

# Ticket Printer

## TG558 serie

35-58 mm

## User Manual



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## PRINTER COMPONENTS

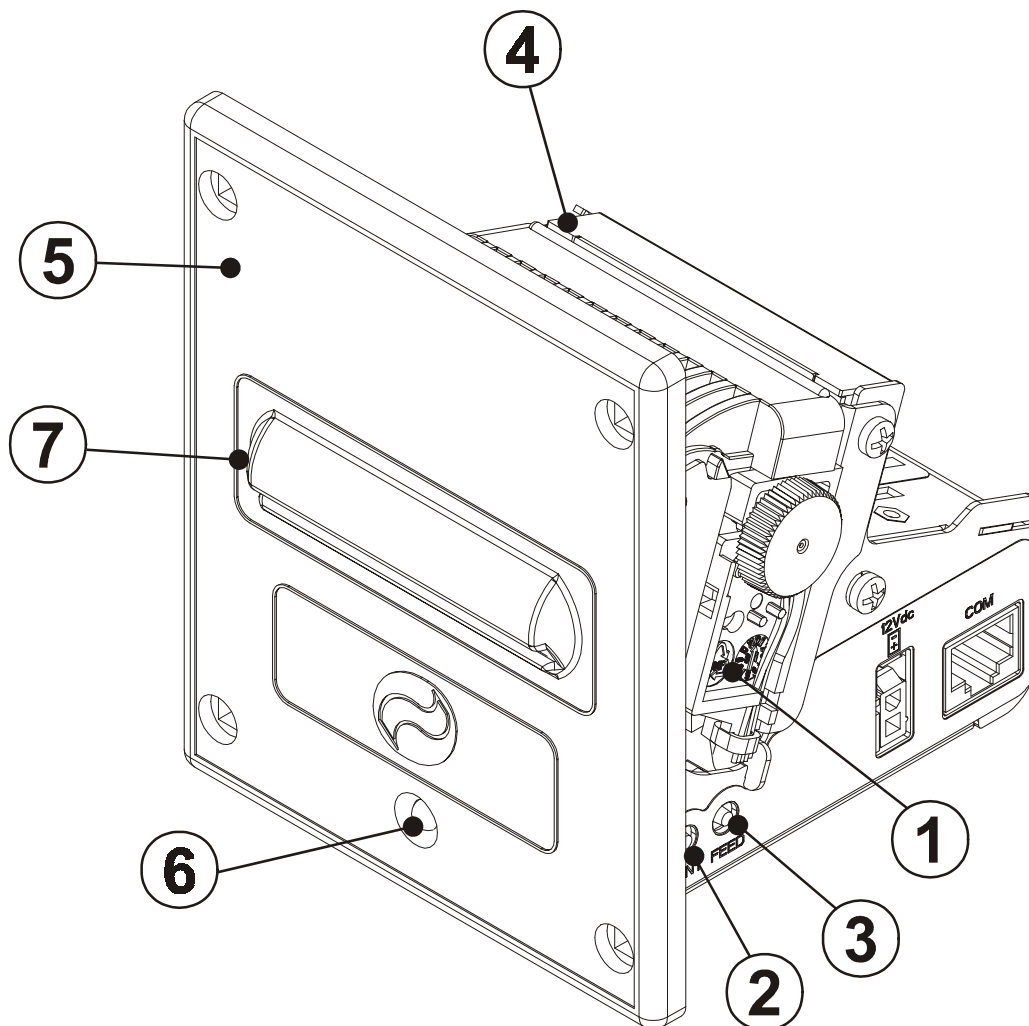
### A. TG558 Exterior view with plastic front panel TG558-x35P <sup>(1)</sup>, TG558-x58P <sup>(1)</sup>, TG558-x35P-0001 <sup>(2)</sup>, TG558-x58P-0001 <sup>(2)</sup>

- 1- Printing mechanism
- 2- "PRINT" key
- 3- "FEED" key
- 4- Case
- 5- Front panel
- 6- Led
- 7- Paper output

<sup>(1)</sup> The **x** suffix indicates the following models :

- TG558-S35P (35mm version with RS232 serial interface)
- TG558-S58P (58mm version with RS232 serial interface)
- TG558-T35P (35mm version with TTL serial interface)
- TG558-T58P (58mm version with TTL serial interface)

<sup>(2)</sup> The **0001** suffix indicate the real time clock option.



**B. TG558 Exterior view with metallic front panel**

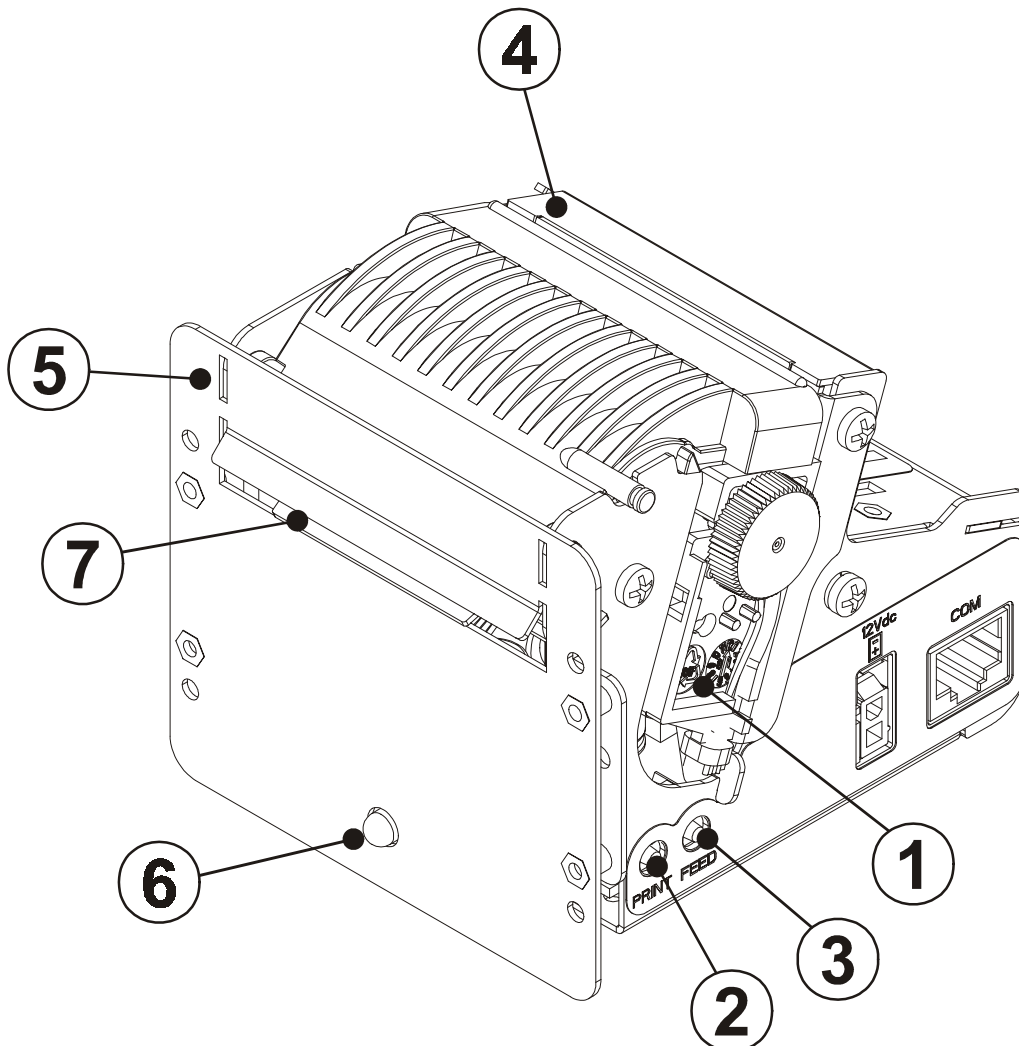
**TG558-x35M <sup>(1)</sup>, TG558-x58M <sup>(1)</sup>, TG558-x35M-0001 <sup>(2)</sup>, TG558-x58M-0001 <sup>(2)</sup>**

- 1- Printing mechanism
- 2- "PRINT" key
- 3- "FEED" key
- 4- Case
- 5- Front panel
- 6- Led
- 7- Paper output

<sup>(1)</sup> The **x** suffix indicates the following models :

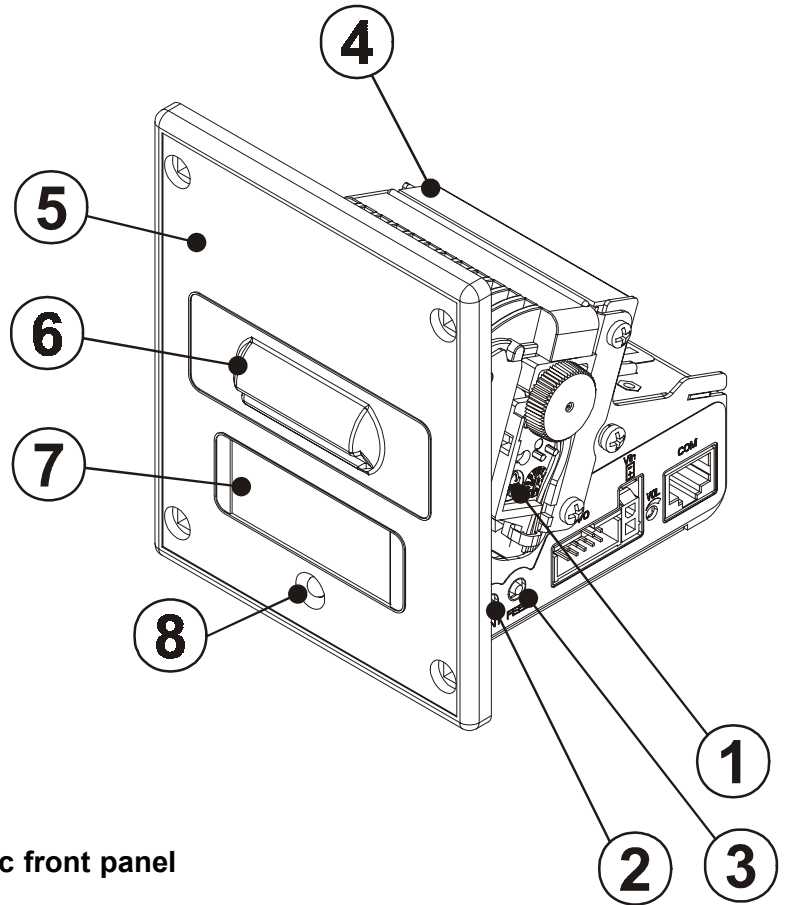
- TG558-S35M (35mm version with RS232 serial interface)
- TG558-S58M (58mm version with RS232 serial interface)
- TG558-T35M (35mm version with TTL serial interface)
- TG558-T58M (58mm version with TTL serial interface)

<sup>(2)</sup> The **0001** suffix indicate the real time clock option.



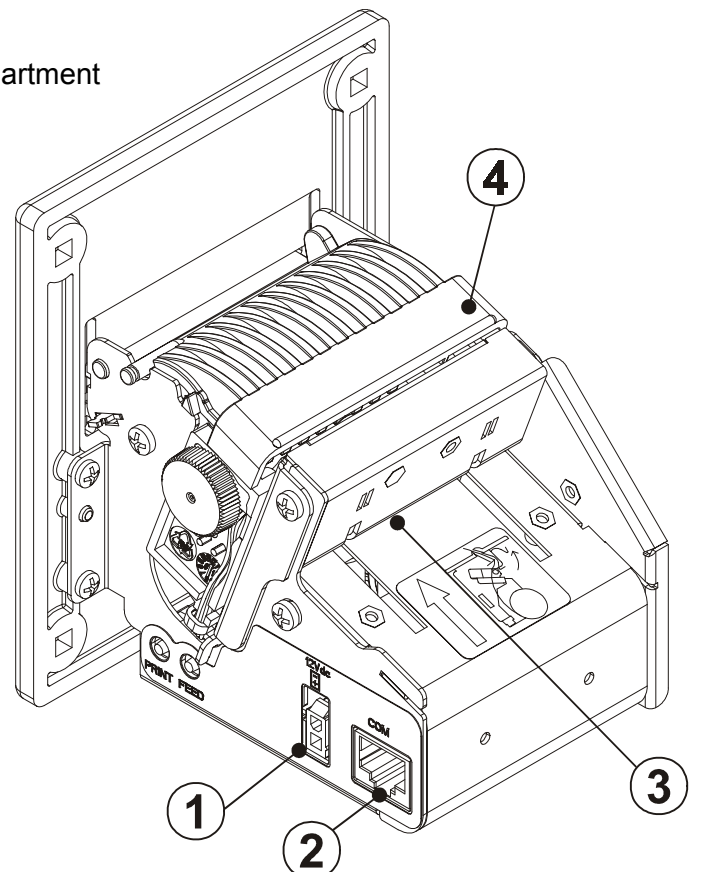
**C. TG558 Exterior view with display  
TG558-35D**

- 1- Printing mechanism
- 2- "PRINT" key
- 3- "FEED" key
- 4- Case
- 5- Front panel
- 6- Paper output
- 7- Display
- 8- Led



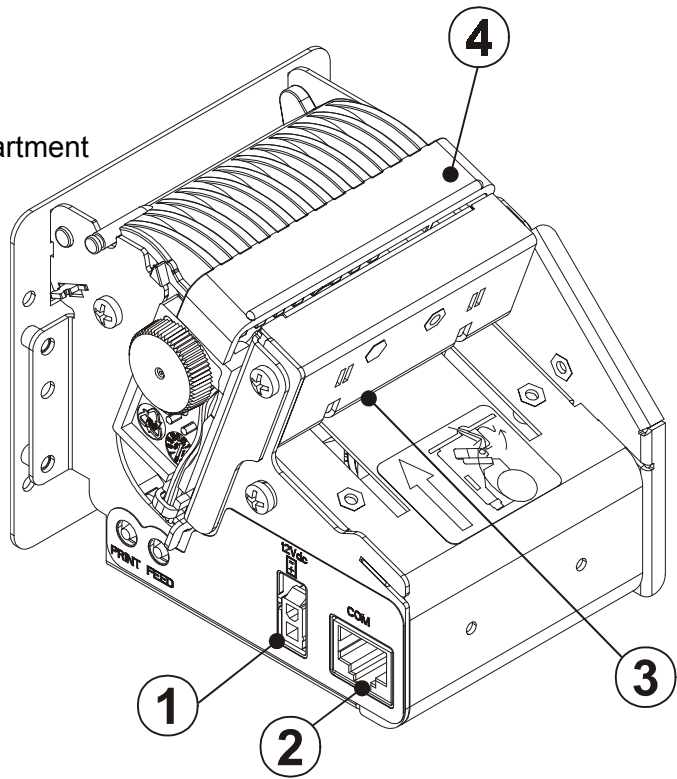
**D. TG558 Rear view with plastic front panel**

- 1- Power supply connector
- 2- RS232 /TTL serial interface connector
- 3- Paper input
- 4- Inspection wicket relative to paper roll compartment



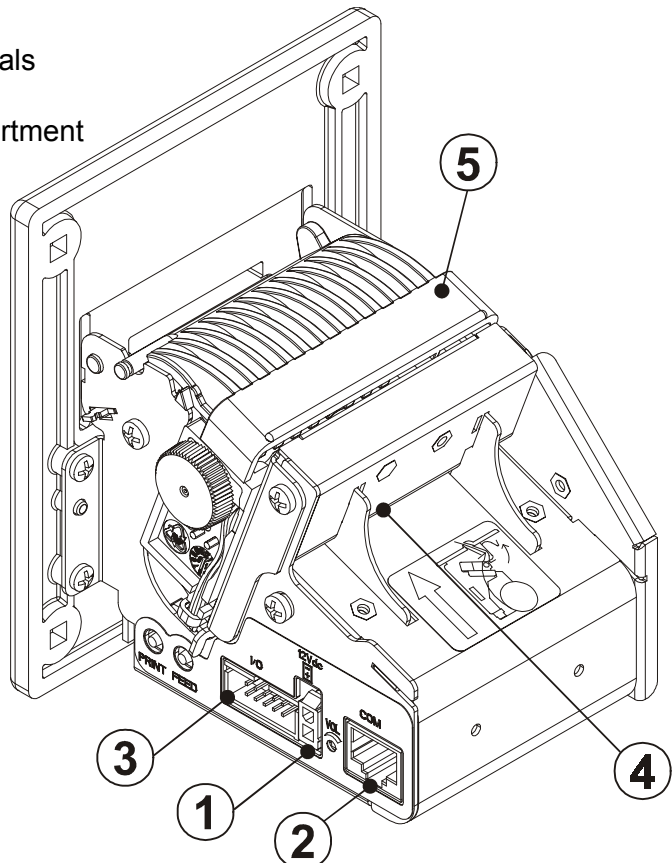
### E. TG558 Rear view with metallic front panel

- 1- Power supply connector
- 2- RS232 /TTL serial interface connector
- 3- Paper input
- 4- Inspection wicket relative to paper roll compartment



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## MANUAL ORGANIZATION

In addition to the Introduction which contains information regarding the symbols used in the manual, general safety information, instructions for unpacking the printer and a brief description and main characteristics of the machine, this manual is divided into the following chapters:

- Chapter 1: Contains the information required for correct printer installation and use
- Chapter 2: Contains interface data
- Chapter 3: Contains a description of printer controls
- Chapter 4: Contains printer technical data
- Chapter 5: Contains the character sets (fonts) used by the printer
- Appendix : Contains a description of printer accessories and spare parts.

## SYMBOLS USED IN THE MANUAL



### NOTE

Gives important information or suggestions for printer use.



### WARNING

Information indicated by this symbol must be followed carefully to avoid damaging the printer.



### DANGER

Information indicated by this symbol must be followed carefully to avoid damage or operator injury.

## GENERAL SAFETY INFORMATION

- Read and retain the instructions which follow.
- Before cleaning the printer, be sure to pull out the electrical cable.
- Use a damp cloth to clean the printer. Do not use liquid or spray products.
- Do not operate the printer near water.
- When positioning the printer, make sure its cables will not be damaged.
- Use the type of electrical power supply indicated on the printer label. If uncertain, contact your dealer.
- Do not block the ventilation openings.
- Do not insert objects inside the printer as this could cause short-circuiting or damage components that could jeopardize printer functioning.
- Do not spill liquids onto the machine.
- Do not carry out repairs on the machine yourself, except for the normal maintenance operations given in the user manual.
- Unplug the printer from the electrical mains and call a specialized repairman if any of the following conditions should arise:
  - A. the power supply connector is damaged
  - B. liquid has spilled into 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 given in the user manual have been followed
  - E. the printer has been dropped and the cover is damaged
  - F. printer performance is noticeably reduced
  - G. the printer is not working

## UNPACKING THE PRINTER

Remove the printer from the carton, taking care not to damage the packing materials which should be retained for future shipping/moving.

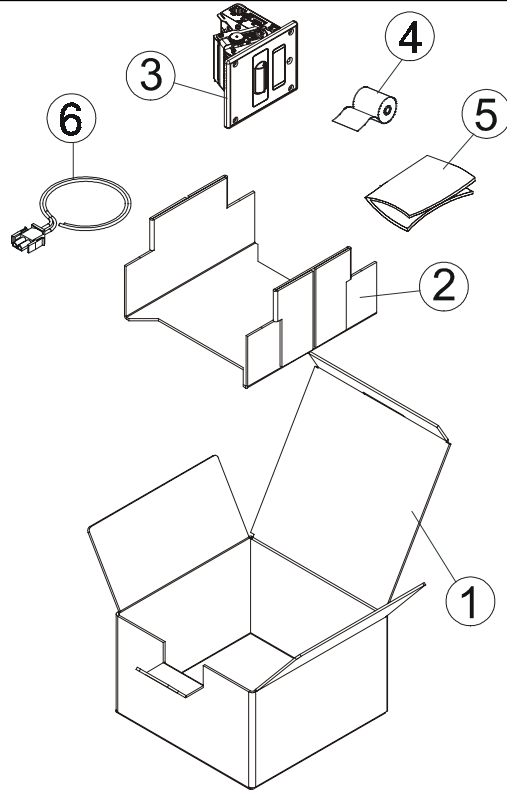
Make sure all components listed below are present and not damaged. If any part is missing and/or damaged, contact customer service.



# INTRODUCTION

1. Box
2. Foam packing shell
3. Printer
4. Paper roll
5. Manual (or CD-Rom)
6. Electrical supply cable

(Fig. 1)



## PRINTER DESCRIPTION

Ultra compact thermal printer (only 9cm deep) for dispensing 35 or 58mm tickets width, easy to install (4 fastening holes and ticket presentation to user incorporated). Thanks to the exclusive **anti-paper-jam system**, the ticket will always be promptly dispensed to the user.

Thanks to an innovative type of **paper roll holding bracket**, it is possible to accommodate up to 73 metres of paper (max external Ø 80mm), adapt the printer to the mechanical space requirements necessitated by the application (3 positions: upper, lower and rear) and manage the near paper end signal.

It is equipped with a 203 dpi thermal print mechanism; it has the serial interfaces RS232 and TTL and it's also available a version equipped with a calendar clock (Real Time Clock).

The TG558 is available with Fireproof plastic or metal front panel. The TG558 display version is equipped with :

- alphanumeric display for viewing scrolling messages is available. Speaker output integrated;
- software tools that allows to transfer MIDI format sound into the printer, through serial port;
- When the "REPORT" key is pressed, it prints the printer operational report.
- When the "FEED" key is pressed, the paper can be fed forward manually.
- The red Status LED displays a printer hardware error status and the winnings. The check is carried out "on line", i.e. in the event of a malfunctioning, the LED will starts flashing as follows:

| STATUS LED                            | DESCRIPTION            |
|---------------------------------------|------------------------|
| Always OFF                            | Printer OFF            |
| Always ON                             | Printer ON – no faults |
| Slow flashing (on for a long period)  | Tilting cover raised   |
| Slow flashing (on for a short period) | Paper Out Message      |

(Tab.1)

## MAIN APPLICATIONS

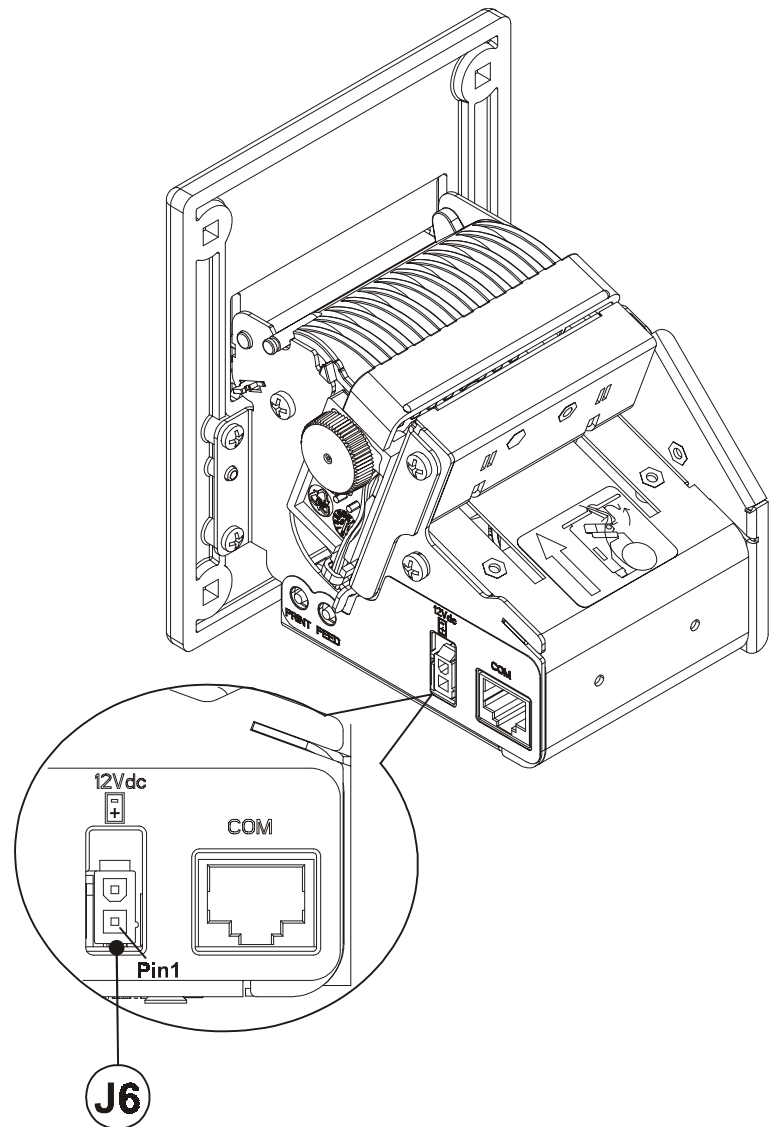
The TG558 printer is the ideal solution for :

- kiosks (internet, public offices, bookings, bank transactions);
- self-service;
- ticket dispensing (public/private transport, automatic payments);
- parking lots;
- queue management systems;
- instruments;
- Gaming machines;
- Vending machines;
- instant lotteries.

# 1. INSTALLATION AND OPERATION

## 1.1 CONNECTIONS

(Fig.1.1)



### 1.1.1 Power supply

The printer TG558 is equipped with a 2 pin male molex connector serie 5569 (Vertical), for the power supply (J6). The signals on the pins of the feed connector are as follows:

Model no. type : Header : 90° Molex serie 5569 (no. 39-30-1020)  
Housing: Molex serie 5557 (no. 39-01-3022)

(Tab.1.1)

| PIN | SIGNAL | DESCRIPTION   |
|-----|--------|---------------|
| 1   | + 12 V | POWER         |
| 2   | GND    | SIGNAL GROUND |



#### WARNING:

Be sure to observe the correct polarity for the power supply.

### 1.1.2 Input/Output connector for TG558 display

The TG558 printer is equipped, for power supply of Coin and loudspeaker and additional signals, with a 10-pin screw terminal connector (J1). The signals on the connector pins are as follows:

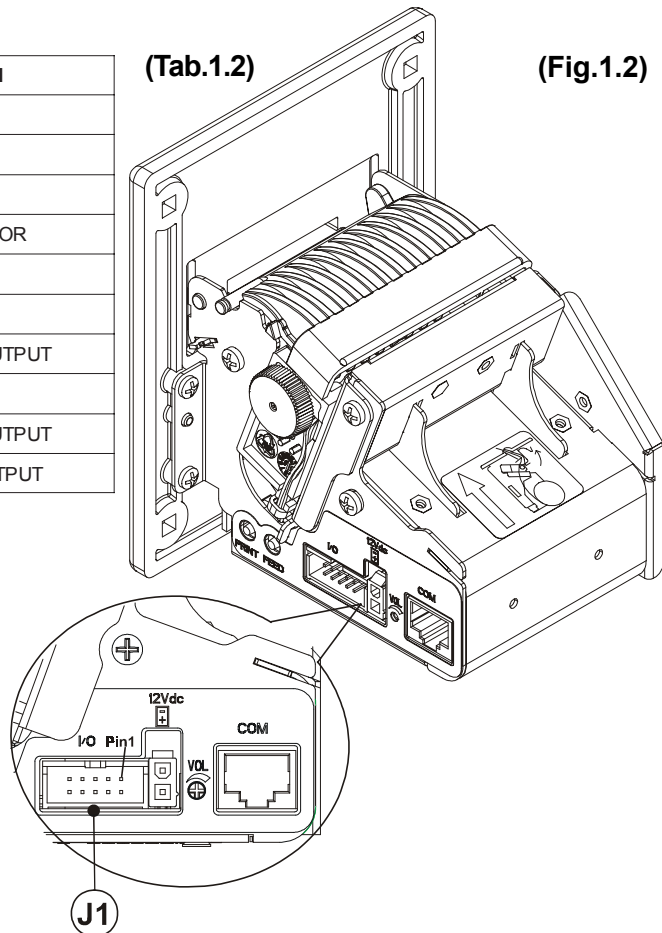
Model no. type : Header : 90° connector for FFC/FPC (pitch 2.54mm)  
Housing: 10 pin flat cable (pitch 2.54 mm)

# 1. INSTALLATION AND OPERATION

| PIN | SIGNAL           | DESCRIPTION        |
|-----|------------------|--------------------|
| 1   | GND              | POWER              |
| 2   | GND              | POWER              |
| 3   | +12 V            | POWER              |
| 4   | AUXILIARY OUTPUT | OPEN COLLECTOR     |
| 5   | +12 V            | POWER              |
| 6   | COIN-IN 1        | COIN INPUT         |
| 7   | ALT1             | LOUDSPEAKER OUTPUT |
| 8   | COIN-IN 2        | COIN INPUT         |
| 9   | ALT2             | LOUDSPEAKER OUTPUT |
| 10  | INIBIT           | ENABLE COIN OUTPUT |

(Tab.1.2)

(Fig.1.2)



## 1.2 SETUP

The printer enables the configuration of the printer default parameters (see fig. 1.3). The parameters affected during configuration are:

- \* PRINT MODE \*
- **Columns:** 24 columns<sup>D</sup>, 40 columns e 42 columns.
- **Print Direction:** Normal<sup>D</sup> or Reverse.
- **Print mode:** Little<sup>D</sup>, Double width (2 x Width), Double height (2 x Height), Expanded.
- **Automatic Feed:** CR disabled or CR enabled<sup>D</sup>.
- **Auto Feed** <sup>(1)</sup>: Enable<sup>D</sup>, Disable.
- **Red intensity** <sup>(2)</sup>: 0,1,2,3,4,5<sup>D</sup>,6,7.
- \* SERIAL MODE \*
- **Baud Rate:** 38400, 19200, 9600<sup>D</sup>, 4800, 2400, 1200, 600.
- **Protocol:**
  - 8, N, 1<sup>D</sup> (8 bit, parity none, 1 Stop bit)
  - 8, E, 1 (8 bit, parity even, 1 Stop bit)
  - 8, O, 1 (8 bit, parity odd, 1 Stop bit)
  - 7, N, 2 (7 bit, parity none, 2 Stop bit)
  - 7, E, 1 (7 bit, parity even, 1 Stop bit)
  - 7, O, 1 (7 bit, parity odd, 1 Stop bit)
- **Flow control:** CTS-RTS, XON-XOFF<sup>D</sup>.
- \* REAL TIME CLOCK \* <sup>(3)</sup>
- **Printing seconds setting:** Enables seconds, disables seconds<sup>D</sup>.
- **DST setting** <sup>(4)</sup>: Enable DST<sup>D</sup>, Disable DST.

Notes : The parameters indicates with a <sup>D</sup> symbol are the default values.



<sup>(1)</sup> **NOTE:** If the function is enabled when the printer receives a characters number equal to the line buffer the next character will place on the left margin in a new line.



<sup>(2)</sup> **NOTE:** Using two-colour thermal paper is possible to set different red tonality.



<sup>(3)</sup> **NOTE:** This setting is available only with RTCK printer version (Real Time Clock) and display version.

# 1. INSTALLATION AND OPERATION



<sup>(4)</sup> **NOTE:** This parameter enable the automatic change of the solar time and summer time.

**SET UP DEFAULT :**

24 COLUMNS (font 16 x 24)  
PRINT DIR. = NORMAL  
PRINT MODE. = LITTLE  
CR-LF HONOR CR  
AUTO FEED = ENABLE  
RED INTENSITY = 5  
SERIAL PORT SELECTED  
BAUD RATE = 9600  
PROTOCOL = 8, N, 1  
FLOW CONTROL = XON - XOFF  
DISABLE SECONDS  
ENABLE DST

**(Fig.1.3)**

## 1.2.1 Configuration of REPORT and FEED keys

If, when the printer is switched on, both of the **PRINT** and **FEED** keys are held down, the printer enters configuration mode and prints the first modifiable parameter. At this point, each time the **PRINT** key is pressed, the parameter changes and its current value is printed. Once the desired value has been obtained, press the **FEED** key to proceed to the next parameter, and so on. Once all the parameters have been run through, the printing of a message signals the end of setting procedure.

## 1.3 AUTOTEST

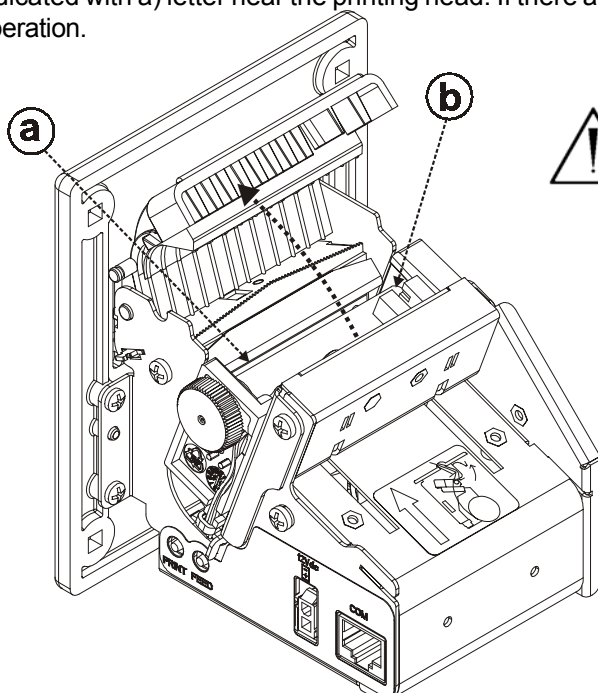
To run the autotest, press the **FEED** key while switching on the printer. During the running of the autotest, the character fonts and logos stored inside the printer are printed.

## 1.4 MAINTENANCE

### 1.41 Changing the paper roll

Every time you change the paper, referred to fig.1.4, need to check as follows :

- Lift the wicket relative to paper roll compartment, and check that there are no scraps of paper at the area indicated with a) letter near the printing head. If there are, remove the scraps before proceeding with any other operation.



**(Fig.1.4)**



### **WARNING**

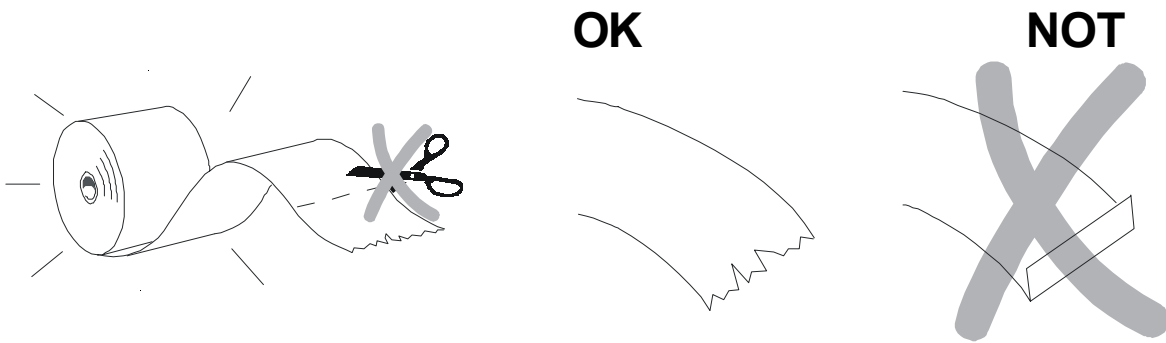
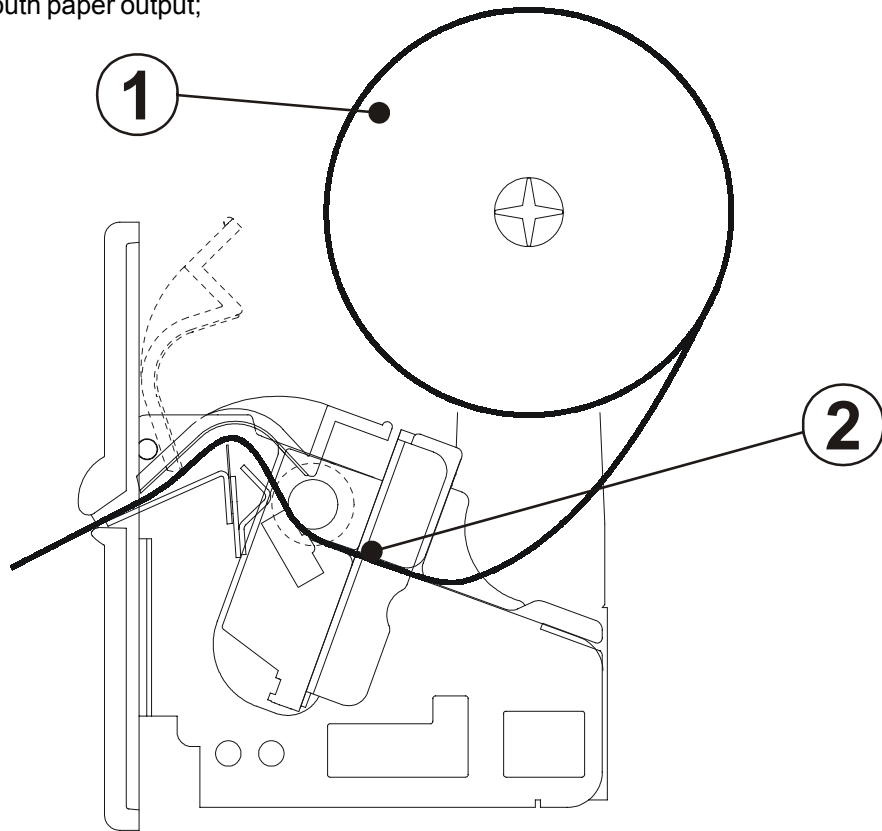
Periodically remove accumulated paper dust from the drag paper roll and the area around the paper outfeed sensor (see fig. 1.4 in the he points indicated with b letter). To clean, do not use harsh chemical solvents; the use of a soft, alcohol-moistened cloth is recommended.

# 1. INSTALLATION AND OPERATION

To change the paper roll in the printer, proceed as follows (see the fig. 1.5) :

- 1) Position the paper roll (1), so that it rotates in the direction shown (fig.1.5);
- 2) Insert the end of the paper roll in the print mechanism (2) and wait until the roll loads automatically;
- 3) Remove the ticket from the mouth paper output;

(Fig.1.5)



(Fig.1.6)



## WARNING

Before inserting the paper, ensure that it isn't cut evenly.

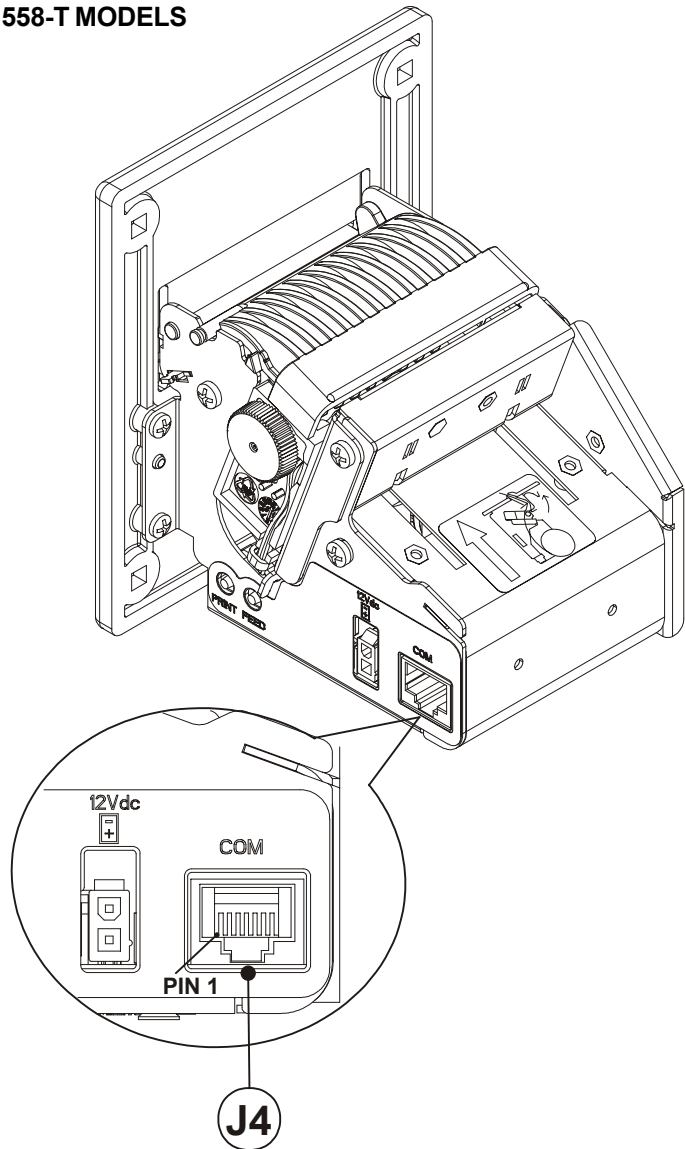
### 1.4.2 Notes for installation and using the printer

The printer in horizontal position must be installed with angularity tolerance of  $\pm 10^\circ$ .

## 2. INTERFACES

### 2.1 INTERFACES OF TG558-S AND TG558-T MODELS

(Fig.2.1)



#### 2.1.1 RS232/TTL Serial

The printer with RS232/TTL serial interface is connected by means of a RJ45 connector J4 (see fig. 2.1). In the following table, the signals present on the connector are listed:

(Tab.2.1)

| PIN | SIGNAL | DESCRIPTION       |
|-----|--------|-------------------|
| 1   | VCC    | + 5V              |
| 2   | GND    | GROUND            |
| 3   | TXD    | DATA TRANSMISSION |
| 4   | RXD    | DATA RECEPTION    |
| 5   | RTS    | READY TO SEND     |
| 6   | +VIN   | + 12V             |
| 7   | NC     | NOT CONNECTED     |
| 8   | NC     | NOT CONNECTED     |

## 2. INTERFACES

In the serial protocol, the signals which characterize communication are TD, RD and RTS if the RTS/CTS protocol has been selected; alternatively, if the XON/OFF protocol has been selected, the signals are TD and RD.

Transmission format

(Fig.2.2)

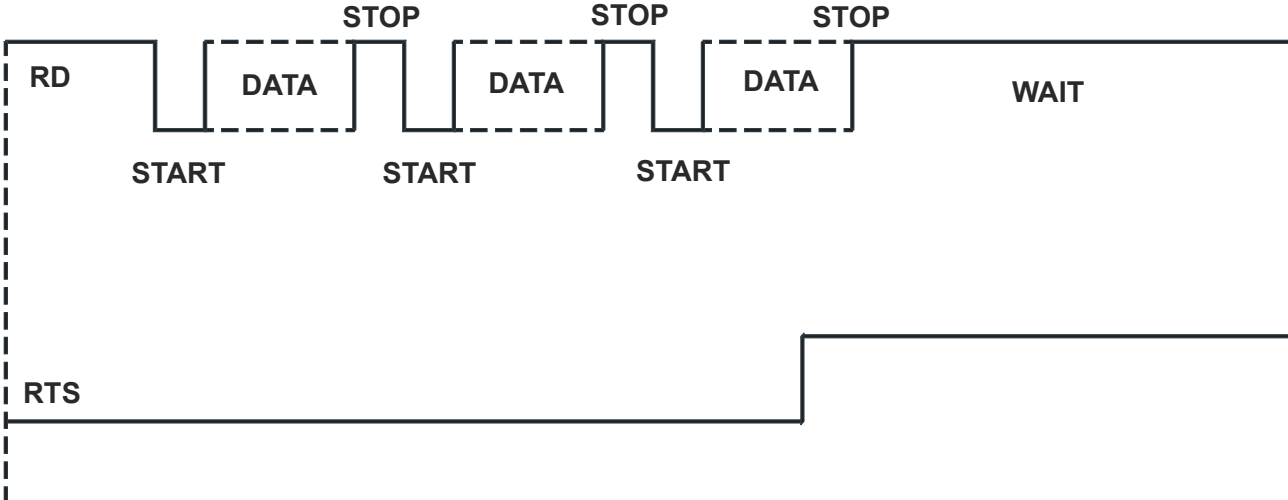


**NOTES :**

- <sup>(1)</sup> Bit 7 is present only if in the set-up was enabled 8 bit character ("Data length").
- <sup>(2)</sup> Parity Bit is present only if in the set-up the parity was enabled.

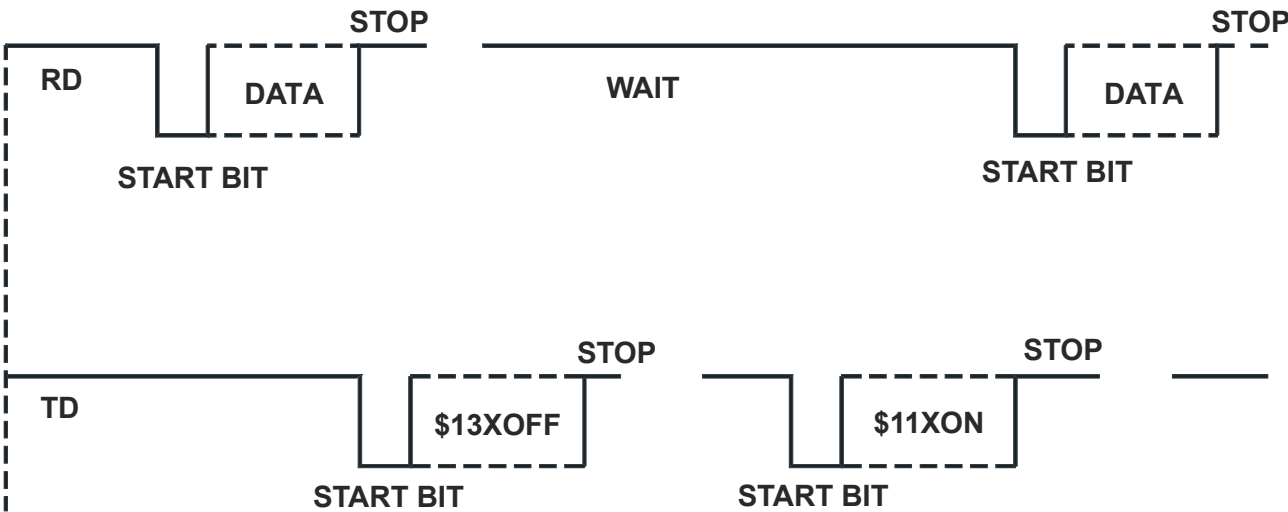
RTS/CTS Protocol

(Fig.2.3)



XON-XOFF Protocol

(Fig.2.4)



## 3. PRINTER FUNCTIONS

### 3.1 CONTROL CHARACTERS

LEGEND :

|               |  |
|---------------|--|
| <b>Symbol</b> | <b>Function</b>  |
| \$            | 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 additional/optional parameters that can have different values.                             |

The command table lists all the commands for the management of the printer functions.

The commands can be transmitted to the printer at any moment, but they will only be carried out when the characters previously transmitted have been printed or the commands previously transmitted have been carried out. There are no commands with priority status; all the commands are carried out when the circular buffer is free to do so.

**COMMAND TABLE**

**(Table 3.1)**

| HEX             | ASCII         | Description                            | Notes             |
|-----------------|---------------|--|-------------------|
| \$00            | NUL           | Prints in small characters             |                   |
| \$01            | SOH           | Prints in double width                 |                   |
| \$02            | STX           | Prints in double height                |                   |
| \$03            | ETX           | Expanded printing                      |                   |
| \$04            | EOT           | Restores small character printing      |                   |
| \$08            | BS            | Moving back of one character           |                   |
| \$0A            | LF            | Forward feeds one line                 |                   |
| (n) \$0B        | VT            | Forward feeds (n) line                 |                   |
| \$0D            | CR            | Prints line buffer                     |                   |
| \$0F            | SI            | Sets CRLF mode                         |                   |
| \$10 \$04 (n)   | DLE EOT n     | Real-time status transmission          |                   |
| \$11            | DC1           | Graphic mode                           |                   |
| \$12            | DC2           | Prints time and date                   | TG558-D,RTCK opt. |
| \$13            | DC3           | Sets time and date                     | TG558-D,RTCK opt. |
| \$14            | DC4           | Transmits time and date in serial      | TG558-D,RTCK opt. |
| \$18            | CAN           | Cancel print data                      |                   |
| \$1B \$23 n     | ESC # n       | Transmit printer ID                    |                   |
| \$1B \$28 nL nH | ESC ( v nL nH | Set relative vertical print position   |                   |
| \$1B \$2D (n)   | ESC - n       | Turn underline mode on/off             |                   |
| \$1B \$30       | ESC 0         | Select 1/8-inch line spacing           |                   |
| \$1B \$32       | ESC 2         | Select 1/6-inch line spacing           |                   |
| \$1B \$33 (n)   | ESC 3 n       | Set line spacing using minimum units   |                   |
| \$1B \$40       | ESC @         | Resets the printer                     |                   |
| \$1B \$41       | ESC A         | Executes [n] dots line feed            |                   |
| \$1B \$44       | ESC D         | Enters date in print buffer            | TG558-D,RTCK opt  |
| \$1B \$49       | ESC I         | Selects Font A                         |                   |
| \$1B \$4A (n)   | ESC J n       | Print and feed paper                   |                   |
| (dd) \$1B \$4D  | (dd) ESC M    | Writes value (dd) in print mode        |                   |
| \$1B \$4E       | ESC N         | Sets normal mode printing              |                   |
| \$1B \$51       | ESC Q         | Enables underlining                    |                   |
| \$1B \$52       | ESC R         | Sets reverse mode printing             |                   |
| \$1B \$54       | ESC T         | Enters time in print buffer            | TG558-D,RTCK opt  |
| \$1B \$55       | ESC U         | Enters date (mm:dd:yy) in print buffer | TG558-D,RTCK opt  |
| \$1B \$57       | ESC W         | Prints graphic line of 200 dpi         |                   |
| \$1B \$58       | ESC X         | Prints in red                          |                   |



### 3. PRINTER FUNCTIONS

| HEX                     | ASCII                 | Description                                     | Notes            |
|-------------------------|-----------------------|---|------------------|
| \$1B \$61               | (dd) ESC a            | Selects justification                           |                  |
| \$1B \$62               | (dd) ESC b            | Selects number of dot spaces                    |                  |
| \$1B \$63               | ESC c                 | Management of bar code printing                 |                  |
| \$1B \$64 (n)           | ESC d n               | Print and feed paper n lines                    |                  |
| \$1B \$68               | ESC h                 | Selects Font B                                  |                  |
| \$1B \$69               | ESC i                 | Selects Font B                                  |                  |
| \$1B \$6D               | ESC m                 | Transmits print mode in serial                  |                  |
| \$1B \$71               | ESC q                 | Disables underlining                            |                  |
| \$1B \$72 (n)           | ESC r n               | Set/reset red printing mode                     |                  |
| \$1B \$73               | ESC s                 | Transmits next character in serial              |                  |
| \$1B \$78 n             | ESC x n               | Select speed/current mode                       |                  |
| \$1B \$7B (n)           | ESC { n               | Set/cancel upside-down character printing       |                  |
| \$1B \$F0               | ESC { }               | Transmission of printer real time clock         | TG558-D,RTCK opt |
| \$1B \$F1               | ESC { }               | Setting of printer real time clock              | TG558-D,RTCK opt |
| \$1B \$FA n xL xH yH yL | ESC { } n xL xH yH yL | Print logo                                      |                  |
| \$1D \$24 n             | GS \$ n               | Set absolute shift into a graphic line          |                  |
| \$1D \$44 s1 s2 s3 s4   | GS D s1 s2 s3 s4      | Visualization on display of a string characters | Only for TG558-D |
| \$1D \$45 d1..d8        | GS E d1..d8           | Display management in graphic mode              | Only for TG558-D |
| \$1D \$46 n             | GS F n                | Setting graphic display effects                 | Only for TG558-D |
| \$1D \$49 (n)           | GS I n                | Transmit printer ID                             |                  |
| \$1D \$4C n m t d1..dk  | GS L n m t d1..dk     | Receive graphic display effect from serial port | Only for TG558-D |
| \$1D \$57 nL nH         | GS W nL nH            | Set printing area width                         |                  |
| \$1D \$59 n             | GS Y n                | Sets height in printing                         |                  |
| \$1D \$5A n             | GS Z n                | Receive n bytes from serial port                |                  |
| \$1D \$62 n             | GS b n                | Prints formatted barcode                        |                  |
| \$1D \$64 n             | GS d n                | Enable/Disable scrolling text                   | Only for TG558-D |
| \$1D \$6F n             | GS o n                | Management of output lines                      | Only for TG558-D |
| \$1D \$72 n             | GS r n                | Transmit status                                 |                  |
| \$1D \$EB               | GS { }                | Receive, Save and Play melody                   | Only for TG558-D |

**NOTE:** commands without specifications in the “Note” column are valid for all the models; otherwise the “Note” column indicate a command that is valid for a specific model as follows :

- TG558-D printer version with display;
- RTCK opt. printer version with real time clock option.

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

#### \$00

|               |   |     |
|---------------|---|-----|
| [Name]        | <b>Small character printing</b>                           |     |
| [Format]      | ASCII   | NUL |
|               | Hex   | 00  |
|               | Decimal   | 0   |
| [Description] | The printer prints in small characters (normal)           |     |
| [Notes]       | • The commands \$00 - \$04 do not cancel the print buffer |     |

### 3. PRINTER FUNCTIONS

- The commands which modify the direction of the characters are only active at the beginning of the line

[Default] Setting the "Print mode" parameter in the printer set-up  
[Reference] **\$01, \$02, \$03, \$04, \$1D \$21, \$1B \$4D**  
[Example]

#### \$01

[Name] **Double width printing**

[Format] ASCII SOH  
Hex 01  
Decimal 1

[Description] The printer prints in double width format

[Notes] 

- The commands \$00 - \$04 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 the "Print mode" parameter in the printer set-up

[Reference] **\$00, \$02, \$03, \$04, \$1D \$21, \$1B \$4D**

[Example]

#### \$02

[Name] **Double height printing**

[Format] ASCII STX  
Hex 02  
Decimal 2

[Description] The printer prints in double height format.

[Notes] 

- The commands \$00 - \$04 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 the "Print mode" parameter in the printer set-up

[Reference] **\$00, \$01, \$03, \$04, \$1D \$21, \$1B \$4D**

[Example]

#### \$03

[Name] **Expanded printing**

[Format] ASCII ETX  
Hex 03  
Decimal 3

[Description] The printer prints in expanded character mode

[Notes] 

- commands \$00 - \$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 the "Print mode" parameter in the printer set-up

[Reference] **\$00, \$01, \$02, \$04, \$1D \$21, \$1B \$4D**

[Example]

### 3. PRINTER FUNCTIONS

#### \$04

|               |   |
|---------------|---|
| [Name]        | <b>Restore small character printing</b>   |
| [Format]      | ASCII            EOT<br>Hex                04<br>Decimal    4   |
| [Description] | The printer resumes printing with small characters  |
| [Notes]       | <ul style="list-style-type: none"><li>• The commands \$00 - \$09 do not cancel the print buffer</li><li>• the commands which modify the dimensions of the characters are only active at the beginning of the line</li></ul> |
| [Default]     | Setting the "Print mode" parameter in the printer set-up  |
| [Reference]   | <b>\$00, \$01, \$02, \$03, \$1D \$21, \$1B \$4D</b>   |
| [Example]     |   |

#### \$07

|               |   |
|---------------|---|
| [Name]        | <b>Cancel print data buffer</b>   |
| [Format]      | ASCII            BEL<br>Hex                07<br>Decimal            7   |
| [Description] | Deletes all the print data in the current print buffer.   |
| [Notes]       | <ul style="list-style-type: none"><li>• If data that existed in the previously specified printing area also exists in the currently specified printing area, it is deleted.</li></ul> |
| [Default]     |   |
| [Reference]   |   |
| [Example]     |   |

#### BS

|               |  |
|---------------|--|
| [Name]        | <b>Moving back of one character</b>                                  |
| [Format]      | ASCII            BS<br>Hex                08<br>Decimal            8 |
| [Description] | Moves print position to previous character.                          |
| [Notes]       | This command can put two characters at the same position.            |
| [Default]     |  |
| [Reference]   |  |
| [Example]     |  |

#### \$0A

|               |   |
|---------------|---|
| [Name]        | <b>Forward feeds one line</b>   |
| [Format]      | ASCII            LF<br>Hex                0A<br>Decimal    10   |
| [Description] | Forward feeds one line equivalent to a line of print  |
| [Notes]       | <ul style="list-style-type: none"><li>• This command brings about the printing of the contents of the line buffer</li></ul> |
| [Default]     |   |
| [Reference]   | <b>\$1B \$32, \$1B \$33</b>   |
| [Example]     |   |

### 3. PRINTER FUNCTIONS

#### (n) \$0B

|               |  |
|---------------|--|
| [Name]        | <b>Forward feeds (n) lines</b>   |
| [Format]      | ASCII          VT<br>Hex             0B<br>Decimal    11   |
| [Description] | Carries out the number of line feeds specified in (n)  |
| [Notes]       | <ul style="list-style-type: none"><li>• The number must be ASCII and between 0 and 9 (when n=0 the command is ignored)</li><li>• This command clears the line buffer</li></ul> |
| [Default]     |  |
| [Reference]   | <b>\$0A</b>  |
| [Example]     | To forward feed fast, 5 lines at a time:<br>\$35 \$0B (or 5 and the command \$0B)  |

#### CR

|               |   |
|---------------|---|
| [Name]        | <b>Print and carriage return</b>  |
| [Format]      | ASCII          CR<br>Hex             0D<br>Decimal        13  |
| [Description] | When autofeed is “CR enabled”, this command functions in the same way as <b>\$0A</b> , otherwise it is disregarded. |
| [Notes]       | <ul style="list-style-type: none"><li>• Sets the print position to the beginning of the line.</li></ul>             |
| [Default]     | See “Autofeed in setup” parameter.  |
| [Reference]   | <b>\$0A</b>   |
| [Example]     |   |

#### \$0F

|               |   |
|---------------|---|
| [Name]        | <b>Set CRLF mode</b>  |
| [Format]      | ASCII          SI<br>Hex             0F<br>Decimal    15  |
| [Description] | Inhibits the command \$0D maintaining enabled only the command \$0A for printing  |
| [Notes]       | <ul style="list-style-type: none"><li>• To disable this option, reset the printer</li><li>• This command clears the line buffer</li><li>• On switching on the default value is in the Option Register</li></ul> |
| [Default]     | Setting in the option register by means of the front keys   |
| [Reference]   | <b>\$0D</b>   |
| [Example]     |   |

#### DLE EOT n

|               |   |
|---------------|---|
| [Name]        | <b>Real-time status transmission</b>  |
| [Format]      | ASCII    DLE   EOT   n<br>Hex      10    04    n<br>Decimal  16    4     n                                      |
| [Range]       | $1 \leq n \leq 6$   |
| [Description] | Transmits the selected printer status specified by <i>n</i> in real time according to the following parameters: |

### 3. PRINTER FUNCTIONS

- n = 1 transmit printer status
- n = 2 transmit off-line status
- n = 3 transmit error status
- n = 4 transmit paper roll sensor status
- n = 5 transmit paper sensors status
- n = 6 transmit input/output status

[Notes]

- This command is executed when the data buffer is full.
- This status is transmitted whenever data sequence \$10 \$04 n is received ( $1 \leq n \leq 6$ ).

[Default]

[Reference]

See tables below.

[Example]

n=1: Printer status

| Bit | Off/On | Hex | Decimal | Function             |
|-----|--------|-----|---------|----------------------|
| 0   | -      | -   | -       | RESERVED             |
| 1   | -      | -   | -       | RESERVED             |
| 2   | -      | -   | -       | RESERVED             |
| 3   | Off    | 00  | 0       | On-line.             |
|     | On     | 08  | 8       | Off-line.            |
| 4   | -      | -   | -       | RESERVED             |
| 5   | -      | -   | -       | RESERVED             |
| 6   | Off    | 00  | 0       | Drag paper motor off |
|     | On     | 40  | 64      | Drag paper motor on  |
| 7   | -      | -   | -       | RESERVED             |

n=2: Off-line status

| Bit | Off/On | Hex | Decimal | Function                  |
|-----|--------|-----|---------|---------------------------|
| 0   | -      | -   | -       | RESERVED.                 |
| 1   | -      | -   | -       | RESERVED.                 |
| 2   | Off    | 00  | 0       | REPORT button not pressed |
|     | On     | 04  | 4       | REPORT button pressed     |
| 3   | Off    | 00  | 0       | FEED button not pressed   |
|     | On     | 08  | 8       | FEED button pressed       |
| 4   | -      | -   | -       | RESERVED.                 |
| 5   | Off    | 00  | 0       | Paper present.            |
|     | On     | 20  | 32      | Paper end.                |
| 6   | Off    | 00  | 0       | No error.                 |
|     | On     | 40  | 64      | Error.                    |
| 7   | -      | -   | -       | RESERVED.                 |

n=3: Error status

| Bit | Off/On | Hex | Decimal | Function                   |
|-----|--------|-----|---------|----------------------------|
| 0   | -      | -   | -       | RESERVED.                  |
| 1   | -      | -   | -       | RESERVED.                  |
| 2   | -      | -   | -       | RESERVED.                  |
| 3   | -      | -   | -       | RESERVED.                  |
| 4   | -      | -   | -       | RESERVED.                  |
| 5   | -      | -   | -       | RESERVED.                  |
| 6   | Off    | 00  | 0       | No auto-recoverable error. |
|     | On     | 40  | 64      | Auto-recoverable error.    |
| 7   | -      | -   | -       | RESERVED.                  |

### 3. PRINTER FUNCTIONS

n=4: Paper roll sensor status

| Bit  | Off/On | Hex | Decimal | Function   |
|------|--------|-----|---------|--|
| 0    | -      | -   | -       | RESERVED.  |
| 1    | -      | -   | -       | RESERVED.  |
| 2    | -      | -   | -       | RESERVED.  |
| 3    | -      | -   | -       | RESERVED.  |
| 4    | -      | -   | -       | RESERVED.  |
| 5, 6 | On     | 60  | 96      | Fixed to On. The paper end is detected by the sensor |
| 7    | -      | -   | -       | RESERVED.  |

n=5: Paper sensor status

| Bit  | Off/On | Hex | Decimal | Function                                     |
|------|--------|-----|---------|--|
| 0    | -      | -   | -       | RESERVED.                                    |
| 1    | -      | -   | -       | RESERVED.                                    |
| 2,3  | Off    | 00  | 0       | Paper end sensor<br>Paper present            |
|      | On     | 0C  | 12      | The paper end is detected by the sensor      |
| 4    | -      | -   | -       | RESERVED.                                    |
| 5, 6 | Off    | 00  | 0       | Near Paper end sensor<br>Paper present       |
|      | On     | 40  | 64      | The near paper end is detected by the sensor |
| 7    | -      | -   | -       | RESERVED.                                    |

n=6: Input/Output status

| Bit | Off/On | Hex | Decimal | Function                    |
|-----|--------|-----|---------|-----------------------------|
| 0   | -      | -   | -       | RESERVED.                   |
| 1   | -      | -   | -       | RESERVED.                   |
| 2   | Off    | 00  | 0       | COIN 1 status at low level  |
|     | On     | 04  | 4       | COIN 1 status at high level |
| 3   | Off    | 00  | 0       | COIN 2 status at low level  |
|     | On     | 08  | 8       | COIN 2 status at high level |
| 4   | -      | -   | -       | RESERVED.                   |
| 5   | Off    | 00  | 0       | INHGET status at low level  |
|     | On     | 20  | 32      | INHGET status at high level |
| 6   | Off    | 00  | 0       | AUXOUT status at low level  |
|     | On     | 40  | 64      | AUXOUT status at high level |
| 7   | -      | -   | -       | RESERVED.                   |

#### \$11

|               |  |
|---------------|--|
| [Name]        | <b>Graphic mode</b>  |
| [Format]      | ASCII            DC1<br>Hex                11<br>Decimal            17   |
| [Description] | Enables graphic mode:<br>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:  |

### 3. PRINTER FUNCTIONS

**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 →** P6 P5 P4 P3 P2 P1                      **2nd byte →** P6 P5 P4 P3 P2 P1                      **3rd byte →** 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.

#### \$12

[Name]

**Print time and date**

[Format]

ASCII -  
 Hex 12  
 Decimal 18

[Description]

Prints the time and date in the following format:

hh : mm dd - mm -yy

If seconds printing is enabled, the format will be:

hh : mm : ss dd - mm -yy

[Notes]

- The command resets the line
- This command is present only in the printer version with display (TG558-D) and RTCK option.

[Default]

[Reference]

**\$13, \$14**

[Example]

#### \$13

[Name]

**Set time and date**

[Format]

ASCII -  
 Hex 13  
 Decimal 19

[Description]

This command sets the time and date in two possible ways :

the first uses 24 hour clock and the second the 12-hour am/pm clock. In the first case, transmits the 10 ASCII characters representing the time and the date followed by \$13 and in the second case transmits the 10 ASCII characters representing the time and the date preceded by "A" or "P" and followed by \$13.

[Notes]

- It is advisable to transmit the command \$0D first, in order to empty the print buffer.
- This command is present only in the printer version with display (TG558-D) and with RTCK option.

[Default]

### 3. PRINTER FUNCTIONS

[Reference] **\$12, \$14**  
 [Example] To set the time 12:45 on 19-01-93, transmit  
 1 2 4 5 1 9 0 1 9 3 \$13  
 \$31 \$32 \$34 \$35 \$31 \$39 \$30 \$31 \$39 \$33 \$13  
 To set the time A 12:45 on 19-01-93, transmit  
 A 1 2 4 5 1 9 0 1 9 3 \$13  
 \$41 \$31 \$32 \$34 \$35 \$31 \$39 \$30 \$31 \$39 \$33 \$13

#### \$14

[Name] **Transmit the time and date in serial**  
 [Format] ASCII -  
 Hex 14  
 Decimal 20  
 [Description] Transmit the time and date on serial port with ASCII format (11 ASCII characters) :  
 hours/minutes/day/mont h/year + (CR) \$0D  
 [Notes] • This command is present only in the printer version with display (TG558-D) and RTCK option.  
 [Default]  
 [Reference] **\$13, \$14**  
 [Example]

#### \$1B \$23 n

[Name] **Transmit printer ID**  
 [Format] ASCII ESC # n  
 Hex 1B 23 n  
 Decimal 27 73 n  
 [Range]  $1 \leq n \leq 3, 49 \leq n \leq 51$   
 [Description] Transmits the printer ID specified by *n* follows:

| n     | Printer ID       | Specification                          |
|-------|------------------|--|
| 1, 49 | Printer model ID | \$68 (58mm model)<br>\$69 (35mm model) |
| 2, 50 | Not used         | Fixed on \$00                          |
| 3, 51 | ROM version ID   | Depends on version ROM (4 char)        |

[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 \$28 \$76 nL nH

[Name] Set relative vertical print position  
 [Format] ASCII ESC ( v nL nH  
 Hex 1B 28 76 nL nH  
 Decimal 27 10 118 nL nH



### 3. PRINTER FUNCTIONS

|               |  |
|---------------|--|
| [Range]       | $0 \leq nL \leq 255$<br>$0 \leq nH \leq 255$   |
| [Description] | Sets the print vertical position based on the current position by using the horizontal or vertical motion unit.<br><ul style="list-style-type: none"> <li>• This command sets the distance from the current position to <math>[(nL + nH \times 256) \times (\text{horizontal or vertical motion unit})]</math>.</li> </ul>   |
| [Notes]       | <ul style="list-style-type: none"> <li>• When the starting position is specified by N motion unit to the bottom:<br/><math>nL + nH \times 256 = N</math></li> <li>• When the starting position is specified by N motion unit to the top (negative direction), use the complement of 65536:<br/><math>nL + nH \times 256 = 65536 - N</math></li> <li>• In standard mode, the vertical motion unit is used.</li> </ul> |
| [Default]     |  |
| [Reference]   |  |
| [Example]     |  |

#### **\$1B \$30**

|               |   |       |     |   |     |    |    |         |    |    |
|---------------|---|-------|-----|---|-----|----|----|---------|----|----|
| [Name]        | <b>Select 1/8-inch line spacing.</b>  |       |     |   |     |    |    |         |    |    |
| [Format]      | <table border="0"> <tr> <td>ASCII</td> <td>ESC</td> <td>0</td> </tr> <tr> <td>Hex</td> <td>1B</td> <td>30</td> </tr> <tr> <td>Decimal</td> <td>27</td> <td>48</td> </tr> </table> | ASCII | ESC | 0 | Hex | 1B | 30 | Decimal | 27 | 48 |
| ASCII         | ESC   | 0     |     |   |     |    |    |         |    |    |
| Hex           | 1B  | 30    |     |   |     |    |    |         |    |    |
| Decimal       | 27  | 48    |     |   |     |    |    |         |    |    |
| [Description] | Selects 1/8-inch line spacing.  |       |     |   |     |    |    |         |    |    |
| [Notes]       |   |       |     |   |     |    |    |         |    |    |
| [Default]     |   |       |     |   |     |    |    |         |    |    |
| [Reference]   | <b>\$1B \$32, \$1B \$33</b>   |       |     |   |     |    |    |         |    |    |
| [Example]     |   |       |     |   |     |    |    |         |    |    |

#### **\$1B \$32**

|               |   |       |     |   |     |    |    |         |    |    |
|---------------|---|-------|-----|---|-----|----|----|---------|----|----|
| [Name]        | <b>Set line spacing at 1/6 inch.</b>  |       |     |   |     |    |    |         |    |    |
| [Format]      | <table border="0"> <tr> <td>ASCII</td> <td>ESC</td> <td>2</td> </tr> <tr> <td>Hex</td> <td>1B</td> <td>32</td> </tr> <tr> <td>Decimal</td> <td>27</td> <td>50</td> </tr> </table> | ASCII | ESC | 2 | Hex | 1B | 32 | Decimal | 27 | 50 |
| ASCII         | ESC   | 2     |     |   |     |    |    |         |    |    |
| Hex           | 1B  | 32    |     |   |     |    |    |         |    |    |
| Decimal       | 27  | 50    |     |   |     |    |    |         |    |    |
| [Description] | Selects 1/6 inch line spacing.  |       |     |   |     |    |    |         |    |    |
| [Notes]       |   |       |     |   |     |    |    |         |    |    |
| [Default]     |   |       |     |   |     |    |    |         |    |    |
| [Reference]   | <b>\$1B \$30, \$1B \$33</b>   |       |     |   |     |    |    |         |    |    |
| [Example]     |   |       |     |   |     |    |    |         |    |    |

#### **\$1B \$33 n**

|               |   |       |     |   |   |     |    |    |   |         |    |    |   |
|---------------|---|-------|-----|---|---|-----|----|----|---|---------|----|----|---|
| [Name]        | <b>Set line spacing.</b>  |       |     |   |   |     |    |    |   |         |    |    |   |
| [Format]      | <table border="0"> <tr> <td>ASCII</td> <td>ESC</td> <td>3</td> <td>n</td> </tr> <tr> <td>Hex</td> <td>1B</td> <td>33</td> <td>n</td> </tr> <tr> <td>Decimal</td> <td>27</td> <td>51</td> <td>n</td> </tr> </table>                    | ASCII | ESC | 3 | n | Hex | 1B | 33 | n | Decimal | 27 | 51 | n |
| ASCII         | ESC   | 3     | n   |   |   |     |    |    |   |         |    |    |   |
| Hex           | 1B  | 33    | n   |   |   |     |    |    |   |         |    |    |   |
| Decimal       | 27  | 51    | n   |   |   |     |    |    |   |         |    |    |   |
| [Range]       | $0 \leq n \leq 255$   |       |     |   |   |     |    |    |   |         |    |    |   |
| [Description] | Sets the line spacing at $[n \times (\text{vertical or horizontal motion unit})]$ inches.   |       |     |   |   |     |    |    |   |         |    |    |   |
| [Notes]       | <ul style="list-style-type: none"> <li>• Changing the horizontal or vertical motion unit does not affect the current line spacing.</li> <li>• However, the value cannot be less than the minimum vertical movement amount.</li> </ul> |       |     |   |   |     |    |    |   |         |    |    |   |

### 3. PRINTER FUNCTIONS

- In standard mode, the vertical motion unit is used.
- The maximum line spacing is  $n = 255$  ( $\cong 32\text{mm}$ ).

[Default]  $n = 32$  (1/6 inch)  
 [Reference] **\$1B \$30, \$1B \$32**  
 [Example]

#### ESC @

[Name] **Initialize printer**  
 [Format] ASCII ESC @  
 Hex 1B 40  
 Decimal 27 64  
 [Description] Clears the data in the print buffer and resets the printer mode to that in effect when power was turned on.  
 [Notes]
 

- The data in the receiver buffer is not cleared.
- The macro definitions are not cleared.

 [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  
 [Description] Executes [N] dots line feed where  $N = 256 \times nL + nH$ .  
 [Notes]
 

- 1 mm is equivalent to 8 dot line.

 [Default]  
 [Reference]  
 [Example] To executes a 40 mm of feed transmit :  
 \$1B \$41 \$01 \$40(or the ESC A command and the value 40mm x8 dot).

#### \$1B \$44

[Name] **Enters the date in the print buffer**  
 [Format] ASCII ESC D  
 Hex 1B 44  
 Decimal 27 68  
 [Description] Enters in the buffer the date of the calendar clock installed inside the printer, in the following format : dd - mm - yy .  
 [Notes]
 

- The date is printed in 8 characters: if there is not enough space in the buffer, it will not be printed.
- It does not zero-set the line buffer
- This command is present only in the printer version with display (TG558-D) and RTCK option.

 [Default]  
 [Reference] **\$1B \$54, \$1B \$55**  
 [Example] If you wish to write :

DATE : 11-09-93 TEST OK

### 3. PRINTER FUNCTIONS

transmit                      DATE : \$1B \$44 TEST TEST OK \$0D  
to print just the date      \$1B \$44 \$0D

#### \$1B \$49

[Name]                      **Selects Font A**  
[Format]                    ASCII            ESC            I  
Hex                        1B            49  
Decimal                  27            73  
[Description]            After receives this command the Font A is selected and the printer is ready to use this configuration. the number of columns by row is indicated as follows :

| TG558      | Font A     |
|------------|------------|
| 58mm model | 24 columns |
| 35mm model | 17 columns |

[Notes]  
[Default]  
[Reference]                **\$1B \$69**  
[Example]

#### \$1B \$4A n

[Name]                      **Print and feed paper.**  
[Format]                    ASCII            ESC J        n  
Hex                        1B        4A        n  
Decimal                  27        74        n  
[Range]                     $0 \leq n \leq 255$   
[Description]            Prints the data in the print buffer and feeds the paper [ n × ( vertical or horizontal motion unit) inches.  
[Notes]                    • After printing is over, this command sets the print starting position at the beginning of the line.  
• The paper feed amount set by this command does not affect the values set by **\$1B \$32** or **\$1B \$33**.  
• In standard mode, the vertical motion unit is used.  
• The maximum paper feed amount is 31.8 mm.  
[Default]  
[Reference]  
[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  
[Description]            Sets the print mode default parameters  
**\$00** small characters  
**\$01** double width printing  
**\$02** double height printing  
**\$03** expanded printing  
[Notes]                    • The setting is stored in EEPROM

### 3. PRINTER FUNCTIONS

[Default] Setting by means of the front keys  
[Reference] **\$1B \$6D**  
[Example] For double height printing, transmit :  
\$30 \$32 \$1B \$4D

#### **\$1B \$4E**

[Name] **Set printing in NORMAL**  
[Format] ASCII ESC N  
Hex 1B 4E  
Decimal 27 78  
[Description] Selects printing in NORMAL mode.  
[Notes] • Setting remains until next set.  
[Default] Setting the "Print mode" parameter in the printer set-up.  
[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.  
[Notes]  
[Default]  
[Reference] **\$1B \$71**  
[Example]

#### **\$1B \$52**

[Name] **Set printing in REVERSE**  
[Format] ASCII ESC R  
Hex 1B 52  
Decimal 27 82  
[Description] Set printing in REVERSE mode: the ticket comes out from printer with the strings straight and oriented on the left to right .  
[Notes]  
[Default] Setting the "Print mode" parameter in the printer set-up.  
[Reference] **\$1B \$4E**  
[Example]

#### **\$1B \$54**

[Name] **Enters the time in the print buffer**  
[Format] ASCII ESC T  
Hex 1B 54  
Decimal 27 84  
[Description] Enters in the buffer the time of the calendar clock installed inside the printer, in the following format : hh : mm.  
[Notes] • The time is printed in 5 characters: if the seconds option is enabled, in 8 characters: if

### 3. PRINTER FUNCTIONS

there is not enough space in the buffer, it will not be printed.

- It does not zero-set the line buffer
- This command is present only in the printer version with display (TG558-D) and RTCK option.

[Default]

[Reference] **\$1B \$44, \$1B \$55**

[Example] If you wish to write :

|                        |                                    |
|------------------------|------------------------------------|
|                        | HOUR : 16 : 45 TEST OK             |
| transmit               | HOUR : \$1B \$54 TEST TEST OK \$0D |
| to print just the time | \$1B \$54 \$0D                     |

#### **\$1B \$55**

[Name] **Enters the date (mm - dd- yy) in the print buffer**

[Format]

|         |     |    |
|---------|-----|----|
| ASCII   | ESC | U  |
| Hex     | 1B  | 55 |
| Decimal | 27  | 85 |

[Description] Enters in the buffer the date of the calendar clock installed inside the printer, in the American style format : mm-dd-yy.

[Notes]

- The date is printed in 8 characters: if there is not enough space in the buffer, it will not be printed.
- It does not zero-set the line buffer
- This command is present only in the printer version with display (TG558-D) and RTCK option.

[Default]

[Reference] **\$1B \$44, \$1B \$54**

[Example] If you wish to write :

|                        |                               |
|------------------------|-------------------------------|
|                        | DATE : 09-11-93 TEST OK       |
| transmit               | DATE : \$1B \$55 TEST OK \$0D |
| to print just the date | \$1B \$55 \$0D                |

#### **\$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 *n* bytes which correspond to an entire graphic line where *n* assumes :

n = 34byte for 35mm model  
n = 48 bytes for 58mm model

[Notes]

[Default]

[Reference]

[Example]

#### **\$1B \$58**

[Name] **Prints in red**

[Format]

|       |     |   |
|-------|-----|---|
| ASCII | ESC | X |
|-------|-----|---|

### 3. PRINTER FUNCTIONS

|         |    |    |
|---------|----|----|
| Hex     | 1B | 58 |
| Decimal | 27 | 88 |

[Description] After receiving this command, the printer prepare itself to print in red.  
 [Notes]  
 [Default]  
 [Reference]  
 [Example]

#### ESC a n

[Name] **Select justification**

|          |         |     |    |   |
|----------|---------|-----|----|---|
| [Format] | ASCII   | ESC | a  | n |
|          | Hex     | 1B  | 61 | n |
|          | Decimal | 27  | 97 | n |

[Range]  $0 \leq n \leq 2, 48 \leq n \leq 50$

[Description] Aligns all data in one line to the specified position, where *n* selects the type of justification as follows:

| n     | Justification |
|-------|---------------|
| 0, 48 | Flush left    |
| 1, 49 | Centered      |
| 2, 50 | Flush right   |

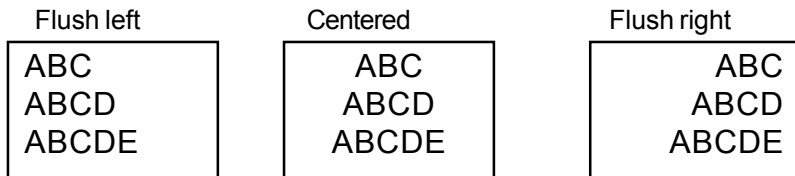
[Notes]

- This command is only enabled when inserted at the beginning of a line.
- Lines are justified within the specified printing area.
- Spaces set by **HT**, **ESC \$** and **ESC \** will be justified according to the previously-entered mode.

[Default] n = 0

[Reference]

[Example]



#### (dd) \$1B \$61

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

|          |         |      |     |    |
|----------|---------|------|-----|----|
| [Format] | ASCII   | (dd) | ESC | b  |
|          | Hex     | (dd) | 1B  | 62 |
|          | Decimal | (dd) | 27  | 98 |

[Description] (dd) are two ASCII characters which identify a hexadecimal byte and correspond to the number of dot lines between one print line and another.

[Notes]

[Default] = 0

[Reference]

[Example]

#### \$1B \$63

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

|          |       |     |    |   |
|----------|-------|-----|----|---|
| [Format] | ASCII | ESC | c  | [code] [height] [position] [options]<br>[length] [data] |
|          | Hex   | 1B  | 63 |   |

### 3. PRINTER FUNCTIONS

[Description]

Decimal 27 99

This command executes a barcode printing depending on the following parameters:

[code] = Type of bar code (ASCII character) The values are :

- 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 alls the possibles 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     | no              | HRI position |
| 0     | 1     | above           |              |
| 1     | 0     | below           |              |
| 1     | 1     | above and below |              |

| Bit 5 | Bit 4 | Function | Description    |
|-------|-------|----------|----------------|
| 0     | 0     | normal   | barcode length |
| 0     | 1     | double   |                |
| 1     | 0     | triple   |                |
| 1     | 1     | Not used |                |

| Bit 1 | Function | Description |
|-------|----------|-------------|
| 6     | Not used | -           |
| 7     | Not used | -           |

[maximum 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 = 8 characters
- EAN13 = 13 characters

### 3. PRINTER FUNCTIONS

[data] = Expressed in ASCII.

[Notes]

[Default]

[Reference]

[Example]

In the following example is indicated the command sequence to print a barcode :

\$1B, 'N', \$1B, 'c', 'C', \$50, \$3C, \$14, \$06, 'TG558'



where :

|            |  |
|------------|--|
| \$1B, 'N'  | (sets the printing in normal mode)         |
| \$1B, 'c', | (barcode printing command)                 |
| 'C',       | (barcode type= Code 39)                    |
| \$50,      | (barcode height = 10 mm)                   |
| \$3C,      | (starting position = 7,5 mm)               |
| \$14,      | (HRI printing below, barcode width double) |
| \$06,      | (characters number to print)               |
| 'TG558'    | (characters to print)                      |

#### ESC d n

[Name]

**Print and feed paper *n* rows**

[Format]

|         |     |     |   |
|---------|-----|-----|---|
| ASCII   | ESC | d   | n |
| Hex     | 1B  | 64  | n |
| Decimal | 27  | 100 | n |

[Range]

$0 \leq n \leq 255$

[Description]

Prints the data in the print buffer and feeds the paper *n* rows.

[Notes]

- Sets the print starting position at the beginning of the line.
- This command does not affect the line spacing set by **\$1B \$32** or **\$1B \$33**.
- The maximum paper feed amount is 200 rows. Even if a paper feed amount of more than 200 rows is set, the printer feeds the paper only 200 rows.

[Default]

[Reference]

**\$1B \$32, \$1B \$33**

[Example]

#### \$1B \$68

[Name]

**Selects Font B**

[Format]

|         |     |     |
|---------|-----|-----|
| ASCII   | ESC | h   |
| Hex     | 1B  | 68  |
| Decimal | 27  | 104 |

[Description]

After receives this command the Font B is selected and the printer is ready to use this configuration. the number of columns by row is indicated as follows :



### 3. PRINTER FUNCTIONS

| TG558      | Font B     |
|------------|------------|
| 58mm model | 42 columns |
| 35mm model | 28 columns |

[Notes]

[Default]

[Reference] **\$1B \$49, \$1B \$69**

[Example]

#### **\$1B \$69**

[Name] **Selects Font B**

[Format]

|         |     |     |
|---------|-----|-----|
| ASCII   | ESC | i   |
| Hex     | 1B  | 69  |
| Decimal | 27  | 105 |

[Description] After receives this command the Font B is selected and the printer is ready to use this configuration. the number of columns by row is indicated as follows :

| TG558      | Font B     |
|------------|------------|
| 58mm model | 40 columns |
| 35mm model | 28 columns |

[Notes]

[Default]

[Reference] **\$1B \$49, \$1B \$68**

[Example]

#### **\$1B \$6B**

[Name] **Transmits the second configuration register in serial**

[Format]

|         |     |     |
|---------|-----|-----|
| ASCII   | ESC | k   |
| Hex     | 1B  | 6B  |
| Decimal | 27  | 107 |

[Description] Transmits through serial port the value of second configuration register in ASCII format on two characters which represent the hexadecimal value.

[Notes]

[Default]

[Reference] **\$1B \$4B**

[Example] The response is on two bytes. E.g. if you receive :

\$30 \$39

it means that the default register is 00001001

#### **\$1B \$6D**

[Name] **Transmits the printing mode in serial**

[Format]

|         |     |     |
|---------|-----|-----|
| ASCII   | ESC | m   |
| Hex     | 1B  | 6D  |
| Decimal | 27  | 109 |

[Description] Transmits through serial port the printing mode configuration.

[Notes]

• If the printer using a parallel protocol, it doesn't transmits anything.

[Default]

Setting in the option register by means on the front keys

[Reference]

### 3. PRINTER FUNCTIONS

[Example]                    The response is on two bytes. E.g. if you receive :  
                                   \$30 \$32  
                                   it means that printing is in double height mode

#### \$1B \$70

[Name]                    **Transmits the configuration register in serial**  
 [Format]                 ASCII                 ESC                 p  
                                   Hex                    1B                    70  
                                   Decimal                27                    112  
 [Description]            Transmits through serial port the option register byte.  
 [Notes]                    • If the printer using a parallel protocol, it doesn't transmits anything  
 [Default]                     
 [Reference]                **\$1B \$47, \$1B \$4B, \$1B \$6B**  
 [Example]                 The response is on two bytes. E.g. if you receive :  
                                   \$30 \$39  
                                   it means that the default configuration is 00001001

#### \$1B \$72 n

[Name]                    **Set/reset red printing mode**  
 [Format]                 ASCII                 ESC                 r                 n  
                                   Hex                    1B                    72                 n  
                                   Decimal                27                    114                n  
 [Range]                     $0 \leq n \leq 1, 48 \leq n \leq 49$   
 [Description]            Sets and resets red printing mode.  
                                   **n                 Function**  
                                   0, 48                Reset red printing mode  
                                   1, 49                Set red printing mode  
 [Notes]                    • The printer prints only entire lines in red, not individual characters.  
                                   • The printer prints red only if enabled (see Setup).  
 [Default]                     $n = 0$   
 [Reference]                 
 [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.

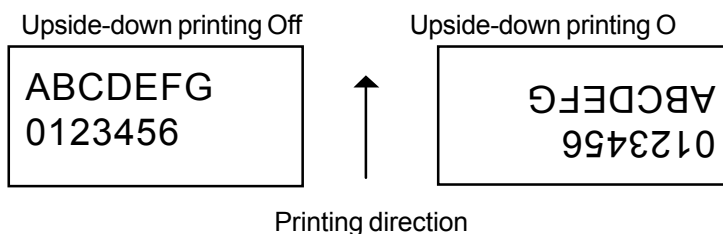
### 3. PRINTER FUNCTIONS

#### \$1B \$78

|               |  |       |     |   |     |    |    |         |    |     |
|---------------|--|-------|-----|---|-----|----|----|---------|----|-----|
| [Name]        | <b>Prints in black</b>   |       |     |   |     |    |    |         |    |     |
| [Format]      | <table border="0"> <tr> <td>ASCII</td> <td>ESC</td> <td>x</td> </tr> <tr> <td>Hex</td> <td>1B</td> <td>78</td> </tr> <tr> <td>Decimal</td> <td>27</td> <td>120</td> </tr> </table> | ASCII | ESC | x | Hex | 1B | 78 | Decimal | 27 | 120 |
| ASCII         | ESC  | x     |     |   |     |    |    |         |    |     |
| Hex           | 1B   | 78    |     |   |     |    |    |         |    |     |
| Decimal       | 27   | 120   |     |   |     |    |    |         |    |     |
| [Description] | After receiving this command, the printer prepare itself to print in black.  |       |     |   |     |    |    |         |    |     |
| [Notes]       |  |       |     |   |     |    |    |         |    |     |
| [Default]     | n = 0  |       |     |   |     |    |    |         |    |     |
| [Reference]   |  |       |     |   |     |    |    |         |    |     |
| [Example]     |  |       |     |   |     |    |    |         |    |     |

#### \$1B \$7B n

|               |  |       |     |   |   |     |    |    |   |         |    |     |   |
|---------------|--|-------|-----|---|---|-----|----|----|---|---------|----|-----|---|
| [Name]        | <b>Turn upside-down printing mode on/off</b>   |       |     |   |   |     |    |    |   |         |    |     |   |
| [Format]      | <table border="0"> <tr> <td>ASCII</td> <td>ESC</td> <td>{</td> <td>n</td> </tr> <tr> <td>Hex</td> <td>1B</td> <td>7B</td> <td>n</td> </tr> <tr> <td>Decimal</td> <td>27</td> <td>123</td> <td>n</td> </tr> </table>  | ASCII | ESC | { | n | Hex | 1B | 7B | n | Decimal | 27 | 123 | n |
| ASCII         | ESC  | {     | n   |   |   |     |    |    |   |         |    |     |   |
| Hex           | 1B   | 7B    | n   |   |   |     |    |    |   |         |    |     |   |
| Decimal       | 27   | 123   | n   |   |   |     |    |    |   |         |    |     |   |
| [Range]       | $0 \leq n \leq 255$  |       |     |   |   |     |    |    |   |         |    |     |   |
| [Description] | <p>Turns upside-down printing mode on or off.</p> <ul style="list-style-type: none"> <li>• When the LSB of <i>n</i> is 0, the upside-down printing mode is off.</li> <li>• When the LSB of <i>n</i> is 1, the upside-down printing mode is on.</li> </ul>                            |       |     |   |   |     |    |    |   |         |    |     |   |
| [Notes]       | <ul style="list-style-type: none"> <li>• Only the LSB of <i>n</i> is effective.</li> <li>• This command is valid only if entered at the beginning of a line.</li> <li>• In upside-down printing mode, the printer rotates the line to be printed 180° and then prints it.</li> </ul> |       |     |   |   |     |    |    |   |         |    |     |   |
| [Default]     | n = 0  |       |     |   |   |     |    |    |   |         |    |     |   |
| [Reference]   |  |       |     |   |   |     |    |    |   |         |    |     |   |
| [Example]     |  |       |     |   |   |     |    |    |   |         |    |     |   |



#### \$1B \$F0

|               |  |       |     |   |     |    |    |         |    |     |
|---------------|--|-------|-----|---|-----|----|----|---------|----|-----|
| [Name]        | <b>Transmits the real time clock</b>   |       |     |   |     |    |    |         |    |     |
| [Format]      | <table border="0"> <tr> <td>ASCII</td> <td>ESC</td> <td>⌘</td> </tr> <tr> <td>Hex</td> <td>1B</td> <td>F0</td> </tr> <tr> <td>Decimal</td> <td>27</td> <td>240</td> </tr> </table>   | ASCII | ESC | ⌘ | Hex | 1B | F0 | Decimal | 27 | 240 |
| ASCII         | ESC  | ⌘     |     |   |     |    |    |         |    |     |
| Hex           | 1B   | F0    |     |   |     |    |    |         |    |     |
| Decimal       | 27   | 240   |     |   |     |    |    |         |    |     |
| [Description] | Using this command, to read the printer calendar clock (real time clock).  |       |     |   |     |    |    |         |    |     |
| [Notes]       | <ul style="list-style-type: none"> <li>• Transmit the time and date in 12 ASCII characters format :<br/> <b>HHmmSSDDMMYY</b></li> </ul> <p>where :</p> <ul style="list-style-type: none"> <li>HH -&gt; hour</li> <li>mm-&gt; minutes</li> <li>SS -&gt; seconds</li> <li>DD -&gt; day</li> <li>MM-&gt; month</li> </ul> |       |     |   |     |    |    |         |    |     |

### 3. PRINTER FUNCTIONS

YY -> year

- This command is present only in the printer version with display (TG558-D) and RTCK option.

[Default]

[Reference]

[Example]

#### \$1B \$F1 n0...n9

[Name] **Sets the real time clock**

|          |         |     |     |          |
|----------|---------|-----|-----|----------|
| [Format] | ASCII   | ESC | {   | n0... n9 |
|          | Hex     | 1B  | F1  | n0... n9 |
|          | Decimal | 27  | 241 | n0... n9 |

[Description] Using this command, to set the printer calendar clock (real time clock).

[Notes] • Transmit the time and date in 10 ASCII characters format :

**HHmmDDMMYY**

where :

HH -> hour

mm-> minutes

DD -> day

MM-> month

YY -> year

- This command is present only in the printer version with display (TG558-D) and RTCK option.

[Default]

[Reference]

[Example]

#### \$1B \$FA n xH xL yH yL

[Name] **Print logo.**

|          |         |     |     |   |    |    |    |    |
|----------|---------|-----|-----|---|----|----|----|----|
| [Format] | ASCII   | ESC | {   | n | xH | xL | yH | yL |
|          | Hex     | 1B  | FA  | n | xH | xL | yH | yL |
|          | Decimal | 27  | 250 | n | xH | xL | yH | yL |

[Range] n = 1, 49

$0 \leq xH, xL, yH, yL \leq 255$

[Description] Prints graphic logo stored into flash bank; n selects the graphic source as follows :

$xL + xH \times 256$  specifies the starting dotline (  $1 \div Nrow$ ) where

$Nrow = 341$  for 58mm model

$Nrow = 512$  for 35mm model

$yL + yH \times 256$  specifies the number of lines to print.

[Notes] • If  $(xL + (xH \times 256)) > Nrow$  the printer does not execute the command where

$Nrow = 341$  for 58mm model

$Nrow = 512$  for 35mm model

• If  $(xL + (xH \times 256) + yL + (yH \times 256)) > Nrow$  the printer prints only  $Nrow - xL + (xH \times 256) + 1$  dotline where

$Nrow = 341$  for 58mm model

$Nrow = 512$  for 35mm model

• The logo dimension is :

$384 \times 341$  for 58mm model

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256 x 512 for 35mm model

[Default]

[Reference]

[Example]

To print from ram bank dotline 10 to dotline 64, send:  
 \$1B \$FA \$00 \$00 \$0A \$00 \$40

#### \$1D \$21 n

[Name]

**Select character size**

[Format]

|         |    |    |   |
|---------|----|----|---|
| ASCII   | GS | !  | n |
| Hex     | 1D | 21 | n |
| Decimal | 29 | 33 | n |

[Range]

$0 \leq n \leq 255$

[Description]

Selects character height and width, as follows:

- Bits 0 to 3 low Nibble: to select character height (see table 2).
- Bits 4 to 7 High Nibble: to select character width (see table 1).

|        |      |      |      |       |      |      |      |
|--------|------|------|------|-------|------|------|------|
| 0bit   | 1bit | 2bit | 3bit | 4bit  | 5bit | 6bit | 7bit |
| height |      |      |      | width |      |      |      |

Table 1 Select Character Width (high Nibble)

| Hex   | Width                 |
|-------|-----------------------|
| 0x    | 1 (normal width = 1x) |
| 1x    | 2 (width = 2x)        |
| 2x    | 3 (width = 3x)        |
| 3x-Fx | 1 (normal width = 1x) |

Table 2 Select character height (Low Nibble)

| Hex   | Height                  |
|-------|-------------------------|
| x0    | 1 (normal height = 1x)) |
| x1    | 2 (height = 2x)         |
| x2    | 3 (height = 3x)         |
| x3-xF | 1 (normal height = 1x)  |

[Notes]

- This command is effective for all characters (except HRI characters).
- If *n* falls outside the defined range, this command is ignored.
- Characters enlarged to different heights on the same line are aligned at the baseline or topline.

[Default]

*n* = 0

[Reference]

**\$00, \$01, \$02, \$03, \$04**

[Example]

#### \$1D \$24 n

[Name]

**Set absolute shift into a graphic line.**

[Format]

|         |    |    |   |
|---------|----|----|---|
| ASCII   | GS | \$ | n |
| Hex     | 1D | 24 | n |
| Decimal | 29 | 36 | n |

[Range]

$0 \leq n \leq 47$  for 58mm model  
 $0 \leq n \leq 34$  for 35mm model

[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]

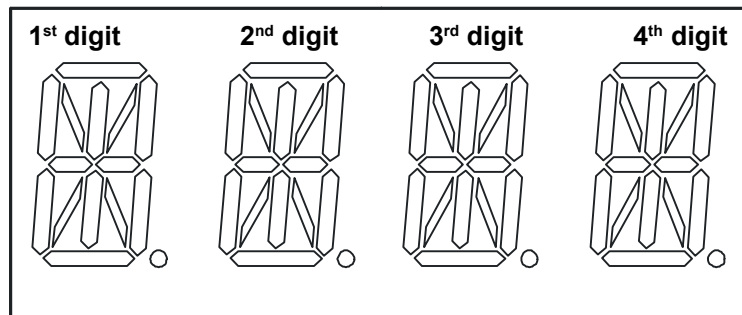
### 3. PRINTER FUNCTIONS

#### \$1D \$44 s1 s2 s3 s4

|               |   |      |      |      |      |      |    |
|---------------|---|------|------|------|------|------|----|
| [Name]        | <b>Visualization on display a string of 4 characters.</b>                     |      |      |      |      |      |    |
| [Format]      | ASCII   | GS   | D    | s1   | s2   | s3   | s4 |
|               | Hex   | 1D   | 44   | s1   | s2   | s3   | s4 |
|               | Decimal   | 29   | 68   | s1   | s2   | s3   | s4 |
| [Range]       | 48 ≤ s1, s2, s3, s4 ≤ 57<br>65 ≤ s1, s2, s3, s4 ≤ 90                          |      |      |      |      |      |    |
| [Description] | Visualizes a string of 4 characters on printer display.                       |      |      |      |      |      |    |
| [Notes]       | • This command is present only in the printer version with display (TG558-D). |      |      |      |      |      |    |
| [Default]     |   |      |      |      |      |      |    |
| [Reference]   |   |      |      |      |      |      |    |
| [Example]     | To visualize the string "CIAO" on display send :                              |      |      |      |      |      |    |
|               | \$1D  | \$44 | \$43 | \$49 | \$41 | \$4F |    |

#### \$1D \$45 d1...d8

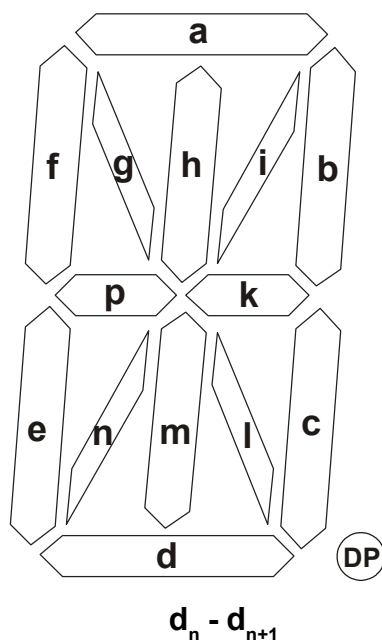
|               |  |    |    |       |    |  |
|---------------|--|----|----|-------|----|--|
| [Name]        | <b>Display management in graphic mode.</b>   |    |    |       |    |  |
| [Format]      | ASCII  | GS | E  | d1... | d8 |  |
|               | Hex  | 1D | 45 | d1... | d8 |  |
|               | Decimal  | 29 | 69 | d1... | d8 |  |
| [Range]       | 0 ≤ d1 ≤ 255<br>0 ≤ d8 ≤ 255   |    |    |       |    |  |
| [Description] | It's possible to customize the display visualization mode. Send 8 bytes (d1...d8) that identify the 4 digit present on display in the following mode : |    |    |       |    |  |



| 1 <sup>st</sup> digit |    | 2 <sup>nd</sup> digit |    | 3 <sup>rd</sup> digit |    | 4 <sup>th</sup> digit |    |
|-----------------------|----|-----------------------|----|-----------------------|----|-----------------------|----|
| d1                    | d2 | d3                    | d4 | d5                    | d6 | d7                    | d8 |

|         |  |
|---------|--|
| [Notes] | • In the following figure are represented the display digits : |
|---------|--|

### 3. PRINTER FUNCTIONS



- Each pair of bytes identify a digit, and must be as follows :

|      |                |   |   |   |   |   |   |   |   |                  |   |   |   |   |   |  |   |
|------|----------------|---|---|---|---|---|---|---|---|------------------|---|---|---|---|---|--|---|
| 7    | d <sub>n</sub> |   |   |   |   |   |   | 0 | 7 | d <sub>n+1</sub> |   |   |   |   |   |  | 0 |
| N.U. | DP             | k | p | n | m | l | i | h | g | f                | e | d | c | b | a |  |   |

- This command is present only in the printer version with display (TG558-D).

[Default]

[Reference]

[Example]

To visualize the character “+” on all 4 display digits send :

\$1D      \$45   \$34   \$80   \$34   \$80   \$34   \$80   \$34   \$80

#### \$1D \$46 n

[Name]

**Enabling graphic display effects.**

[Format]

|         |    |    |   |
|---------|----|----|---|
| ASCII   | GS | F  | n |
| Hex     | 1D | 46 | n |
| Decimal | 29 | 70 | n |

[Range]

$1 \leq n \leq 4, 49 \leq d8 \leq 52$

[Description]

Enables the graphic display effects. There are a4 effects already stored into the printer that can be reloaded in base of the n value.

[Notes]

- This command is present only in the printer version with display (TG558-D).

[Default]

[Reference]

[Example]

#### \$1D \$49 n

[Name]

**Transmit printer ID**

[Format]

|         |    |    |   |
|---------|----|----|---|
| ASCII   | GS | l  | n |
| Hex     | 1D | 49 | n |
| Decimal | 29 | 73 | n |

### 3. PRINTER FUNCTIONS

[Range]  $1 \leq n \leq 3, 49 \leq n \leq 51$   
 [Description] Transmits the printer ID specified by  $n$  follows:

| n     | Printer ID       | Specification                          |
|-------|------------------|--|
| 1, 49 | Printer model ID | \$68 (58mm model)<br>\$69 (35mm model) |
| 2, 50 | Type ID          | See table below                        |
| 3, 51 | ROM version ID   | Depends on ROM version (4 character)   |

#### n = 2, Type ID

| Bit | Off/On | Hex | Decimal | Function                             |
|-----|--------|-----|---------|--------------------------------------|
| 0   | Off    | 00  | 0       | 2-byte character codes not supported |
| 1   | Off    | 00  | 0       | Autocutter not supplied              |
|     | On     | 02  | 2       | Autocutter supplied                  |
| 2   | Off    | 00  | 0       | Thermal paper w/o label              |
|     | On     | 04  | 4       | Thermal paper w/label                |
| 3   | -      | -   | -       | RESERVED                             |
| 4   | -      | -   | -       | RESERVED                             |
| 5   | -      | -   | -       | RESERVED                             |
| 6   | -      | -   | -       | RESERVED                             |
| 7   | -      | -   | -       | RESERVED                             |

[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 \$4C n m t d1...dk

[Name] **Receive display effect from serial port**

[Format] ASCII GS L n m t d1... dk  
 Hex 1D 4C n m t d1... dk  
 Decimal 29 76 n m t d1... dk

[Range]  $1 \leq n \leq 4, 49 \leq n \leq 52$   
 $0 \leq m \leq 63$   
 $0 \leq d1 \leq 255, 0 \leq dk \leq 255$

[Description] Receives display effect from serial port.

- The  $n$  parameter indicates the effect display number to apply (see \$1D \$46 command).
- The  $m$  parameter indicates the frame number. if the  $m$  value exceeds the maximum value allowed then was automatically limited to 63.
- The  $t$  parameter indicates the display interval between one frame and another (the value is calculated in milliseconds).

[Notes] • The frame structure is the same as specified in the command \$1D \$45.  
 • The d1...dk bytes, that was sent to define the display effect, are calculated as follows :  
 $k = m \times 8$  (where  $m$  is the frame number)  
 • After receiving this command a printer reset was executed.  
 • This command is present only in the printer version with display (TG558-D).



### 3. PRINTER FUNCTIONS

[Default]

[Reference]           **\$1D \$45**

[Example]

#### **\$1D \$57 n d1...dn**

[Name]               **Prints n byte of a 203 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       for 58mm model  
                       1 ≤ n ≤ 34       for 35mm model  
                       0 ≤ d1 ... dn ≤ 255

[Description]     Print n byte of a 203 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

#### **\$1D \$59 n**

[Name]               **Sets height in printing.**

|          |         |    |    |   |
|----------|---------|----|----|---|
| [Format] | ASCII   | GS | Y  | n |
|          | Hex     | 1D | 59 | n |
|          | Decimal | 29 | 89 | n |

[Description]     Sets height during printing based on following values of n:

When you print a dot line if

                      n=0 height is set to one

                      n ≠ 0 (default value) height is set to two

[Notes]            When n ≠ 0 (default value) each dotline is twice replicated

[Default]

n ≠ 0

[Reference]

[Example]

#### **\$1D \$5A n**

[Name]               **Receive n bytes from serial port**

|          |         |    |    |   |
|----------|---------|----|----|---|
| [Format] | ASCII   | GS | Z  | n |
|          | Hex     | 1D | 5A | n |
|          | Decimal | 27 | 90 | n |

[Description]     Receives n bytes from serial port and prints them in graphic mode

[Notes]            Max value of n is n ≤ 48 for 58mm model

### 3. PRINTER FUNCTIONS

n ≤ 34 for 35mm model

[Default]

[Reference]

[Example]

**\$1D \$62 m n**

[Name]

**Management of barcode printing.**

[Format]

|   |   |     |         |    |    |     |     |
|---|---|-----|---------|----|----|-----|-----|
| ① | ② | ③   | ASCII   | GS | b  | m   | n   |
|   |   | Hex |         | 1D | 62 | m   | n   |
|   |   |     | Decimal |    | 29 | 124 | m n |

[Range]

|   |              |  |
|---|--------------|--|
| ① | m = 'p', 'P' | 1 ≤ n ≤ 3, 49 ≤ n ≤ 51                     |
| ② | m = 't', 'T' | 48 ≤ n ≤ 56                                |
| ③ | m = 'c', 'C' | n = 'z', 'Z', 'i', 'I', 'd', 'D', 'r', 'R' |

[Description]

① This command prints a EAN13 barcode already formatted ; n specifies the formattation type as follows :

| n     | Barcode format |
|-------|----------------|
| 1, 49 | DDMMYYHHmmSS   |
| 2, 50 | DDMMYnHHmmSS   |
| 3, 51 | DDMMYYHHmmnnn  |

where :

**DD** -> day **MM** -> month **YY** -> year **HH** ->hour  
**mm** -> minutes **SS** -> seconds **n** -> terminal number(0-9)  
**nnn** -> progressive ticket number

② This command sets the terminal number that will be printed in the barcode if it was selected the DDMMYnHHmmSS format.

- The terminal number value must be included between 0 and 9 (n).

After receiving this command the printer send a byte to host in the following format :

1° byte: ACK (\$06) if the setting value is included in the interval  
NAK (\$15) if the setting value is not included in the interval

- The terminal number is stored into EEprom so this value still remains also after a reset command or printer shut-down.

③ This command is relative to the counter defined as progressive of ticket printed; n specifies the operation executed on counter as indicated in the following table :

| n        | Function                                 |
|----------|--|
| 'z', 'Z' | Resets the progressive ticket counter    |
| 'i', 'I' | Increases the progressive ticket counter |
| 'd', 'D' | Decreases the progressive ticket counter |
| 'r', 'R' | Reads the progressive ticket counter     |

- The counter value is stored into RAM so when the printer resets or shut-down the counter is reset .

[Notes]

[Default]

[Reference]

[Example]



### 3. PRINTER FUNCTIONS

#### \$1D \$72 n

|               |   |
|---------------|---|
| [Name]        | <b>Transmit status</b>  |
| [Format]      | ASCII            GS    r    n<br>Hex                1D   72   n<br>Decimal            29   114   n  |
| [Range]       | n = 1, 49   |
| [Description] | Transmits the status specified by <i>n</i> as follows:<br><b>n            Function</b><br>1, 49        Transmits paper sensor status (as for <b>\$1D \$76</b> ).<br>Paper sensor status (n = 1, 49) |

| Bit | Off/On | Hex  | Decimal | Function                               |
|-----|--------|------|---------|--|
| 0,1 | -      | -    | -       | RESERVED                               |
| 2,3 | Off    | 00   | 0       | Paper-end sensor:<br>Paper present     |
|     | On     | (0C) | (12)    | Paper-end sensor:<br>Paper not present |
| 4   | Off    | 00   | 0       | Not used. Fixed to Off.                |
| 5   | -      | -    | -       | RESERVED                               |
| 6   | -      | -    | -       | RESERVED                               |
| 7   | -      | -    | -       | RESERVED                               |

|             |  |
|-------------|--|
| [Notes]     | • This command is executed when the data is processed in the data buffer. Therefore, there may be a time lag between receiving the command and transmitting the status, depending on data buffer status. |
| [Default]   |  |
| [Reference] | <b>\$10 \$04, \$1B \$76</b>  |
| [Example]   |  |

#### \$1D \$EB

|               |  |
|---------------|--|
| [Name]        | <b>Received, save, execute melody</b>  |
| [Format]      | ① ASCII            GS    { }    N    k<br>Hex                1D   EB   4E   k<br>Decimal            29   235   78   k<br>② ASCII            GS    { }    w    k    mh   ml   n1t1..nmtm<br>Hex                1D   EB   77   k    mh   ml   n1t1..nmtm<br>Decimal            29   235   119   k    mh   ml   n1t1..nmtm  |
| [Range]       | ① $1 \leq k \leq 4, 49 \leq k \leq 52$<br>② $1 \leq k \leq 4, 49 \leq k \leq 52$<br>$0 \leq mH \leq 255, 0 \leq mL \leq 255$   |
| [Description] | ① • This command is used for receiving and saving a melody.<br>• The <i>k</i> parameter selects the melody to execute.<br>② • This command save a melody into flash.<br>• <i>k</i> parameter selects the melody to receive.<br>• <i>mH</i> and <i>mL</i> are the number of notes to receive ( $mH \times 256 + mL$ ).<br>• <i>n</i> indicates the note to play (see Note Table).<br>• <i>t</i> indicates the duration of playing note ; (the exactly duration of any note will be expressed in multiples of 5 ms). |

### 3. PRINTER FUNCTIONS

In the following table are listed the usable notes and their hexadecimal value to send for playing note.

**NOTES TABLE**

| Note     | Value (Hex) | Description   |
|----------|-------------|---------------|
| NO_SOUND | \$21        | -             |
| SOUND_ON | \$20        | -             |
| RE_D_5   | \$30        | RE # 5 Ottava |
| MI_5     | \$31        | MI            |
| FA_5     | \$32        | FA            |
| FA_D_5   | \$33        | FA #          |
| SOL_5    | \$34        | SOL           |
| SOL_D_5  | \$35        | SOL #         |
| LA_5     | \$36        | LA            |
| LA_D_5   | \$37        | LA #          |
| SI_5     | \$38        | SI            |
| DO_6     | \$39        | DO 6 Ottava   |
| DO_D_6   | \$3A        | DO #          |
| RE_6     | \$29        | RE            |
| RE_D_6   | \$3B        | RE #          |
| MI_6     | \$3C        | MI            |
| FA_6     | \$3D        | FA            |
| FA_D_6   | \$0E        | FA #          |
| SOL_6    | \$3E        | SOL           |
| SOL_D_6  | \$2C        | SOL #         |
| LA_6     | \$3F        | LA            |
| LA_D_6   | \$04        | LA #          |
| SI_6     | \$05        | SI            |
| DO_7     | \$25        | DO 7 Ottava   |
| DO_D_7   | \$2F        | DO #          |
| RE_7     | \$06        | RE            |
| RE_D_7   | \$07        | RE #          |

[Notes]

- ② • The NO\_SOUND note disable the tones generator must be used to end a melody.
- The SOUND\_ON note enable the tones generator but no produce any music. This note must be used also when executes a pause.
- Every melody always must be start with the SOUND\_ON note.
- This command is present only in the printer version with display (TG558-D).

[Default]

[Reference]

[Example]

## 4. TECHNICAL SPECIFICATIONS

### 4.1 TECHNICAL SPECIFICATIONS

Table 4.1 gives the main technical specifications for the 204 dpi printer model.

(Tab.4.1)

| Model                           | 58 mm  |    |    | 35 mm                    |    |
|---------------------------------|--|----|----|--------------------------|----|
| Columns                         | 24   | 40 | 42 | 17                       | 28 |
| Print method                    | Thermal  |    |    |                          |    |
| Resolution                      | 203 DPI (8 dot/mm)   |    |    |                          |    |
| <b>Paper specifications</b>     |  |    |    |                          |    |
| Type of paper                   | Thermal rolls<br>Heat-sensitive side on outside of roll  |    |    |                          |    |
| Recommended types of paper      | from 55 g/m <sup>2</sup> to 65 g/m <sup>2</sup> (KANZAN)   |    |    |                          |    |
| Width                           | 57.5 mm ± 1 mm   |    |    | 35mm ± 0.5 mm            |    |
| Internal roll core diameter     | 13mm   |    |    |                          |    |
| External roll diameter          | max Ø80 mm (with external roll holder support)   |    |    |                          |    |
| Core type                       | Cardboard or plastic   |    |    |                          |    |
| Sensors                         | Head temperature, paper end,<br>anti-paper-jam<br>Optional : external near paper end,<br>ticket presence on output |    |    |                          |    |
| Printing mode                   | Straight, Reverse  |    |    |                          |    |
| Printing format                 | Height/Width from 1 to 2, bold, reverse, underlined.   |    |    |                          |    |
| Character fonts                 | ASCII standard, International  |    |    |                          |    |
| Available interfaces            | RS232/TTL  |    |    |                          |    |
| Baud rate                       | From 600 to 38400 bps  |    |    |                          |    |
| Receive buffer                  | 750 bytes  |    |    |                          |    |
| Flash memory                    | 60 Kbytes  |    |    |                          |    |
| Graphics memory                 | 1 logo of 384 x 341 dots   |    |    | 1 logo of 256 x 512 dots |    |
| Printing Driver                 | Windows™ 95, 98, ME, NT4, 2K, XP   |    |    |                          |    |
| Power supply                    | 12 Vdc ± 10%   |    |    |                          |    |
| <b>Current Consumption</b>      |  |    |    |                          |    |
| Medium consumption              | 2 A  |    |    |                          |    |
| Stand by consumption            | 0.1 A  |    |    |                          |    |
| Printer Weight <sup>(1)</sup>   | 490 gr.  |    |    |                          |    |
| <b>Environmental conditions</b> |  |    |    |                          |    |
| Operating temperature           | 0°C ÷ 50°C   |    |    |                          |    |
| Relative humidity               | 10% ÷ 85% w/o condensation   |    |    |                          |    |
| Storage temperature / Humidity  | -20 °C ÷ +70 °C / 10% ÷ 90%  |    |    |                          |    |



Notes :<sup>(1)</sup> Referred without paper roll and model with plastic front panel.

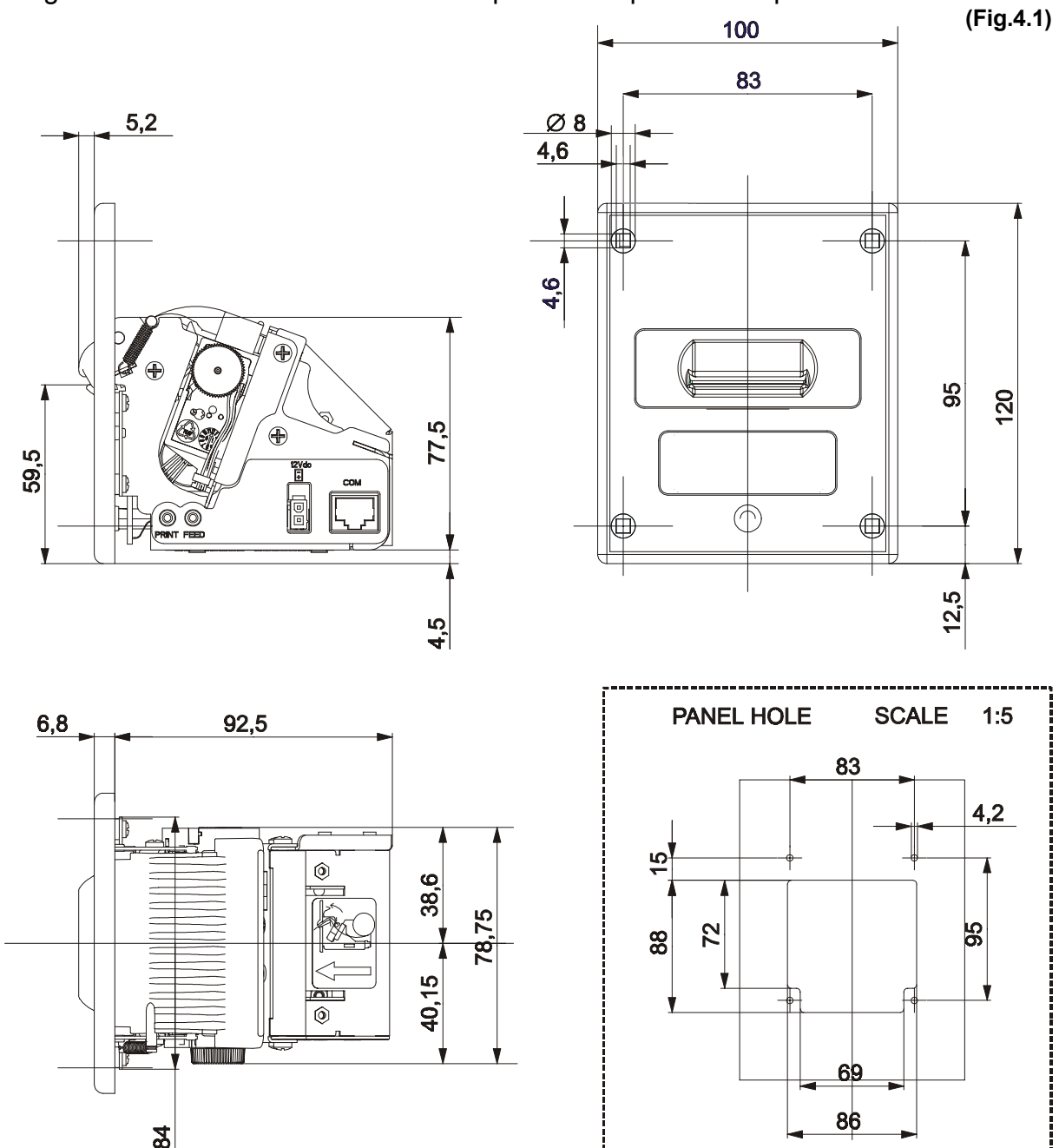
## 4. TECHNICAL SPECIFICATIONS

|                            |  |                                  |
|----------------------------|--|----------------------------------|
| <b>OPTIONS</b>             | - Adjustable roll holder support with sensor |                                  |
| <b>Columns</b>             | 24 (mod. 58mm)<br>17 (mod. 35mm)             | 40 (mod. 58mm)<br>28 (mod. 35mm) |
| <b>Matrix of character</b> | 16 x 24                                      | 8 x 24                           |
| <b>Printing speed</b>      |  |                                  |
| Lines / sec                | 16,25  | 16,25                            |
| Chars / sec                | 390  | 650                              |
| <b>Characters (W x H)</b>  |  |                                  |
| Normal                     | 2 x 3  | 1 x 3                            |

### 4.2 DIMENSIONS

#### 4.2.1 Model with plastic front panel

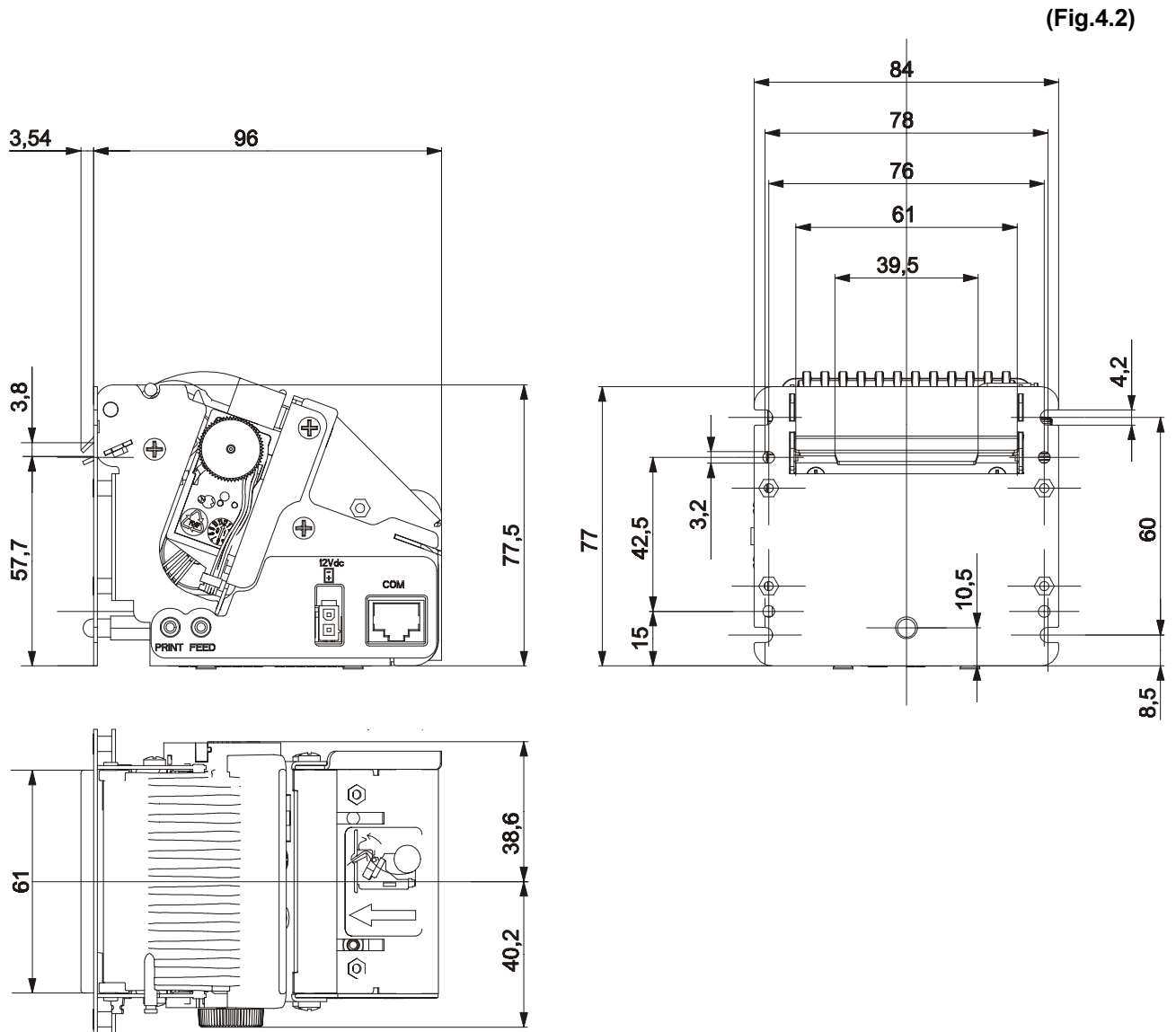
The figure 4.1 shows the dimensions of the printer with plastic front panel.



## 4. TECHNICAL SPECIFICATIONS

### 4.2.2 Model with metallic front panel

The figure 4.2 shows the dimensions of the printer with metallic front panel (35mm version).



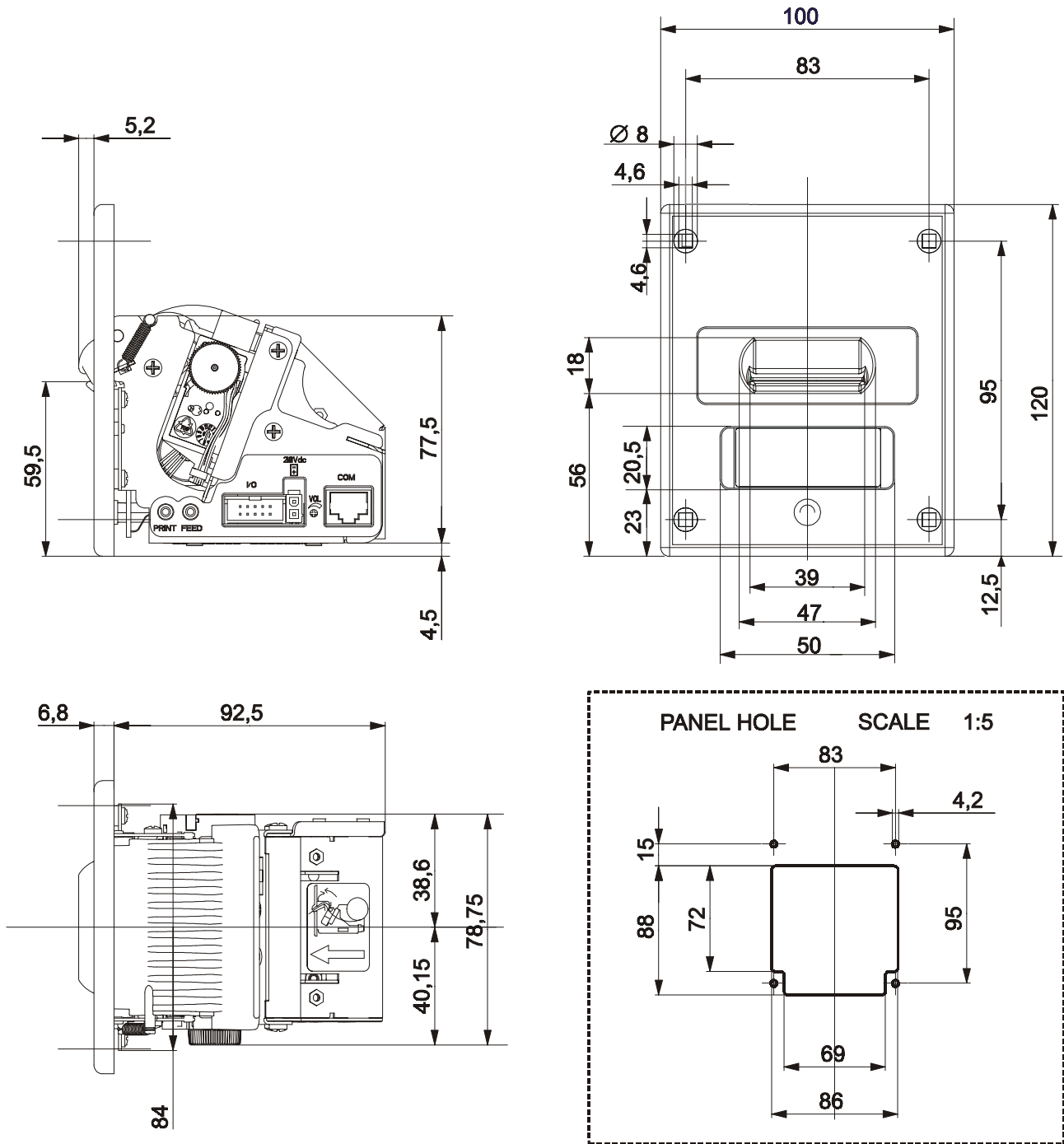


# 4. TECHNICAL SPECIFICATIONS

## 4.2.3 Model with Display

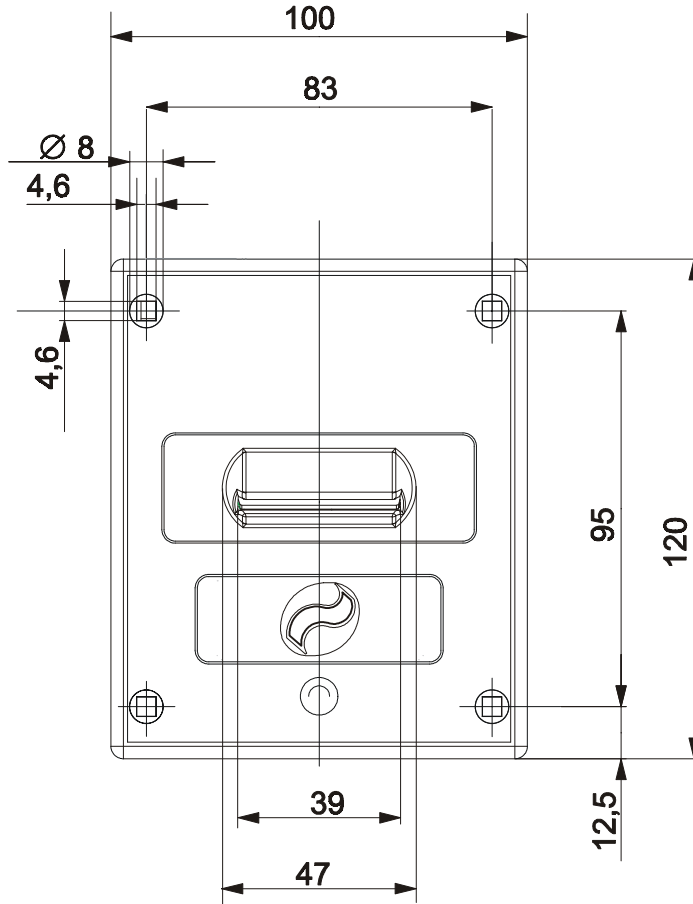
The figure 4.3 shows the dimensions of the printer with display (35mm version).

(Fig.4.3)



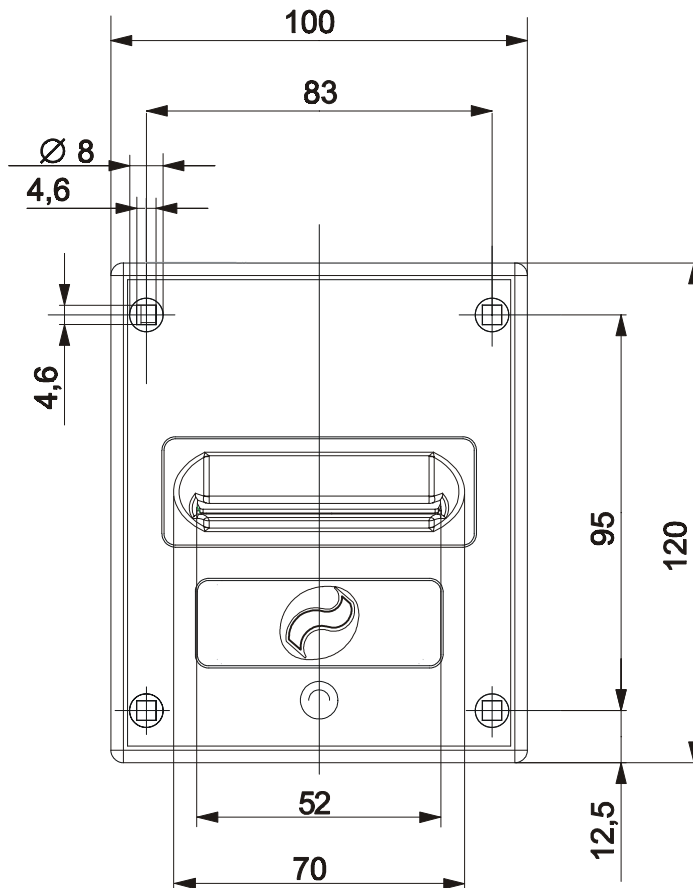
## 4. TECHNICAL SPECIFICATIONS

The figures 4.4 and 4.5 show the dimensions of TG558 front panel .



Front Panel  
TG558 35 mm

(Fig.4.4)



Front Panel  
TG558 58 mm

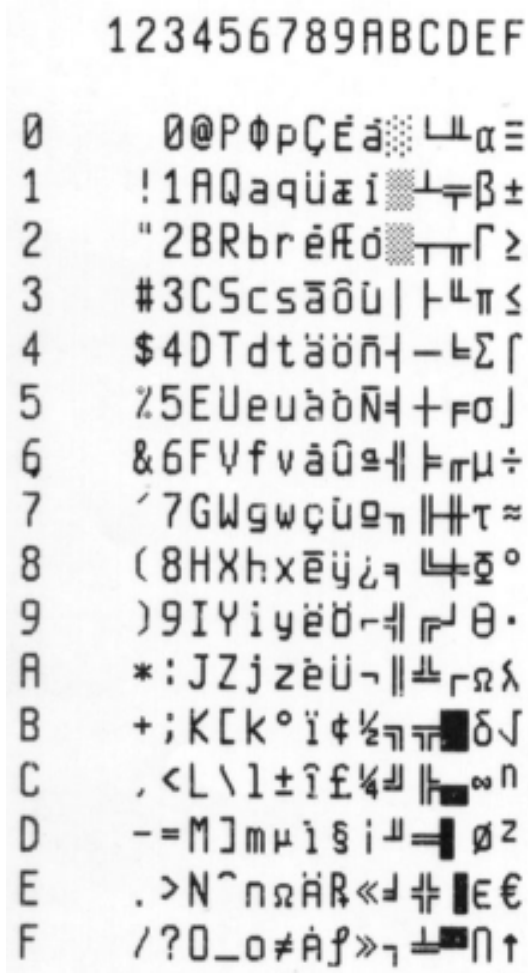
(Fig.4.5)

# 5. CHARACTER SET

## 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.

24 COLUMNS (font 16 x24)



(Fig.5.1)

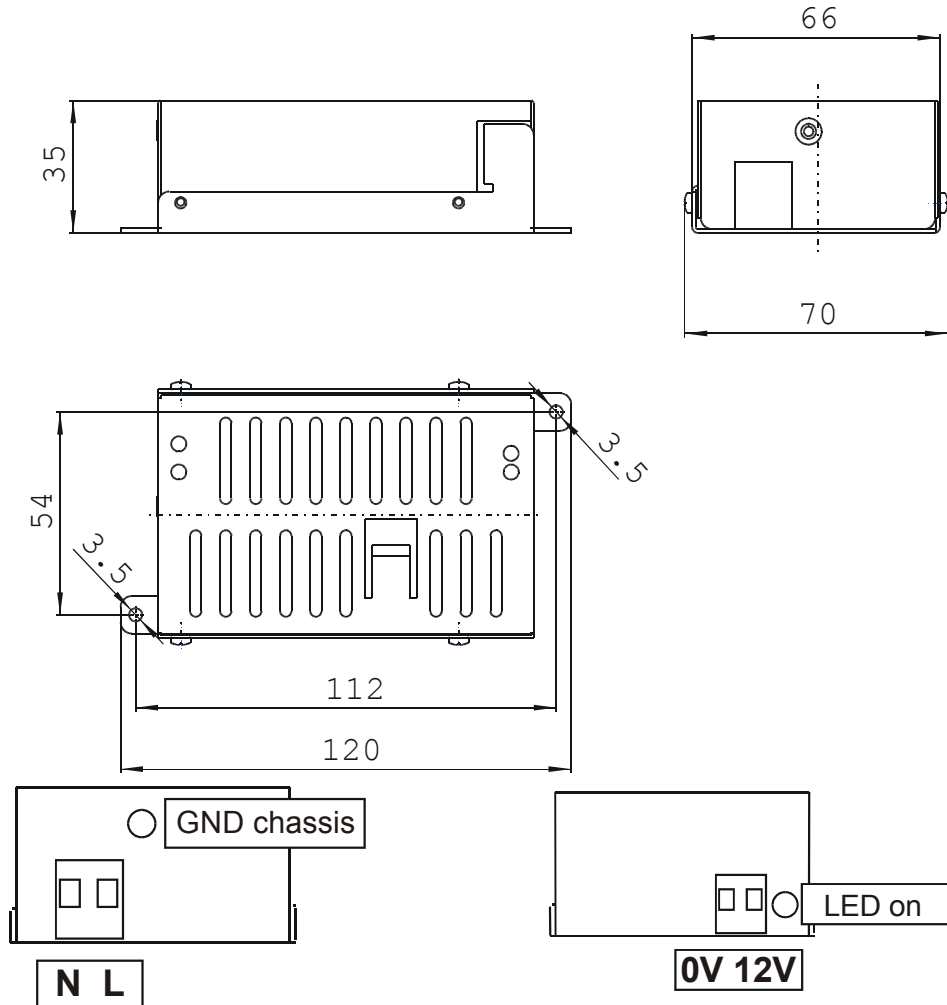
# APPENDIX A - ACCESSORIES AND SPARE PARTS

## A.1 ACCESSORIES

### A.1.1 Power Supply

The figure below illustrates the 12V power supply provided by Custom to be used for printer operation.

(Fig.A.1)



(Tab.A.1)

| Input specifications |                    | Output specifications |                   |
|----------------------|--------------------|-----------------------|-------------------|
| Input voltage        | 100 Vac to 240 Vac | Output voltage        | 12 V              |
| Input frequency      | 50 Hz to 60 Hz     | Output current        | Maximum 4 A       |
|                      |                    |                       | Peak 6 A          |
|                      |                    |                       | Short Circuit 6 A |

### A.1.2 Adjustable paper holder suport

An adjustable paper holder support kit (see fig. A.2 and A.3) is available for the printer to make it possible to use larger-width rolls of paper (80mm max.).

(Tab.A.2)

|                |  |
|----------------|--|
| PCXSP-TG558-35 | Paper roll holder kit for 35mm version with QFC sensor |
| PCXSP-TG558-58 | Paper roll holder kit for 58mm version with QFC sensor |

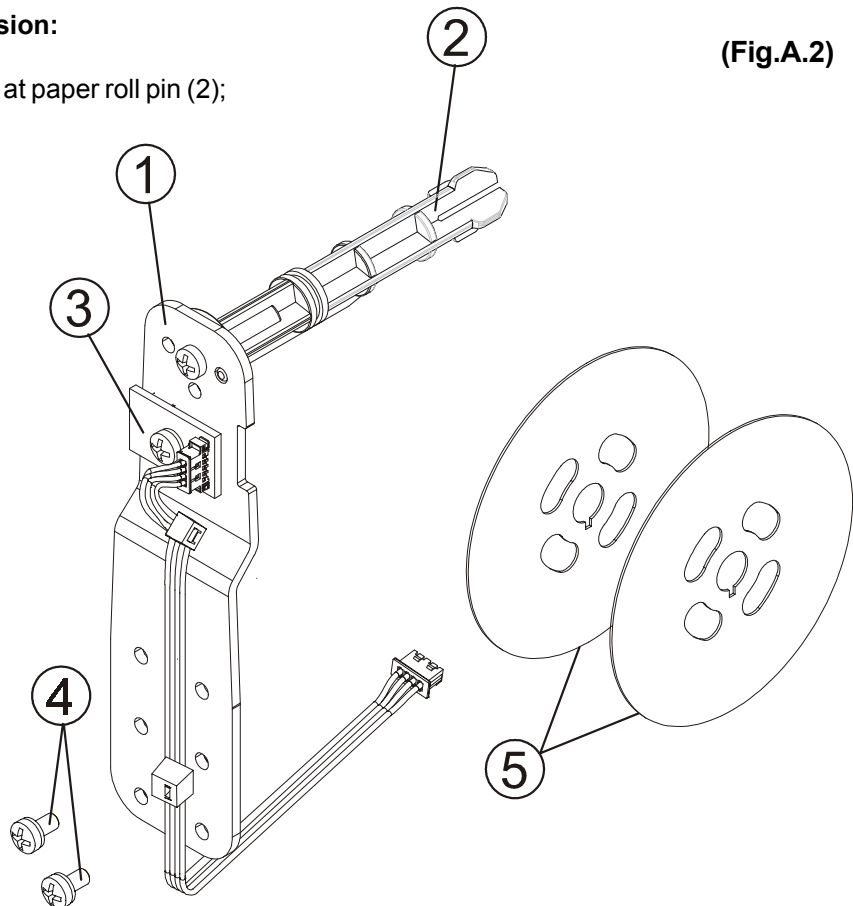
The kit is provided already installed ad shown in figures A.2 and A.3.

## APPENDIX A - ACCESSORIES AND SPARE PARTS

### Paper roll holder Kit for 58mm version:

- Paper holder support (1) assembled at paper roll pin (2);
- Near paper end sensor board (3);
- Two M3x6 fixing screws (4);
- Two control discs (5).


(Fig.A.2)

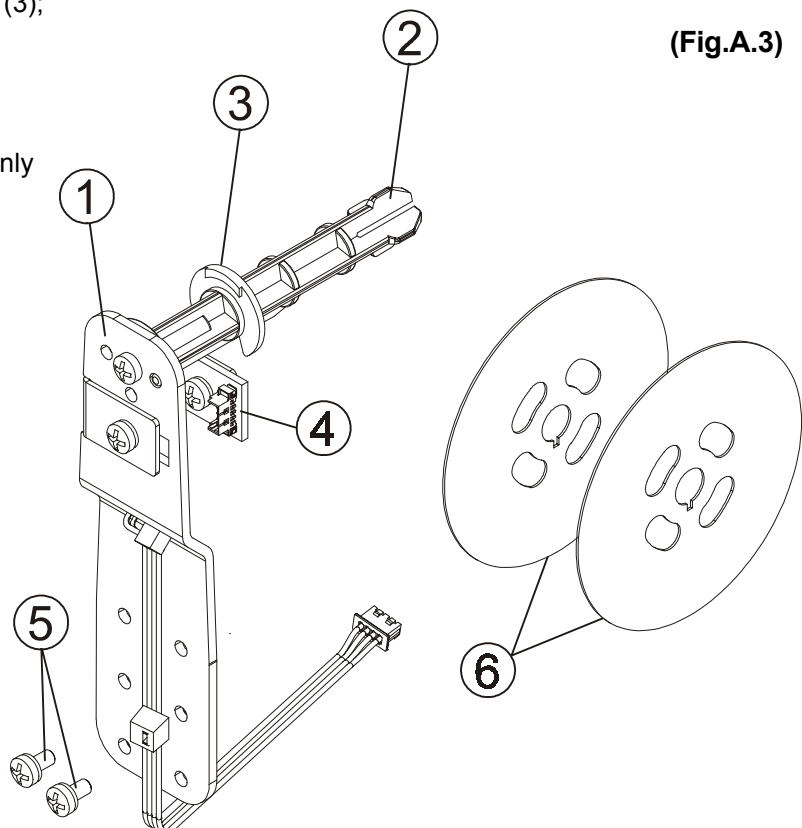


### Paper roll holder Kit for 35mm version:

- Paper holder support (1) assembled at paper roll pin (2);
- Stop ring <sup>(1)</sup> for paper width adjustment (3);
- Near paper end sensor board (4);
- Two M3x6 fixing screws (5);
- Two control discs (6).

(Fig.A.3)

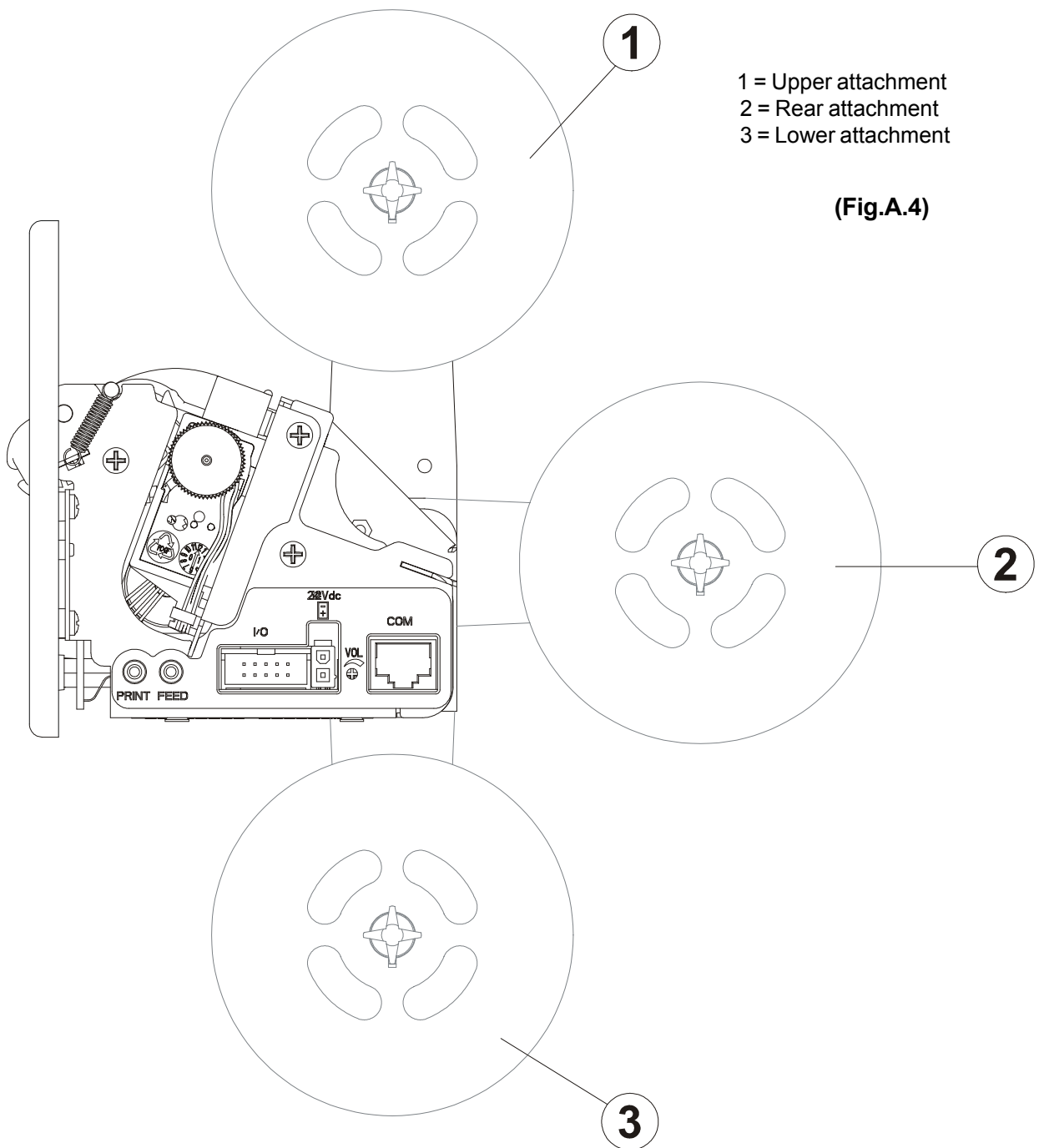
 <sup>(1)</sup> **NOTE:** The stop ring is present only in the 35mm version.



# APPENDIX A - ACCESSORIES AND SPARE PARTS

## Assembly instructions

The position of the roll holder support is not fixed and its rear, lower and upper position may be adjusted as shown in figure A.4.



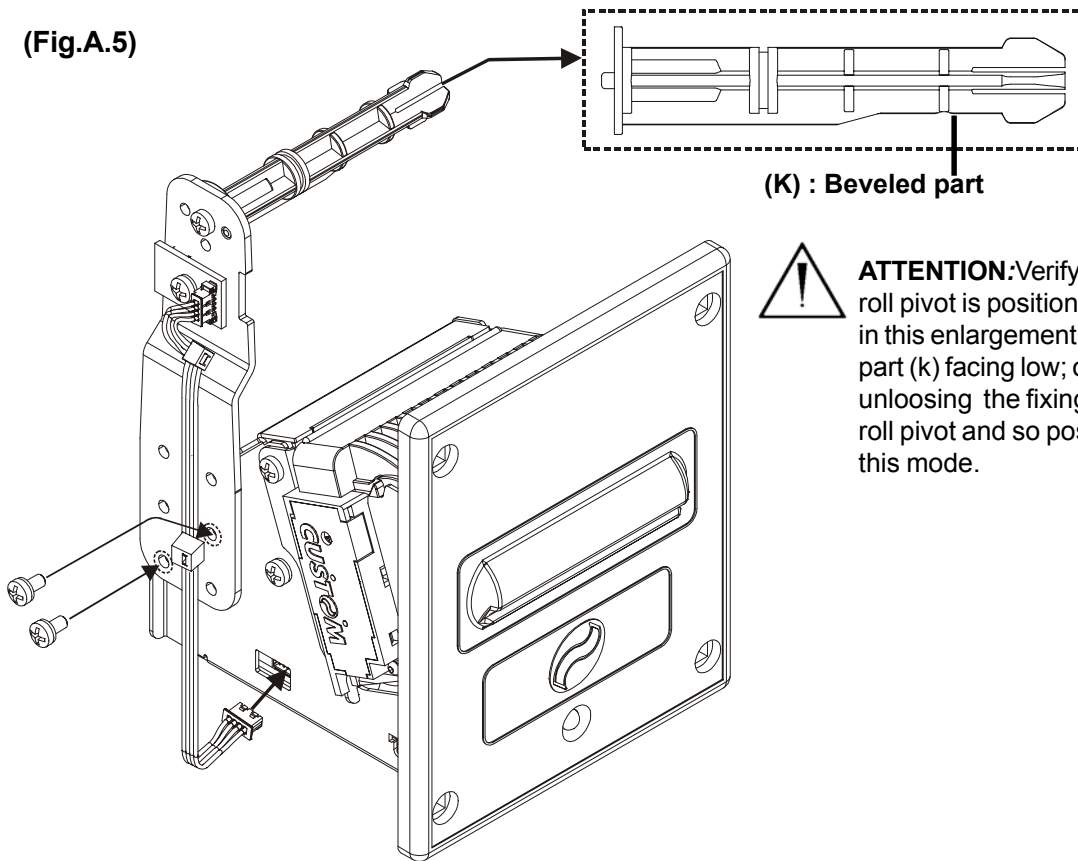
## Upper attachement

### 58mm Version

1- Attach the support to the printer body using the two M3x6 fixing screws (3) supplied with the kit, as shown in fig. A.5.

2 - Insert the near paper end sensor connector (1) of the roll holder support into the printer connector as shown in fig. A.5.

(Fig.A.5)



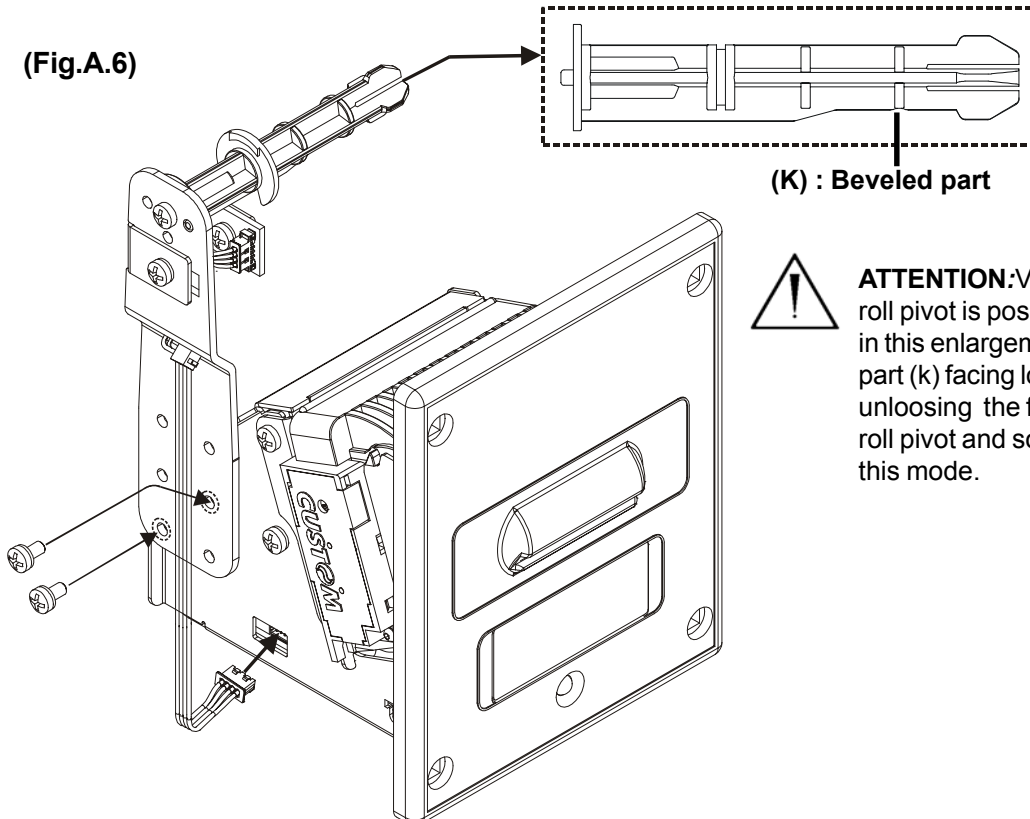
**ATTENTION:** Verify that the paper roll pivot is positioned as indicated in this enlargement with beveled part (k) facing low; otherwise unloosing the fixing screw of paper roll pivot and so positioning itself in this mode.

### 35mm Version

1- Attach the support to the printer body using the two M3x6 fixing screws (3) supplied with the kit, as shown in fig. A.6.

2 - Insert the near paper end sensor connector (1) of the roll holder support into the printer connector as shown in fig. A.6.

(Fig.A.6)



**ATTENTION:** Verify that the paper roll pivot is positioned as indicated in this enlargement with beveled part (k) facing low; otherwise unloosing the fixing screw of paper roll pivot and so positioning itself in this mode.

# APPENDIX A - ACCESSORIES AND SPARE PARTS

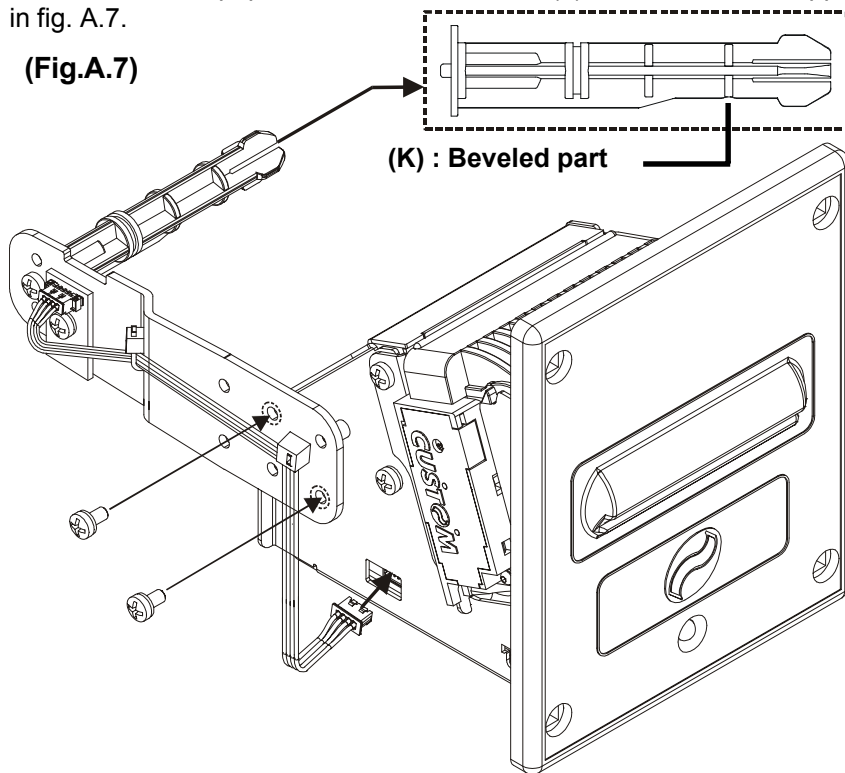
## Rear attachment

### 58mm Version

1- Attach the support to the printer body using the two M3x6 fixing screws (3) supplied with the kit, as shown in fig. A.7.

2 - Insert the near paper end sensor connector (1) of the roll holder support into the printer connector as shown in fig. A.7.

(Fig.A.7)



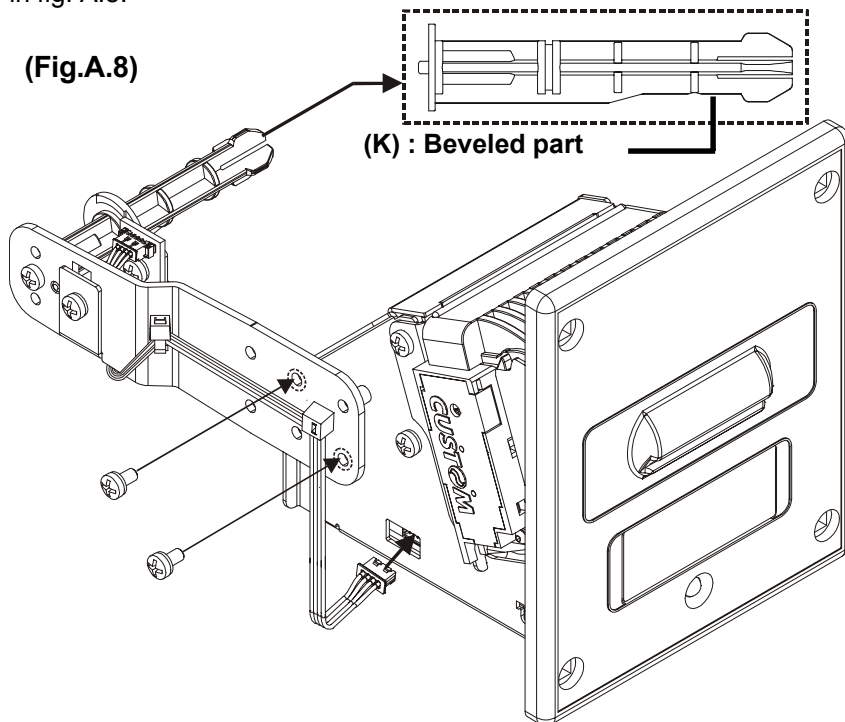
**ATTENTION:** Verify that the paper roll pivot is positioned as indicated in this enlargement with beveled part (k) facing low; otherwise unloosing the fixing screw of paper roll pivot and so positioning itself in this mode.

### 35mm Version

1- Attach the support to the printer body using the two M3x6 fixing screws (3) supplied with the kit, as shown in fig. A.8.

2 - Insert the near paper end sensor connector (1) of the roll holder support into the printer connector as shown in fig. A.8.

(Fig.A.8)



**ATTENTION:** Verify that the paper roll pivot is positioned as indicated in this enlargement with beveled part (k) facing low; otherwise unloosing the fixing screw of paper roll pivot and so positioning itself in this mode.



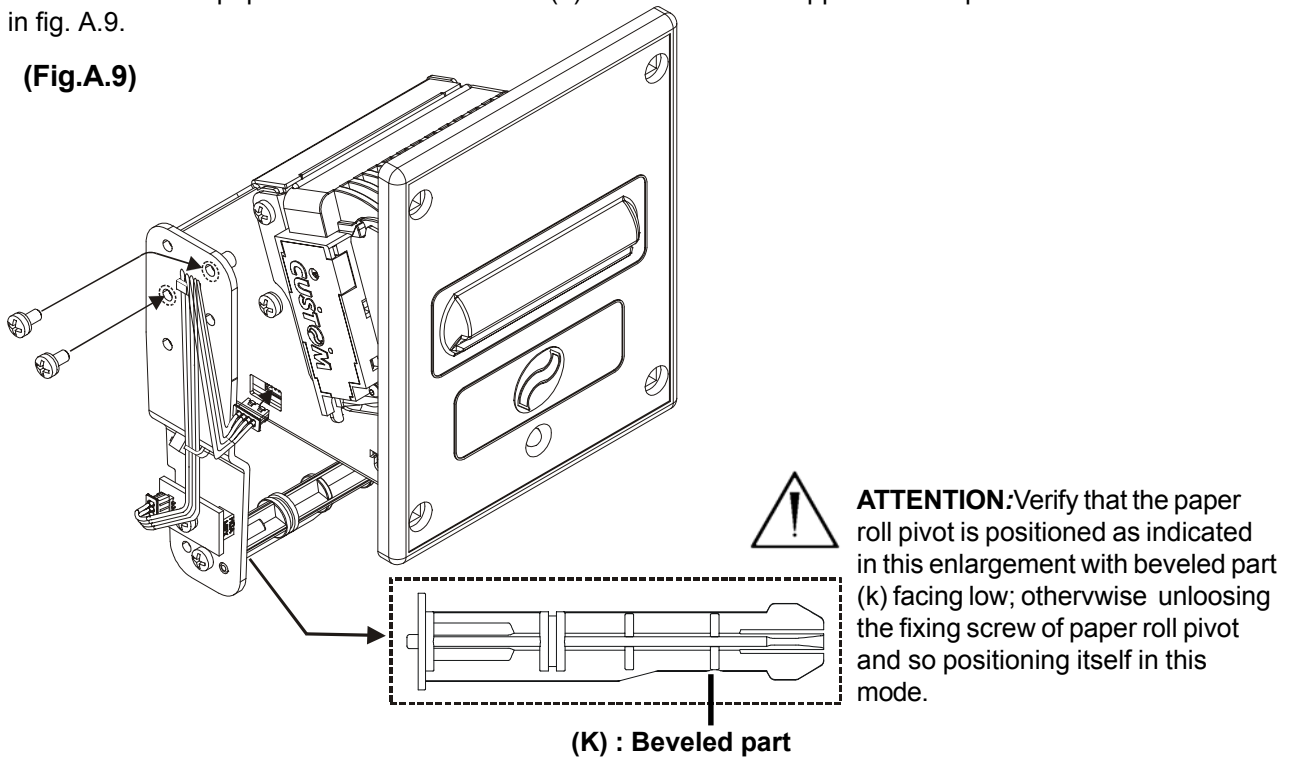
## Lower attachment

### 58mm Version

1- Attach the support to the printer body using the two M3x6 fixing screws (3) supplied with the kit, as shown in fig. A.9.

2 - Insert the near paper end sensor connector (1) of the roll holder support into the printer connector as shown in fig. A.9.

(Fig.A.9)

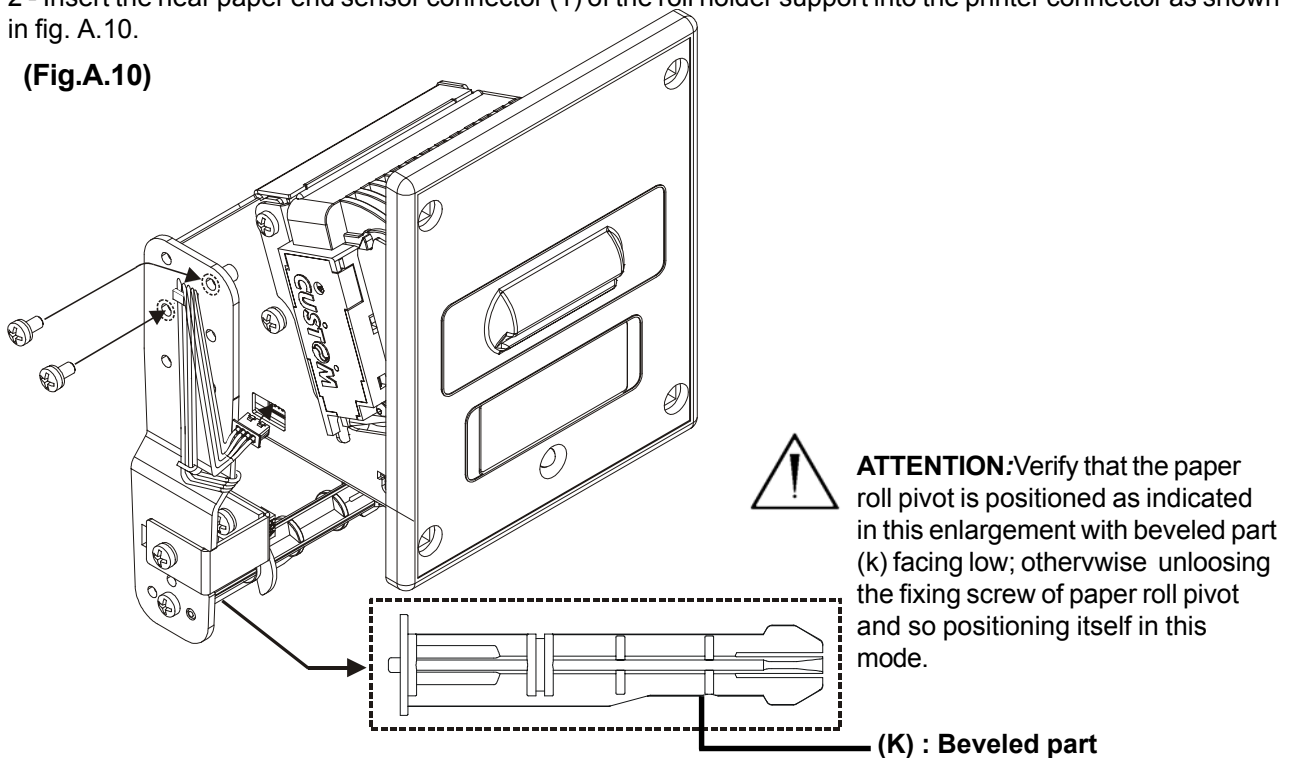


### 35mm Version

1- Attach the support to the printer body using the two M3x6 fixing screws (3) supplied with the kit, as shown in fig. A.10.

2 - Insert the near paper end sensor connector (1) of the roll holder support into the printer connector as shown in fig. A.10.

(Fig.A.10)

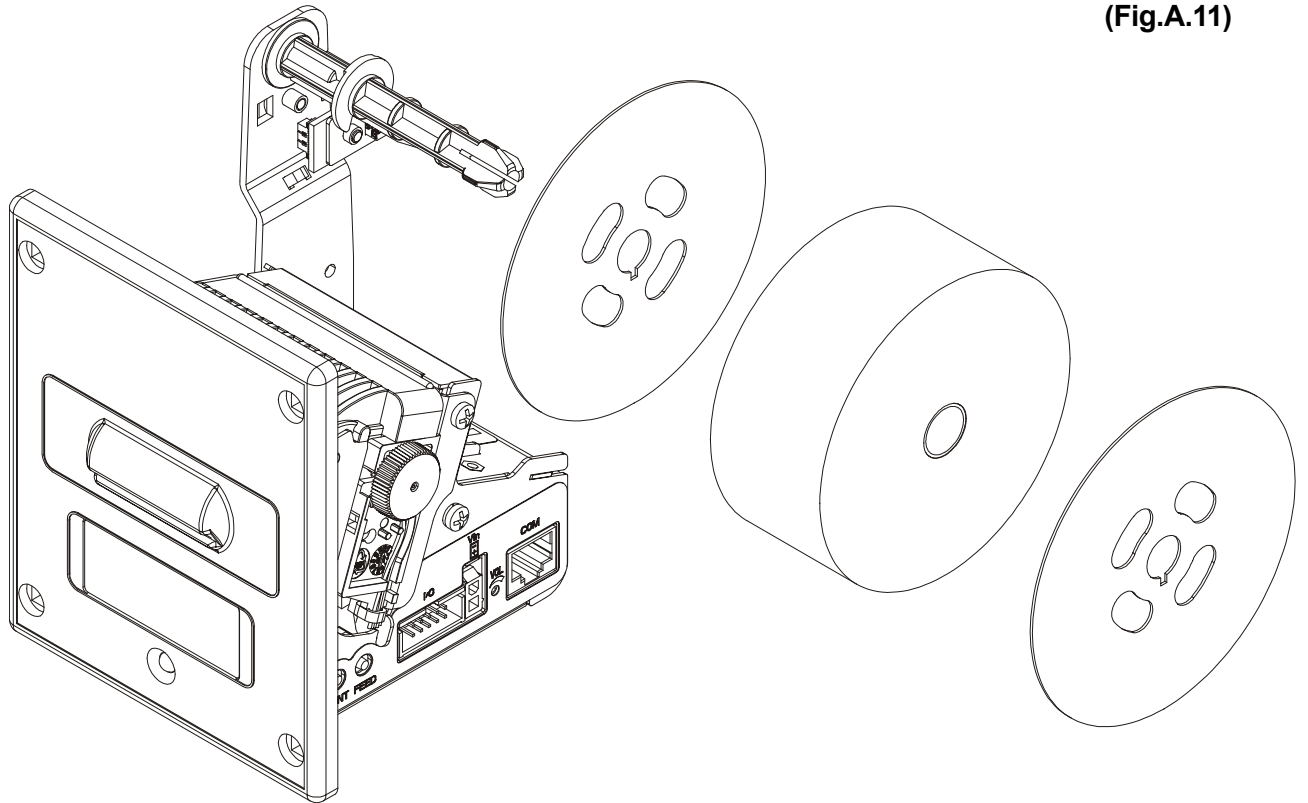


## Using the control discs

Assembly the control discs with the paper roll pivot as shown in the fig. A.11.



<sup>(2)</sup> **NOTE:** The model indicated in fig. A.11 is indicative to show the assembly so the following informations are corrects for all models.

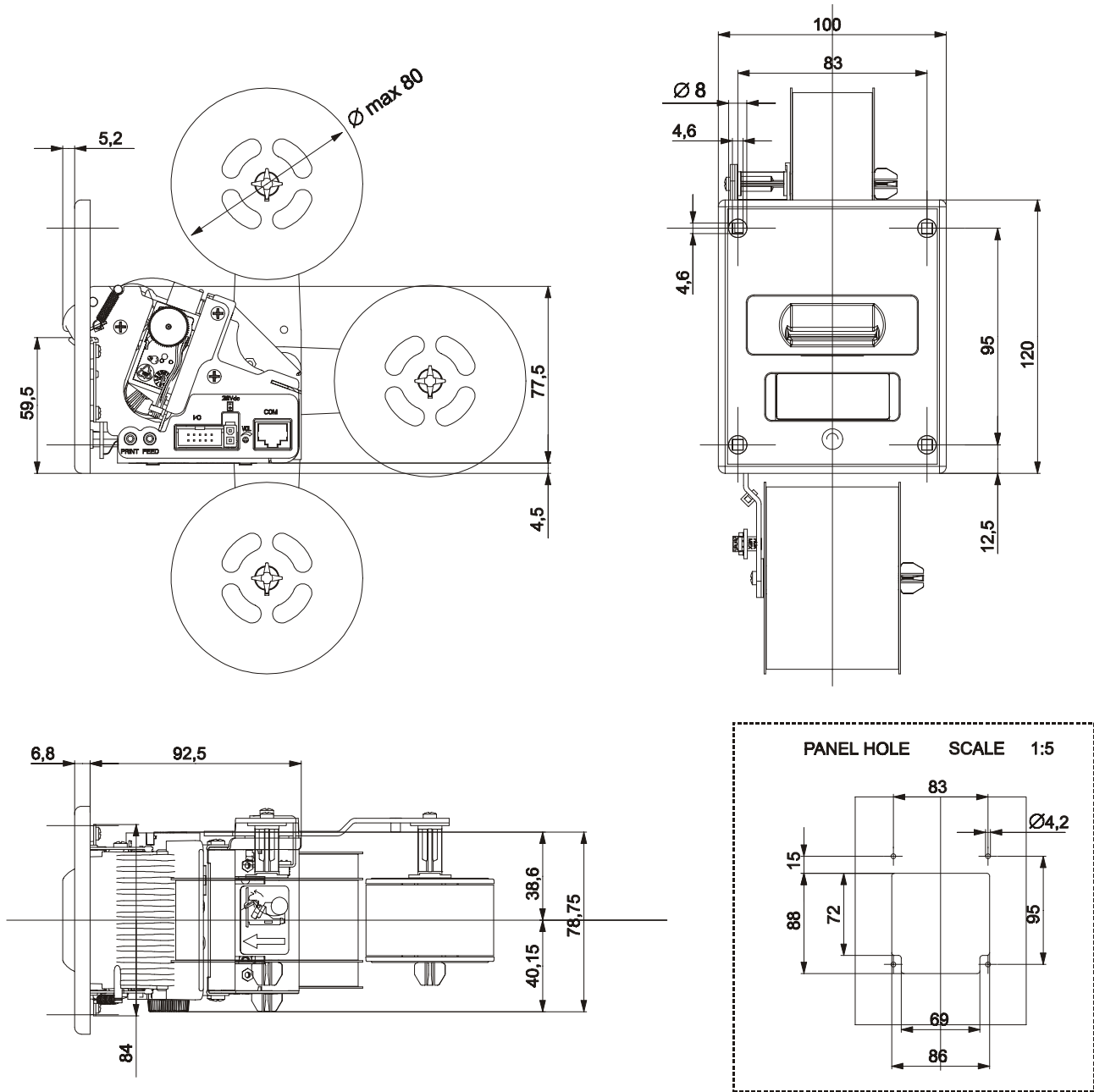


# APPENDIX A - ACCESSORIES AND SPARE PARTS

## Printer dimensions with Paper holder support

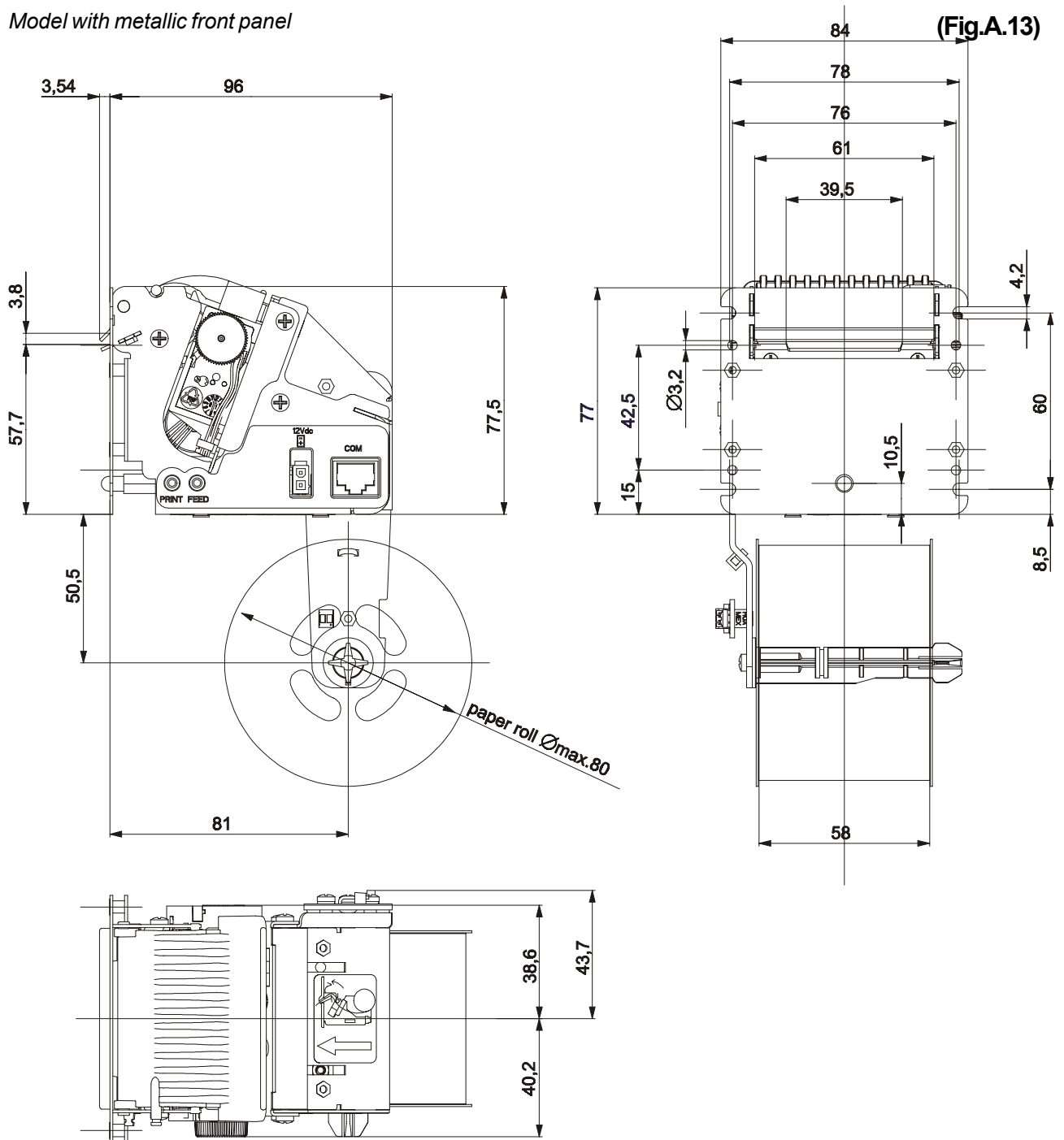
Model with plastic front panel

(Fig.A.12)



# APPENDIX A - ACCESSORIES AND SPARE PARTS

Model with metallic front panel



## A.2 SPARE PARTS

### Paper rolls

|             |  |           |
|-------------|--|-----------|
| RCT35X70-AF | 35mm Model thermal roll paper fraud preventing | (Tab.A.4) |
|-------------|--|-----------|

|             |  |           |
|-------------|--|-----------|
| RCT35X70-RS | 35mm model of thermal roll paper back side pre-printed   | (Tab.A.5) |
| RCT58X70-RS | 58mm model of thermal roll paper back side pre-printed   |           |
|             | Customized pre-printed logo for 2000 rolls order minimum |           |