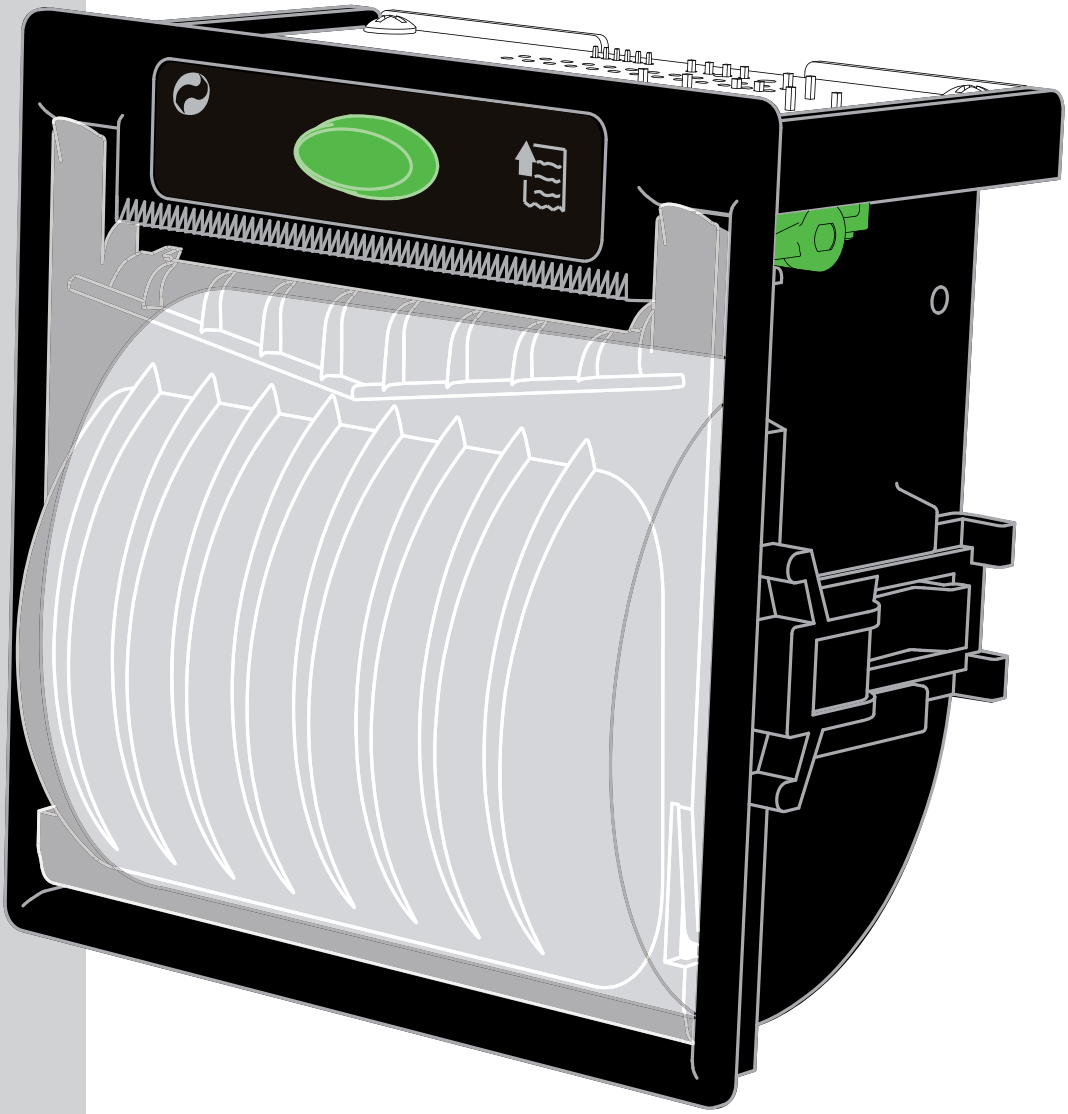
PLUS II

USER MANUAL



OEM

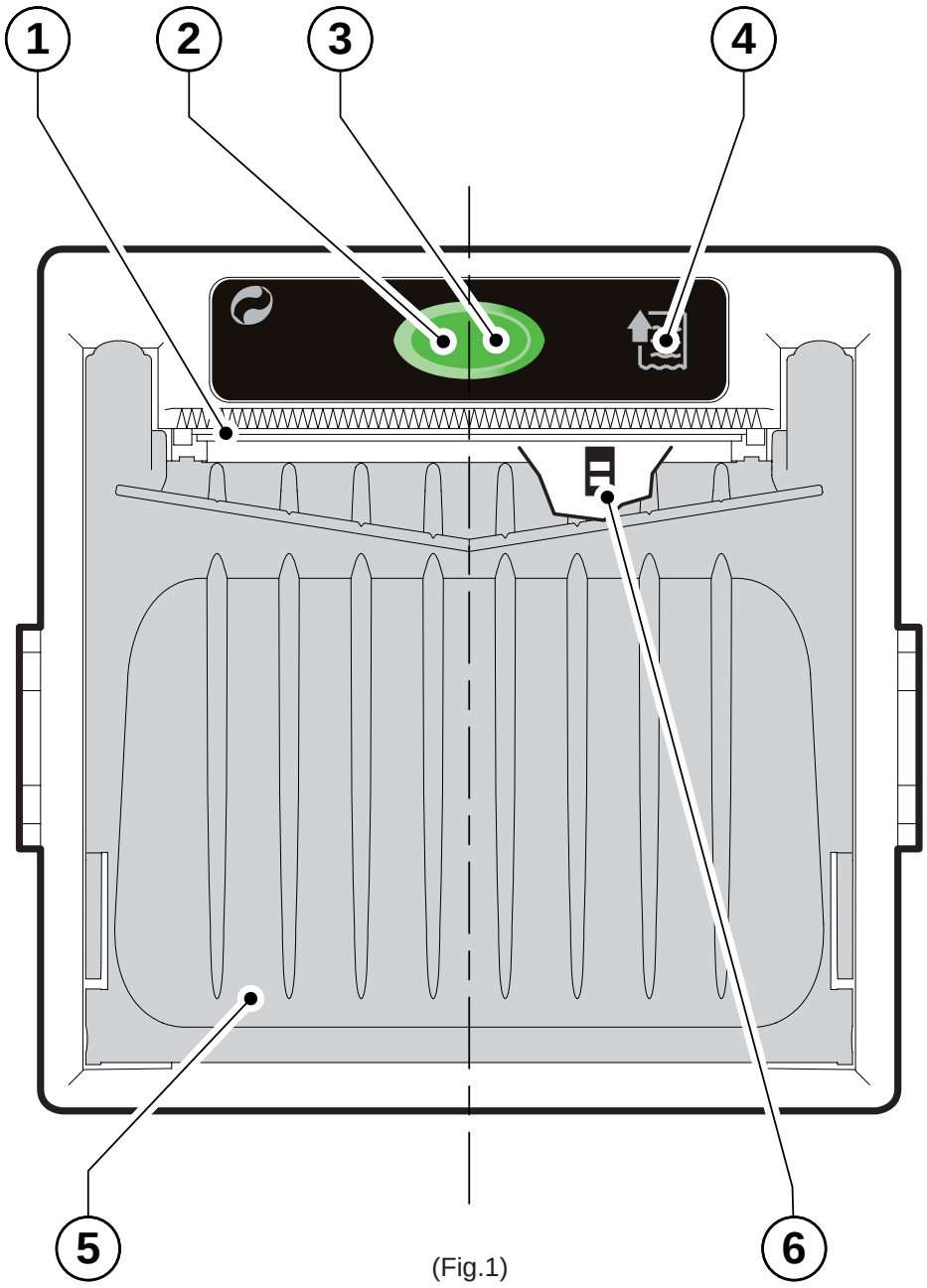
CUSTOM ENGINEERING S.p.A.
Str. Berettine 2 - 43010 Fontevivo (PARMA) - Italy
Tel.: +39 0521-680111 - Fax: +39 0521-610701
http: www.custom.it

Customer Service Department:
Tel.: +39 059 88 69 587
Email: support@custom.it

PRINTER COMPONENTS

A. PLUS II Front view

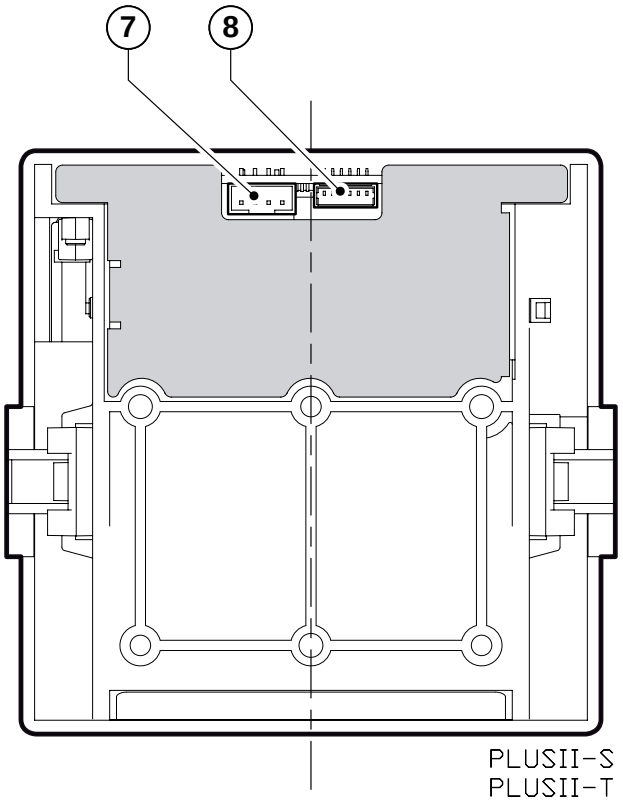
1- Paper mouth
2- STATUS Led
3- OPEN key (for paper roll compartment opening)
4- FEED key
5- Paper roll compartment
6- Paper end sensor



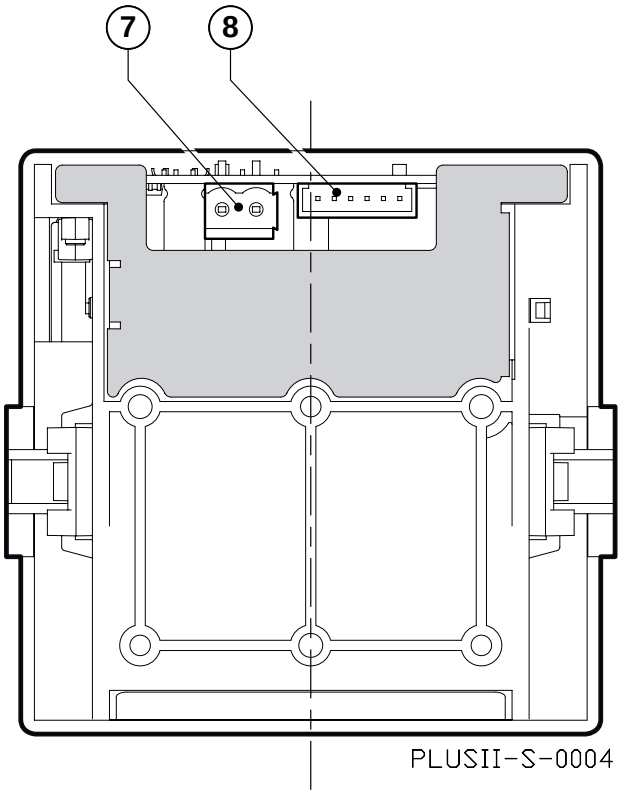
(Fig.1)

B. PLUS II Rear view

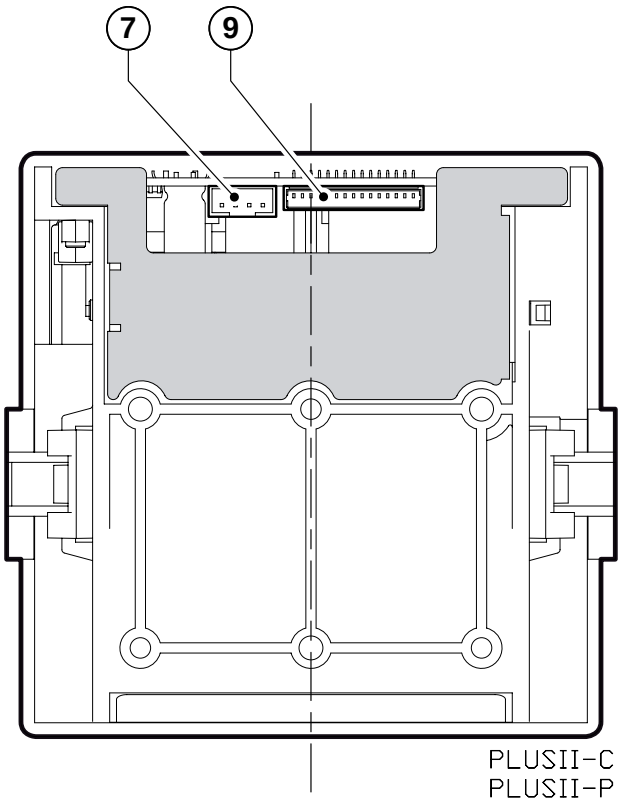
7- Power supply connector
8- RS232 / TTL Serial interface connector
9- CENTRONICS / TTL Parallel interface connector



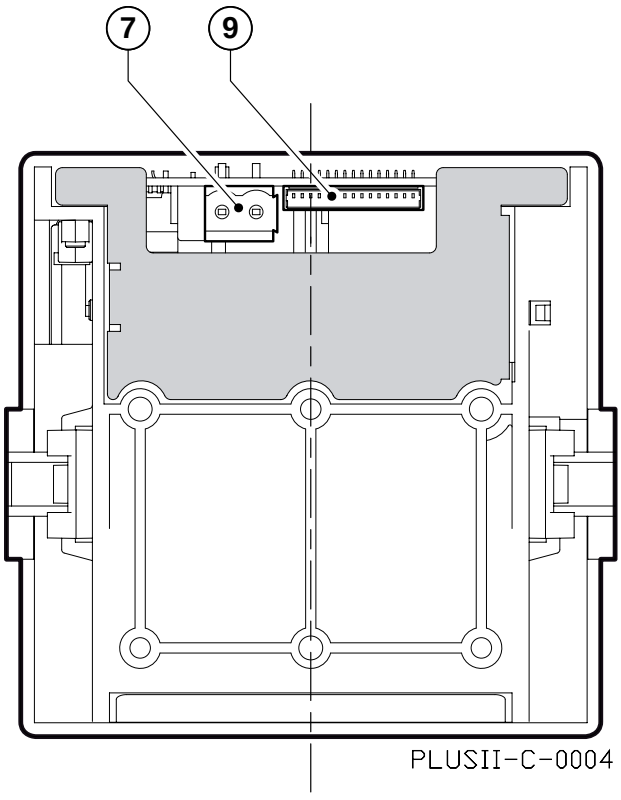
PLUSII-S
PLUSII-T



PLUSII-S-0004



PLUSII-C
PLUSII-P



PLUSII-C-0004

MANUAL CONTENTS

In addition to the Introduction which includes a description of the explanatory notes used in the manual, general safety information, how to unpack the printer and a brief description of the printer including its basic features, this manual is organized as follows:

Chapter 1: Contains the information required for correct printer installation and its proper use
Chapter 2: Contains information on interface specifications
Chapter 3: Contains a description of the printer command set
Chapter 4: Contains Technical Specifications of the printer
Chapter 5: Contains the character sets (fonts) used by the printer

EXPLANATORY NOTES USED IN THIS MANUAL

N.B.
Gives important information or suggestions relative to the use of the printer.

WARNING
Information marked with this symbol must be carefully followed to guard against damaging the printer.

DANGER
Information marked with this symbol must be carefully followed to guard against operator injury or damage.

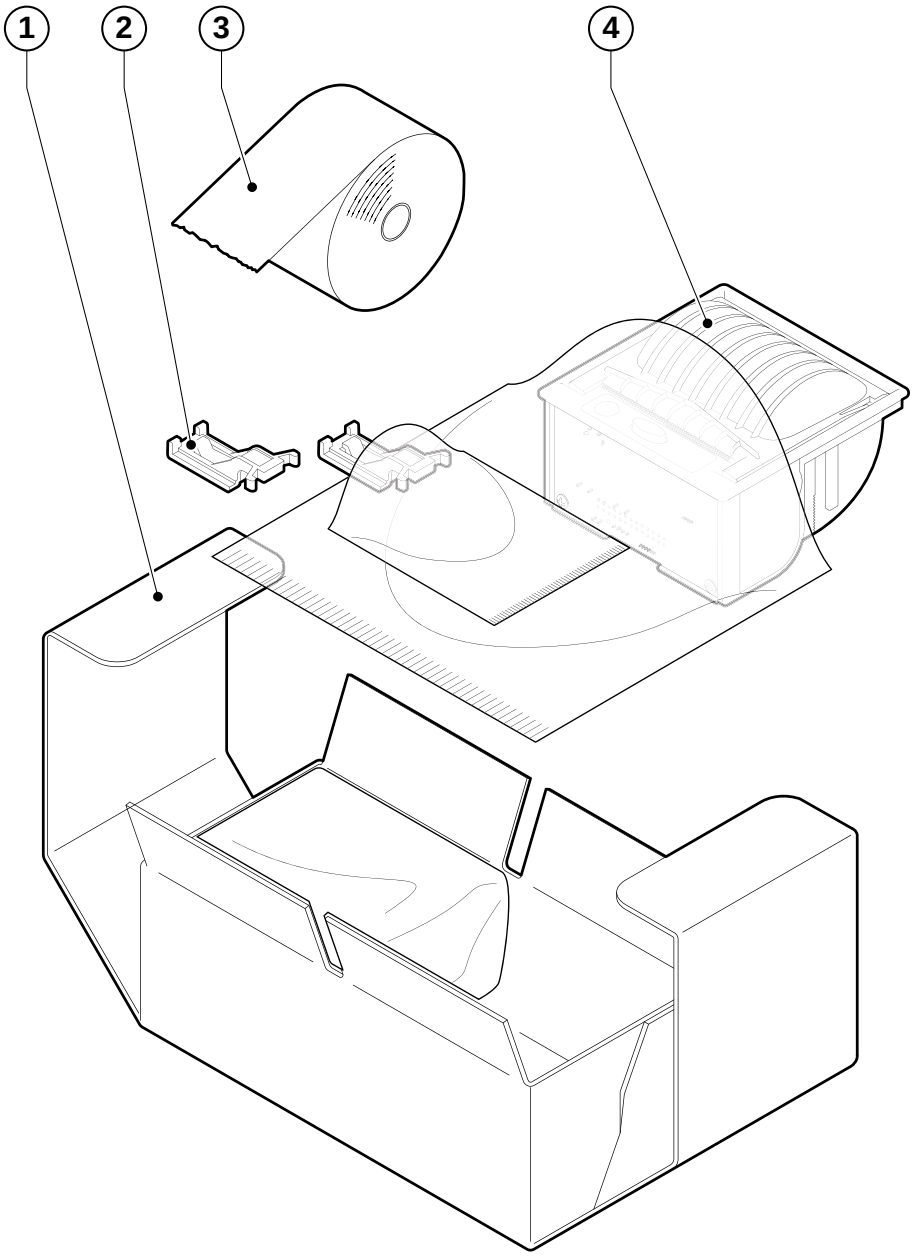
GENERAL SAFETY INFORMATION

- Read and keep the instructions which follow.
- Follow all warnings and instructions indicated on the printer.
- Before cleaning the printer, disconnect the power supply.
- Clean the printer with a damp cloth. Do not use liquid or spray products.
- Do not operate the printer near water.
- Do not use the printer on unstable surfaces that might cause it to fall and be seriously damaged.
- During the integration of the printer, we strongly warn to keep an adeguate paper loop outlet underneath the presenter, in order to allow the receipt being properly printed out.
- Only use the printer on hard surfaces and in environments that guarantee proper ventilation.
- Make sure the printer is placed in such a way as to avoid damage to its wiring.
- Use the type of electrical power supply indicated on the printer label. If in doubt, contact your retailer.
- Do not block the ventilation openings.
- Do not introduce foreign objects of any kind into the printer as this could cause a short circuit or damage parts that could jeopardize printer functioning.
- Do not spill liquids onto the printer.
- Do not carry out technical operations on the printer, with the exception of the scheduled maintenance procedures specifically indicated in the user manual.
- Disconnect the printer from the electricity supply and have it repaired by a specialized technician when:
    - A. The feed connector has been damaged.
    - B. Liquid has seeped inside the printer.
    - C. The printer has been exposed to rain or water.
    - D. The printer is not functioning normally despite the fact that all instructions in the users manual have been followed.
    - E. The printer has been dropped and its outer casing damaged.
    - F. Printer performance is poor.
    - G. The printer is not functioning.

UNPACKING THE PRINTER

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

1. Box
2. Fixing hooks
3. Paper roll
   (inside the printer)
4. Printer



(Fig.1)

- Open the printer packaging
- Take out the fixing hooks and remove it from its plastic covering
- Take out the printer and remove it from its plastic covering
- Keep the box packing materials in the event the printer must be transported/shipped in the future

GENERAL FEATURES

PLUS II is the new ultra-compact thermal panel printer, paper width 57,5 mm, with “SIXLOAD” easy paper loading system. PLUS II is performing and versatile, able to satisfy any printing requirements for industrial automation and garage equipment. In particular, PLUS II is suitable for measurement instrument applications, analysis and check, weighing systems, gas analyser, anti-theft devices, autoclaves, Pos.
PLUS II is provided with the innovative fixing system “EASYLOCK”: this system allows to fit the printer to any panel thickness. Moreover PLUS II can be equipped with a plastic surround which makes mechanically compatible with CUSTOM F and P series panel printers.

PLUS II is supplied by 5 Vcc (or 0004 model with extended power supply range 9-48 Vdc) and is available with serial RS232/TTL interface, parallel Centronics/TTL and paper sensor. It’s equipped with a 203 dpi thermal printing mechanism, using 57,5 mm-wide paper rolls. It can print 24, 40 or 42 characters per line according to the selection made at the Setup stage or through a software command. Printer manage LINERLESS paper.
The double hook lock system makes PLUS II safe and reliable.

PRINTER DESCRIPTION

The printer (see Fig.1) has an ABS casing with a front cover (5) which opens to allow access to the paper roll and print head. The control panel is located on the front and has a FEED key (4) and an OPEN key (3) for paper roll compartment opening. The OPEN key is made of transparent plastic material so it works also as a STATUS Led (2).

- FEED key. When the LINE FEED key is pressed, the printer advances the paper. During power-up, if the FEED key is held down, the printer enters the SETUP routine and print the SETUP report. The printer will remain in standby in Hexadecimal dump mode until another key is pressed or characters are received through the printer communication port; for every 10 characters received it prints hexadecimal values and ASCII codes (if the characters appear underlined, it means the receive buffer is full); See Hexadecimal Dump.

- OPEN key. Press the OPEN key to open the paper roll compartment.

- STATUS Led displays printer hardware status. In case of malfunction, the colour and flash frequency changing as follows:

(Tab.1)

STATUS LED	COLOUR	DESCRIPTION	
	OFF	Printer OFF	
	ON	Printer ON: no error	
	BLINKING	**RECOVERABLE ERROR**	
		Slow	Paper end
		Fast	Heading over temperature Power supply voltage incorrect

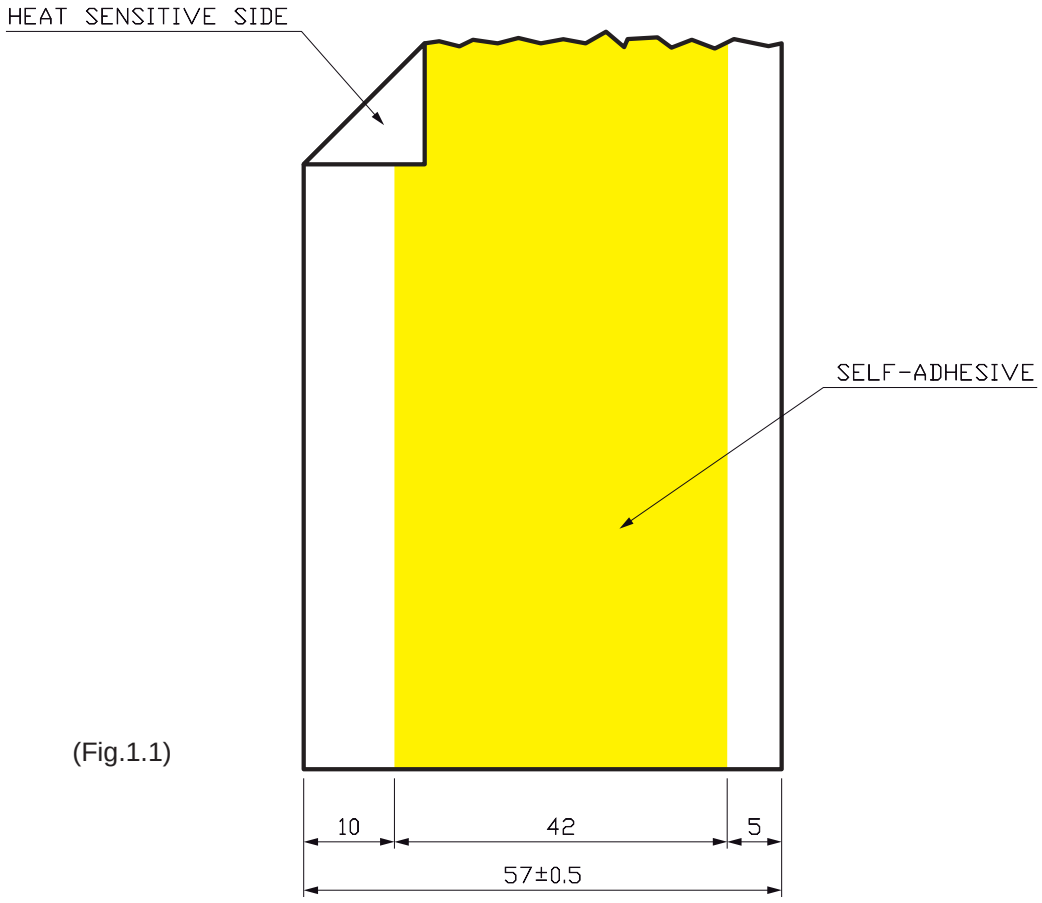
Blank page

1.1 PAPER SPECIFICATIONS

Printer manage thermal roll (heat-sensitive side on outside of roll) or LINERLESS paper (see paragraph 1.1.1).

1.1.1 Specifications for LINERLESS paper

LINERLESS paper is a thermal paper with a self-adhesive layer without liner (on non heat-ensitive side). For the better use with the printer the self-adhesive area must comply with the following dimensions (see Fig. 1.1):



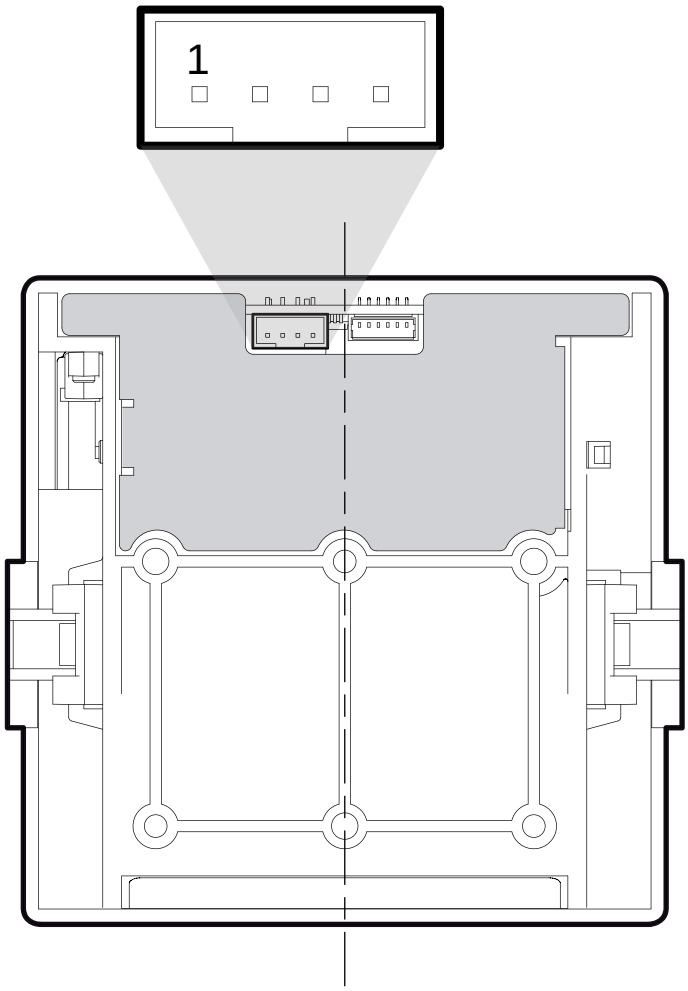
(Fig.1.1)

LINERLESS PAPER SPECIFICATIONS	
Self-adhesive	Water based acrylic
Self-adhesive mass	Permanent 16 gr/m² ±2gr
Total thickness	93 µm ±2 µm
Total weight	96 gr/m² ±2gr
Recommended temperature	
Stick	from +15°C to +40°C
Storage	from +10°C to +40°C
Resistance after stick	from -10°C to +50°C

1.2 CONNECTIONS OF PLUSII-S AND PLUSII-T

1.2.1 Power supply

The printer is equipped with a 4 pin JST male connector (90°) for the power supply. The signals on the connector pins are as follows::



(Fig.1.2)

Model no. type:

Header: S4B-PH-K-S 90° (JST)
Housing: PHR-4 (JST) or equivalent

PIN	SIGNAL	DESCRIPTION
1	GND	Ground signal
2	GND	Ground signal
3	+Vin*	Head voltage
4	+Vcc*	Logic supply voltage

NOTE
(*) For the electrical specifications see Chapter 4.

WARNING
Respect the polarity of the power supply.

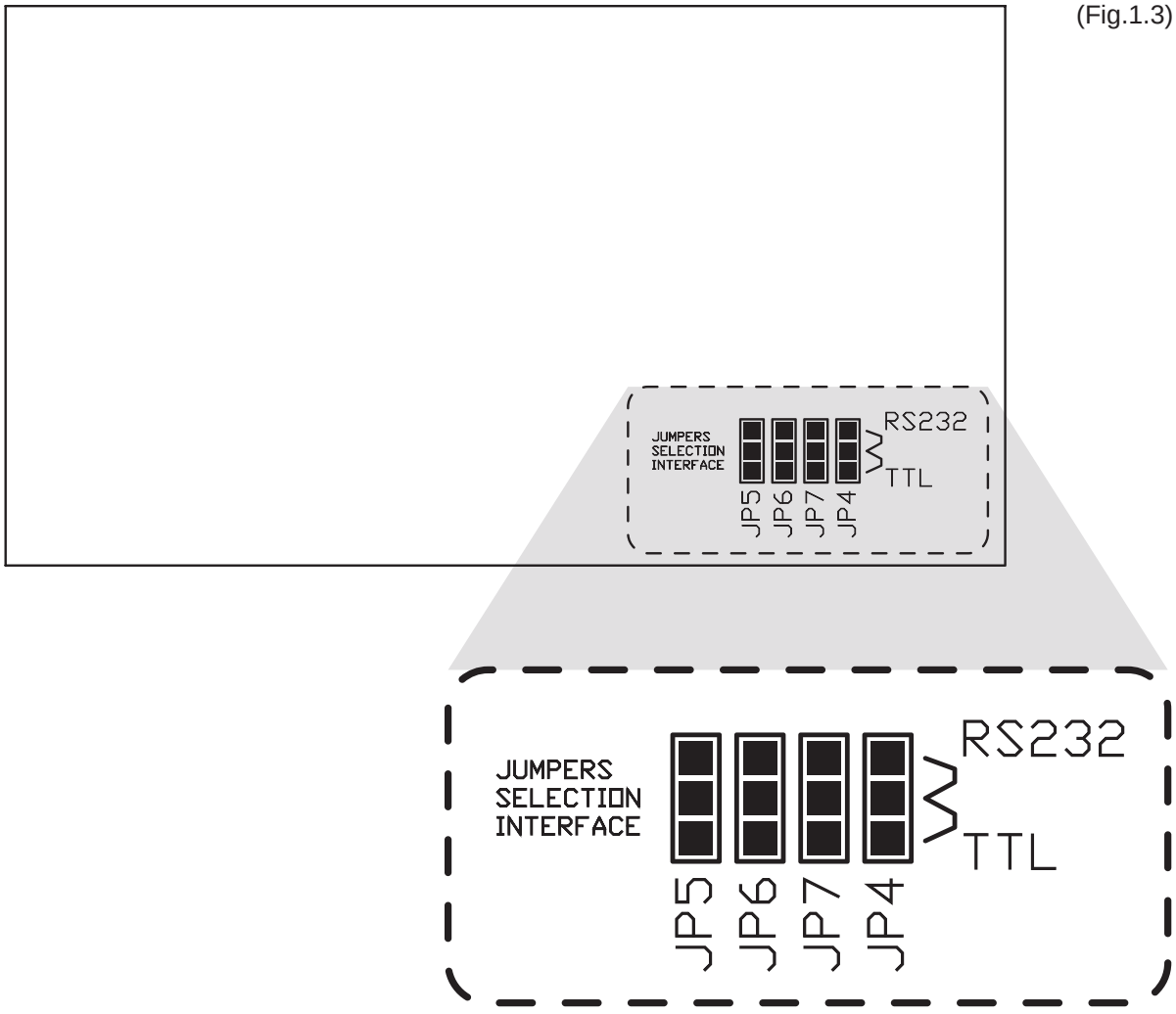
1.2.2 Setting serial interface

The JP4, JP5, JP6 and JP7 jumpers on controller board (see Fig.1.3) manages the setting of serial interface as indicated:

SERIAL	JP4	JP5	JP6	JP7
RS232				
TTL				

Refer to Fig.1.3 for the jumpers position.

(Fig.1.3)



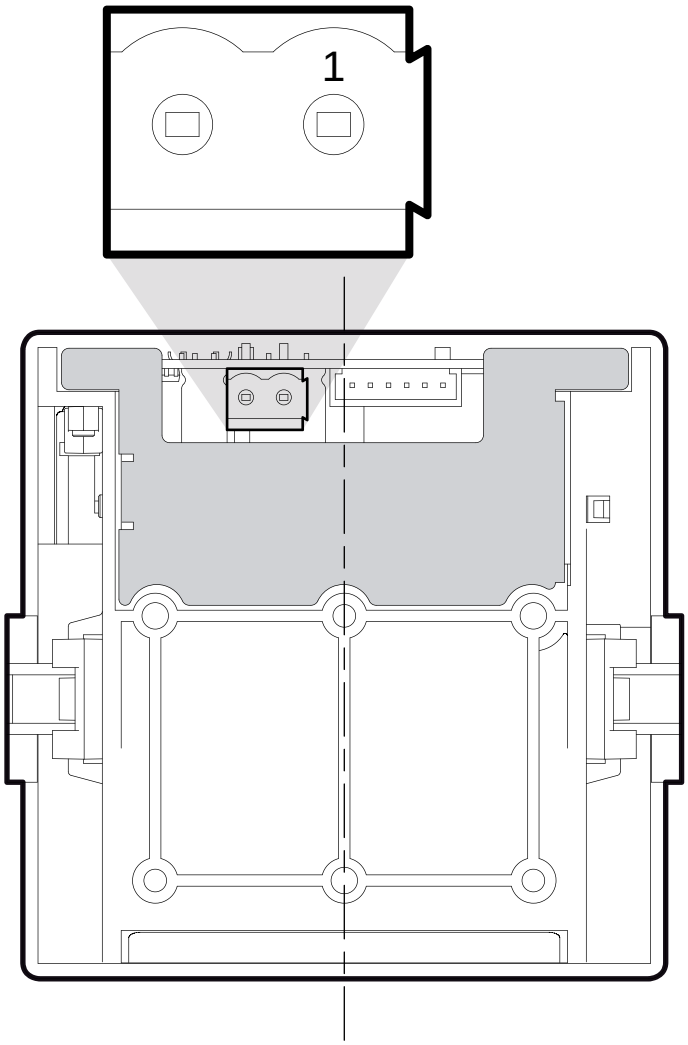
1.3 CONNECTIONS OF PLUSII-S-0004

1.3.1 Power supply

The printer is equipped with a 2 pin male connector terminal block (90°) for the power supply. The signals on the connector pins are as follows:

Model no. type:

Header: 90° Terminal block (pitch 5.08mm)
Housing: Terminal block (AWG 20-14)



(Fig.1.4)

PIN	SIGNAL	DESCRIPTION
1	GND	Ground signal
2	+Vin*	Logic supply voltage

NOTE
(*) For the electrical specifications see Chapter 4.

WARNING
Respect the polarity of the power supply.

1.3.2 Setting serial interface

See paragraph 1.2.2.

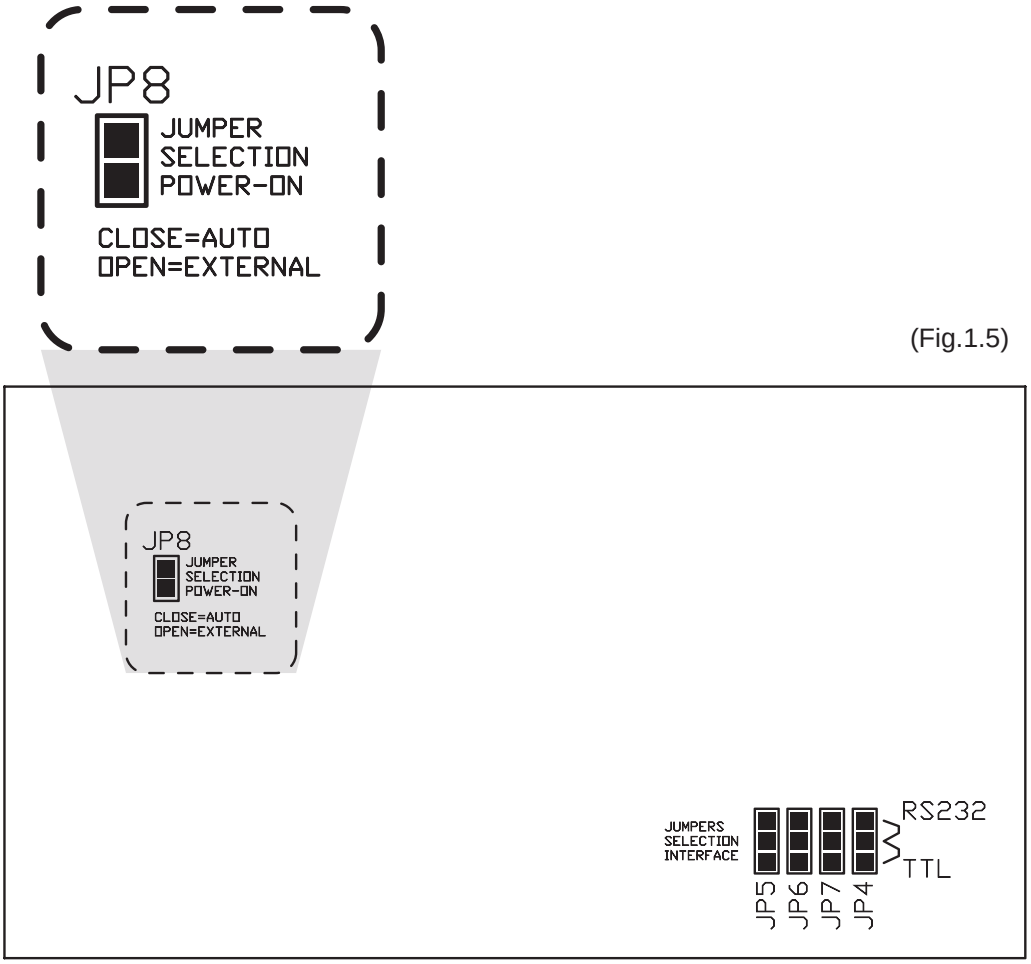
1.3.3 Power-On configuration

The JP8 jumper on controller board (see Fig.1.5) manages the power-on setting function as indicated:

J8	
CLOSED	Auto Power-On enabled
OPEN	Auto Power-On disabled

- **If JP8 is closed:** The printer switches on when powered up, and it switches off when power is off (default condition). In this condition the ESC '0' command has not effects.
- **If JP8 is open:** When the printer is powered up the low-consumption mode is activated. An impulse of at least 500 m/sec on pin 6 of the serial RS232 connector must be given to switch on the printer (see par. 2.2.1 and table 2.2). Use ESC "0" command to switch off the printer and bring it back to low-consumption mode.

Refer to Fig. 1.5 for the JP8 jumper position.



(Fig.1.5)

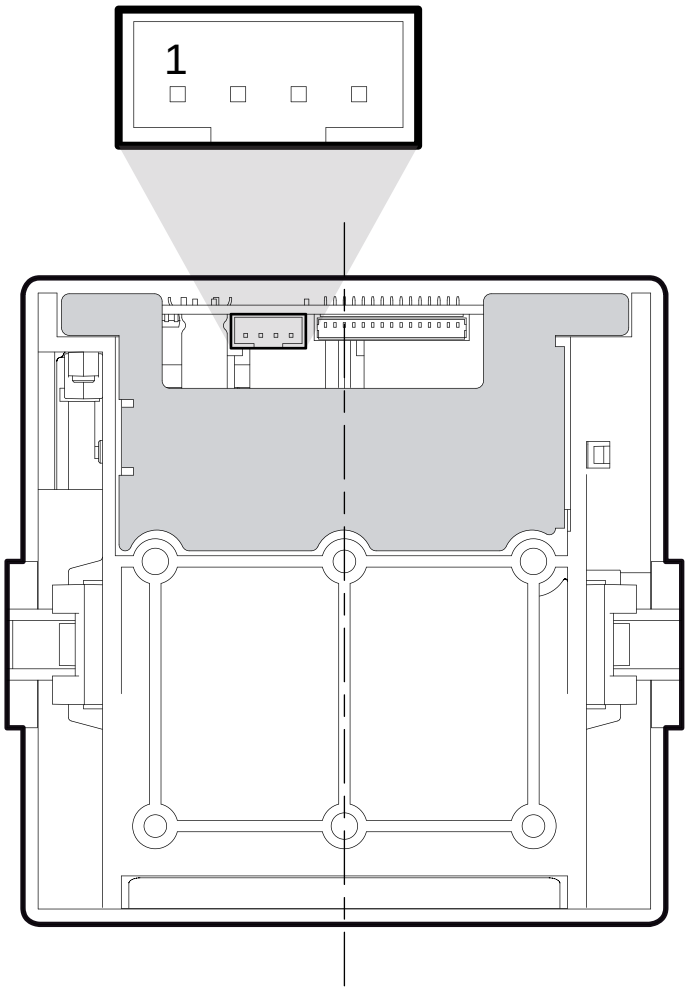
1.4 CONNECTIONS OF PLUSII-C AND PLUSII-P

1.4.1 Power supply

The printer is equipped with a 4 pin JST male connector (90°) for the power supply. The signals on the connector pins are as follows:

Model no. type:

Header: S4B-PH-K-S 90° (JST)
Housing: PHR-4 (JST) or equivalent



(Fig.1.6)

PIN	SIGNAL	DESCRIPTION
1	GND	Ground signal
2	GND	Ground signal
3	+Vin*	Head voltage
4	+Vcc*	Logic supply voltage

NOTE
(*) For the electrical specifications see Chapter 4.

WARNING
Respect the polarity of the power supply.

1.4.2 Setting parallel interface

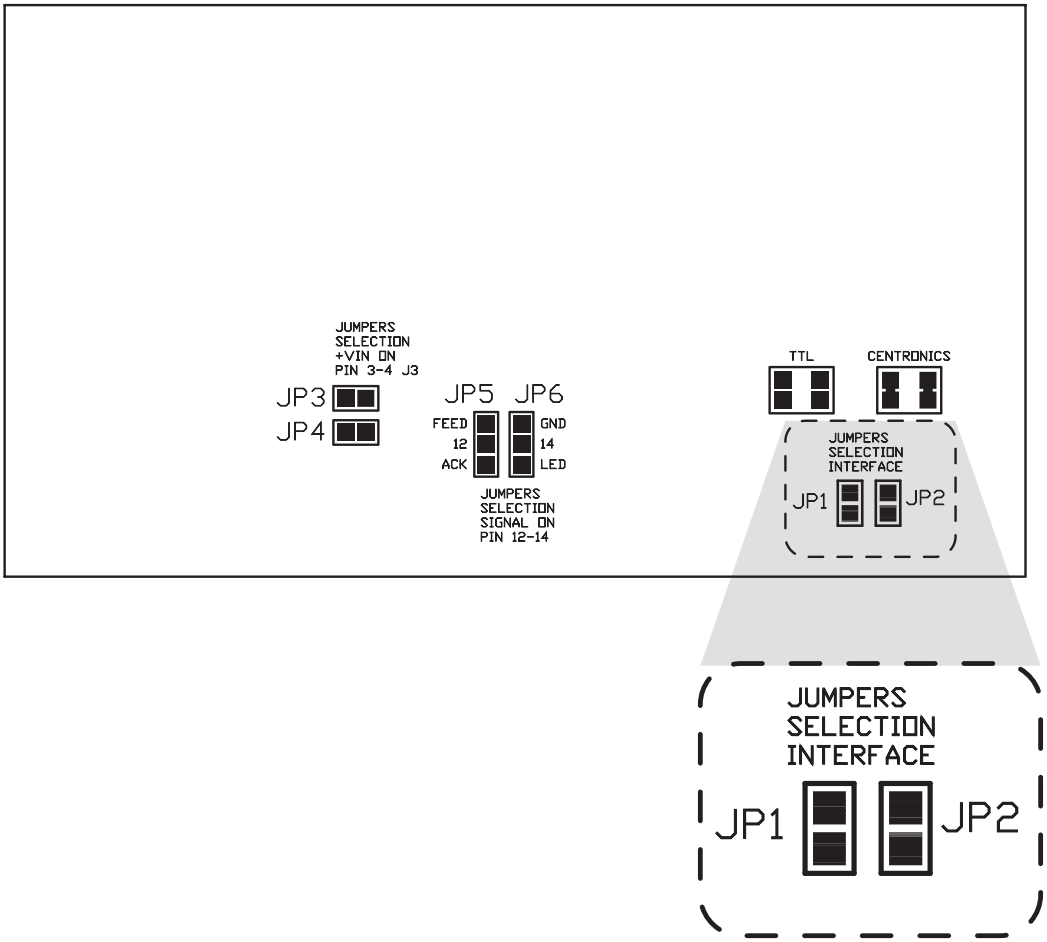
The JP2 and JP1 jumpers on controller board (see Fig.1.7) manages the setting of parallel interface as indicated:

JP1	JP2	PARALLEL INTERFACE SELECTION
CLOSED	CLOSED	Centronics
OPEN	OPEN	TTL

- **If JP1 and JP2 are closed:** the Centronics parallel interface is selected.
- **If JP1 and JP2 are open:** the TTL parallel interface is selected.

Refer to Fig.1.7 for the JP1 and JP2 jumpers position.

(Fig.1.7)



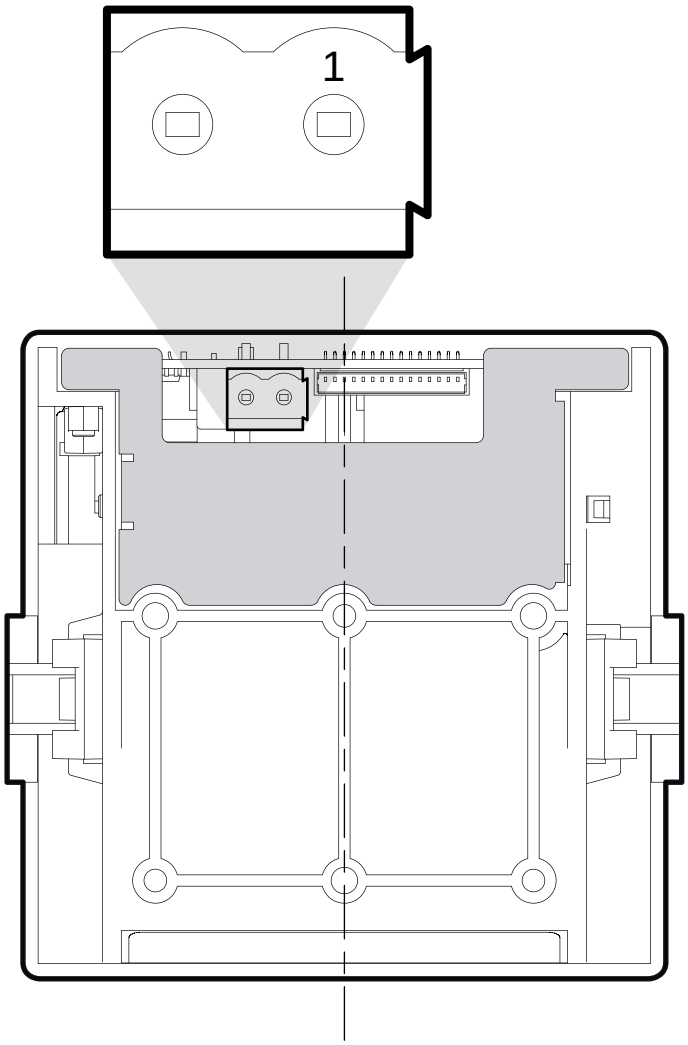
1.5 CONNECTIONS OF PLUSII-C-0004

1.5.1 Power supply

The printer is equipped with a 2 pin male connector terminal block (90°) for the power supply. The signals on the connector pins are as follows:

Model no. type:

Header: 90° Terminal block (pitch 5.08mm)
Housing: Terminal block (AWG 20-14)



(Fig.1.8)

PIN	SIGNAL	DESCRIPTION
1	GND	Ground signal
2	+Vin*	Logic supply voltage

NOTE
(*) For the electrical specifications see Chapter 4.

WARNING
Respect the polarity of the power supply.

1.5.2 Setting parallel interface

See paragraph 1.4.2.

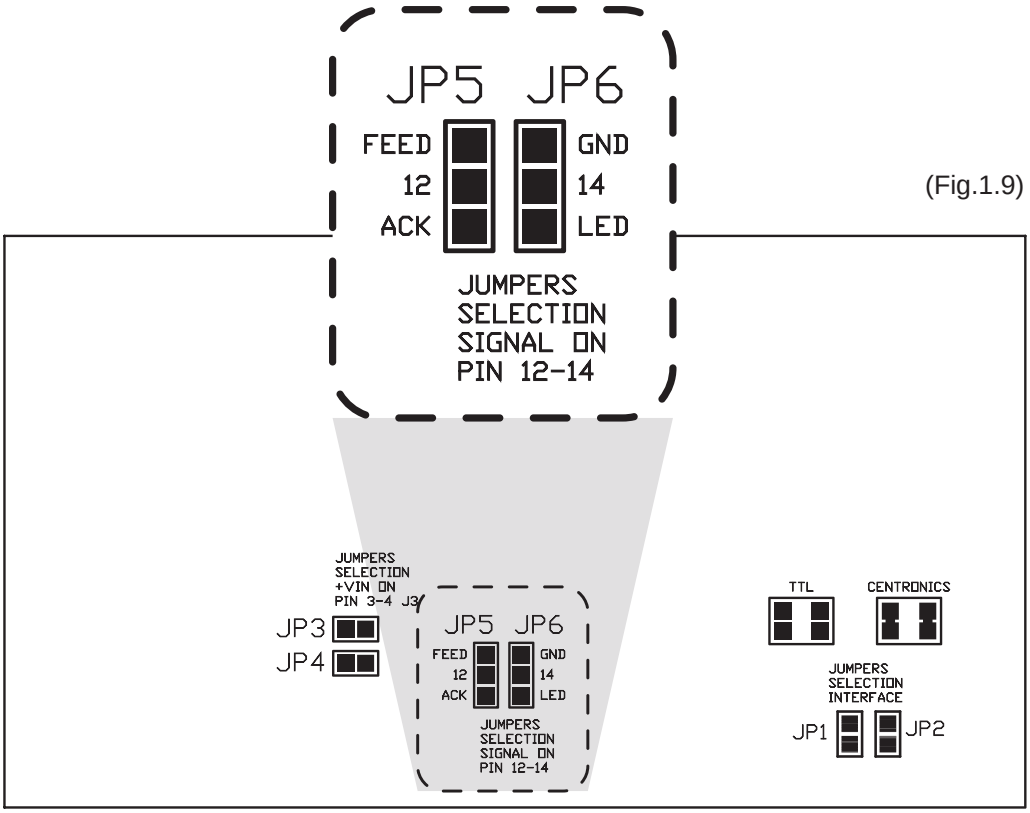
1.5.3 Setting JP5 and JP6 jumpers

The JP5 and JP6 jumpers on controller board (see Fig.1.9) manages the setting for the signals of pin 12 and 14 of parallel interface connector as indicated:

SIGNAL OF PIN 12	JP5
FEED	
ACK	

SIGNAL OF PIN 14	JP6
GND	
LED	

Refer to Fig.1.9 for the JP5 and JP6 jumpers position.



(Fig.1.9)

1.6 SELF-TEST

Printer operating status is indicated in the configuration print-out in which, next to the name of the components displayed (see Fig.1.10 and 1.11), the following information is given:

- under HEAD TEMPERATURE is given the temperature of the head.
- under HEAD VOLTAGE is given the voltage of the head.

(Fig.1.10)

PRINTER SETUP

HEAD TEMP. [°C] = 32.5
HEAD VOLT [V] = 5,00

Baud Rate ..... : **38400 bps**
Data Length..... : **8 bits/chr**
Parity ..... : **None**
Handshaking ..... : **Xon/Xoff**
Autofeed ..... : **CR Enabled**
Columns ..... : **24 col.**
Print Mode ..... : **Normal**
Char Mode..... : **Normal**
Print Density..... : **0**

[PUSH] *key to enter setup*
[FAST PUSH] *key to exit*

RS232 Model

(Fig.1.11)

PRINTER SETUP

HEAD TEMP. [°C] = 32.5
HEAD VOLT [V] = 5,00

Interface ..... : **Centronics**
Autofeed ..... : **CR Enabled**
Columns ..... : **24 col.**
Print Mode ..... : **Normal**
Char Mode..... : **Normal**
Print Density..... : **0**

[PUSH] *key to enter setup*
[FAST PUSH] *key to exit*

Centronics Model

1.7 CONFIGURATION

This printer permits the configuration of default parameters. The printer's configurable parameters are:

Printer Interface [1]**:** Centronics, TTL.
Baud Rate [2]**:** 38400, 19200[D], 9600, 4800, 2400,1200, 600.
Data Length [2]**:** 7, 8[D] bits/chr.
Parity [2]**:** None[D], Even or Odd.
Handschaking [2]**:** XON/XOFF[D] o Hardware.
Autofeed: CR disabled[D] o CR enabled.
Columns: 24 col.[D], 40 col. e 42 col.
Print Mode: Normal[D] o Reverse.
Char Mode: Normal[D], Double width (2 x Width), Double height (2 x Height), Expanded.
Print Density: -2, -1, 0[D], +1, +2.

GENERAL NOTES: The parameters marked with the symbol [D] are the default values.

[1] **NOTE:** Only parallel interface model parameter.

[2] **NOTE:** Only serial interface model parameter.

The settings made are stored in nonvolatile memory and are loaded automatically.
During power-up, if the FEED key is held down, the printer enters the autotest routine and prints out the setup report. The printer will remain in standby in Hexadecimal dump mode *(see par. 1.8)* until another key is pressed or characters are received through the printer communication port.
When the FEED key is pressed, the printer enters parameter configuration. Each time the FEED key is pressed, the parameter will change and the current value will be printed out. Once the desired value has been attained, hold the FEED key down for at least a second to pass to the next parameter, and so on. Printing out of a new printer set up report indicates that set up is complete.

1.8 HEXADECIMAL DUMP

This function is used to display the characters received from the communications port; after the reception of each 8 characters from the communications port, the printer prints out both the hexadecimal code received as well as the corresponding ASCII code.
Shown below is an example of a Hexadecimal Dump:

HEXADECIMAL DUMP

```
31 32 33 34 35 36 37 38    12345678
39 30 31 32 33 34 35 36    90123456
37 38 39 75 69 73 64 66    789uisdf
68 6B 6A 73 64 68 66 68    hkjsdhfh
73 64 66 6B 6A 68 73 64    sdfkjhsd
66 73 64 66 6B 68 6A 77    fsdfkhjw
65 69 6F 79 75 77 71 65    eioyuwqe
6F 72 69 75 77 65 72 69    oriuweri
6F 75 77 65 72 69 6F 75    ouweriou
77 65 72 69 6F 75 77 65    weriouwe
72 69 6F 75 77 65 72 68    riouwerh
6B 6C 73 64 66 68 6B 73    klsdfhks
64 66 6B 73 64 66 68 6A    dfksdfhj
73 64 66 6B 6A F2 73 64    sdfkj≥sd
66 6B F2 6A 73 68 64 66    fk≥jshdf
6A 6B 6C 68                jklh
```

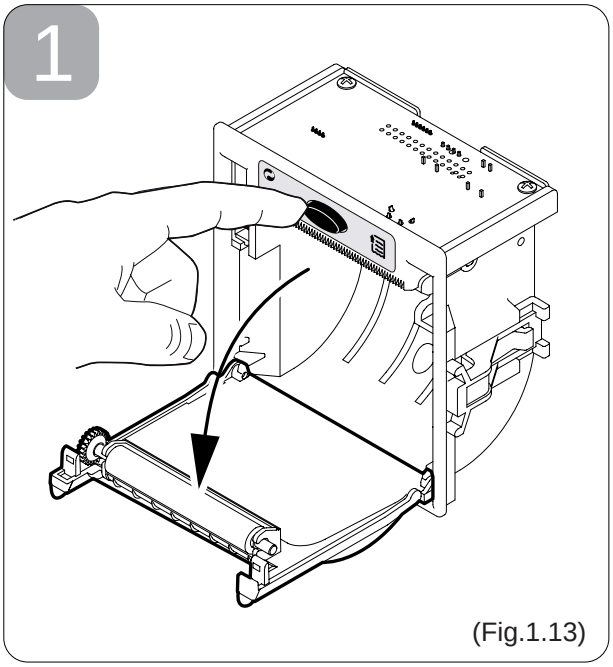
(Fig.1.12)

1.9 MAINTENANCE

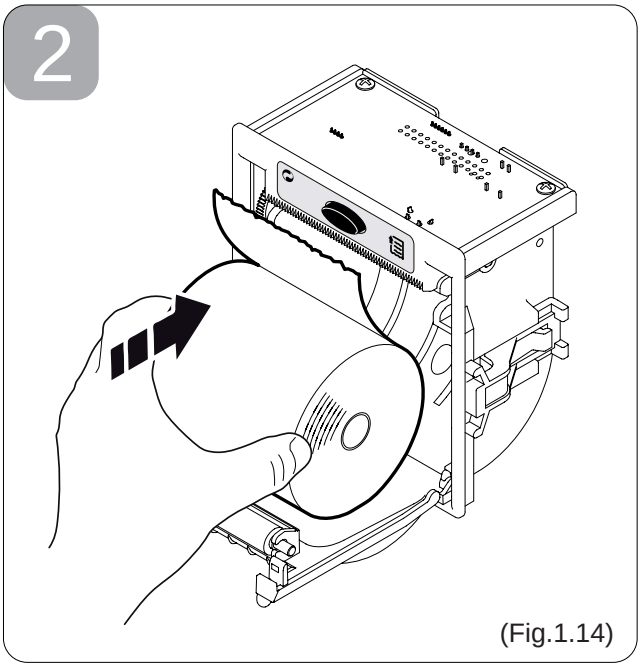
1.9.1 Changing the paper roll

To change paper roll, proceed as follows:

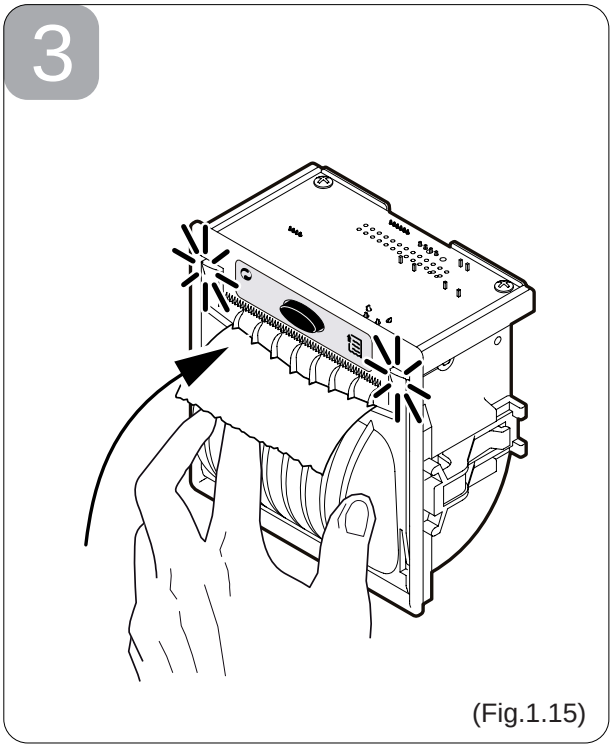
1. Press the OPEN key to open the printer cover as shown (see Fig.1.13).
2. Place the paper roll making sure it unrolls in the proper direction as shown (see Fig.1.14).
3. Take out the paper and re-close the cover as shown (see Fig.1.15). The printer cover is locked.
4. Tear off the exceeding paper using the jagged edge (see Fig.1.16).
5. The printer is ready.



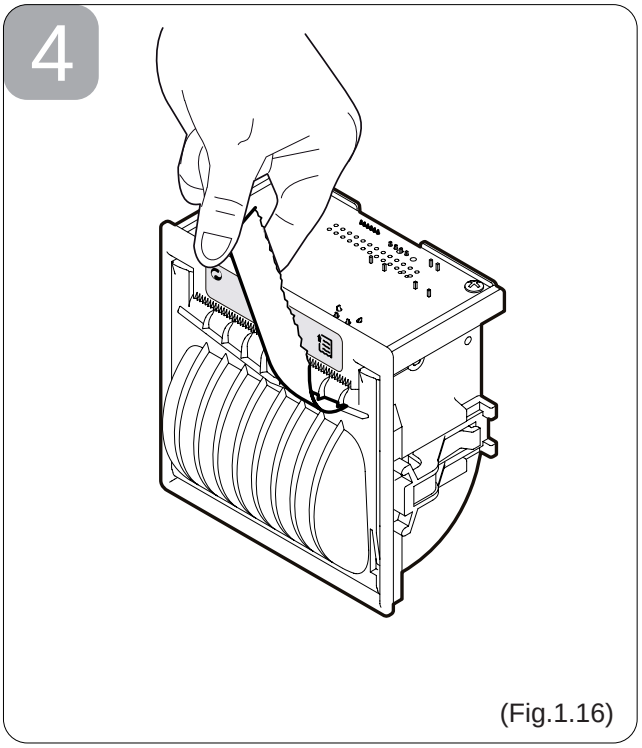
(Fig.1.13)



(Fig.1.14)



(Fig.1.15)



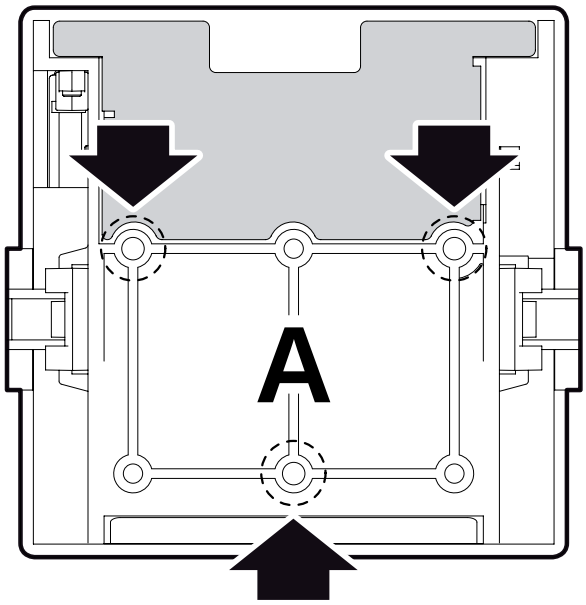
(Fig.1.16)

1.9.2 Notes about the installation

Fixing to the panel

Fix the printer in the 3 holes as shown in the scheme **(A)** (see Fig.1.17), using M3 tapping screws (n.3).

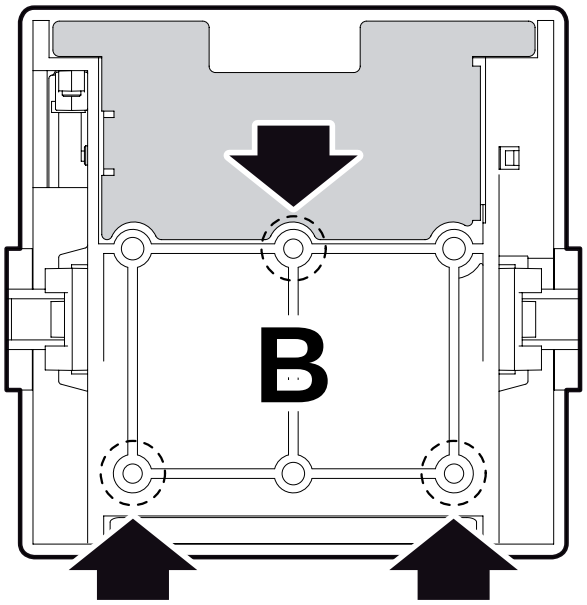
(Fig.1.17)



Fixing back

Fix the printer in the 3 holes as shown in the scheme **(B)** (see Fig.1.18), using 3 screws for plastic d=3 (6 mm usable length).

(Fig.1.18)



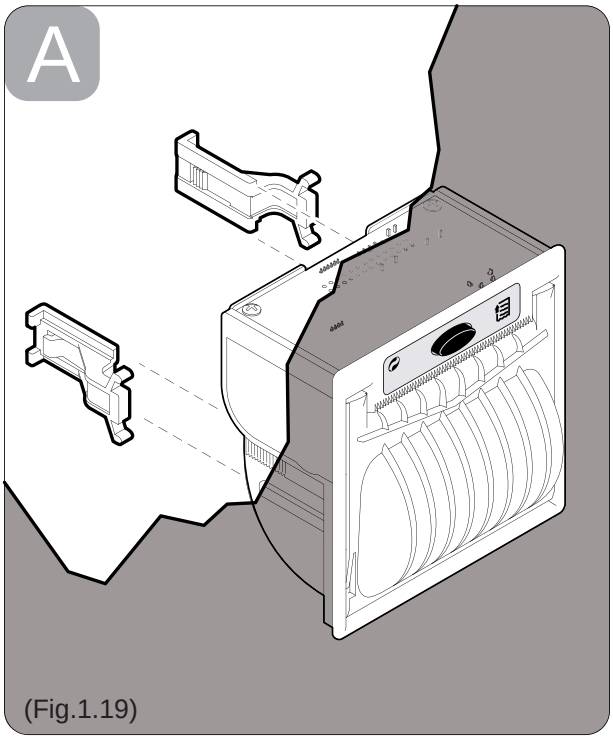
NOTE:
The informations provided in this paragraph are corrects for all models.

1.9.3 “EASYLOCK” fixing system

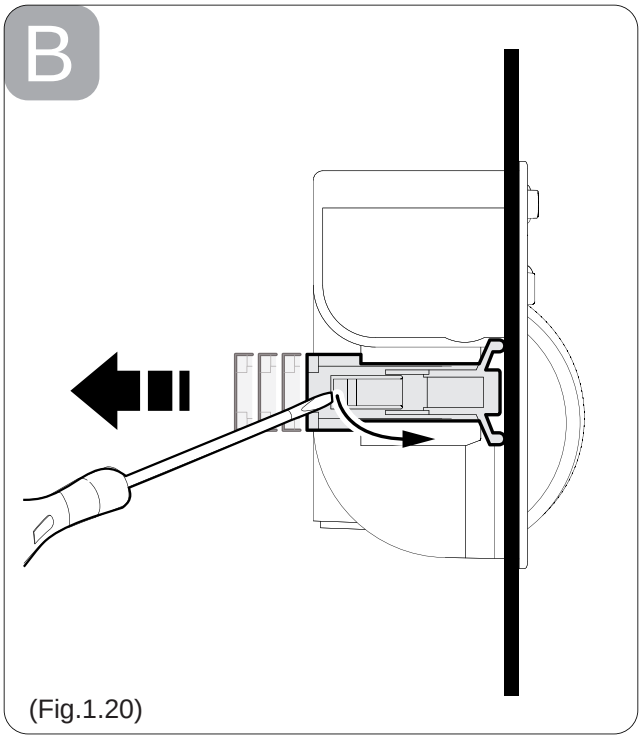
This system allows to adapt the printer to every panel thickness and it is not necessary to use other fixing tools.

A FIXING (see Fig.1.19)
- Use only the 2 hooks, provided in the package.
- Place the printer on the panel.
- Insert the 2 fixing hooks in their seat.
- Push the 2 fixing hooks against the panel to lock the printer.

B REMOVING (see Fig.1.20)
- Lift the flap by using a flat screwdriver.
- Take away the hook.



(Fig.1.19)



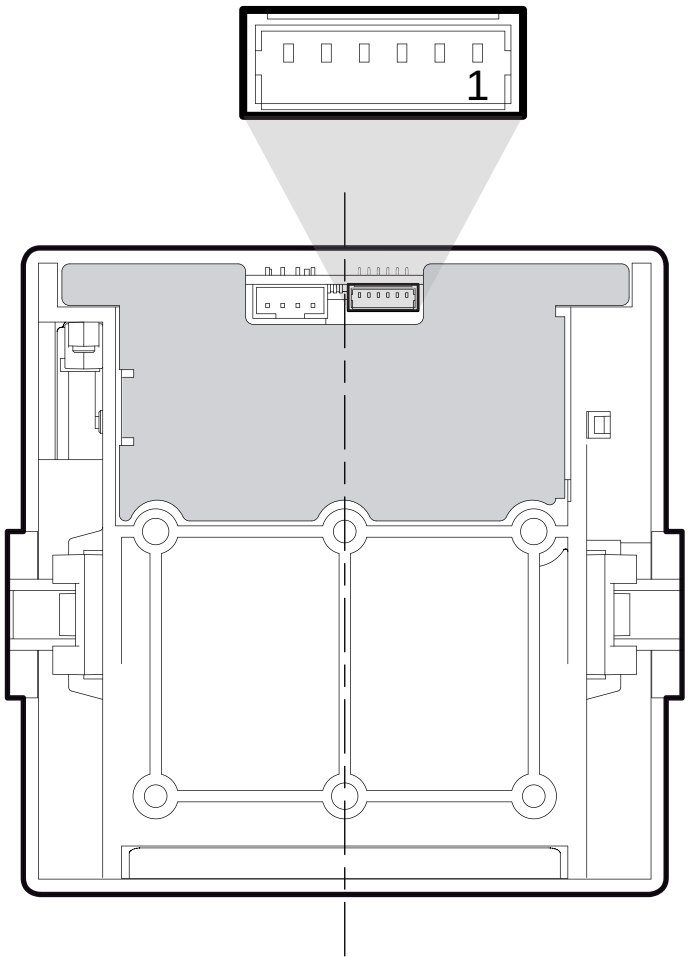
(Fig.1.20)

2.1 INTERFACES OF PLUSII-S AND PLUSII-T

The printer with a serial RS232/TTL interface has a molex 6-pin male connector 53261 series (90°). Refer to the table below for the connector pin signals:

Model no. type:

Header: Molex 53261 series 6 pin
Housing: Molex 51021 series 6 pin (no. 51021-0600))



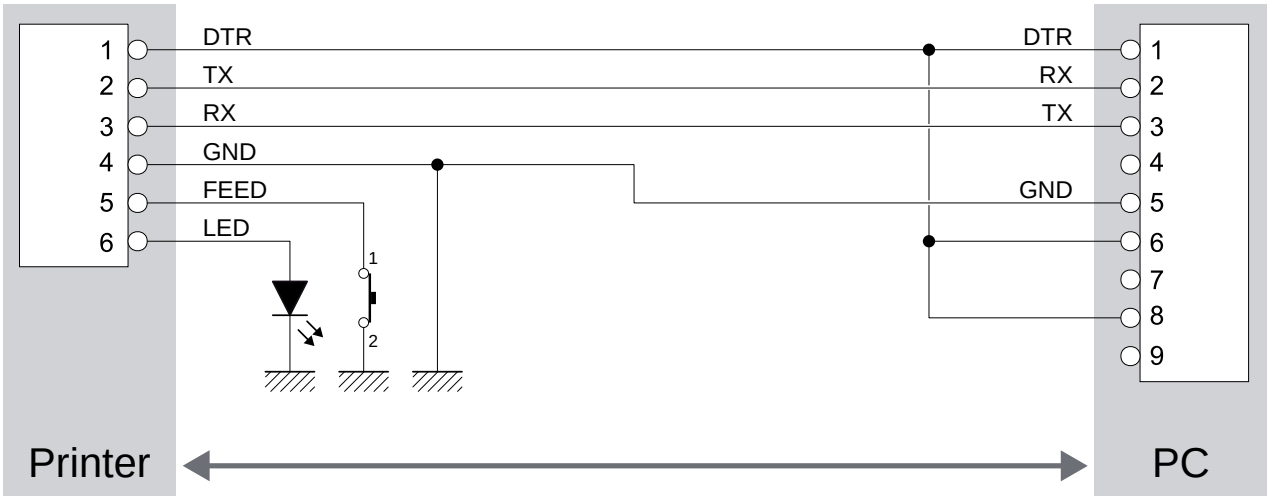
(Fig.2.1)

(Tab.2.1)

PIN	SIGNAL	IN / OUT	DESCRIPTION
1	DTR	OUT	Data terminal ready
2	TX	OUT	Data transmission
3	RX	IN	Data reception
4	GND		Ground signal
5	FEED	IN	FEED signal (active at low level)
6	LED	OUT	LED signal (external)

2.1.1 Connection Printer-PC

The diagrams below show a sample connection between printer and Personal Computer using a 6 pin female Molex 51021 connector by printer side and a 9 pin female connector by a PC side.

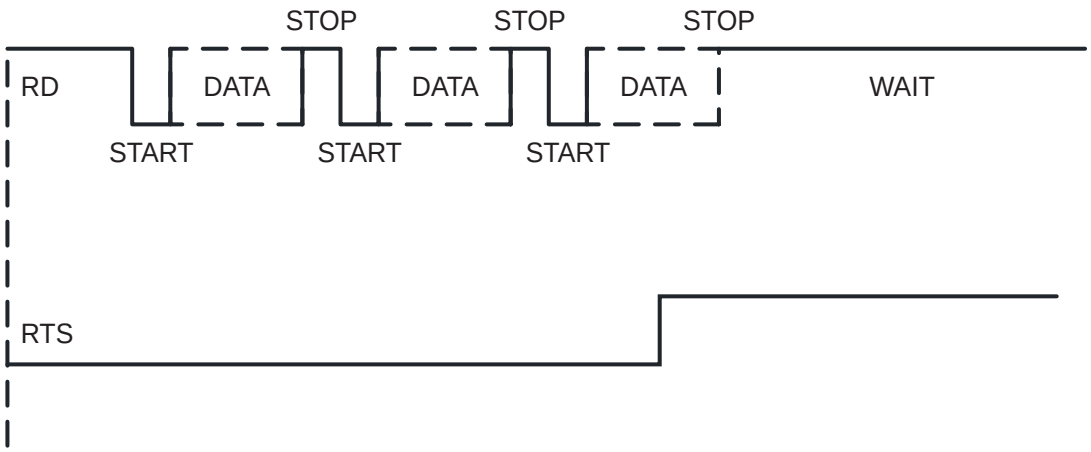


In the serial protocol, the signals which distinguish the communication are TD, RD, and RTS if the RTS/CTS protocol has been selected while, if the XON/XOFF protocol has been selected, the signals are TD and RD.

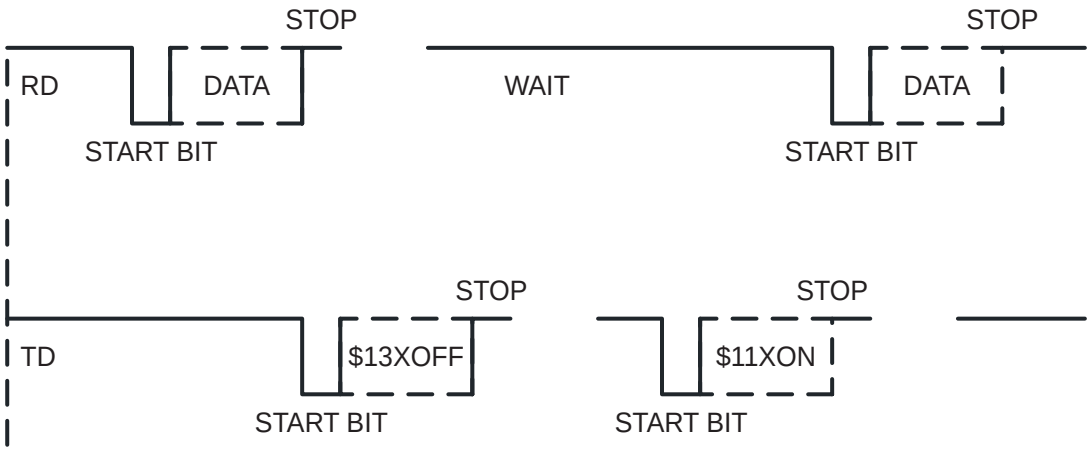
Transmission format

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

RTS/CTS Protocol



XON/XOFF Protocol

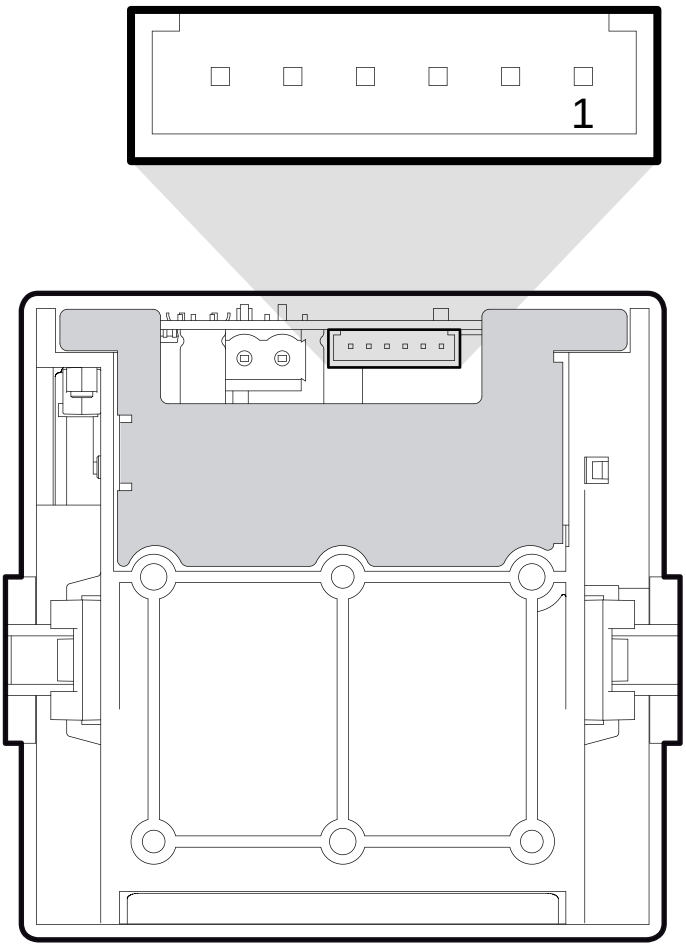


2.2 INTERFACES OF PLUSII-S-0004

The printer with RS232 interface has a 6-pin male connector AMP-MODU II (90°). Refer to the table below for the connector pin signals:

Model no. type:

Header: AMP-MODU II (no. 280379-2)
Housing: AMP-MODU II (no. 280360)



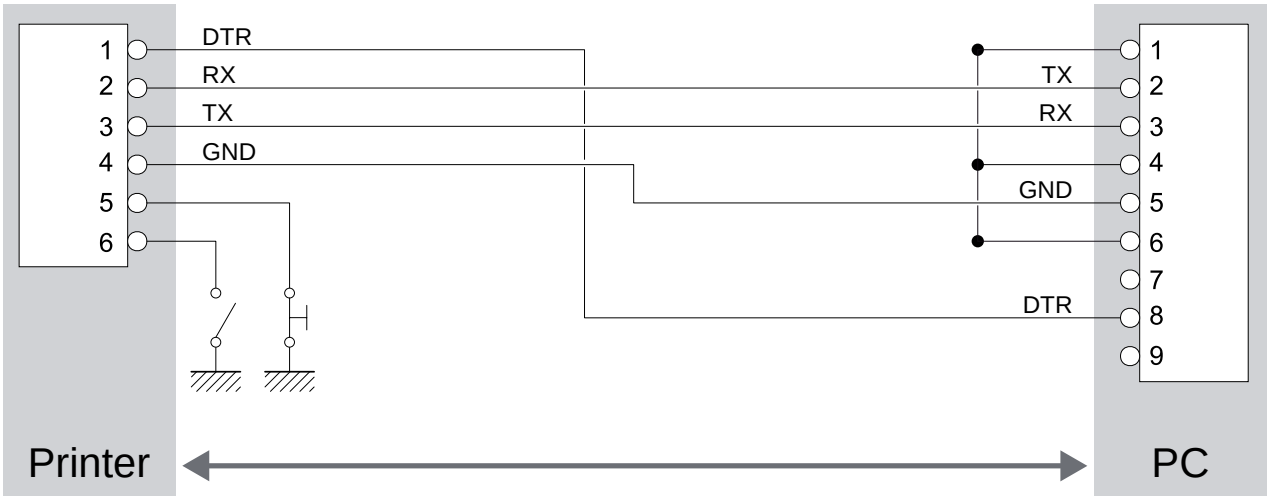
(Fig.2.2)

(Tab.2.2)

PIN	SIGNAL	IN / OUT	DESCRIPTION
1	DTR	OUT	Data terminal ready
2	TX	OUT	Data transmission
3	RX	IN	Data reception
4	GND		Ground signal
5	RESET	IN	Reset signal (active at a low level)
6	POWER-ON	IN	Power-On signal (an impulse of at least 500 m/sec. active at a high level)

2.2.1 Connection Printer-PC

The diagrams below show a sample connection between printer and Personal Computer using a 6 pin female AMP MOUD II connector by printer side and a 9 pin female connector by a PC side.

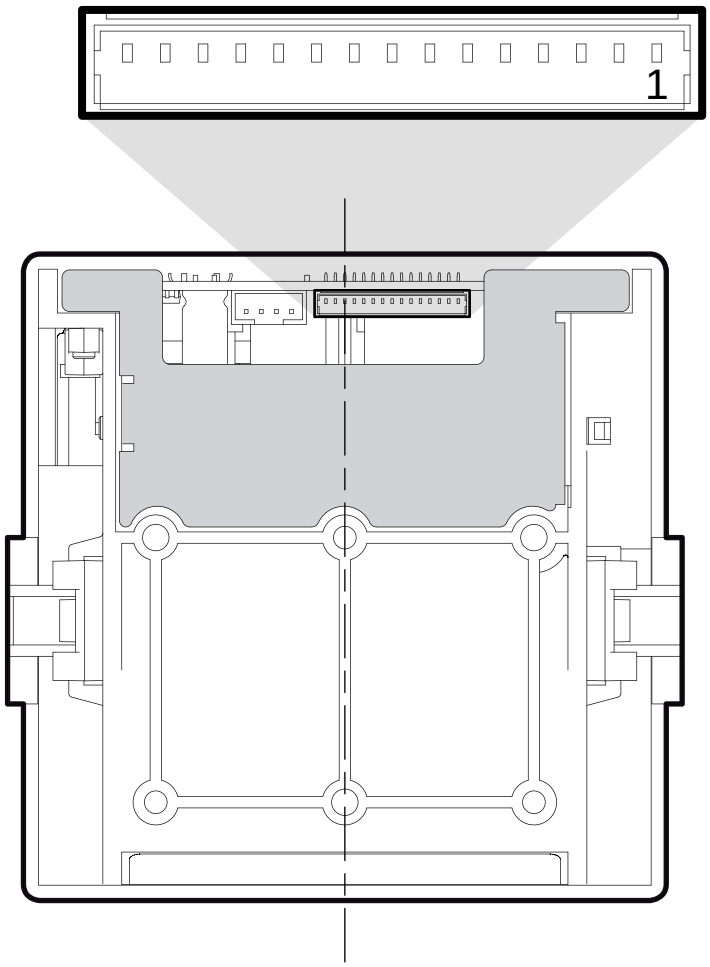


2.3 INTERFACES OF PLUSII-C AND PLUSII-P

The printer with parallel Centronics/TTL interface has a molex 15-pin male connector 53261 series (90°). Refer to the table below for the connector pin signals:

Model no. type:

Header: Molex 53261 series 15 pin
Housing: Molex 51021 series 15 pin (no. 51021-1500)



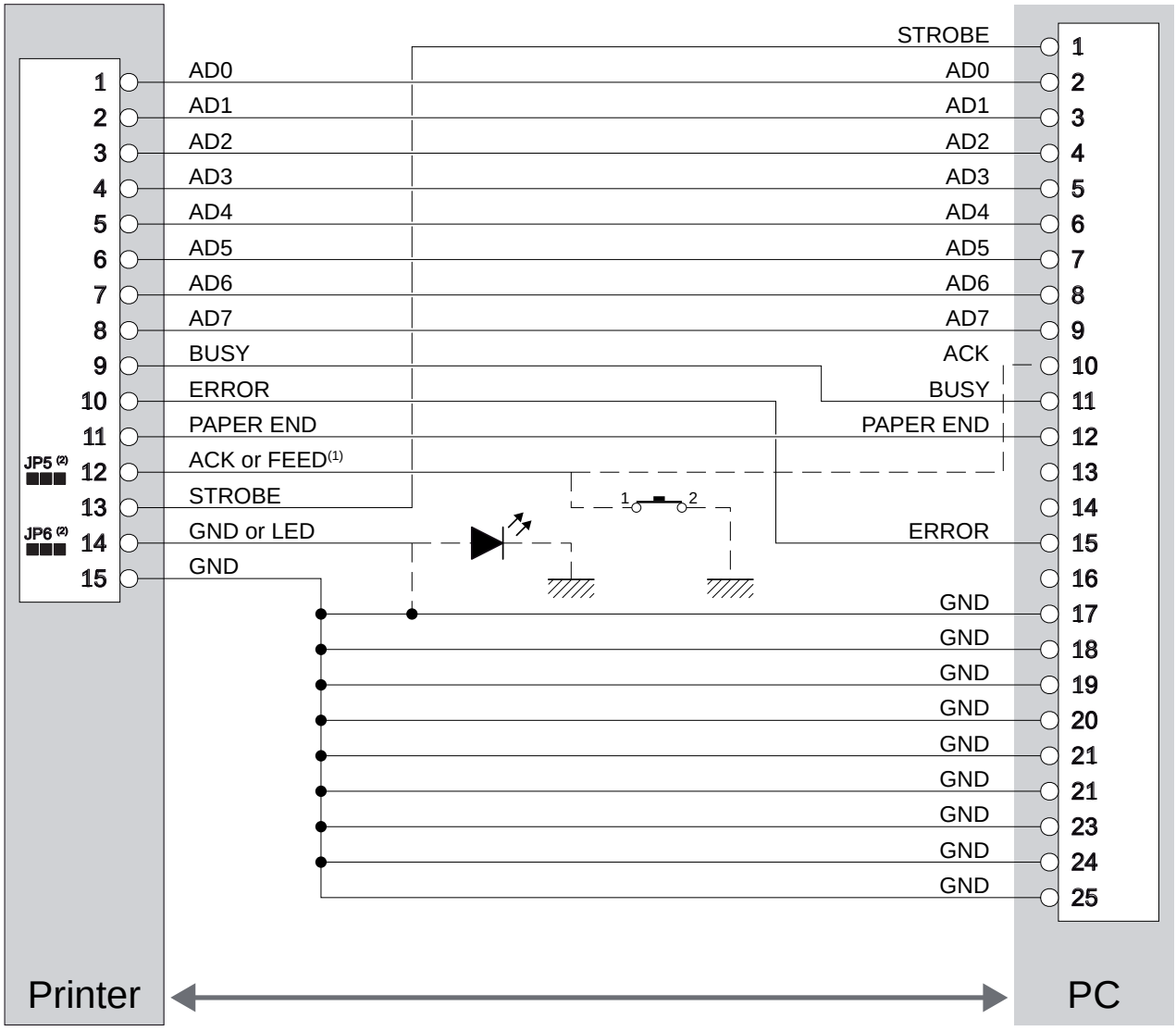
(Fig.2.3)

(Tab.2.3)

PIN	SIGNAL	IN /OUT	DESCRIPTION	
1	AD0	IN	Data 0	
2	AD1	IN	Data 1	
3	AD2	IN	Data 2	
4	AD3	IN	Data 3	
5	AD4	IN	Data 4	
6	AD5	IN	Data 5	
7	AD6	IN	Data 6	
8	AD7	IN	Data 7	
9	BUSY	OUT	Peripheral not ready to receive data	
10	ERROR	OUT	Error	
11	PAPER END	OUT	Paper end	
12	ACK	OUT	Acknowledge	Setting with JP5 (2)
	FEED (1)	IN	FEED signal (active at low level)	
13	STROBE	IN	Strobe	
14	GND		Ground signal	Setting with JP6 (2)
	LED	OUT	LED signal (external)	
15	GND		Ground signal	

2.3.1 Connection Printer-PC

The following scheme, represent the connection cable configuration between Molex connector 51021 series 15-pin (female) and a 25-pin connector (female). This cable can be use as wiring between the printer board and a 25-pin connector (male).



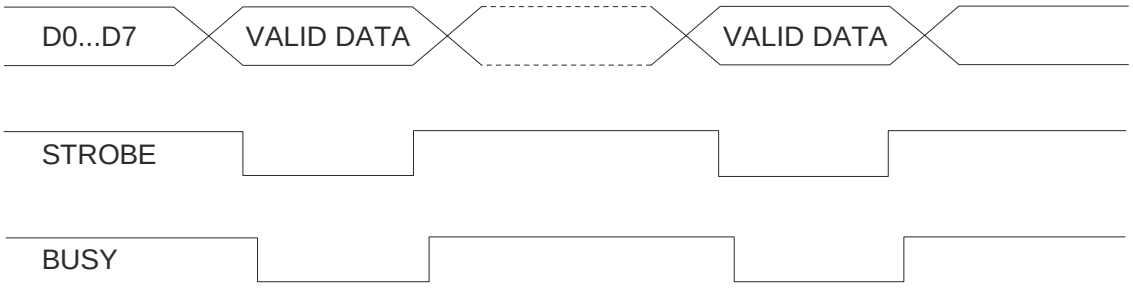
NOTE

(1) Signal not available with Centronics interface.

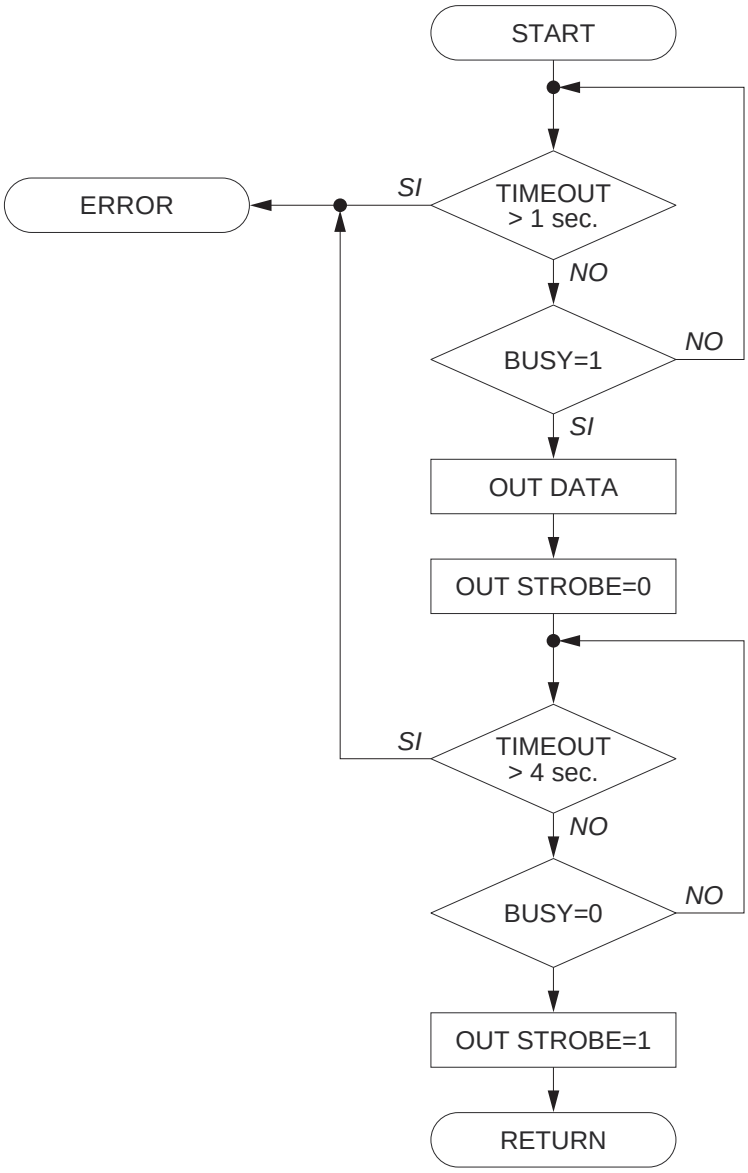
(2) For JP5 and JP6 settings see paragraph 1.5.3.

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

Transmission format



Flow diagram

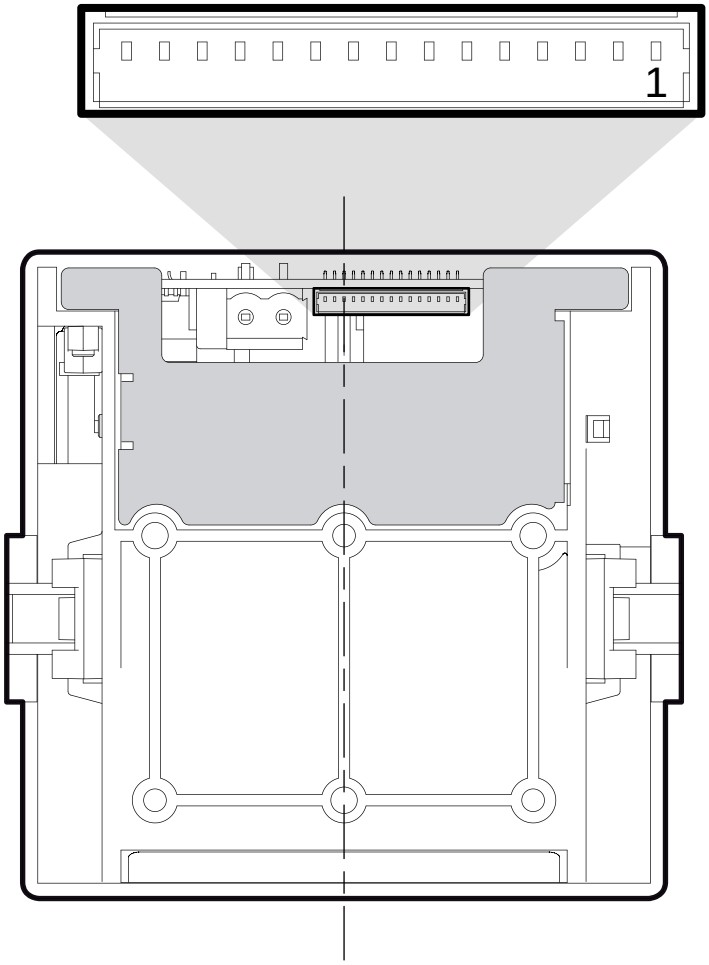


2.4 INTERFACES OF PLUSII-C-0004

The printer with a parallel Centronics interface, 0004 option, has a molex 15-pin male connector 53261 series (90°). Refer to the table below for the connector pin signals:

Model no. type

Header : Molex 53261 series 15 pin
Housing : Molex 51021 series 15 pin
(no. 51021-1500)



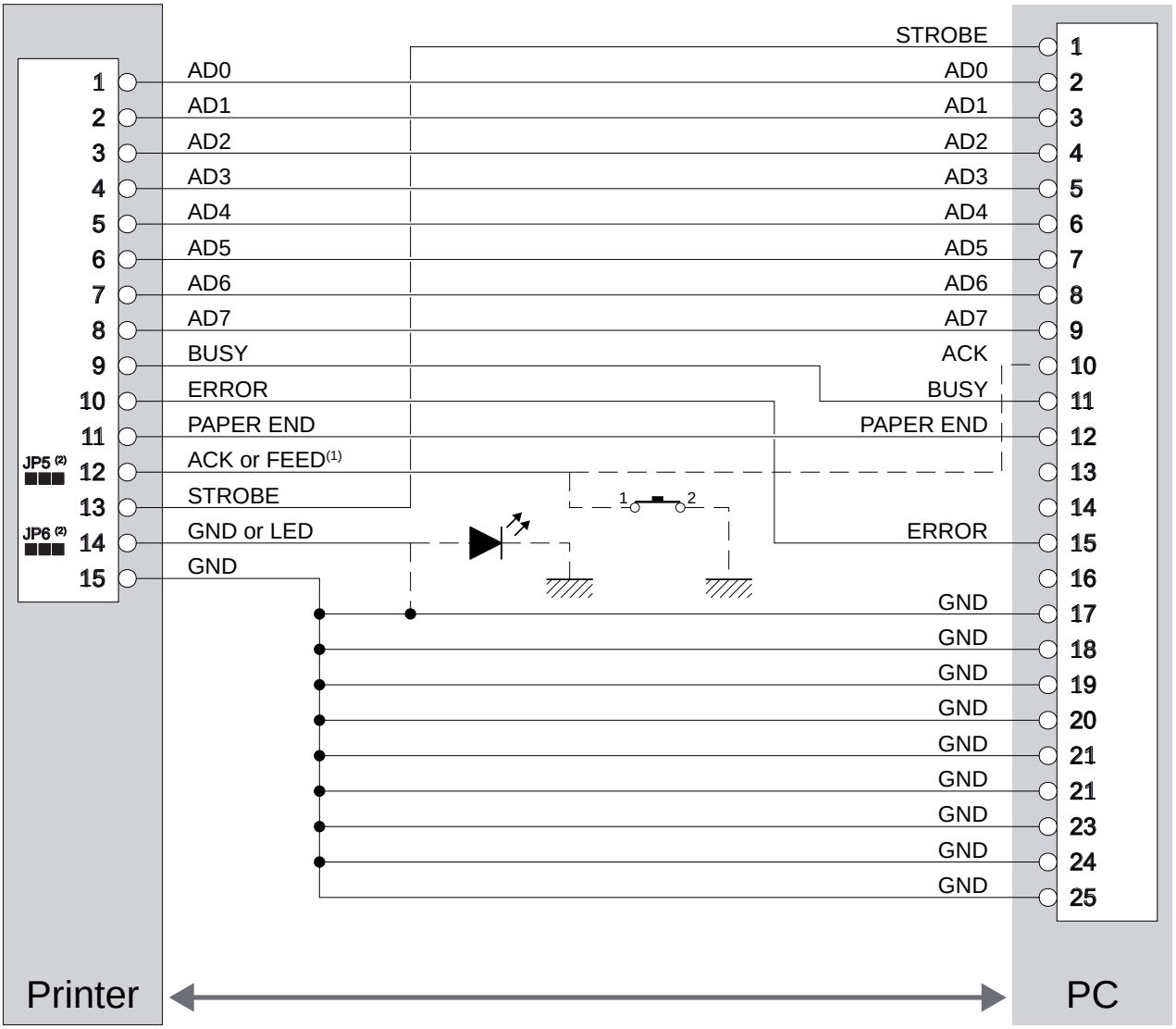
(Fig.2.4)

(Tab.2.4)

PIN	SIGNAL	IN /OUT	DESCRIPTION	
1	AD0	IN	Data 0	
2	AD1	IN	Data 1	
3	AD2	IN	Data 2	
4	AD3	IN	Data 3	
5	AD4	IN	Data 4	
6	AD5	IN	Data 5	
7	AD6	IN	Data 6	
8	AD7	IN	Data 7	
9	BUSY	OUT	Peripheral not ready to receive data	
10	ERROR	OUT	Error	
11	PAPER END	OUT	Paper end	
12	ACK	OUT	Acknowledge	Setting with JP5 (2)
	FEED (1)	IN	FEED signal (active at low level)	
13	STROBE	IN	Strobe	
14	GND		Ground signal	Setting with JP6 (2)
	LED	OUT	LED signal (external)	
15	GND		Ground signal	

2.4.1 Connection Printer-PC

The following scheme, represent the connection cable configuration between Molex connector 51021 series 15-pin (female) and a 25-pin connector (female). This cable can be use as wiring between the printer board and a 25-pin connector (male).



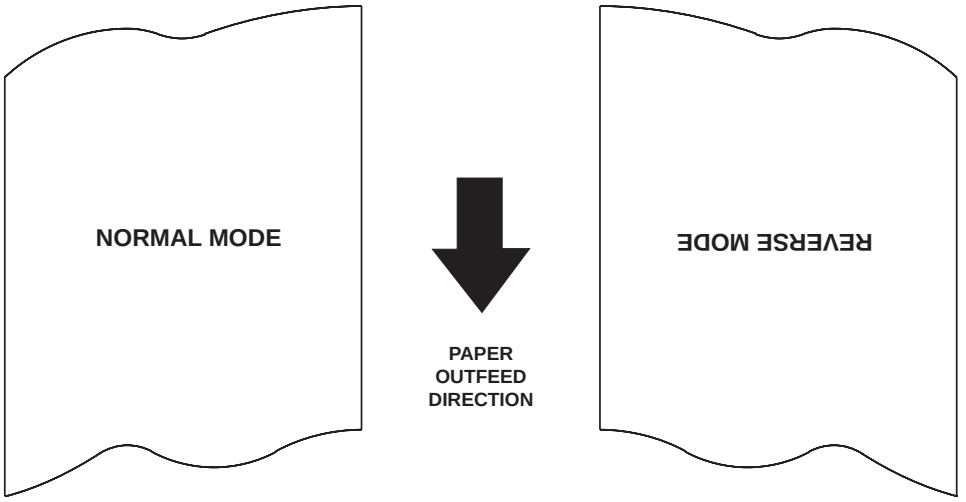
NOTE

(1) Signal not available with Centronics interface.

(2) For JP5 and JP6 settings see paragraph 1.5.3.

3.1 PRINT DIRECTION

The printer has two printing directions which can be selected by means of the control characters: normal and reverse.



(Fig.3.1)

3.2 COMMAND DESCRIPTIONS

The table 3.1 shows the commands list, ordered by their hexadecimal value.

LEGEND :

Symbol	**Function**
$	indicates the representation of the command hexadecimal value (for example $40 means HEX 40).
{ }	indicates an ASCII character not performable.
n, m, t, x, y	are optional parameters that can have different values.

3.2.1 ESC/POS Emulation

The following table lists all the commands for function management in ESC/POS Emulation of the printer. The commands can be transmitted to the printer at any moment, but they will only be carried out when the commands ahead of them have been executed. The commands are carried out when the circular buffer is free to do so.

COMMAND DESCRIPTION TABLE

(Tab.3.1)

Com. HEX	Com. ASCII	Description
$00		Prints in small characters
$01		Prints in double width
$02		Prints in double height
$03		Expanded printing
$04		Restore small character printing
$0A		Forward feeds on line
(n) $0B		Forward feeds (n) lines
$0D		Print line buffer
$0F		Set CRLF mode
$11		Graphic mode
$1B $23 n	ESC # n	Transmit printer ID

$1B $30	ESC 0	Switch off the printer	ONLY FOR PLUSII-S-0004
$1B $40	ESC @	Resets the printer	
$1B $41 nH nL	ESC A nH nL	Executes (n) dots line feed	
$1B $49	ESC I	Selects 24 columns	
(dd) $1B $4D	(dd) ESC M	Writes value (dd) in print mode	
$1B $4E	ESC N	Set normal mode printing	
$1B $51	ESC Q	Enable underlining	
$1B $52	ESC R	Set reverse mode printing	
$1B $57	ESC W	Print graphic line of 200 dpi	
(dd) $1B $61	(dd) ESC a	Selects number of dot spaces	
$1B $63	ESC c	Management of bar code printing	
$1B $68	ESC h	Selects 42 columns	
$1B $69	ESC i	Selects 40 columns	
$1B $6D	ESC m	Transmit print mode in serial	
$1B $71	ESC q	Disable underlining	
$1B $73	ESC s	Transmits next character in serial	
$1B $76	ESC v	Transmits printer ID	
$1B $FA n1 n2	ESC { } n1 n2	Prints graphic	
$1D $24 n	GS $ n	Set absolutes shift into a graphic line	
$1D $49 n	GS I n	Transmits the printer ID	
$1D $55	GS U	Resets printer parameters to default value	
$1D $57 n d1...dn	GS W n d1...dn	Print n byte of a 200 dpi graphic line	

NOTE: Commands without specifications are valid for all the models. All that commands which provide an answer from the printer are not active for the parallel interface models (PLUSII-C, PLUSII-P and PLUSII-C-0004).

The following pages provide a more detailed description of each command.

$00

[Name]	**Small character printing.**	
[Format]	ASCII	-
	Hex	00
	Decimal	0
[Description]	The printer prints in small characters (normal)	
[Notes]	• The commands from $00 to $09 do not cancel the print buffer • The commands which modify the direction of the characters are only active at the beginning of the line	
[Default]	Setting in option register by means of front keys	
[Reference]	$01, $02, $03, $04, $1B $4D	
[Example]		

$01

[Name]	**Double width printing.**	
[Format]	ASCII	-
	Hex	01
	Decimal	1
[Description]	The printer prints in double width format	
[Notes]	• The commands from $00 to $09 do not cancel the print buffer. • The commands which modify the direction of the characters are only active at the beginning of the line.	
[Default]	Setting in option register by means of front keys	
[Reference]	$00, $02, $03, $04, $1B $4D	
[Example]		

$02

[Name]	**Double height printing.**	
[Format]	ASCII	-
	Hex	02
	Decimal	2
[Description]	The printer prints in double height format	
[Notes]	• The commands from $00 to $09 do not cancel the print buffer. • The commands which modify the direction of the characters are only active at the beginning of the line.	
[Default]	Setting in option register by means of front keys.	
[Reference]	$00, $01, $03, $04, $1B $4D	
[Example]		

$03

[Name]	**Expanded printing.**	
[Format]	ASCII	-
	Hex	03
	Decimal	3
[Description]	The printer prints in expanded character mode.	
[Notes]	• Commands from $00 to $09 do not cancel the print buffer. • The commands which modify the dimensions of the characters are only active at the beginning of the line.	
[Default]	Setting in the option register by means of the front keys.	
[Reference]	$00, $01, $02, $04, $1B $4D	
[Example]		

$04

[Name] **Restore small character printing.**
[Format] ASCII -
Hex 04
Decimal 4
[Description] The printer resumes printing with small characters.
[Notes] • The commands from $00 to $09 do not cancel the print buffer.
• the commands which modify the dimensions of the characters are only active at the beginning of the line.
[Default] Setting in the option register by means of the front keys
[Reference] $00, $01, $02, $03, $1B $4D
[Example]

$0A

[Name] **Forward feeds one line.**
[Format] ASCII -
Hex 0A
Decimal 10
[Description] Forward feeds one line equivalent to a line of print.
[Notes] • This command brings about the printing of the contents of the line buffer.
• If the line buffer is empty this command executes a line feed of 24 dots (= 3 mm). If the line buffer contains text the line feed is = (character height + spacing) dots (default = 4 mm).
[Default]
[Reference] $0B
[Example]

(n) $0B

[Name] **Forward feeds (n) lines.**
[Format] ASCII -
Hex 0B
Decimal 11
[Description] Carries out the number of line feeds specified in (n).
[Notes] •The number must be ASCII and between 0 and 9 (when n=0 the command is ignored)
• This command clears the line buffer.
[Default]
[Reference] $0A
[Example] To forward feed fast, 5 lines at a time:
$35 $0B (or 5 and the command $0B)

$0D

[Name] **Print the line buffer.**
[Format] ASCII {}
Hex 0D
Decimal 13
[Description] This command prints the line buffer.
[Notes] • If the line buffer is empty, the command is ignored.
• If the CRLF option is set, this command is ignored and printing can only be ordered through the command $0A.
[Default]
[Reference] $0F
[Example]

$0F

[Name] **Set CRLF mode.**

[Format]
ASCII -
Hex 0F
Decimal 15

[Description] Inhibits the command $0D maintaining enabled only the command $0A for printing.

[Notes]
• To disable this option, reset the printer.
• This command clears the line buffer.
• On switching on the default value is in the Option Register.

[Default] Setting in the option register by means of the front keys.

[Reference] $0D

[Example]

$11

[Name] **Graphic mode.**

[Format]
ASCII -
Hex 11
Decimal 17

[Description] Enables graphic mode:
a line in 24 column mode corresponds to 144 horizontal dots divided into 24 blocks of 6 dots each; a line in 40 column mode corresponds to 240 horizontal dots divided into 40 blocks of 6 dots each.

[Notes] To obtain graphic printing, enter the command $11 at the beginning of each line. The format of the byte in graphic configuration is:

X	**R**	**P6**	**P5**	**P4**	**P3**	**P2**	**P1**
D7	*D6*	*D5*	*D4*	*D3*	*D2*	*D1*	*D0*

where:
X is not used (0 is recommended);
R must be fixed at level 1;
P1,..P6 are the graphic dot data (1 prints, 0 does not print).
The P6 bit of the string of dots transmitted is printed on the left and the others follow from left to right (P5, P4, P3, P2, P1) as shown:

1st byte è ►	**2nd byte è ►**	**3rd byte è ►**
P6 P5 P4 P3 P2 P1	P6 P5 P4 P3 P2 P1	P6 P5 P4 P3 P2 P1

[Default]

[Reference]

[Example] To print a line of dots, transmit:
$11, n x $7F (where n is the number of characters per line), $0D.
To print an empty line, transmit:
$11, $40, $0D.

$1B $23 n

[Name] **Transmit printer ID.**

[Format]

ASCII	ESC	#	n
Hex	1B	23	n
Decimal	27	73	n

[Range] 1 ≤ n ≤ 3, 49 ≤ n ≤ 51

[Description] Transmits the printer ID specified by n follows:

n	PRINTER ID	SPECIFICATION
1, 49	Printer model ID	$1B
2, 50	Not used	Fixed on $00
3, 51	ROM version ID	Dipends on ROM (4 car)

[Notes] • This command is executed when the data is processed in the data buffer. Therefore, there could be a time lag between command reception and data transmission, depending on data buffer status.

[Default]

[Reference]

[Example]

$1B $30 *(only for PLUSII-S-0004)*

[Name] **Switch-off the printer.**

[Format]

ASCII	ESC	0
Hex	1B	30
Decimal	27	48

[Description] Switch off the printer and bring it back to low-consumption mode if was disabled the Auto POWER-ON function (see paragraph 1.3.3).

[Notes] • This command is executed only when the JP8 jumper is open.

[Default]

[Reference]

[Example]

$1B $40

[Name] **Resets the printer.**

[Format]

ASCII	ESC	@
Hex	1B	40
Decimal	27	64

[Description] Cancels all the data in the print buffer and resets the printer mode, restoring the mode which was enabled at the moment of switching on.

[Notes] • Same as hardware reset.
• After the command has been transmitted, 1.5 seconds elapse before the printer is enabled.

[Default]

[Reference]

[Example]

$1B $41 nH nL

[Name] **Executes (n) dots line feed.**

[Format]

ASCII	ESC	A	nH	nL
Hex	1B	41	nH	nL
Decimal	27	65	nH	nL

[Range] 0 ≤ nH, nL ≤ 255

[Description] Executes (N) dots line feed where N = 256 x nH + nL.

[Notes]
- 1 mm = 8 dot line.
- The maximum paper line feed value is about 1 m.

[Default]

[Reference]

[Example] To forward feed 40mm send this sequence:

$1B $41 $01 $40 (the ESC A command with 40mm x 8dot)

$1B $49

[Name] **Selects 24 columns.**

[Format]

ASCII	ESC	I
Hex	1B	49
Decimal	27	73

[Description] On receiving this command, the printer enters 24-column per line printing mode.

[Notes]

[Default]

[Reference] $1B $69, $1B $68

[Example]

(dd) $1B $4D

[Name] **Writes the value (dd) in the print mode.**

[Format]

ASCII	dH	dL	ESC	M
Hex	dH	dL	1B	4D
Decimal	dH	dL	27	77

[Range] dH = 48
48 ≤ dL ≤ 51

[Description] Sets the print mode default parameters. ASCII characters (dd) identify an hexadecimal byte as follow:

$00	small character printing
$01	double width printing
$02	double height printing
$03	expanded printing

[Notes]

[Default] Setting in option register by means of front keys.

[Reference] $00, $02, $03, $04, $1B $6D

[Example] For double height printing, transmit: $30 $32 $1B $4D

$1B $4E

[Name] **Set normal mode printing.**

[Format]

ASCII	ESC	N
Hex	1B	4E
Decimal	27	78

[Description] Select normal mode printing:the receipt feeds out of the printer with the printing upside down running from right to left.

[Notes]
[Default] Setting in option register by means of front keys
[Reference] $1B $52
[Example]

$1B $51

[Name] **Enable underlined printing.**
[Format]

ASCII	ESC	Q
Hex	1B	51
Decimal	27	81

[Description] After this command has been received, the characters are printed underlined.
[Note]
[Default]
[Reference] $1B $71
[Example]

$1B $52

[Name] **Set reverse mode printing.**
[Format]

ASCII	ESC	R
Hex	1B	52
Decimal	27	82

[Description] Selects printing in reverse mode: the receipt feeds out of the printer with the printing in normal mode running from left to right.
[Notes]
[Default] Setting in option register by means of front keys.
[Reference] $1B $4E
[Example]

$1B $57

[Name] **Prints a graphic line at 203 dpi.**
[Format]

ASCII	ESC	W
Hex	1B	57
Decimal	27	87

[Description] After receiving this command, the printer waits for 48 bytes which correspond to an entire graphic line. In fact, 48 bytes of 8 bits each correspond to 384 dots per line.
[Notes]
[Defaul]
[Reference]
[Example]

(dd) $1B $61

[Name] **Selects the number of dot spaces.**
[Format]

ASCII	(dd)	ESC	a
Hex	(dd)	1B	61
Decimal	(dd)	27	97

[Description] By using (dd) parameters it's possible to select the dot line number between one print line and another.
[Notes] • (dd) are two ASCII characters (selected between '0', '1' ... '9', 'A', 'B' ... 'F') which identifies number from 0 to 127 in hexadecimal form and corresponds to the number of dot lines between one print line and another. The acceptable range is from $00 to $7FH.
[Default] 0
[Reference]
[Example]

$1B $63

[Name] **Management of bar code printing.**

[Format]

ASCII	ESC	c	[code] [height] [position] [options] [length] [data]
Hex	1B	63	
Decimal	27	99	

[Description] This command executes a barcode printing with the following settings:

[ASCII code] Type of bar code:

I	Interleaved 2/5
C	Code 39
B	CodaBar
e	EAN8
E	EAN13

[height] Number of dot lines in 1/8 mm. units.

[position] Left hand margin, expressed in 1/8 mm. units

[options] Specify the bar code options trough a byte. In the following tables are listed all the possible values of single bit inside of byte:

BIT 0	FUNCTION	DESCRIPTION
0	Check digit is not printed	Check digit
1	Check digit is printed	

BIT 1	FUNCTION	DESCRIPTION
-	Not used	-

BIT 3	BIT 2	FUNCTION	DESCRIPTION
0	0	None	HRI Position
0	1	Above	
1	0	Below	
1	1	Above & below	

BIT 5	BIT 4	FUNCTION	DESCRIPTION
0	0	Normal	Barcode width
0	1	Double	
1	0	Triple	
1	1	Not used	

BIT 6	FUNCTION	DESCRIPTION
-	Not used	-

BIT 7	FUNCTION	DESCRIPTION
-	Not used	-

[length] Specify the characters number to print trough a byte; in following are listed the maximum lenghts allowed:

Interleaved 2/5	= 12 characters
Code 39	= 10 characters
CodaBar	= 10 characters
EAN8	= 7 characters
EAN13	= 12 characters

[data] Specify the characters to print expressed in ASCII.

[Notes] • For EAN8 and EAN13 barcodes the check digit is automatic.
• When CODE 39 barcode is used with triple width function, if 6 characters + check digit are sent the print limits are exceeded, so the barcode can't be printed.
[Default]
[Reference]
[Example] In the following example is indicated the command sequence to print a barcode:

$1B, 'N', $1B, 'c', 'C', $50, $3C, $14, $04, 'PLUS'

where:

$1B, 'N'	(sets the printing in normal mode)
$1B, 'c',	(bar code printing command)
'C',	(barcode type = Code 39)
$50,	(barcode heigth = 10 mm)
$3C,	(starting position = 7,5 mm)
$14,	(HRI printing below, barcode width double)
$04,	(characters number to print)
'PLUS'	(characters to print)

$1B $68

[Name] **Selects 42 columns.**
[Format]

ASCII	ESC	h
Hex	1B	68
Decimal	27	104

[Description] On receiving this command, the printer enters 42-column per line printing mode.
[Notes]
[Default]
[Reference] $1B $49, $1B $69
[Example]

$1B $69

[Name] **Selects 40 columns.**
[Format]

ASCII	ESC	i
Hex	1B	69
Decimal	27	105

[Description] On receiving this command, the printer enters 40-column per line printing mode.
[Notes]
[Default]
[Reference] $1B $49, $1B $68
[Example]

$1B $6D

[Name] **Transmits the print mode in serial.**

[Format]

ASCII	ESC	m
Hex	1B	6D
Decimal	27	109

[Description] Transmits the print mode configuration on the serial port.

[Notes]
- If the printer is using the parallel protocol, nothing will be transmitted.
- If the print mode setting is $04 the printer answer $30 $30 (normal character).

[Default] Setting in the option register by means of the front keys.

[Reference]

[Example] The response is on two bytes. For example if you receive:

$30, $32

it means that printing is in double height mode

$1B $71

[Name] **Disable underlined printing.**

[Format]

ASCII	ESC	q
Hex	1B	71
Decimal	27	113

[Description] Disable underlined printing

[Notes]

[Default]

[Reference] $1B $51

[Example]

$1B $73

[Name] **Transmits the next character in serial.**

[Format]

ASCII	ESC	s
Hex	1B	73
Decimal	27	115

[Description] Transmits the next character it receives on the serial port.

[Notes]

[Default]

[Reference]

[Example] If you transmit:

$1B $73 $41

the last character, A ($41), will not be printed but immediately transmitted on the serial line.

$1B $76

[Name] **Transmit paper sensor status.**

[Format]

ASCII	ESC	v
Hex	1B	76
Decimal	27	118

[Description] When this command is received, transmit the current status of the paper sensor.

[Notes] • This command is executed immediately, even when the data buffer is full (Busy).
The status to be transmitted is shown in the table below:

Bit	Off/On	Hex	Decimal	Function
0,1	Off	00	0	Cover close, paper present.
	On	03	3	Cover open or paper sensor not working.
2,3	Off	00	0	Paper-end sensor: paper present.
	On	0C	12	Paper-end sensor: paper not present.
4	Off	00	0	Not used. Fixed to Off.
5	Off	00	0	Head temperature correct.
	On	20	32	Head temperature error.
6	Off	00	0	Supply voltage correct.
	On	40	64	Supply voltage error.
7	Off	00	0	Not used. Fixed to Off.

[Default]
[Reference]
[Example]

$1B $FA n1 n2

[Name] **Print graphic bank (384 x 85 dots).**

[Format]

ASCII	ESC	{}	n1	n2
Hex	1B	FA	n1	n2
Decimal	27	250	n1	n2

[Range] 0 ≤ n1, n2 ≤ 255

[Description] Prints the graphics bank from flash.
n1 specifies the starting dot line (1 ÷ 85).
n2 specifies the number of lines to print.

[Notes] • If n1 + n2 > 85 the printer only prints 85 - n1 + 1 dotlines.

[Default]
[Reference]

[Example] To print the graphic bank from dotline 10 to dotline 40, send:
$1B $FA $0A $1E

$1D $24 n

[Name] **Set absolute shift into a graphic line.**

[Format]

ASCII	GS	$	n
Hex	1D	24	n
Decimal	29	36	n

[Range] 0 ≤ n ≤ 47

[Description] Set the print beginning position into a graphic line based on the current value of n that indicate the byte number of shift from left margin.

[Notes] • Settings outside the specified printable area are ignored.

[Default]
[Reference]
[Example]

$1D $49 n

[Name] **Transmit printer ID.**

[Format]

ASCII	GS	I	n
Hex	1D	49	n
Decimal	29	73	n

[Range] 1 ≤ n ≤ 3, 49 ≤ n ≤ 51

[Description] Transmits the printer ID specified by n follows:

n	PRINTER ID	SPECIFICATION
1, 49	Printer model ID	$1B
2, 50	Not used	Fixed on $00
3, 51	ROM version ID	Dipends on ROM (4 car)

[Notes] • This command is executed when the data is processed in the data buffer. Therefore, there could be a time lag between command reception and data transmission, depending on data buffer status.

[Default]

[Reference]

[Example]

$1D $55

[Name] **Resets the printer parameters to default.**

[Format]

ASCII	GS	U
Hex	1D	55
Decimal	29	85

[Description] Resets the printer parameters to the default configuration.

[Notes] • After executing this command the printer is initialized.

[Default]

[Reference]

[Example]

$1D $57 n d1...dn

[Name] **Prints n byte of a 200 dpi graphic line.**

[Format]

ASCII	GS	W	n	d1...dn
Hex	1D	57	n	d1...dn
Decimal	29	87	n	d1...dn

[Range] 1 ≤ n ≤ 48
0 ≤ d1…dn ≤ 255

[Description] Print n byte of a 200 dpi graphic line where:
• n specifies the number of byte to print;
• d1...dn specify the bytes to print.

[Notes] • If the bit image data input exceeds the number of dots to be printed on a line, the excess data are processed as printable characters.
• d indicates the bit image data. Set a corresponding bit to 1 to print a dot, or to 0 to not print the dot.
• This command is not affected by the emphasized, double-strike, underline (etc.) print modes and the upside-down mode.

[Default]

[Reference]

[Example] For printing 12 bytes the command sequence is:
$1D $57 $0C $FF $00 $FF $00 $FF $00 $FF $00 $FF $00 $FF $00

Blank page

4.1 TECHNICAL SPECIFICATIONS

Table 4.1 gives the main technical specifications for the printer.

(Tab.4.1)

Available interfaces	Serial RS232 / TTL	Parallel Centronics / TTL
Baud rate	From 600 to 38400 bps	-
Sensors	Head temperature, paper end OPTIONAL: Cover open sensor	
Printing driver	Window™ 2K, XP	
Receive buffer	128 Kbytes	
Flash memory	32 Mbytes	
Emulation	CUSTOM	
PRINTER SPECIFICATIONS		
Print method	Thermal, fixed head	
Resolution	203 DPI (8 dot/mm)	
Printing mode	Straight, 180°	
Printing format	Normal, width from 1 to 2, bold, reverse, underlined	
Character fonts	ASCII standard, International	
Graphics memory	1 Logo (384 x 85 dots)	
Number of columns	**24**	**40**
Character matrix	16 x 24	8 x 24
Printing speed		
Lines / sec.	13	13
Chars / sec.	307	512
Characters (L x H mm)	2 x 3	1 x 3
PAPER SPECIFICATIONS		
Type of paper	Thermal rolls (heat-sensitive side on outside of roll) LINERLESS paper (see paragraph 1.1.1)	
Paper width	57 mm ±0.5 mm	
Recommended types of paper	from 55 g/m^2 to 70 g/m^2	
Internal roll core diameter	13 mm	
External roll diameter	max. Ø50 mm	
Core type	Cardboard or plastic	
ELECTRICAL SPECIFICATIONS		
Power Supply	**Vcc**	**Vin**
PLUS II-S (2), PLUS II-T (2)	3.5 ÷ 8 V *(Range max.)*	3.5 ÷ 8 V *(Range max.)*
PLUS II-S-0004 (2)	-	9 ÷ 48 V *(Range max.)*
PLUS II-C (2), PLUS II-P (2)	5 ± 5%	3.5 ÷ 8 V *(Range max.)*
PLUS II-C (2), PLUS II-P (2)	-	9 ÷ 48 V *(Range max.)*
Absorptions (5V)		
Medium (50% Dot ON)	0.2 A (Vcc) 3.3 A (Vin)	
Stand by	0.1 A	

Absorptions (9 ÷ 48 V)		
Medium (50% Dot ON)	3 A (9V) 0.7 A (48V)	
Stand by	0.1 A	
Absorptions (3.5 ÷ 8 V)		
Medium (50% Dot ON)	3.3 A (3.5V) 2.5 A (8V)	
Stand by	0.1 A	
ENVIRONMENTAL CONDITIONS		
Operating temperature	0-50°C	
Relative humidity	10-85% Rh	
Storage temperature / Humidity	-20 °C – 70 °C / 10% - 90% Rh	
Dimensions	Length [mm] =	90 max.
	Width [mm] =	57 max.
	Height [mm] =	85.5 max.
Weight [gr]	141 (1)	

NOTE

(1) Referred without paper roll.

(2) Codes description:

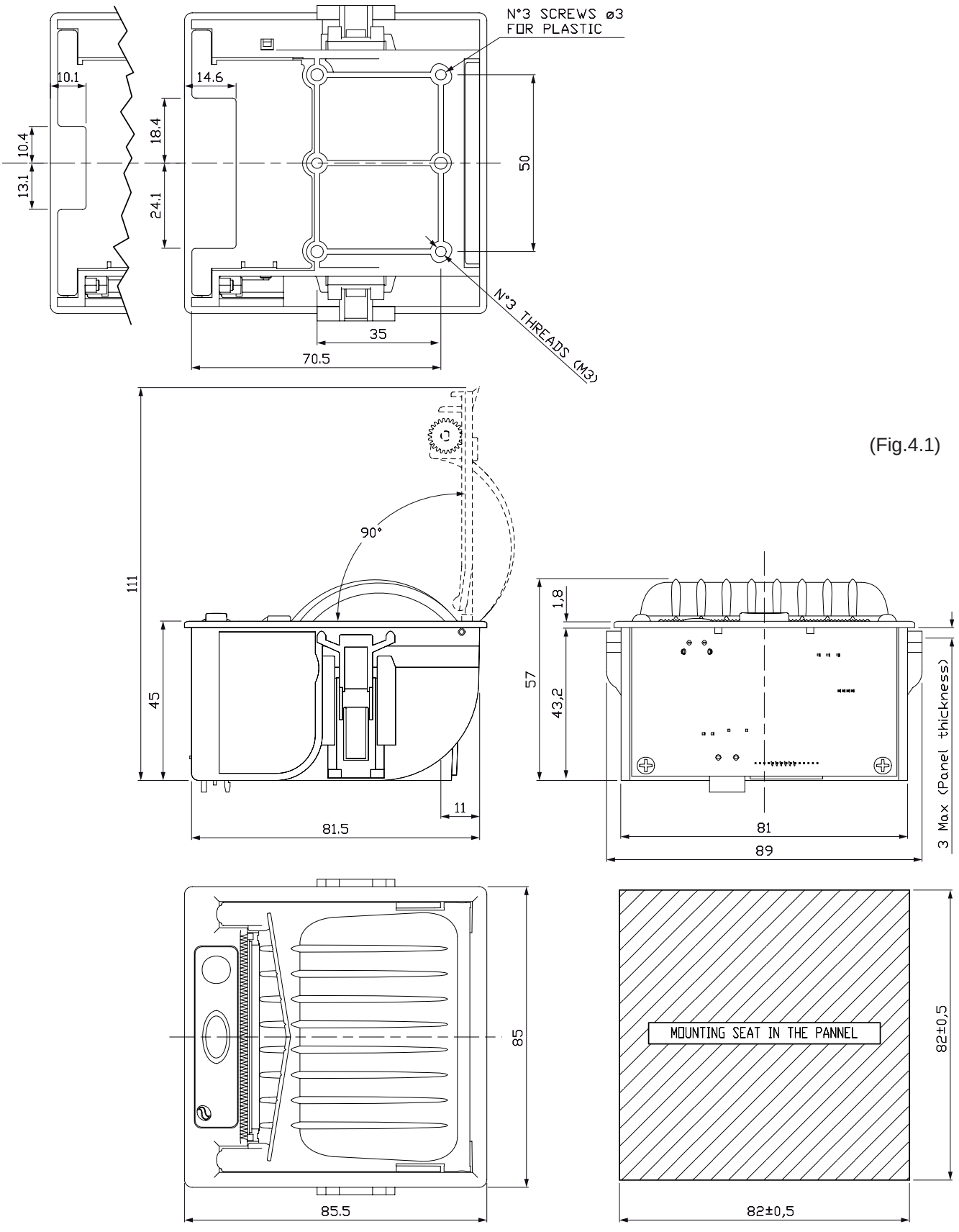
PLUS II-S	*Serial RS232*
PLUS II-T	*Serial TTL*
PLUS II-S-0004	*RS232 Extended range*
PLUS II-C	*Parallel Centronics*
PLUS II-P	*Parallel TTL*
PLUS II-C-0004	*Parallel Centronics Extended range*

4.2 DIMENSIONS

Versions:
PLUS II-S
PLUS II-T

Versions:
PLUS II-C
PLUS II-P

PLUS II-C-0004
PLUS II-S-0004



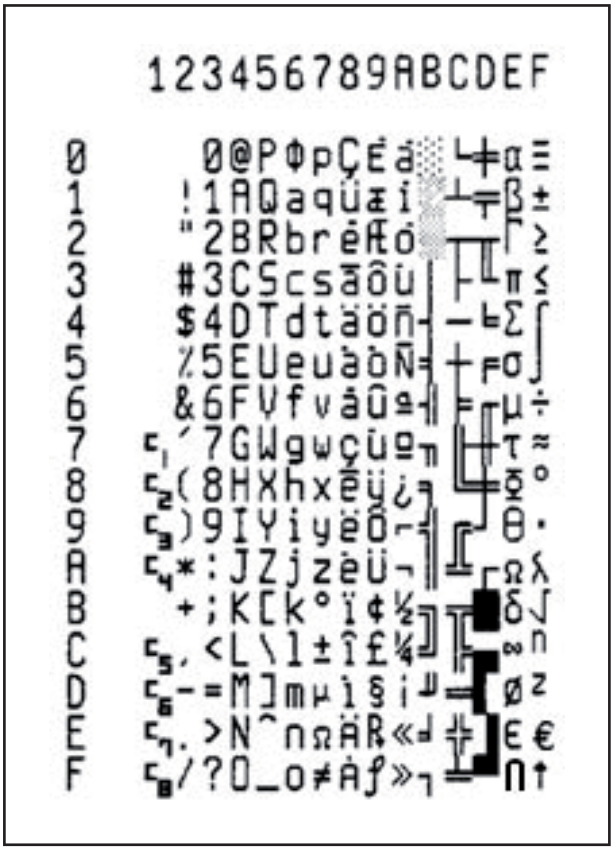
(Fig.4.1)

Blank page

5.1 CHARACTER SETS

The printer has 2 fonts each width 224 characters (Font 1 and Font 2). Shown below in figure 5.1 is an example of font1.

Font 1



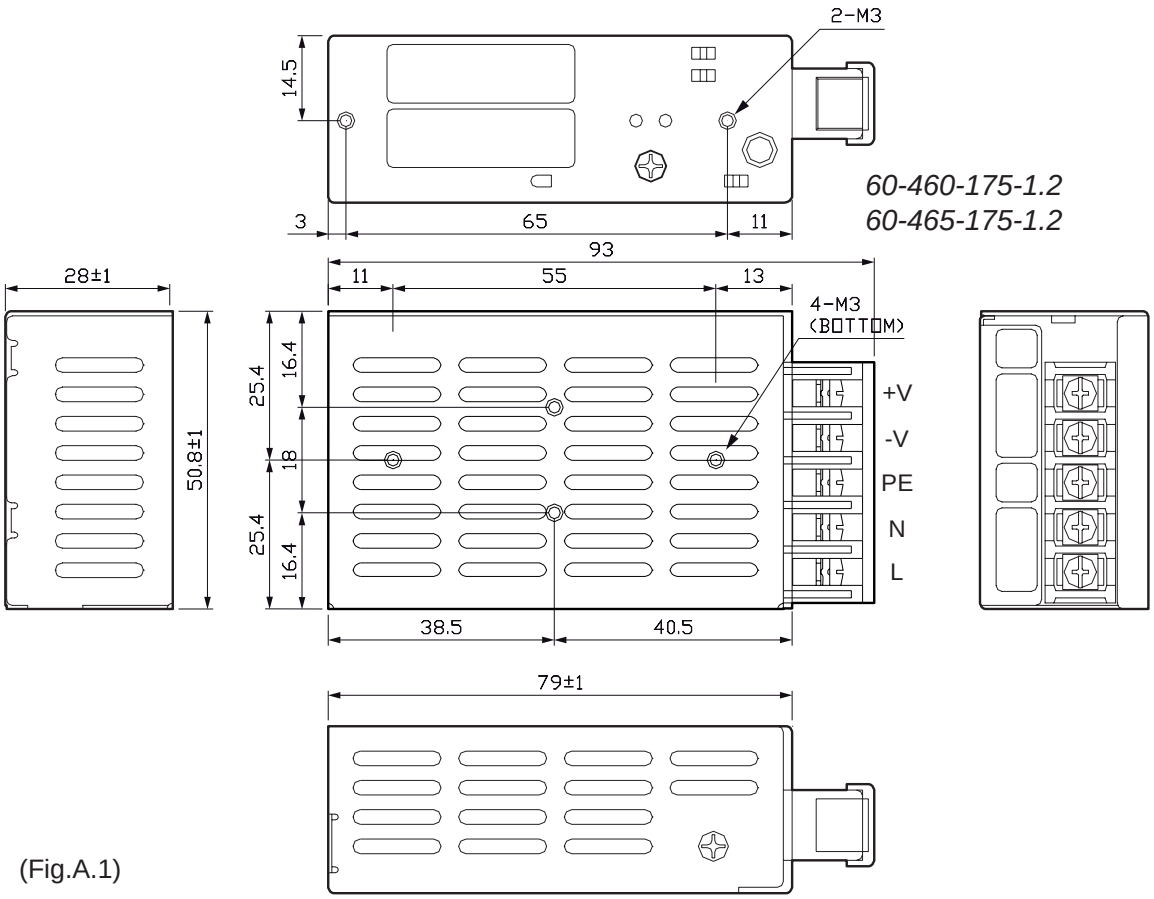
(Fig.5.1)

Blank page

A.1 ACCESSORIES

A.1.1 Power supply

The figure below illustrates the power supply provided by Custom to be used for printer operation of PLUSII-S , PLUSII-T, PLUSII-C and PLUSII-P models.



(Fig.A.1)

1. TERMINAL BLOCK: 5P, PITCH 7.62 mm WITH PC COVER
2. UNIT: mm

PPSPS-025-05	Switching power supply 5V 25W
Input specifications	
Input voltage	AC: 85V ÷ 264V DC: 120V ÷ 375V
Current	0.8A max at 100V AC input
Input frequency	47Hz ÷ 63Hz
Output specifications	
Output voltage	5V
Output current	5.0A
Efficiency	72%
Environmental conditions	
Operating temperature	-25°C ÷ 70°C
Humidity	20% ÷ 85%
Storage temperature / Humidity	-25°C ÷ 75°C / 10% ÷ 95% (w/o condensation)

Protection devices: Shortcircuit, overload and overvoltage.

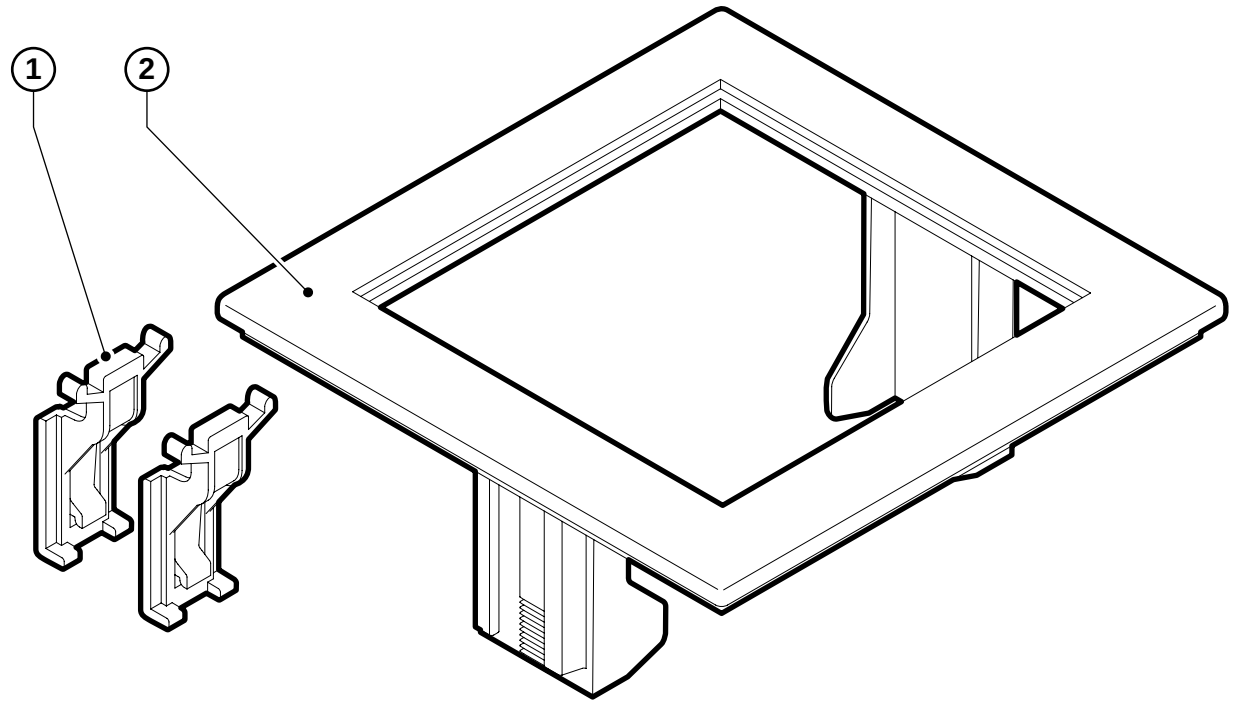
A.1.2 Adaptor frame kit 112X112

The printer has an adaptor frame which makes it mechanically compatible with CUSTOM F and P series panel printers (see Fig. A.2).

PCXSP-PLUS-2	Grey adaptor frame with hooks
PCXSP-PLUS-3	Black adaptor frame with hooks

The kit is composed of:

1. N°2 Fixing hooks
2. Adaptor frame [1]

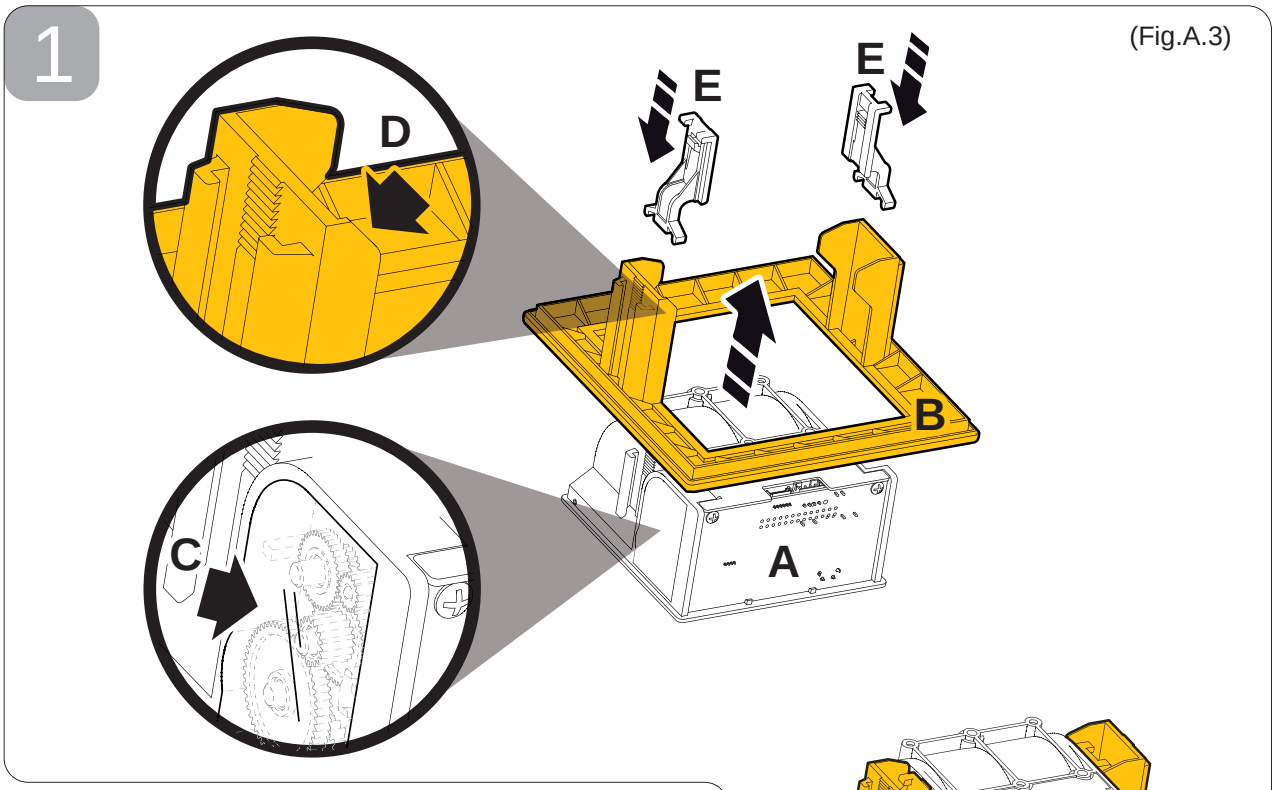


(Fig.A.2)

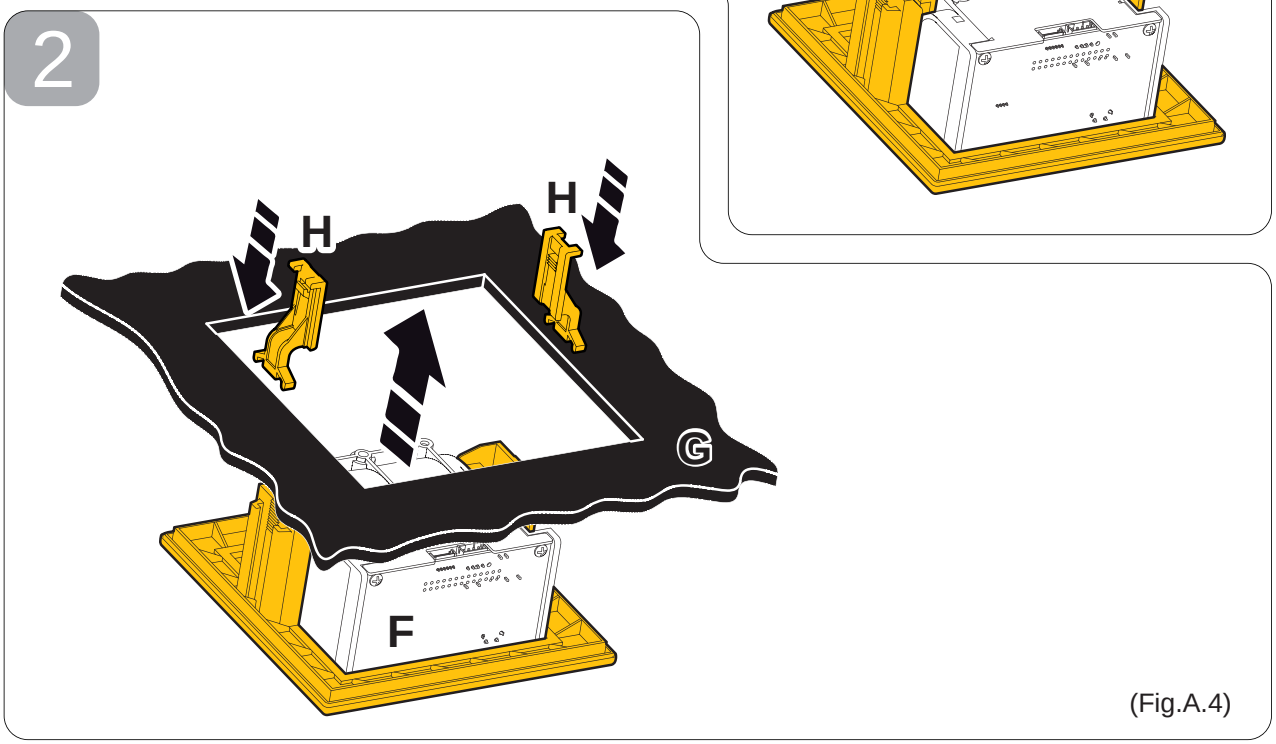
NOTE:
[1] Pay attention that the external frame, the cover and the printer frame are made from polypropylene, so it's better to keep away from: Ammonia, Methanol, Acetone, Washing-up liquid, Benzol, Dishwasher liquid, Hydrocarbon, Dichloromethane, Perchloretylene, Ethylene, Trichlorethylene, Toluene.

Assembling instructions

- Fit the printer (A) into the adaptor frame (B), making sure that the side of the printer with carter gears (C) is aligned with the hooking slide of the frame with the smoothed corner (D), not the side with two hooks (see Fig. A.3).
- Fix the printer to the frame using the 2 hooks (E) included with the printer (see Fig. A.3)
- The printer/frame unit is assembled.
- Fit the printer/frame unit (F) into the panel (G) and fix it using the 2 hooks (H), included in the assembling kit (see Fig. A.4).

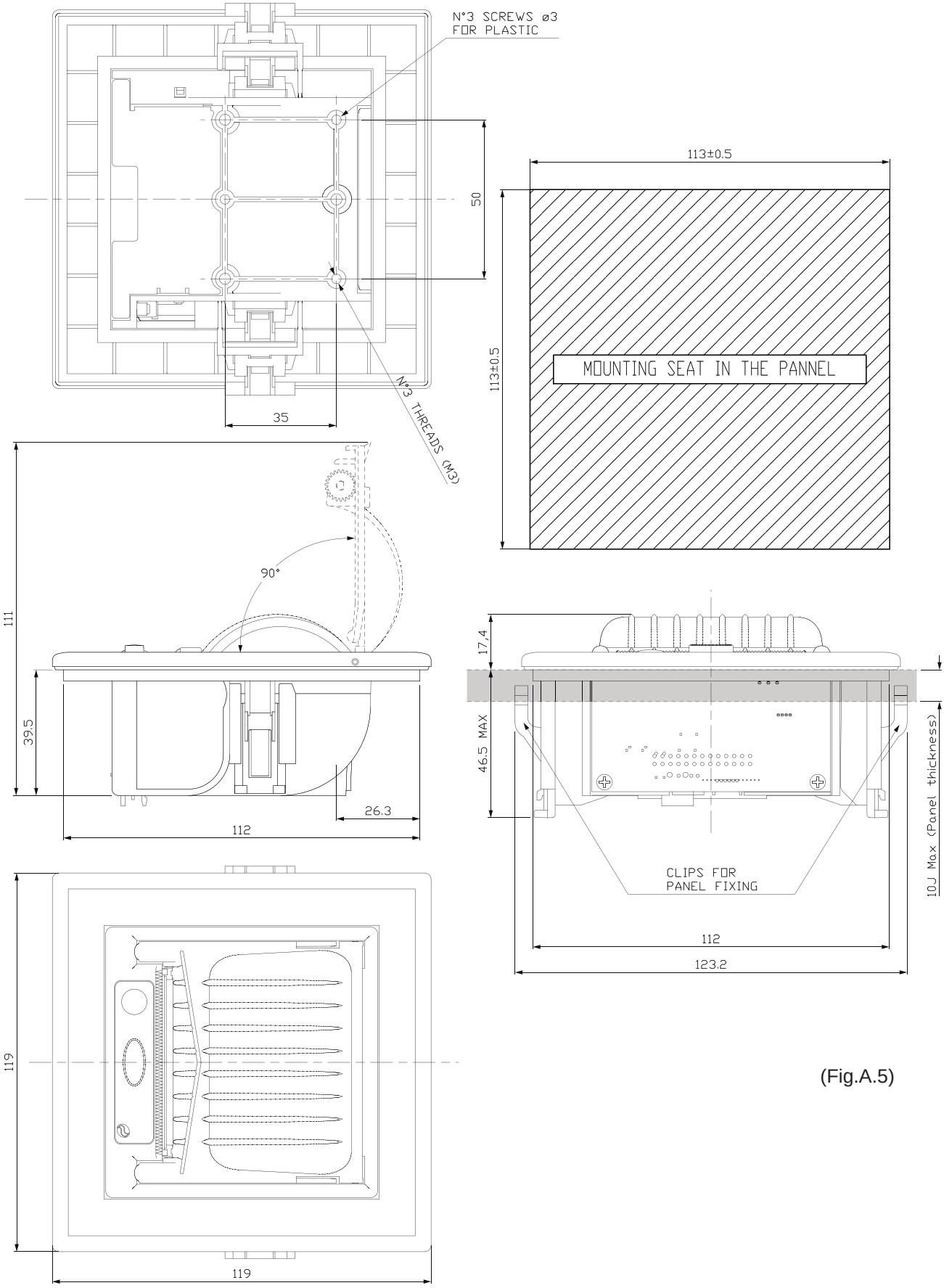


(Fig.A.3)



(Fig.A.4)

Printer dimensions assembled with the frame



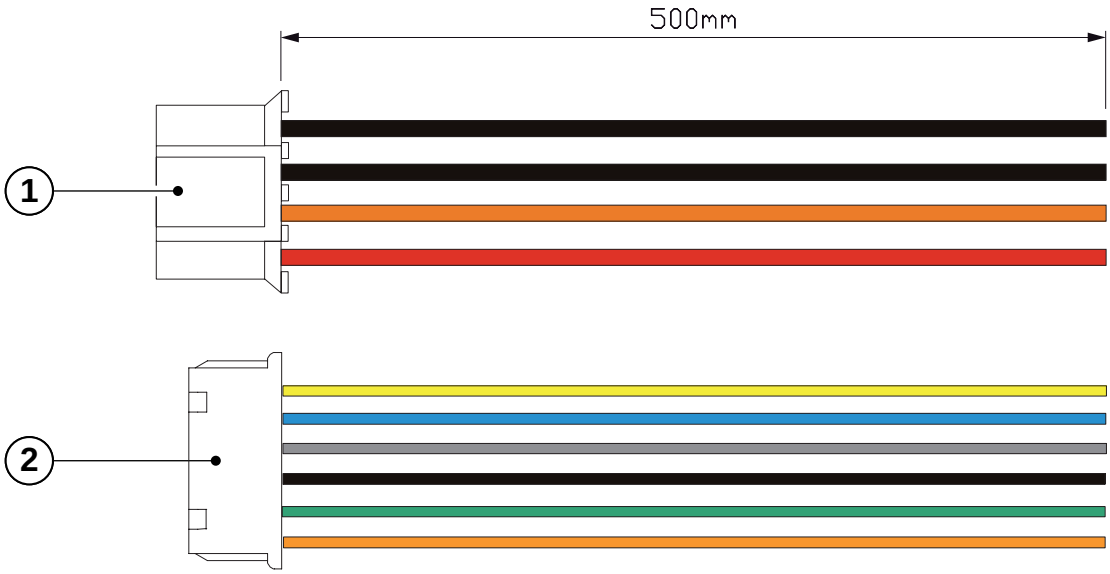
(Fig.A.5)

A.1.3 Data and power supply cables kit for PLUSII-S and PLUSII-T

The printer can be supplied with a data and power supply cables STARTER KIT.

PCSKMINIPLUS-S	Starter Kit cables for serial MINIPLUS

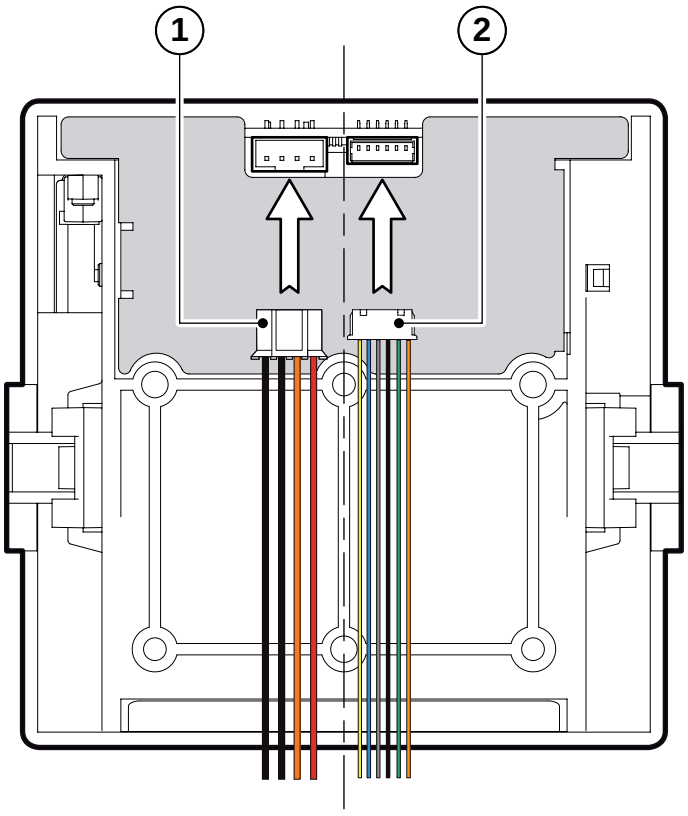
The kit includes (see Fig. A.6):
1. Power supply cable.
2. Data cable for serial interface.



(Fig.A.6)

To the cable connections proceed as follow:

- Connect the power supply cable (1) to the power supply connector in the rear of the printer (see Fig. A.7).
- Connect the data serial interface cable (2) to the interface connector in the rear of the printer (see Fig. A.7)

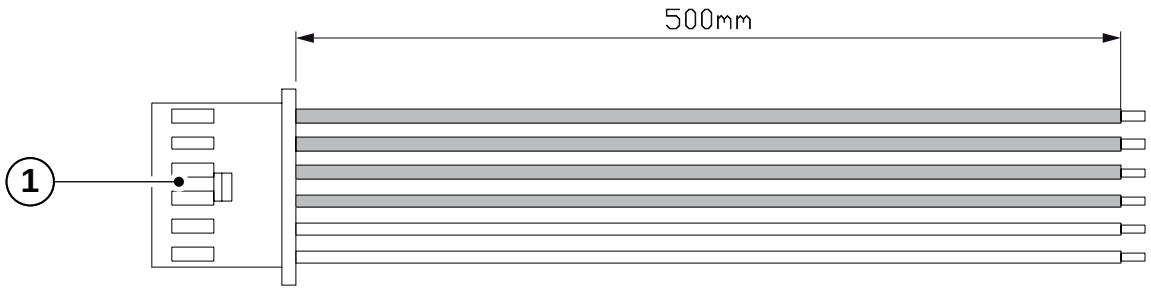


(Fig.A.7)

A.1.4 Data serial cable kit for PLUSII-S-0004

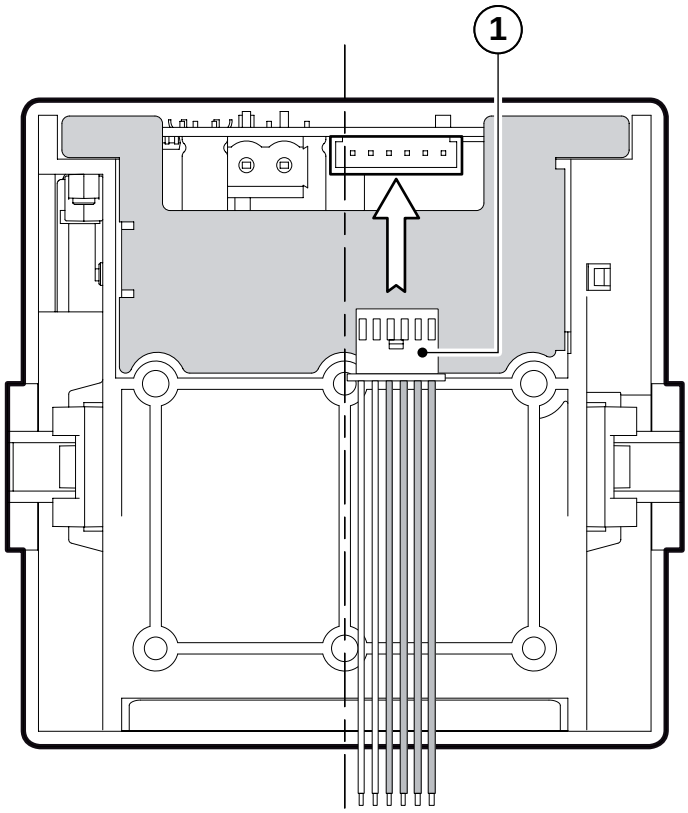
The printer can be supplied with a data serial cable (see Fig. A.8).

PCSKPLUS-0004	Starter Kit for PCPLUS-S-0004



(Fig.A.8)

Connect the data serial interface cable (1) to the interface connector in the rear of the printer (see Fig. A.9).



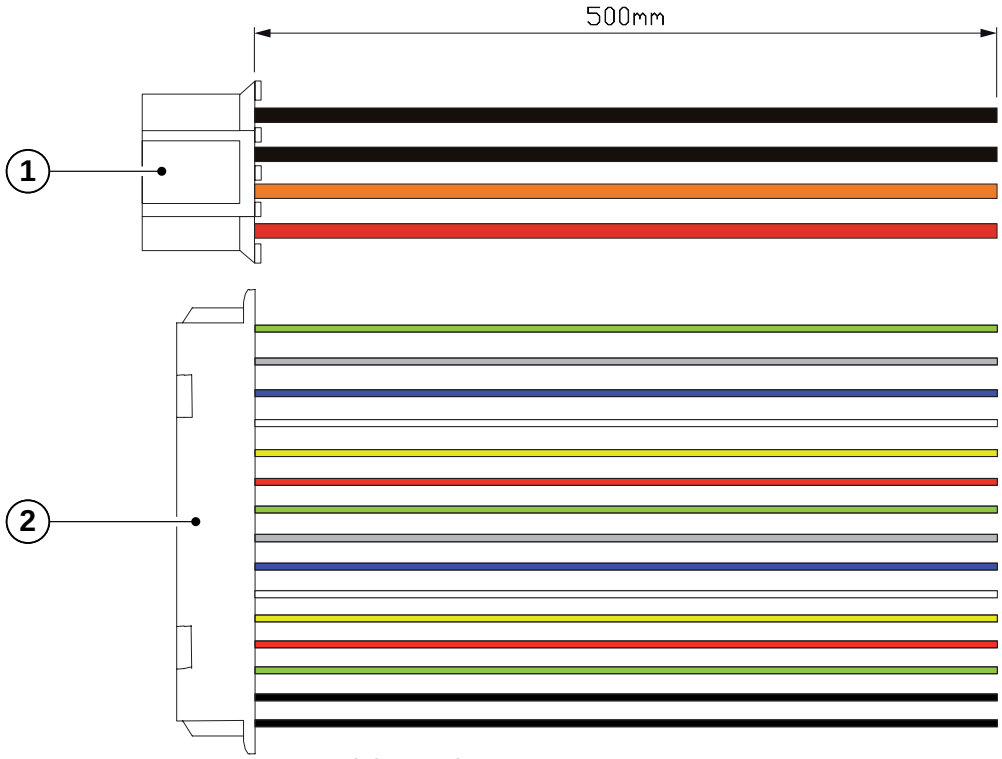
(Fig.A.9)

A.1.5 Data and power supply cables kit for PLUSII-C and PLUSII-P

The printer can be supplied with a data and power supply cable starter kit.

PCSKPLUS-C	Starter Kit cables for PCPLUS-C and PCPLUS-P

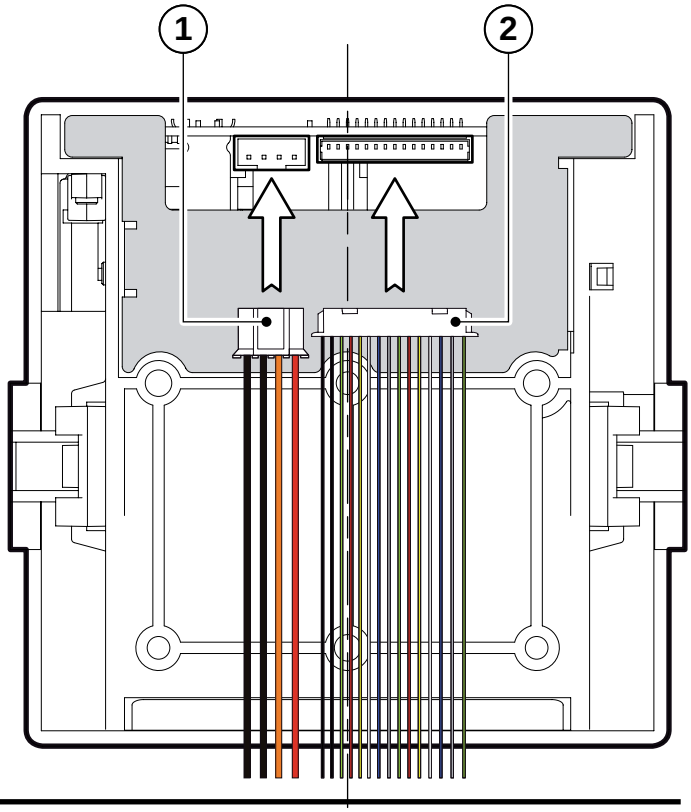
The kit includes (see Fig. A.10):
1. Power supply cable.
2. Data cable for parallel interface.



(Fig.A.10)

To the cable connections proceed as follow:

- Connect the power supply cable (1) to the power supply connector in the rear of the printer (see Fig. A.11).
- Connect the data parallel interface cable (2) to the interface connector in the rear of the printer (see Fig. A.11)

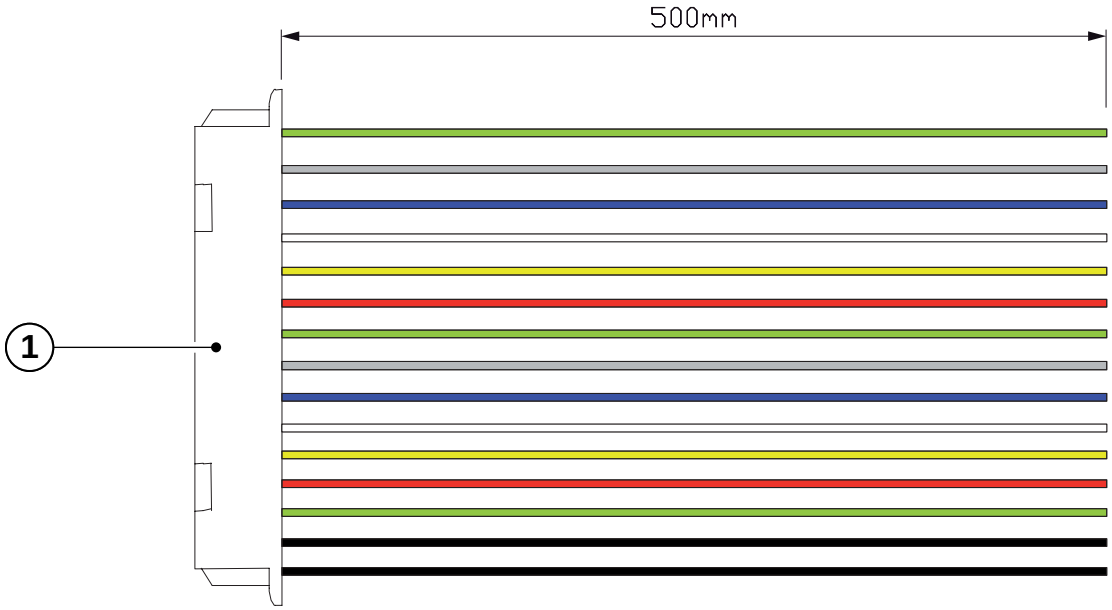


(Fig.A.11)

A.1.6 Data serial cable kit for PLUSII-C-0004

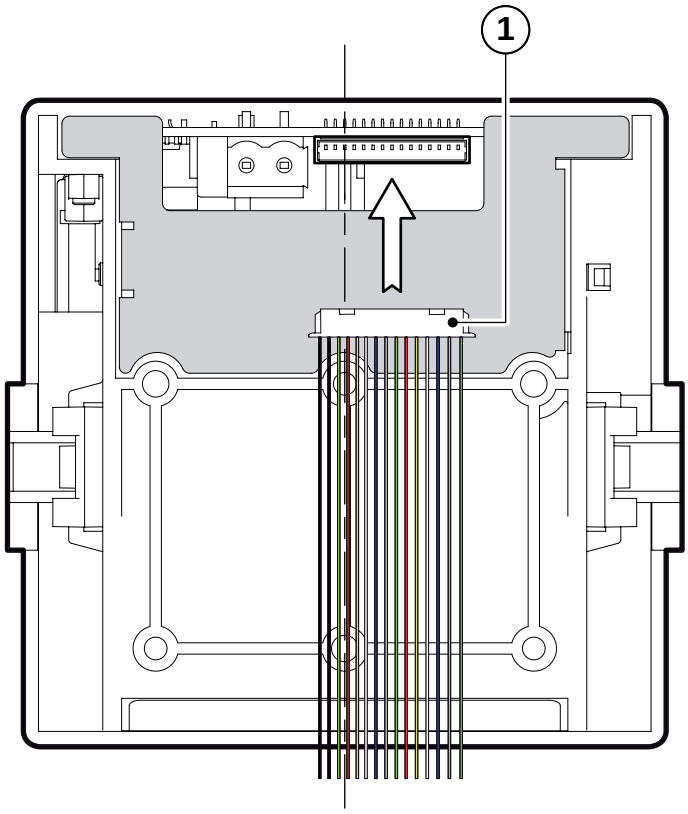
The printer can be supplied with a data parallel cable (see Fig. A.12).

PCSKPLUS-C-0004	Starter Kit for PCPLUS-C-0004



(Fig.A.12)

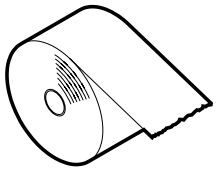
Connect the data parallel interface cable (1) to the interface connector in the rear of the printer (see Fig. A.13).



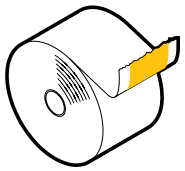
(Fig.A.13)

A.2 SPARE PARTS

A.2.1 Supplies



RCT57X50				
Thermal paper roll 57mm d=50				
Quantity recommended per n° machines purchased				
N° machines	*<10*	*<50*	*<100*	*>100*
Quantities recommended	*5*	*30*	*60*	*90*



RCT57X50-18MM-LL				
Linerless paper roll L=57 Di=18 De=50				
Quantity recommended per n° machines purchased				
N° machines	*<10*	*<50*	*<100*	*>100*
Quantities recommended	*5*	*30*	*60*	*90*

Part Number : DOME-PLUSII Rev. 1.00

M . U . R . S . T .
Ministry University
Research Scientific
T e c h n o l o g y
Authorized laboratory
n o . 5 0 8 4 6 Z Y Z

CUSTOM ENGINEERING SPA
World Headquarters
Via Berettine, 2 - 43100 Fontevivo
Tel. +39 0521 680111 - Fax +39 0521 610701
info@custom.biz - www.custom.biz

www.custom.biz

Always On!