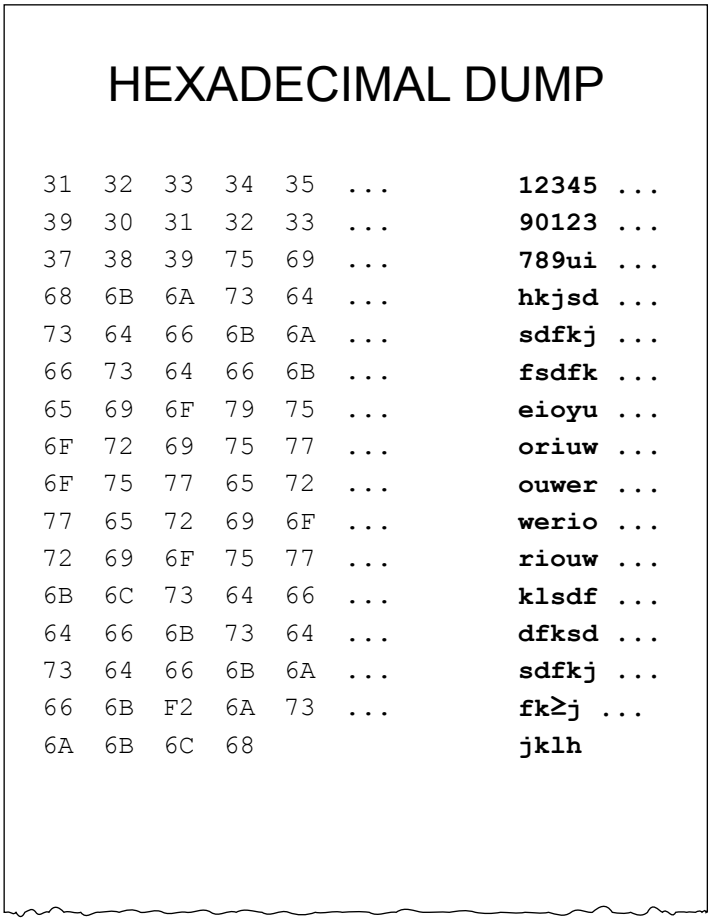
NOTE: When the chinese font is enabled, the selection of the character code table is suspended (parameter “CODE TABLE”). When the Chinese fonts is disabled, it returns the character code table previously in use (parameter “CODE TABLE”).

SPEED / QUALITY	*Setting of printing speed and printing quality:* *High Quality [D]* *Normal*
PRINT WIDTH	*Width of printing area:* *76mm 82mm 88mm 94mm 100mm* *78mm 84mm 90mm 96mm 102mm* *80mm 86mm 92mm 98mm 104mm [D]*
PAPEREND BUFFER CLEAR	*Cleaning mode of the data in receive buffer, if the printing is stopped due to lack of paper:* *Disabled [D] = The data remain in the receive buffer. When the paper runs out, the printer keeps the remaining data in the receive buffer and prints the remaining portion of the ticket after that the new paper is loaded.* *Enabled = When the paper runs out, all data in the receive buffer are deleted.*
PRINTHEAD TEST POWERON	*Setting of the performing of the print head test:* *Disabled [D] = the test is performed only during the printing of the setup report* *Enabled = the test is performed at each power on*
PRINT DENSITY	*Adjusting the printing density:* *-50% -12% +25%* *-37% 0 [D] +37%* *-25% +12% +50%*

5.5 Hexadecimal dump

This function is used for the diagnosis of the characters received from the communications port. Characters are printed as hexadecimal code and the corresponding ASCII code (see below). Each line is preceded by a counter in hexadecimal that indicates the number of bytes received.

During the startup, if you hold down the FEED key, the printer enters the self-test routine and print the setup report.
The printer remains in standby until a key is pressed or characters are received through the communication port (Hexadecimal Dump mode). For each character sent, the ticket shows the hexadecimal value and the ASCII codes (if the characters are underlined, the receive buffer is full). Shown below is an example of a Hexadecimal Dump:



HEXADECIMAL DUMP

```
31  32  33  34  35  ...      12345 ...
39  30  31  32  33  ...      90123 ...
37  38  39  75  69  ...      789ui ...
68  6B  6A  73  64  ...      hkjsd ...
73  64  66  6B  6A  ...      sdfkj ...
66  73  64  66  6B  ...      fsdfk ...
65  69  6F  79  75  ...      eioyu ...
6F  72  69  75  77  ...      oriuw ...
6F  75  77  65  72  ...      ouwer ...
77  65  72  69  6F  ...      werio ...
72  69  6F  75  77  ...      riouw ...
6B  6C  73  64  66  ...      klsdf ...
64  66  6B  73  64  ...      dfksd ...
73  64  66  6B  6A  ...      sdfkj ...
66  6B  F2  6A  73  ...      fk≥j ...
6A  6B  6C  68               jklh
```

6 MAINTENANCE

6.1 Planning of cleaning operations

The regular cleaning of the device keeps the print quality and extends its life. The following table shows the recommended planning for the cleaning operations.

EVERY PAPER CHANGE	
Printhead	Use isopropyl alcohol
Rollers	Use isopropyl alcohol
EVERY 5 PAPER CHANGES	
Paper compartment	Use compressed air or tweezers
Sensors	Use compressed air
EVERY 6 MONTHS OR AS NEEDED	
Printer case	Use compressed air or a soft cloth

For specific procedures, see the following pages.

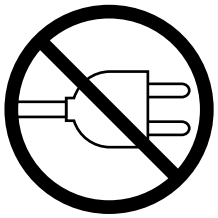
NOTE:
If you use the device in dusty environments, you must reduce the intervals between the cleaning operations.

6.2 Cleaning

For periodic cleaning of the printer, see the instructions below.

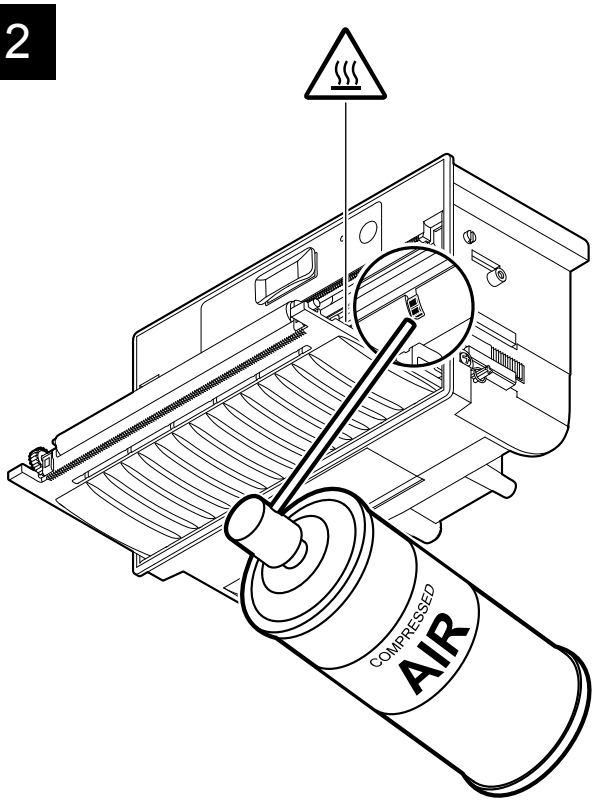
Sensors

1



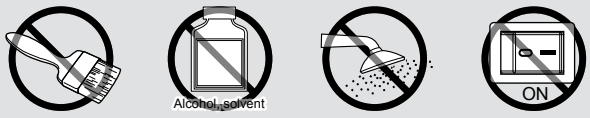
Disconnect the power supply cable and open the frontal cover of the device (see par. 4.1)

2



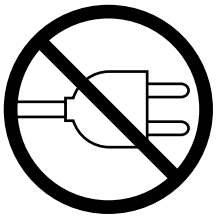
Clean the device sensor by using compressed air.

ATTENTION:
Do not use alcohol, solvents, or hard brushes.
Do not let water or other liquids get inside the device.



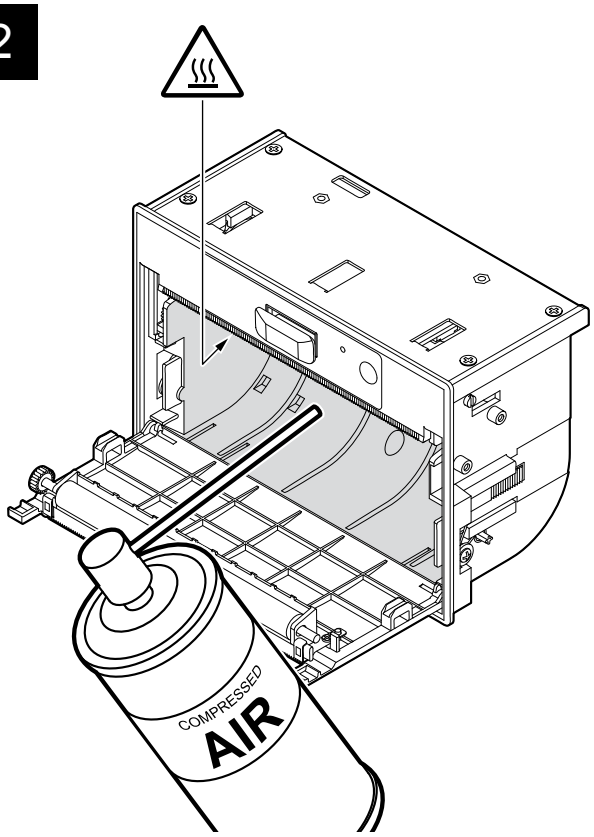
Paper compartment

1



Disconnect the power supply cable and open the frontal cover of the device (see par. 4.1)

2

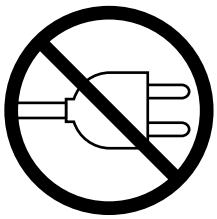


Remove any scraps of paper and the accumulated paper dust into the paper compartment by using compressed air

ATTENTION:
Do not use alcohol, solvents, or hard brushes.
Do not let water or other liquids get inside the device.

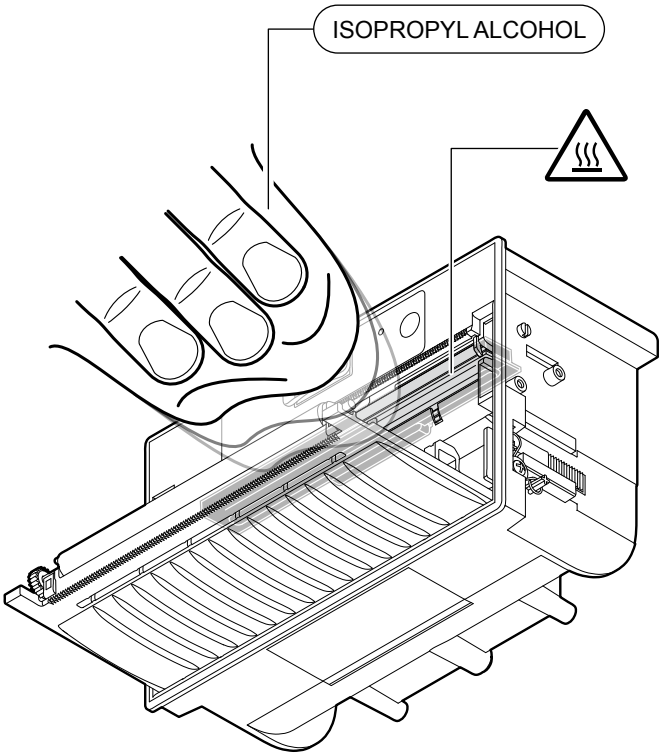
Printing head

1



Disconnect the power supply cable and open the fronal cover of the device (see par. 4.1)

2

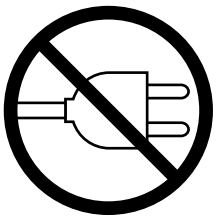


Clean the printing head by using a non-abrasive cloth moistened with isopropyl

ATTENTION:
Do not use solvents, or hard brushes.
Do not let water or other liquids get inside the machine.

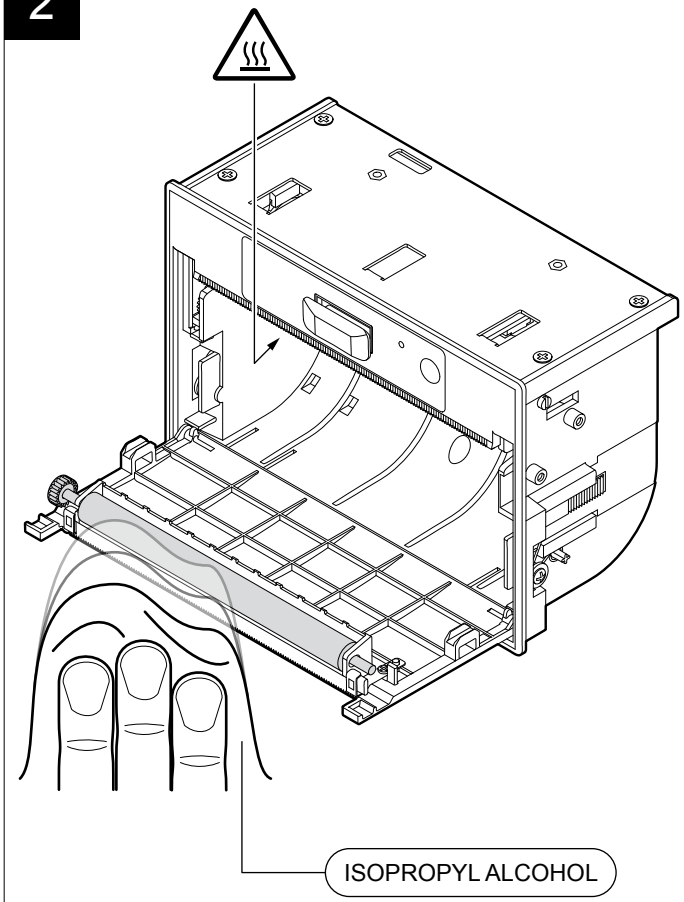
Printing roller

1



Disconnect the power supply cable and open the frontal cover of the device (see par. 4.1)

2

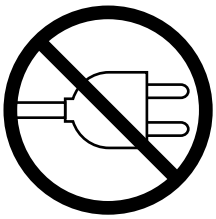


Clean the printing roller by using a non-abrasive cloth moistened with isopropyl.

ATTENTION:
Do not use solvents, or hard brushes.
Do not let water or other liquids get inside the machine.

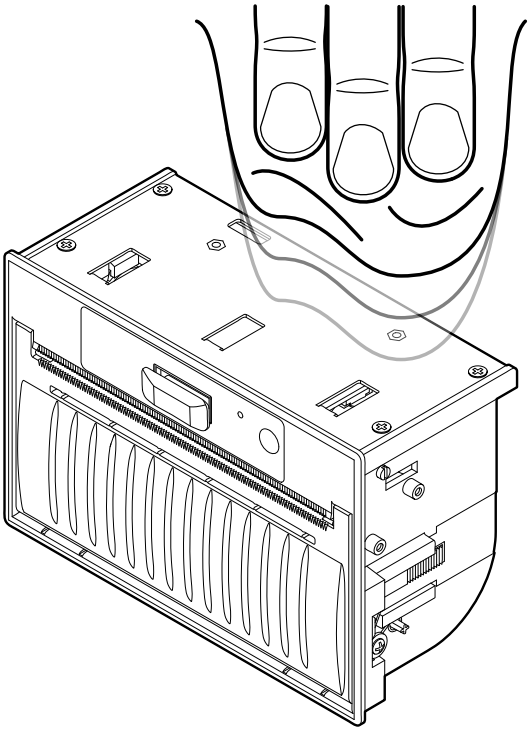
Case

1



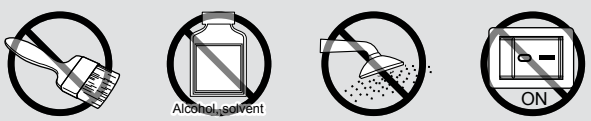
Disconnect the
power supply cable

2



To clean the device,
use compressed air or a soft cloth

ATTENTION:
Do not use alcohol, solvents, or hard brushes.
Do not let water or other liquids get inside the device.



6.3 Firmware upgrade

ATTENTION:
During communication between PC and device for the firmware update it is strictly forbidden to disconnect the communication cable or to remove the power supply of the devices not to endanger the proper functioning of the machine.

Only during the firmware update, the connection between PC and device must be direct, without the use of HUB device.

Only during the firmware update, do not connect or disconnect other USB devices.

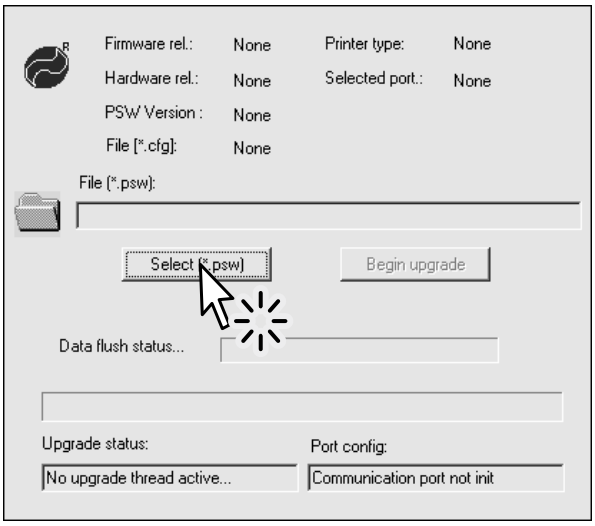
NOTES:
The latest firmware of the device is available in the download area of the web site www.custom.biz

Install on the PC used for printer upgrading the UPGCEPRN software available in the download area of the web site www.custom.biz.

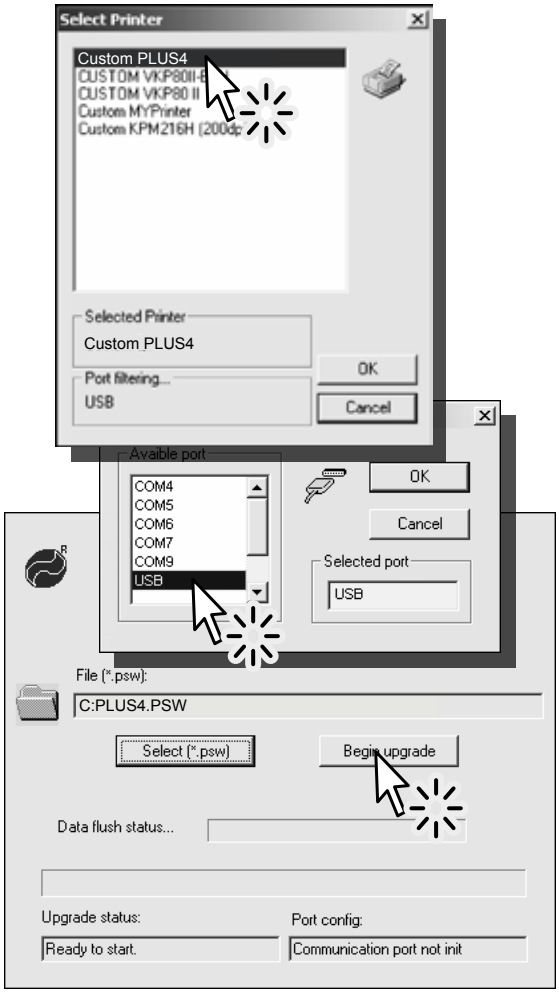
For communication via USB you must install on PC the printer driver available in the download area of the web site www.custom.biz.

Proceed as follows:

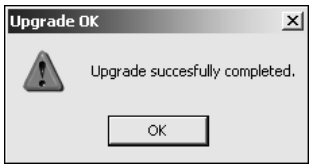
1. Write down the product code (14 digits) printed on the product label (see par.2.4).
2. Go to the web site www.custom.biz and download the appropriate firmware release from the DOWNLOAD area.
3. Print the SETUP report (see chapter 5).
4. Switch OFF the device.
5. Connect the device to the PC using a USB cable (see par.3.3).
6. Switch ON the device.
7. Launch the software UPGCEPRN.
8. Select the update file .PSW location:



9. Select item USB and then select the USB device among those proposed (e.g. PLUS4):



10. After a few minutes a message on the screen warns that the update is completed.



11. Print a new SETUP report to verify the new firmware release (see chapter 5).

7 SPECIFICATIONS

7.1 Hardware specifications

GENERAL	
Sensors	Paper presence, printing head temperature
MTBF (1)	118 000 hours
Emulations	ESC/POS™
Printing driver	Windows XP, Windows VISTA (32/64bit), Windows 7 (32/64bit), Windows 8 (32/64bit), Linux, Android
INTERFACES	
models without interconnection module	
USB connector	12 Mbit/sec (USB 2.0 full speed)
Serial RS232/TTL connector	from 1200 to 115200 bps
models with interconnection module	
Seriale RS232 connector	from 1200 to 115200 bps
USB connector	12 Mbit/sec (USB 2.0 full speed)
Centronics/TTL connector	up to 2MB/sec
MEMORIES	
Receive buffer	2 Kbytes
Flash memory	1 Mbytes internal + 4 Mbytes external (of which 1Mbytes available)
RAM memory	128 Kbytes internal + 8Mbytes external
PRINTER	
Resolution	203 dpi (8 dot/mm)

Printing method	Thermal, fixed head
Printing width	from 76mm to 104mm (2mm step)
Printing mode	Normal, 90°, 180°, 270°
Printing format	Height/width from 1 to 8, bold, reverse, underlined, italic
Character fonts	54 character code tables (see par.7.5) Extended Chinese GB18030-2000
Printable barcode	UPCA, UPCE, EAN13, EAN8, CODE39, ITF CODABAR, CODE93, CODE128, CODE32
Printing speed (2) (3)	High Quality = 50 mm/sec Normal = 70 mm/sec
PAPER	
Tipe of paper	Thermal paper rolls, thermal side on outside of roll
Paper width	112 mm, 114 mm
Paper weight	from 50 g/m2 to 60 g/m2
Recommended types of paper	KANZAN KF50
Paper end	Not attached to roll core
External roll diameter	max. 50 mm
Internal roll core diameter	12 mm
Core type	Cardboard or plastic
DEVICE ELECTRICAL SPECIFICATIONS	
Power supply	
models without interconnection module	from 5 Vdc to 8 Vdc (optional external power supply)
models with interconnection module	from 9 Vdc to 42 Vdc (optional external power supply)
Medium consumption (3)	
models without interconnection module	from 1 A to 1,37 A
models with interconnection module	from 0,85 A to 0,20 A

Stand-by consumption	
models without interconnection module	0,085 A
models with interconnection module	0,097 A
ELECTRICAL SPECIFICATIONS POWER SUPPLY cod.963GE020000003 (OPTIONAL)	
Power supply voltage	from 100 Vac to 240 Vac
Frequency	from 50 Hz to 60 Hz
Current (output)	2.5 A
Power	60W
ENVIRONMENTAL CONDITIONS	
Operating temperature	from 0°C to +60°C
Relative humidity	from 10% Rh to 85% Rh
Storage temperature	from -20 °C to +70 °C
Storage relative humidity	from 10% Rh to 90% Rh

NOTES:
(1) : Control board.
(2) : Respecting the regular schedule of cleaning for the device components.
(3) : Referred to a standard CUSTOM receipt (L=10cm, Density = 12,5% dots on).

7.2 Character specifications in ESC/POS™ emulation

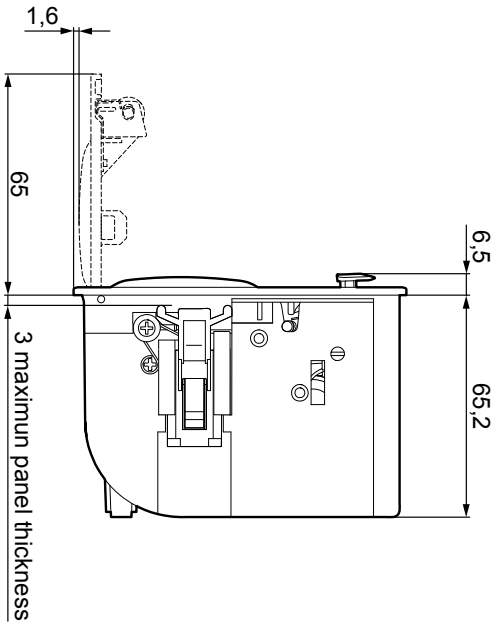
Character set		3	
Character density	11 cpi	15 cpi	20 cpi
Number of columns	46	59	83
Chars / sec	402	516	726
Lines / sec	8,75	8,75	8,75
Characters (L x H mm)-Normal	2,25 x 3	1,625 x 3	1,25 x 3

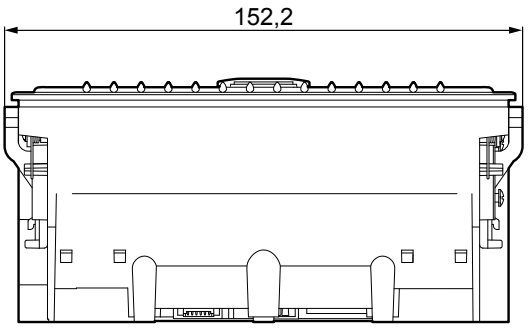
7.3 Device dimensions

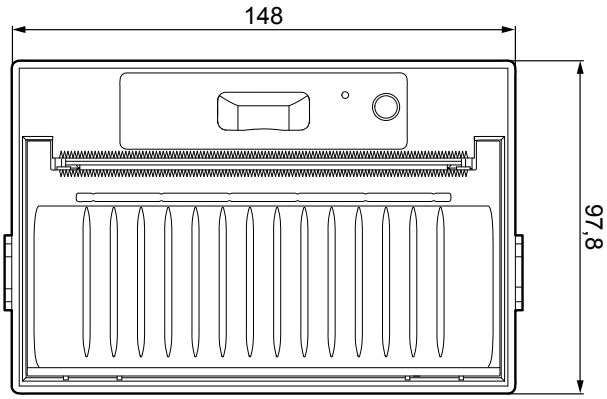
Length	148 mm
Height	97,8 mm
Width	
models without interconnection module	71,7 mm
models with interconnection module	89,1 mm
Weight	
models without interconnection module	390 g
models with interconnection module	510 g

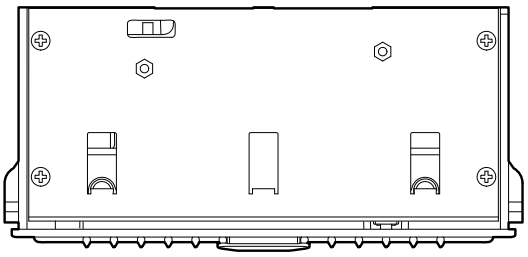
NOTE: All the dimensions shown in following figures are in millimetres.

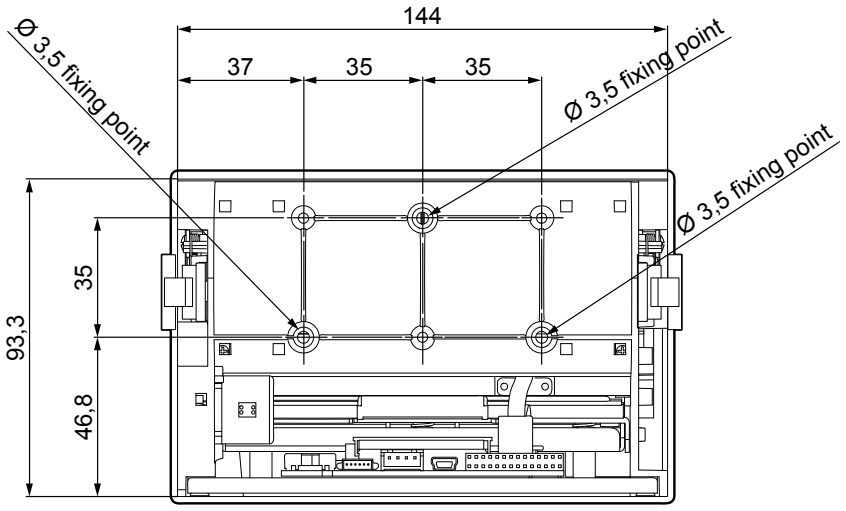
Models without interconnection module



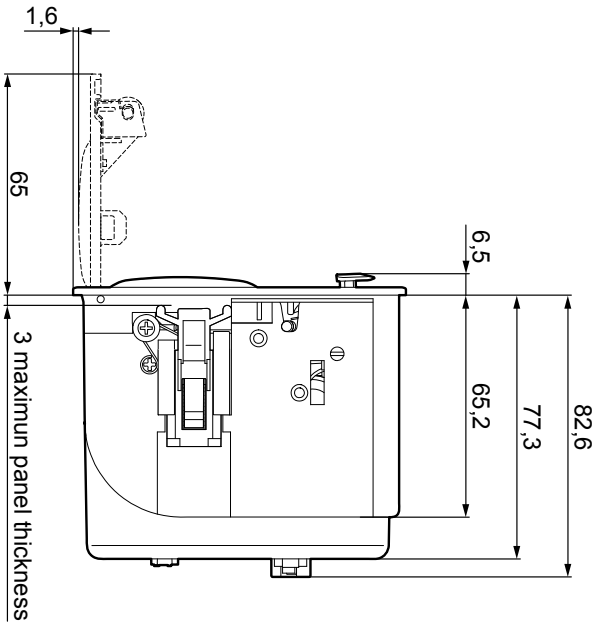


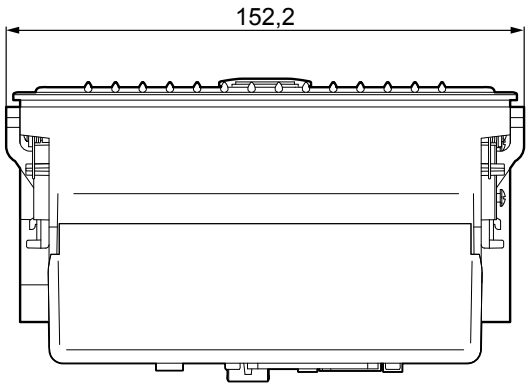


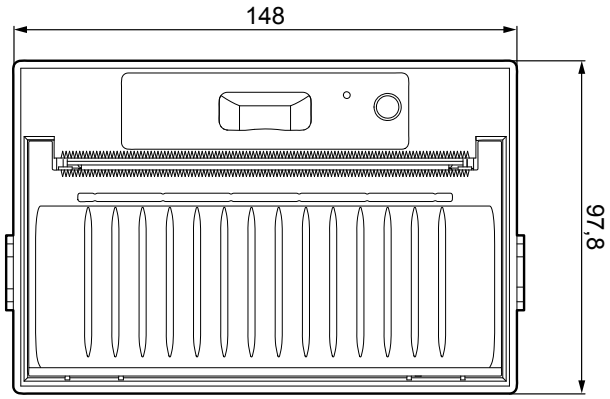


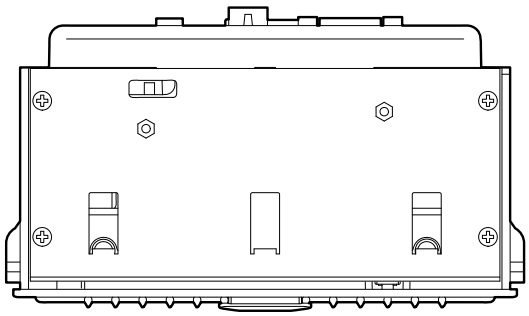


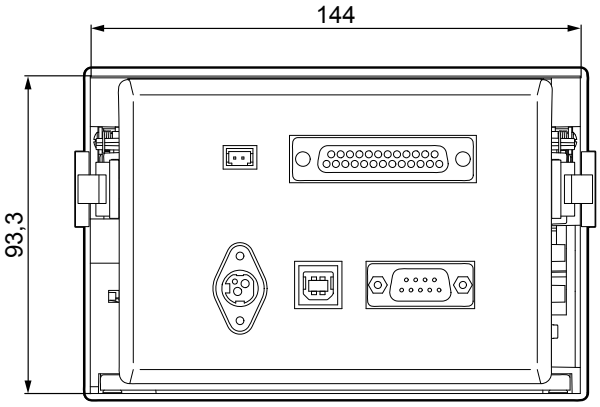
Models with interconnection module







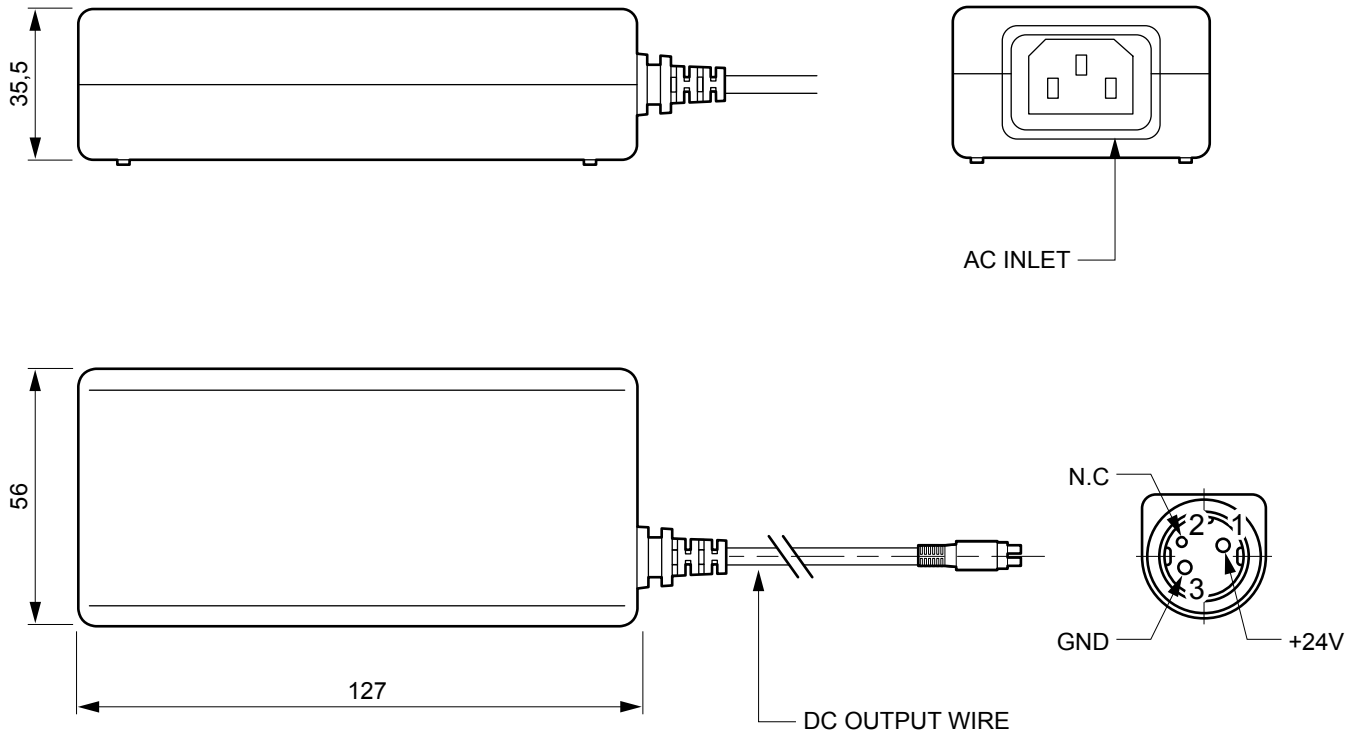




7.4 Power supply dimensions cod.963GE020000003 (optional)

Length	127 mm
Height	35,5 mm
Width	56 mm

NOTE:
All the dimensions shown in following figures are in millimetres.



7.5 Character sets in ESC/POS™ emulation

The device has 3 fonts of varying width (11, 15 and 20 cpi) which may be related one of the coding tables provided on the device.

To know the coding tables actually present on the device, you need to print the font test (see par.2.5).

You can set font and coding table by using the commands (see the Commands Manual of the device) or using the “Code Table” and the “Chars / Inch” parameters during the Setup procedure (see par.5.4).

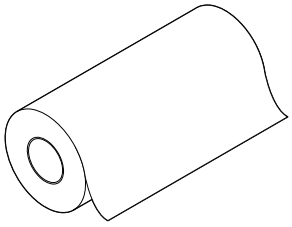
The following is the full list of coding tables that can be installed on the device.

<Code Table>	Coding table
0	PC437: Usa, Standard Europe
1	Katakana
2	PC850: Multilingual
3	PC860: Portuguese
4	PC863: Canadian-Frech
5	PC865: Nordic
11	PC851: Greek
12	PC853: Turkish
13	PC857: Turkish
14	PC737: Greek
15	ISO8859-7: Greek
16	WPC1252
17	PC866: Cyrillic #2
18	PC852: Latin2
19	PC858: Euro
20	KU42: Thai
21	TIS11: Thai
26	TIS18: Thai
30	TCVN-3: Vietnamese
31	TCVN-3: Vietnamese
32	PC720: Arabic

<Code Table>	Coding table
33	WPC775: Baltic Rim
34	PC855: Cyrillic
35	PC861: Icelandic
36	PC862: Hebrew
37	PC864: Arabic
38	PC869: Greek
39	ISO8859-2: Latin2
40	ISO8859-15: Latin9
41	PC1098: Farsi
42	PC1118: Lithuanian
43	PC1119: Lithuanian
44	PC1125: Ukrainian
45	WPC1250: Latin2
46	WPC1251: Cyrillic
47	WPC1253: Greek
48	WPC1254: Turkish
49	WPC1255: Hebrew
50	WPC1256: Arabic
51	WPC1257: Baltic Rim
52	WPC1258: Vietnamese
53	KZ-1048: Kazakhstan

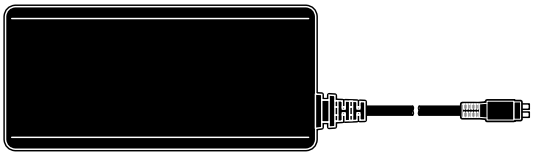
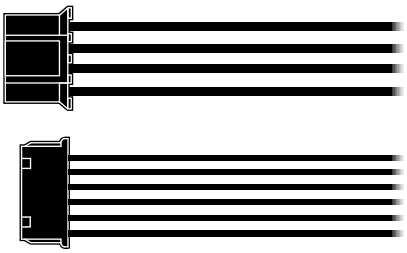
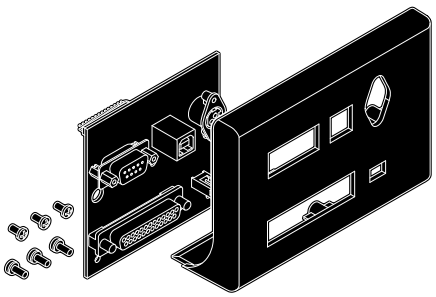
8 CONSUMABLES

The following table shows the list of available consumables for device:

DESCRIPTION	CODE
THERMAL PAPER ROLL wight = 55g/m^2 width = 112mm Ø external = 48mm Ø core = 12mm	**67300000000309** 

9 ACCESSORIES

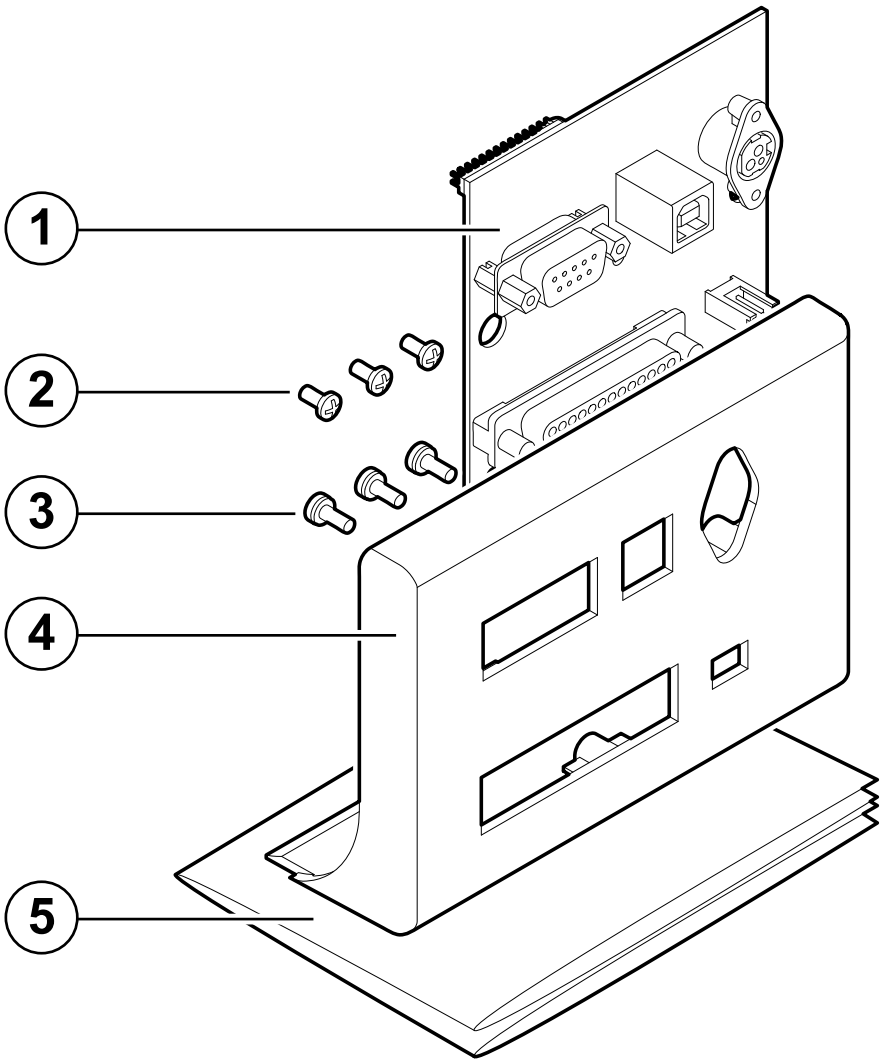
The available accessories for the device are listed in the following table:

DESCRIPTION	CODE
POWER SUPPLY (for technical specification, see paragraph 7.1)	**963GE020000003** 
models without interconnection module	
CABLES KIT POWER SUPPLY + SERIAL/TTL INTERFACE 5-8 VOLT	**44000000002500** 
INTERCONNECTION MODULE (see paragraphs 9.1)	**976GJ020000001** 
models with interconnection module	
POWER SUPPLY CABLE	**22600000000012** 

9.1 Interconnection module (models without interconnection module)

An interconnection module kit (cod.976GJ020000001) is available for the device.

The kit includes (see figure):
1. Interconnection board
2. No.3 fixing screws for interconnection board
3. No.3 fixing screws for rear cover
4. Rear cover
5. Instruction sheet



NOTE:
To assemble the interconnection module, refer to the instruction sheet provided with the kit.

10 TECHNICAL SERVICE

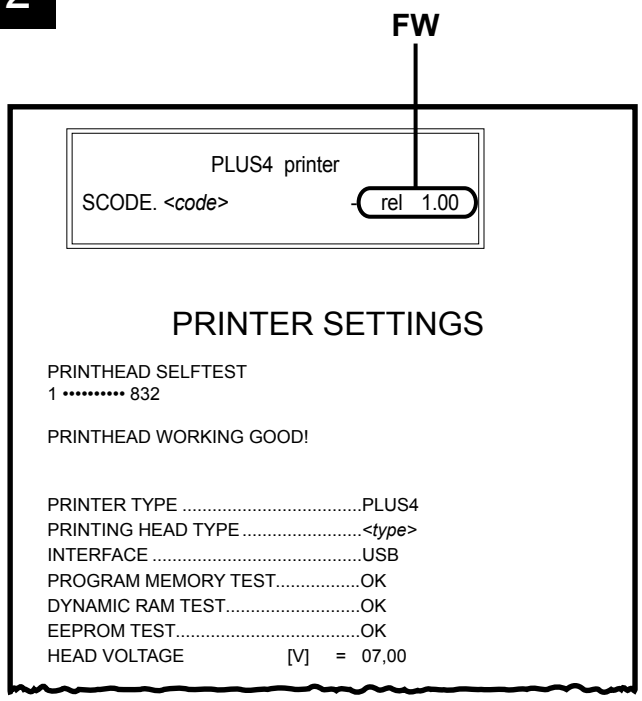
In case of failure, contact the Technical Service by sending an e-mail to support@custom.it detailing:
1. Product code
2. Serial number
3. Hardware release
4. Firmware release

To get the necessary data, proceed as follows:

1

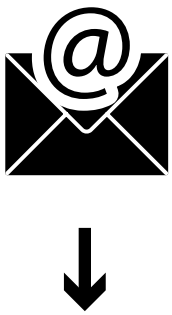
Write down the data printed
on the product label (see paragraph 2.4)

2



Print a Setup report (see paragraph 5.1)
The Setup report shows
the firmware release

3



support@custom.it
Customer Service Department

Send an e-mail to the Technical Service,
with the data collected

Part Number : 76200000003800 Rev.1.00

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