AVIATION

USER MANUAL

KPM862
TK862

CUSTOM®

CUSTOM S.p.A.
Via Berettine 2/B
43010 Fontevivo (PARMA) - Italy
Tel. : +39 0521-680111
Fax : +39 0521-610701
http: www.custom.biz

Customer Service Department:
www.custom4u.it

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 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.

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.
- Do not fix indissolubly the device or its accessories such as power supplies unless specifically provided in this manual.
- When positioning the device, make sure cables do not get damaged.
- [Only OEM equipment] The equipment must be installed in a kiosk or system that provides mechanical, electrical and fire protection.
- The mains power supply must comply with the rules in force in the Country where you intend to install the equipment.
- 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.
- Make sure the power cable provided with the appliance, or that you intend to use is suitable with the wall socket available in the system.
- Make sure the electrical system that supplies power to the device is equipped with a ground wire and is protected by a differential switch.
- Before any type of work is done on the machine, disconnect the power supply.
- Use the type of electrical power supply indicated on the device label.
- These devices are intended to be powered by a separately certified power module having an SELV, non-energy hazardous output. (IEC60950-1 second edition).
- [Only POS equipment] The energy to the equipment must be provided by power supply approved by CUSTOM S.p.A.
- Take care the operating temperature range of equipment and its ancillary components.
- 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.
- The equipment must be accessible on these components only to trained, authorized personnel.
- Periodically perform scheduled maintenance on the device to avoid dirt build-up that could compromise the correct, safe operation of the unit.
- 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.
- Use consumables approved by CUSTOM S.p.A.

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 2014/30/EU and 2014/35/EU inasmuch as it was designed in conformity with the provisions laid down in the following Standards:

- EN 55032 *(Electromagnetic compatibility of multimedia equipment - Emission Requirements)*
- EN EN55024/EN55035 *(Electromagnetic compatibility of multimedia equipment - Immunity requirements)*
- EN IEC/EN62368-1 *(Audio/video, information and communication technology equipment)*

The device is in conformity with the essential requirements laid down in Directives 2014/53/EU about devices equipped with intentional radiators. The Declaration of Conformity and other available certifications can be downloaded from the site www.custom4u.it.

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.

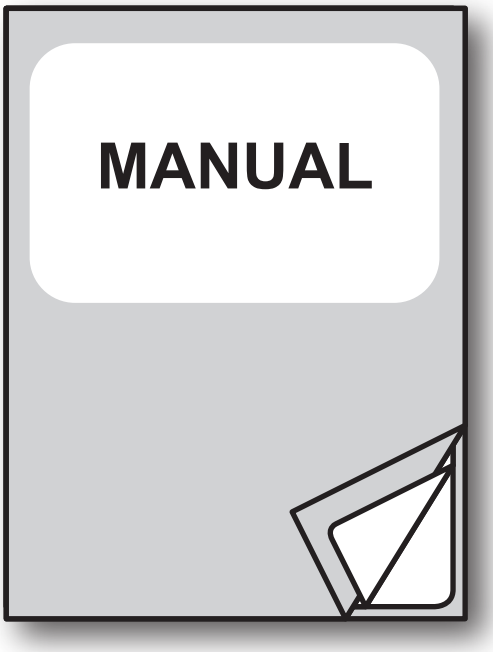
- Do not dispose of this equipment as miscellaneous solid municipal waste, but arrange to have it collected separately.
- The re-use or correct recycling of the electronic and electrical equipment (EEE) is important in order to protect the environment and the wellbeing of humans.
- In accordance with European Directive WEEE 2012/19/EU, 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.
- For the waste sorting of the packaging materials, please check the local waste disposal laws.

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

This product meets the ENERGY STAR® guidelines for energy efficiency.

For more information about ENERGY STAR®, visit www.energystar.gov.

This note is valid only for device bringing ENERGY STAR® trademark.



For further information about the use of “PrinterSet” tool
refer to the manual with code **782000000001800**

TABLE OF CONTENTS

1 INTRODUCTION 9

2 IDENTIFICATION OF THE MODELS 11

3 DESCRIPTION 13
3.1 Box contents 13
3.2 Device components: external views 17
3.3 Device components: keys and connectors view 24
3.4 Device components: internal view 25
3.5 Key functions: power up 27
3.6 Key functions: standby 28
3.7 Status messages 29
3.8 Dual feeder status messages 30
3.9 Messages on display 31
3.10 Device label 32

4 INSTALLATION 33
4.1 Fastening 33
4.2 Low paper sensor 35
4.3 Connections 38
4.4 Pinout 40
4.5 Driver and SDK 43

5 OPERATION 45
5.1 Opening device cover 45
5.2 Adjusting paper width 47
5.3 Switch the device on/off 50
5.4 Loading the paper roll 52
5.5 Issuing ticket 58
5.6 VeriPrint® system 63
5.7 Stock control 64

6 CONFIGURATION 65
6.1 Configuration by keys 65
6.2 Configuration by software 68
6.3 Printhead status 70
6.4 Device status 71
6.5 Communication parameters 72
6.6 Operation parameters 74
6.7 Alignment parameters 76
6.8 Aero parameters 78
6.9 RFID parameters 80

7 ALIGNMENT 83
7.1 Alignment parameters 84

8 MAINTENANCE 87
8.1 Device paper jam 87
8.2 Dual feeder paper jam 90
8.3 Planning of cleaning operations 93
8.4 Cleaning 94
8.5 Firmware upgrade 100

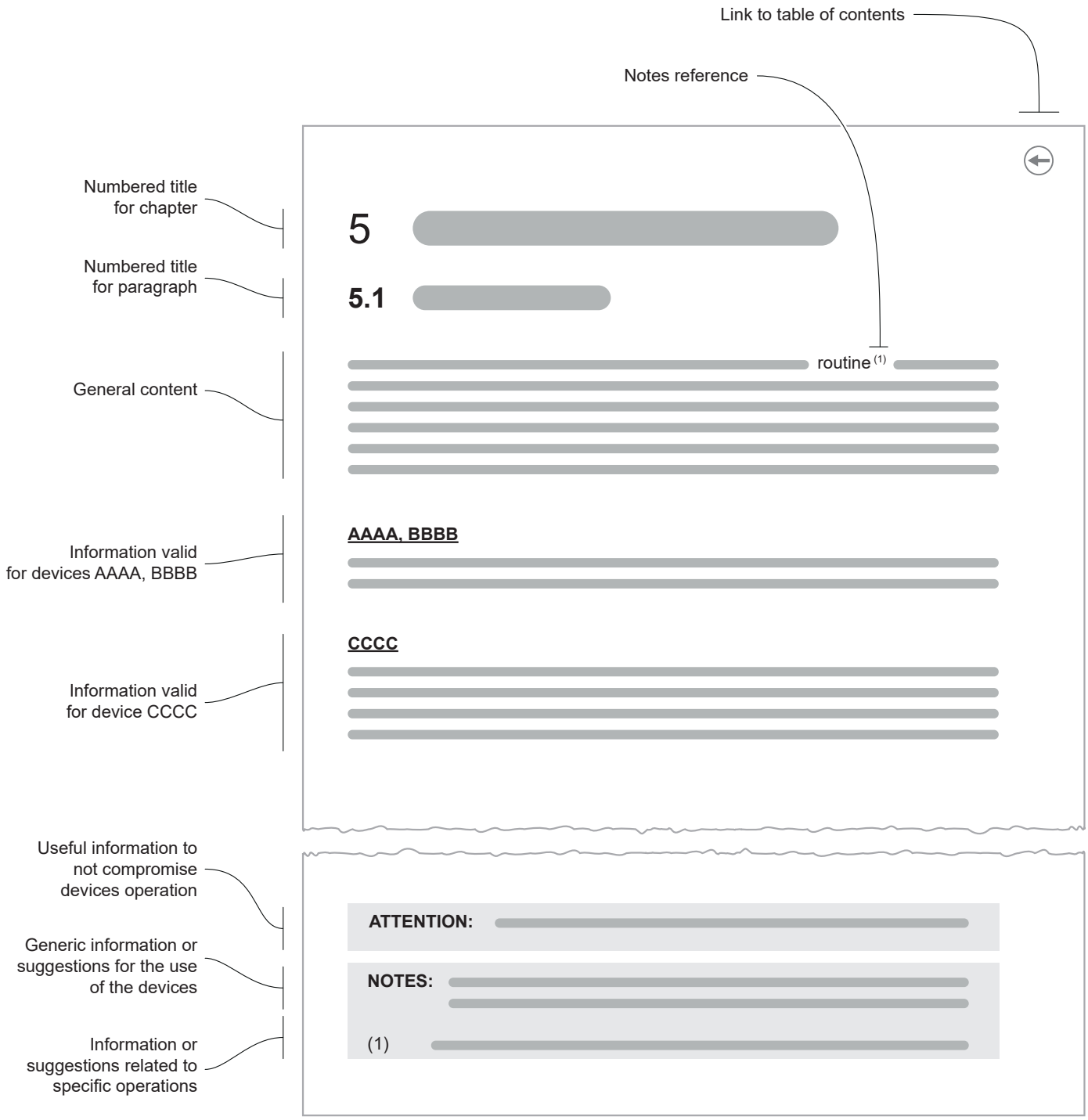
9 SPECIFICATIONS 103
9.1 Hardware specifications 103
9.2 Device dimensions 107
9.3 Device dimensions with ejector group 112
9.4 Device dimensions with RFID kit 115
9.5 Device dimensions with paper roll holder 116
9.6 Device dimensions with vertical ticket tray 117
9.7 Device dimensions with rear ticket tray 118
9.8 Power supply and power cord dimensions 119

10 ACCESSORIES 121

11 TECHNICAL SERVICE 125

1 INTRODUCTION

This document is divided into sections and chapters. Each chapter can be reached by the index at the beginning of this document. The index can be reached by the button on each page as shown in the diagram below.



2 IDENTIFICATION OF THE MODELS

NOMENCLATURE	DESCRIPTION	NOTES
KPM862 STD	KPM862 base configuration (OEM model with 200 dpi printhead)	-
KPM862 DF	KPM862 with dual feeder	-
TK862 STD	TK862 base configuration (TKT model with 200 dpi printhead)	-
TK862 DF	TK862 with dual feeder	-
TK862 EJC	TK862 with ejector group	-
TK862 VR	TK862 with VeriPrint® system	-
KPM862 EJC	KPM862 with ejector group	Accessory required
KPM862 DF-EJC	KPM862 DF with ejector group	Accessory required
TK862 DF-EJC	TK862 DF with ejector group	Accessory required
TK862 IDU	TK862 with integrated RFID UHF antenna	Accessory required

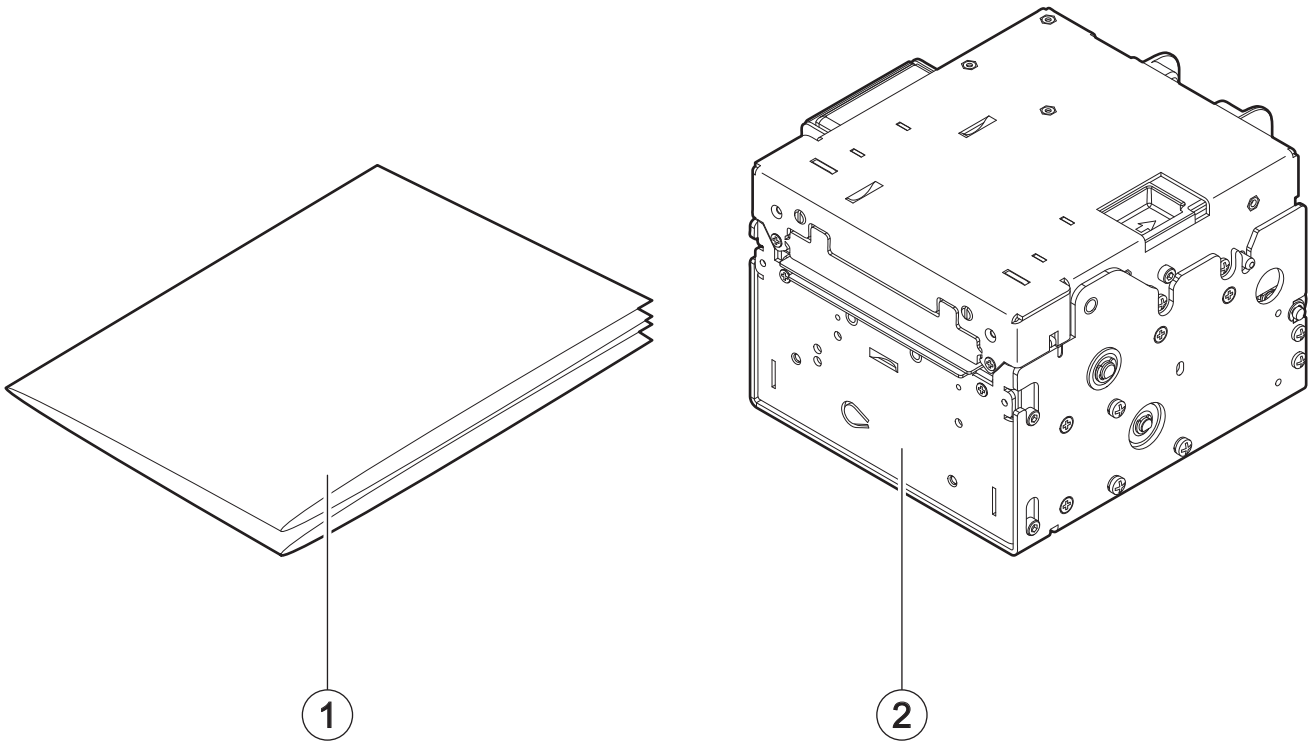
3 DESCRIPTION

3.1 Box contents

Remove the device from its carton being careful not to damage the packing material so that it may be re-used if the device 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.

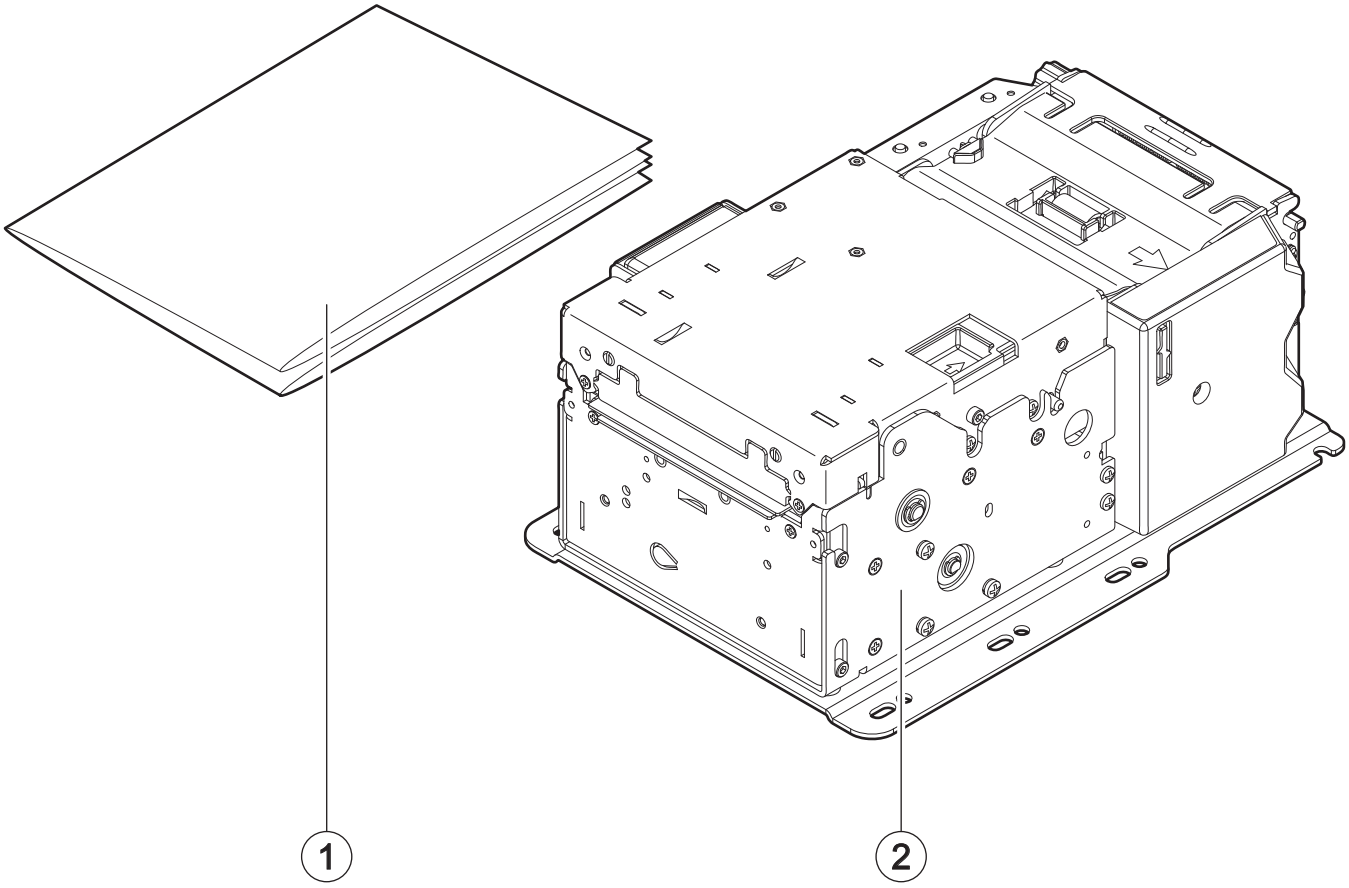
KPM862 STD, KPM862 EJC

1. Documentation (installation instruction sheet)
2. Device



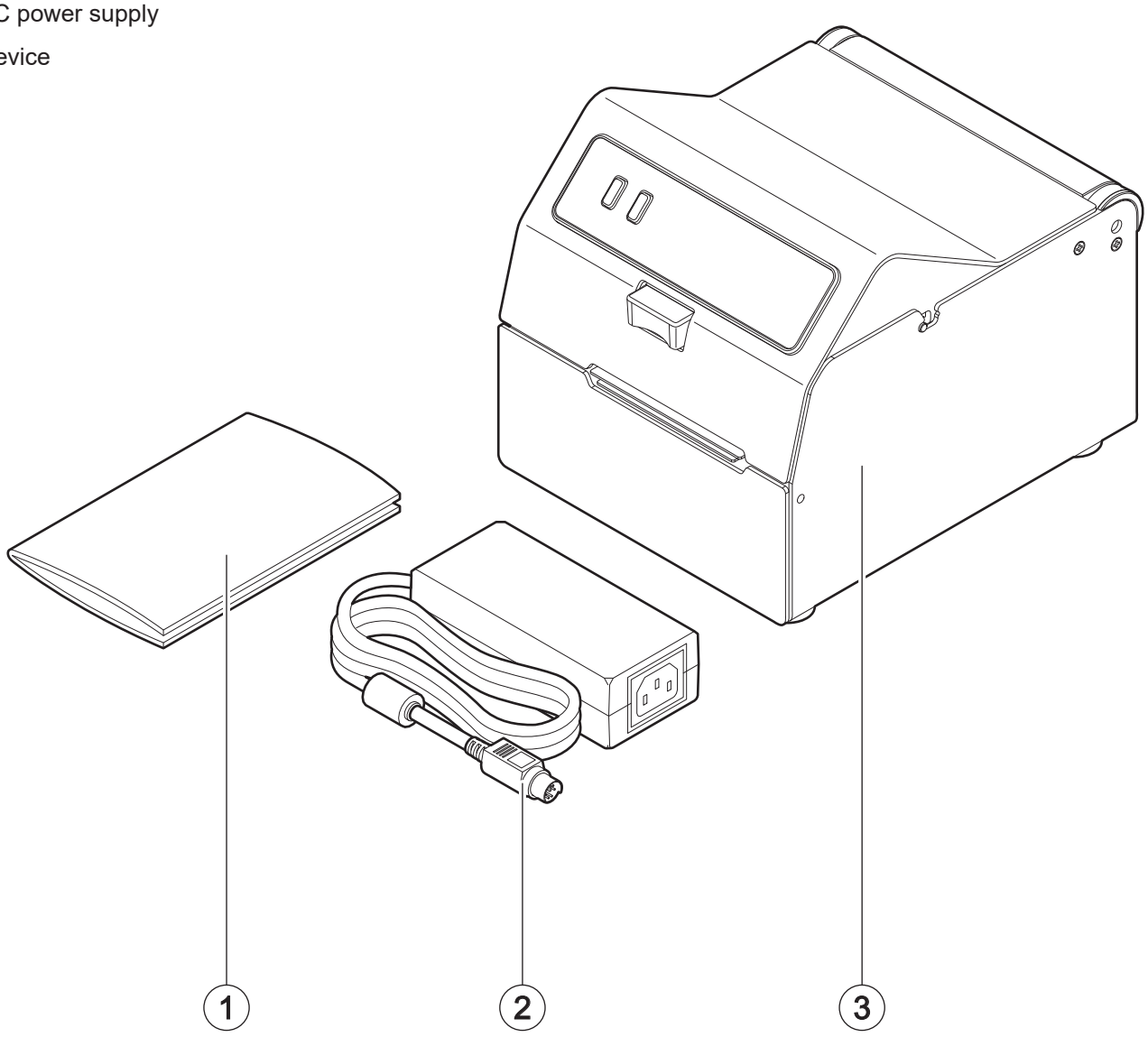
KPM862 DF, KPM862 DF-EJC

1. Documentation (installation instruction sheet)
2. Device



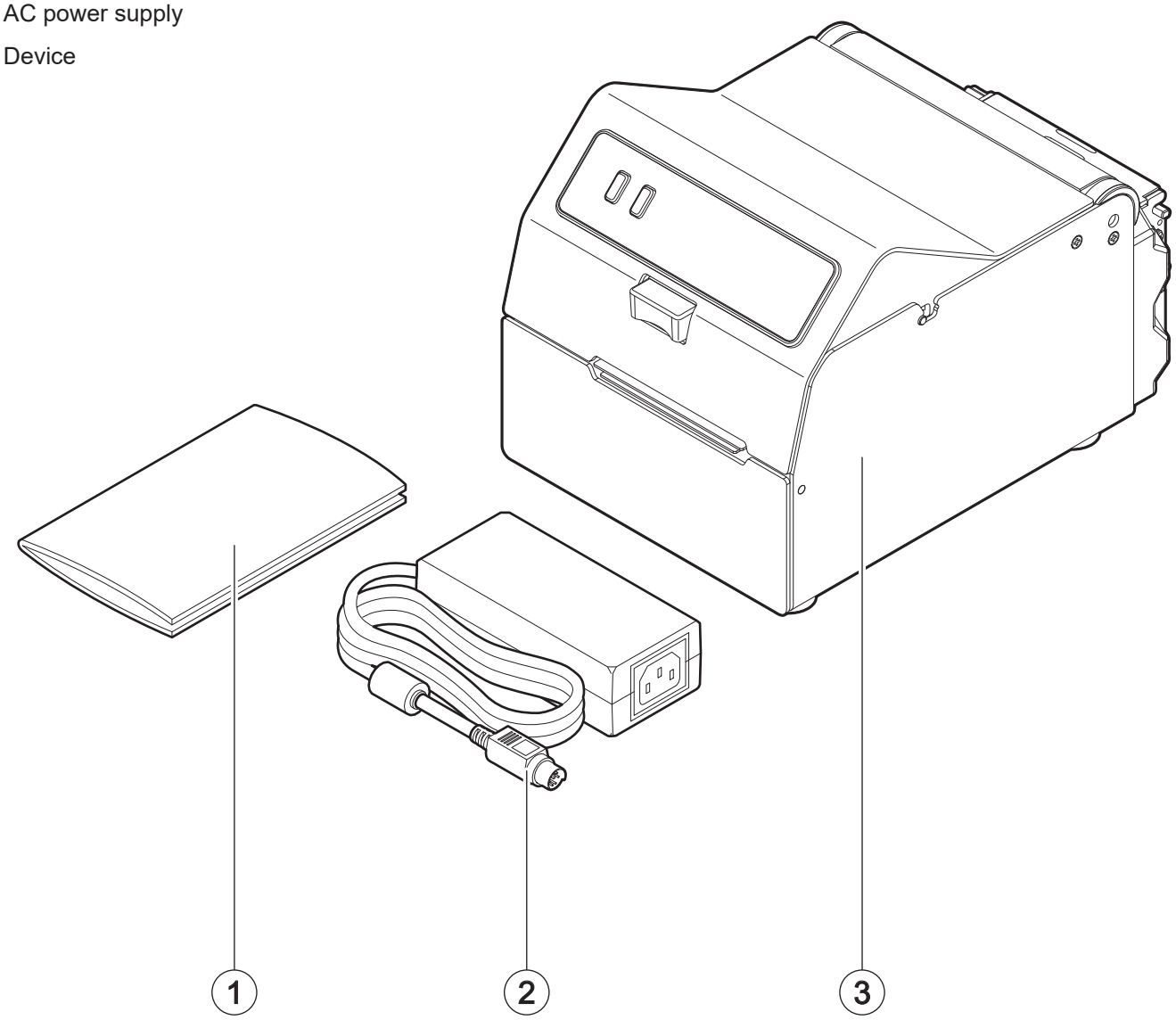
TK862 STD, TK862 EJC, TK862 VR, TK862 IDU

1. Documentation (short guide)
2. AC power supply
3. Device



TK862 DF-EJC

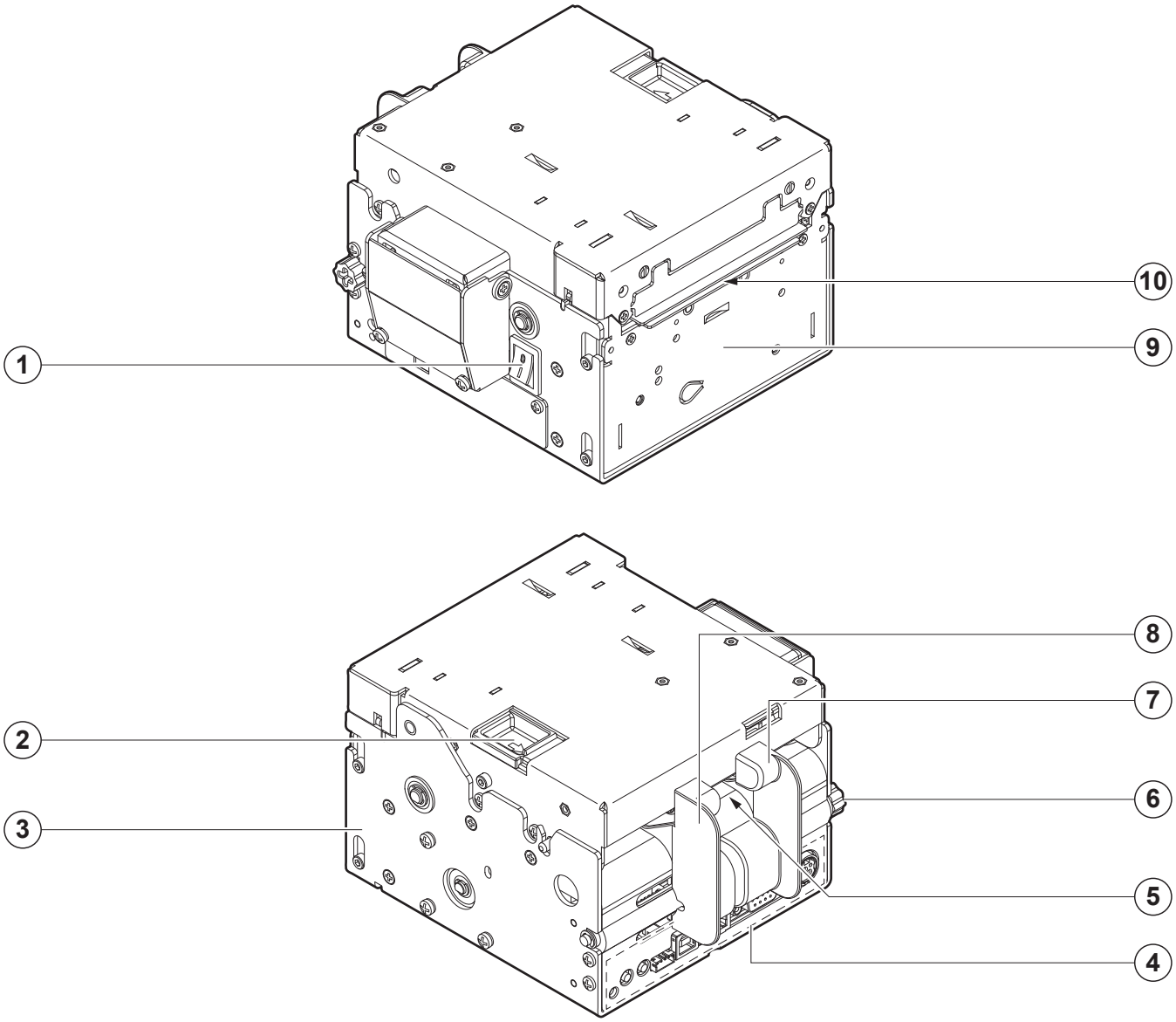
1. Documentation (short guide)
2. AC power supply
3. Device



3.2 Device components: external views

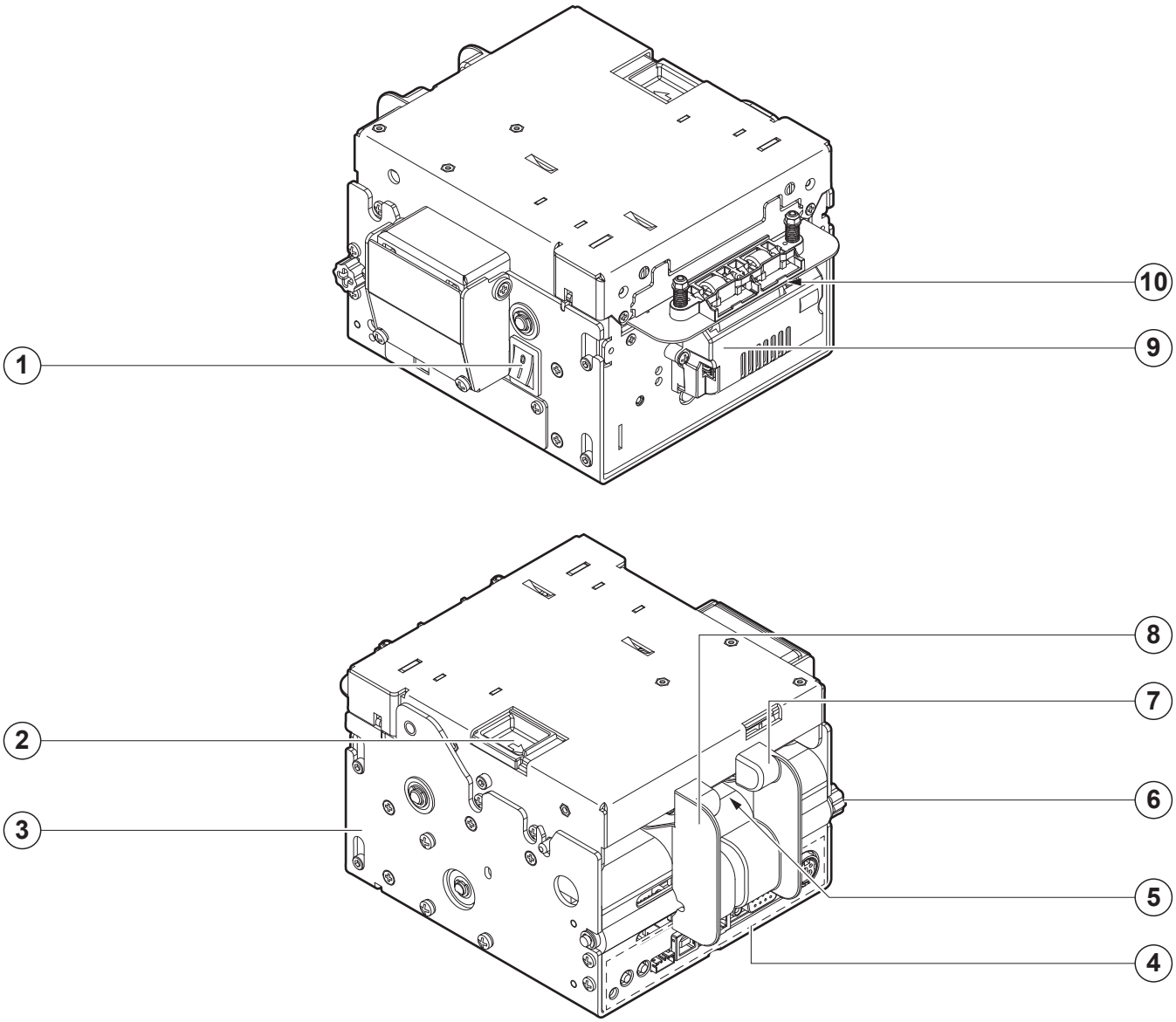
KPM862 STD

1. ON/OFF key
2. Opening lever for upper cover
3. Device chassis
4. Keys and connectors panel (see paragraph 3.3)
5. Paper input
6. Adjustment knob for paper input width
7. Left paper guide
8. Right paper guide
9. Front cover
10. Paper out



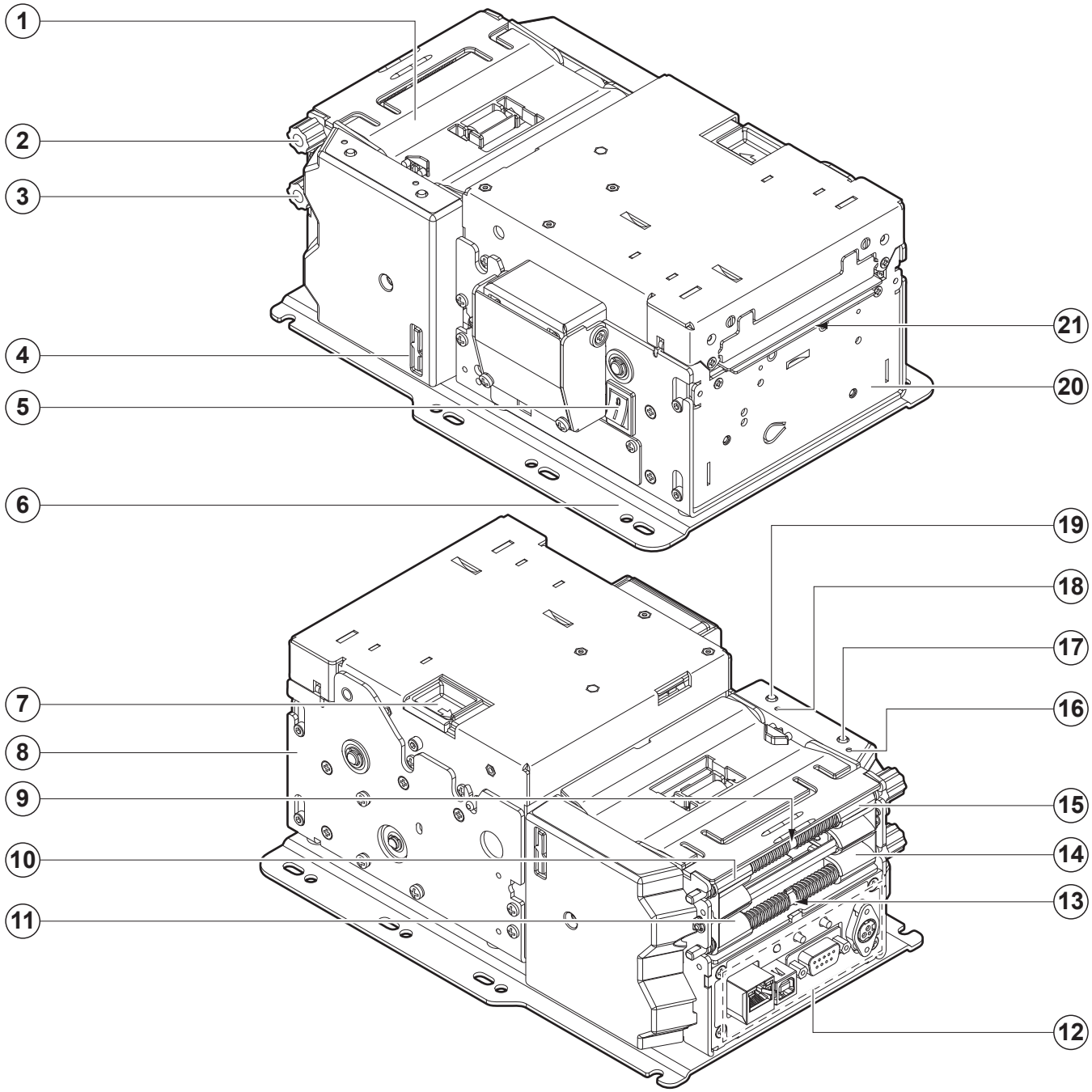
KPM862 EJC

1. ON/OFF key
2. Opening lever for upper cover
3. Device chassis
4. Keys and connectors panel (see paragraph 3.3)
5. Paper input
6. Adjustment knob for paper input width
7. Left paper guide
8. Right paper guide
9. Front cover with ejector group
10. Paper out



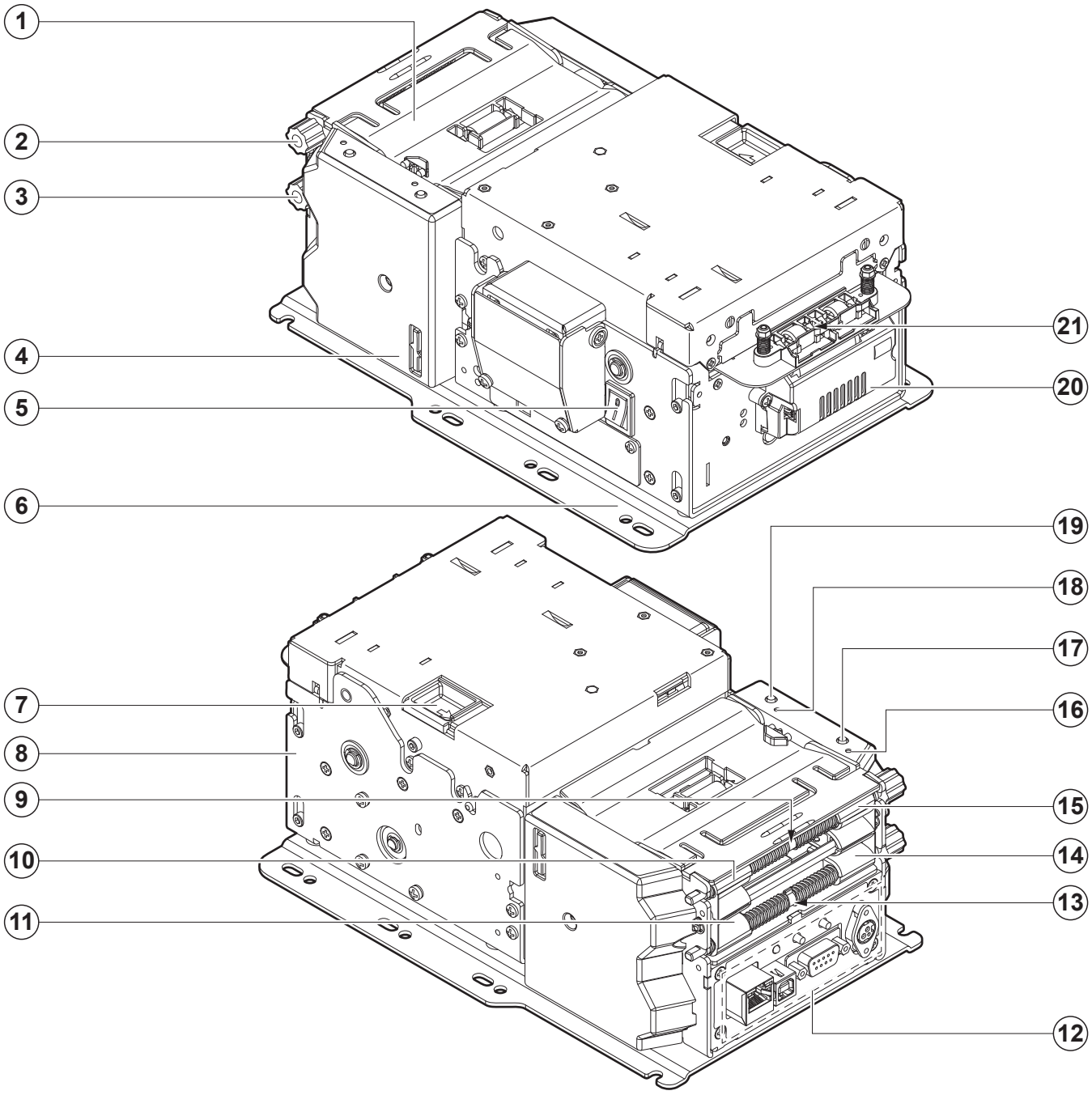
KPM862 DF

1. Dual feeder
2. Adjustment knob for paper input 1 width
3. Adjustment knob for paper input 2 width
4. Connector cap low paper
5. ON/OFF key
6. Fixing plate
7. Opening lever for upper cover
8. Device chassis
9. Paper input 1
10. Paper input 1 right guide
11. Paper input 2 right guide
12. Keys and connectors panel (see paragraph 3.3)
13. Paper input 2
14. Paper input 2 left guide
15. Paper input 1 left guide
16. F1 status LED
17. F1 key
18. F2 status LED
19. F2 key
20. Front cover
21. Paper out



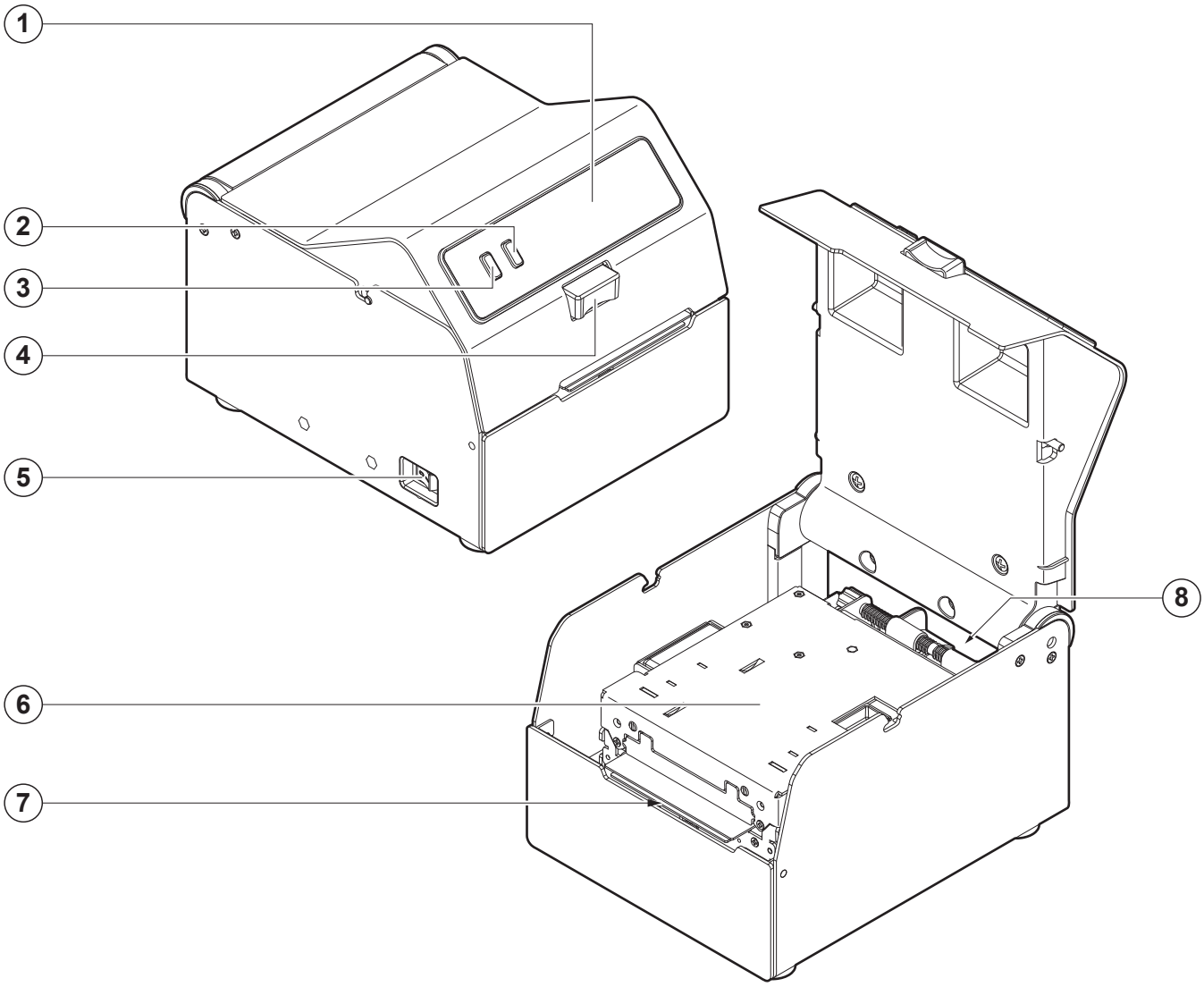
KPM862 DF-EJC

1. Dual feeder
2. Adjustment knob for paper input 1 width
3. Adjustment knob for paper input 2 width
4. Connector cap low paper
5. ON/OFF key
6. Fixing plate
7. Opening lever for upper cover
8. Device chassis
9. Paper input 1
10. Paper input 1 right guide
11. Paper input 2 right guide
12. Keys and connectors panel (see paragraph 3.3)
13. Paper input 2
14. Paper input 2 left guide
15. Paper input 1 left guide
16. F1 status LED
17. F1 key
18. F2 status LED
19. F2 key
20. Front cover with ejector group
21. Paper out



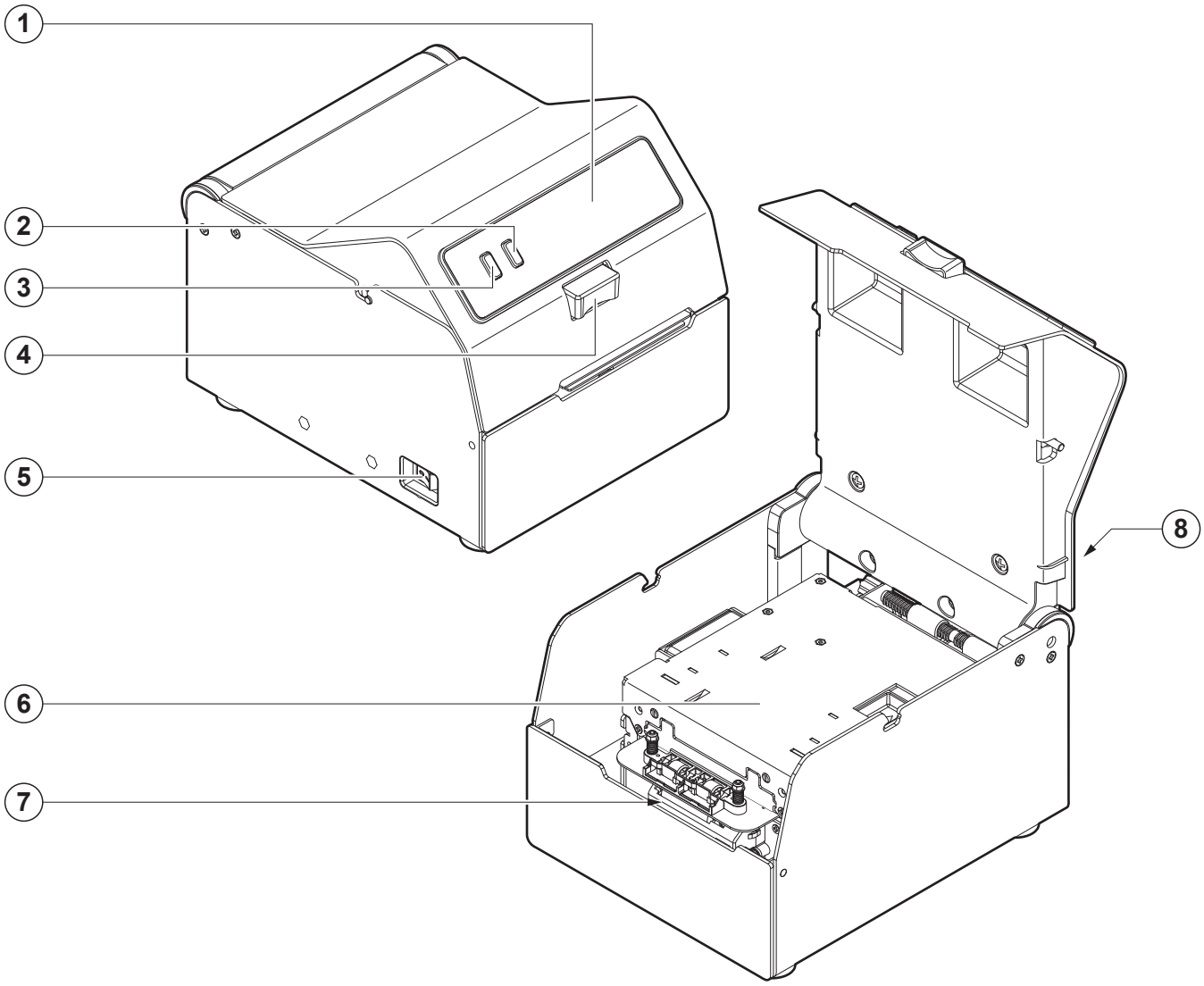
TK862 STD, TK862 VR, TK862 IDU

1. Display
2. LINE FEED key
3. FORM FEED key
4. Opening lever for upper cover
5. ON/OFF key
6. Internal printer (see previous pages)
7. Paper out
8. Paper input



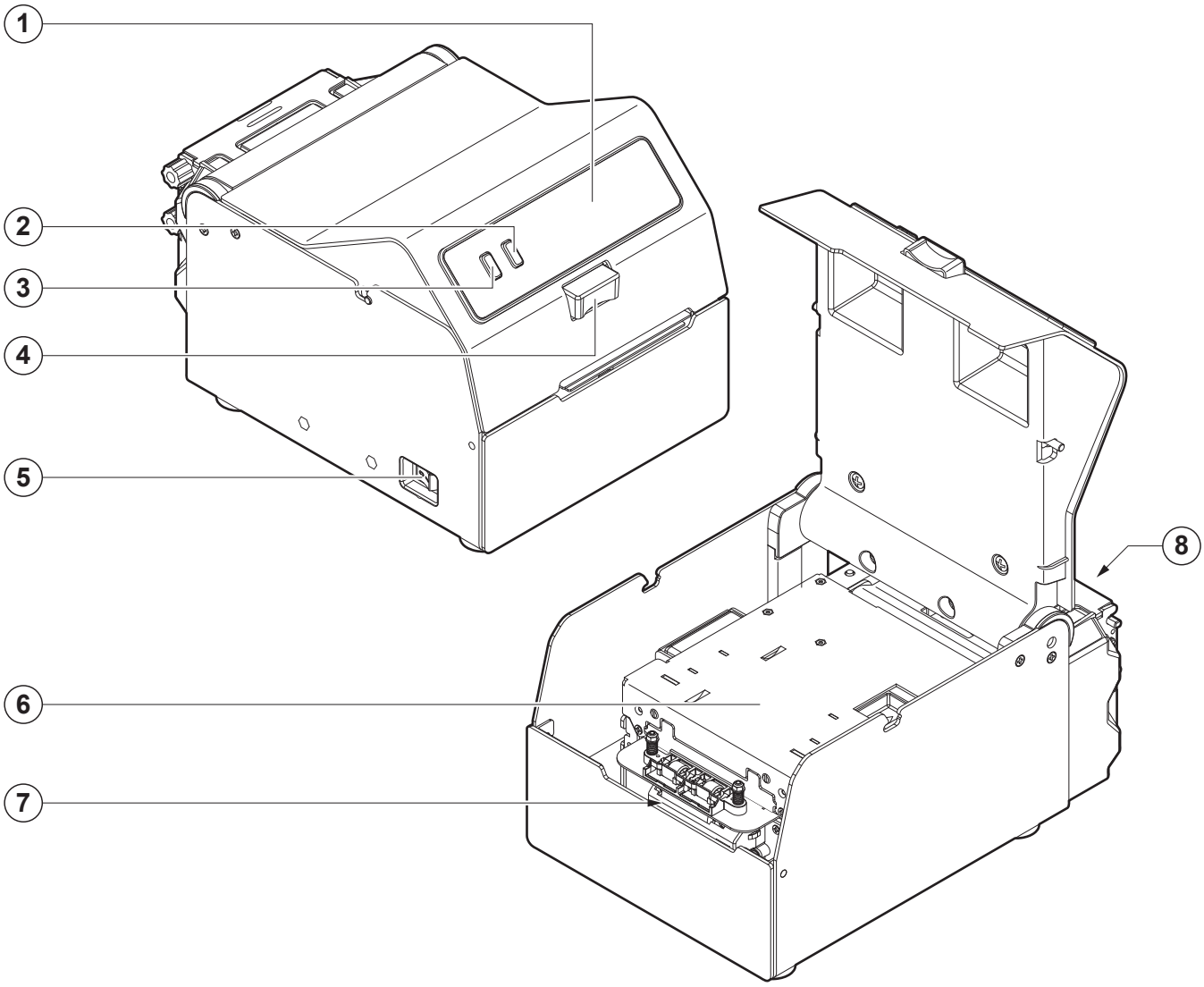
TK862 EJC

1. Display
2. LINE FEED key
3. FORM FEED key
4. Opening lever for upper cover
5. ON/OFF key
6. Internal printer with ejector group (see previous pages)
7. Paper out
8. Paper input



TK862 DF-EJC

1. Display
2. LINE FEED key
3. FORM FEED key
4. Opening lever for upper cover
5. ON/OFF key
6. Internal printer with dual feeder and ejector group (see previous pages)
7. Paper out
8. Paper input

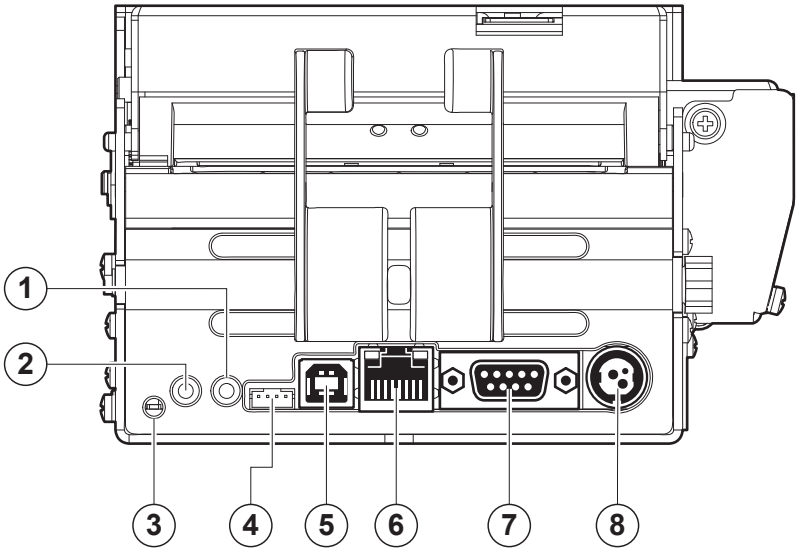


3.3 Device components: keys and connectors view

For ease of reference, for some models is represented only the internal printer group.

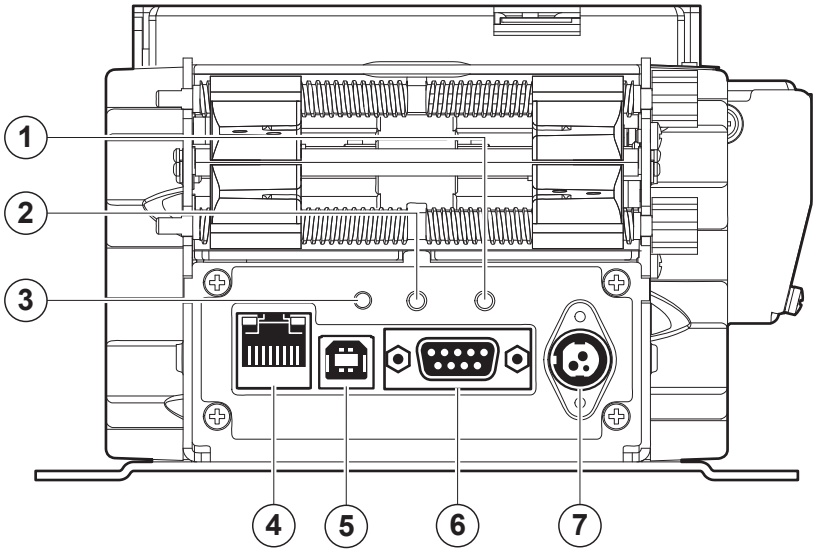
KPM862 STD, KPM862 EJC, TK862 STD, TK862 EJC, TK862 VR, TK862 IDU

1. FF key
2. LF key
3. Status LED
4. External low paper sensor connector
5. USB port
6. Ethernet port
7. RS232 serial port
8. Power supply port



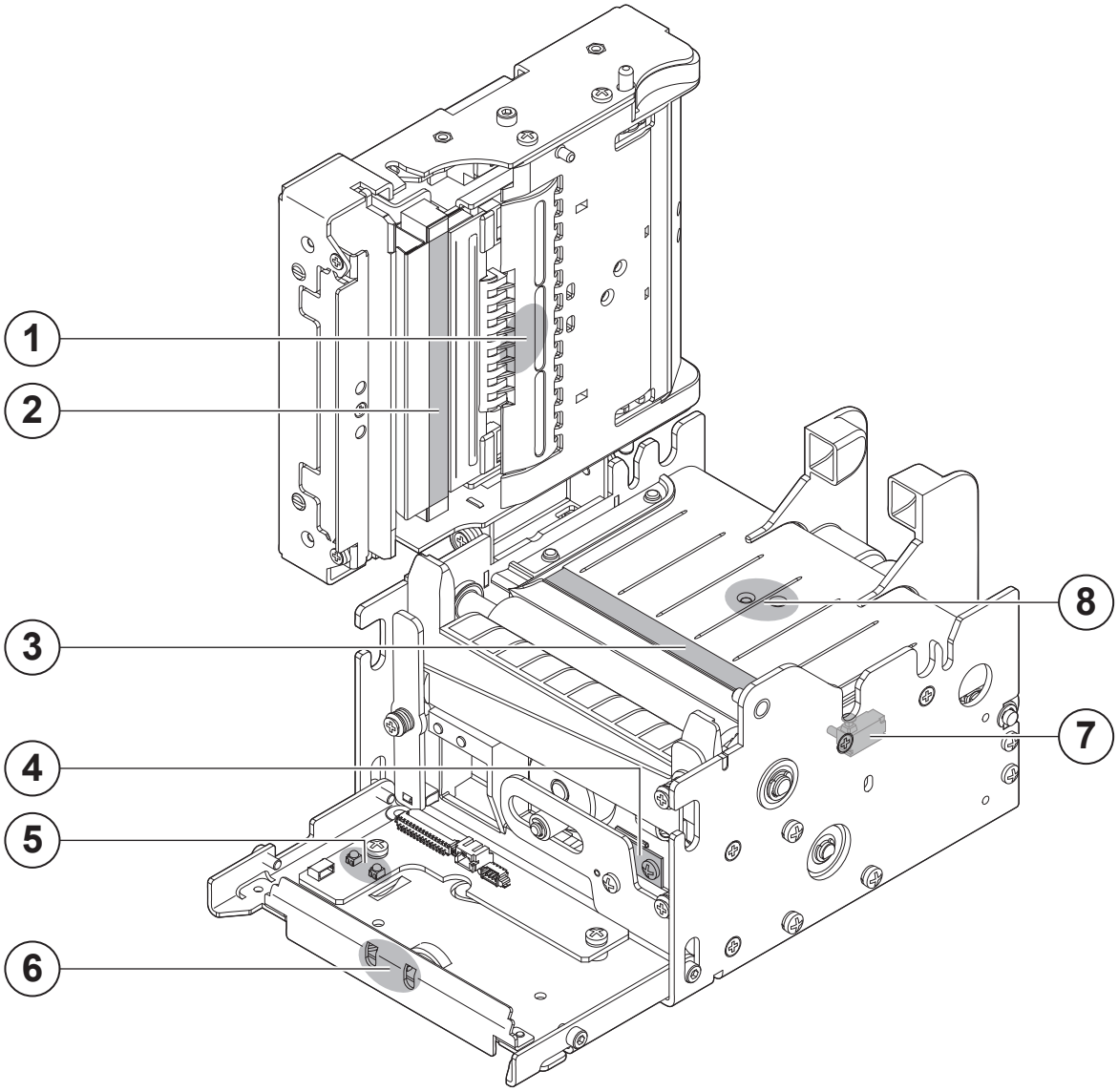
KPM862 DF, KPM862 DF-EJC,TK862 DF, TK862 DF-EJC

1. FF key
2. LF key
3. Status LED
4. Ethernet port
5. USB port
6. RS232 serial port
7. Power supply port

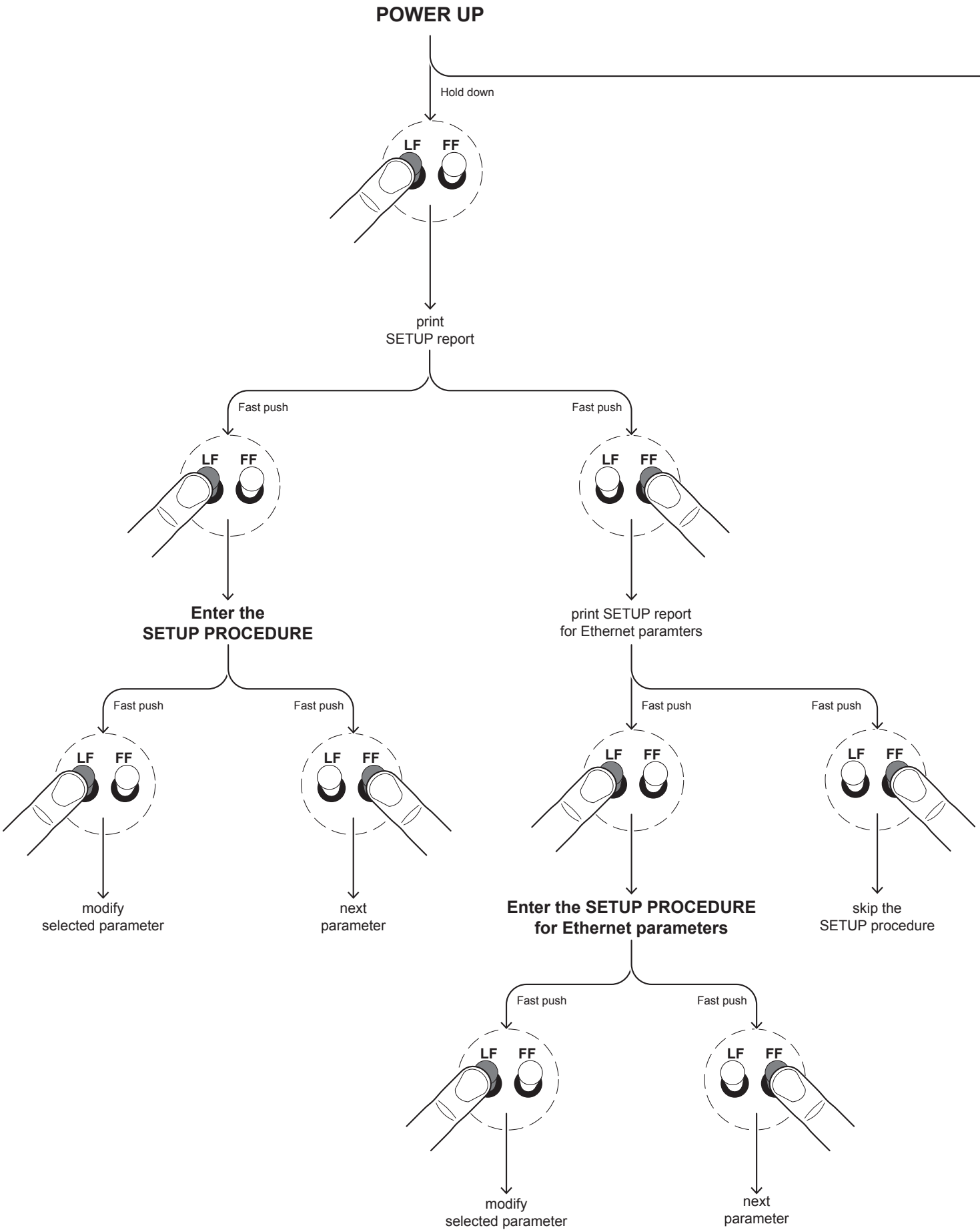


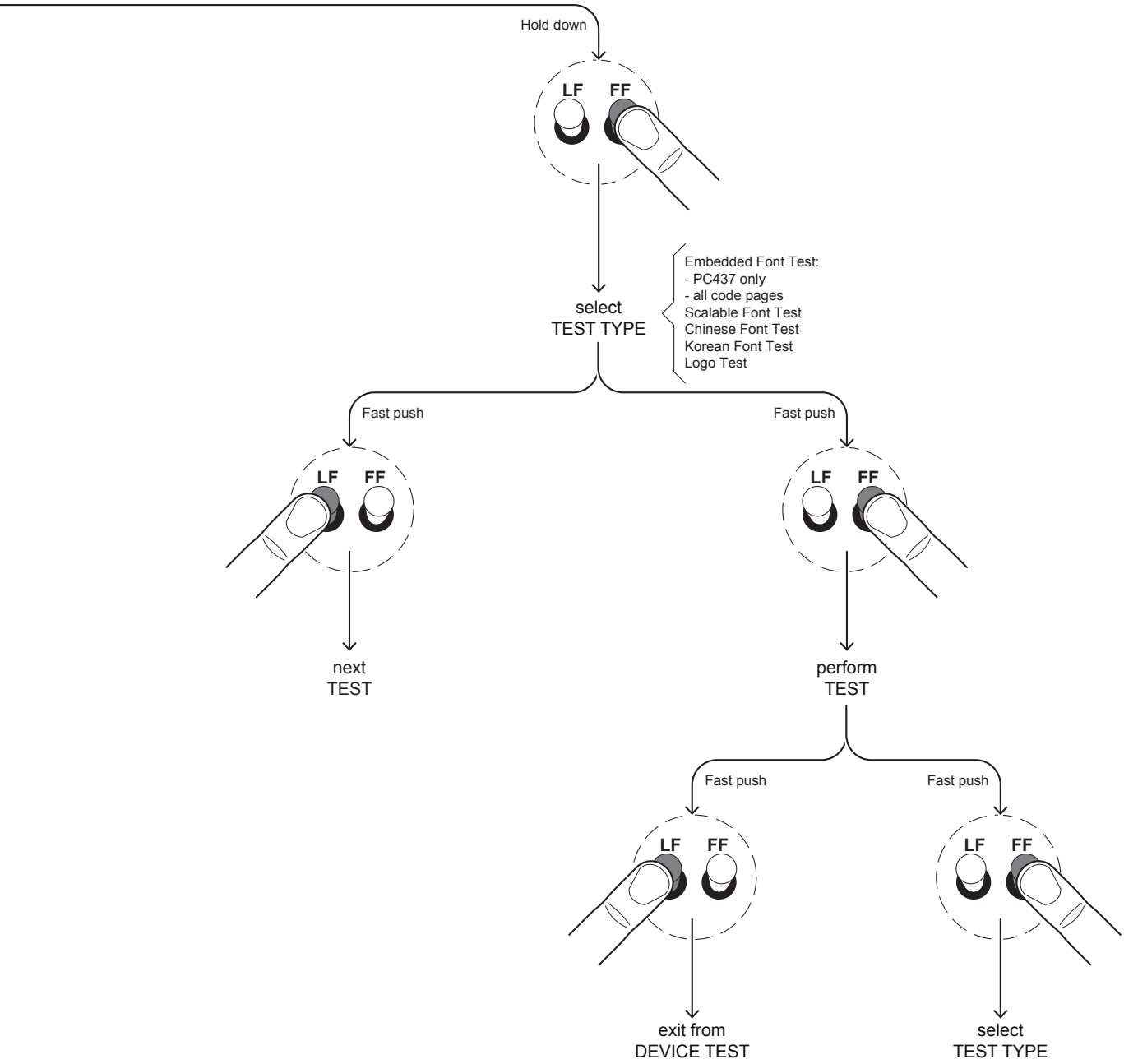
3.4 Device components: internal view

1. Head temperature sensor
2. Upper CIS reader (only for TK862 VR)
3. Lower CIS reader
4. Autocutter position sensor
5. Opening/closing front cover sensor
6. Paper out presence sensors
7. Opening/closing upper cover sensor
8. Paper input presence sensors

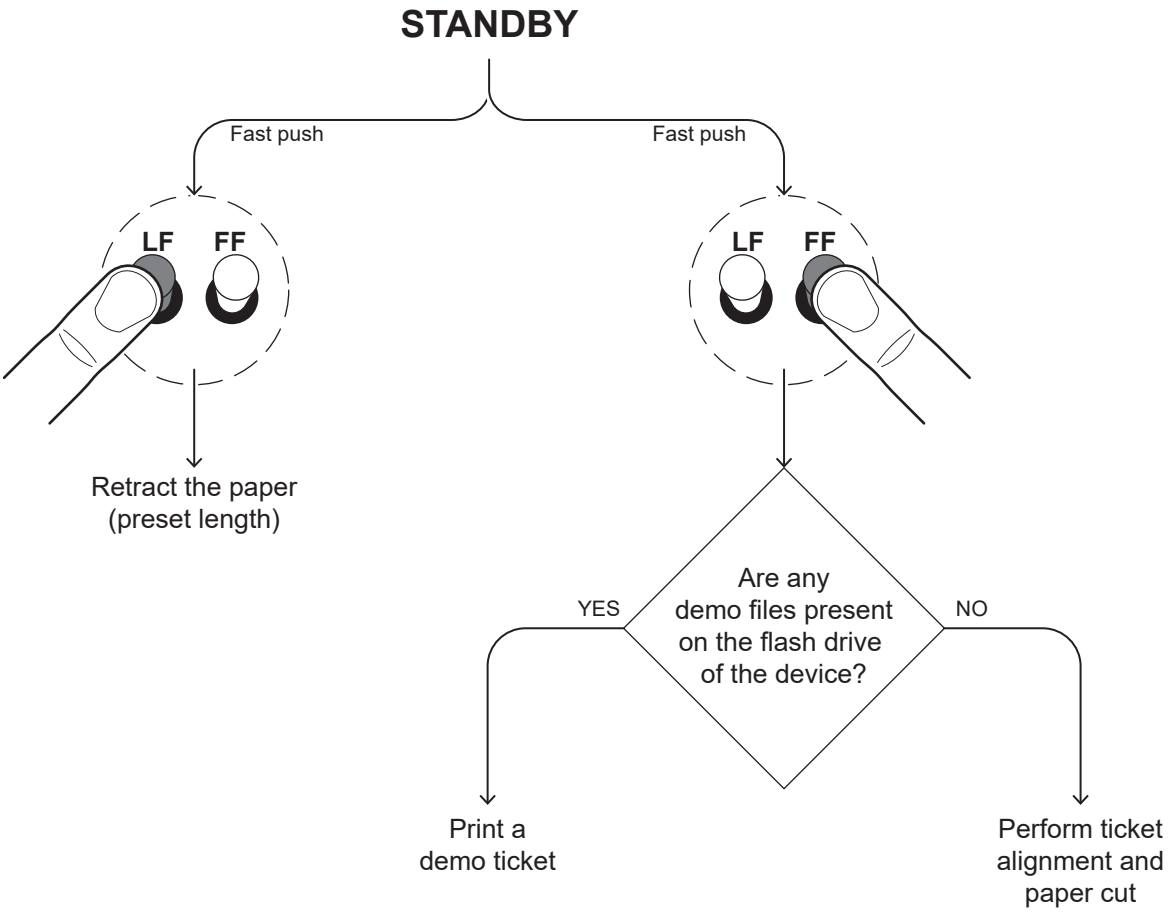


3.5 Key functions: power up

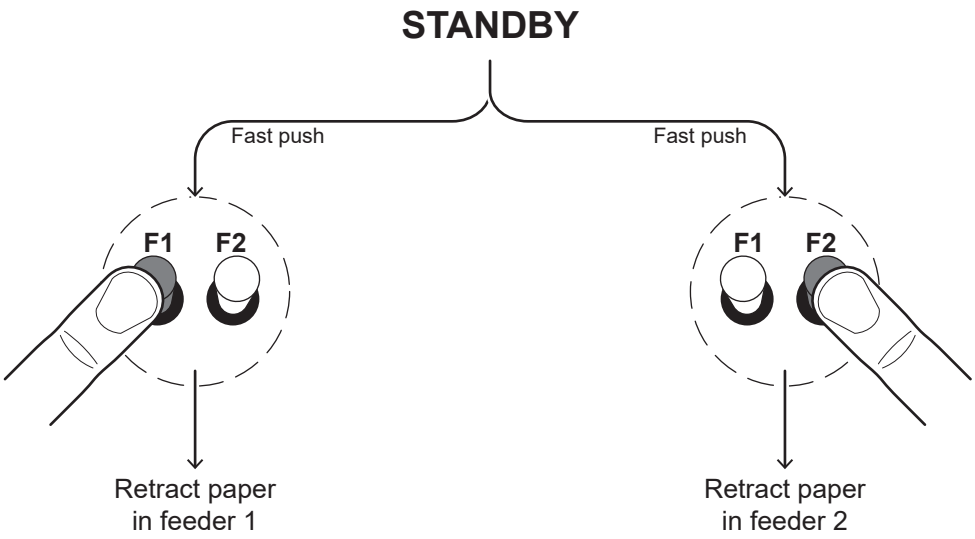



Hold down
LF
FF
select
TEST TYPE
Embedded Font Test:
- PC437 only
- all code pages
Scalable Font Test
Chinese Font Test
Korean Font Test
Logo Test
Fast push
Fast push
LF
FF
LF
FF
next
TEST
perform
TEST
Fast push
Fast push
LF
FF
LF
FF
exit from
DEVICE TEST
select
TEST TYPE

3.6 Key functions: standby



KPM862 DF, KPM862 DF-EJC, TK862 DF, TK862 DF-EJC



3.7 Status messages

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	DEVICE OFF
GREEN	ON	DEVICE 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	PRINTHEAD OVERHEATED
	x 3	PAPER END
	x 4	PAPER JAM
	x 5	POWER SUPPLY VOLTAGE INCORRECT
	x 6	COVER OPEN
RED UNRECOVERABLE ERROR	x 2	FPGA ERROR
	x 3	RAM ERROR
	x 4	EXTERNAL FLASH ERROR
	x 5	CUTTER ERROR
	x 6	FRONT COVER OPEN

3.8 Dual feeder status messages

KPM862 DF, KPM862 DF-EJC, TK862 DF, TK862 DF-EJC

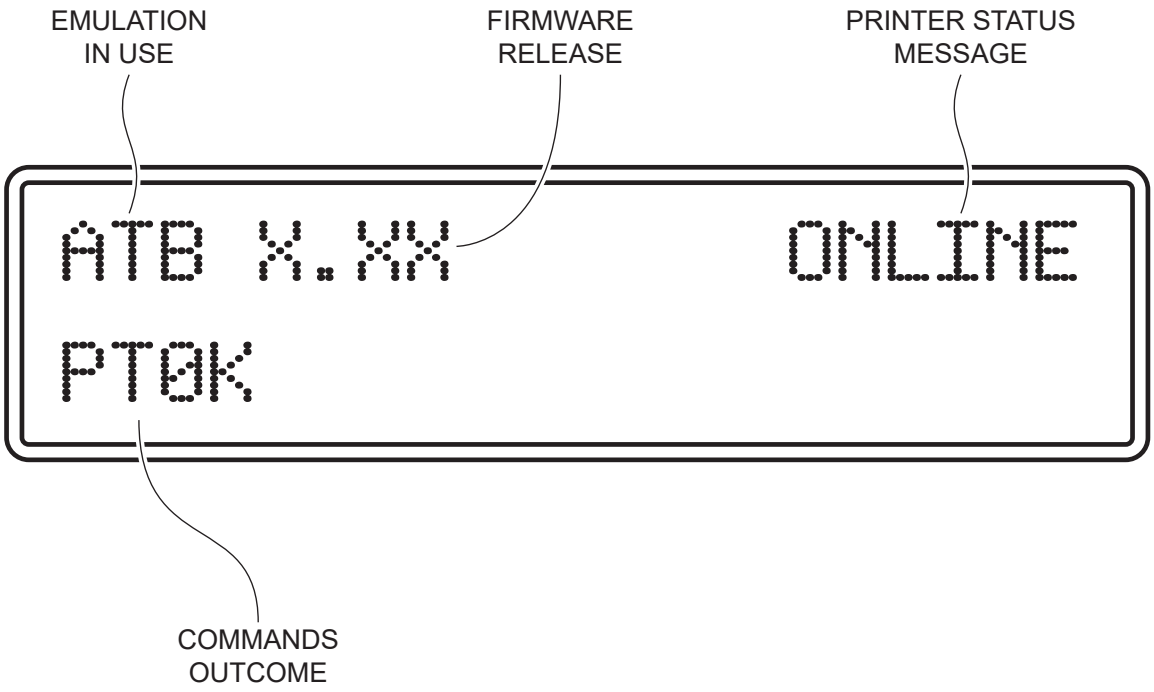
The LED panel of dual feeder is comprised of two LED (one of green colour and one of red colour).
The LED indicate the dual feeder status and the paper status. Given in the table below are the various LED signals and the corresponding dual feeder status.

STATUS LED		DESCRIPTION
RED	ON	FEEDER COVER OPEN
		ERROR (PAPER JAM, COMMAND RECEPTION TIMEOUT)
GREEN	ON	PAPER PRESENCE
ORANGE		FEEDER PAPER END

3.9 Messages on display

TK862 STD, TK862 EJC, TK862 DF, TK862 DF-EJC, TK862 VR, TK862 IDU

The display shows the firmware release, a device status message and the outcome of the last sent command (see following image).



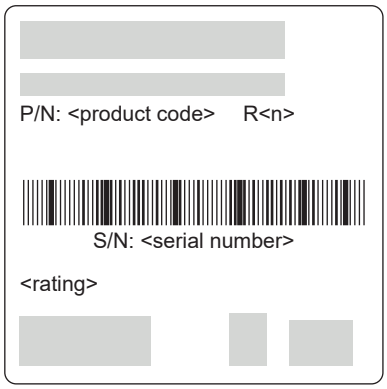
The possible outcomes of commands are several and they may be divided into two groups:
1. Successful outcome, which contains the OK answer to the last command (for example, PTOK)
2. Not successful outcome, which reports an error code (for example, ERR8)

The possible emulations are the following:
- ATB Emulation used to print the boarding passes
- BTP Emulation used to print the bag tags
- SER Service emulation. Generally used to configure the printer, perform updates or to print from Windows drivers

The possible status messages are the following:
- ONLINE The device is ready (standby message)
- OFFLINE The device is in a “busy” condition (during commands sending, on paper jam, and so on)
- LINK DOWN The serial connection cable is unplugged
- COVEROPEN The upper cover is open
- PAPERJAM The device has detected an anomaly along the paper path
- NOPAPER No paper loaded into the device
- BIN1EMPTY No paper loaded into the paper input 1 of the dual feeder (only for TK862 DF and TK862 DF-EJC)
- BIN2EMPTY No paper loaded into the paper input 2 of the dual feeder (only for TK862 DF and TK862 DF-EJC)

3.10 Device label

The main data used to identify the machine are shown on the label attached to the bottom of the device.
In particular, it shows the electrical data for the connection to a power source. It also shows the product code, the serial number and the hardware revision (R).

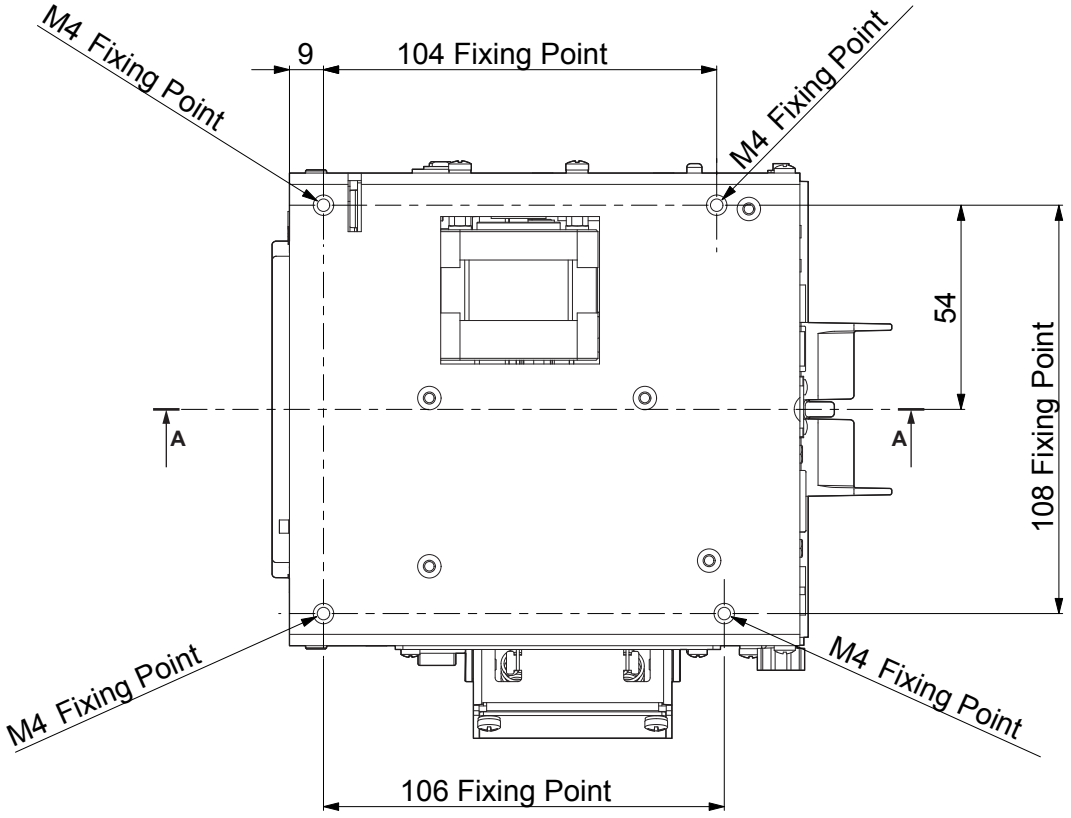


4 INSTALLATION

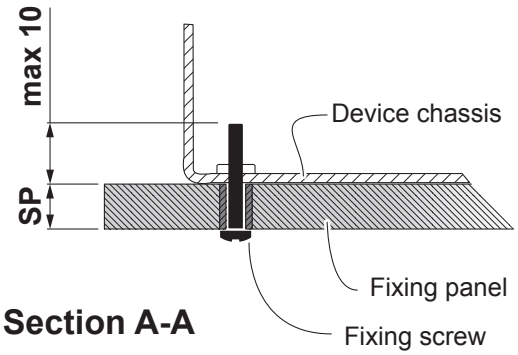
4.1 Fastening

KPM862 STD, KPM862 EJC

The device is provided with four fixing holes on the bottom of device (see following figure, dimensions in millimetres). To fasten the device on a panel, use four M4 screws.



It's very important to consider the screws length not to damage the internal components placed near the fixing holes (see following figure).



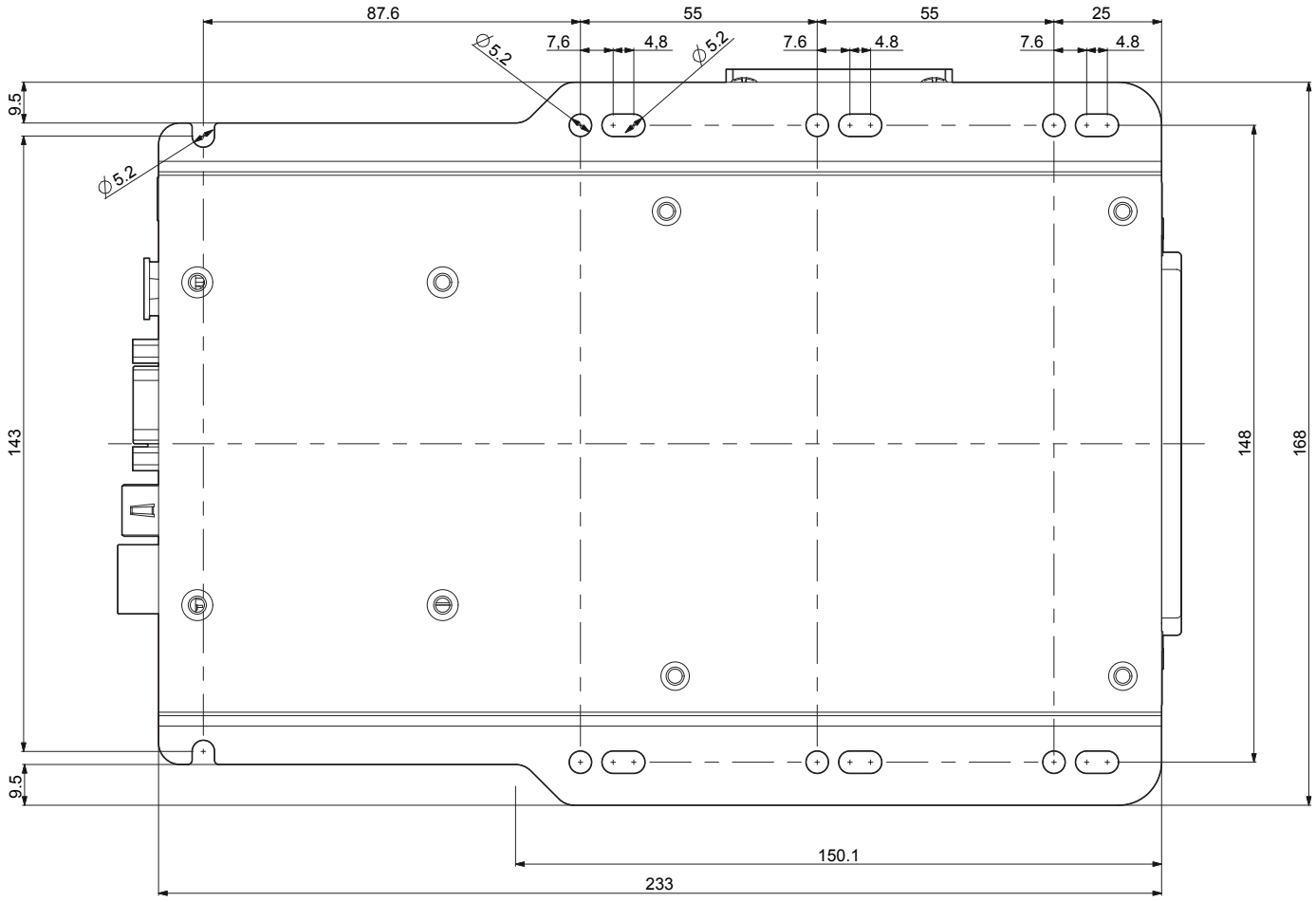
The screw length (L) will be calculated according to the thickness of the panel (Sp) on which the device is fixed, as follows:

$$L \leq 10 \text{ mm} + Sp$$

For example, if panel thickness is 10 mm (Sp = 10 mm), the maximum length for screws will be 20 mm.

KPM862 DF, KPM862 DF-EJC

The device is provided with six fixing holes and six slots on the bottom of device (see following figure, dimensions in millimetres).

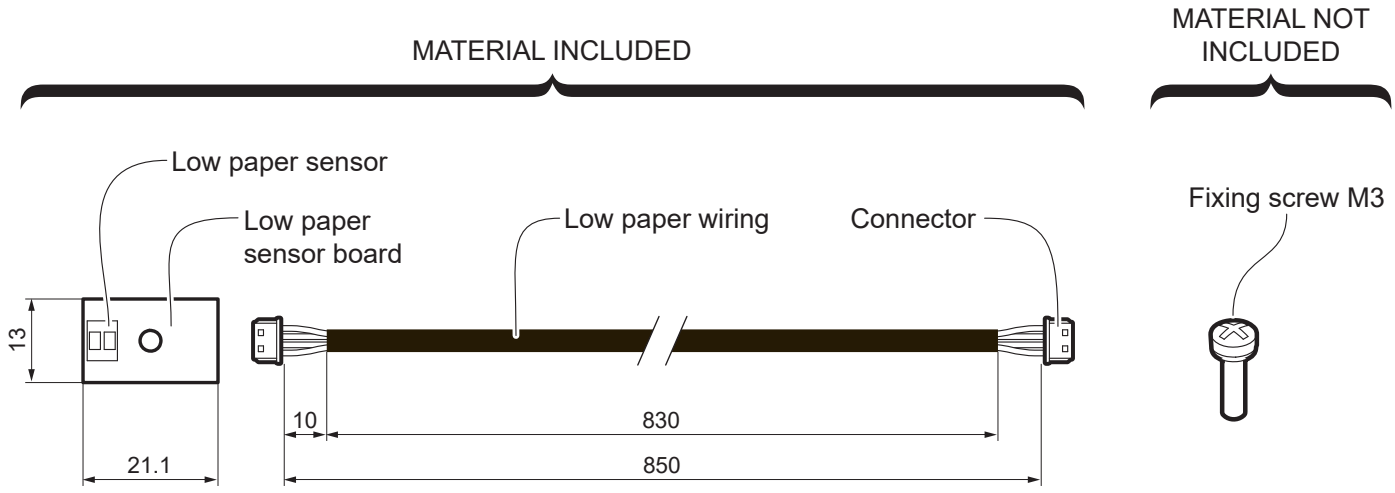


4.2 Low paper sensor

KPM862 STD, KPM862 EJC

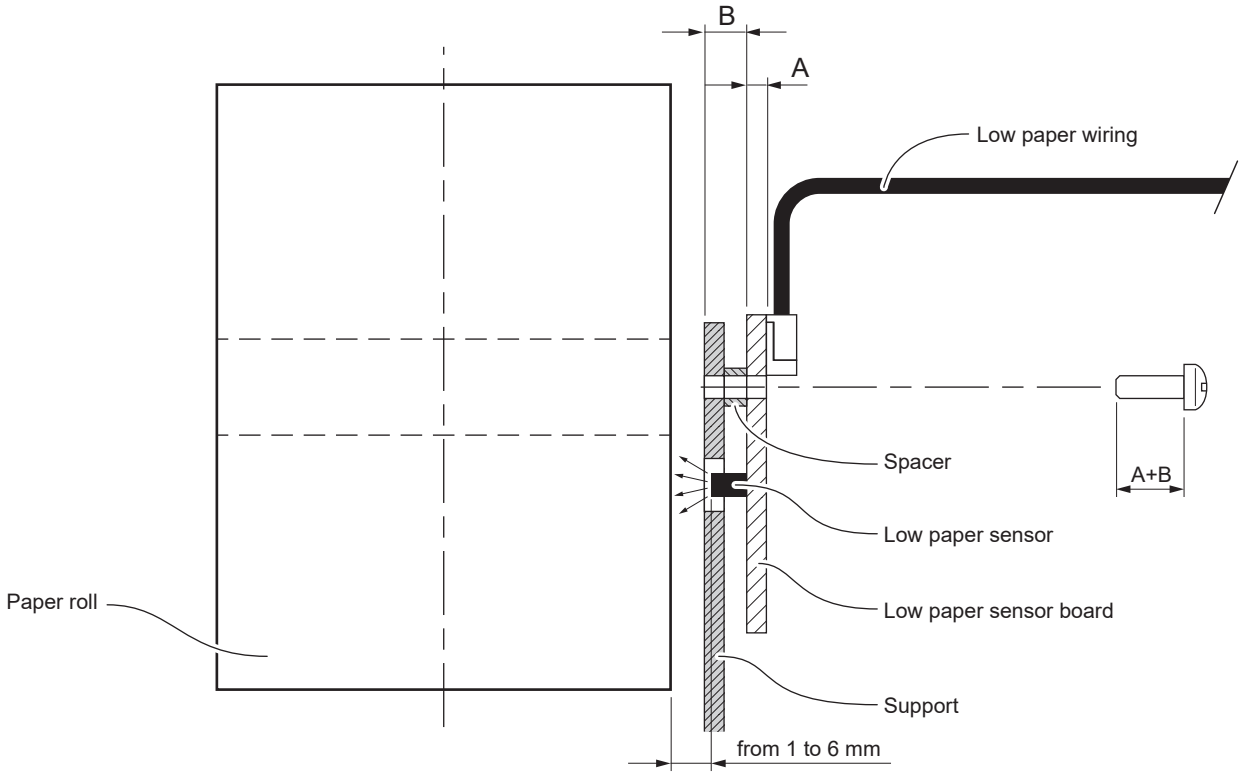
The device provides as an accessory (see chapter 10) a low paper sensor with the cable (see following figure). To fix the sensor, use an M3 screw not supplied.

All the dimensions shown in following figures are in millimetres.



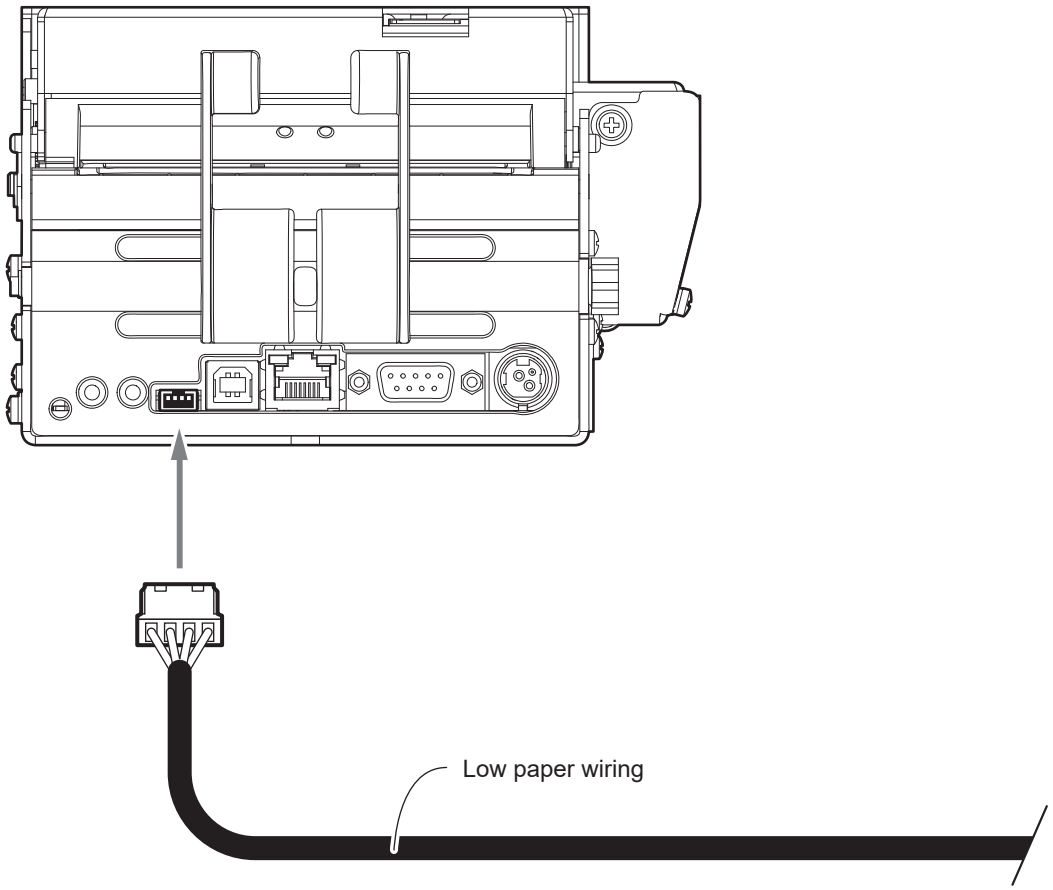
For the assembly procedure, proceed as follows:

1



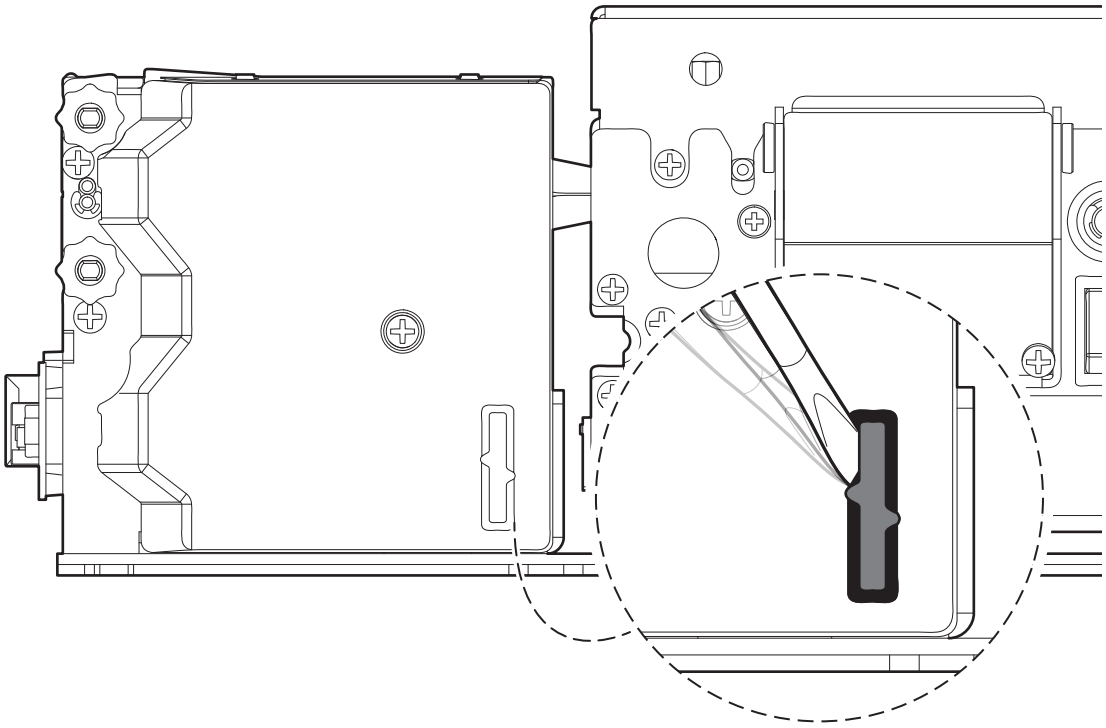
Fix the low paper sensor board to the support by using an M3 screw not included.
For the correct functioning of the low paper sensor, comply with the measures specified.

2



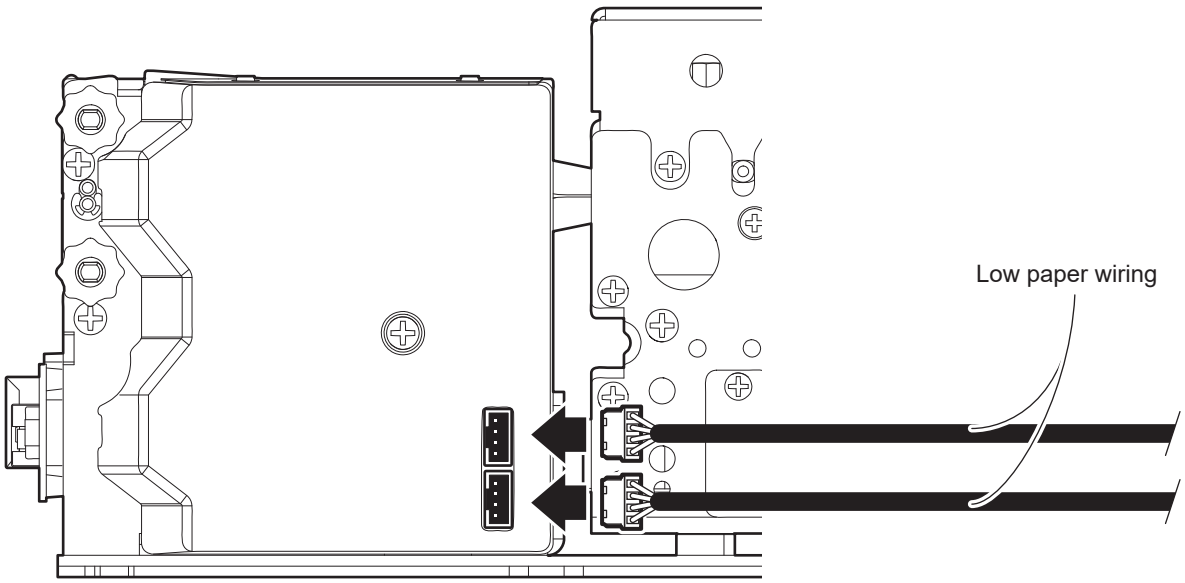
Connect the wiring coming from the low paper sensor board
at the connector shown in figure.

1



2

Using a screwdriver, remove the connector cap on the side of the dual feeder

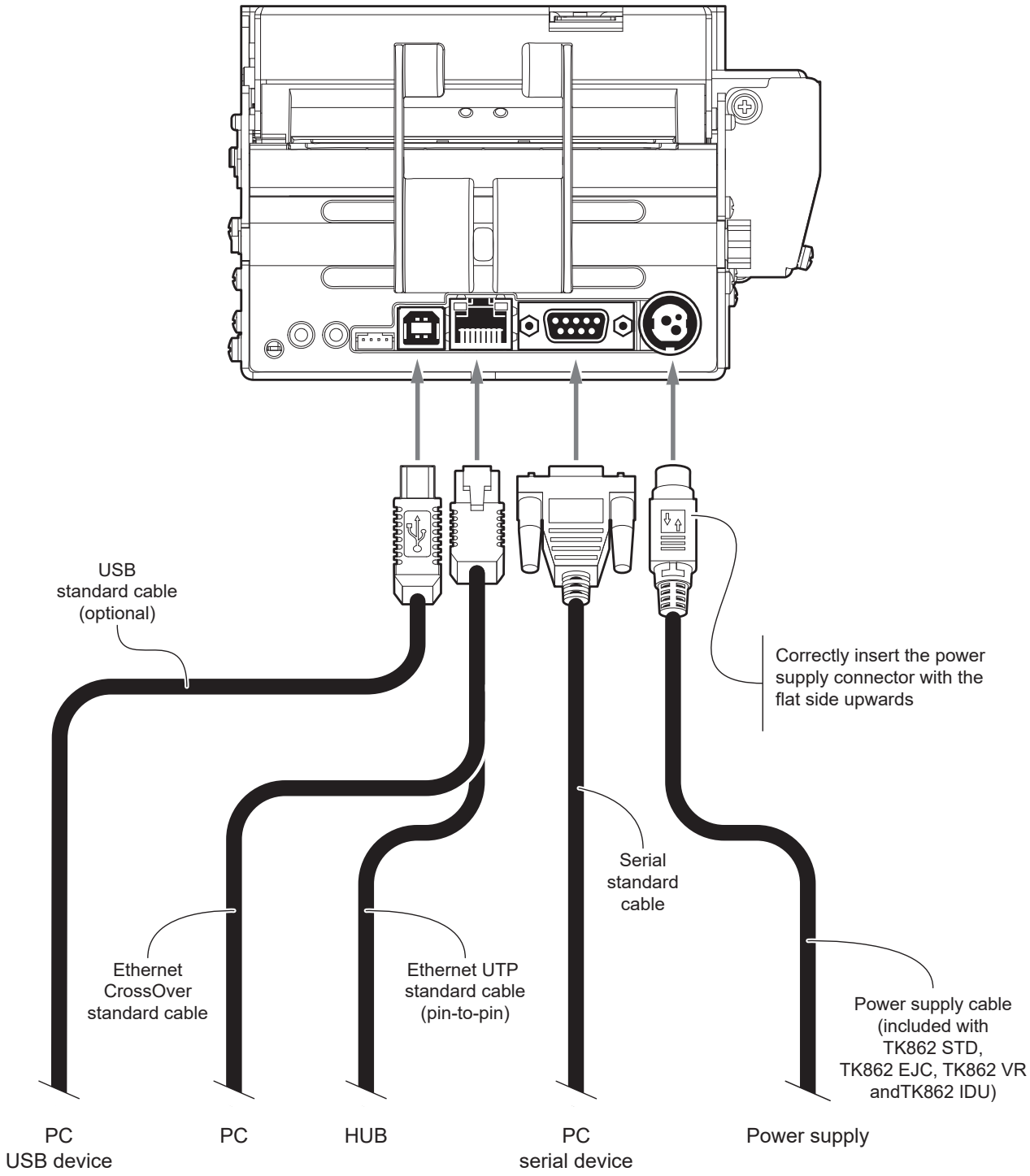


Connect the wiring coming from the low paper sensor board
to one the connectors shown in figure.

4.3 Connections

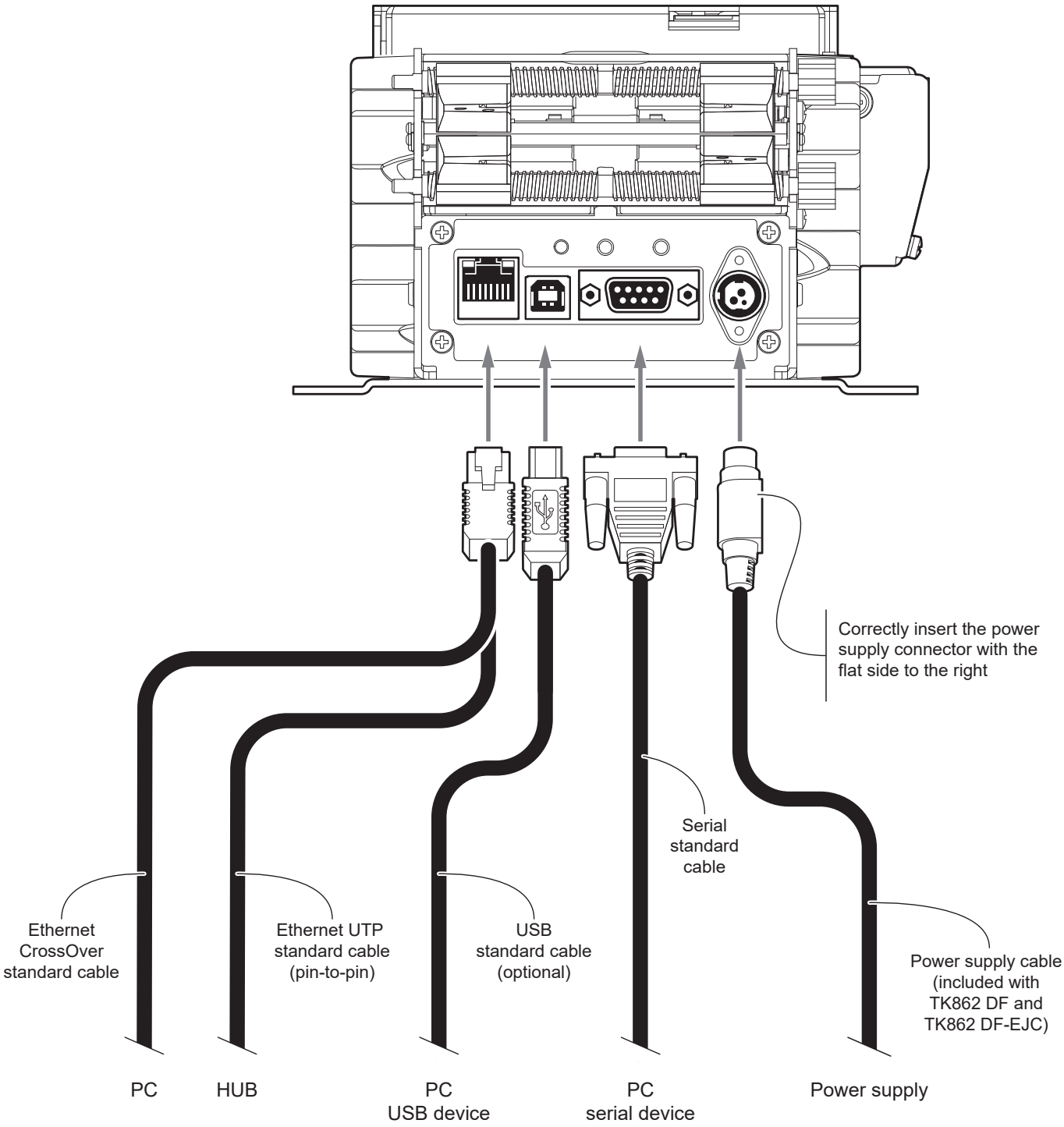
The following figure shows the possible connections for the device. When the RS232 and USB communication cables are connected to the device at the same time, communication takes place via the USB port.
For ease of reference, for some models is represented only the internal printer group.

KPM862 STD, KPM862 EJC, TK862 STD, TK862 EJC, TK862 VR, TK862 IDU



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

KPM862 DF, KPM862 DF-EJC, TK862 DF, TK862 DF-EJC



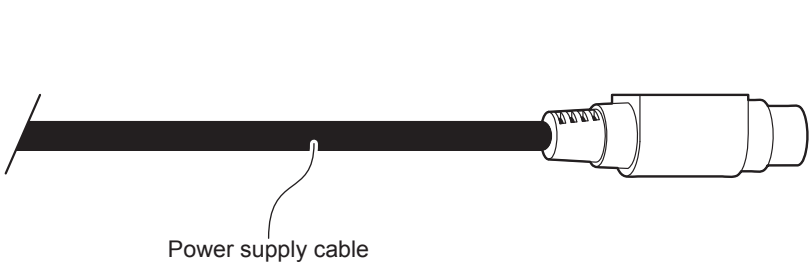
ATTENTION: In some using conditions, we recommend the installation of a ferrite core on the power supply cable.

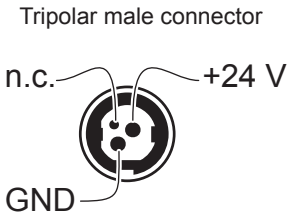
4.4 Pinout

POWER SUPPLY
Tripolar female connector

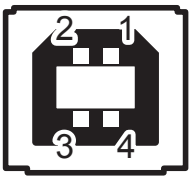
J20	1	GND
	2	+24 Vdc
	3	GND
	4	Frame GND

The following figure shows the connector pinout of power supply cable:



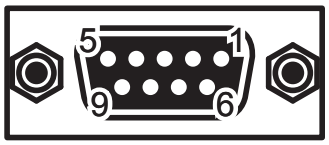


ATTENTION:
Respect power supply polarity.



USB INTERFACE
Female USB type B connector

J4	1	USBHS_VBUS (out)
	2	USBHS_D-
	3	USBHS_D+
	4	GND
	SH1	SHIELD
	SH2	SHIELD



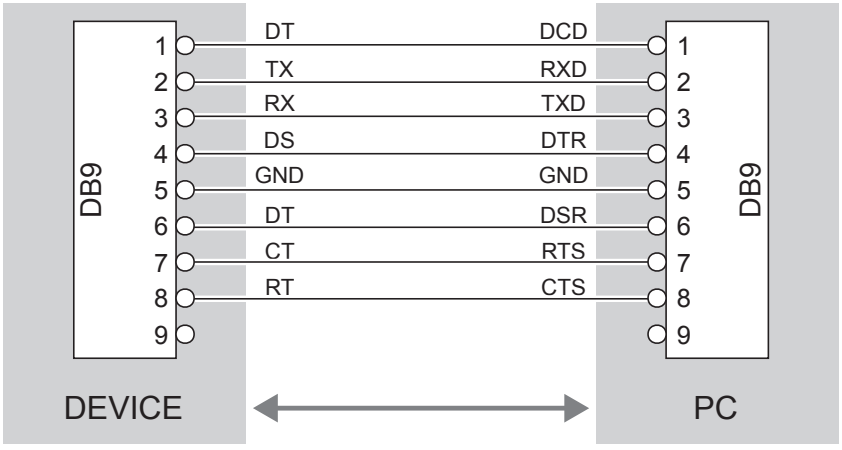
RS232 SERIAL INTERFACE

Female DB9 connector

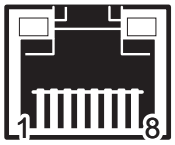
J3	1	DT	
	2	TX	During transmission, takes the values -VRS232 and + VRS232 depending on data
	3	RX	During reception, takes the values -VRS232 and +VRS232 depending on data
	4	DS	
	5	GND	
	6	DT	When +VRS232, device is power on
	7	CT	
	8	RT	When +VRS232, device is ready to receive data
	9	+5V	
	SH1	SHIELD	
	SH2	SHIELD	

Given the presence of the RS232 standard, logic value “0” corresponds to the voltage value +VRS232 (voltage value between +3Vdc and +15Vdc) and logic value “1” corresponds to the voltage value -VRS232 (voltage value between -3Vdc and -15Vdc.

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.



ETHERNET INTERFACE

Female RJ45 connector

J1	1	ETX+
	2	ETX-
	3	ERX+
	4	+V
	5	+V
	6	ERX-
	7	GND
	8	GND
	9	+3.3 V
	10	LED-LNK
	11	+3.3 V
	12	LED-LAN
	13	SH1
	14	SH2
	15	FIX1
	16	FIX2

The functionality of two LEDs are specified in following tables:

- For 10Base-T connection:

LED	FUNCTION
LED-LNK	Link (yellow color): the LED lights up when a connection is active.
LED-LAN	Rx/Tx: (green color): the LED lights up when occurs a data reception or transmission.

- For 10/100Base-TX connection:

LED	FUNCTION
LED-LNK	The LED light (yellow color) on when a connection is active and flashes when occurs a data reception or transmission.
LED-LAN	The LED light (green color) on when occurs a 100 Mbit connection and off when occurs a 10 Mbit connection.

The device automatically recognizes the type of connection (cross or pin-to-pin).

The pinout shown in table represents the input signals to component J1 before the isolation voltage transformer (through-hole pin).

4.5 Driver and SDK

The drivers for the following operating system are available in the website www.custom4u.it:

OPERATING SYSTEM	DESCRIPTION	INSTALLATION PROCEDURE
Windows	Driver for 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 for Windows VISTA (32/64 bit)	
	Driver for Windows 7 (32/64 bit)	
	Driver for Windows 8 (32/64 bit)	
	Driver for Windows 8.1 (32/64 bit)	
	Driver for Windows 10 (32/64 bit)	
	Self-installing driver for Virtual COM (32/64 bit) (see paragraph 6.5)	
Linux	32/64 bit	Follow the instruction get back on the “Readme.txt” file. You can find it in the software package downloaded in advance.
Android	SDK for Custom Android API	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 SDK.

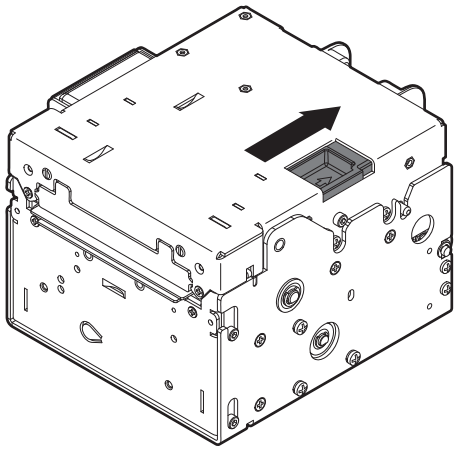
5 OPERATION

5.1 Opening device cover

For ease of reference, for some models is represented only the standard model of internal printer group without dual feeder.

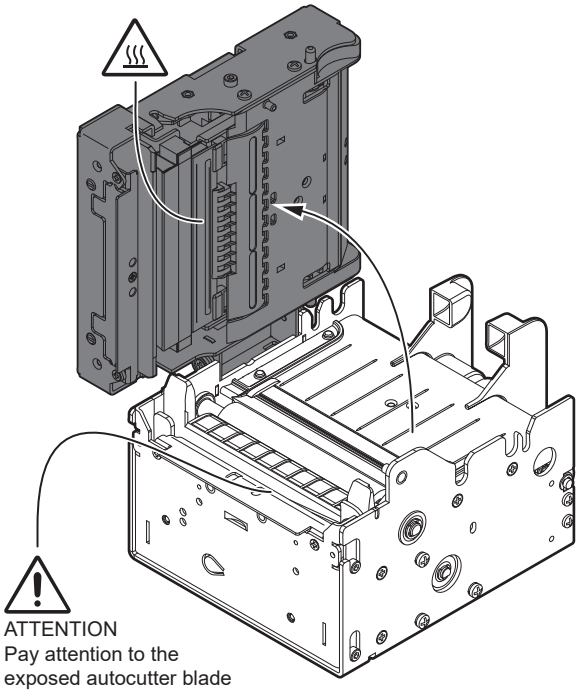
KPM862 STD, KPM862 EJC, KPM862 DF, KPM862 DF-EJC

1



Push the opening lever
in the direction shown in figure.

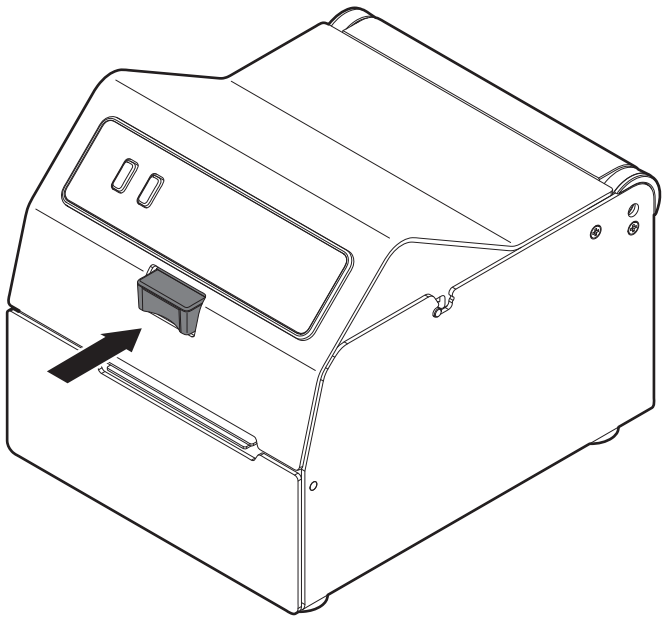
2



Open the device upper cover.

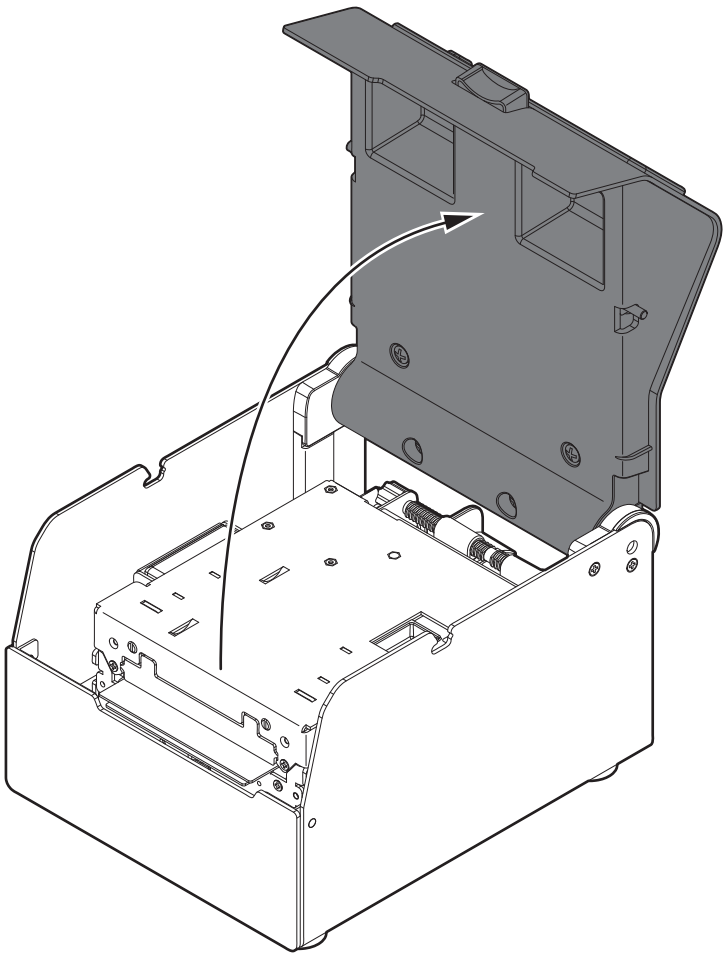
TK862 STD, TK862 EJC, TK862 DF, TK862 DF-EJC, TK862 VR, TK862 IDU

1



Push the opening lever
in the direction shown in figure.

2

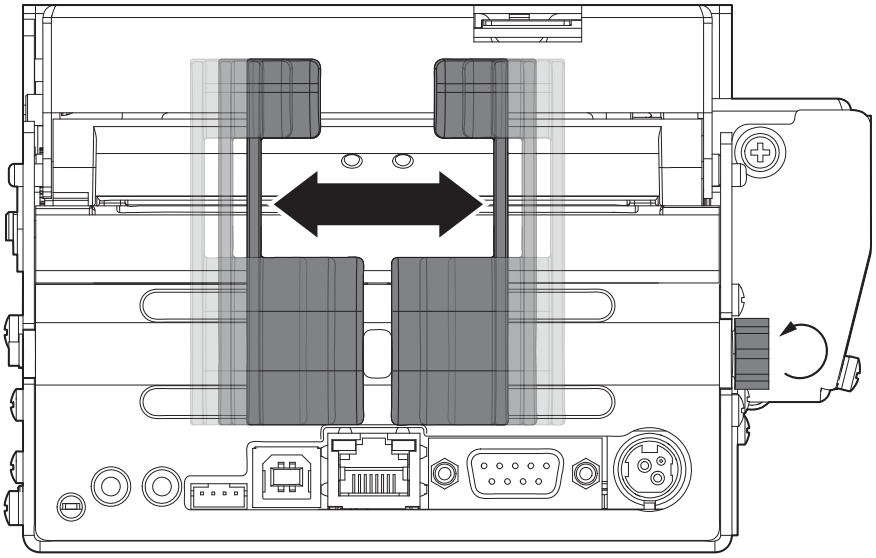


Open the device upper cover.

5.2 Adjusting paper width

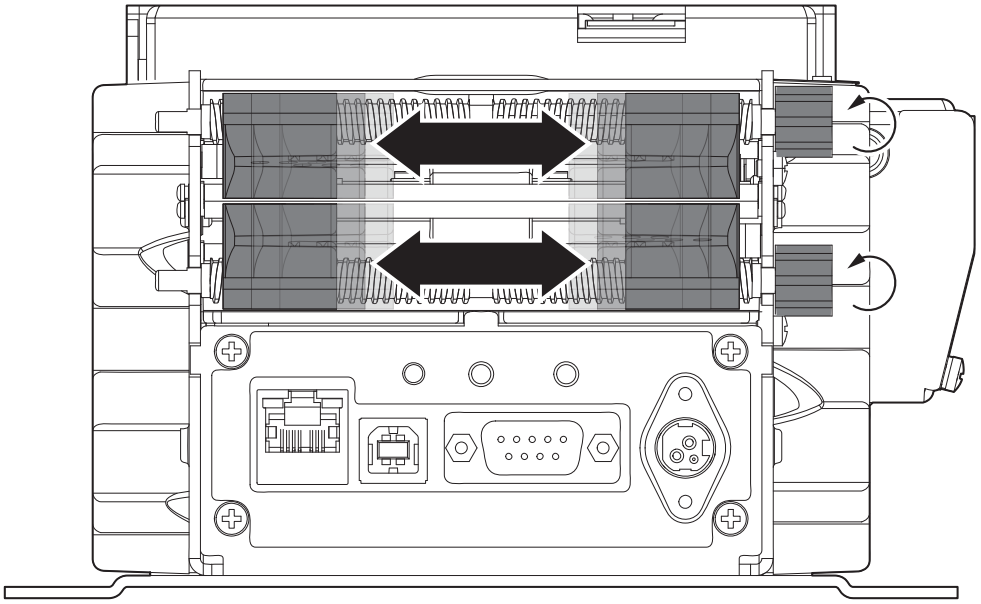
KPM862 STD, KPM862 EJC

Paper width may be adjusted from 40 mm to 86 mm turning the adjustment knob for paper input.



KPM862 DF, KPM862 DF-EJC, TK862 DF, TK862 DF-EJC

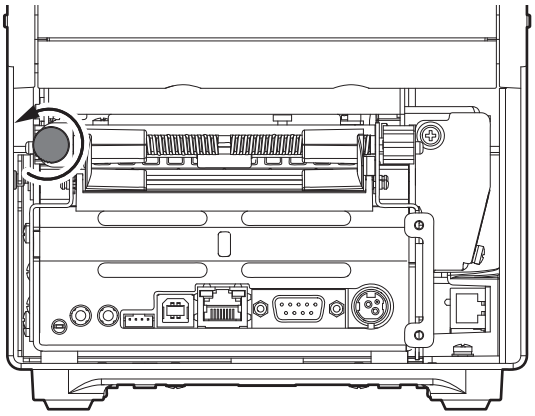
Paper width may be adjusted from 40 mm to 86 mm turning the adjustment knobs for dual feeder paper input.



TK862 STD, TK862 EJC, TK862 VR, TK862 IDU
KPM862 models with optional kit RFID code 918LK010100000

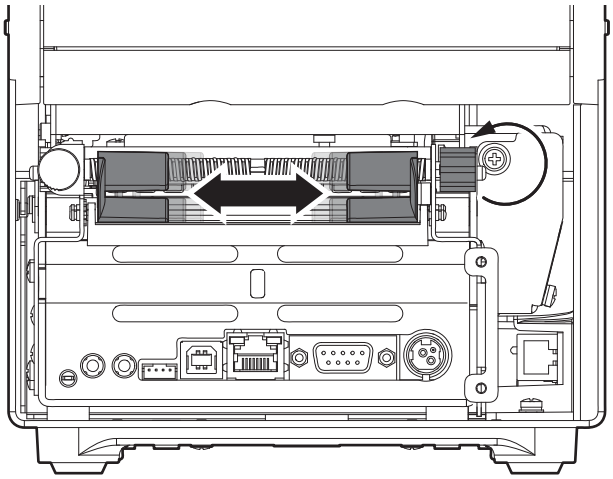
Paper width may be adjusted from 40 mm to 86 mm turning the adjustment knob for paper input.

1



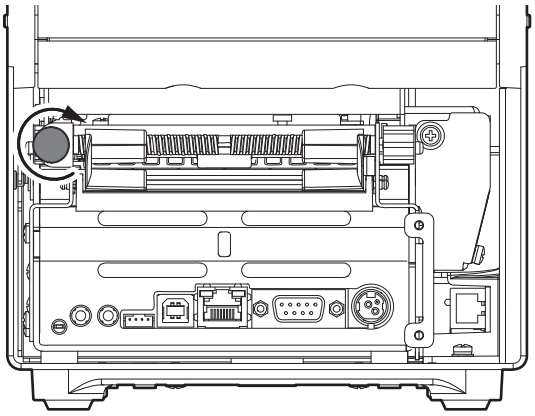
Loosen the knob shown in figure.

2



Adjust the paper width.

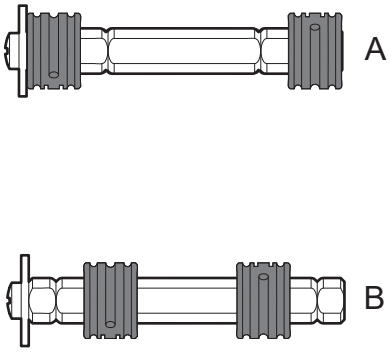
3



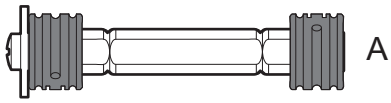
Tighten the knob.

If you use the device with the paper roll holder code 974LU010000004 provided as an accessory (see chapter 10), adjust the two bushing on the roll holder pin by placing them on the notches on the spindle according to the paper width and the position of the bracket frame as follows (see also the figure):

- For 82.5 mm paper width, place both the bushings on the external notches (advised position) (position A) or on the internal notches (position B).
- For 54 mm paper width, place both the bushings on the external notches (position A).



82.5 mm paper width



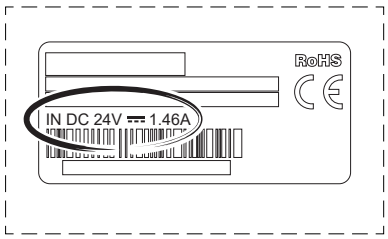
54 mm paper width

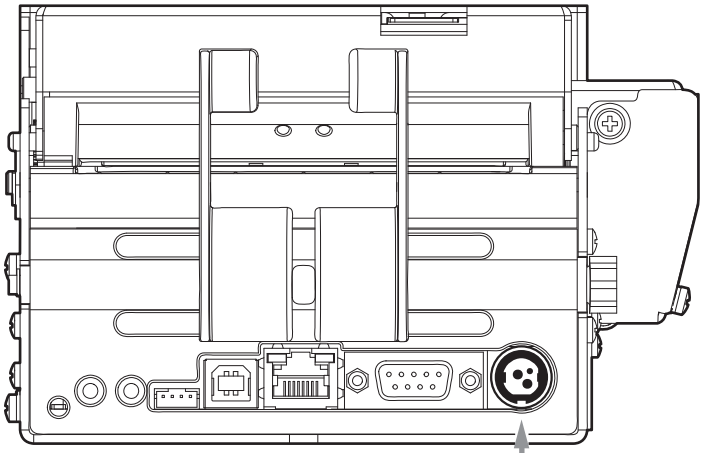
5.3 Switch the device on/off

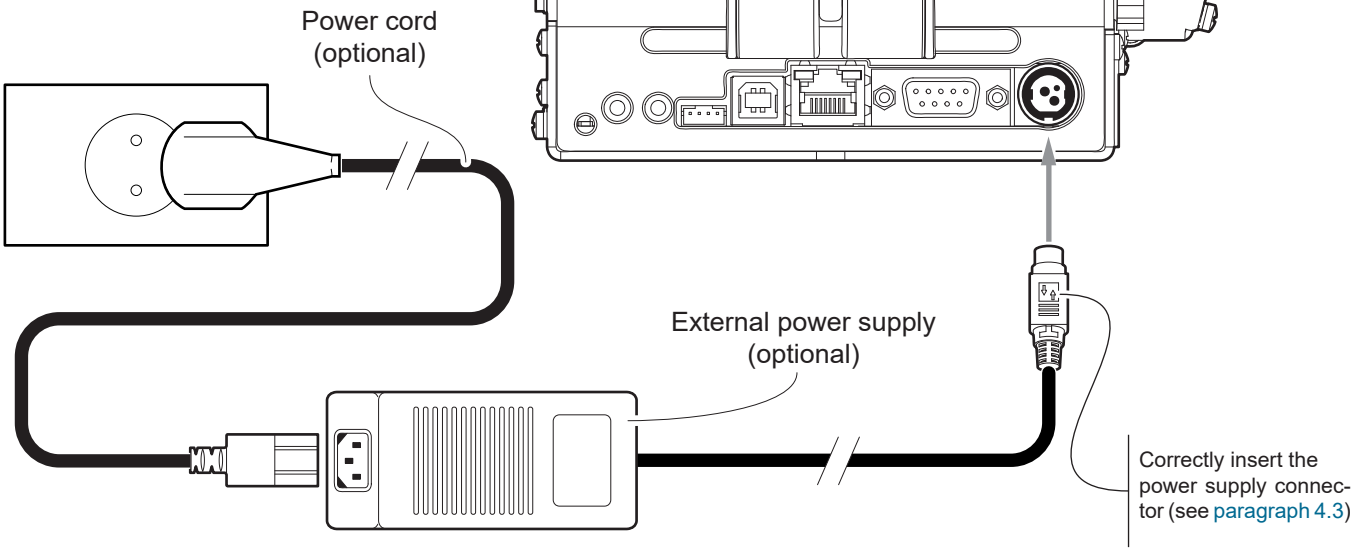
For ease of reference, for some models is represented only the standard model of internal printer group without dual feeder.

KPM862 STD, KPM862 EJC, KPM862 DF, KPM862 DF-EJC

1

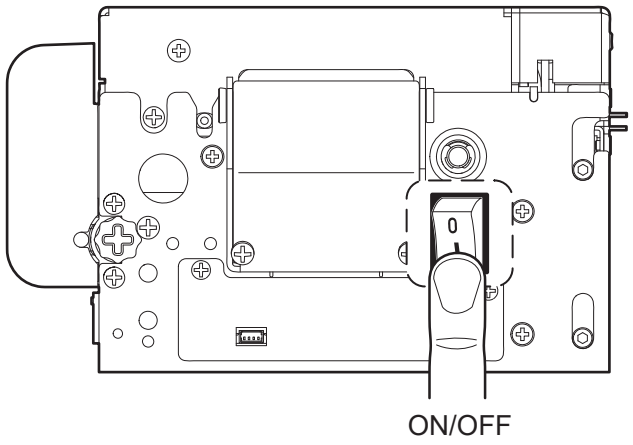


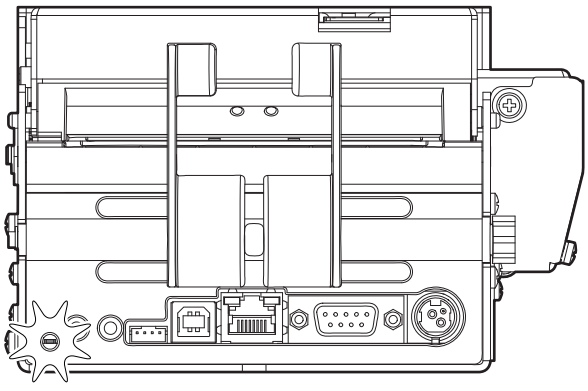




Connect the power adapter (optional) to the device and the mains outlet.
Use the type of electrical power supply indicated on the label.

2

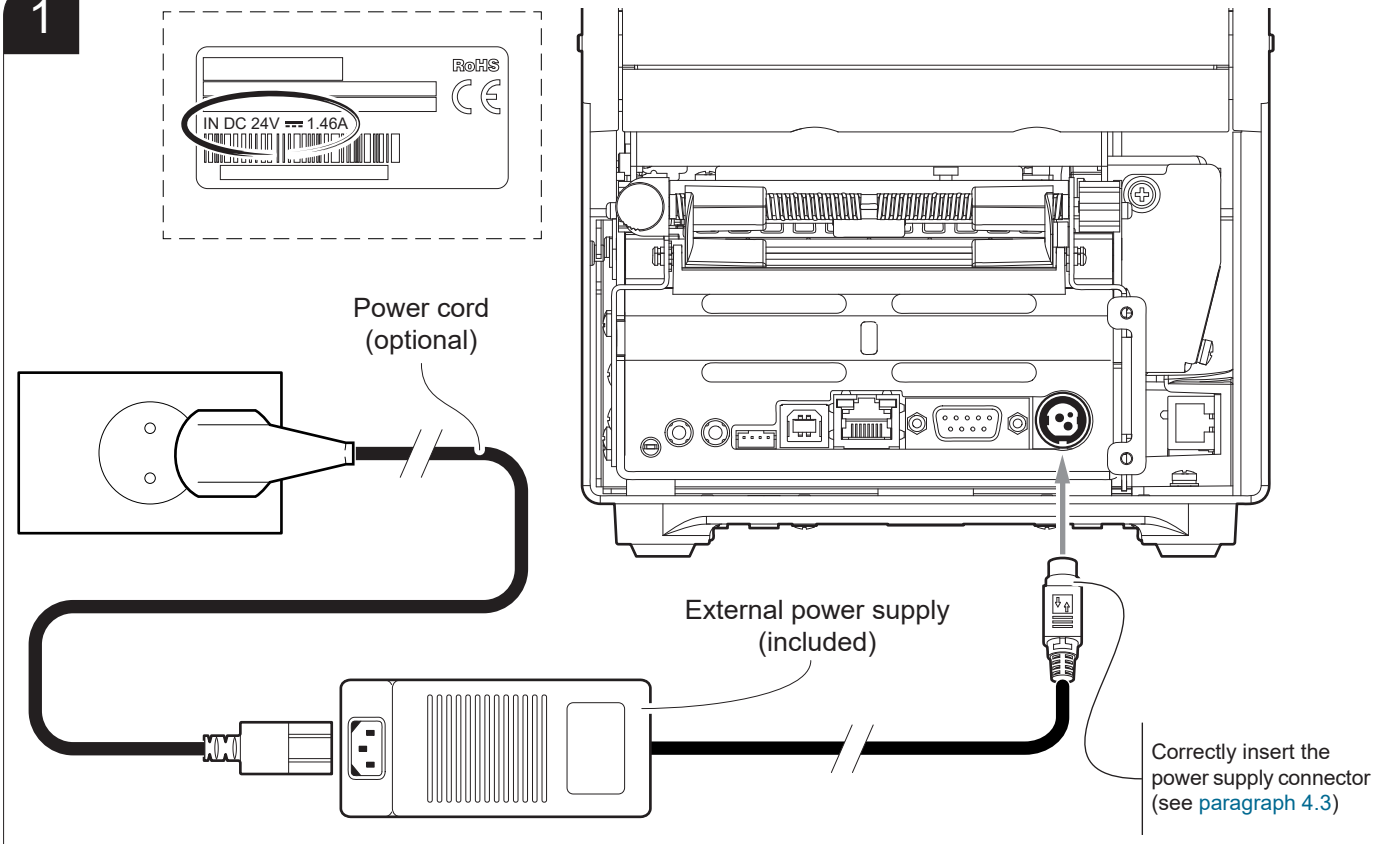




Switch the device on pressing ON/OFF key, the status LED is switched on and the device is ready.
Switch the device off pressing ON/OFF key.

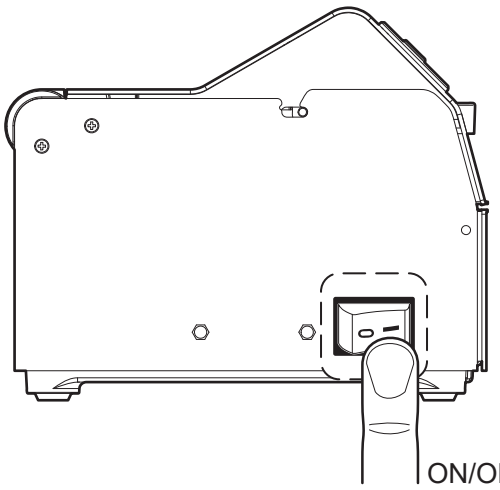
TK862 STD, TK862 EJC, TK862 VR, TK862 DF, TK862 DF-EJC, TK862 IDU

1



Connect the power adapter to the device and the mains outlet.
Use the type of electrical power supply indicated on the label.

2



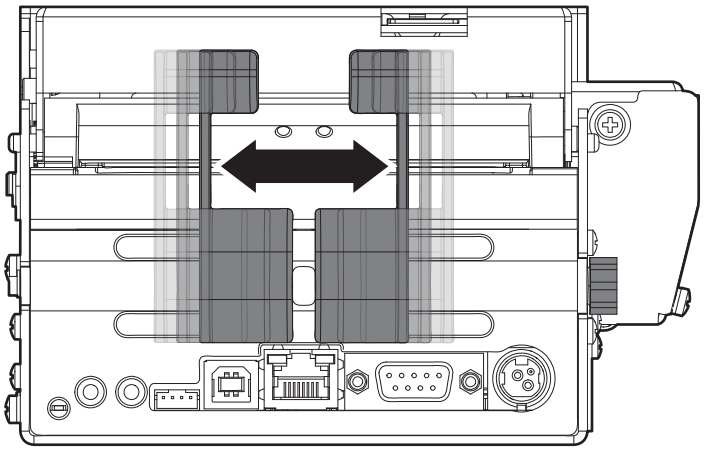
Switch the device on pressing ON/OFF key, the display is switched on and the device is ready.
Switch the device off pressing ON/OFF key.

5.4 Loading the paper roll

To change the paper roll proceed as follows. At every paper change, check inside the device to locate and remove any scraps of paper.

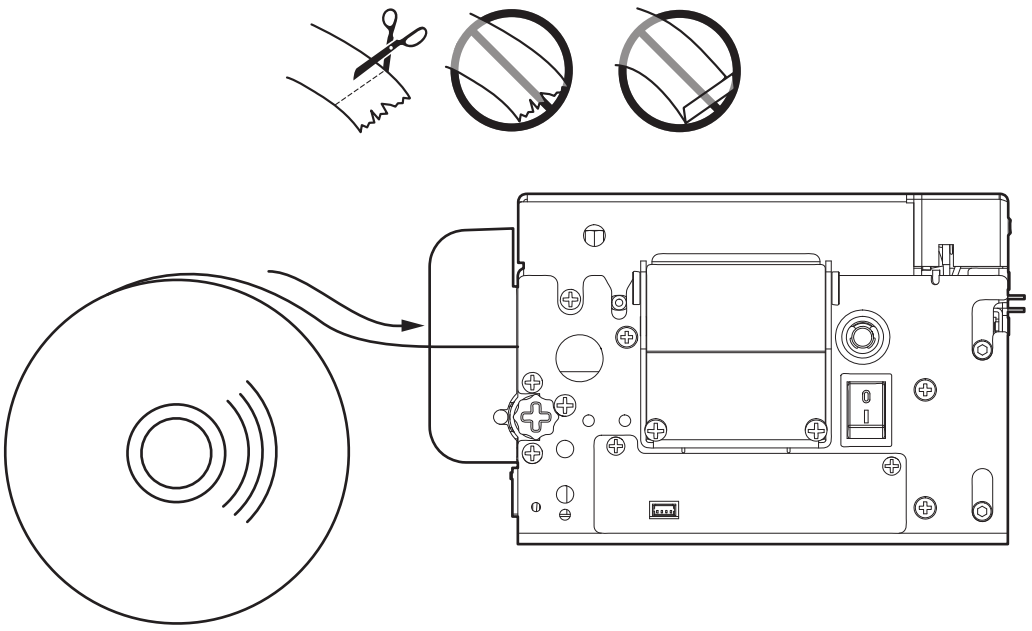
KPM862 STD, KPM862 EJC

1



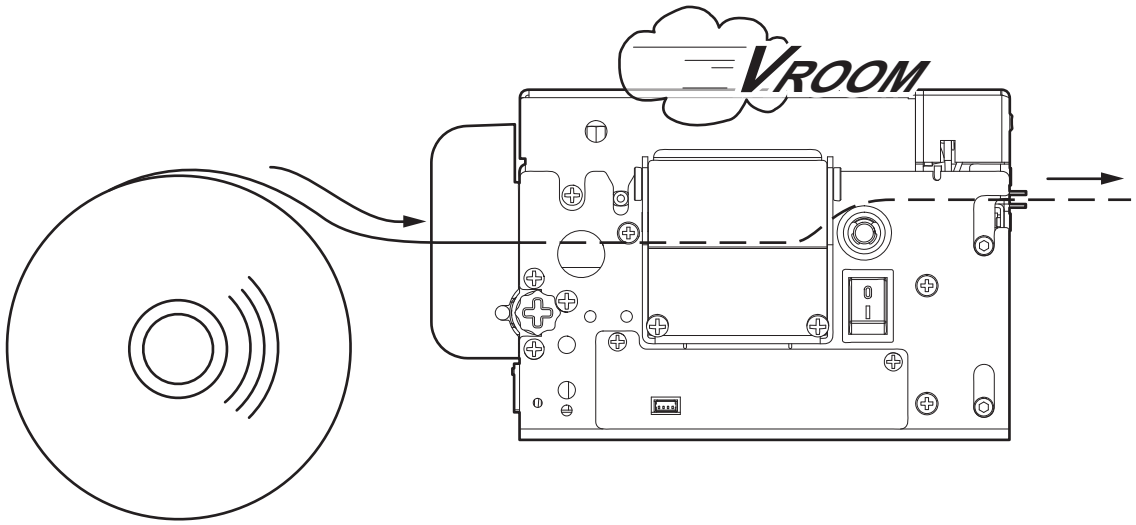
Adjust the paper width
(see paragraph 5.2).

2



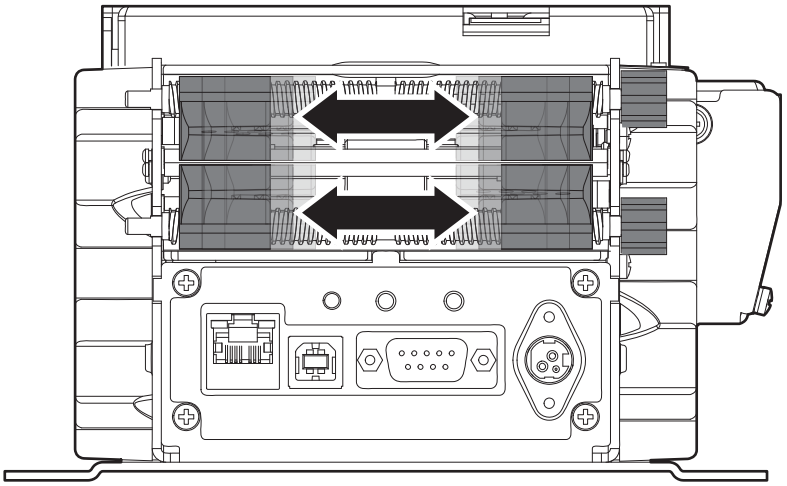
Insert the paper into the input mouth so that it unrolls correctly.
Be sure that the paper is correctly positioned into paper guides.

3



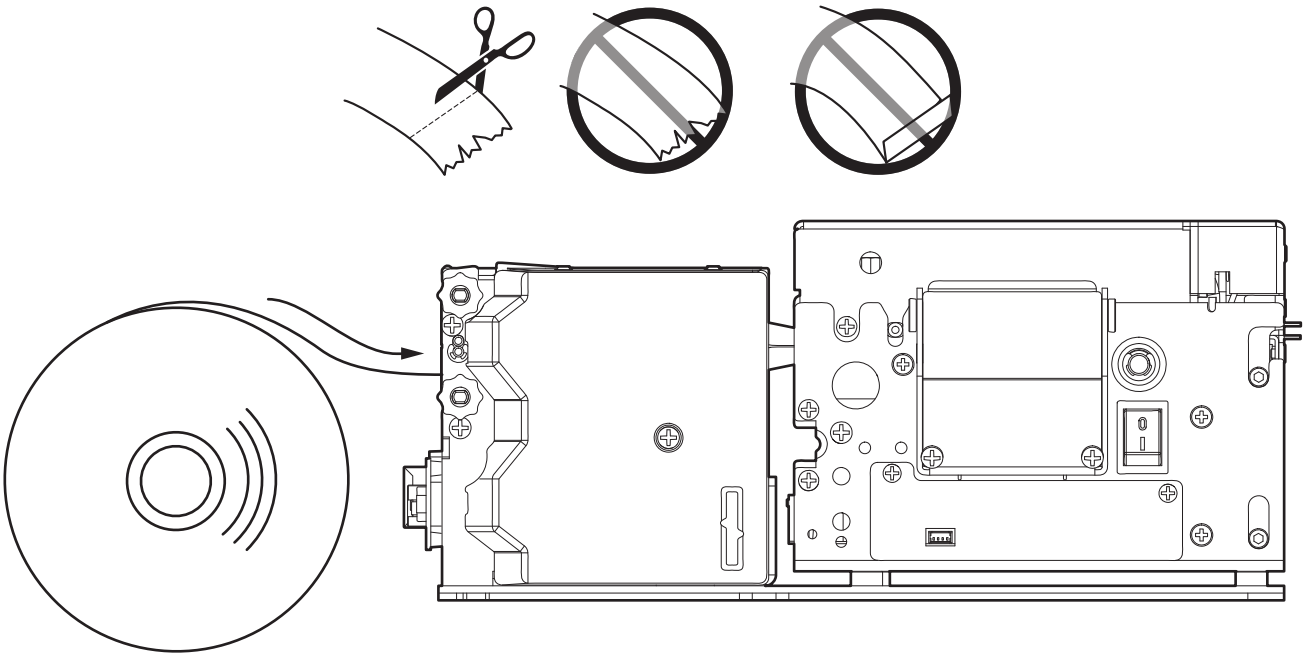
Wait until the paper is
automatically loaded.

1



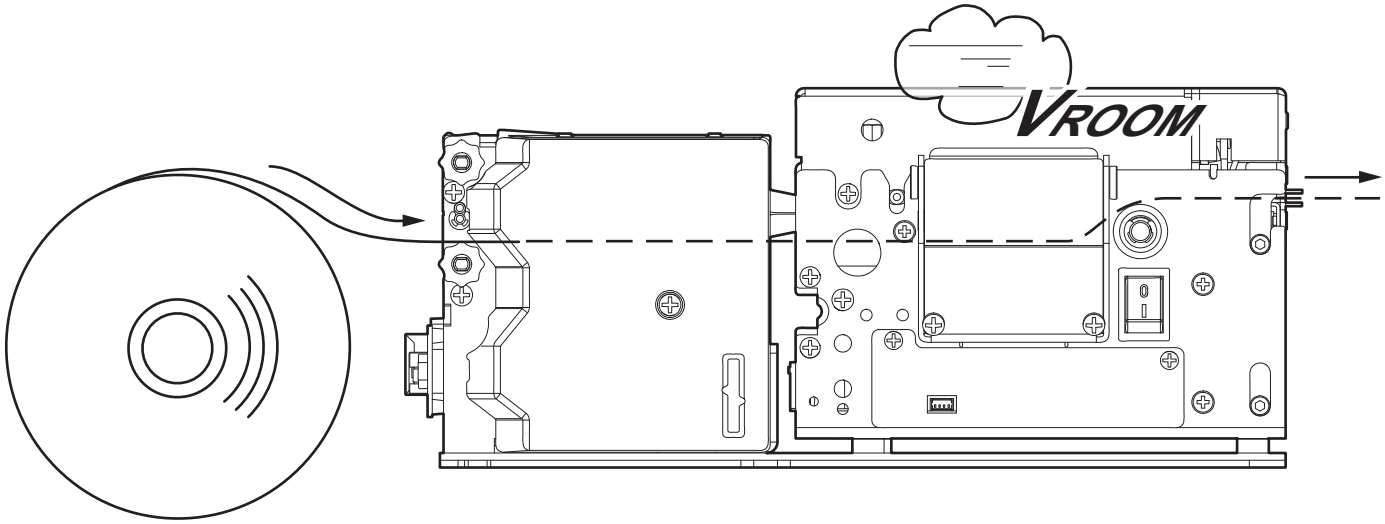
Adjust the paper width
(see paragraph 5.2).

2



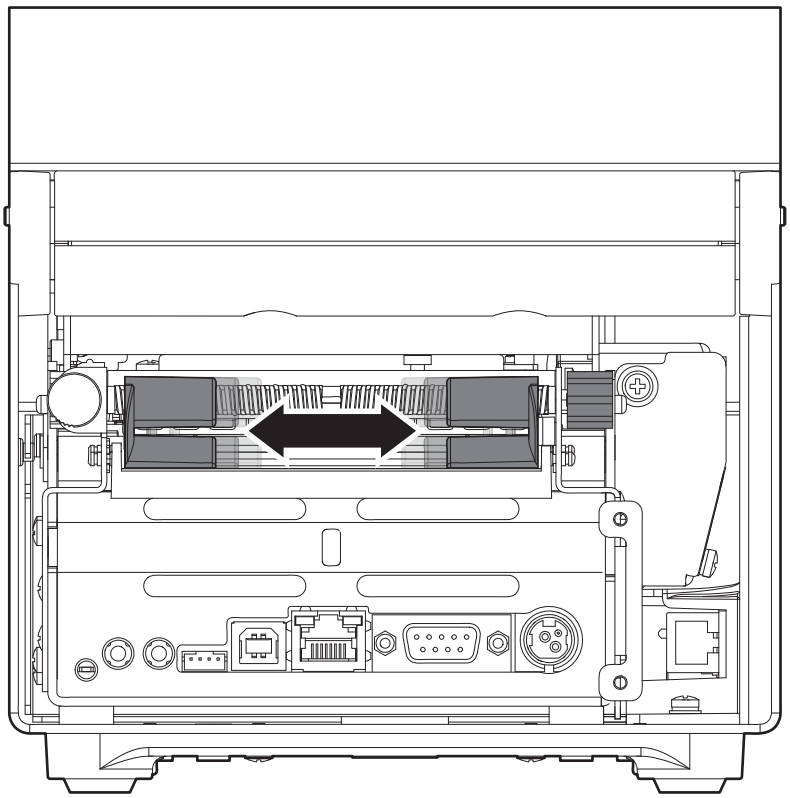
Insert the paper into one of the input feeder so that it unrolls correctly.
Be sure that the paper is correctly positioned into paper guides.

3



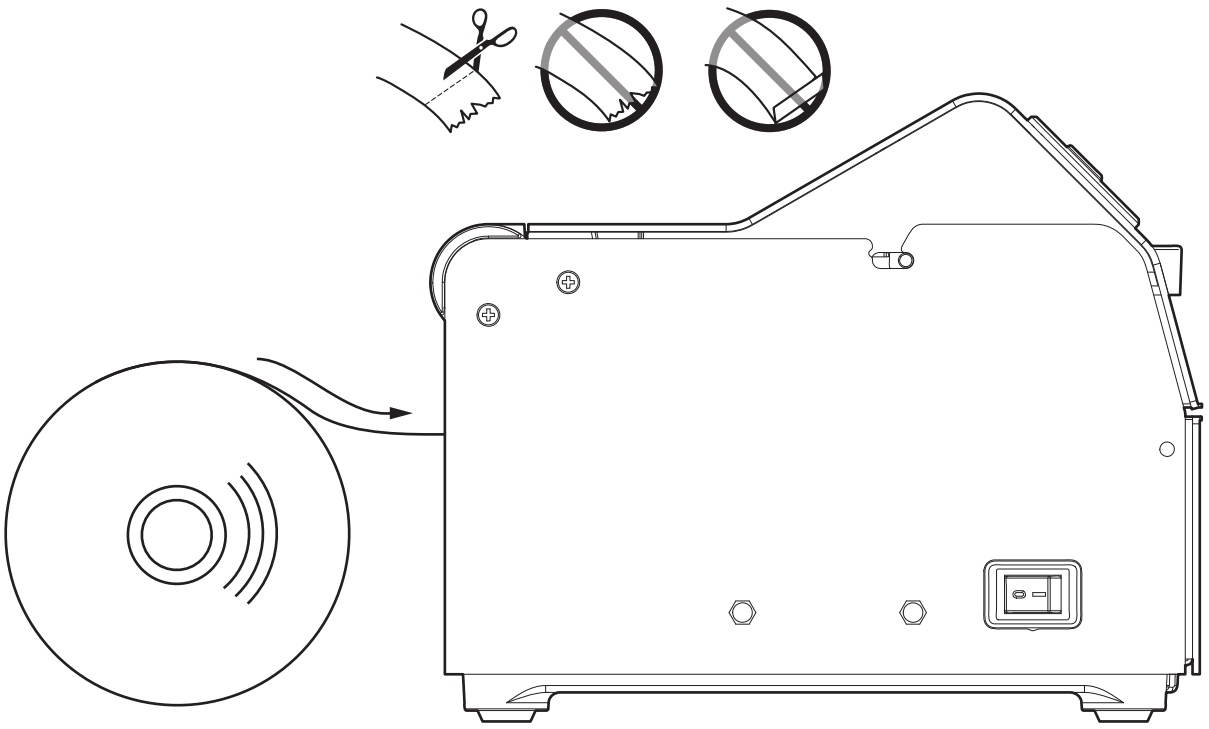
Wait until the paper is
automatically loaded.

1



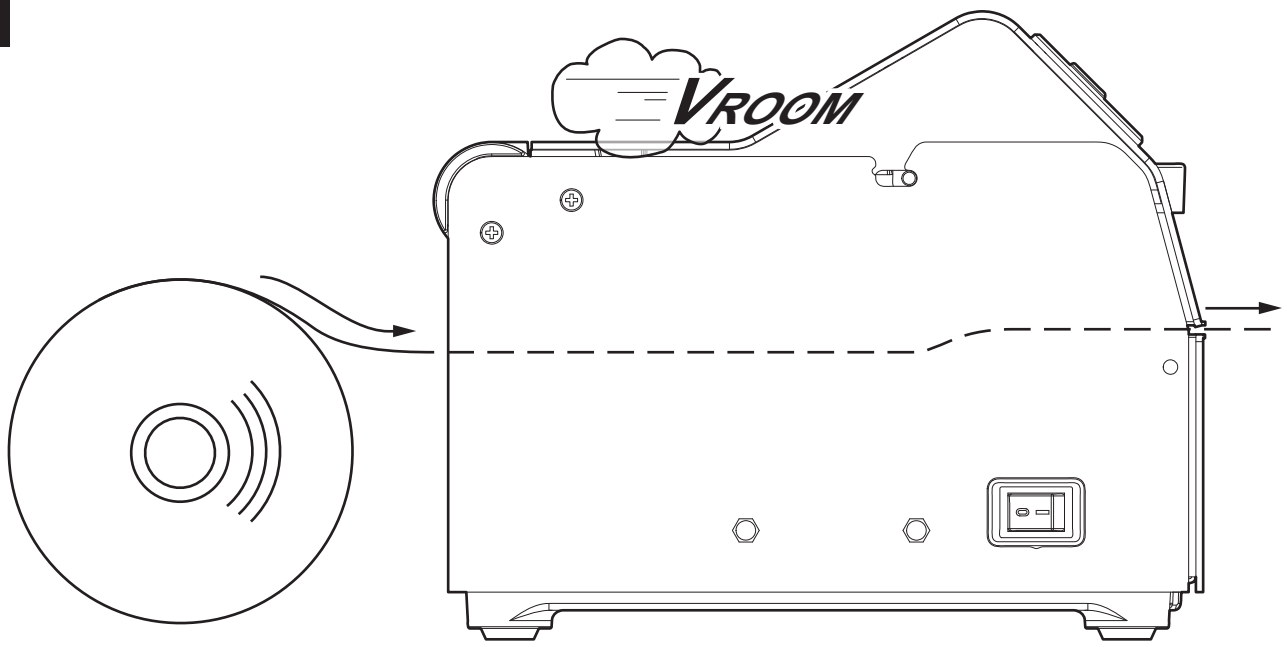
Adjust the paper width
(see paragraph 5.2).

2



Insert the paper into the input mouth so that it unrolls correctly.
Be sure that the paper is correctly positioned into paper guides.

3



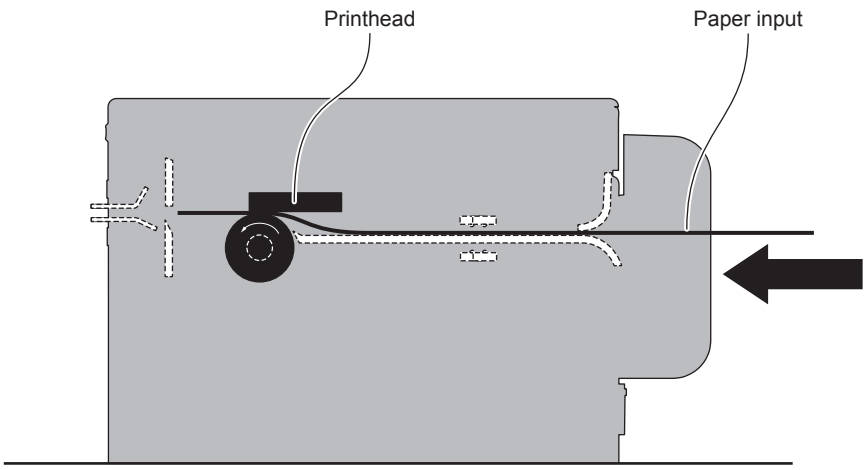
Wait until the paper is
automatically loaded.

5.5 Issuing ticket

The device allows you to choose between different operating modes for the issuance of printed tickets.
The operating modes shown in following images, depend on the settings of configuration parameters and commands sent to the device.
For ease of reference, for some models is represented only the internal printer group without dual feeder.

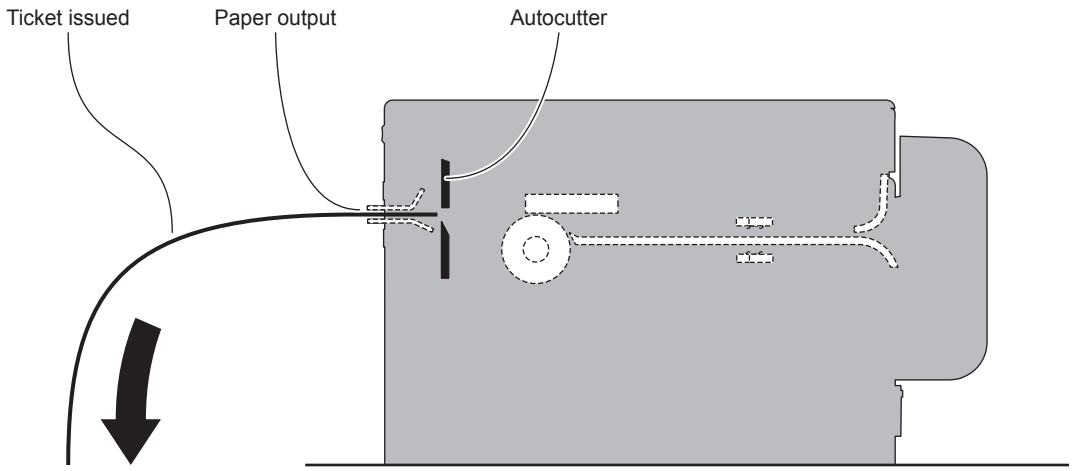
Standard mode

1



The device starts the ticket printing.

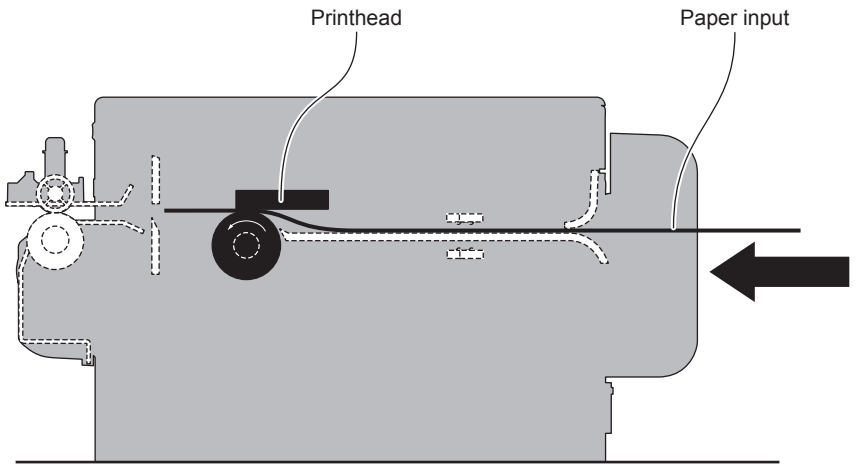
2



When printing ends, the device cuts the ticket printed that is issued from the paper output.

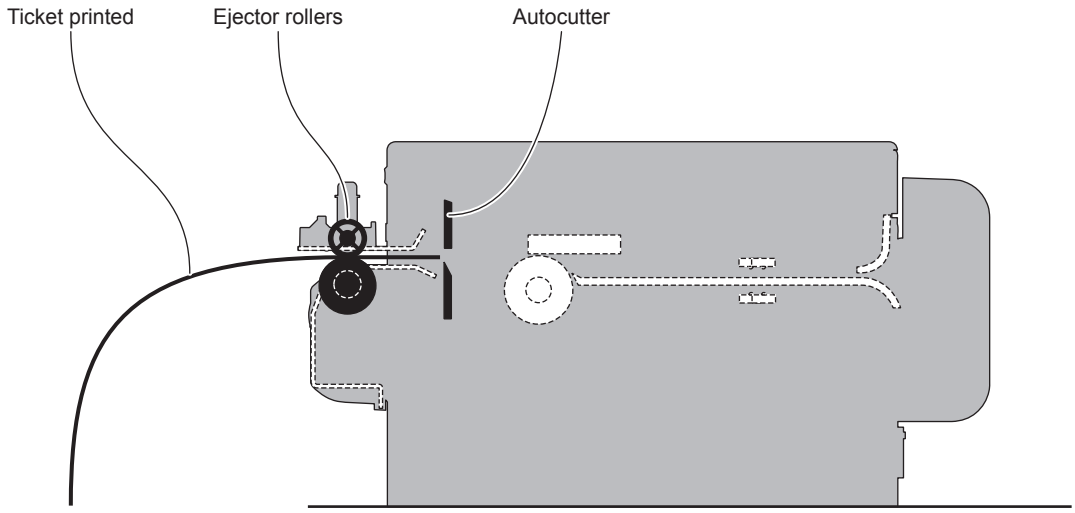
“PRESENT” mode (KPM862 EJC, KPM862 DF-EJC, TK862 EJC, TK862 DF-EJC)

1



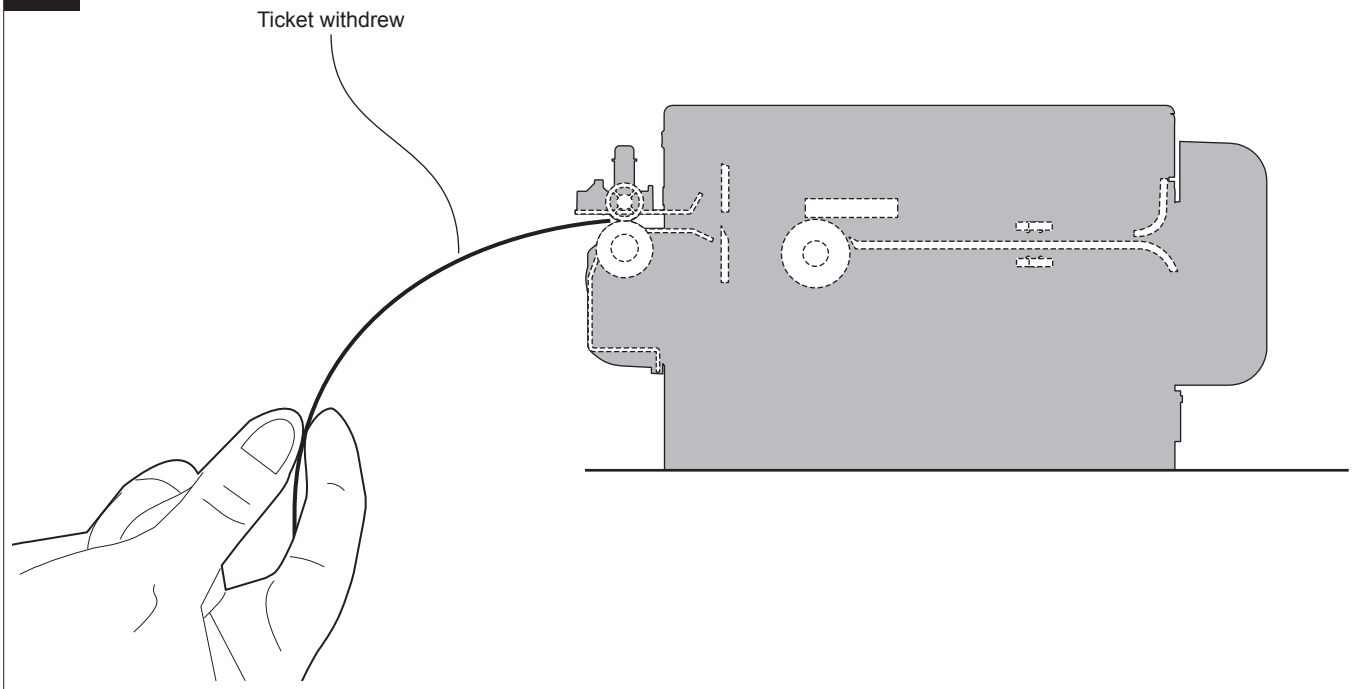
The device starts the ticket printing.

2



When printing ends, the device cuts the ticket printed
and hold it between the ejector rollers.

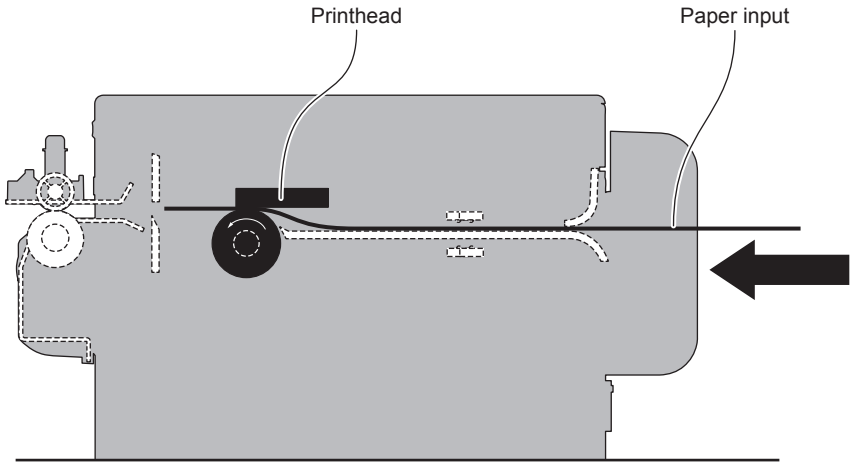
3



The user withdraws the ticket printed.

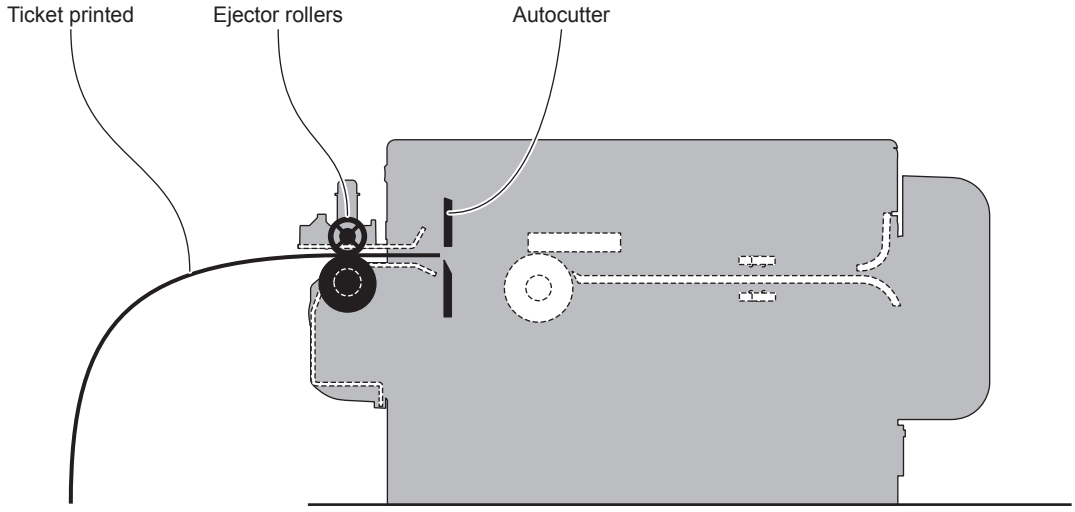
“EJECT” mode (KPM862 EJC, KPM862 DF-EJC, TK862 EJC, TK862 DF-EJC)

1



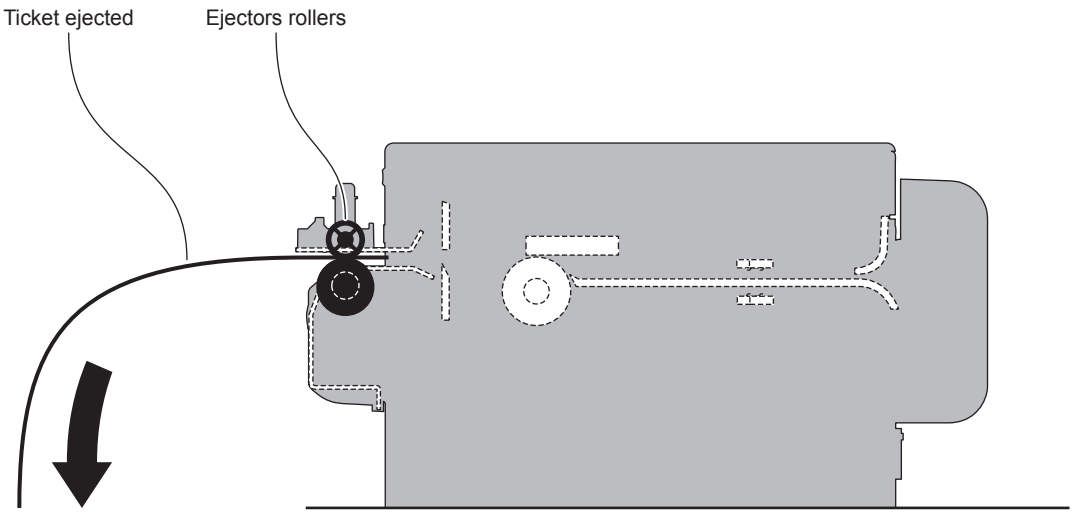
The device starts the ticket printing.

2



When printing ends, the device cuts the ticket printed
and hold it between the ejector rollers.

3



The device ejects the ticket printed.

NOTE:
To enable this issuing method, you need to correctly set the operation mode of the ejector device with the command 0x1D 0x65 0x31 (see the device commands manual).

5.6 VeriPrint® system

TK862 VR

VeriPrint® is a system designed by CUSTOM S.p.A. thanks to which the functions of an image scanner and those of a thermal printing head can be integrated in a single component to be included in systems and terminals for POS, betting/ lottery and ticketing application automation. Solutions and benefits with VeriPrint®:

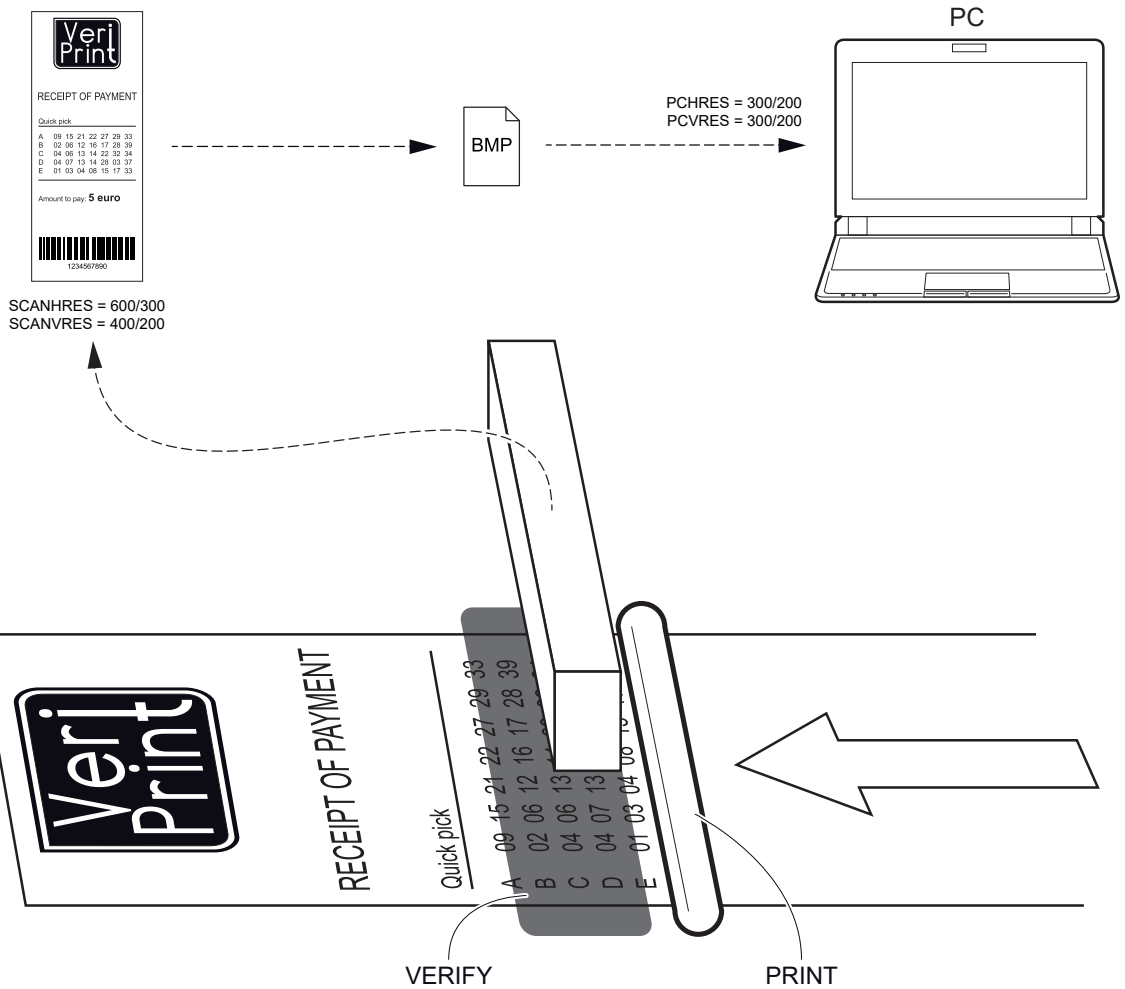
- Automatic scan of the images of all tickets.
- Protection against manipulated tickets.
- In case of doubts on the originality of a ticket presented, possibility of retrieval of the original image.
- Maximum safety, resulting in claim and cost reductions.

World patent for a system allowing to print, scan and check the data sent to the printing process.

How VeriPrint® works

While printing a receipt, an integrated scanning element captures the image of the receipt automatically and reads any barcode printed (for readable formats see paragraph 9.1). The image can be sent to a remote host in real time through commands (see the device commands manual). The captured image represents the actual and “true” look of the receipt as the customer receives it from the operator or a self-service kiosk.

The operating parameters for the scanner unit and VeriPrint® system can be set by using the “PrinterSet” software tool available on www.custom4u.it.



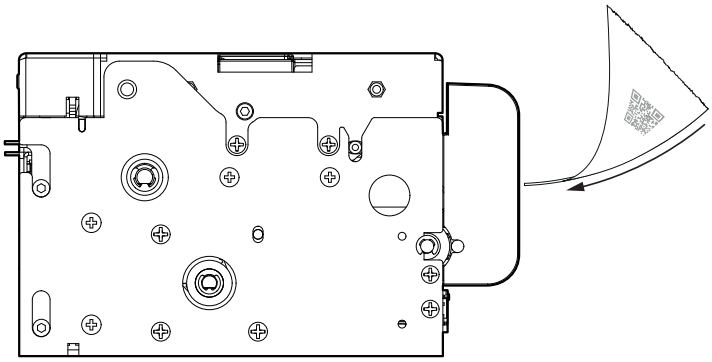
5.7 Stock control

Stock control is a system that allows you to check the print media used during printing and to guarantee protection against the risk of manipulated tickets.

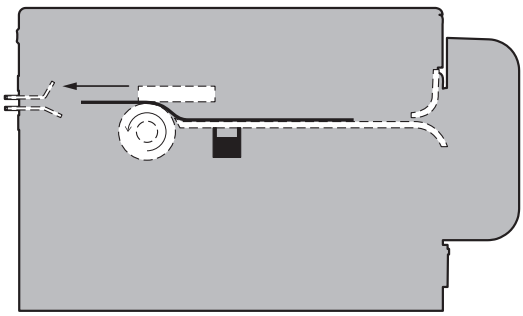
How stock control works

When handling the paper, the sensor placed inside the device automatically reads the pre-printed barcode on the back of the ticket to verify its originality. The application can verify its veracity and, in case of validation, the device proceeds with the printing of the ticket.

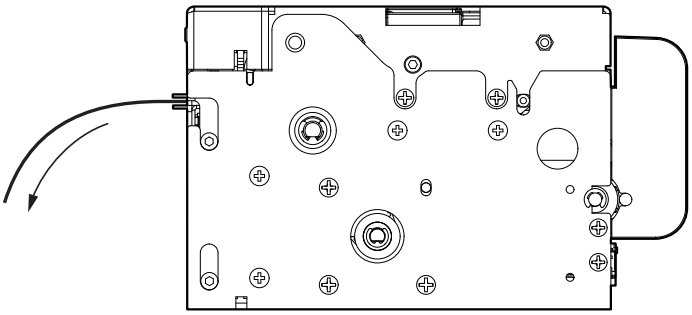
In order to use the stock control it is necessary to purchase a specific license. Contact technical assistance or your dealer.



STEP 1:
Pre-printed barcode
on the back (1D or 2D)



STEP 2:
Data acquisition
and validation



STEP 3:
If validation is OK then ticket printi

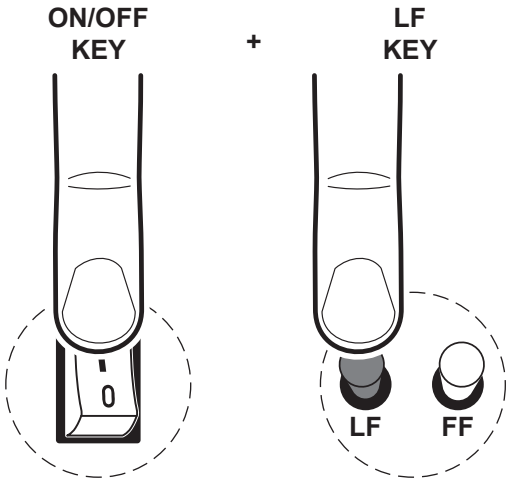
6 CONFIGURATION

6.1 Configuration by keys

To enter the configuration mode and print a setup report with the operating parameters of the device, proceed as follows.
For ease of reference, for some models is represented only the standard model of internal printer group without dual feeder.

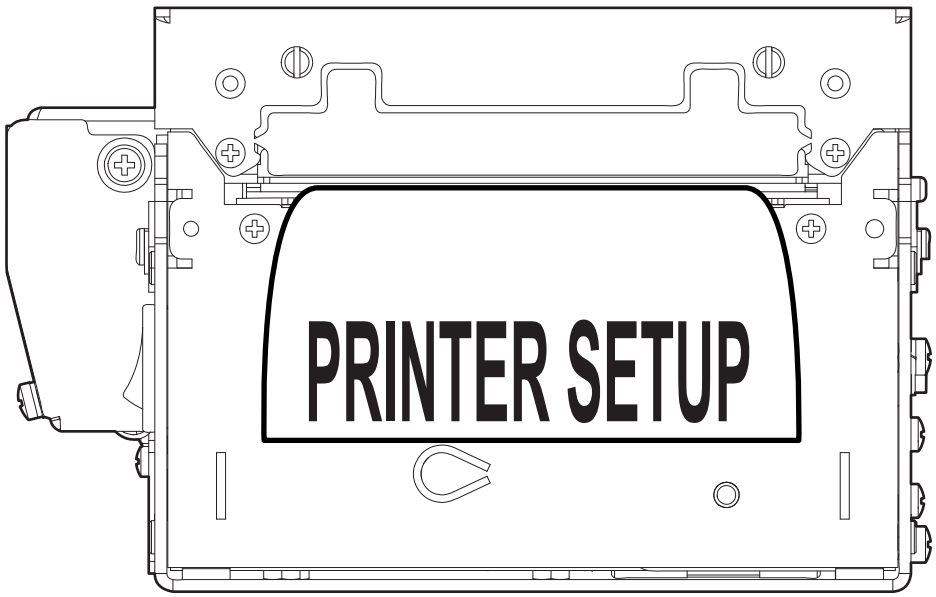
KPM862 STD, KPM862 EJC, KPM862 DF, KPM862 DF-EJC

1



While pressing the LF key,
switch on the device by pressing the ON/OFF key.

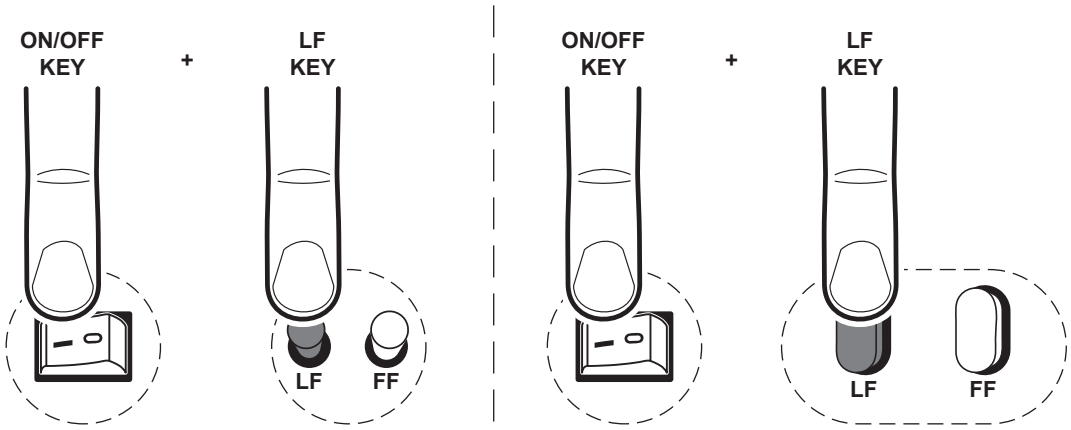
2



The device prints the report with the settings parameters.
Follow the instruction printed on the paper to proceed with configuration procedure.

TK862 STD, TK862 EJC, TK862 DF, TK862 DF-EJC, TK862 VR, TK862 IDU

1

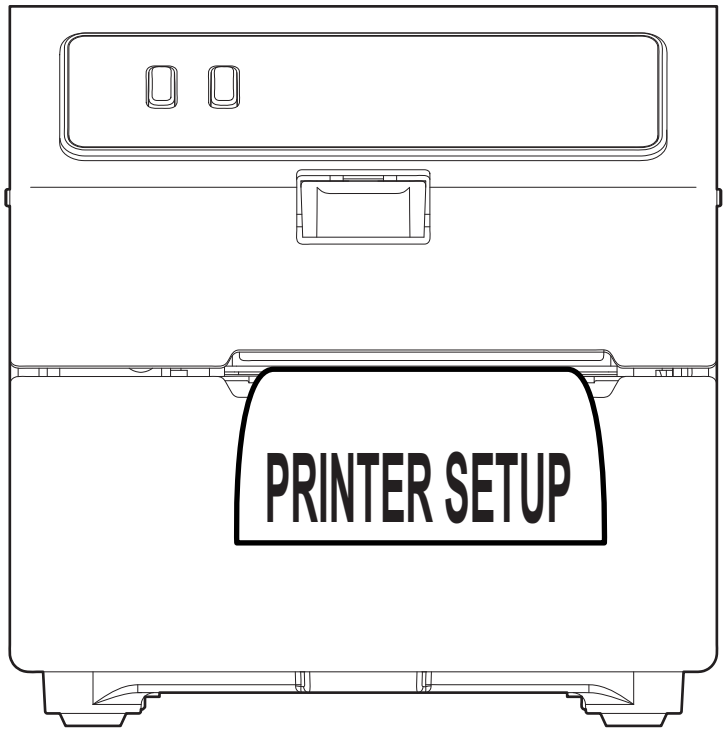


rear keys

front keys

While pressing the LF key,
switch on the device by pressing the ON/OFF key.

2



The device prints the report with the settings parameters.
Follow the instruction shown on display to proceed with configuration procedure.

The following figures shows the device setup reports. The shown values for parameters are sample values; for a detailed description of the device operating parameters see the following paragraphs.

DEVICE NAME AND FIRMWARE MODULES RELEASE

PRINTING HEAD STATUS

DEVICE STATUS

PARAMETERS FOR DEVICE CONFIGURATION

KEYS FUNCTIONS

<device name>
SCODE. <code> - rel 1.00
FCODE. <code> - rel 1.00
DCODE. <code> - rel 1.00
S/N: <number>

PRINTER SETTINGS

1 •••••••• 640

PRINTHEAD WORKING GOOD!

PRINTER TYPE ..... <device model>
RFID Module ..... <RFID>
RFID Module Release ..... <RFID rel.>
PRINTING HEAD TYPE ..... <head model>
INTERFACE ..... USB
PROGRAM MEMORY TEST..... OK
DYNAMIC RAM TEST..... OK
CUTTER TEST..... OK
HEAD VOLTAGE [V] = 24.17
HEAD TEMPERATURE [°C] = 24
POWER ON COUNTER = 10
PAPER PRINTED [cm] = 160
CUT COUNTER = 3

Printer Emulation ..... : **SERVICE**
RS232 Baud Rate ..... : **115200 bps**
RS232 Data Length..... : **8 bits/chr**
RS232 Parity ..... : **None**
RS232 Handshaking ..... : **Hardware**
Print Mode ..... : **Normal**
Busy Condition ..... : **RxFull**
Autofeed ..... : **CR Disabled**
Chars / Inch ..... : **A=15 B=20 cpi**
Font Type..... : **International**
ATB Print Quality ..... : **High Speed**
Print Width..... : **80 mm**
Paper End Management ..... : **Print All**
RFID Module Baud Rate ..... : **115200 bps**
Paper Threshold ..... : **40%**
Notch/B.Mark Pos. F1 ..... : **Bottom**
Notch/B.Mark Pos. F2 ..... : **Bottom**
PaperEnd Buffer Clear ..... : **Disabled**
PrintHead Test PowerOn ..... : **Disabled**
USB Address Number ..... : **0**
USB Class ..... : **Printer**
Selector Option..... : **Disabled**
Ejector Speed..... : **75%**
Cutter..... : **Enabled**
Ejecter Type..... : **Ejecter**
Low Paper ..... : **Disabled**
Print Density..... : **0%**

[LF] *enter Printer Setup*
[FF] *enter Ethernet Setup*

ETHERNET PARAMETERS

KEYS FUNCTIONS

ETH. SPEED = 100Mb/s Half-Duplex MDIX

DHCP Client ..... : **Disabled**

IP Address ..... : **192.168. 0. 1**
Subnet Mask ..... : **255.255.255. 0**
Default Gateway..... : **192.168. 0. 5**

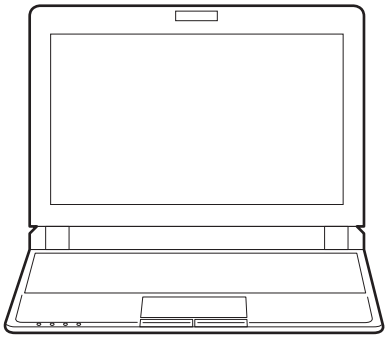
MAC Address ..... : **00-0E-E2-02-00-00**

[LF] *enter Ethernet Setup*
[FF] *skip Setup*

6.2 Configuration by software

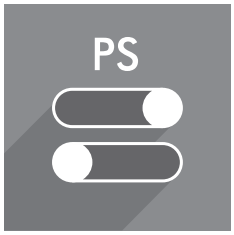
The setup parameters can be set by using the “PrinterSet” software tool available on www.custom4u.it.
For a detailed description of the device operating parameters see the following paragraphs.
To configure the device by software, proceed as follows:

1



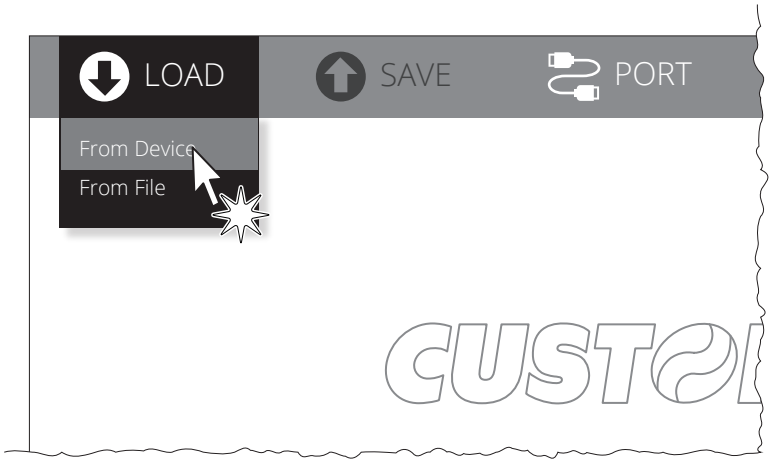
Connect the device to a PC directly (see paragraph 4.3),
without using HUB devices.

2



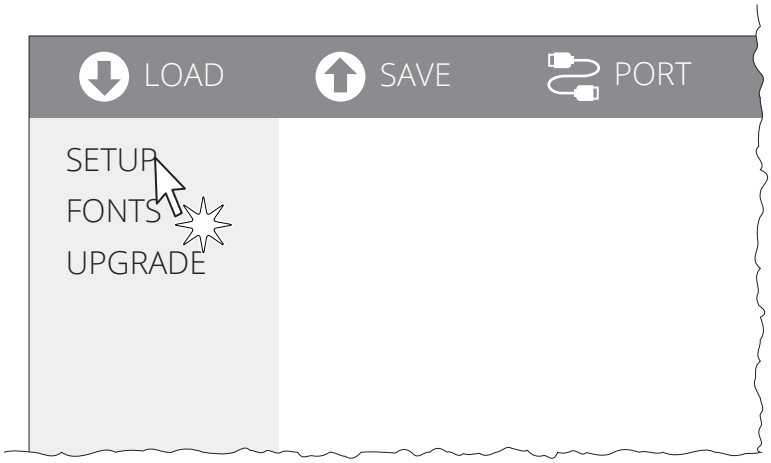
Start “PrinterSet” software tool.

3



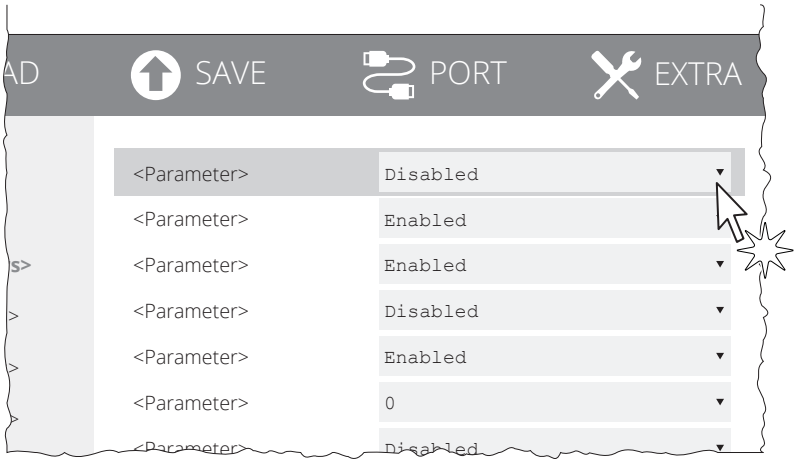
Click on LOAD > FROM DEVICE and select
the device connected to the PC.

4



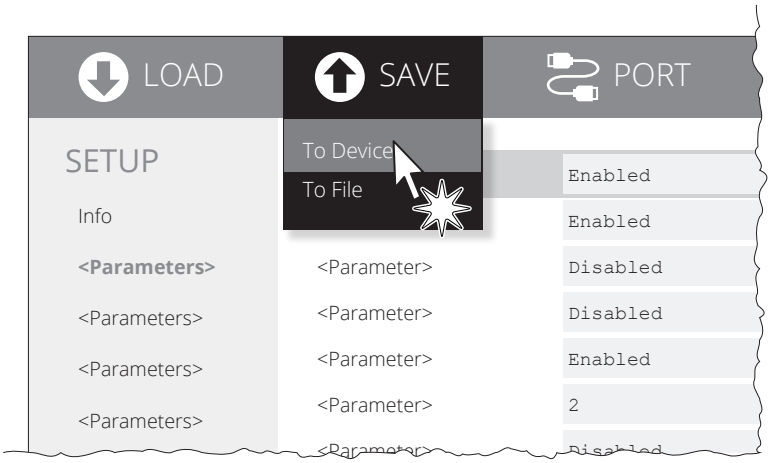
Click on SETUP to access the operating parameteres
of the device to be configured.

5



Make the desired changes to the
device operating parameters.

6

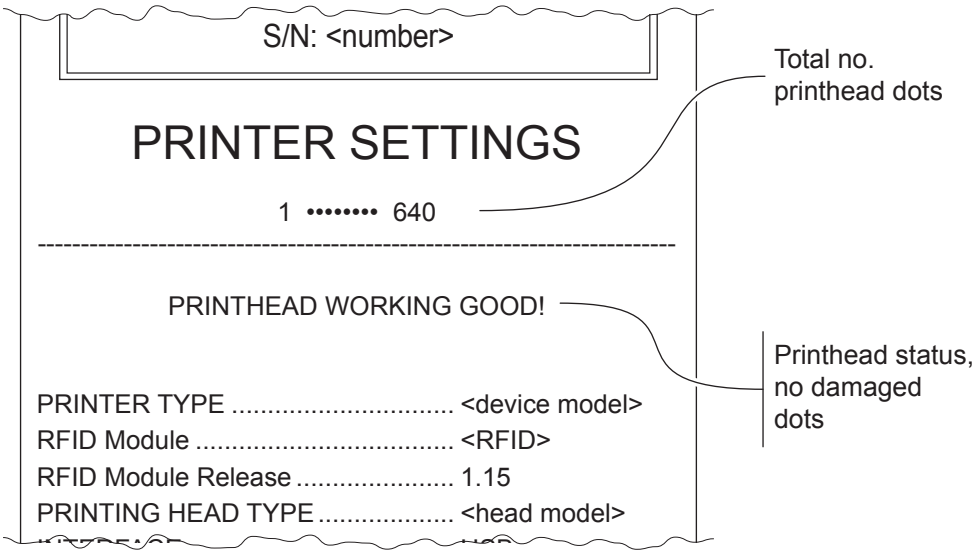


Click on SAVE > TO DEVICE
to make the changes made effective.

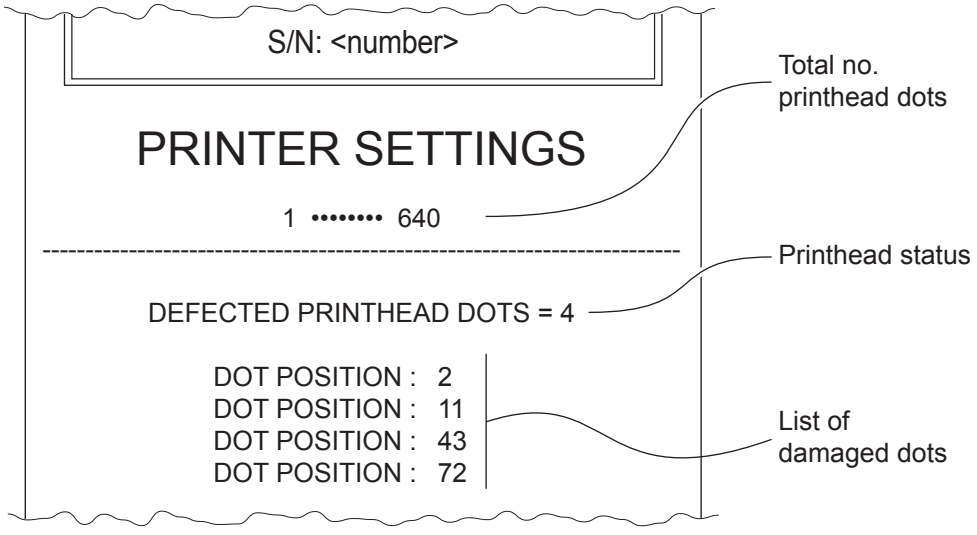
ATTENTION: During saving, it is strongly discouraged to disconnect the communication cable or to remove the power supply of the PC or the device.

6.3 Printhead status

The device performs the printhead operating status when printing the setup report. The total number of dots is reported Are indicated the total dots number of the printhead and their status (see figure below).



In case of damaged dots, these are listed in the print out in according to their position on the heating line (see figure below).



6.4 Device status

The 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
RFID MODULE	presence of RFID module
RFID MODULE RELEASE	RFID module firmware release
PRINTING HEAD TYPE	printing 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
CUTTER 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
CUT COUNTER	number of cuts made

6.5 Communication parameters

The 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.

RS232 BAUD RATE	Communication speed of the serial interface: 9600 57600 19200 115200 [D] 38400 Parameter valid only with serial interface.
RS232 DATA LENGTH	Number of bit used for characters encoding: 7 bits/car 8 bits/car [D] 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 Parameter valid only with serial interface.
USB CLASS	USB communication class definition. Printer [D] = setting the printer function Virtual COM = setting the USB port as a serial port
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 NONE
NETWORK PRINTER NAME	Identification name of the device within a network. This parameter is not printed on setup report and it is modifiable only during setup procedure by software (see paragraph 6.2).
DHCP CLIENT	Setting of the DHCP protocol: Disabled [D] = protocol disabled Enabled = protocol enabled Press FF key to modify the value of highlighted digit. Pressing LF key to move cursor on next digit (if cursor is on the latest digit, proceed to next parameter by pressing LF key).

IP ADDRESS	IP address of the device. Press FF key to modify the value of highlighted digit. Pressing LF key to move cursor on next digit (if cursor is on the latest digit, proceed to next parameter by pressing LF key).
SUBNET MASK	This parameter identifies the local network address. Press FF key to modify the value of highlighted digit. Pressing LF key to move cursor on next digit (if cursor is on the latest digit, proceed to next parameter by pressing LF key).
DEFAULT GATEWAY	This parameter identifies the gateway IP address used to send applications to the external network. Press FF key to modify the value of highlighted digit. Pressing LF key to move cursor on next digit (if cursor is on the latest digit, proceed to next parameter by pressing LF key).
PRIMARY DNS SERVER	This parameter identifies the Domain Name System (DNS). This parameter is not printed on setup report.
SECONDARY DNS SERVER	This parameter identifies the Domain Name System (DNS). This parameter is not printed on setup report.
TCP PRINTER PORT	This parameter sets the TCP port number. This parameter is not printed on setup report.
MAC ADDRESS	This is the number, provided by the constructor, that identifies the device; this number is univocal. This parameter is not modifiable by setup.
RFID MODULE BAUD RATE	Communication speed of the RFID module: 1200 9600 57600 2400 19200 115200 [D] 4800 38400

6.6 Operation parameters

The 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. SERVICE [D] = used only for upgrade BTP = used for management of baggages ticket ATB = used for management of boarding ticket
PRINT MODE	Printing mode: Normal [D] = enables printing in normal writing way Reverse = enables printing rotated 180 degrees
ATB PRINT QUALITY	Setting of speed and printing quality. High Quality [D] Normal High Speed
PAPER THRESHOLD	Threshold value (in percent) for the recognition of paper presence by the paper presence sensor: 30% 60% 90% 40% [D] 70% 50% 80%
CUTTER	Enable or disable the autocutter at the hardware level: Disabled = autocutter disabled Enabled [D] = autocutter enabled For the device described in this document, keep this parameter set on "Enabled", as the default value.
EJECTOR SPEED	Adjusting the ejector speed: 100% 75% [D] 50% +25% This parameter is valid only for KPM862 EJC, KPM862 DF-EJC, TK862 EJC, TK862 DF-EJC.
EJECTER TYPE	Management of the ejector device: Presenter = after the printing end, the device cuts the ticket and holds it between the ejector rollers in a "cut & hold" mode waiting for the user withdrawal Ejecter [D] = after the printing end, the device cut the ticket and eject it This parameter is valid only for KPM862 EJC, KPM862 DF-EJC, TK862 EJC, TK862 DF-EJC.

LOW PAPER	Setting of the low paper detection: Disabled [D] = detection disabled Enabled = detection enabled

6.7 Alignment parameters

The 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.

BLACKMARK POS. F1	Position of the black mark alignment and choice of appropriate black mark sensor: Disabled = the black mark alignment is not performed Bottom [D] = the black mark position is detected by the lower sensor (reflection) Transparent = the black mark position is detected by both the sensors (transparence)
ALIGNMENT TYPE F1	This parameter defines the point for the black mark alignment: Autocentering [D] = the point for the black mark alignment is the center of black mark Edge = the point for the black mark alignment is the frontal edge of black mark DETLTYPE [(*)] = black mark sensor is set by command (*) only for ATB emulation.
B/W THRESHOLD F1	Value of the conversion threshold from grayscale to B/W of the scanned image: from 0 to 255
VIRTUAL SENSOR POSITION F1	Black mark search position: Auto [D] Center Left Right
BLACKMARK POS. F2	Position of the black mark alignment and choice of appropriate black mark sensor: Disabled = the black mark alignment is not performed Bottom [D] = the black mark position is detected by the lower sensor (reflection) Transparent = the black mark position is detected by both the sensors (transparence) This parameter is valid only for KPM862 DF, KPM862 DF-EJC, TK862 DF, TK862 DF-EJC.
ALIGNMENT TYPE F2	This parameter defines the point for the black mark alignment: Autocentering [D] = the point for the black mark alignment is the center of black mark Edge = the point for the black mark alignment is the frontal edge of black mark DETLTYPE [(*)] = black mark sensor is set by command (*) only for ATB emulation. This parameter is valid only for KPM862 DF, KPM862 DF-EJC, TK862 DF, TK862 DF-EJC.
B/W THRESHOLD F2	Value of the conversion threshold from grayscale to B/W of the scanned image: from 0 to 255 This parameter is valid only for KPM862 DF, KPM862 DF-EJC, TK862 DF, TK862 DF-EJC.

VIRTUAL SENSOR POSITION F2	Black mark search position: Auto [D] Center Left Right This parameter is valid only for KPM862 DF, KPM862 DF-EJC, TK862 DF, TK862 DF-EJC.

6.8 Aero parameters

The 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.

AEA PROTOCOL STX	Value of the start byte of protocol (up to three bytes, expressed in hexadecimal). If '00' value is set, this parameter is disabled. This parameter is not printed on setup report and it is modifiable only during setup procedure by software (see paragraph 6.2). Moreover, it may not be available for some models.
AEA PROTOCOL ETX	Value of the end byte of protocol (up to three bytes, expressed in hexadecimal). This parameter can not be disabled, unlike the "AEA PROTOCOL STX". This parameter is not printed on setup report and it is modifiable only during setup procedure by software (see paragraph 6.2). Moreover, it may not be available for some models.
AEA PROTOCOL CKSUM	Set type of checksum for AEA protocol: NONE LRC DRC LRC+DRC CRC16 This parameter is not printed on setup report and it is modifiable only during setup procedure by software (see paragraph 6.2). Moreover, it may not be available for some models.
BUFFERED PRINT	When enabled disable support for ERR7 management (see IATA ITPS specfications for ERR7 description).
LEGACY COMMANDS	Enables support for legacy commands.
AEA PROT. ACK TIMEOUT [ms]	Set the timeout (expressed in milliseconds) to wait for Ack from host: from 0 ms to 9999 ms This parameter is ignored if "AEA PROTOCOL CKSUM" is set to "NONE" value.
BUSY PAPER END	See the printer in busy condition if paper is not present.
BARCODE ID 4	Setting of the barcode format associated with ID 4 (see AEA specifications): Code128 = sets the Code128 format DataMatrix [D] = sets the DataMatrix format If parameter "Printer emulation" is set on "Service", this parameter has no effect on device configuration and it is not printed on setup report.

VERTICAL SCALE [0.1%]	Adjust of the printing positions by adding the percentage value to the coordinates of elements (in the direction of the length of the ticket). If parameter “Printer emulation” is set on “Service”, this parameter has no effect on device configuration and it is not printed on setup report.
PRESENTER OFFSET [mm]	Setting of the presentation distance of ticket in case of presentation mode enabled (paper cut disabled). If parameter “Printer emulation” is set on “Service”, this parameter has no effect on device configuration and it is not printed on setup report.
ATB TICKET LENGTH	This parameter defines the detection mode of the ticket length: Auto [D] = at the paper autoload, the device automatically calculates the ticket length by detecting two consecutive black marks and then recover the first ticket used for detection Auto No Recovery = at the paper autoload, the device automatically calculates the ticket length by detecting two consecutive black marks. The ticket used for detection is not recovered. 8” Fixed = the ticket length is set to 8” 7” 3/8 Fixed = the ticket length is set to 7” 3/8 If parameter “Printer emulation” is set on “Service” or “BTP”, this parameter has no effect on device configuration and it is not printed on setup report.
ATB REPRINT AFTER ERRS	If parameter "Printer emulation" is set on "Service", this parameter has no effect on device configuration and it is not printed on setup report.
ERRS STOCKTYPE UNKNOWN	This parameter enables/disables the management of the ERRS: Disabled = ERRS management disabled Enabled [D] = ERRS management enabled
RECOVERY MODE	Setting of recovery mode for paper portion on output mouth after a ticket presentation and withdrawal: Auto Check = device automatically detect paper presence on output sensor and then recovers a fixed portion of paper Fixed [D] = device recovers a fixed portion of paper (set by command) The parameter is printed on setup report only if the “Printer emulation” parameter is set on value “ATB” or “BTP” and only with cut disabled by commands (refer to the command manual of the device).
ATB PARAMETERS	See IATA ITPS specifications.
BTP PARAMETERS	See IATA ITPS specifications.

6.9 RFID parameters

TK862 IDU

The 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.

RFID ENCODING	Setting of the coding system used for the writing of the RFID chip: AEA2007 RP1740C [D] The parameter is printed on setup report only if the "Printer emulation" parameter is set on value "ATB" or "BTP".
RFID REGION	Set working frequency for RFID module: Europe 856-867 MHz FCC 902-927 MHz Japan 952-953 MHz Japan T106 916-920 MHz Japan T107 916-923 MHz Korean 917-920 MHz China 840-844 MHz China 920-924 MHz Canada 902-927 MHz
RFID MIN POWER	Set minimum working power range for RFID module: 0% [D] 30% 60% 90% 10% 40% 70% 100% 20% 50% 80%
RFID MAX POWER	Set maximum working power range for RFID module: 0% 30% 60% 90% 10% 40% 70% 100% [D] 20% 50% 80%
RFID INVENTORY MULTI	When disabled, printer will VOID tag if two or more tags are found before encoding.
RFID REWRITE TAG	When disabled, printer will VOID tag if tag found is already encoded according to IATA RP1740c.
MODE	See IATA ITPS specifications.
VERIFY	See IATA ITPS specifications.
DATE ANSWER	See IATA ITPS specifications.
LICENSE PLATE ASNWER	See IATA ITPS specifications.

AFI	See IATA ITPS specifications.
ENCODE RETRY	See IATA ITPS specifications.
VOID RETRY	See IATA ITPS specifications.

7 ALIGNMENT

Device is provided with a CIS sensor for the use of alignment black mark in order to handle:
- roll of tickets with pre-printed fields and a fixed length;
- fan-fold module of tickets with pre-printed fields and a fixed length.

The alignment black mark may be formed by:
- black mark printed on paper;
- hole between two tickets;

A CIS (Contact Image Sensor) sensor consists of a linear array of RGB LEDs (red, green and blue) that turn on and off in rapid sequence illuminating the original image to be scanned and of a row of CIS sensors for record the changes in reflecting brightness, without using mirrors and lenses.
The presence of the black mark is therefore detected by the amount of light that returns to the sensor, considering that the light is reflected by the white paper and absorbed by the black mark.

To use tickets with holes, it is possible to use the same sensors as “transparence” sensors. The presence of the hole is detected as if it were a black mark printed on the paper.

To guarantee the alignment, it is necessary to correctly choose how to use the CIS sensor to use for the notch/b.mark detection depending on the type of paper.
To do this, you must enable the parameter “Notch/B.Mark Pos. F1” during the setup procedure (see chapter 6) and set the correct value of this parameter as described in the following table:

VALUE OF THE “NOTCH/B.MARK POS. F1” PARAMETER	BLACK MARK TYPE
Disabled	Alignment disabled
Bottom	Black mark printed on the non-thermal side of paper
Transparent	Hole between tickets

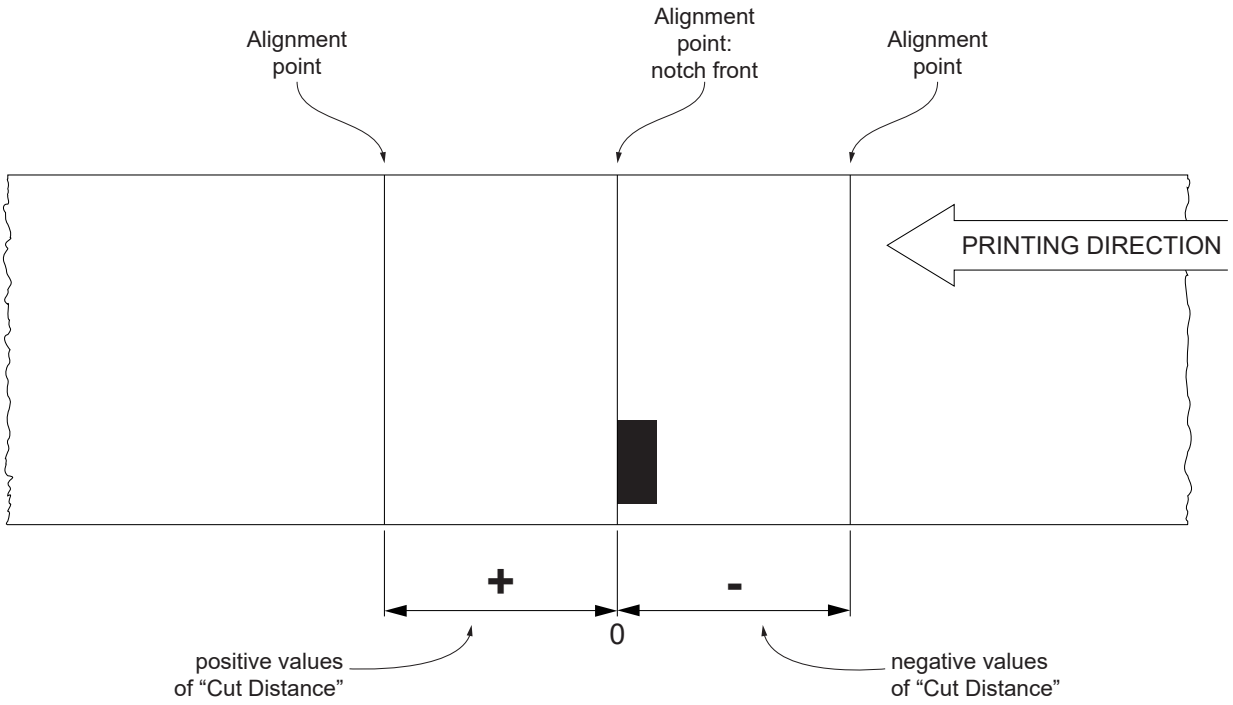
The following paragraphs show how to correctly set the configuration parameters of device in order to assure the alignment.

7.1 Alignment parameters

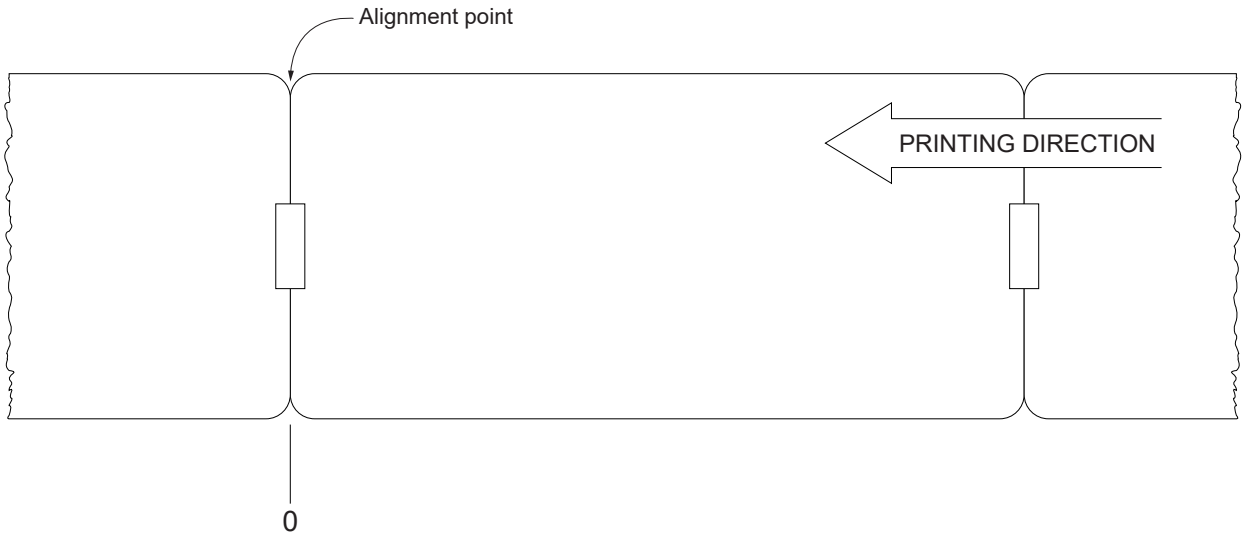
The “alignment point” is defined as the position inside the ticket to use for the notch/b.mark alignment.
The distance between the notch/b.mark edge and the alignment point is defined as “Cut Distance”.

The value of “Cut Distance” varies from a minimum value of -99.8 mm to a maximum value of 99.8 mm.

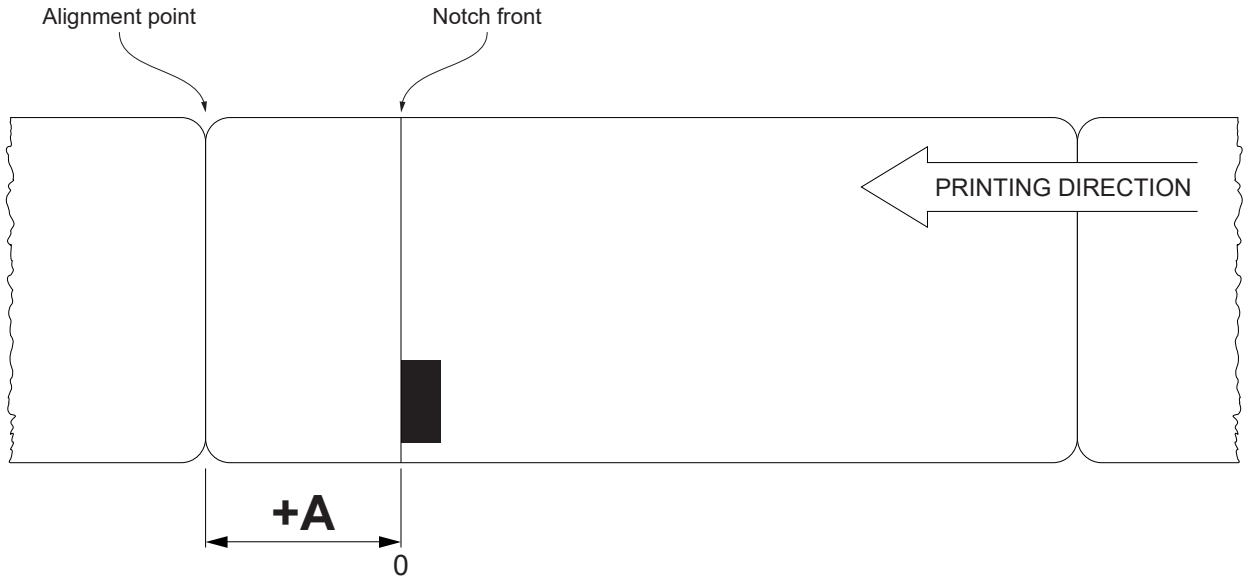
If the “Cut Distance” value is set to 0, the alignment point is set at the beginning of the notch/b.mark:



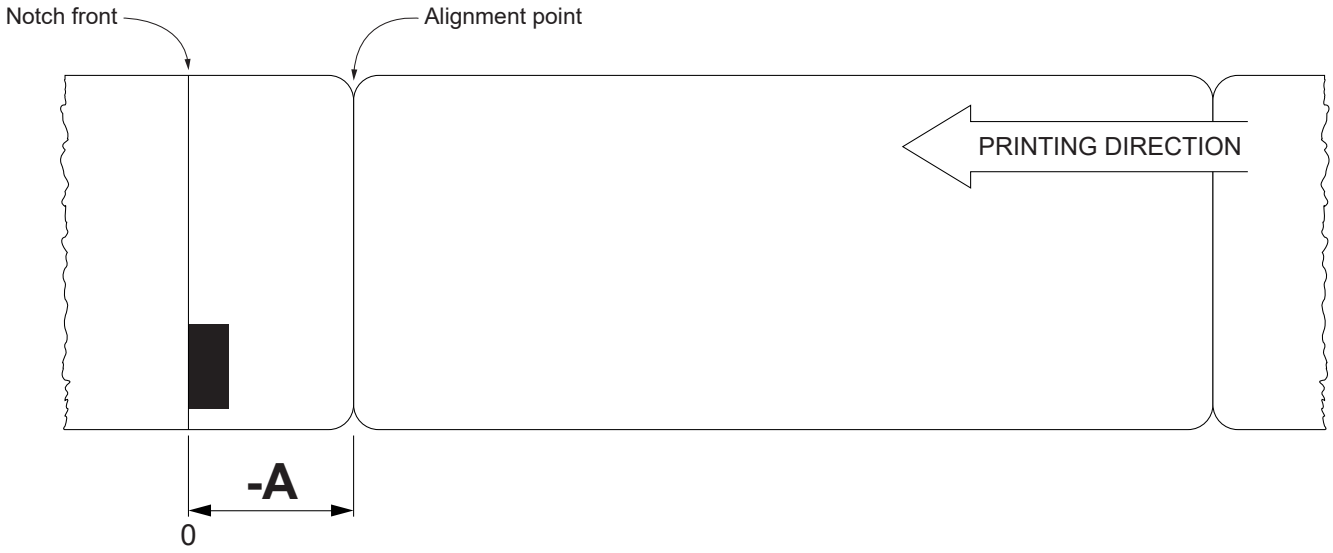
For paper with holes, if the “Cut Distance” value is set to 0, the alignment point is set at the center line of the hole:



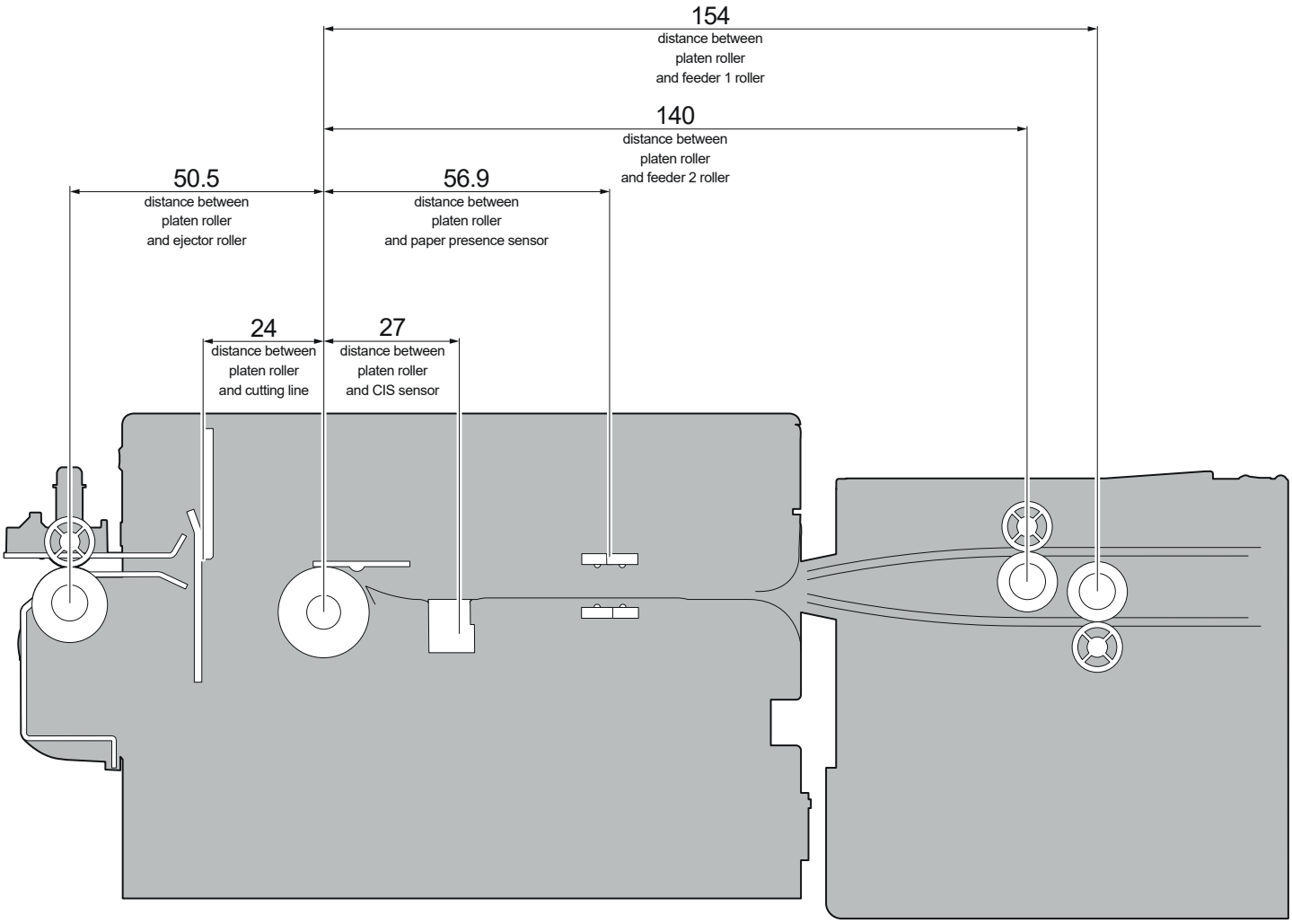
The following figure shows an example of paper with alignment point set by a positive value of “Cut Distance” (“Cut Distance” = + A):



To set a negative value of the “Cut Distance” parameter is useful in cases where the alignment point refers to the notch/b.mark on the previous ticket or where the desired cutting line is placed in the middle of the alignment notch/b.mark. In the following images, the value of “Cut Distance” parameter is set to -A.



The following figure shows a simplified section of the device with the paper path and the distances (in millimetres) between the alignment sensors, the printing head and the autocutter (cutting line).

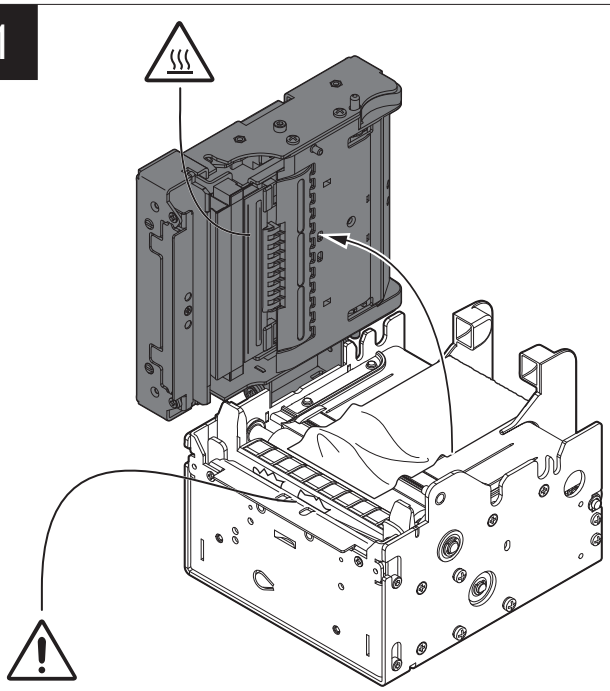


8 MAINTENANCE

8.1 Device paper jam

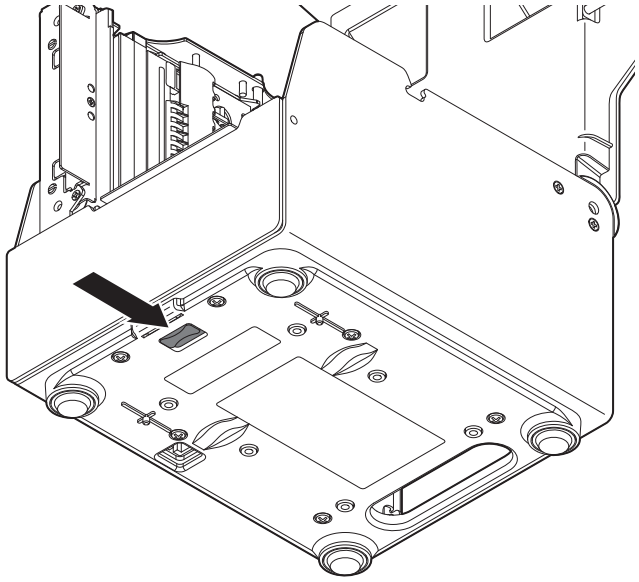
For ease of reference, for some models is represented only the standard model of internal printer group without dual feeder.

1



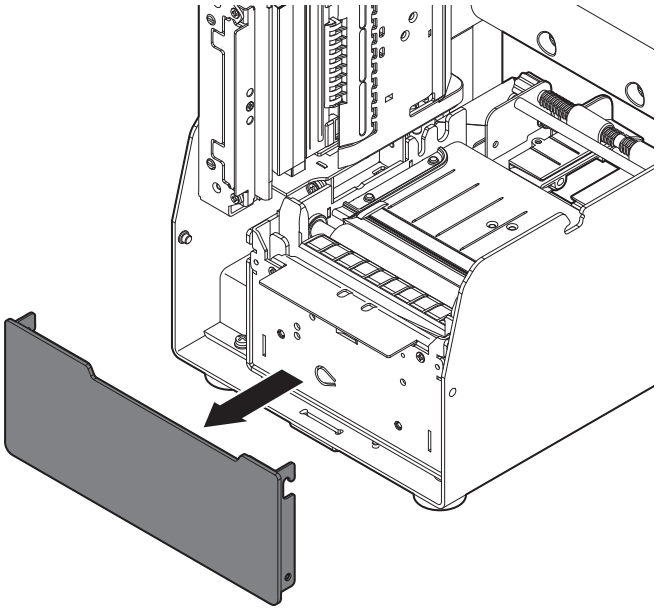
Open the upper covers of the device (see paragraph 5.1).

2 **TK862 STD, TK862 EJC, TK862 VR, TK862 IDU TK862 DF, TK862 DF-EJC**



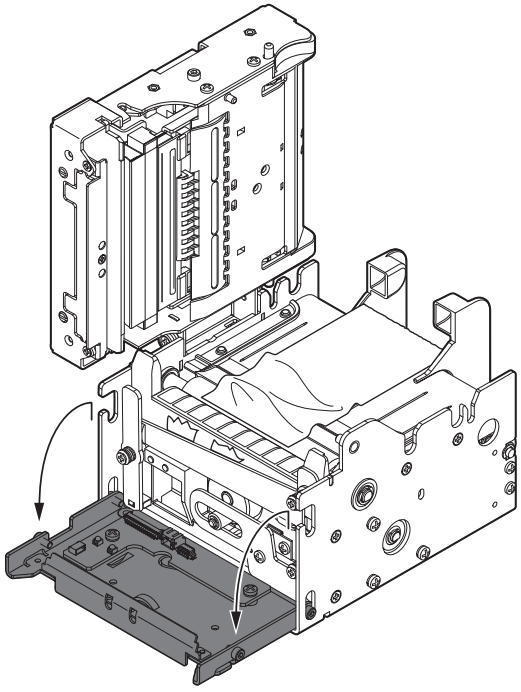
Unlock the front panel pushing the opening lever in the direction shown in figure.

3 **TK862 STD, TK862 EJC, TK862 VR, TK862 IDU TK862 DF, TK862 DF-EJC**



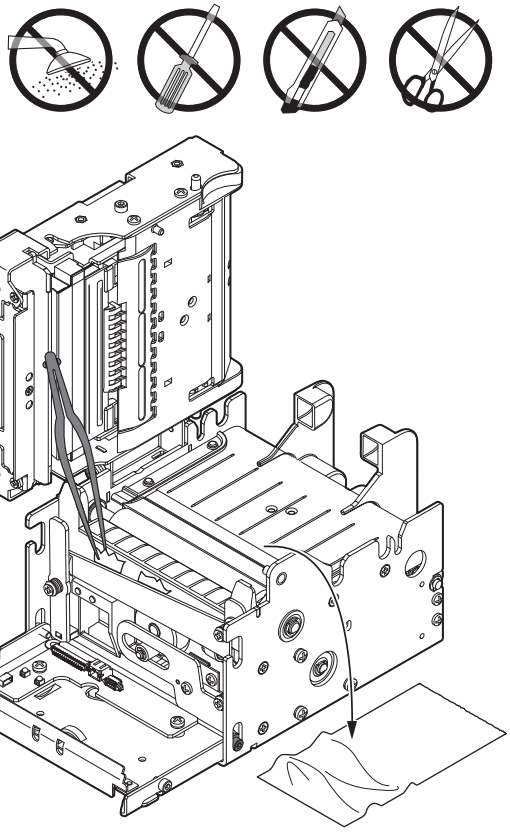
Move the front panel.

4



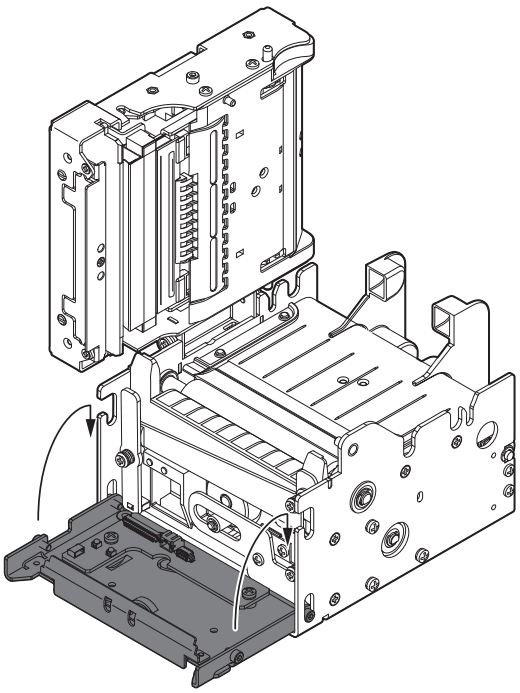
Open the device front cover.

5



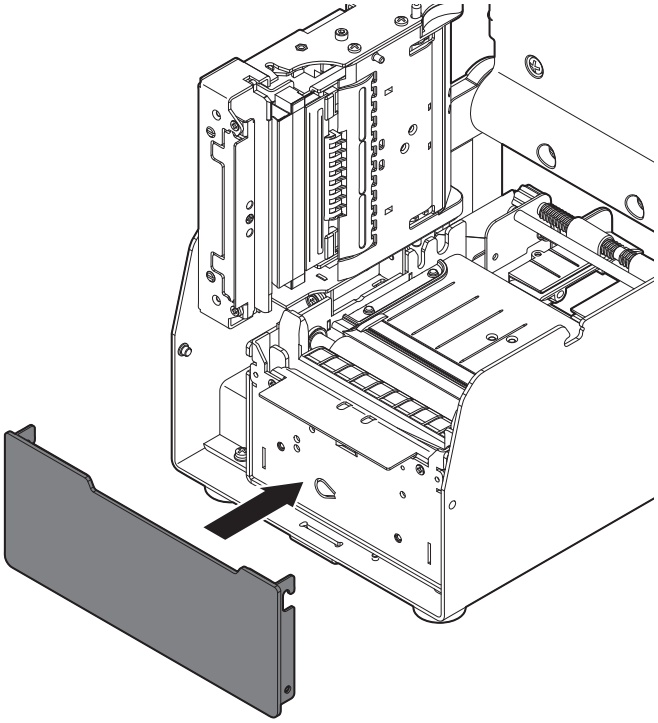
Remove the damaged paper and check the presence for paper scraps inside the device. Carefully remove all paper scraps. If necessary use tweezers.

6



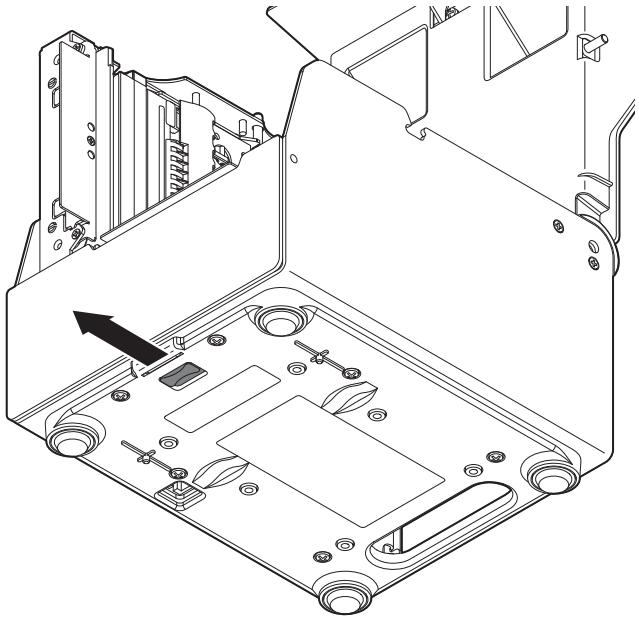
Close the device front cover.

7 **TK862 STD, TK862 EJC, TK862 VR, TK862 IDU**
TK862 DF, TK862 DF-EJC



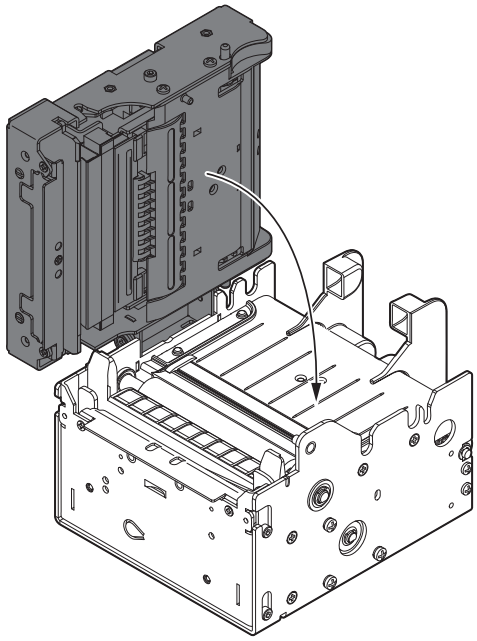
Insert the front panel.

8 **TK862 STD, TK862 EJC, TK862 VR, TK862 IDU**
TK862 DF, TK862 DF-EJC



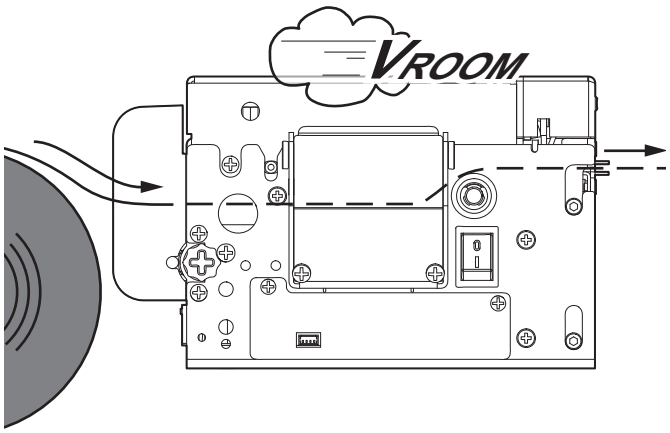
Lock the front panel pushing the opening lever in the direction shown in figure.

9



Close the upper covers of the device.

10



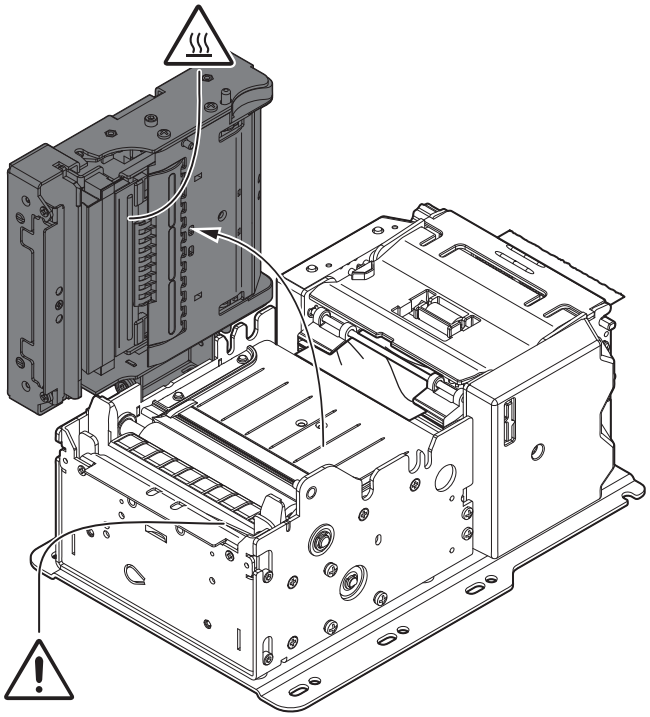
Insert the paper
(see paragraph 5.4).

8.2 Dual feeder paper jam

For ease of reference, for some models is represented only the internal printer group.

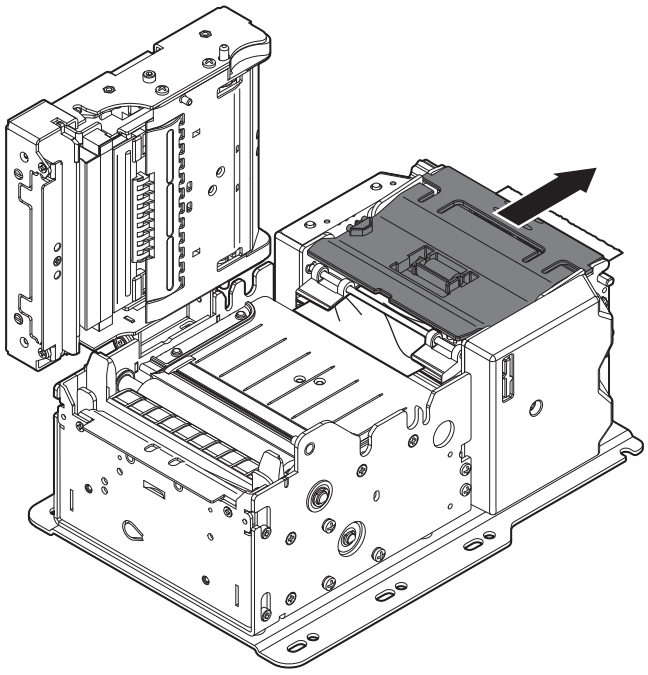
KPM862 DF, KPM862 DF-EJC, TK862 DF, TK862 DF-EJC

1



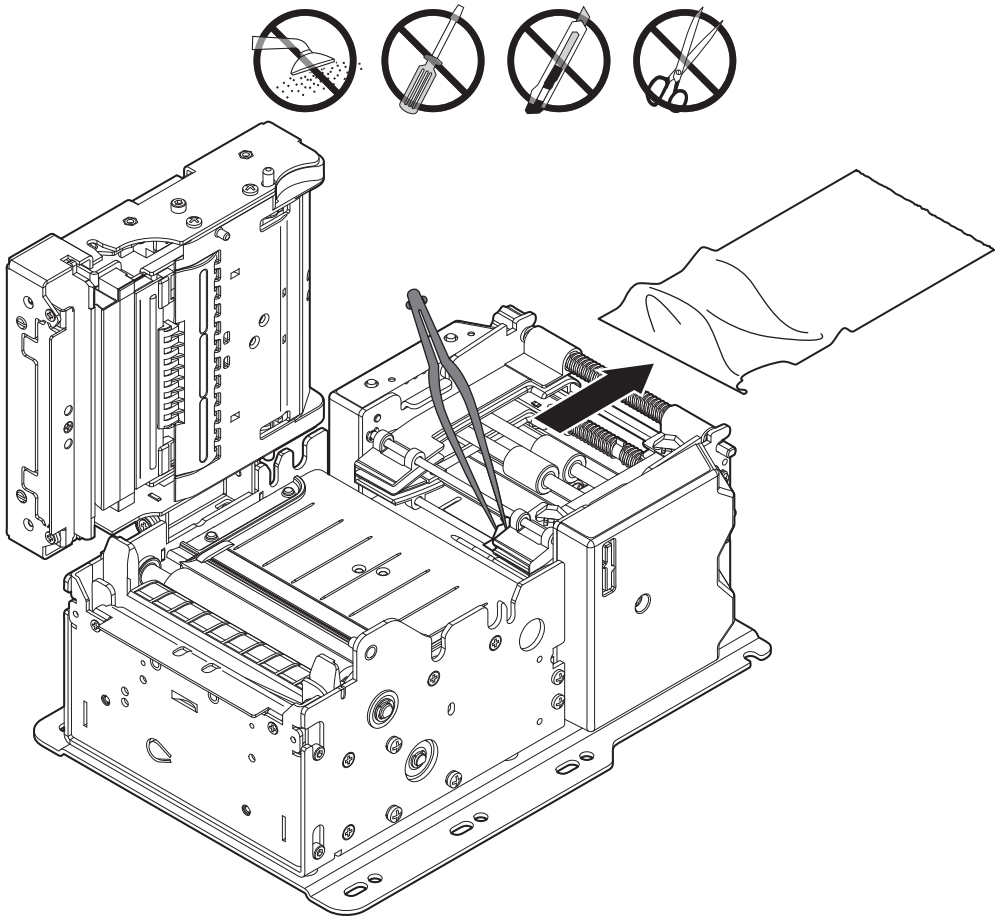
Open the upper covers of the device
(see paragraph 5.1).

2



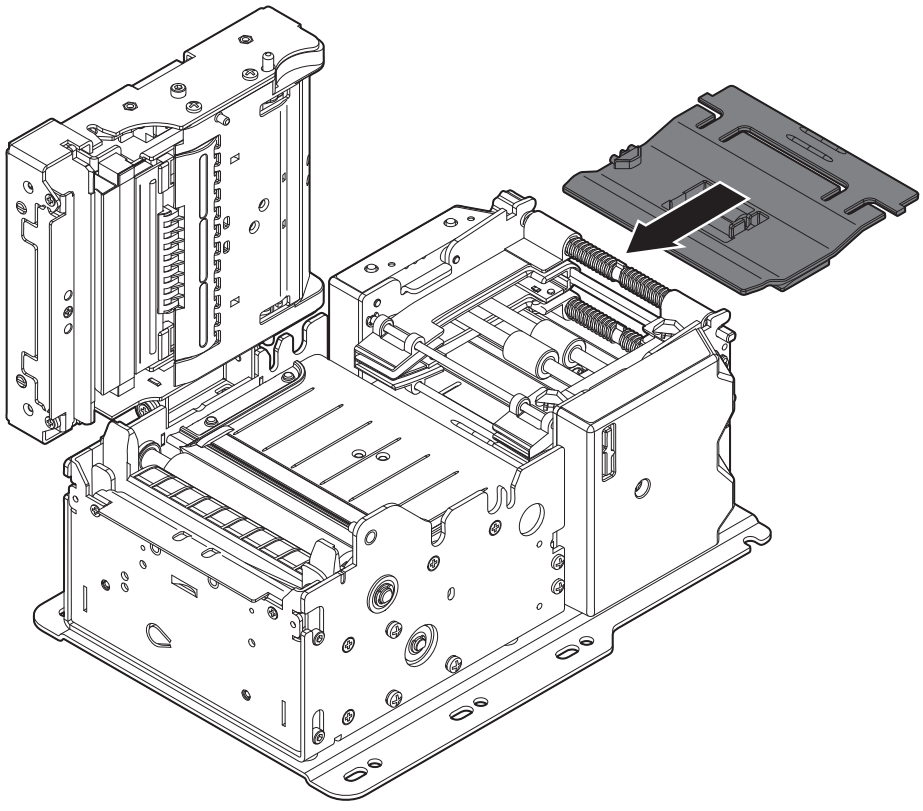
Lift up and pull the dual feeder upper cover.

3



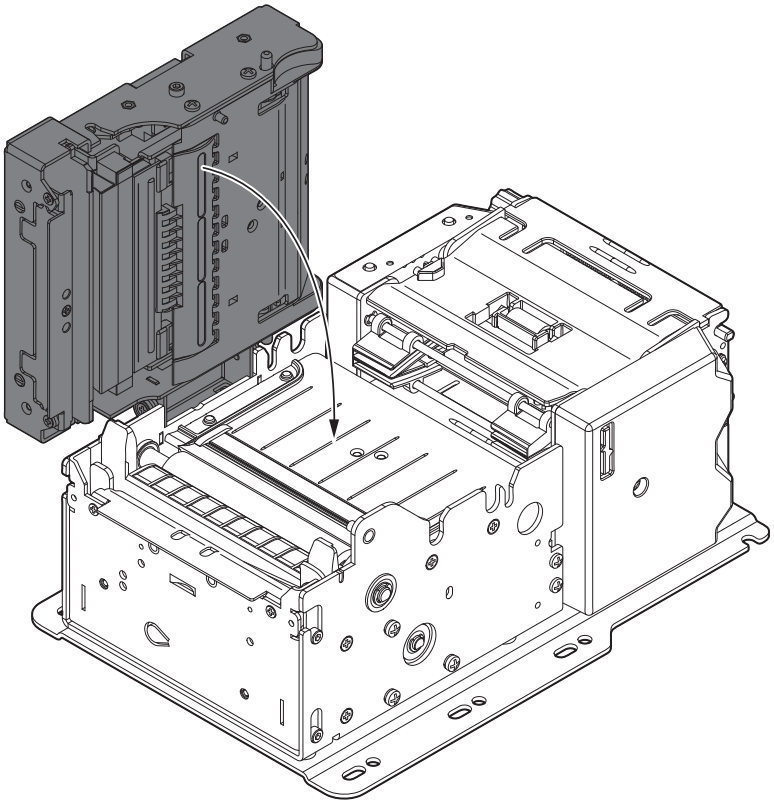
Remove the damaged paper and check the presence for paper scraps inside the device.
Carefully remove all paper scraps. If necessary use tweezers.

4



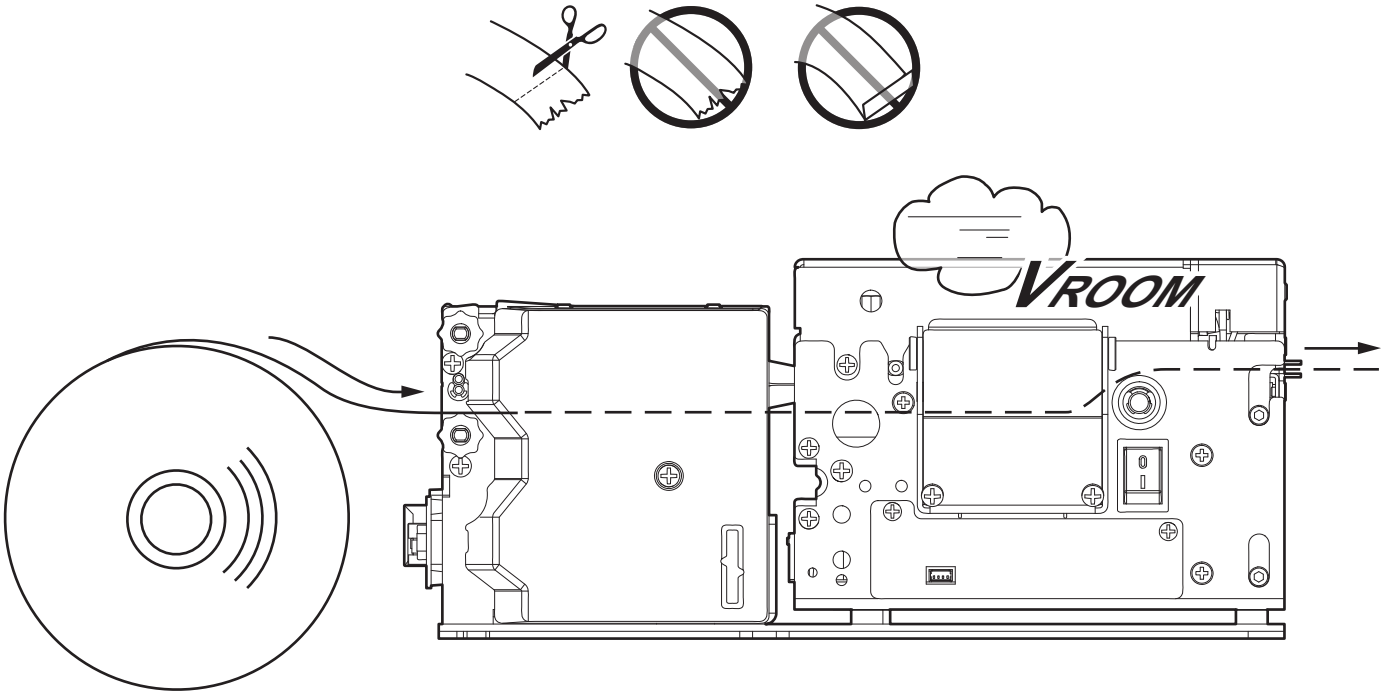
Insert the dual feeder upper cover.

5



Close the device upper covers.

6



Insert the paper
(see paragraph 5.4).

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

For specific procedures, see paragraph 8.4.

EVERY PAPER CHANGE	
Printhead	Use isopropyl alcohol
Platen roller	Use isopropyl alcohol
CIS reader	Use a soft cloth
EVERY 5 PAPER CHANGES	
Autocutter	Use compressed air
Paper path	Use compressed air or tweezers
Sensors	Use compressed air
Dual feeder (1)	Use compressed air
EVERY 6 MONTHS OR AS NEEDED	
Case	Use compressed air or a soft cloth
Display (2)	Use compressed air or a soft cloth Do not use ammonia-based products

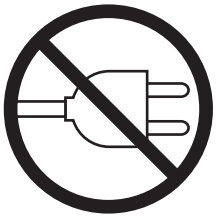
NOTES:
(1) : Only for KPM862 DF, KPM862 DF-EJC, TK862 DF, TK862 DF-EJC.
(2) : Only for TK862 STD, TK862 EJC, TK862 DF, TK862 DF-EJCTK862 DF-EJC, TK862 VR, TK862 IDU.

8.4 Cleaning

For periodic cleaning of the device, see instructions below.
For ease of reference, for some models is represented only the standard model of internal printer group without dual feeder.

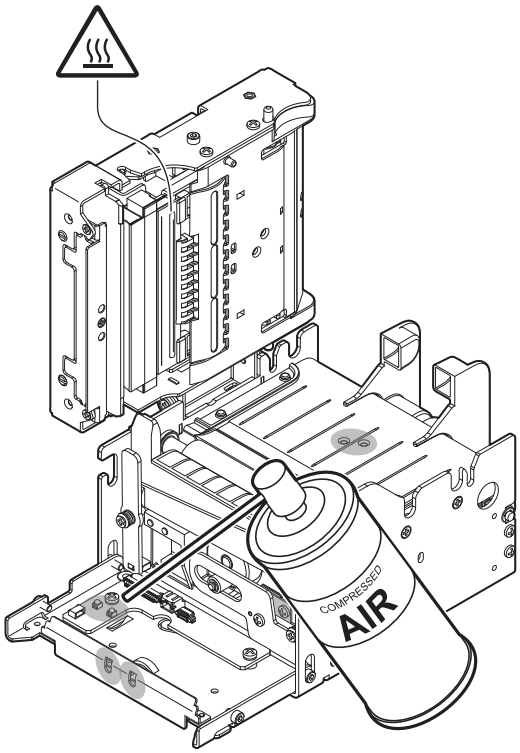
Sensors

1



Disconnect the power supply cable and open the device covers (see paragraph 8.1).

2

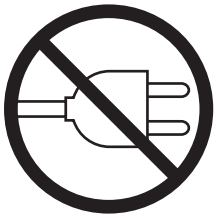


ATTENTION:
Do not use alcohol, solvents, or hard brushes.
Do not let water or other liquids get inside the machine.
To remove paper scraps, use tweezers or compressed air.

Clean all the device sensors by using compressed air.

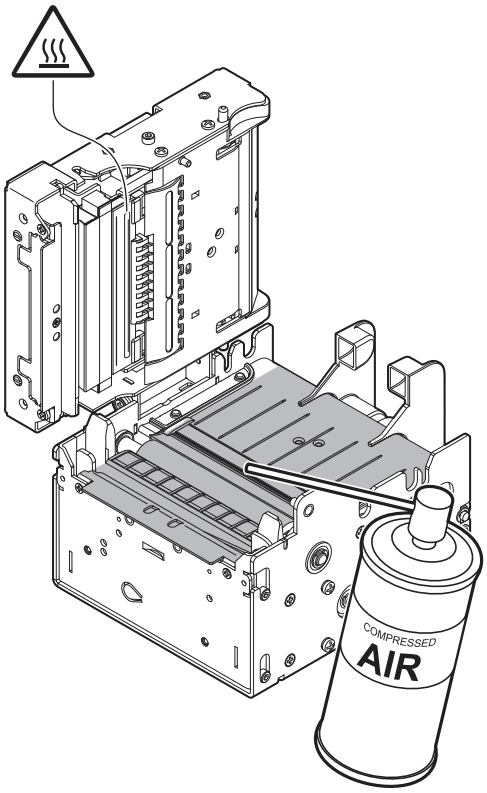
Paper path

1



Disconnect the power supply cable and open the upper device cover (see paragraph 5.1).

2

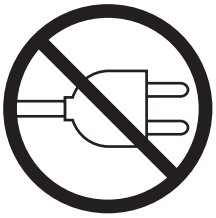


ATTENTION:
Do not use alcohol, solvents, or hard brushes.
Do not let water or other liquids get inside the machine.
To remove paper scraps, use tweezers or compressed air.

Clean the area involved in the passage of paper by using compressed air.

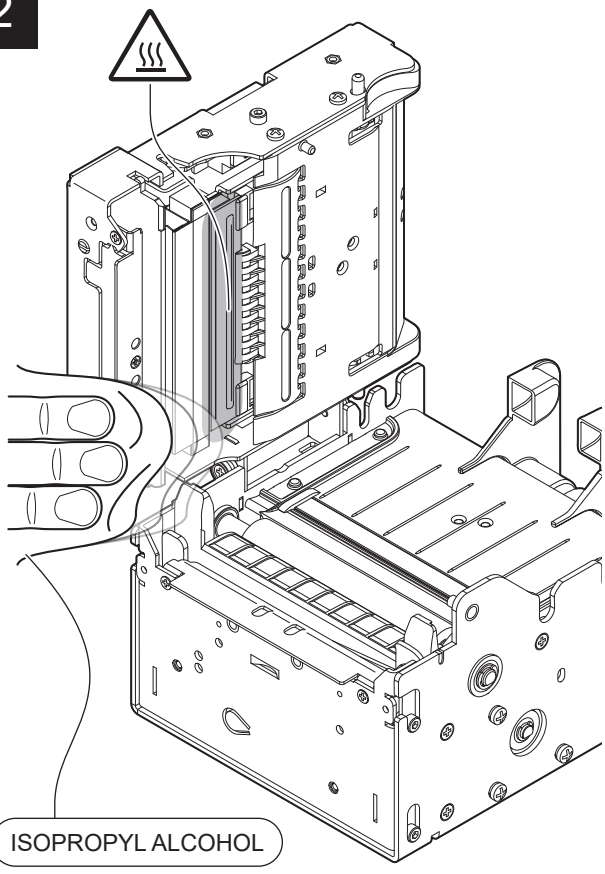
Printhead

1



Disconnect the power supply cable and
open the upper device cover (see paragraph 5.1).

2

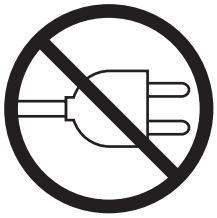


ATTENTION:
Do not use solvents, or hard brushes.
Do not let water or other liquids get inside the machine.
To remove paper scraps, use tweezers or compressed air.

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

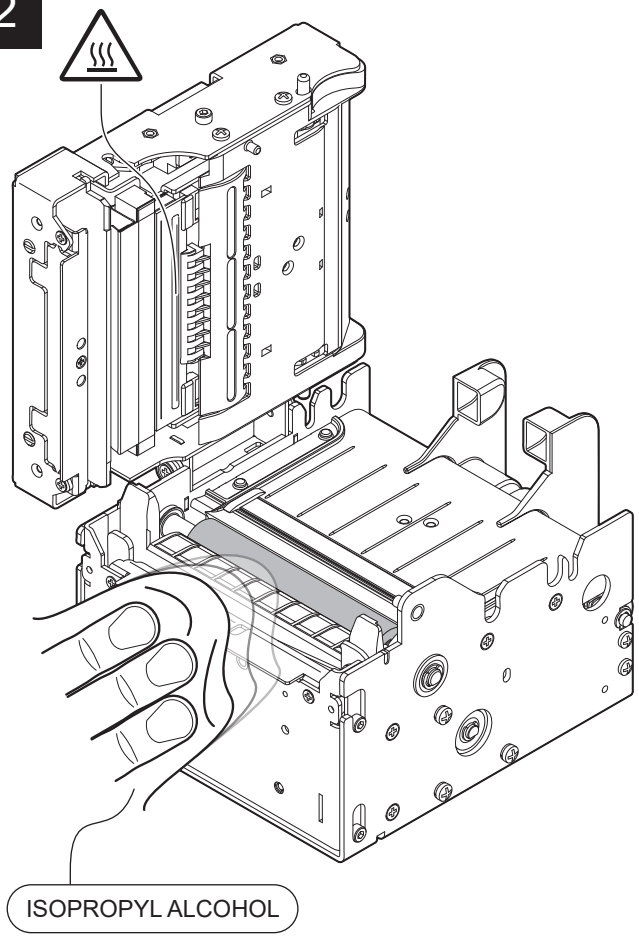
Platen roller

1



Disconnect the power supply cable and
open the upper device cover (see paragraph 5.1).

2

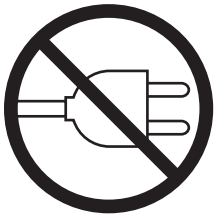


ATTENTION:
Do not use solvents, or hard brushes.
Do not let water or other liquids get inside the machine.
To remove paper scraps, use tweezers or compressed air.

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

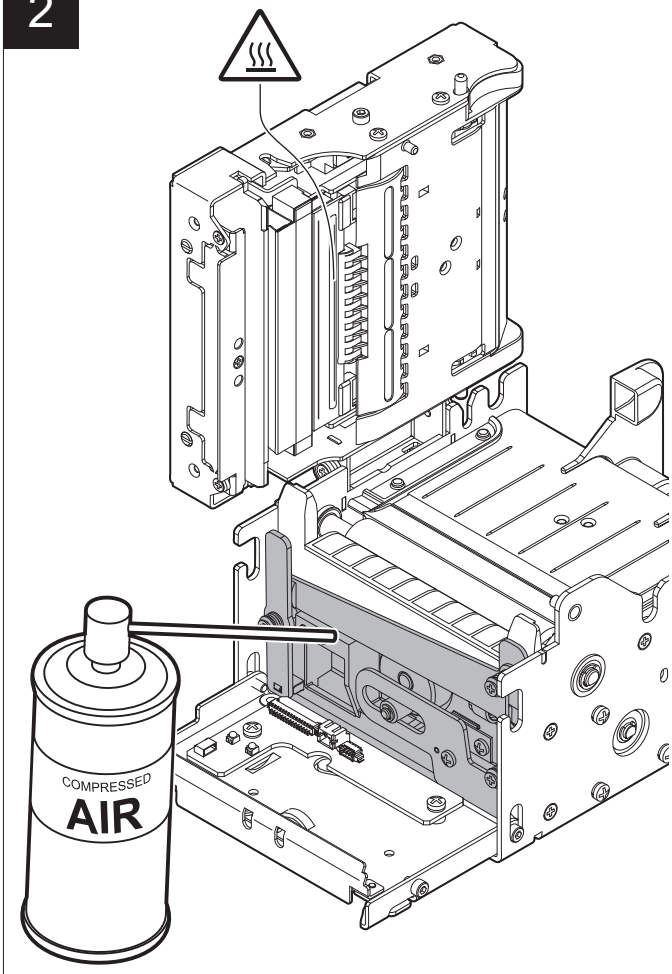
Autocutter

1



Disconnect the power supply cable and
open the device covers (see paragraph 8.1).

2

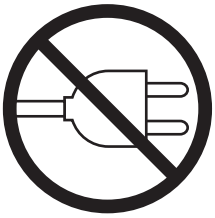


ATTENTION:
Do not use alcohol, solvents, or hard brushes.
Do not let water or other liquids get inside the machine.
To remove paper scraps, use tweezers or compressed air.

Clean the autocutter
by using compressed air.

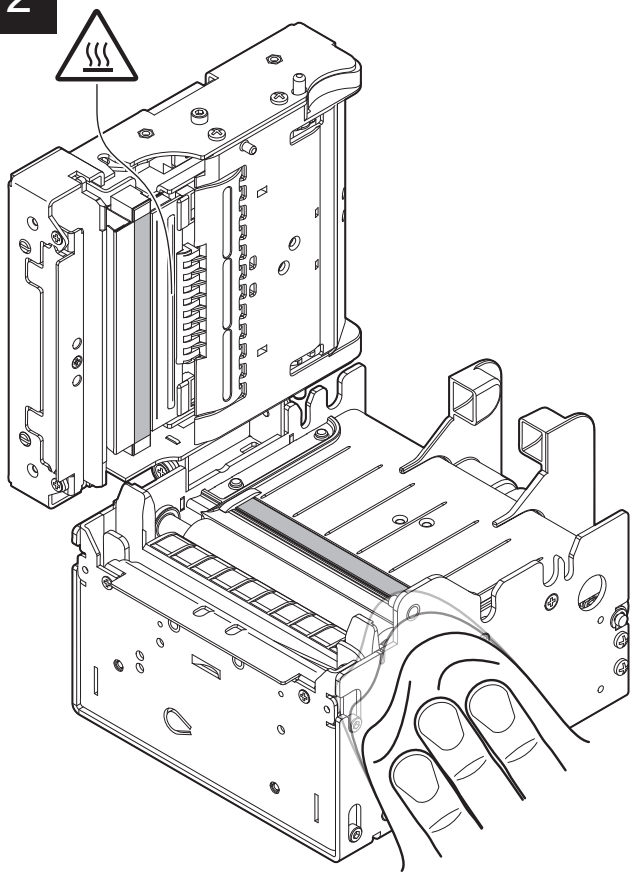
CIS reader

1



Disconnect the power supply cable and
open the upper device cover (see paragraph 5.1).

2

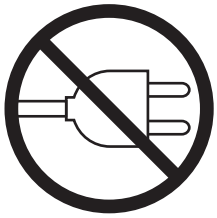


ATTENTION:
Do not use alcohol, solvents, or hard brushes.
Do not let water or other liquids get inside the machine.

Clean the windows for barcode reading
by using a soft cloth.

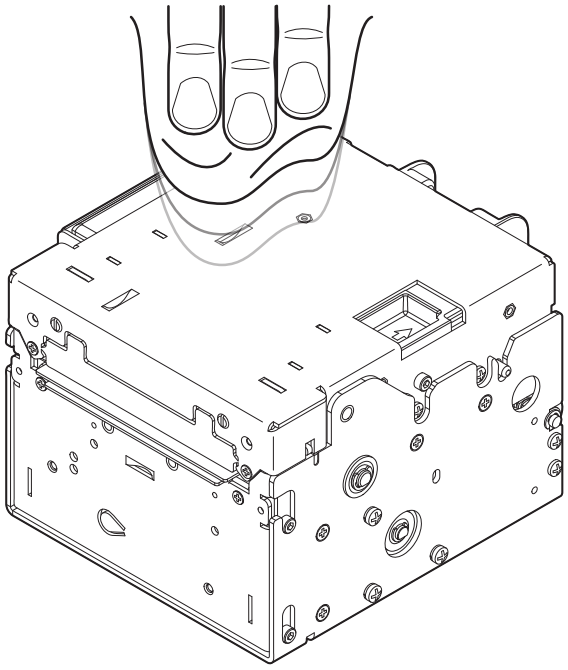
Case

1



Disconnect the power supply cable.

2

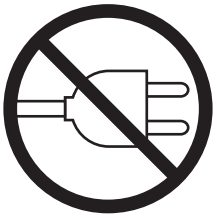


ATTENTION:
Do not use alcohol, solvents, or hard brushes.
Do not let water or other liquids get inside the machine.

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

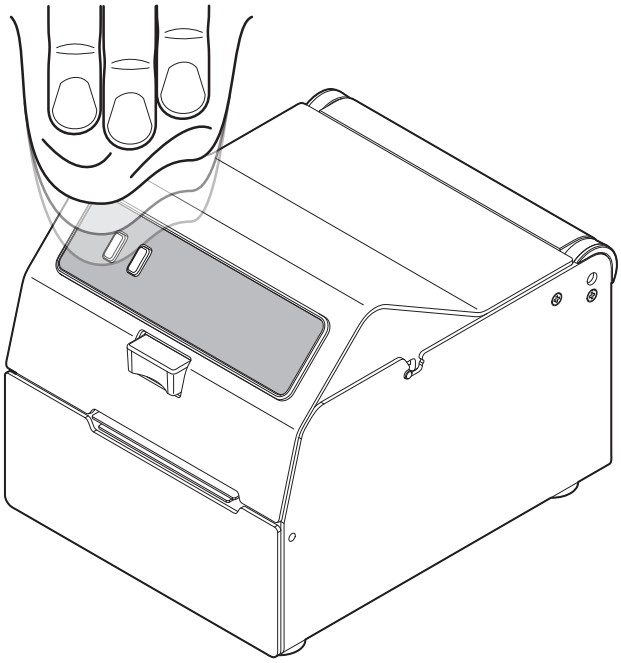
Display

1



Disconnect the power supply cable.

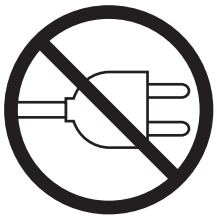
2



ATTENTION:
Do not use alcohol, solvents, or hard brushes.
Do not let water or other liquids get inside the machine.
Do not use ammonia-baesd products.

To clean the display,
use compressed air or a soft cloth.

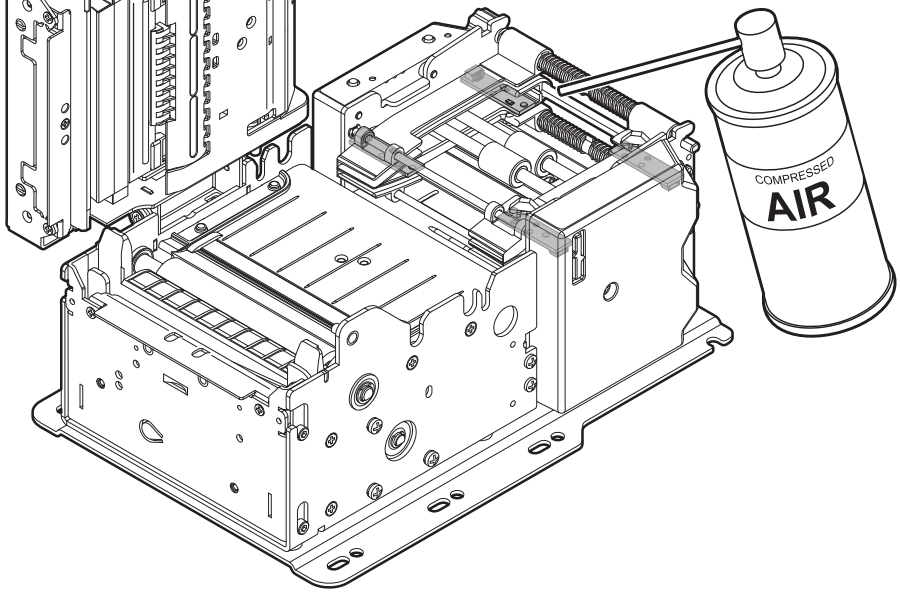
1



Disconnect the power supply cable and open the upper cover of the device and dual feeder (see paragraph 8.2).

2

ATTENTION:
Do not use alcohol, solvents, or hard brushes.
Do not let water or other liquids get inside the machine.
To remove paper scraps, use tweezers or compressed air.



Clean all the sensors
by using compressed air.

3

ATTENTION:
Do not use alcohol, solvents, or hard brushes.
Do not let water or other liquids get inside the machine.
To remove paper scraps, use tweezers or compressed air.

Clean the paper feed rollers
by using compressed air.

4

ATTENTION:
Do not use alcohol, solvents, or hard brushes.
Do not let water or other liquids get inside the machine.
To remove paper scraps, use tweezers or compressed air.

Clean the area involved in the passage of paper
by using compressed air.

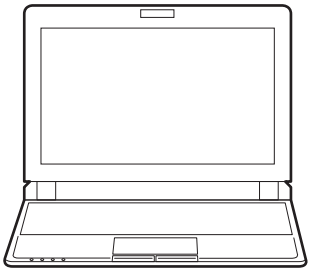
8.5 Firmware upgrade

Firmware upgrade can be performed by using the “PrinterSet” software tool available on www.custom4u.it.
To upgrade firmware, proceed as follows:

1

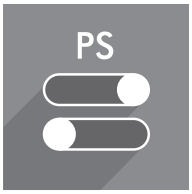
Login to the website www.custom4u.it, type in the product code of the device and download the latest firmware release available.

2

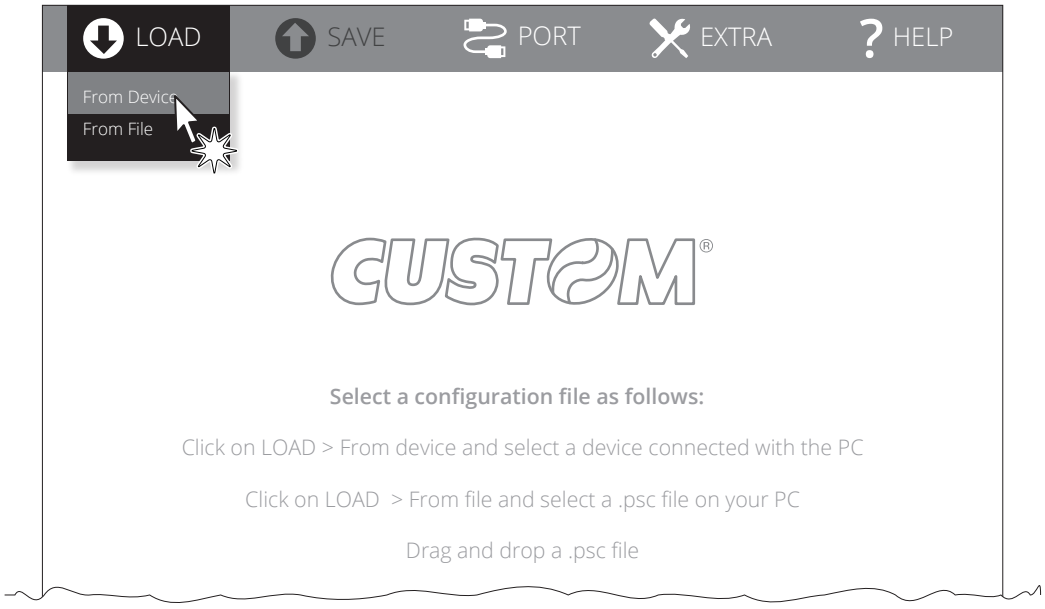


Connect the device to a PC directly (see paragraph 4.3), without using HUB devices.

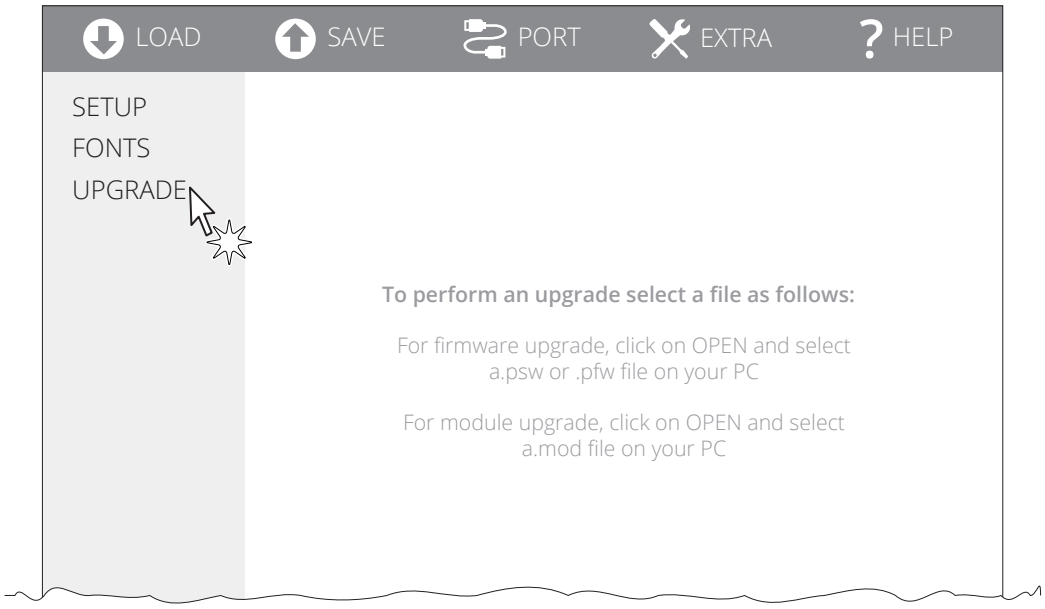
3



Start the “PrinterSet” software tool.



Click on LOAD > FROM DEVICE and
select the device connected to the PC.



Click on UPGRADE and follow
the instructions shown on the screen.

ATTENTION:
During saving, it is strongly discouraged to disconnect the communication cable or to remove the power supply of the PC or the device.

9 SPECIFICATIONS

9.1 Hardware specifications

GENERAL	
Sensors	Head temperature, input paper presence, output paper presence, CIS reader, front and upper cover open, external low paper, tilting slide position (only for models with selector), dual feeder paper input (only for models with dual feeder)
Emulations	SERVICE, ATB, BTP
Printing driver	Windows XP VISTA (32/64 bit) Windows 7 (32/64 bit) Windows 8 (32/64 bit) Windows 8.1 (32/64 bit) Windows 10 (32/64 bit) Self-installing driver for Virtual COM (32/64 bit) Linux (32/64 bit) Android
INTERFACES	
USB port	12 Mbit/s
RS232 serial port	from 9600 bps to 115200 bps
Ethernet port	10 Mbit/s, 100 Mbit/s
MEMORIES	
Flash memory	internal 2 MB + external 8 MB
RAM memory	internal 640 kB + external 8 MB
PRINTER	
Resolution	203 dpi (8 dot/mm)
Printing method	Thermal, fixed head

Head life [1]	
Abrasion resistance [2]	100 km (with recommended paper)
Pulse durability	100 M (12.5% duty cycle)
Printable barcodes	Codabar, Code 32, Code 39, Code 93, Code 128, EAN-8, EAN-13, GS1 DataBar Stacked, GS1 DataBar Stacked Omnidirectional, GS1 DataBar Expanded Stacked, ITF, UPC-A, UPC-E, Aztec, Aztec Rune, Data Matrix, PDF417, QRCode, Micro QRCode
Readable barcodes [3]	Codabar, Code 39, Code 93, Code 128, EAN-8, EAN-13, DataBar Omnidirectional, DataBar Stacked, DataBar Limited, DataBar Expanded, DataBar Expanded Stacked, ITF, UPC-A, UPC-E, Aztec, CC-A, CC-B, CC-C, Data Matrix, Go Gode II, Han Xin Barcode, Maxi Code, PDF417, Micro PDF417, QRCode, Micro QRCode, Micro QRCode Extended
Printing speed [1] [4]	High Quality = 148 mm/s Normal = 200 mm/s High Speed = 220 mm/s
PAPER	
Type of paper	Thermal rolls, heat-sensitive side on outside of roll Thermal Fan-fold module
Paper width	54 mm (according to IATA BTP specifications - resolution 740) 82.5 mm (according to IATA ATB specifications - resolution 722e)
Paper weight	according to IATA specifications
Paper thickness	according to IATA specifications
External roll diameter [5]	
KPM862 DF KPM862 DF-EJC TK862 DF TK862 DF-EJC	max. 150 mm
KPM862 STD KPM862 EJC TK862 STD TK862 EJC TK862 VR TK862 IDU	max. 300 mm

Internal roll core diameter	25 mm (+ 1 mm)
Core thickness	2 mm (+ 1 mm)
Paper end	Not attached to roll core
Core type	Cardboard or plastic
AUTOCUTTER	
Paper cut	Total cut
Estimated life (1)	1500000 cuts
DEVICES ELECTRICAL SPECIFICATIONS	
Power supply	24 Vdc ± 10%
Typical consumption (4)	1.46 A
Standby consumption	0.08 A
POWER SUPPLY ELECTRICAL SPECIFICATIONS code 963GE020000106 (optional for KPM862 STD, KPM862 EJC, KPM862 DF, KPM862 DF-EJC included with TK862 STD, TK862 EJC, TK862 DF and TK862 VR)	
Power supply voltage	Auto Range, 90-264 Vac
Frequency	from 47 Hz to 63 Hz
Output	24 V, 4.17 A
Power	100 W

ENVIRONMENTAL CONDITIONS	
Operating temperature	
KPM862 STD KPM862 EJC KPM862 DF KPM862 DF-EJC	from -20°C to +60°C (6)
TK862 STD TK862 EJC TK862 VR TK862 IDU TK862 DF TK862 DF-EJC	from 0°C to +40°C
Relative humidity (RH)	from 10% to 95% (w/o condensation)
Storage temperature	from -20 °C to +70 °C
Storage relative humidity (RH)	from 10% to 95% (w/o condensation)

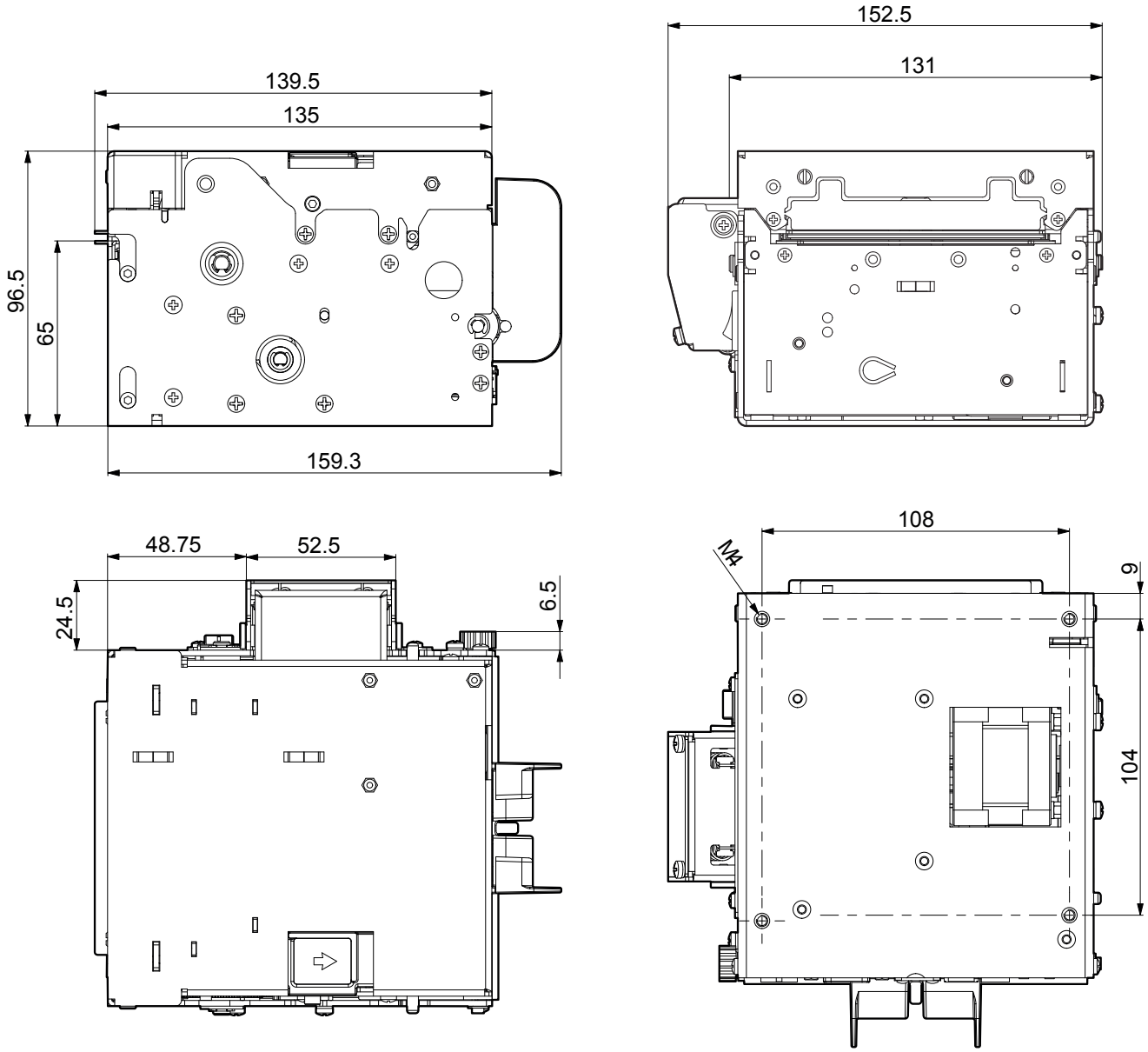
NOTES:
(1) : Respecting the regular schedule of cleaning for the device components.
(2) : Damages caused by scratches, ESD and electromigration are excluded.
(3) : Purchase the specific license. Contact technical assistance or your dealer.
(4) : Referred to a standard CUSTOM receipt (L = 10 cm, Density = 12.5% dots on).
(5) : For external rolls diameter higher to Ø150 mm it's recommended to use a paper pretensioning device.
(6) : If you use the device with the power supply code 963GE020000106, supplied as an accessory, the operating temperature range is from 0 °C to +40 °C.

9.2 Device dimensions

KPM862 STD

Length	163.8 mm
Height	96.5 mm
Width	152.5 mm
Weight	2150 g

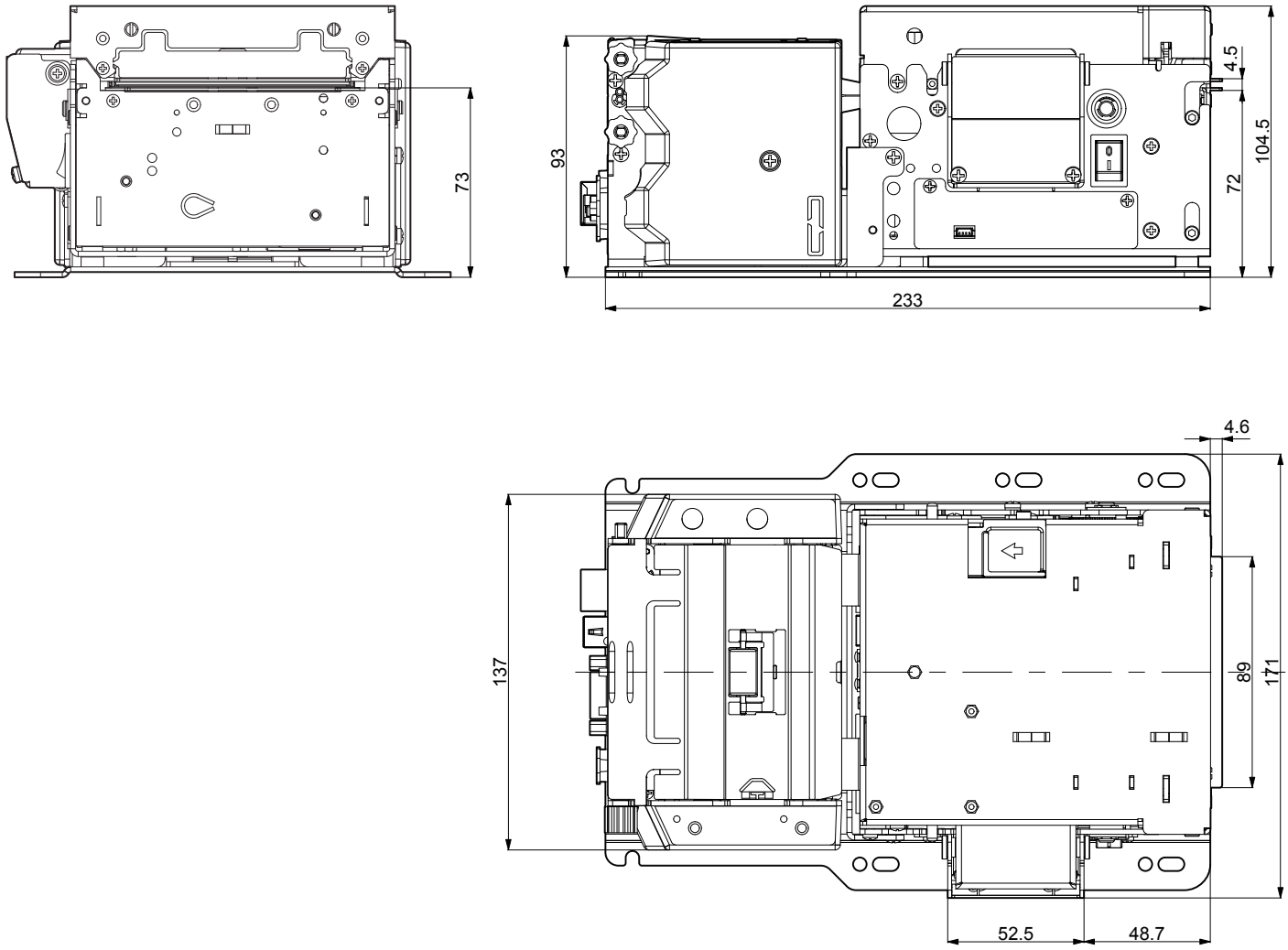
All the dimensions shown in following figure are in millimetres and referred to devices with cover closed.



KPM862 DF

Length	237.6 mm
Height	104.5 mm
Width	171 mm
Weight	3400 g

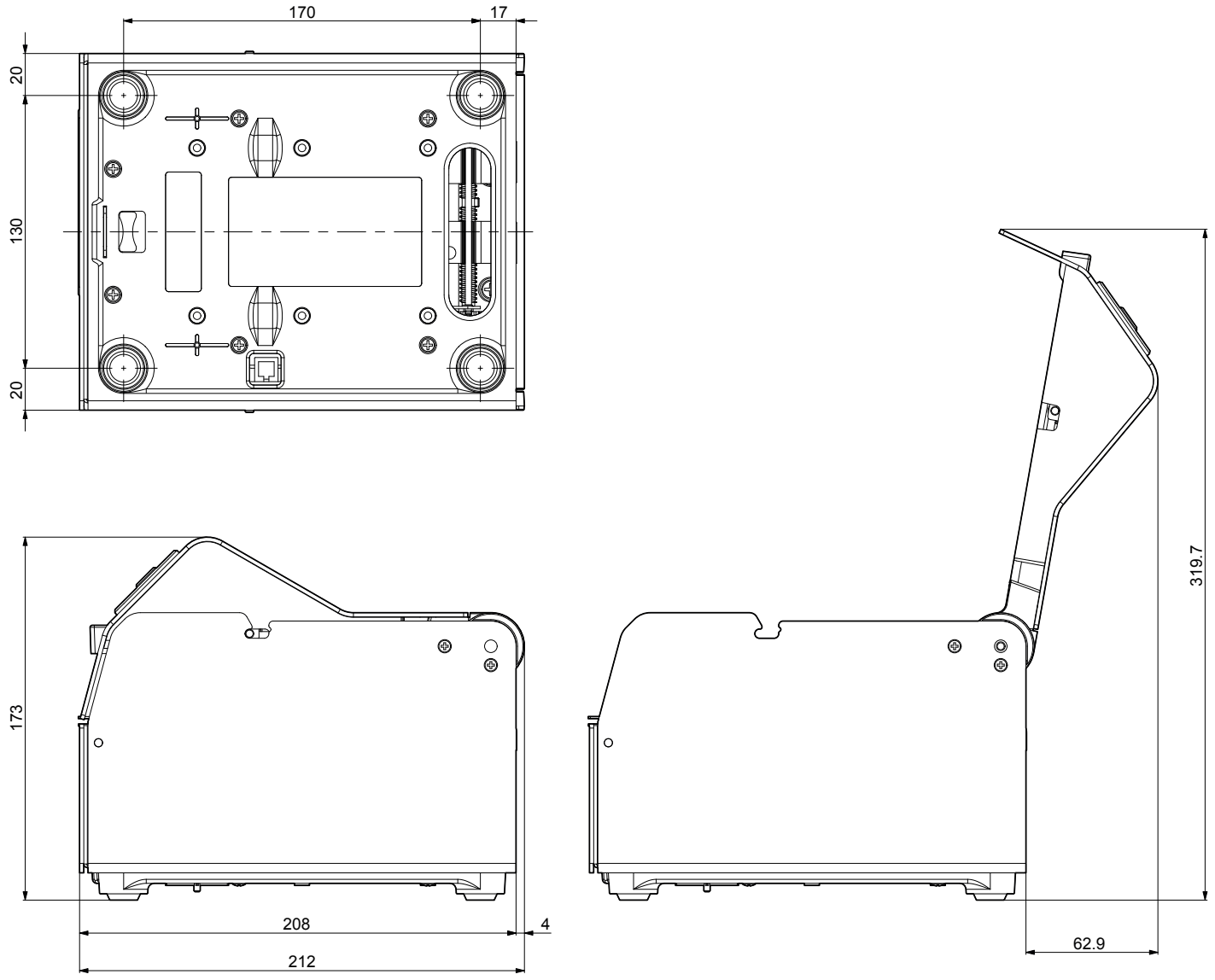
All the dimensions shown in following figure are in millimetres and referred to devices with cover closed.



TK862 STD, TK862 VR, TK862 IDU

Length	216 mm (with cover closed) 274.9 mm (with cover open)
Height	173 mm (with cover closed) 319.7 mm (with cover open)
Width	170 mm
Weight	4850 g

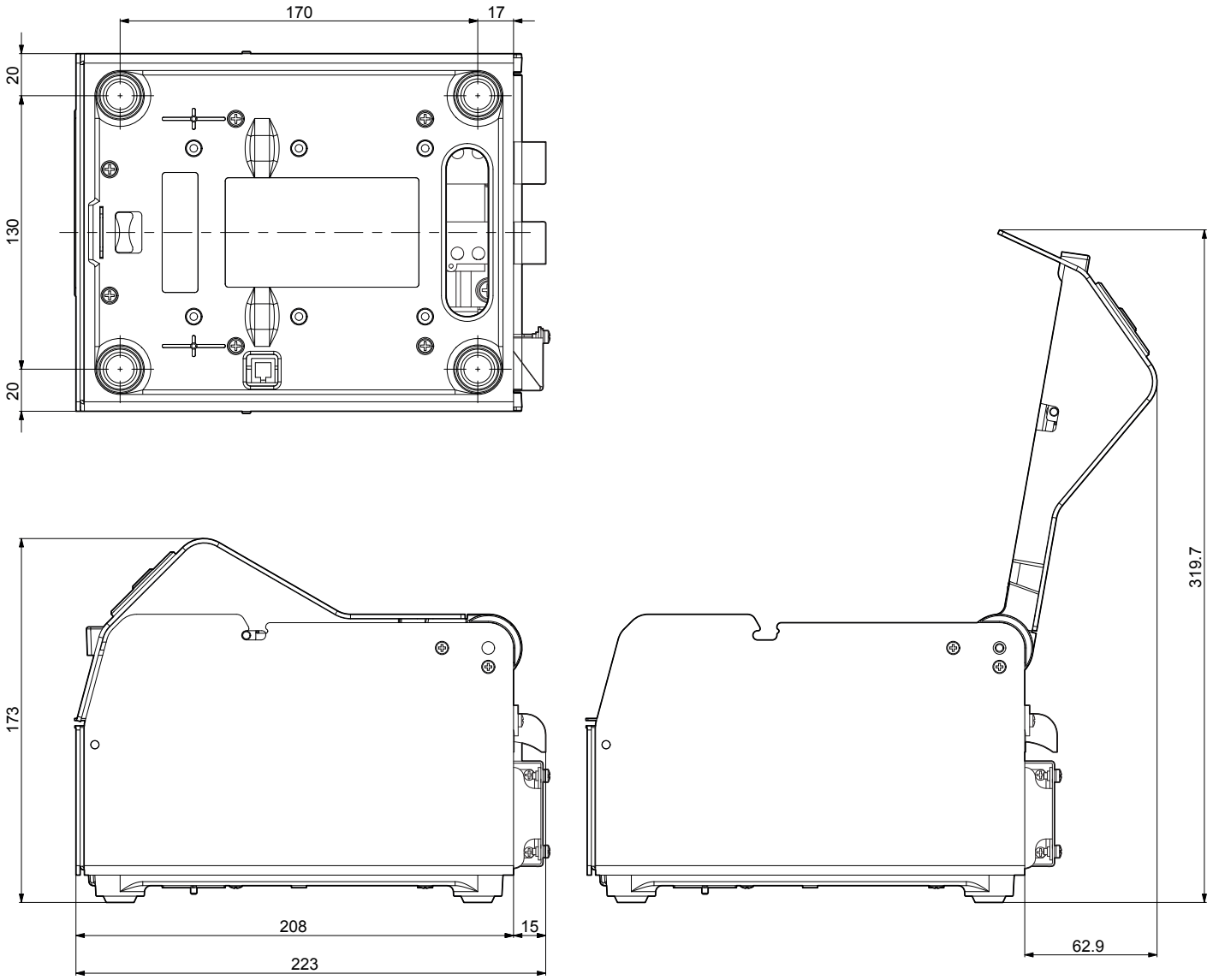
All the dimensions shown in following figure are in millimetres.



TK862 EJC

Length	223 mm (with cover closed) 274.9 mm (with cover open)
Height	173 mm (with cover closed) 319.7 mm (with cover open)
Width	170 mm
Weight	5000 g

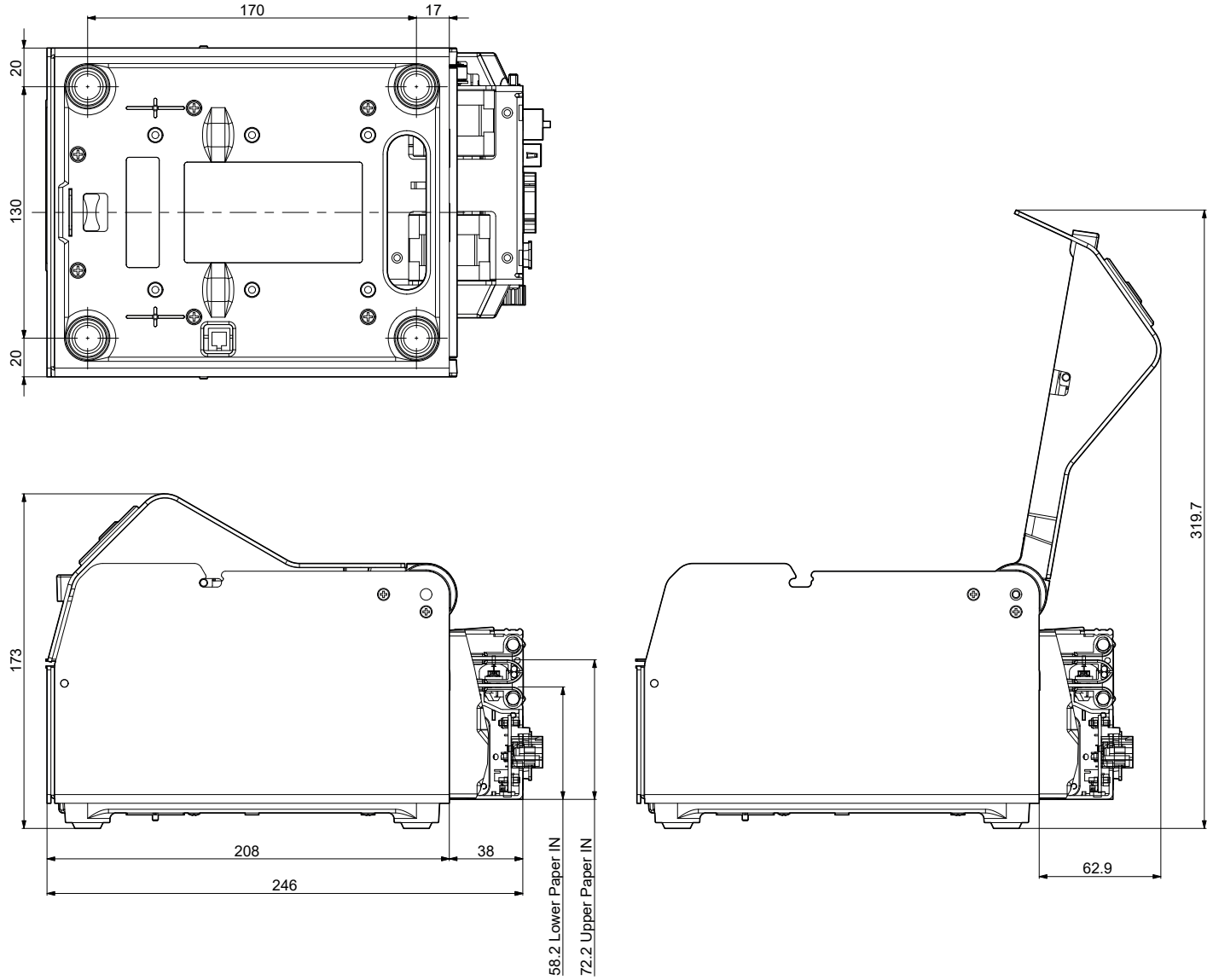
All the dimensions shown in following figure are in millimetres.



TK862 DF

Length	246 mm (with cover closed) 274.9 mm (with cover open)
Height	173 mm (with cover closed) 319.7 mm (with cover open)
Width	170 mm
Weight	6100 g

All the dimensions shown in following figure are in millimetres.

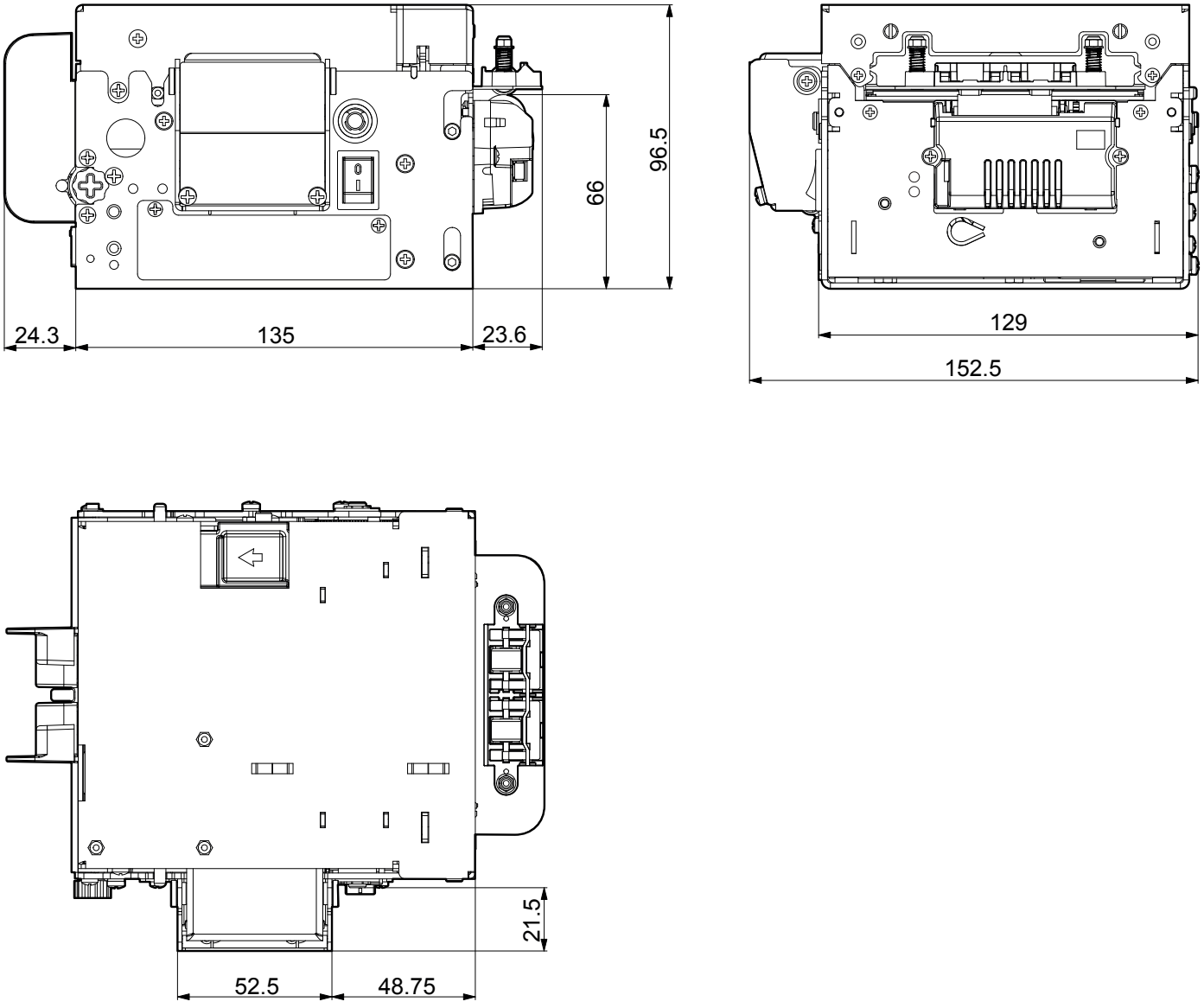


9.3 Device dimensions with ejector group code 976LK010000001 (optional)

KPM862 EJC

Length	182.9 mm
Height	96.5 mm
Width	152.5 mm
Weight	2300 g

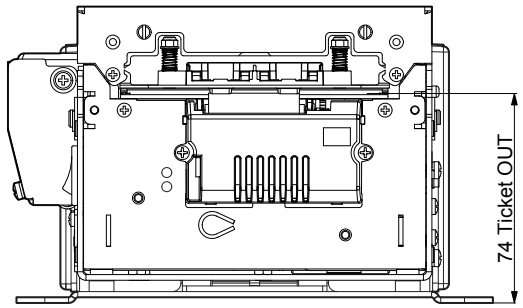
All the dimensions shown in following figure are in millimetres and referred to devices with covers closed.

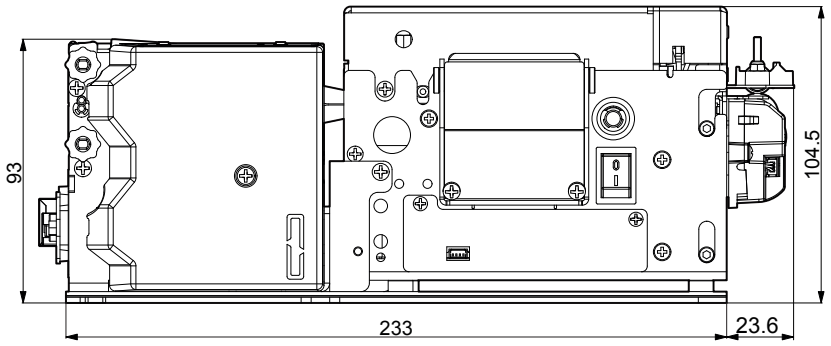


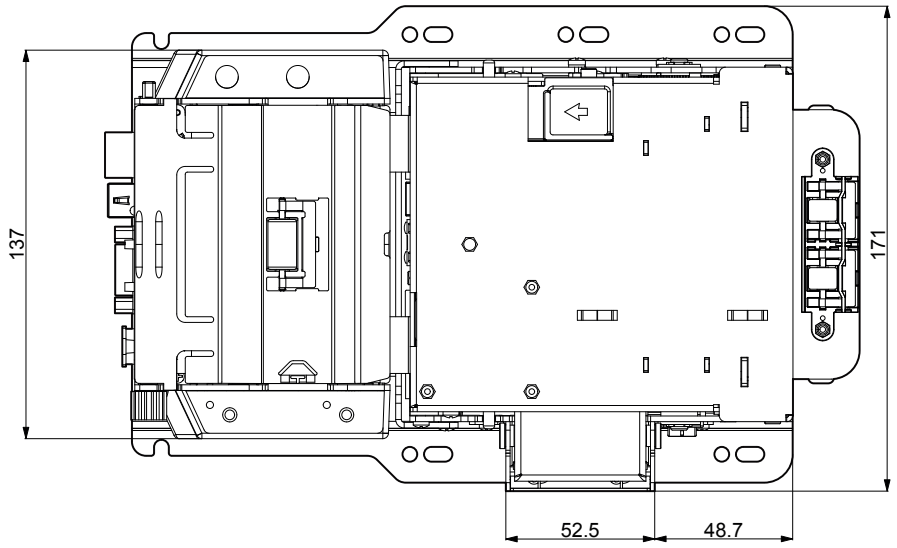
KPM862 DF-EJC

Length	256.6 mm
Height	104.5 mm
Width	171 mm
Weight	3550 g

All the dimensions shown in following figure are in millimetres and referred to devices with covers closed.



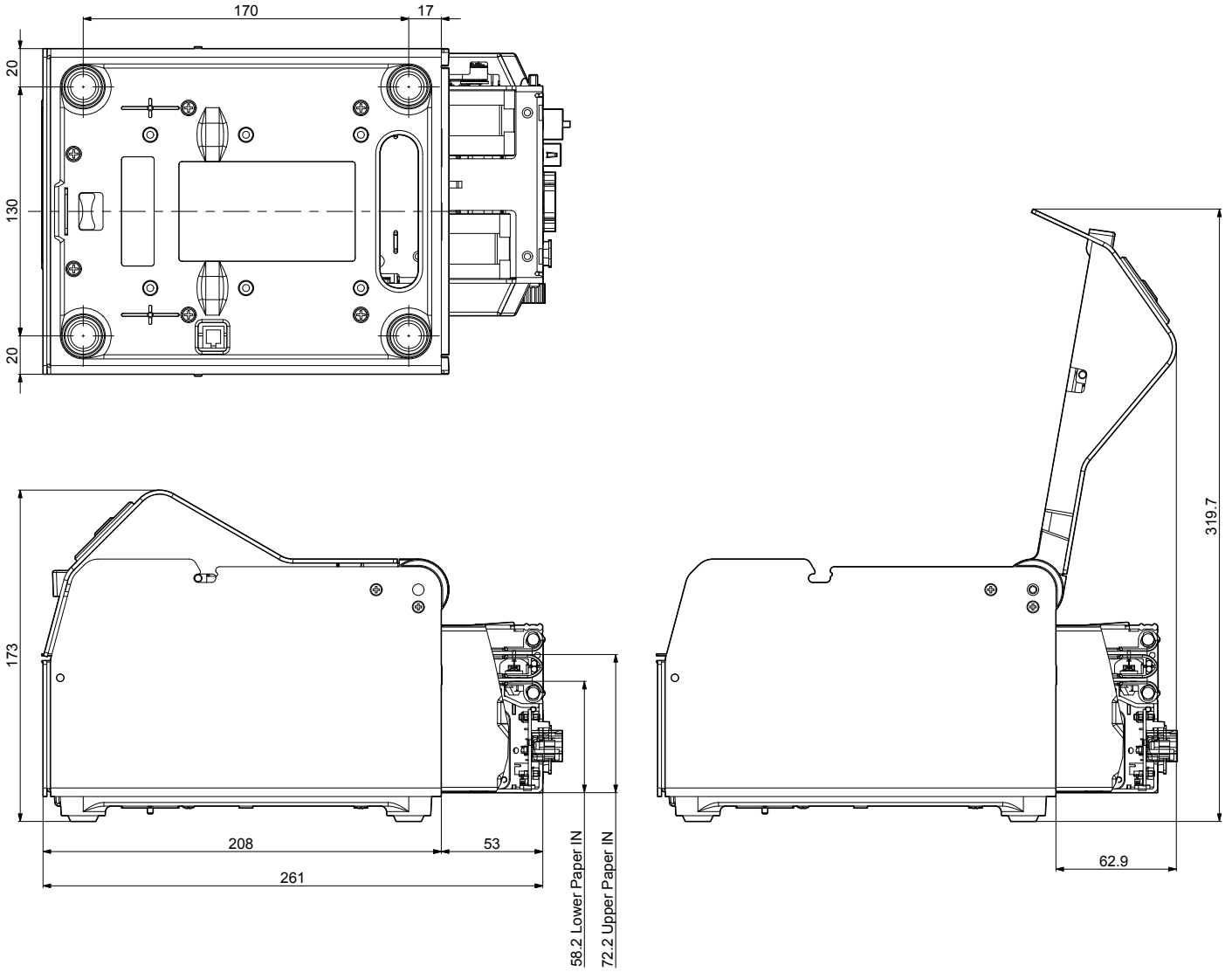




TK862 DF-EJC

Length	261 mm (with cover closed) 274.9 mm (with cover open)
Height	173 mm (with cover closed) 319.7 mm (with cover open)
Width	170 mm
Weight	6250 g

All the dimensions shown in following figure are in millimetres.

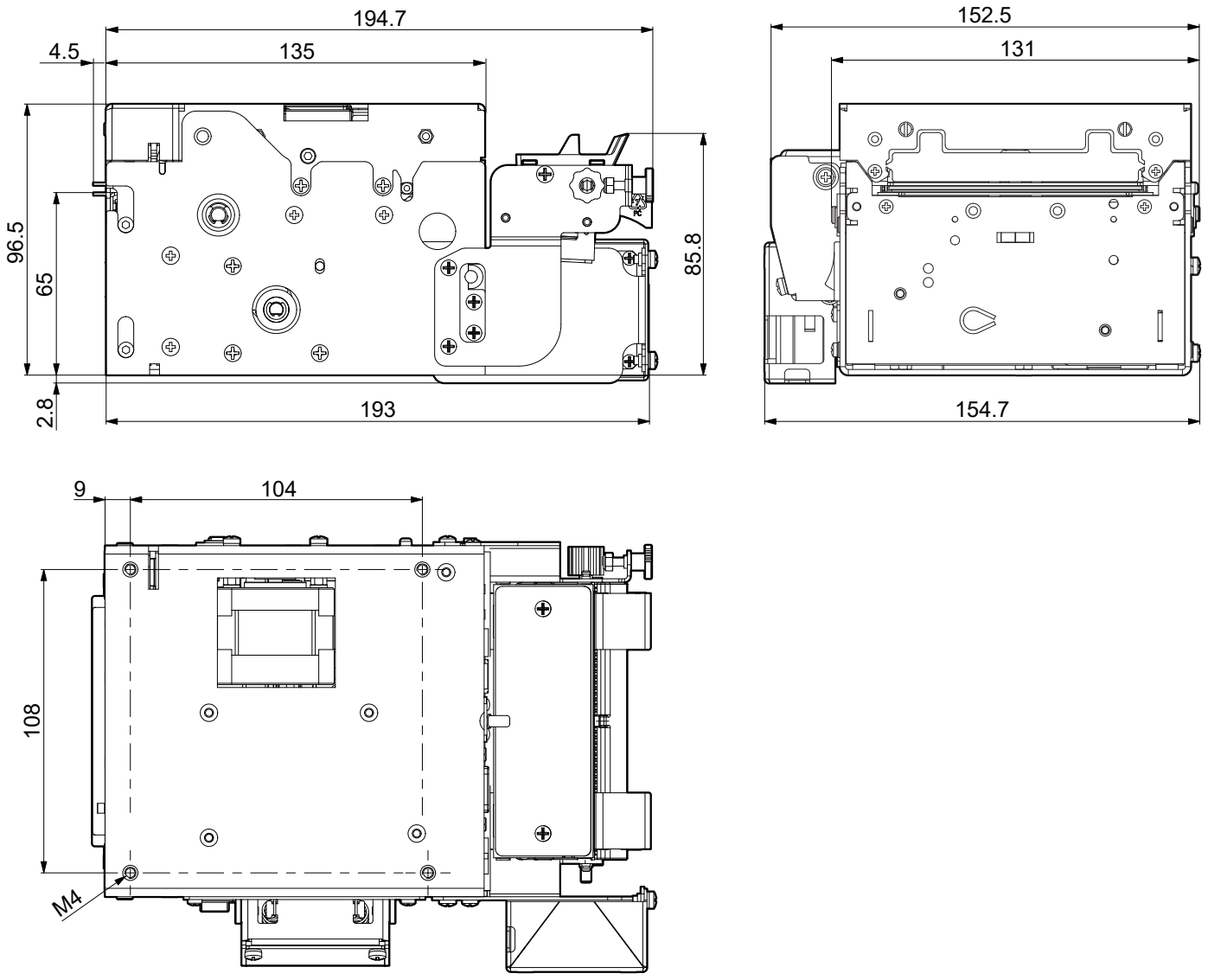


9.4 Device dimensions with RFID kit code 918LK010100000 (optional)

KPM862 STD

Length	194.7 mm
Height	99.3 mm
Width	154.7 mm

All the dimensions shown in following figure are in millimetres and referred to devices with cover closed.

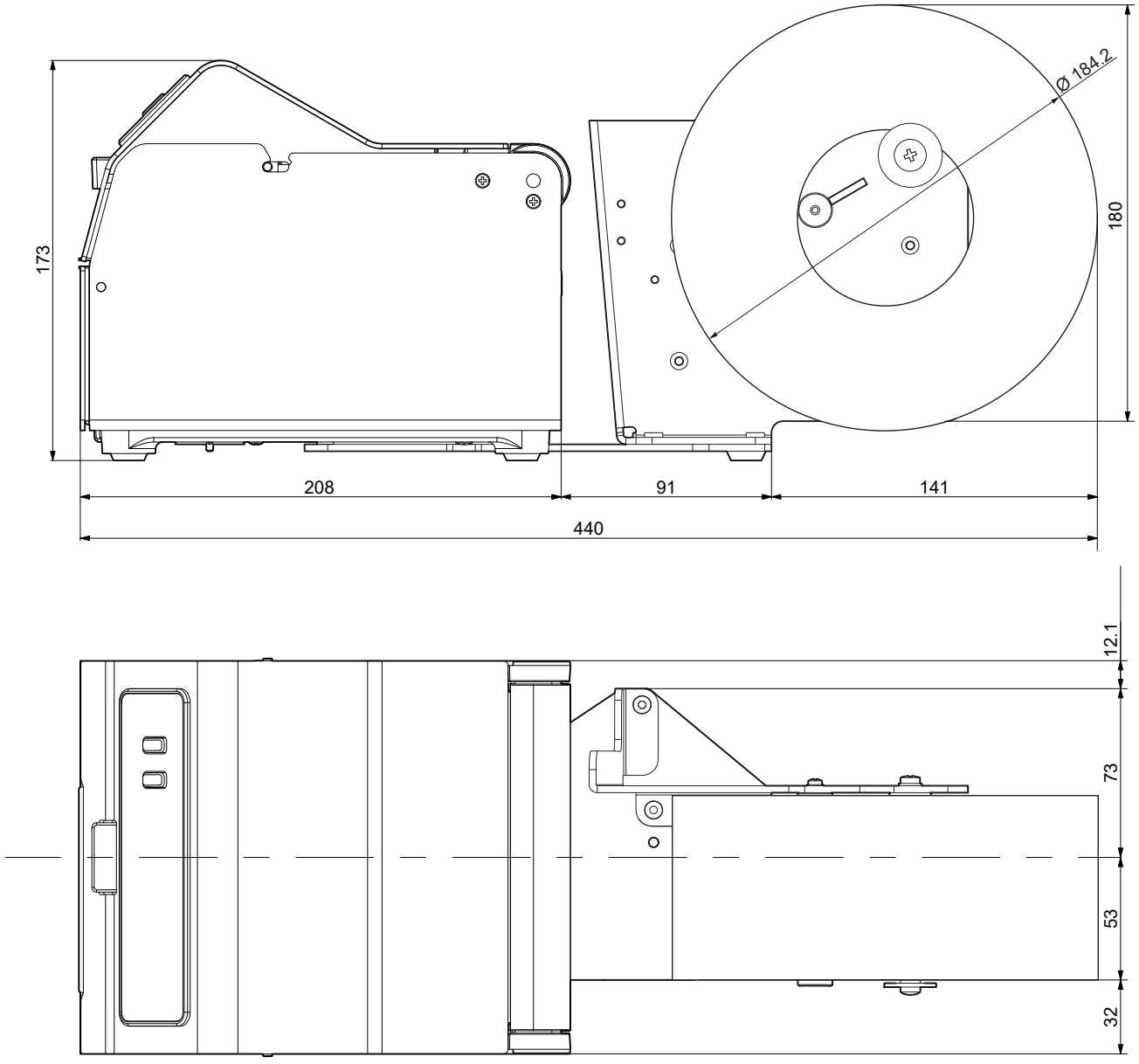


9.5 Device dimensions with paper roll holder code 974LU010000004 (optional)

TK862 STD, TK862 IDU, TK862 VR

Length	max. 440 mm
Height	max. 197 mm
Width	194 mm
Supported paper rolls	54 mm width, 76.2 mm inner core, 184.2 mm external diameter 82 mm width, 25 mm inner core, 150 mm external diameter

All the dimensions shown in following figure are in millimetres and referred to devices with covers closed.

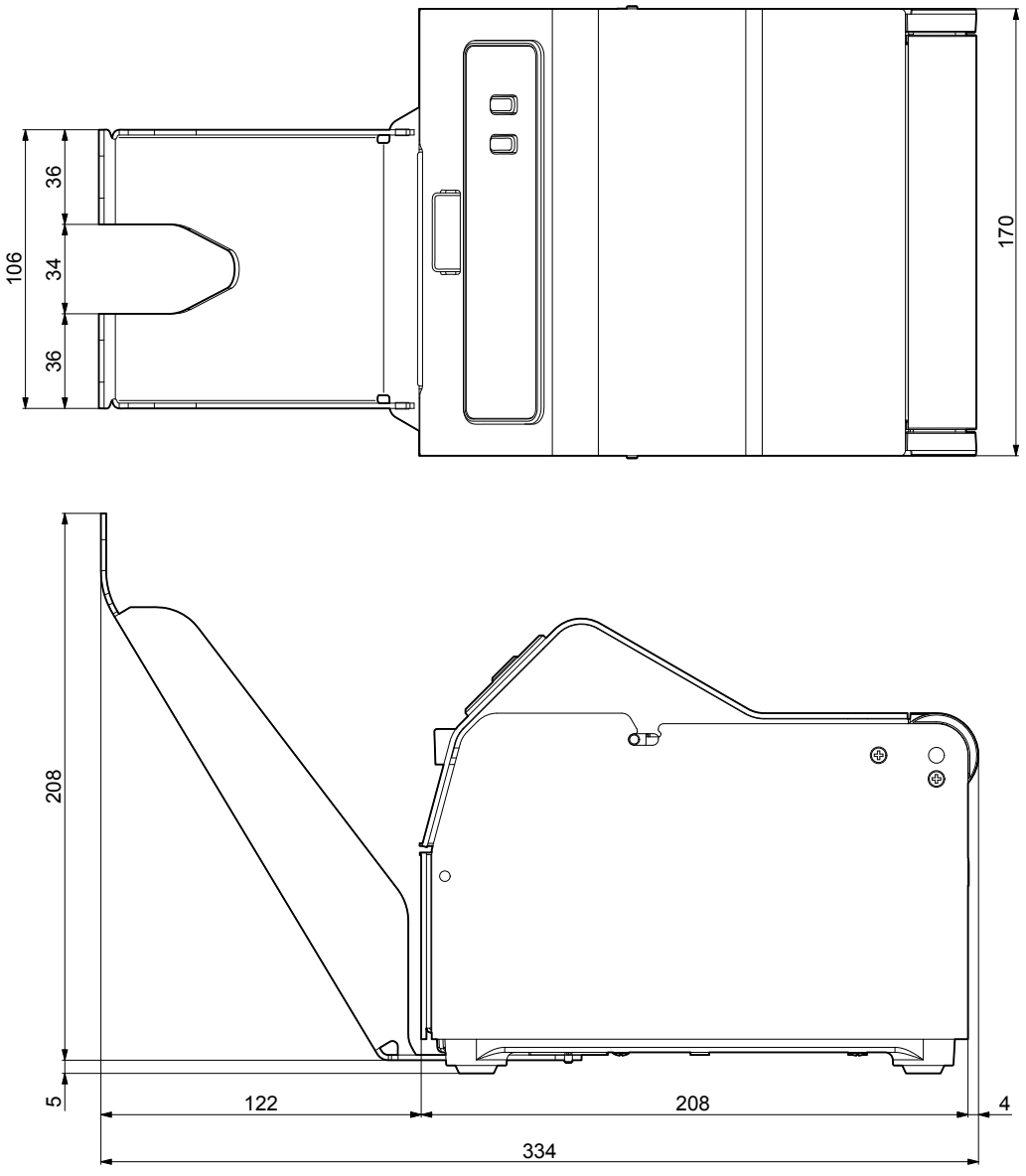


9.6 Device dimensions with vertical ticket tray code 974LU010000003 (optional)

TK862 STD, TK862 IDU, TK862 VR

Length	334 mm
Height	213 mm
Width	170 mm

All the dimensions shown in following figure are in millimetres and referred to devices with covers closed.

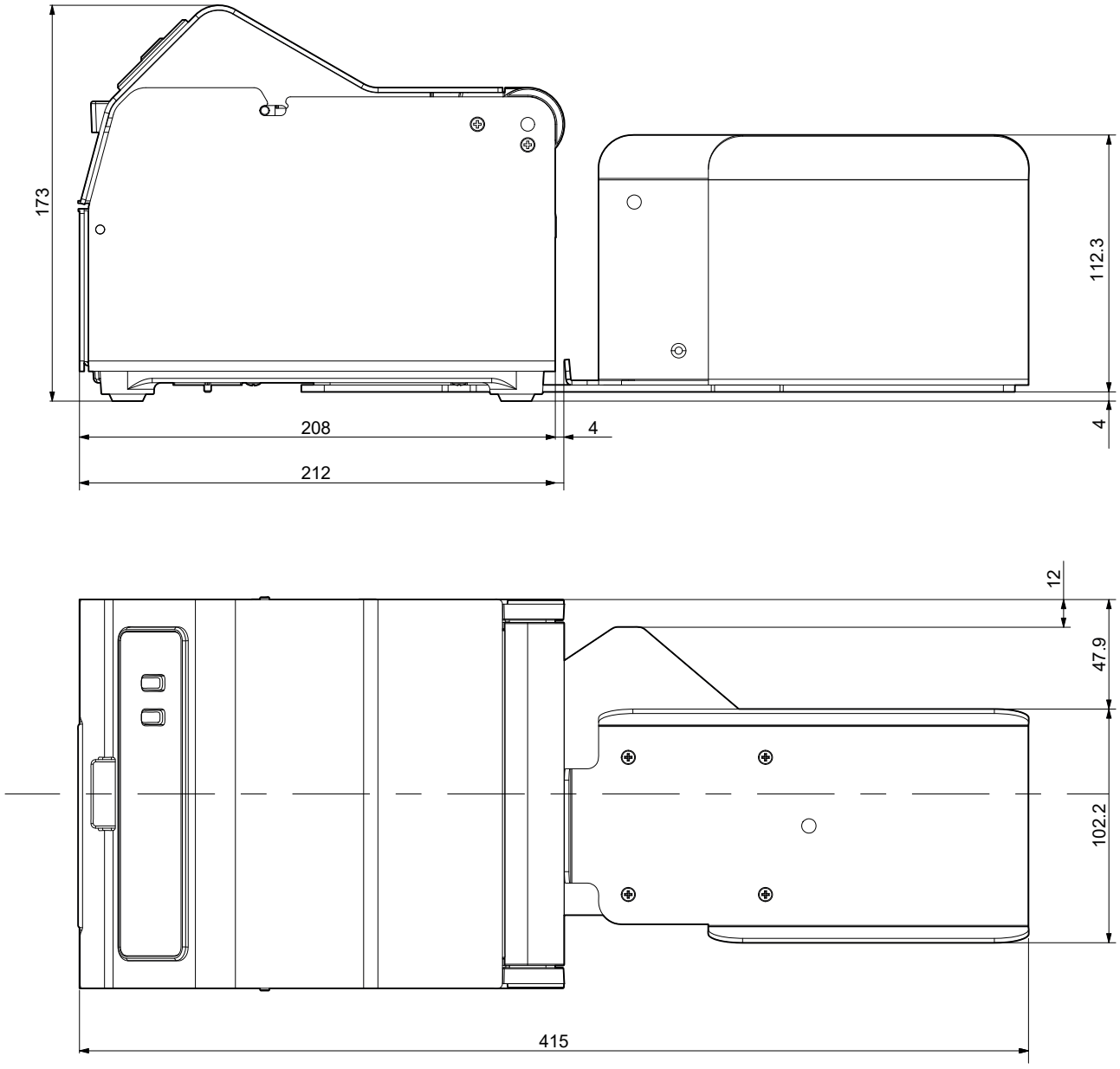


9.7 Device dimensions with rear ticket tray code 974LU010000005 (optional)

TK862 STD, TK862 IDU, TK862 VR

Length	415 mm
Height	173 mm
Width	170 mm

All the dimensions shown in following figure are in millimetres and referred to devices with covers closed.



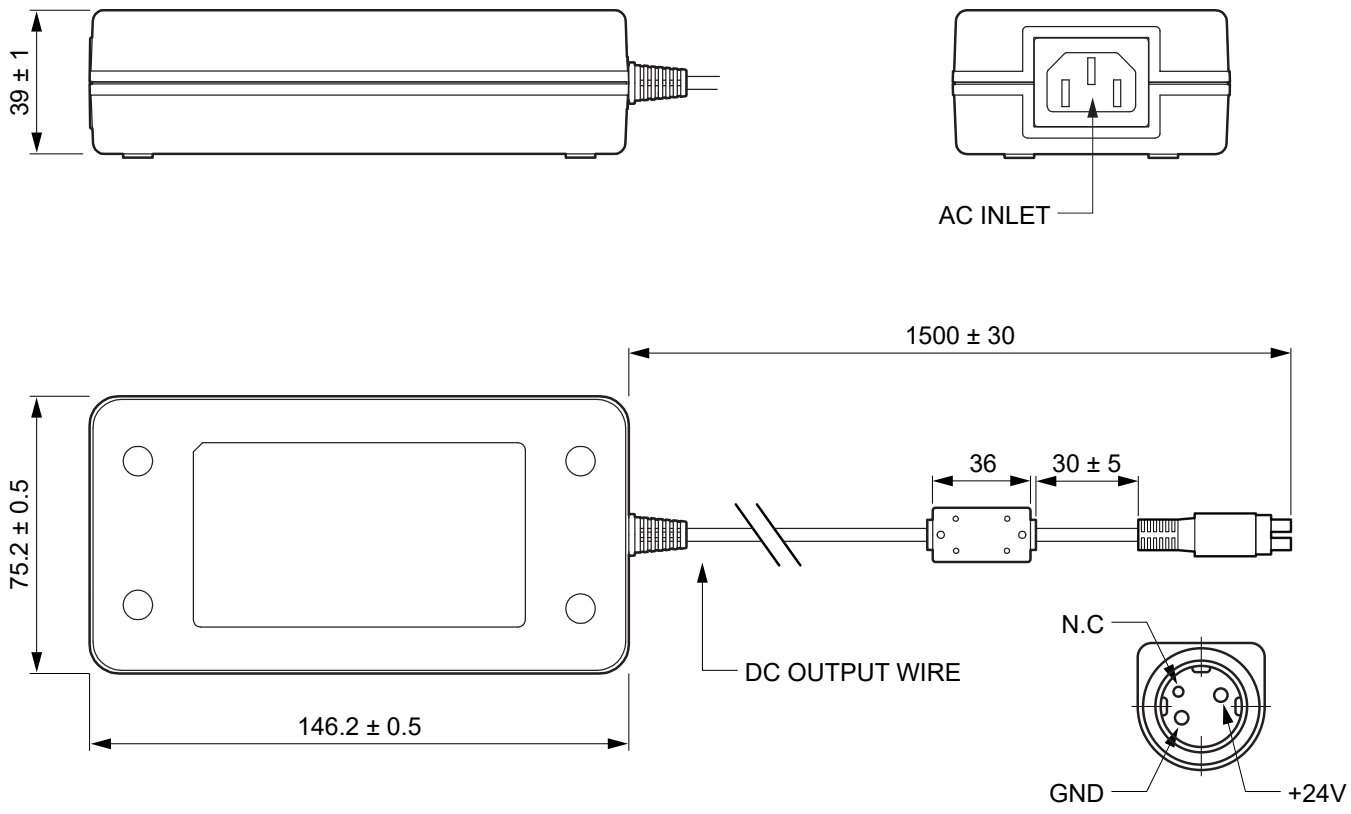
9.8 Power supply and power cord dimensions

The following table shows the dimensions of the power supply, the power cord and the adapter for power supply optionals for the device.

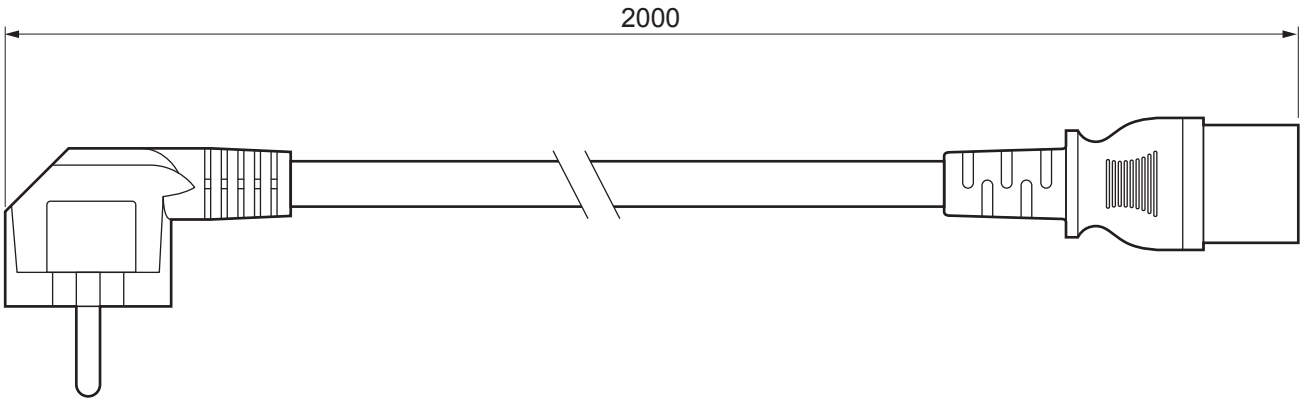
POWER SUPPLY code 963GE020000106 (optional for KPM862 STD and KPM862 DF)	
Length	146.2 mm
Height	39 mm
Width	75.2 mm
POWER CORD WITH SCHUKO PLUG code 26100000000311 (optional for every model)	
Length	2000 mm
POWER CORD WITH UK PLUG code 26100000000313 (optional for every model)	
Length	2000 mm

All the dimensions shown in following figures are in millimetres.

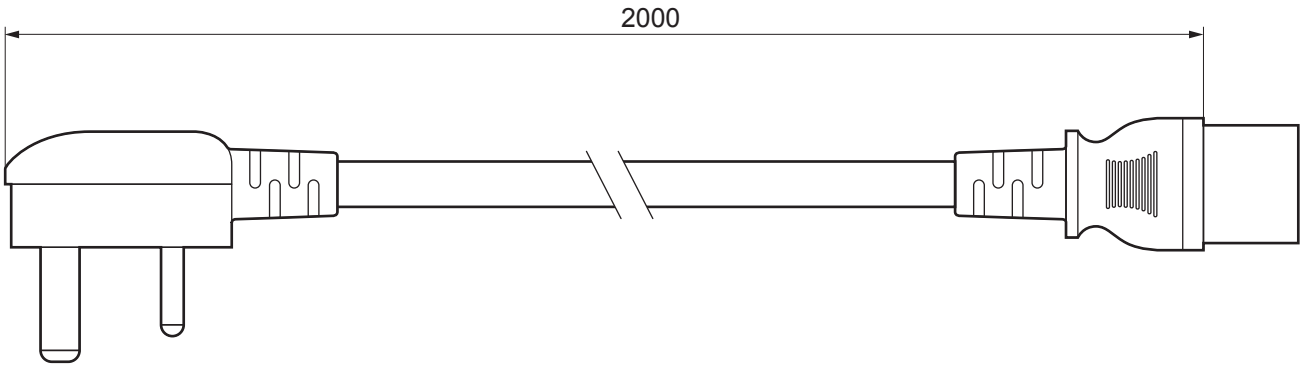
POWER SUPPLY code 963GE020000106



POWER CORD code 26100000000311



POWER CORD code 26100000000313



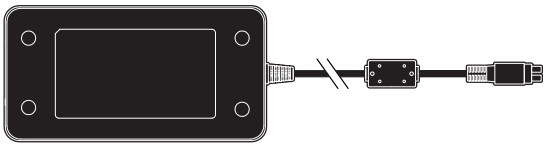
10 ACCESSORIES

The following table shows the list of available accessories for device.

KPM862 STD, KPM862 DF

963GE020000106

POWER SUPPLY
(for technical specifications, see paragraph 9.1)



26100000000311

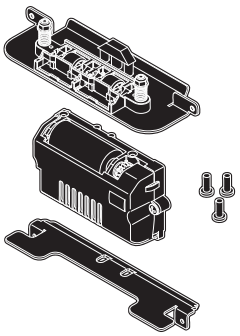
POWER CORD SCHUKO PLUG
length = 2 m
(see paragraph 9.8)

26100000000313

POWER CORD UK PLUG
length = 2 m
(see paragraph 9.8)

976LK010000001

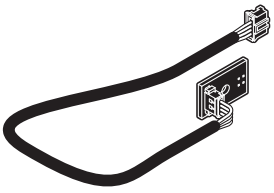
EJECTOR DEVICE
To use this accessory it is necessary to set, via PrinterSet, the setup parameter “Ejecter Type” to the value “Ejecter (see chapter 6)



976LN010000001

EXTERNAL LOW PAPER SENSOR
board with cable 850 mm long

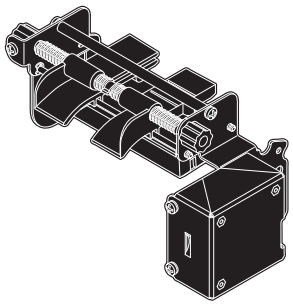
(only for KPM862 STD)



918LK010100000

RFID UHF KIT
(see paragraph 9.4)

(only for KPM862 STD, KPM862 EJC)



TK862 STD, TK862 EJC, TK862 DF, TK862 VR

26100000000311

POWER CORD SCHUKO PLUG
length = 2 m
(see paragraph 9.8)

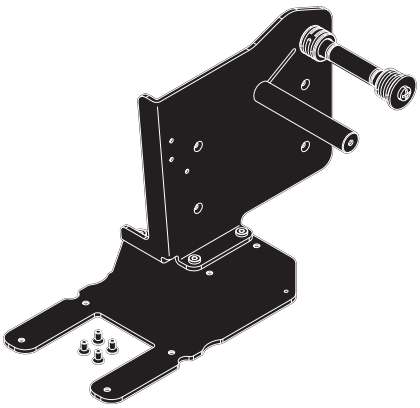
26100000000313

POWER CORD UK PLUG
length = 2 m
(see paragraph 9.8)

974LU010000004

PAPER ROLL HOLDER
(see paragraph 9.5)

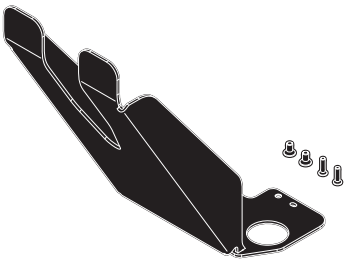
only for TK862 STD, TK862 VR, TK862 IDU



974LU010000003

VERTICAL TICKET TRAY
(see paragraph 9.6)

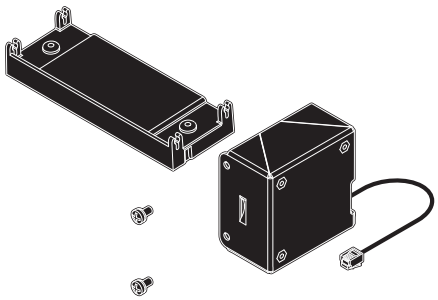
only for TK862 STD, TK862 VR, TK862 IDU



918LU010100000

RFID UHF KIT

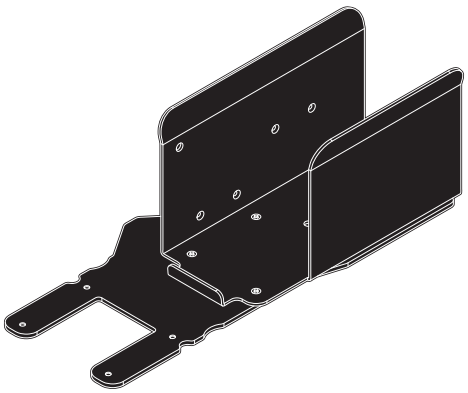
(only for TK862 STD, TK862 EJC, TK862 VR)



974LU010000005

REAR TICKET TRAY
(see paragraph 9.7)

only for TK862 STD, TK862 VR, TK862 IDU



11 TECHNICAL SERVICE

In case of failure, contact the technical service accessing the website www.custom4u.it and using the support tools on the homepage. It is advisable to keep the identification data of the product at hand.

The product code, the serial number and the hardware release number can be found on the product label (see paragraph 3.10).
The firmware release number (SCODE) can be found:

- on the setup report (see paragraph 6.1)
- connecting the device to a PC and starting the “PrinterSet” tool (see paragraph 6.2)

Code : 0576200M000109 Rev.1.40

CUSTOM S.p.A.
World Headquarters
Via Berettine, 2/B - 43010 Fontevivo, Parma ITALY
Tel. +39 0521 680111 - Fax +39 0521 610701
info@custom.biz - www.custom.biz