

## PICA II

### Operating Manual



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Information on the scope of delivery, appearance, performance, dimensions, and weight reflect our knowledge at the time of printing.

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Carl Valentin label printers comply with the following safety guidelines:

**CE**    Low-Voltage Directive (2014/35/EU)  
         Electromagnetic Compatibility Directive (2014/30/EU)



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# 1 Introduction

## 1.1 General Instructions

Basic information and warning references with the corresponding signal words for the danger level are as follows specified in this manual:



**DANGER** identifies an extraordinarily great and immediate danger which could lead to serious injury or even death.



**WARNING** identifies a possible danger could lead to serious bodily injury or even death if sufficient precautions are not taken.



**WARNING** of cutting injuries.  
Pay attention that cutting injuries caused by blades, cutting devices or sharp-edged parts are avoided.



**WARNING** of hand injuries.  
Pay attention that hand injuries caused by closing mechanical parts of a machine/equipment are avoided.



**WARNING** of hot surfaces.  
Pay attention so as not to come into contact with hot surfaces.



**CAUTION** indicates a potentially dangerous situation which could lead to moderate or light bodily injury or damage to property.



**NOTICE** gives you tips. They make a working sequence easier or draw attention to important working processes.



Gives you tips on protecting the environment.



Handling instruction



Optional accessories, special fittings

Date

Information in the display

## 1.2 Intended Use

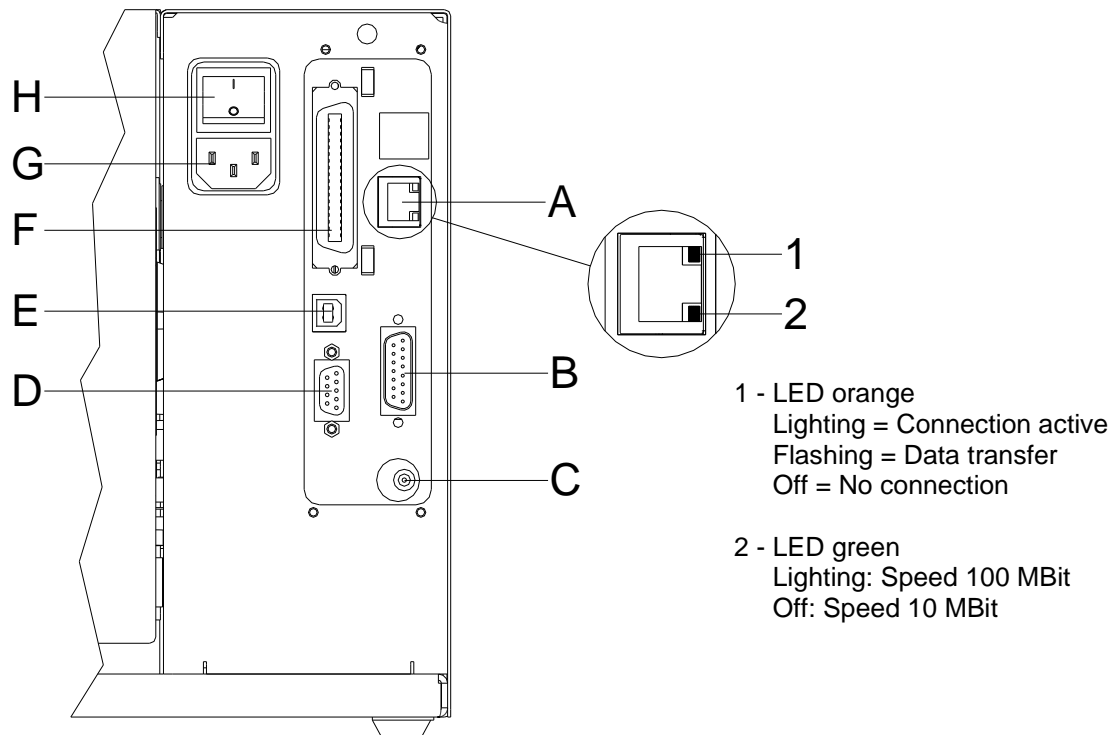
The label printer is a state-of-the-art device which complies with the recognized safety-related rules and regulations. Despite this, a danger to life and limb of the user or third parties could arise and the label printer or other property could be damaged while operating the device.

The label printer may only be used while in proper working order and for the intended purpose. Users must be safe, aware of potential dangers and must comply with the operating instructions. Faults, in particular those which affect safety, must be remedied immediately.

The label printer is solely intended to print suitable media which have been approved by the manufacturer. Any other or additional use is not intended. The manufacturer/supplier is not liable for damage resulting from misuse. Any misuse is at your own risk.

Intended use includes heeding the operating manual, including the maintenance recommendations/regulations specified by the manufacturer.

### 1.3 Connector Pin Assignment (Printer Rear)



**Figure 1**

- A Ethernet 10/100 Interface
- B External Output/Input (Option)
- C Winder Connection



**CAUTION!**

The label printer can be damaged by non-compliant winders.

⇒ Attach only winders of Carl Valentin.

- D Serial Interface RS-232
- E USB Interface
- F Centronics
- G Power Supply
- H Switch On/Off





## 2 Safety Instructions

The label printer is configured for a voltage of 230 V AC or 115 V AC (see type plate). It has to be plugged into a grounded socket only.

Couple the label printer to devices using extra low voltage only.

Before making or undoing connections, switch off all devices involved (computer, printer, accessories etc.).

Operate the label printer in a dry environment only and do not get it wet (sprayed water, mist etc.).

Maintenance and servicing work can only be carried out by trained personnel.

Operating personnel must be trained by the operator on the basis of the operating manual.

In case of cleaning and maintenance with an open printer cover, ensure that clothing, hair, jewellery and similar personal items do not contact the exposed rotating parts.

The print unit and parts of it (e.g. printhead) can get hot during printing. Do not touch the printhead during operation. Cool down the print unit before changing material, removal or adjustment.

Never use highly inflammable consumables.

There is a risk of injury at the tear-off edge. If the tear-off edge is not used, attach the edge protection profile.

Carry out only the actions described in these operating instructions. Any work beyond this may only be performed by the manufacturer or upon agreement with the manufacturer.

Unauthorized interference with electronic modules or their software can cause malfunctions.

Other unauthorized work or modifications to the direct print module can endanger operational safety.

Always have service work done in a qualified workshop, where the personnel have the technical knowledge and tools required to do the necessary work.



### NOTICE!

After a repair the safe functioning of the printer must be guaranteed.

There are warning stickers on the direct print modules that draw your attention to dangers. Therefore, the warning stickers are not to be removed as then you and others cannot be aware of dangers and may be injured.



### DANGER!

Danger to life and limb from power supply!

⇒ Do not open the printer casing.

## 2.1 Operating Conditions

**Before initial operation and during operation** these operating conditions have to be observed to guarantee safe and interference-free service of our printers.

Therefore please carefully read these operating conditions.

Shipment and storage of our printers are **only** allowed in original packing.

Installation and initial operation of printer is only allowed if operating conditions were **fulfilled**.

Initial operation, programming, operation, cleaning and service of our printers are only recommended after careful study of our manuals.

Operation of printer is only allowed by especially trained persons.



### NOTICE!

Perform trainings regularly.

Content of the training are chapter 2.1 (Operating Conditions), chapter 5 (Load Media) and chapter 9 (Maintenance and Cleaning).

These indications are also valid for someone else's equipment supplied by us.

Only use original spare and exchange parts.

Please contact the manufacturer with respect to spare/wear parts.

### Conditions for installation place

The installation place of printer should be even, free of vibration and currents of air are to be avoided.

The printers have to be installed to ensure optimal operation and servicing.

### Installation of power supply

The installation of the power supply to connect our printers has to be effected according to the international rules and regulations, especially the recommendations of one of the three following commissions:

- International Electronic Commission (IEC)
- European Committee for Electro technical Standardisation (CENELEC)
- Verband Deutscher Elektrotechniker (VDE)

Our printers are constructed according to VDE and have to be connected to a grounded conductor. The power supply has to be equipped with a grounded conductor to eliminate internal interfering voltage.

**Technical data of power supply**

Power line voltage and power line frequency: See type plate

Allowable tolerance of power line voltage:  
+/-10 % of nominal value

Allowable tolerance of power line frequency:  
+2 % ... -2 % of nominal value

Allowable distortion factor of power line voltage:  $\leq 5\%$

**Anti-interference measures**

In case your net is infected (e.g. by using thyristor controlled machines) anti-interference measures have to be taken. You can use one of the following possibilities:

- Provide separate power supply to our printers.
- In case of problems please connect capacity-decoupled isolation transformer or similar interference suppressor in front of our printers.

**Stray radiation and immunity from disturbance**

Emitted interference according to EN 61000-6-4: 01-2007 industrial sector

- Interference voltage to wires according to EN 55022: 05-2008
- Interference field power according to EN 55022: 05-2008
- System perturbation according to EN 61000-3-2: 04-2006
- Flicker according to EN 61000-3-3: 09-2008

**Stray radiation and immunity from disturbance**

Immunity to interference according to EN 61000-6-2: 2005 industrial sector

- Stray radiation against discharge of static electricity according to EN 61000-4-2: 12-2001
- Electromagnetic fields according to EN 61000-4-3: 11-2003, ENV 50204: 03-1995
- Fast transient burst according to EN 61000-4-4: 07-2005
- Surge according to EN 61000-4-5: 12-2001
- High-frequency voltage according to EN 61000-4-6: 12-2001
- Voltage interruption and voltage drop according to EN 61000-4-11: 08-2004

**NOTICE!**

This is a machine of type A. This machine can cause interferences in residential areas; in this case it can be required from operator to accomplish appropriate measures and be responsible for it.

**Connecting lines to external machines**

All connecting lines have to be guided in shielded lines. Shielding has to be connected on both sides to the corner shell.

It is not allowed to guide lines parallel to power lines. If a parallel guiding cannot be avoided a distance of at least 0.5 m has to be observed.

Temperature of lines between:  $-15 \dots +80 \text{ }^{\circ}\text{C}$ .

It is only allowed to connect devices which fulfil the request 'Safety Extra Low Voltage' (SELV). These are generally devices which are checked corresponding to EN 62368-1.

**Installation of data lines**

The data cables must be completely protected and provide with metal or metallised connector housings. Shielded cables and connectors are necessary, in order to avoid radiant emittance and receipt of electrical disturbances.

**Allowable lines**

Shielded line:

4 x 2 x 0,14 mm<sup>2</sup> ( 4 x 2 x AWG 26)  
6 x 2 x 0,14 mm<sup>2</sup> ( 6 x 2 x AWG 26)  
12 x 2 x 0,14 mm<sup>2</sup> (12 x 2 x AWG 26)

Sending and receiving lines have to be twisted in pairs.

Maximum line length:

with interface V 24 (RS-232C) - 3 m (with shielding)  
with Centronics - 3 m (with shielding)  
USB - 3 m  
Ethernet - 100 m

**Air convection**

To avoid inadmissible heating, free air convection has to be ensured.

**Limit values**

Protection according IP: 20

Ambient temperature  $^{\circ}\text{C}$  (operation): Min. +5 Max. +35

Ambient temperature  $^{\circ}\text{C}$  (storage): Min.  $-20$  Max. +60

Relative air humidity % (operation): Max. 80

Relative air humidity % (storage): Max. 80  
(bedewing of printers not allowed)

**Guarantee**

We do not take any responsibility for damage caused by:

- Ignoring our operating conditions and operating manual.
- Incorrect electric installation of environment.
- Building alterations of our printers.
- Incorrect programming and operation.
- Not performed data protection.
- Using of not original spare parts and accessories.
- Natural wear and tear.

When (re)installing or programming our printers please control the new settings by test running and test printing. Herewith you avoid faulty results, reports and evaluation.

Only specially trained staff is allowed to operate the printers.

Control the correct handling of our products and repeat training.

We do not guarantee that all features described in this manual exist in all models. Caused by our efforts to continue further development and improvement, technical data might change without notice.

By further developments or regulations of the country illustrations and examples shown in the manual can be different from the delivered model.

Please pay attention to the information about admissible print media and the notes to the printer maintenance, in order to avoid damages or premature wear.

We endeavoured to write this manual in an understandable form to give you as much information as possible. If you have any queries or if you discover errors, please inform us to give us the possibility to correct and improve our manual.



### 3 Technical Data

	Pica II 104/8	Pica II 106/12	Pica II 103/8 T	Pica II 108/12 T
Print Resolution	200 dpi	300 dpi	203 dpi	300 dpi
Max. Print Speed	100 mm/s	100 mm/s	100 mm/s	100 mm/s
Print Width	104 mm	105,7 mm	104 mm	108,4 mm
Passage Width	110 mm	110 mm	110 mm	110 mm
Printhead	Flat Type <sup>1</sup>	Flat Type <sup>1</sup>	Flat Type <sup>2</sup>	Flat Type <sup>2</sup>
Labels				
Labels/Continuous Material	Rolls, Fan-Fold, Paper, Cardboard, Textile, Synthetics			
Max. Material Weight	220 g/m² (larger on demand)			
Min. Label Width	15 mm			
Min. Label Height	Standard: 6 mm Cutter/dispenser mode: 15 mm			
Max. Label Height	Standard: 750 mm Option: 650 mm			
Max. Roll Diameter				
Internal Unwinder	180 mm			
Internal Rewinder	---			
Core Diameter	40 mm / 75 mm (Option)			
Winding	Outside or Inside			
Label Sensor	Standard: transmission Option: transmission + reflexion from above / from below			
Transfer Ribbon (for thermal transfer printer only)				
Ink	outside or inside (option)			
Max. Roll Diameter	Ø 70 mm			
Core Diameter	25,4 mm / 1"			
Max. Length	300 m			
Max. Width	110 mm			
Dimensions (mm)				
Width x Height x Depth	230 x 230 x 350			
Weight	9 kg			
Electronics				
Processor	High Speed 32 Bit			
RAM	16 MB			
Battery Cache	For Real Time Clock (Storage of Data with Shut-Down)			
Warning Signal	Acoustic Signal when Error			
Interfaces				
Serial	RS-232C (max. 115200 Baud)			
Parallel	Centronics (SPP)			
USB	2.0 High Speed Slave			
Ethernet (Option)	10/100 Base T, LPD, RawIP-Printing, DHCP, HTTP, FTP			
WLAN (Option)	module 802.11 b/g/n WEP, WPA, WPA-PSK, WPA2, WPA2-PSK, EAP			
Operation Data				
Power Supply	230 V AC / 50-60 Hz 2 A 115 V AC / 50-60 Hz 3 A (Option)			
Max. Power Consumption	150 VA			
Operating Temperature	5 ... 35 °C			
Max. Humidity	80 % (not condensing)			

<sup>1</sup> Thermal Transfer

<sup>2</sup> Thermal Direct

<b>Operation Panel</b>	
Keys	Test Print, Status Print, Feed, Enter
LCD Display	Graphic Display 122 x 32 pixel
<b>Monitoring</b>	
Stop Printing If	Transfer Ribbon End End of Label
Status Print	Extensive status print with information about settings e.g. print length counter, runtime counter, photocells, interface and network parameters Printout of all internal fonts and supported bar codes
<b>Fonts</b>	
Font types	6 Bitmap fonts 8 Vector fonts/TrueType fonts 6 proportional fonts other fonts on demand
Character sets	Windows 1250 up to 1257, DOS 437, 850, 852, 857, UTF-8 all West and East European Latin, Cyrillic, Greek and Arabic (option) characters are supported Other character sets on demand
Bitmap fonts	Size in width and height 0,8 ... 5,6 Zoom 2 ... 9 Orientation 0°, 90°, 180°, 270°
Vector fonts/TrueType fonts	Size in width and height 1 ... 99 mm Variable zoom Orientation 0°, 90°, 180°, 270°
Font attributes	Depending on character font Bold, Italic, Inverse, Vertical
Font width	Variable
<b>Bar Codes</b>	
1D Bar Codes	2/5 Industrial, Codabar, Code 128, Code 128A, Code 128B, Code 2/5 interleaved, Code 39, Code 39 extended, Code 93, EAN 13, EAN 8, EAN Add-on, GS1-128, Identcode, ITF 14, Leitcode, Pharmacode, PLANET (Postal Alpha Numeric Encoding Technique), PostNet, PZN 7, PZN 8, UPC-A, UPC-E, USPS Intelligent Mail
2D Bar Codes	Aztec Code, CODABLOCK F, DataMatrix, GS1 DataMatrix, MAXICODE, PDF 417, QR Code
Composite Bar Codes	GS1 DataBar Expanded, GS1 DataBar Limited, GS1 DataBar Omnidirectional, GS1 DataBar Stacked, GS1 DataBar Stacked Omnidirectional, GS1 DataBar Truncated
	All bar codes are variable in height, module width and ratio Orientation 0°, 90°, 180°, 270° Optionally with check digit and human readable line
<b>Software</b>	
Configuration	ConfigTool
Process Control	Loftware
Label Design Software	Labelstar Office Lite, Labelstar Office
Windows Driver	Windows 8.1® - Windows 10® 32/64 Bit, Windows 11® Windows Server 2016® - Windows Server 2022®



**Standard equipment**

- Tear-Off Edge
- Real time clock with printout date and time  
Automatic daylight saving time  
Storage of data with shut-down
- Integrated Rewinder  
(max. outside diameter 180 mm)
- Thermal Direct or Thermal Transfer Version
- USB Interface

**Optional equipment**

- Cutter Unit
- Dispenser Unit with Photocell
- Dispenser Unit without Photocell
- Label Photocell  
(transmission and reflexion from above / from below)
- External Rewinder for Labels
- External Rewinder for Backing Paper
- Ethernet Interface
- WLAN Interface
- Dispenser I/O

### 3.1 Control Inputs and Outputs

By means of a maximum of 16 control inputs and outputs which, in the following, are also referred to as ports, different functions of the printer system can be triggered and operating states can be displayed.

The ports are provided by means of a D-Sub bushing (26pin HD) at the rear panel of the printer system and are galvanically isolated from protective earth (PE) by means of an optocoupler semi-conductor route.

Each port can be configured as input and as output. This function however, is predefined in the printer software and cannot be changed by the user.

The following parameters can be changed and set by using the menu: debounce times and high or low active.

#### Printer, internal circuitry

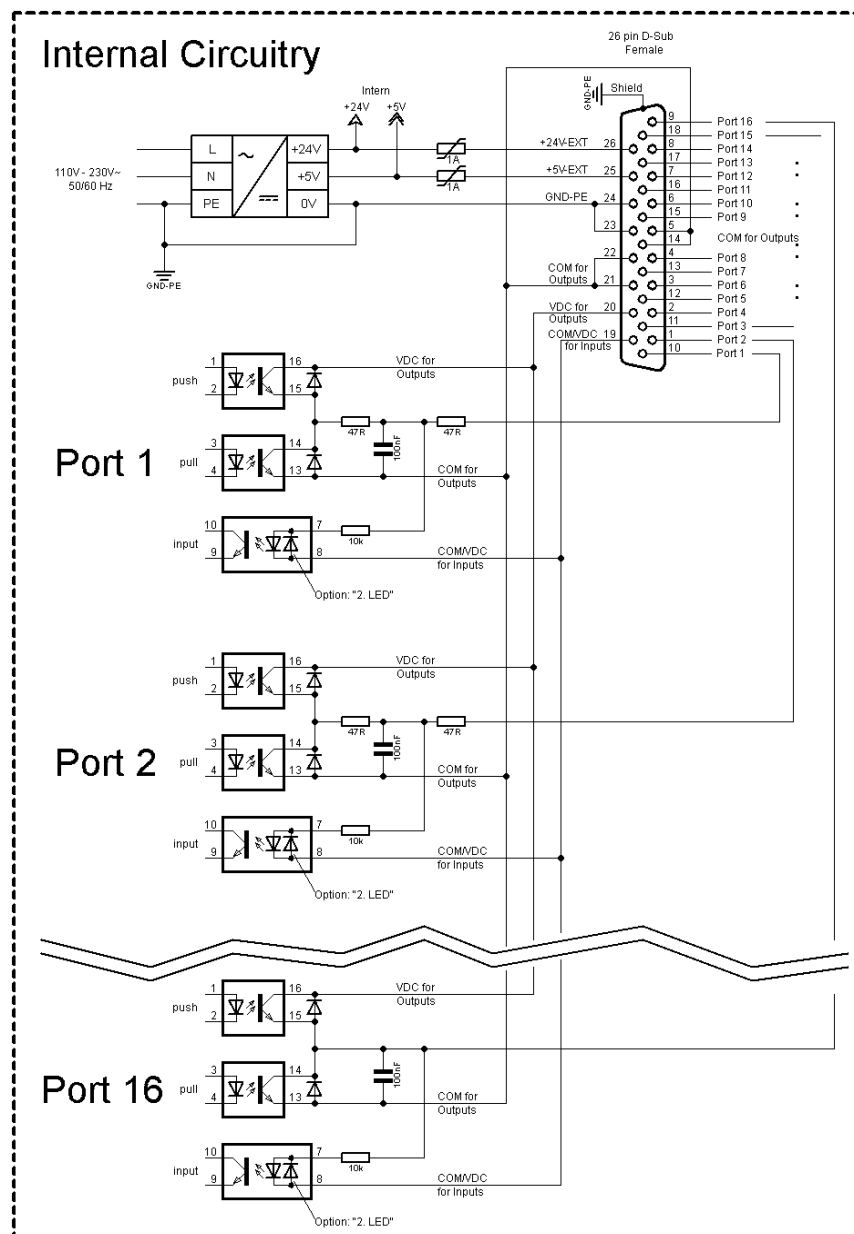
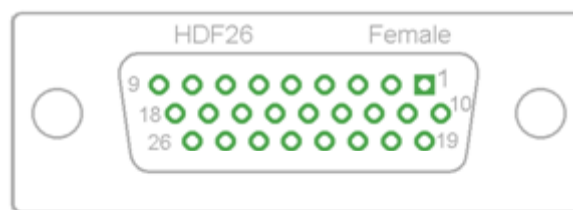


Figure 2

### Configuration of D-Sub socket



**Figure 3**

### Cable identification

Number	Color
1	white
2	brown
3	green
4	yellow
5	grey
6	pink
7	blue
8	red
9	black
10	violet
11	grey-pink
12	red-blue
13	white-green
14	brown-green
15	white-yellow
16	yellow-brown
17	white-grey
18	grey-brown
19	white-pink
20	pink-brown
21	white-blue
22	brown-blue
23	white-red
24	brown-red
25	white-black
26	brown-black

Port 1 to Port 16 = Assignment for I/O Profile *Std\_Label*

Identification	Pin	Description / Function
Port 1	10	Print start and cut (Input)
Port 2	1	Reprint last printed label (Input)
Port 3	11	Counter Reset (Input)
Port 4	2	Option applicator only: Start application (Input)
Port 5	12	Error reset (Input)
Port 6	3	Cancel all print jobs (Input)
Port 7	13	Label end sensor (Input)
Port 8	4	External release signal (Input)
Port 9	15	Error (Output)
Port 10	6	Print order activ (Output)
Port 11	16	Dispenser photocell: Label exists at dispenser photocell (Output)
Port 12	7	Single print (Output)
Port 13	17	Ready (Output)
Port 14	8	Option applicator only: Ready for application (Output)
Port 15	18	Option scanner only Bar code not readable (Output)
Port 16	9	Prior warning for transfer ribbon end (Output)
COM/VDC for Inputs	19	Common reference potential of all control inputs. 'COM/VDC for Inputs' is usually connected with the (-) terminal of the control voltage and the control inputs are switched to active (+). By means of the option '2nd LED', 'COM/VDC for Inputs' can optionally be connected with the (+) terminal of the control voltage. Then, the control inputs are switched to active (-).
VDC for Outputs	20	Common supply connection of all control outputs. 'VDC for Outputs' must be connected with the (+) terminal of the control voltage. Never leave 'VDC for Outputs' open even if no output is used.
COM for Outputs	5,14 21,22	Common reference potential of all control outputs. 'COM for Outputs' must be connected with the (-) terminal of the control voltage. Never leave 'COM for Outputs' open even if no output is used.
GND-PE	23,24	'GND-PE' is the reference potential of the '+5 VDC EXT' and '+24 VDC EXT' voltages provided by the printer system. 'GND-PE' is printer internally connected with protective earth (PE).

Identification	Pin	Description / Function
+ 5 VDC EXT	25	5 Volt DC output for external use. Max. 1 A. This voltage is provided from direct print module and can be used e.g. as control voltage. Never apply any external voltage to this output.
+ 24 VDC EXT	26	24 Volt DC output for external use. Max. 1 A. This voltage is provided from direct print module and can be used e.g. as control voltage. Never apply any external voltage to this output.

Port 1 to Port 16 = Assignment for I/O Profile *StdFileSelLabel*

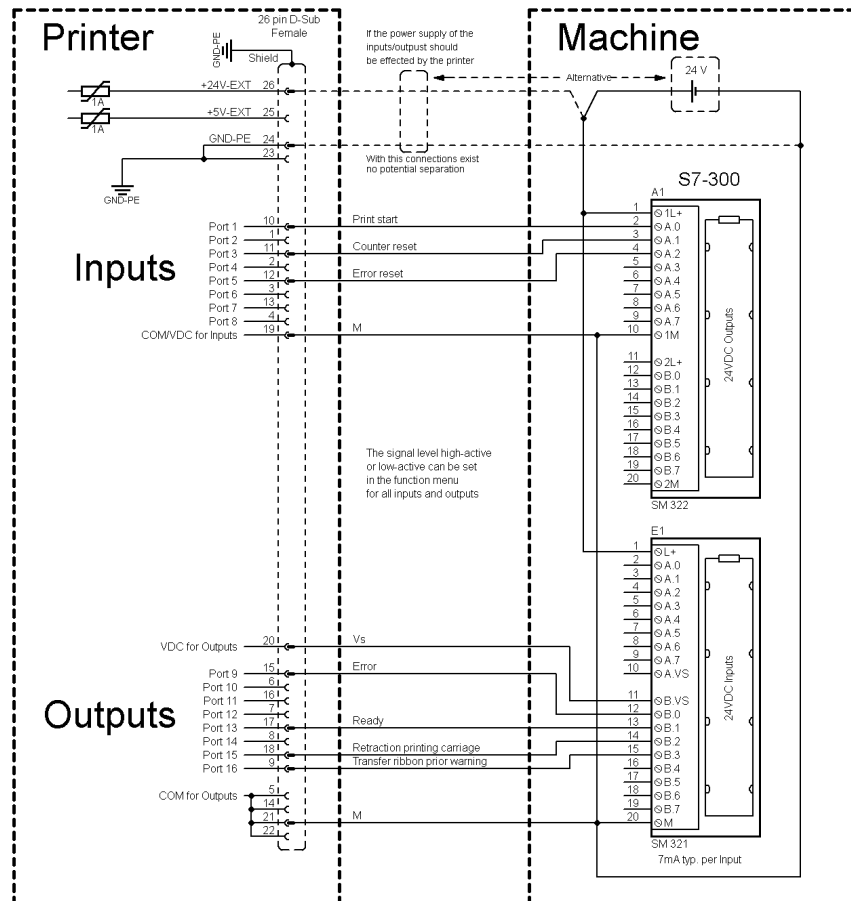
Identification	Pin	Description / Function
Port 1	10	Print start and cut (Input)
Port 2	1	Error reset (Input)
Port 3	11	Number of the file to load Bit 0 (Input)
Port 4	2	Number of the file to load Bit 1 (Input)
Port 5	12	Number of the file to load 2 (Input)
Port 6	3	Number of the file to load 3 (Input)
Port 7	13	Number of the file to load 4 (Input)
Port 8	4	Number of the file to load 5 (Input)
Port 9	15	Error (Output)
Port 10	6	Print order active (Output)
Port 11	16	Dispenser photocell: Label exists at dispenser photocell (Output)
Port 12	7	Printing (Output)
Port 13	17	Ready (Output)
Port 14	8	No function
Port 15	18	Option scanner only: Bar code not readable (Output)
Port 16	9	Transfer ribbon prior warning (Output)

**Technical data**

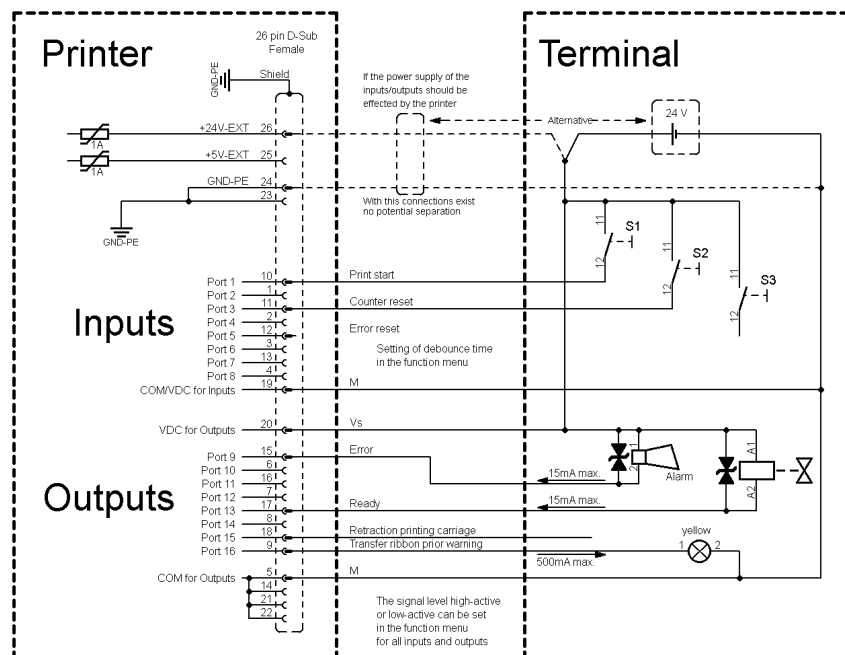
Plug Connector	
Type	D-Sub connector High Density 26-pin. / connector
Manufacturer	W+P-Products
Reference number	110-26-2-1-20
Output Voltages (connected with GND-PE)	
+ 24 V / 1 A	Fuse: Polyswitch / 30 V / 1 A
+ 5 V / 1 A	Fuse: Polyswitch / 30 V / 1 A
Port 1 - 15	
<b>Input</b>	
Voltage	5 VDC ... 24 VDC
Impedance	$47\Omega + (100\text{nF} \parallel 10\text{ k}\Omega)$
<b>Output</b>	
Voltage	5 VDC ... 24 VDC
Impedance	$47\Omega + (100\text{nF} \parallel 10\text{ k}\Omega \parallel 47\Omega)$
Current max.	High +15 mA Low -15 mA
Port 16	
<b>Input</b>	
Voltage	5 VDC ... 24 VDC
Impedance	$100\text{nF} \parallel 10\text{ k}\Omega$
<b>Output</b>	
Voltage	5 VDC ... 24 VDC
Impedance	$100\text{nF} \parallel 10\text{ k}\Omega$
Current max.	High +500 mA (Darlington BCP56-16) Low - 500 mA (Darlington BCP56-16)
Optocoupler	
Output	TCMT4106, CTR 100 % - 300 %, Vishay or TLP281-4(GB), CTR 100 % - 600 %, Toshiba
Input	TCMT4106, CTR 100 % - 300 %, Vishay or TLP281-4(GB), CTR 100 % - 600 %, Toshiba
Input Option 2nd LED	TCMT4600, CTR 80 % - 300 %, Vishay or TLP280-4, CTR 33 % - 300 %, Toshiba

**Example 1**

Device connection to a machine with S7-300 SPS.

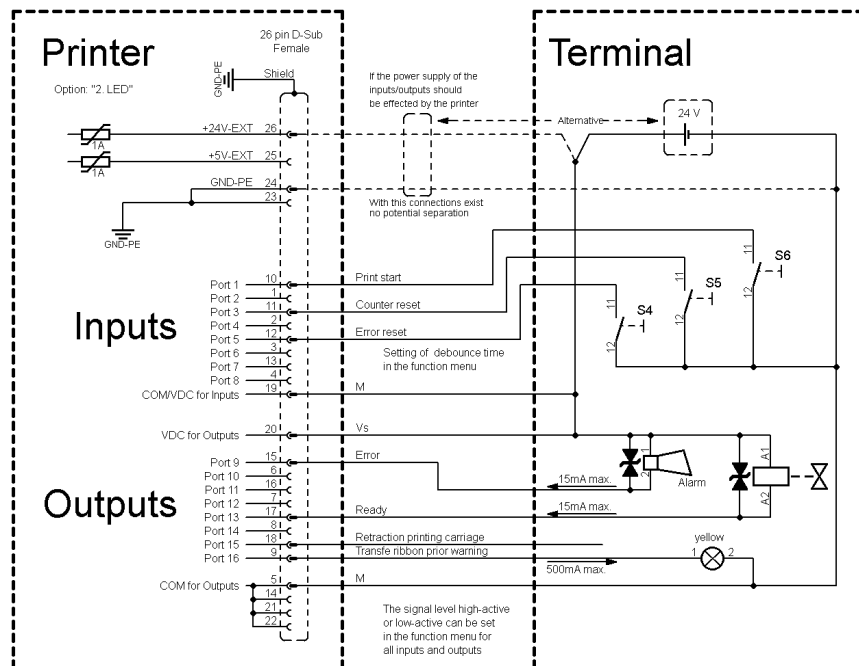
**Figure 4****Example 2**

Device connection to an operating panel.

**Figure 5**

**Example 3**

Device connection version if 'Option: 2. LED'.

**Figure 6****Precautions**

When connecting a reed contact with a control input, the contact must have a switching capacity of min. 1 A in order to prevent the contact from sticking due to the inrush current. As an alternative, a suitable resistor can be connected in series.

If one of the printer's internal voltages '+5 VDC EXT' or '+24 VDC EXT' is used, an external fuse e.g. 0.5 AF, should be additionally installed to protect the printer electronics.

In the event of an inductive load, an antiparallel connected diode, for instance, must be used to discharge the induction energy.

In order to minimise the influence of leakage currents at control outputs, a resistor must, depending on what is connected, be installed in parallel with the load.

In order to avoid any damages to the printing system, the max. output currents must not be exceeded or outputs shorted.



## 4 Installation

### Unpack the label printer

- ⇒ Lift the label printer on the bottom and remove the printer from the carton.
- ⇒ Check the label printer for transport damages.
- ⇒ Check delivery for completeness.

### Scope of delivery

- Label Printer.
- Power Cable.
- Empty core, mounted on transfer ribbon rewinder.
- Tear-off edge (basic printers only).
- Dispensing edge (printers with option dispenser only).
- Cutter unit (printers with option cutter only).
- Product Safety Guide.



#### NOTICE!

Retain the original packaging for subsequent transport.

### 4.1 Set up the Label Printer



#### CAUTION!

The label printer and the print media can be damaged by moisture and water.

- ⇒ Set up the label printer only in a dry place protected from sprayed water.
- ⇒ Set up the label printer on a level, vibration-free and air draught-free surface.
- ⇒ Open the cover of the label printer.
- ⇒ Remove the foam transportation safeguards near the printhead.

## 4.2 Connect the Label Printer



### NOTICE!

Do not use a power cord with an inadequate current carrying capacity.

### Connect to the power supply

The label printer is prepared according to standard for a mains voltage of 230 V AC / 50-60 Hz. Optionally a mains voltage can be used by 115 V AC / 50-60 Hz. The set mains voltage is mentioned on the type plate.



### CAUTION!

The label printer can be damaged by undefined switch-on currents.

- ⇒ Set the power switch to '0' before plugging in the label printer.
- ⇒ Insert the power cable into the power connection socket.
- ⇒ Insert the plug of power cable into a grounded electrical outlet.

### Connect to a computer or computer network



### NOTICE!

Insufficient or missing grounding can cause faults during operation.

Ensure that all computers and connection cables connected to the label printer are grounded.

- ⇒ Connect the label printer to a computer or network with a suitable cable.

## 4.3 Switch on the Label Printer

After all connections are completed, switch on the label printer. The main menu appears which shows the current date and time.

## 4.4 Start-Up





### NOTICE!


The printer can be controlled either by our printer driver or our label design software.

After switching on the label printer the main menu appears which shows the current status as well as current date and time.

Insert the label material and transfer ribbon (see chapter 5, on page 29).

After inserting the labels and the transfer ribbon the labels must be measured by the printer. With this procedure the label length is measured and the label photocell adjusted.

Press the keys  and  on the foil keyboard (> 3 sec.) to start the measuring process. For the measuring procedure the printer must be in online mode.

After terminating the measuring procedure press the key  to move to the online mode.



### NOTICE!

To enable correct measuring, at least two completed labels have to be passed through (not for continuous labels).

During the measuring procedure of label and gap length small differences can occur. Therefore the values can be set and transferred to the printer by means of the label design software as well as via the printer driver.



## 5 Load Media

### 5.1 Load Label Roll

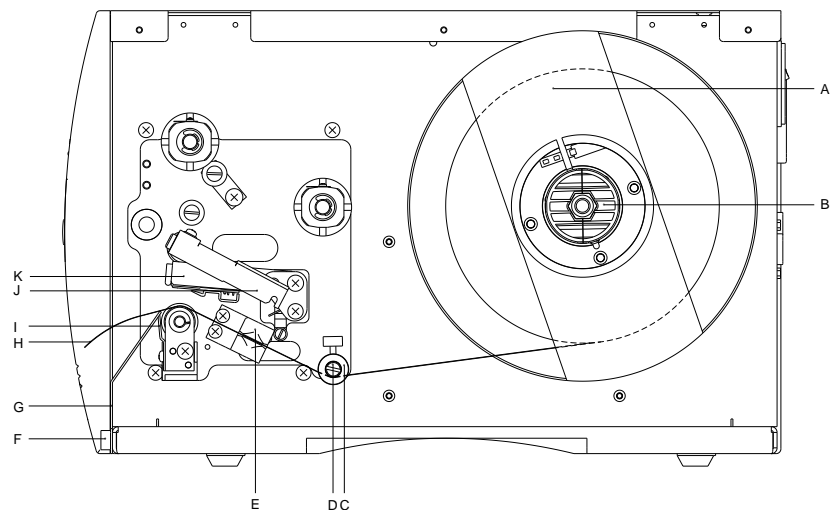


#### NOTICE!

As for the electrostatic unloading the thin coating of the thermal printhead or other electronic parts can be damaged, the label material should be antistatic.

The use of wrong materials can lead to printer malfunctions and the guarantee can expire.

**Load label roll for standard mode**



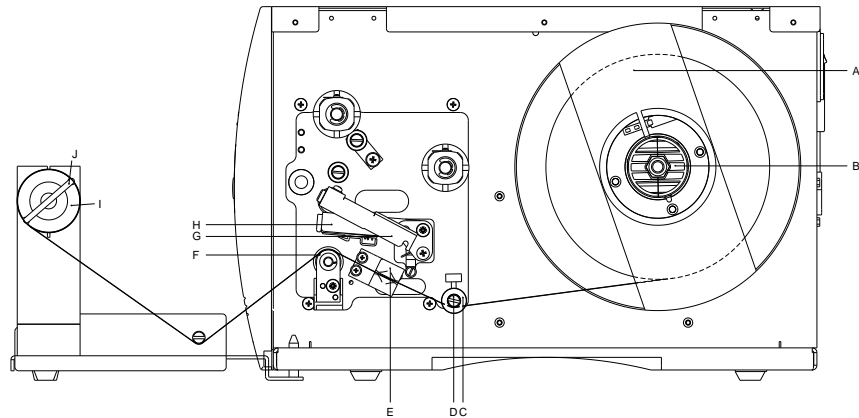
**Figure 7**

1. Open the printer cover.
2. Open printhead (K) by turning the red pressure lever (J) anticlockwise.
3. Remove the outside label mounting plate (A).
4. Load the label roll with inner winding onto the unwinding roll (B).
5. Attach again the label mounting plate (A).
6. Lead the label material (H) below the return pulley (D) and the printhead (K).  
Make sure that the material is passed through the photocell (E).
7. Move the printhead (K) down by turning the red lever (J) in clockwise direction until it locks.
8. Adjust the adjusting ring (C) on the deviating shaft (D) to the material width.
9. Close the printer cover.

**Load label roll for tear-off mode**

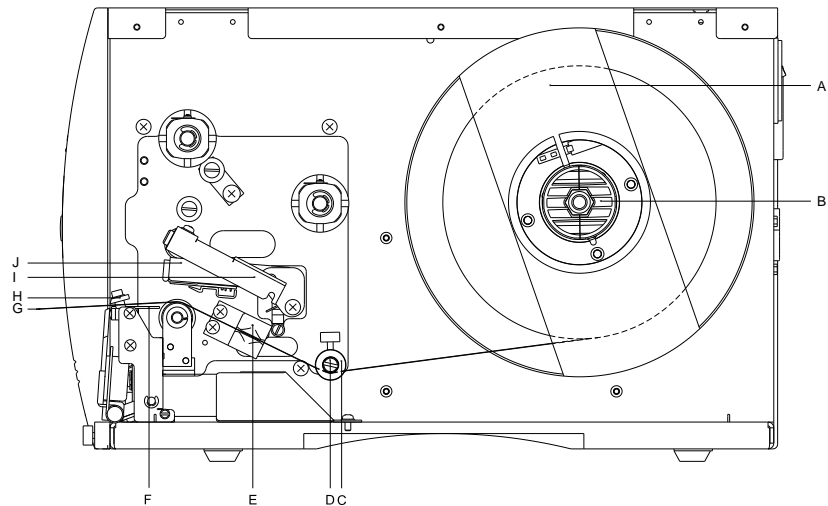
The printer is equipped by default with an integrated tear-off edge (not with option cutter or dispenser).

For an operation with tear-off edge (I) unscrew the two knurled knobs (F) and remove the front plate (G).

**Load labels for rewinding mode**

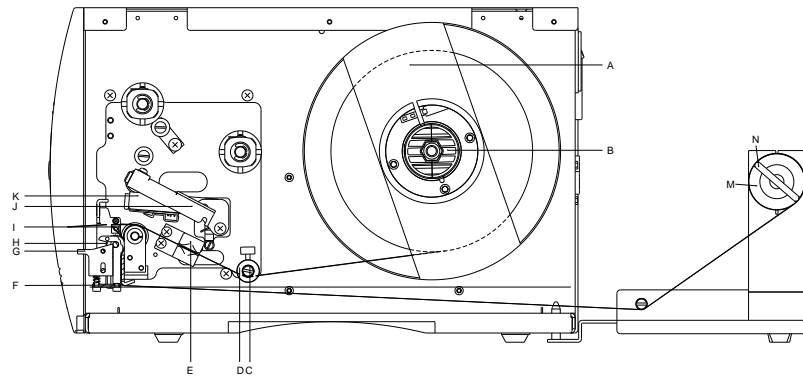
**Figure 8**

1. Open the printer cover.
2. Open the printhead (H) by turning the red pressure lever (G) anticlockwise.
3. Remove the outside label mounting plate (A).
4. Load the label roll with inner winding onto the unwinding roll (B).
5. Attach again the label mounting plate (A).
6. Lead the label material below the return pulley (D) and the printhead (H).  
Make sure that the material is passed through the photocell (E).
7. Guide the label material over the pressure roll (F) and fix it with a clamp (J) to the rewinding roll (I).
8. Move the printhead (H) down by turning the red lever (G) in clockwise direction until it locks.
9. Adjust the adjusting ring (C) on the deviating shaft (D) to the material width.
10. Close the printer cover.

**Load label roll  
for cutting mode****Figure 9**

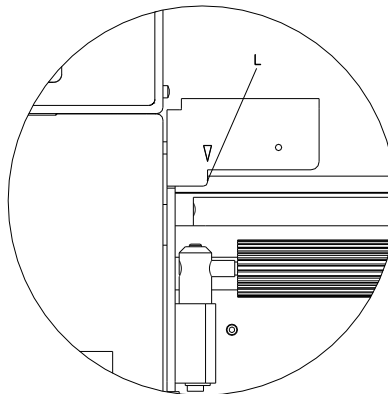
1. Open the printer cover.
2. Open printhead (J) by turning the red pressure lever (I) anticlockwise.
3. Remove the outside label mounting plate (A).
4. Load the label roll with inner winding onto the unwinding roll (B).
5. Attach again the label mounting plate (A).
6. Lead the label material (I) below the return pulley (D) and the printhead (J).  
Make sure that the material is passed through the photocell (E).
7. Guide the label material through the bottom plate (F) and the cutter ledge (H).
8. Move the printhead (J) down by turning the red lever (I) in clockwise direction until it locks.
9. Adjust the adjusting ring (C) on the deviating shaft (D) to the material width.
10. Close the printer cover.

### Load label roll for peel-off mode






**Figure 10**

1. Open the printer cover.
2. Open the printhead (K) by turning the red pressure lever (J) anticlockwise.
3. Remove the outside label mounting plate (A).
4. Load the label roll with inner winding onto the unwinding roll (B).
5. Attach again the label mounting plate (A).
6. Lead the label material below the return pulley (C) and printhead (K) and hold it towards the marked stopper surface (L).



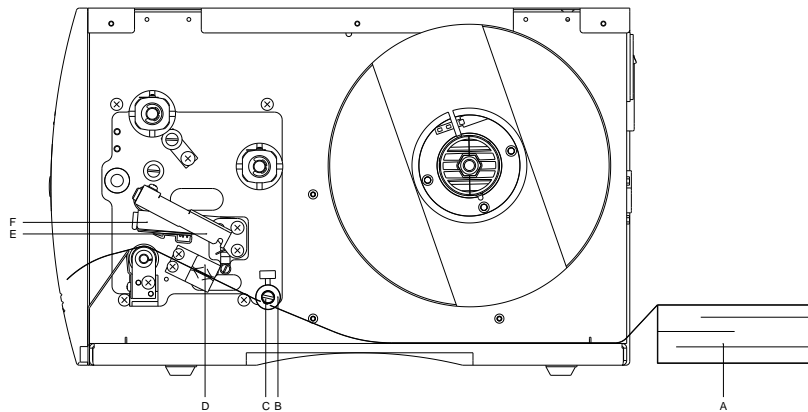
Make sure that the material is passed through the photocell (E).

7. Move the printhead (K) down by turning the red lever (J) in clockwise direction until it locks.
8. Adjust the adjusting ring (D) on the deviating shaft (C) to the material width.
9. Press the key  to start a test print, or press the keys  +  to start a measuring procedure to determine the exact position of label beginning.



10. Unlock the dispensing roll (H) by pressing the red locking part (G).
11. Strip some labels from the backing paper and lead the backing material over the dispensing edge (I).
12. Press the dispensing roll (H) backwards towards the backing paper.
13. Place the backing material under the dispensing angle (F) rearwards and fix it with the clamp (N) at the optional external rewinding unit (M).
14. Close the printer cover.

## 5.2 Load Fan-Fold Labels



**Figure 11**

1. Open the printer cover.
2. Open the printhead (F) by turning the red pressure lever (E) anticlockwise.
3. Place the fan-fold material (A) from behind to the printer bottom.
4. Lead the fan-fold material (A) below the return pulley (C) and the printhead (F).  
Make sure that the material is passed through the photocell (D).
5. Move the printhead (F) down by turning the red lever (E) in clockwise direction until it locks.
6. Adjust the adjusting ring (B) on the deviating shaft (C) to the material width.
7. Close the printer cover.

### 5.3 Load Transfer Ribbon



#### NOTICE!

For the thermal transfer printing method, it is necessary to load a ribbon, otherwise when using the printer in direct thermal print it is not necessary to load a ribbon. The ribbons used in the printer have to be at least the same width as the print media. In case the ribbon is narrower than the print media, the printhead is partly unprotected and this could lead to early wear and tear.

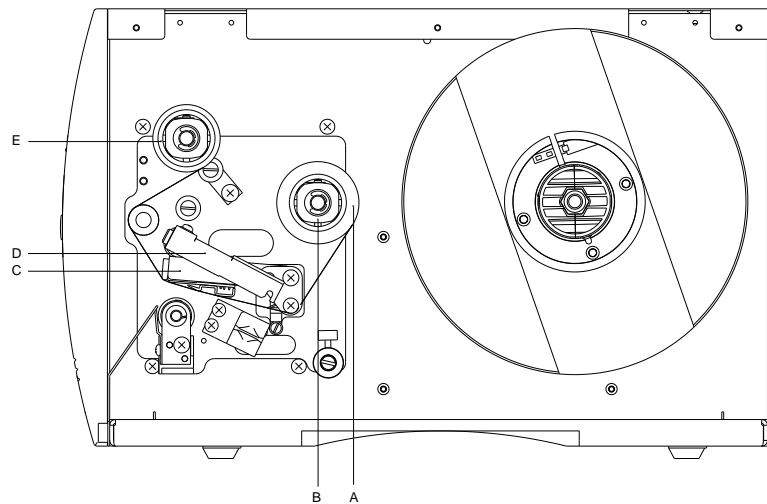


Figure 12



#### NOTICE!

Before a new transfer ribbon roll is loaded, the printhead must be cleaned using printhead and roller cleaner (97.20.002). For detailed information, please see page 52.

The handling instructions for the use of Isopropanol (IPA) must be observed. In the case of skin or eye contact, immediately wash off the fluid thoroughly with running water. If the irritation persists, consult a doctor. Ensure good ventilation.

1. Open the printer cover.
2. Open the printhead (C) by turning the red pressure lever (D) anticlockwise.



#### CAUTION!

Risk of scraping when inserting the transfer ribbon res. when removing the used transfer ribbon!

⇒ Be careful with the spring steel plate edges!

3. Load the transfer ribbon roll (A) with outer winding onto the unwinding roll (B).
4. Place an empty ribbon roll on the rewinding roll (E) and lead the transfer ribbon below the printhead (C).
5. Fix the transfer ribbon with an adhesive tape at the empty core of the rewinding roll (E). Make sure that the rotation direction of transfer ribbon rewinding is anticlockwise.

6. Move the printhead (C) down by turning the red lever (D) in clockwise direction until it locks.
7. Close the printer cover.

**NOTICE!**

As for the electrostatic unloading the thin coating of the thermal printhead or other electronic parts can be damaged, the transfer ribbon should be antistatic.  
The use of wrong materials can lead to printer malfunctions and the guarantee can expire.

**CAUTION!**

Impact of electrostatic material on people!

⇒ Use antistatic transfer ribbon because electrostatic discharge can occur when removing.

## 6 Control Panel

### 6.1 Structure of the Control Panel

With the control panel the user can control the operation of the printer. The following processes can be done:

- Interrupt, continue or cancel print orders.
- Test functions.
- Determine label values.
- Error acknowledgement.
- Restore default values.

Settings made on the control panel make generally the basic settings of the label printer.




### 6.2 Printer States



#### NOTICE!

The printer has additionally to the two-line display 2 coloured LEDs so that the user can read the printer state from the distance.

State	LED	Display	Description
Ready		ONLINE Date and time	The printer is ready and can receive data
Not ready		OFFLINE Date and time	In Offline mode the following processes can be done: <ul style="list-style-type: none"> <li>• Feeds a blank label</li> <li>• Test print / status print</li> <li>• Error acknowledgement</li> <li>• Cancel a print order</li> </ul>
Printing		Name Print Name of the printed label. Specified and actual number of prints inside a current print order.	The printer is processing the current print order. The printer can receive data for a new print order. The new print order will start after the previous one has finished.




State	LED	Display	Description
Pause		Name Stopped Name of the printed label. Specified and actual number of prints inside a current print order.	The print order was interrupted by the user.
Waiting		Name Waiting Name of the printed label. Specified and actual number of prints inside a current print order.	Only with option dispenser: The printer is ready to print the next label of the current print order and to dispense it afterwards.
Error		Error Number Error number Short-description of the error.	An error is occurred that must be rectified (see error table on page 57). The print order can be continued after removing the error.









### 6.3 Key Functions



#### NOTICE!

The key functions depend on the current printer state.

State	Key	Description/Function
Ready		Change to the offline mode.
		Keep the keys successively pressed to determine the label values.
		Keep the keys successively pressed (> 10 s) to restore the default values.

State	Key	Description/Function
Not ready		Change to the online mode.
		Short press = Label feed. Longer press = Single cut.
		Short press = Test print. Longer press = Status print.
		Keep the keys together pressed to access the service functions (page 45).
Printing		Interrupt print order. Continue print order.
Pause		Interrupt print order.
		Continue print order.
Error		Error acknowledgement (see table on page 57).





## 7 Printing



### CAUTION!

Printhead damage caused by improper handling!

- ⇒ Do not touch the underside of the printhead with the fingers or sharp objects.
- ⇒ Ensure that the labels are clean.
- ⇒ Ensure that the label surfaces are smooth. Rough labels act like emery paper and reduce the service life of the printhead.
- ⇒ Print with the lowest possible printhead temperature.


### 7.1 Process Print Orders


The printer must be in Online mode.


During a current print order the printer is in Online mode, i.e. data can be sent by the interface.


Send the print order by interface to the printer.

After transferring the data the print order is started automatically and the first label is printed.

Press the key  to interrupt the print order.


Press the key  to print the last printed label again.  
This is relevant if an error appeared during the current print order and the sequence of labels (e.g. counter) is considerably important.

Press the key  to continue the print order.

Press the key  to cancel the interrupted print order.

### 7.2 Status Print


The printer must be in Online mode.

Press the key  (> 2 s) to print the current printer settings and a sample label.

The printer settings can be modified only by the interface.

### 7.3 Label Feed

The printer must be in Offline mode.

Press the key  to start the feed of one label.

### 7.4 Saving Labels

The saving of data e.g. text or graphic is done in the internal data memory. The saving can be selected either in our label design software or by an appropriate program.

For more information, see the appropriate manual.

### 7.5 Tear-off Mode

In order to detach the label band after terminating the print order by hand, the label printer is equipped by default with a tear-off bar.

Loading of labels in tear-off mode, see on page 30.


### 7.6 Synchronize the Label Feed

The printer must be in Offline mode.

After inserting the label material for dispenser or cutter mode, the synchronization of label feed is necessary. The first label which is detected by the label photocell will be transported to the print position and all labels in front will be fed out of the printer.

The synchronization in dispenser mode prevents that blank labels are peeled-off together with the first printed label.

The synchronization of label feed in cutter mode prevents that the first cut label would be too long.

Press key  to start the synchronization.

Remove the labels peeled-off.

## 7.7 Dispenser Mode

The label dispenser unit removes the label from backing paper and provides it for further processing. After removing the label, the following print order is activated by the dispenser photocell or an external impulse to the dispenser inputs. The backing paper can be rolled up again with the internal rewinder.

Loading of labels in peel-off mode, see on page 32.



### NOTICE!

The operating mode can be selected in the printer driver or our label design software.

### Operating modes

#### Off:

It is printed without the labels are dispensed.

#### I/O static:

The input signal evaluated, i.e. it is printed as long as the signal exists. The number of labels which was entered at the print start is printed.

The set dispenser offset is not taken into consideration.

#### I/O static continuous:

For description of this operating mode, see I/O static.

Continuous means that it is printed as long as new data is transferred via interface

The set dispenser offset is not taken into consideration.

#### I/O dynamic:

The external signal is evaluated dynamically, i.e. is the printer in 'waiting' mode a single label is printed at each signal changing. After the print the set dispenser offset is executed, i.e. a backfeed is effected.

#### I/O dynamic continuous:

For description of this operating mode, see I/O dynamic.

Continuous means that it is printed as long as new data is transferred via interface.

#### Photocell:

The printer is controlled via photocell. The printer prints automatically a label if the user takes away the label at the dispensing ledge. The print order is finished when the target number of labels is reached.

#### Photocell continuous:

For description of this operating mode, see Photocell.

Continuous means that it is printed as long as new data is transferred via interface.

## 7.8 Cutter Mode



### CAUTION!

Risk of injury, particularly during maintenance, the cutter blades are sharp!

- ⇒ Switch off before attaching the cutter!
- ⇒ The cutter may only be used when it is mounted on the printer!
- ⇒ Do not try to cut any materials which exceed the maximum width or thickness specifications.
- ⇒ Do NOT touch the area of the moving blades!

The 'Guillotine' cutter permits cutting of materials up to a weight of 220 g/m<sup>2</sup> without any problems. The cutter can be refit without any technical effort. The activation of a cut can be started by an external impulse of the dispenser photocell.

Loading of labels in cutter mode, see on page 31.



### NOTICE!

The operating mode can be selected in the printer driver or our label design software.

## Operating modes

### Off:

The print order is processed without cutting.

### Without Backfeed:

A cut is effected after each label.

We recommend using this operating mode if no data which is to print is in the upper part of the label.

### With Backfeed:

A cut is effected after each label.

### Interval with Final Cut:

A cut is effected after a fixed number of labels which you have to enter at the print start and additionally at the end of the print order.


### Interval without Final Cut:

A cut is effected after a fixed number of labels which you have to enter at the print start. At the end of the printer order no cut is effected except when the set interval comes to the end of the print order.

### Final Cut:

A cut is only effected at the end of the print order.

### Single Cut:

The printer must be in Offline mode, then press the key  (> 2 s).

## 8 Service Functions

The printer must be in Offline mode.

Press and hold the keys  +  (> 3 s) to access the service functions.

**LbI-PC TR S.[V]**  
19 4.65

### Adjust Sensibility of Label Photocell

Reflexion / Transmission Photocell - depending on setting

Press the keys  +  to reduce the value.


Press the keys  +  to increase the value.

Press the key  to confirm the setting.

Determine the signal threshold

Setting the photocell level.

In case of problems while positioning or measuring of label, levels for label photocell can be set manually. Make sure that a large hub as possible (label >4 V, gap <0,3 V) is set.

Press the key  to move to the next menu.


**Disp.-PC S.[V]**  
80 0.02

### Adjust Sensibility of Dispenser Photocell

Press the keys  +  to reduce the value.

Press the keys  +  to increase the value.

Press the key  to confirm the setting.

Press the key  to move to the next menu.

**Heater Resist.**  
1250

### Adjust the Heater Resistance


To achieve a high print quality, the indicated Ohm value must be set after replacing the printhead.

Press the keys  +  to reduce the value.

Press the keys  +  to increase the value.


Press the key  to confirm the setting.


**Printer language  
English**

Press the key  to move to the next menu.

Select the Printer Language

Press the keys  +  or  +  to select the printer language. The following languages are available: German, English, French, Spanish, Finnish, Czech (option), Portuguese, Dutch, Italian, Danish and Polish.

Press the key  to confirm the selection.

Press key  to move to the next menu.

**Printer emulat.  
CVPL**


Select the Printer Emulation

Press the keys  +  or  +  to change the protocol.

Change between CVPL protocol and ZPL II® protocol.

**CVPL:** Carl Valentin Programming Language


**ZPL:** Zebra® Programming Language

Press the key  to confirm the selection.

The printer performs a restart and ZPL II® commands are transformed into CVPL commands internally by the printer and then executed by the printer.

**NOTICE!**

Before starting a firmware update make sure that the CVPL protocol is selected.

Press the key  to move to the next menu.

**ZP Y-Adjust  
0.0**


Zero point adjustment in Y direction

Indication of the value in 1/100 mm.

After replacing the printhead - the print cannot be continued at the same position on the label, the difference can be corrected in printing direction.

**NOTICE!**

The value for zero point adjustment is set ex works. After replacing the printhead, only service personnel are allowed to set this value anew.

Press the key  to move to the next menu.

**ZP X-Adjust**  
**0.0**

Zero point adjustment in Y direction


Indication of the value in 1/100 mm.

After replacing the printhead - the print cannot be continued at the same position on the label, the difference can be corrected across the printing direction.



**NOTICE!**


The value for the zero point adjustment is set ex works. After replacing the printhead, only service personnel are allowed to set this value anew.


Press the key  to move to the next menu.

**Printer type**  
**Pica II 106/12**

Select the Printer Type

Press the keys  +  or  +  to change the printer type.

Press the key  to confirm the selection.

Press the key  to move to the next menu.

**Printhead**  
**PH 232**

Printhead Type

Indication of the currently used printhead.





## 9 Maintenance and Cleaning



### DANGER!

Risk of death by electric shock!

⇒ Before opening the housing cover, disconnect the label printer from the mains supply and wait for a moment until the power supply unit has discharged.



### CAUTION!

Risk of injury when cleaning.

⇒ Pay attention to sharp edges.



### NOTICE!

When cleaning the label printer, personal protective equipment such as safety goggles and gloves are recommended.

### Maintenance plan

Maintenance task	Frequency
General cleaning (see 0, on page 50).	As necessary.
Clean the transfer ribbon drawing roller (see section 9.2, page 50).	Each time the transfer ribbon is changed or when the printout is adversely affected.
Clean the pressure roller (see 0, on page 50).	Each time the label roll is changed or when the printout and label transport are adversely affected.
Clean the printhead (see 9.4, on page 52).	<b>Direct thermal printing:</b> Each time the label roll is changed. <b>Thermal transfer printing:</b> Each time the transfer ribbon is changed or when the printout is adversely affected.
Clean the label photocell (see 9.5, on page 53).	When changing the label roll.
Replace the printhead (see 9.6, on page 54).	In case of errors in printout.

**NOTICE!**

The handling instructions for the use of Isopropanol (IPA) must be observed. In the case of skin or eye contact, immediately wash off the fluid thoroughly with running water. If the irritation persists, consult a doctor. Ensure good ventilation.

**WARNING!**

Risk of fire by easily inflammable label soluble!

⇒ When using label soluble, dust must be completely removed from the label printer and cleaned.

## 9.1 General Cleaning

**CAUTION!**

Abrasive cleaning agents can damage the label printer!

- ⇒ Do not use abrasives or solvents to clean the outer surface of the label printer.
- ⇒ Remove dust and paper fuzz in the printing area with a soft brush or vacuum cleaner.
- ⇒ Clean the outer surfaces with an all-purpose cleaner.

## 9.2 Clean the Transfer Ribbon Drawing Roller

A soiled drawing roller can lead to reduced print quality and can affect transport of material.

1. Open the printer cover.
2. Remove the transfer ribbon from the label printer.
3. Remove deposits with the roller cleaner and a soft cloth.
4. If the roller appears damaged, replace it.
5. Reload the labels and transfer ribbon (see chapter 5 Load Media, on page 29).
6. Close the printer cover.

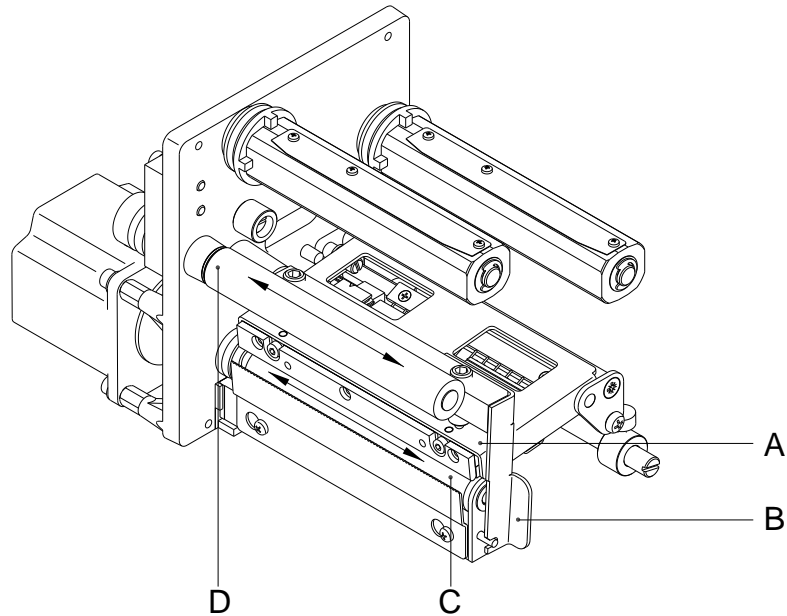
### 9.3 Clean the Pressure Roller

A soiled pressure roller can lead to reduced print quality and can affect transport of material.

**CAUTION!**

Pressure roller can be damaged!

⇒ Do not use sharp or hard objects to clean the pressure roller.



**Figure 13**

1. Open the printer cover.
2. Turn the red lever (B) counter clockwise to lift up the printhead (A).
3. Remove the labels and transfer ribbon from the label printer.
4. Remove deposits with a roller cleaner and a soft cloth.
5. Turn the roller (C + D) manually step by step to clean the complete roller (only possible when printer is switched off, as otherwise the step motor is full of power and the roller is kept in its position).
6. Reload the labels and transfer ribbon (see chapter 5 Load Media, on page 29).
7. To move the printhead down, turn the pressure lever in clockwise direction until it locks.
8. Close the printer cover.

## 9.4 Clean the Printhead



### CAUTION!

Risk of injury from the hot printhead!

- ⇒ Make sure the printhead has cooled down before cleaning.

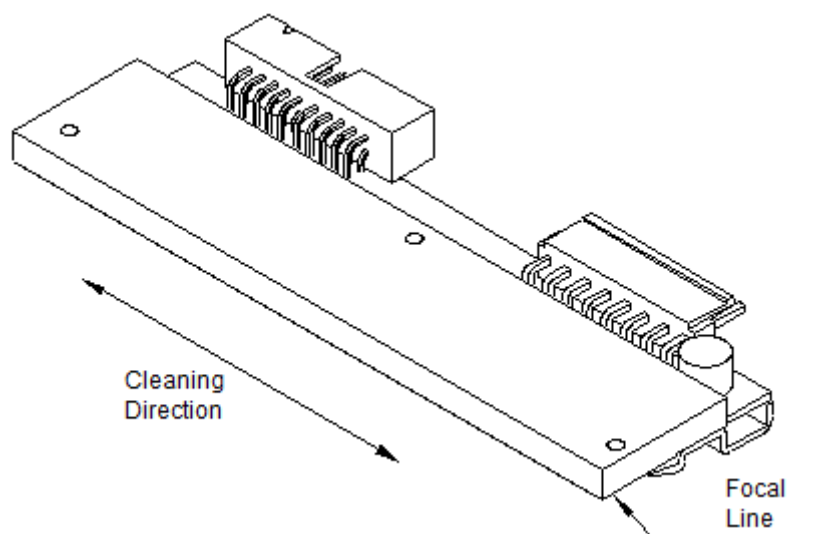
Printing can cause accumulation of dirt at printhead e.g. by colour particles of transfer ribbon, and therefore it is necessary to clean the printhead in regular periods depending on operating hours, environmental effects such as dust etc.



### CAUTION!

Printhead can be damaged!

- ⇒ Do not use sharp or hard objects to clean the printhead.
- ⇒ Do not touch protective glass layer of the printhead.



**Figure 14**

1. Open the printer cover.
2. Turn the red lever (B, in Figure 13) counter clockwise to lift up the printhead.
3. Remove the labels and transfer ribbon from the label printer.
4. Clean the printhead surface with a special cleaning pen or a cotton swab dipped in pure alcohol.
5. Before using the label printer, let the printhead dry for about two to three minutes.
6. Reload the labels and transfer ribbon (see chapter 5 Load Media, on page 29).
7. To move the printhead down, turn the pressure lever in clockwise direction until it locks.

## 9.5 Clean the Label Photocell

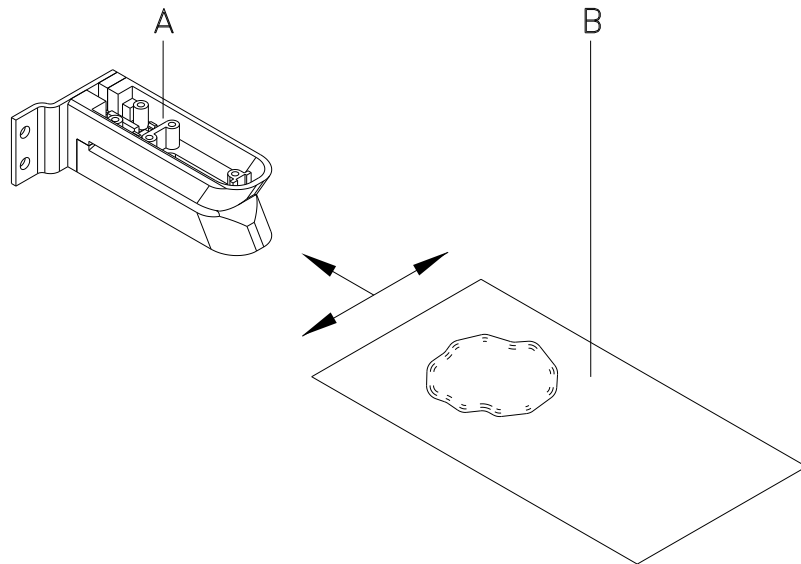


### CAUTION!

Label photocell can be damaged!

⇒ Do not use sharp or hard objects or solvents to clean the label photocell.

The label photocell can be soiled with paper dust. This may affect the label scanning.



**Figure 15**

1. Open printer cover.
2. Turn the red lever counter clockwise to lift up the printhead.
3. Remove labels and transfer ribbon from the label printer.
4. Blow out the photocell (A) with pressure gas spray. Observe strictly the instructions on the spray can!
5. Clean the label photocell (A) additionally with a cleaning card (B) before soaked in pure alcohol. Move the cleaning card from one side to the other (see illustration).
6. Reload the labels and transfer ribbon (see chapter 5 Load Media, on page 29).
7. To move the printhead down, turn the pressure lever in clockwise direction until it locks.
8. Close the printer cover.

## 9.6 Replace the Printhead (General)



### CAUTION!

The printhead can be damaged by static electricity discharges and impacts!

- ⇒ Set up the printer on a grounded, conductive surface.
- ⇒ Ground your body, e.g. by wearing a grounded wristband.
- ⇒ Do not touch contacts on the plug connections (B, C).
- ⇒ Do not touch printing line (E) with hard objects or your hands.

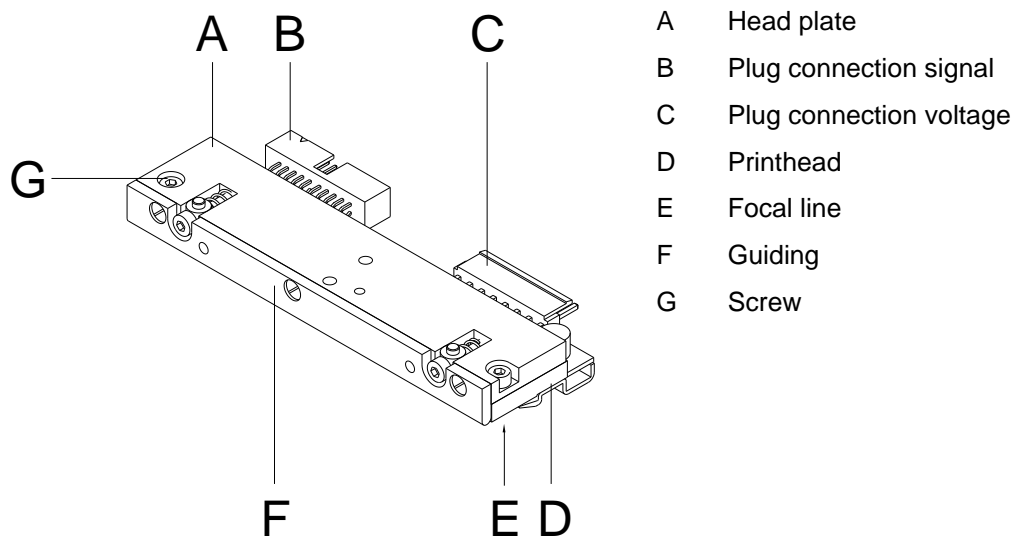


Figure 16



### NOTICE!

The printhead (D) is preinstalled on a head plate (A) and aligned at the factory.



### CAUTION!

Danger of abrasion when removing/installing the printhead!

- ⇒ Pay attention to the toothing when the tear-off edge is installed.

## 9.7 Replace the Printhead

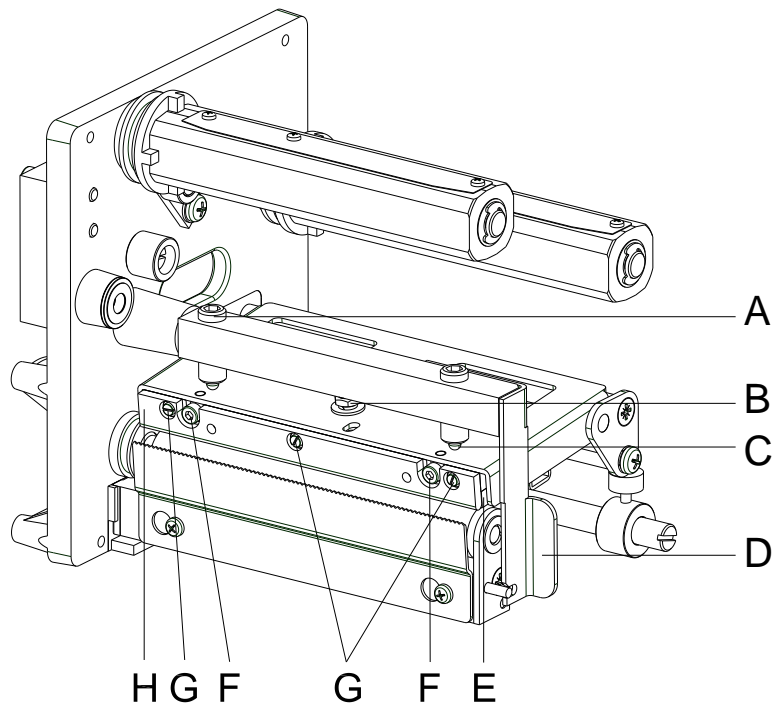


Figure 17

### Remove the printhead

1. Remove labels and transfer ribbon from the label printer.
2. When the printhead is closed, loosen the fixing screw (B).
3. Turn the red lever (D) counter clockwise to lift up the printhead.
4. If the printhead (E) is not disengaged on the pressure roller, continue loosen the fixing screw (B).
5. Remove the printhead carefully to the front until you can reach the plug connections.
6. Remove the plug connections and then remove the printhead (E).
7. Loosen the fixing screws (G) and remove the guiding (H).

### Install the printhead

1. Attach plug connections.
2. Mount the guiding (H) and fixing screws (G) at the printhead.
3. Position the printhead in the printhead mounting bracket in such a way that the pins are secured in the corresponding holes in the head plate.
4. Lightly keep the printhead mounting bracket on the pressure roller with one finger and check for correct positioning of the printhead.
5. Screw in the fixing screw (B) and tighten them.
6. Reload labels and transfer ribbon (see chapter 5 Load Media, on page 29).
7. To move the printhead down, turn the pressure lever in clockwise direction until it locks.
8. Close the printer cover.
9. Check the resistance value on the type plate of printhead and if necessary change the value in the menu *Service functions/Heater resistance*.

## 9.8 Adjust the Printhead

Complete the following printhead settings to achieve the best possible print image:

- ⇒ Align the heating line with the highest point of the pressure roller. Density of the print image is the greatest at this point.
- ⇒ Set the parallelism of horizontal lines with the edge of the label.



### CAUTION!

The printhead assembly can be damaged.

Attempting to adjust the printhead when the fixing screw (E) is tight can lead to defects at the printhead assembly.

- ⇒ Always loosen the fixing screw (E) before adjusting the printhead.



### NOTICE!

Open and close the printhead locking device after each step of the adjustment.

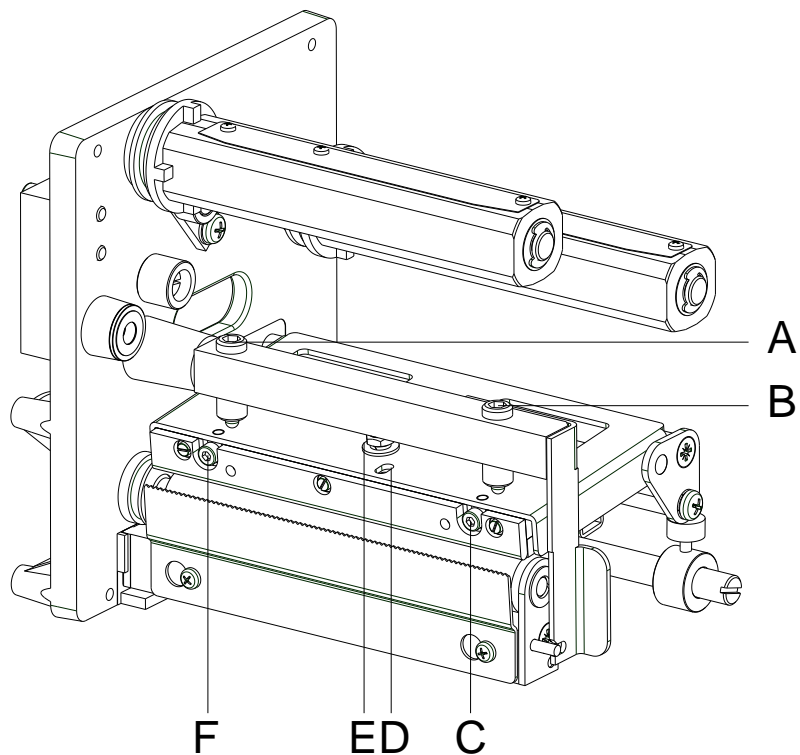


Figure 18



**Parallelism**

An important characteristic for a high quality print is the parallelism of the focal line of the thermal printhead to the pressure roll. Because of the fact that the position of focal line of the printhead depends on fluctuations caused by production, it is necessary to adjust the parallelism.

1. Loosen the fixing screw (E) approx. ¼ rotations.
2. Adjust the parallelism with the adjusting screws (C+F)  
Clockwise = printhead moves forwards  
Counter clockwise = printhead moves backwards
3. Adjust the parallelism as long as the printing result comes up to your full expectation.
4. Tighten again the fixing screws (E).
5. Start a print order with approx. 10 labels and control the correct passage of transfer ribbon.

**Pressure**

Increasing the head contact pressure leads to an improvement of the print image density on the corresponding side and to a shifting of the ribbon feed path in the corresponding direction.

**CAUTION!**

Damage of printhead by unequal use!

⇒ Only change the factory settings in exceptional cases.


The selection of the smallest value can optimize the life cycle of printhead.


1. Turn the pressure pieces (A+B) to change the pressure of printhead.
2. Turning the pressure pieces  
in clockwise direction increases the pressure  
anticlockwise reduces the pressure.
3. Tighten again the pressure lever clockwise to lock the printhead.





## 10 Error Correction

In case an error occurred, the printer stops and the print order is interrupted.

After removing the error, press key  to acknowledge the error.

An active print order is now interrupted. Press key  to print the last printed label once more.

This is particularly important if an error arose during a current print order and the sequence of the labels (e.g. counter) is to be considered.

Press key  to continue a print order or press key  to cancel the print order.

Error message	Cause	Remedy
1 Line too high	Line rises up completely or partly over the upper edge of label.	Move line down (increase Y value). Check rotation and font.
2 Line too low	Line rises up completely or partly over the bottom edge of label.	Move line up (reduce Y value). Check rotation and font.
3 Character set	One res. several characters of the text is res. are not available in the selected font.	Change text. Change font.
4 Unknown BC type	Selected code is not available.	Check code type.
5 Illegal rotation	Selected rotation is not available.	Check rotation.
6 CV font	Selected font is not available.	Check font.
7 Vector font	Selected font is not available.	Check font.
8 Measuring label	While measuring no label was found. Set label length is too large.	Check label length and if labels are inserted correctly. Restart measuring anew.
9 No label found	No label available. Soiled label photocell. Labels not inserted correctly.	Insert new label roll. Check if labels are inserted correctly. Clean the label photocell.
10 No ribbon	During the print order the ribbon roll becomes empty (front printhead). Defect at the transfer ribbon photocell (front photocell).	Change transfer ribbon. Check transfer ribbon photocell (service functions).

Error message	Cause	Remedy
11 COM FRAMING	Stop bit error.	Check stop bits. Check baud rate. Check cable (printer and PC).
12 COM PARITY	Parity error.	Check parity. Check baud rate. Check cable (printer and PC).
13 COM OVERRUN	Loss of data at serial interface (RS-232).	Check baud rate. Check cable (printer and PC).
14 Field number	Received line number is invalid.	Check sent data. Check connection PC - printer.
15 Length mask	Invalid length of received mask statement.	Check sent data. Check connection PC - printer.
16 Unknown mask	Transferred mask statement is invalid.	Check sent data. Check connection PC - printer.
17 Missing ETB	No end of data found.	Check sent data. Check connection PC - printer.
18 Invalid character	One res. several characters of the bar code is res. are not valid.	Change bar code data. Change font.
19 Invalid statement	Unknown transferred data record.	Check sent data. Check connection PC - printer.
20 Invalid check digit	For check digit control the entered res. received check digit is wrong.	Calculate check digit anew. Check code data.
21 Invalid SC code	Selected SC factor is invalid for EAN res. UPC.	Check SC factor.
22 Invalid number of digits	Entered digits for EAN res. UPC are invalid < 12; > 13.	Check number of digits.
23 Type check digit	Selected check digit calculation is not available in the bar code.	Check calculation of check digit. Check bar code type.
24 Invalid extension	Selected zoom factor is not available.	Check zoom factor.
25 Offset sign	Entered sign is not available.	Check offset value.
26 Offset value	Entered offset value is invalid.	Check offset value.

Error message	Cause	Remedy
27    Printhead temperature	Printhead temperature is too high. Defective printhead sensing device.	Reduce contrast. Change printhead.
28    Cutter error	With cut an error occurred. Paper jam.	Check label run. Check cutter run.
29    Invalid parameter	Entered data do not correspond to the characters allowed from the application identifier.	Check code data.
30    Application Identifier	Selected application identifier is not available in GS1-128.	Check code data.
31    HIBC definition	Missing HIBC system sign. Missing primary code.	Check definition of HIBC code.
32    System clock	Real Time Clock function is selected but the battery is empty. Defective RTC.	Change battery. Change RTC component.
33    No CF interface	Interrupted connection CPU - CF card. Defective CF card interface.	Check connection CPU - CF card interface. Check CF card interface.
34    No print memory	Not enough print memory available.	Check CF assembly on CPU.
35    Printhead open	At start of a print order the printhead is open.	Close the printhead and start print order anew.
36    BCD invalid format	BCD error Invalid format for the calculation of Euro variable.	Check entered format.
37    BCD overflow	BCD error Invalid format for the calculation of Euro variable.	Check entered format.
38    BCD division	BCD error Invalid format for the calculation of Euro variable.	Check entered format.
39    FLASH ERROR	Flash component error.	Run a software update. Change CPU.
40    Length command	Invalid length of the received command statement.	Check data sent. Check connection PC - printer.

Error message	Cause	Remedy
41 No drive	CF card not found / not correctly inserted.	Insert CF card correctly.
42 Drive error	Impossible to read CF card (faulty).	Check CF card, if necessary change it.
43 Unformatted	CF Card not formatted.	Format CF card.
44 Delete directory	Attempt to delete the actual directory.	Change directory.
45 Invalid path	Too long indication of path.	Indicate a shorter path.
46 Drive write-protected	Memory card is write-protected.	Deactivate write protection.
47 Directory not file	Attempt to indicate a directory as file name.	Correct your entry.
48 File already open	Attempt to change a file during an access is active.	Select another file.
49 No file/directory	File does not exist on CF card.	Check file name.
50 Invalid file name	File name contains invalid characters.	Correct entry of name, remove special characters.
51 Internal file error	Internal file system error.	Please contact your distributor.
52 Root full	The max. number (64) of main directory entries is reached.	Delete at least one main directory entry and create subdirectories.
53 Drive full	Maximum CF capacity is reached.	Use new CF Card, delete no longer required files.
54 File/directory exists	The selected file/directory already exists.	Check name, select a different name.
55 File too large	During copying procedure not enough memory space onto target drive available.	Use a larger target card.
56 No update file	Errors in update file of firmware.	Start update file anew.
57 Invalid graphic file	The selected file does not contain graphic data.	Check file name.
58 Directory not empty	Attempt to delete a not empty directory.	Delete all files and sub-directories in the desired directory.
59 No CF interface	No CF card drive found.	Check connection of CF card drive. Contact your distributor

Error message	Cause	Remedy
60 No media	No CF card is inserted.	Insert CF card in the slot.
61 Webserver error	Error at start of web server.	Please contact your distributor.
62 Wrong PH FPGA	The direct print module is equipped with the wrong FPGA.	Please contact your distributor.
63 End position	The label length is too long. The number of labels per cycle is too much.	Check label length res. the number of labels per cycle.
64 Zero point	Defective photocell.	Change photocell.
65 Compressed air	Pressure air is not connected.	Check pressure air.
66 External release	External print release signal is missing.	Check input signal.
67 Column too wide	Wrong definition of column width res. number of columns.	Reduce the column width res. correct the number of columns.
68 Scanner	The connected bar code scanner signals a device error.	Check the connection scanner/printer. Check scanner (dirty).
69 Scanner NoRead	Bad print quality. Printhead completely soiled or defective. Print speed too high.	Increase contrast. Clean printhead or replace (if necessary). Reduce print speed.
70 Scanner data	Scanned data does not correspond to the data which is to print.	Replace printhead.
71 Invalid page	As page number either 0 or a number > 9 is selected.	Select a number between 1 and 9.
72 Page selection	A page which is not available is selected.	Check the defined pages.
73 Undefined page	The page is not defined.	Check the print definition.
74 Format user guiding	Wrong format for customized entry.	Check the format string.
75 Format date/time	Wrong format for date/time.	Check the format string.
76 Hotstart CF	No CF card found.	If option hotstart was activated, a CF card must be inserted.  Switch off the printer before inserting the memory card.
77 Flip/Rotate	Selection of print of several columns and also mirror/rotate.	It is only possible to select one of both functions.

Error message	Cause	Remedy
78 System file	Loading of temporary hotstart files.	Not possible.
79 Shift variable	Faulty definition of shift times (overlapping times).	Check definition of shift times.
80 GS1 Databar	General GS1 Databar error.	Check definition and parameter of GS1 Databar code.
81 IGP error	Protocol error IGP.	Check sent data.
82 Time generation	Printing creation was still active at print start.	Reduce print speed. Use printers' output signal for synchronization. Use bitmap fonts to reduce generating time.
83 Transport protection	Both DPM position sensors (start/end) are active.	Displace zero point sensor Check sensors in service functions menu
84 No font data	Font and web data is missing.	Run a software update.
85 No layout ID	Layout ID definition is missing.	Define layout ID onto the label.
86 Layout ID	Scanned data does not correspond to defined ID.	Wrong label loaded from CF card.
87 RFID no label	RFID unit cannot recognize a label.	Displace RFID unit or use an offset.
88 RFID verify	Error while checking programmed data.	Faulty RFID label. Check RFID definitions
89 RFID timeout	Error at programming the RFID label.	Label positioning. Faulty label.
90 RFID data	Faulty or incomplete definition of RFID data.	Check RFID data definitions.
91 RFID tag type	Definition of label data does not correspond with the used label.	Check storage partitioning of used label type
92 RFID lock	Error at programming the RFID label (locked fields).	Check RFID data definitions. Label was already programmed.
93 RFID programming	Error at programming the RFID label.	Check RFID definitions.



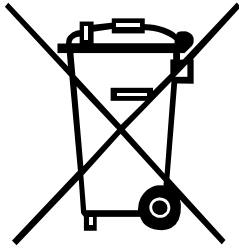
Error message	Cause	Remedy
94 Scanner timeout	The scanner could not read the bar code within the set timeout time.  Defective printhead. Wrinkles in transfer ribbon. Scanner wrong positioned. Timeout time too short.	Check printhead. Check transfer ribbon. Position scanner correctly, corresponding to the set feeding. Select longer timeout time.
95 Scanner layout difference	Scanner data does not correspond to bar code data.	Check adjustment of scanner. Check scanner settings / connection.
96 COM break	Serial interface error.	Check settings for serial data transmission as well as cable (printer-PC).
97 COM general	Serial interface error.	Check settings for serial data transmission as well as cable (printer-PC).
98 No software printhead FPGA	No printhead-FPGA data available.	Please contact your responsible distributor.
99 Load software printhead FPGA	Error when programming printhead-FPGA.	Please contact your responsible distributor.
100 Upper position	Option applicator: Sensor signal up is missing.	Check input signals / compressed-air supply.
101 Lower position	Option applicator: Sensor signal down is missing.	Check input signals / compressed-air supply.
102 Vacuum plate empty	Option applicator: Sensor does not recognize a label at vacuum plate.	Check input signals / compressed-air supply.
103 Start signal	Print order is active but device not ready to process it.	Check start signal.
104 No print data	Print data outside the defined label.  Selection of wrong module type (design software).	Check selected module type. Check selection of left/right version.
105 Printhead	No original printhead is used.	Check the used printhead. Contact your distributor.

Error message	Cause	Remedy
106 Invalid Tag type	Wrong Tag type. Tag data do not match the Tag type in the printer.	Adapt data or use the correct Tag type.
107 RFID inactive	RFID module is not activated. No RFID data can be processed.	Activate RFID module or remove RFID data from label data.
108 GS1-128 invalid	Transferred GS1-128 bar code is invalid.	Verify bar code data (see GS1-128 bar code specification).
109 EPC parameter	Error at EPC calculation.	Verify data (see EPC specification).
110 Housing open	When starting the print order the housing cover is not closed.	Close the housing cover and start the print order anew.
111 EAN.UCC code	Transferred EAN.UCC code is invalid.	Verify bar code data (see corresponding specification).
112 Print carriage	Printing carriage does not move.	Check gear belt (possibly broken).
113 Applicator error	Option applicator: Error while using applicator.	Check applicator.
114 Left position	Option applicator: Left final position switch is not in correct position.	Check LEFT final position switch for correct function and position. Check function of pneumatics for cross traverse.
115 Right position	Option applicator: Right final position switch is not in correct position.	Check RIGHT final position switch for correct function and position. Check function of pneumatics for cross traverse.
116 Print position	Option applicator: The applicator is not in the print position when trying to print a label.	Check TOP and RIGHT final position switch for correct function and position. Check pneumatics for function
117 XML parameter	The parameters in the XML file are not correct.	Please contact your responsible distributor.
118 Invalid variable	Transferred variable is invalid with customized entry.	Select correct variable without customized entry and transfer it.

Error message	Cause	Remedy
119 No ribbon	During the print order the ribbon roll becomes empty (rear printhead). Defect at the transfer ribbon photocell (rear photocell).	Change transfer ribbon. Check transfer ribbon photocell (service functions).
120 Wrong directory	Invalid target directory when copying.	Target directory must not be within the source directory. Check target directory.
121 No label PH2	No label found at the rear printhead (DuoPrint). Soiled label photocell. Labels not inserted correctly.	Insert new label roll. Clean the label photocell. Check if labels are inserted correctly.
122 IP occupied	The IP address was already assigned.	Assign a new IP address.
123 Print asynchronous	The label photocell does not work in the order as it is expected according to print data. The settings of the photocell are not correct. Settings of label size and gap size are not correct. No label found at the rear printhead. Soiled label photocell. Labels not inserted correctly.	Check label size and gap size. Check label photocell settings. Check correct loading of label material. Insert new label roll. Clean the label photocell. Check if labels are inserted correctly.
124 Speed too low	The print speed is too slow.	Increase the speed of customers' machine.
125 DMA buffer	Communication problem HMI.	Restart the printer.
126 UID conflict	Configuration RFID programming faulty.	Run RFID initialising.
127 Module not found	RFID module not available.	Check the RFID module connection. Please contact your responsible distributor.
128 No release signal	No print release by higher-level control (customer machine).	Activate release signal at the higher-level control.

Error message	Cause	Remedy
129 Wrong firmware	Firmware does not match the used printer type.	Use firmware that fits to the printer type. Please contact your responsible distributor.
130 Language missing	Language file for the set printer language is not available.	Please contact your responsible distributor.
131 Wrong material	Label material does not fit to printing data.	User label material with suitable label and/or gap length.
132 Invalid mark-up tag	Invalid mark-up formatting characters in text.	Correct the formatting characters in the text.
133 Script not found	LUA script file not found.	Check the file name.
134 Script failure	LUA script is incorrect.	Check the script.
135 Script user error	Error in LUA script user input.	Correct the input value.
136 No reprint available	No label data for reprinting available.	Send new label data to the printer.
137 Printhead short circuit	Electrical short at the printhead.	Check the used printhead. Please contact your distributor.
138 Too less ribbon	Transfer ribbon ends.	Change transfer ribbon.
139 Rewinder error	Label band is torn	Load a new label roll. Stick together the label band.
140 Rewinder motor blocked	External rewinder motor is blocked.	Switch off the printing system and check mechanical resistance. Change the full label roll.
141 Hardware error	A hardware component could not be found.	Please contact your responsible distributor.
142 No print mechanics	No print mechanics connected.	Check connection (print mechanics – control unit)

## 11 Environmentally-Friendly Disposal



Manufacturers of B2B equipment are obliged to take back and dispose of old equipment that was manufactured after 13 August 2005. As a principle, this old equipment may not be delivered to communal collecting points. It may only be organised, used and disposed of by the manufacturer. Valentin products accordingly labelled can therefore be returned to Carl Valentin GmbH.

This way, you can be sure your old equipment will be disposed of correctly.

Carl Valentin GmbH thereby fulfils all obligations regarding timely disposal of old equipment and facilitates the smooth reselling of these products. Please understand that we can only take back equipment that is sent free of carriage charges.

The electronics board of the printing system is equipped with a battery. This must only be discarded in battery collection containers or by public waste management authorities.

Further information on the WEEE directive is available on our website [www.carl-valentin.de](http://www.carl-valentin.de).



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